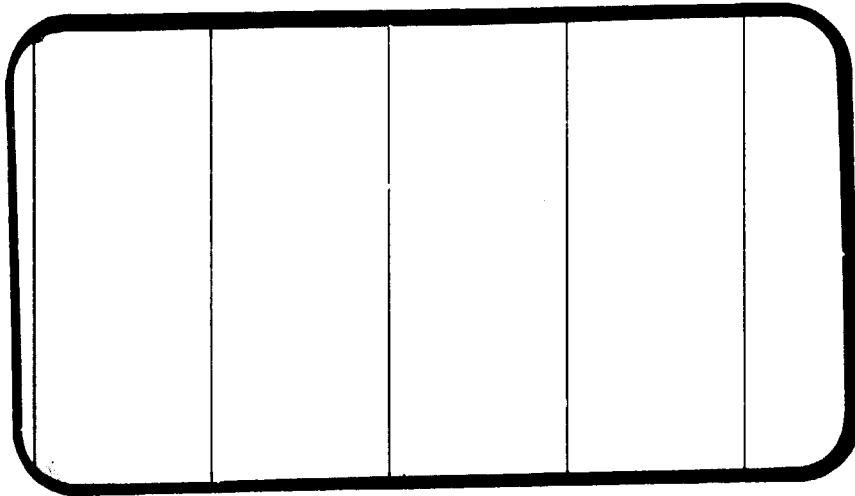




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(NASA-CR-134419) DATA REPORT FOR TESTS ON
THE HEAT TRANSFER EFFECTS OF THE 0.0175
SCALE ROCKWELL INTERNATIONAL SPACE SHUTTLE
VEHICLE MODEL 22-0T IN THE AEDC 50 INCH B
WIND TUNNEL (0H4B), VOLUME 1 (Chrysler

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G3/18 Unclas
12298

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER
HOUSTON, TEXAS

DATA MANAGEMENT services
SPACE DIVISION  CHRYSLER CORPORATION

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DATA REPORT FOR TESTS ON THE HEAT TRANSFER
EFFECTS OF THE 0.0175-SCALE
ROCKWELL INTERNATIONAL SPACE SHUTTLE VEHICLE MODEL
22-0T IN THE AEDC 50-INCH B WIND TUNNEL (OH4B)
VOLUME 1 OF 3

By

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Prepared under NASA Contract Number NAS9-13247

By

Data Management Services
Chrysler Corporation Space Division
New Orleans, La. 70189

for

Engineering Analysis Division
Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number: AEDC (VA 352)
NASA Series Number: OH4B
Test Dates: September 29 to October 4, 1973
Model Number: 22-0T

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DATA REPORT FOR TESTS ON THE HEAT TRANSFER
EFFECTS OF THE 0.0175-SCALE
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22-0T IN THE AEDC 50-INCH B WIND TUNNEL (OH4B)

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W. Martindale, AEDC

ABSTRACT

Results of wind tunnel heat transfer tests of 0.0175-scale Rockwell International Space Shuttle Vehicle configurations for orbiter alone, tank alone, and orbiter plus external tank are presented in this report. Body flap shielding of SSME's during simulated entry was also investigated.

The tests were conducted at Mach 8 for thirteen Reynolds number per foot values ranging from 0.5×10^6 to 3.72×10^6 .

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COEFFICIENT SCHEDULE:

- A: HI/HO, HU/HO vs X/LT
- B: HI/HO, HU/HO vs X/L
- C: HI/HO, HU/HO vs X/C
- D: HU/HO vs X/C
- E: HI/HO vs X/L
- F: HU/HO vs X/L
- G: HU/HO vs X

NOTE: A large volume of working data plots were generated and released by the Data Management Services during initial data processing activities. However, for documentation purposes, only a small representative selection of plots are included. The data will remain on file and be available for any future applications.

INTRODUCTION

The experimental investigation described in this report was performed to obtain aerodynamic heating rate data in both ascent and entry flight regimes of the Space Shuttle Vehicle. Second stage ascent interference heating was investigated with the orbiter alone, tank alone and orbiter plus external tank configurations at angles of attack of -10° , -5° , 0° , and 5° and sideslip angles of 0° and -2° .

Orbiter entry heating data was obtained over an angle of attack range of 25° to 45° for sideslip angles of 0° and 5° . Effects of control surface deflections and body flap nozzle shielding were also investigated.

The test program was conducted in the Arnold Engineering Development Center VKF 50-inch B tunnel at Mach 8 for free-stream Reynolds number per foot values from 0.5×10^6 to 3.72×10^6 .

NOMENCLATURE

| <u>Symbol</u> | <u>Plot Symbol</u> | <u>Definition</u> |
|---------------|--------------------|---|
| b | | model skin thickness, span, in |
| c | | chord, in |
| c_p | | specific heat of model material, BTU/lbm - °R |
| h | | heat transfer coefficient, BTU/ft ² -sec-°R |
| h_{ref} | HREF | reference heat transfer coefficient, BTU/ft ² -sec-R |
| h_i/h_o | HI/HO | ratio of interference heat transfer coefficient to stagnation heat transfer coefficient |
| h_i/h_u | HI/HU | ratio of interference heat transfer coefficient to undisturbed heat transfer coefficient |
| h_u/h_o | HU/HO | ratio of undisturbed heat transfer coefficient to stagnation heat transfer coefficient |
| H | | enthalpy, BTU/lbm |
| r | HAW/HT | adiabatic wall temperature ratio, T_{aw}/T_o (recovery factor). NOTE: Where HAW/HT = 0.0 in displayed data, the heat transfer coefficient has been calculated using a recovery factor calculated from $T_{aw}/T_o = (0.867 + 0.133 \sin^{1.55} \delta)$, where $\delta = (\alpha + \theta)$. Alpha is the model angle of attack and theta is local surface angle. |
| L | | length, in |
| M | MACH | Mach number |
| Re | RN/L | unit Reynolds number, per foot |
| t | | time, sec |
| T | | temperature, °R |
| T_o | | stagnation temperature, °R |
| T_i | | initial temperature, °R |

NOMENCLATURE - Continued

| <u>Symbol</u> | <u>Plot Symbol</u> | <u>Definition</u> |
|---------------|--------------------|---|
| T_{aw} | | adiabatic wall temperature, °R |
| Q_i | | initial heat transfer rate, BTU/sec |
| T/C | | thermocouple |
| W | | model material density, lbm/ft ³ |
| x | X | axial distance from nose to corresponding component, in |
| x/c | X/C | chordwise location, fraction of local chord |
| x/L | X/L | longitudinal location, fraction of length |
| y | Y | spanwise distance from centerline, in |
| x/LT | X/LT | longitudinal location on tank, fraction of length |
| z | Z | waterplane distance, in |
| 2Y/B | 2Y/B | spanwise location of semispan |
| Z/BV | Z/BV | vertical tail location, fraction of height |
| δ_a | | aileron deflection angle, degrees |
| δ_{BF} | B.FLAP | body flap deflection angle, degrees |
| δ_r | | rudder deflection angle, degrees |
| β | Beta | sideslip angle, degrees |
| α | ALPHA | angle of attack, degrees |
| δ_e | ELEVON | elevon deflection angle, degrees |
| θ | PHI | radial location on tank, degrees |
| θ_n | PHIN | radial location on orbiter nozzle, degrees |

NOMENCLATURE - Concluded

Subscripts

| | |
|----|--------------------------|
| aw | adiabatic wall condition |
| i | initial condition |
| O | Orbiter |
| T | tank |
| V | vertical tail |
| w | wall conditions |
| u | stagnation conditions |

REMARKS

During the course of mated configuration testing, it was felt that the forward canopy to wing bottom surface seam may have affected transition. This seam was repaired with dental plaster and 48 transition study runs were made at the end of the test with the orbiter alone configuration. These runs (177-224) consisted of eleven Re/ft values at two angles of attack, and demonstrated that the seam did not prematurely trip the boundary layer.

The original run schedule did not include obtaining data from the 11 T/C's on the windshield, but during the test high heating rates were observed in the canopy area. Therefore, three runs (#31, 32, and 33) were added to the run schedule to obtain this data. The first 11 T/C's of the data acquisition system switch position No. 1 were replaced with the windshield T/C's for these runs.

CONFIGURATIONS INVESTIGATED

The 22-OT model is a 0.0175-scale replica of the Vehicle 3 configuration Rockwell International Space Shuttle Orbiter and external tank per Drawing Number VL70-000139. The model was a thin skin thermocouple model instrumented with 428 iron-constantan thermocouples and was sting mounted through the orbiter base. The tank was sting mounted to the orbiter sting.

Provisions were made to test elevon deflections of 0° , $+5^\circ$, $+10^\circ$; body flap deflections of 0° , $+10^\circ$; and rudder flare angles of 0° and 40° . Entry orbiter nozzle heating data was obtained by replacing the orbiter main sting with an instrumented base plate and nozzle and an offset sting mounted through the vertical tail area. The offset sting simulated a rudder flare deflection angle of 40° .

The main model structure is 15-5 PH stainless steel with instrumented areas of 15-5 PH and 17-7 PH. Thermocouple locations and local skin thicknesses are presented in Table 4. The model instrumentation reference system is described in Figure 1. The configurations tested are described below with the component definitions given in Table 3.

| | |
|--|--|
| $B_{17}, C_7, M_4, F_5, W_{103}, E_{22}, V_7, R_5$ | Orbiter alone (O_1) |
| $B_{17}, C_7, M_4, F_5, W_{103}, E_{22}, V_7, R_5, T_{10}$ | Orbiter plus tank ($O_1 + T_{10}$) |
| T_{10} | Tank alone (T_{10}) |
| $B_{17}, C_7, M_4, F_5, W_{103}, E_{22}, V_7, R_5, N$ | Descent orbiter alone nozzle heating (O_2) |

TEST FACILITY DESCRIPTION

The Arnold Engineering Development Center (AEDC) is an Air Force Facility located in Tullahoma, Tennessee. The tunnel used, Tunnel B, is located in the Von Karman Facility portion of this center. Engineering and other technical operations in this tunnel are performed by contractor personnel of ARO, Inc.

Tunnel B is a continuous, closed circuit, variable density wind tunnel with an axisymmetric contoured nozzle and a 50-inch diameter test section. The tunnel can be operated at a nominal Mach number of 6 or 8 at stagnation pressures from 20 to 300 and 50 to 900 psia, respectively, and at a stagnation temperature of up to 1350°R. The model may be injected into the tunnel for a test run and then retracted for model cooling or model changes without interrupting the tunnel flow.

TEST PROCEDURES

The model was installed upright for second stage testing and offset-sting nozzle heating and transition studies. The orbiter was inverted for entry, orbiter alone testing. All configurations were leveled in both pitch and yaw planes. Yaw angles were obtained by combinations of roll and pitch with the tunnel model support system.

All instrumentation leads were routed internally through the model support apparatus to the data acquisition patching network outside the tunnel. Two hundred ninety one thermocouples were connected to the instrumentation patch board. Since the data acquisition system capability was ninety-seven recorded thermocouples per run, three runs were necessary for one test point. Each run of the test point series corresponded to one switch position (97 channels) of the data acquisition system.

The model was injected into the flow and remained on centerline for approximately one second. After retraction, the model was cooled to an isothermal state by air from high pressure manifolds.

For orbiter transition studies and nozzle heating tests, the orbiter base and main sting were removed and replaced with an instrumented base plate and nozzle. The model was then mounted with an offset sting through the vertical tail area. Only two main engines were simulated and only the left nozzle was instrumented. Shadowgraphs were taken for each run of the program.

DATA REDUCTION

Thermocouple outputs were recorded on magnetic tape at the rate of 20 times per second from the start of the injection cycle until about 4 seconds after the model reached the tunnel centerline. The heat transfer coefficient, h , was computed from the relation

$$h = Wbc_p \frac{d\left[\ln\left(\frac{T_o - T_{wi}}{T_o - T_w}\right)\right]}{dt}$$

where

W = model skin density, lbm/ft^3

b = model skin thickness, ft

c_p = model skin specific heat, $\text{BTU/lbm} \cdot ^\circ\text{R}$

T_{wi} = initial model skin temperature, $^\circ\text{R}$

This relation was derived from the equation

$$h = \frac{Wbc_p \frac{dT_w}{dt}}{T_o - T_w}$$

which neglects conduction losses and the assumptions that h , W , and c_p are constants.

If conduction losses are indeed very small, then

$$\ln \left[\frac{T_o - T_{wi}}{T_o - T_w} \right]$$

versus time is very nearly linear. Even when conduction effects are significant, a small linear portion of the curve can generally be found

at early time. It is for this reason that a linear least squares curve fit of $\ln((T_o - T_{wi})/(T_o - T_w))$, begun as soon as it could be determined that the model had reached uniform flow, was used to compute the derivative

$$\frac{d[\ln \left(\frac{T_o - T_{wi}}{T_o - T_w} \right)]}{dt}$$

and then h.

The lengths of the curve fits were kept as short as possible and yet be consistent with system noise characteristics. These curve fit lengths are given below:

| Range | No. of Points |
|--------------------------------|---------------|
| $32 < \frac{dT_w}{dt}$ | 5 |
| $16 < \frac{dT_w}{dt} \leq 32$ | 7 |
| $8 < \frac{dT_w}{dt} \leq 16$ | 9 |
| $4 < \frac{dT_w}{dt} \leq 8$ | 13 |
| $2 < \frac{dT_w}{dt} \leq 4$ | 17 |
| $1 < \frac{dT_w}{dt} \leq 2$ | 25 |
| $\frac{dT_w}{dt} < 1$ | 41 |

REFERENCE

1. Foster, T.F.: Pretest Information for Testing of the 22-0T 0.0175-Scale Thin Skin Thermocouple model in the AEDC 50-inch B Wind Tunnel. Rockwell International Publication Number SD73-SH-0237, September 4, 1973.

TABLE I. - TEST CONDITIONS

| TEST : | OH4B | | DATE : | Sept. 1973 |
|-------------------------|--------------------------------------|---------------------------------------|--|------------|
| TEST CONDITIONS | | | | |
| MACH NUMBER | REYNOLDS NUMBER (per unit length) | DYNAMIC PRESSURE (pounds/sq. inch) | STAGNATION TEMPERATURE (degrees Fahrenheit) | |
| 8 | $0.5 \times 10^6/\text{ft}$ | 110 | 800 | |
| 8 | $0.68 \times 10^6/\text{ft}$ | 140 | 810 | |
| 8 | $1.0 \times 10^6/\text{ft}$ | 210 | 815 | |
| 8 | $1.25 \times 10^6/\text{ft}$ | 265 | 825 | |
| 8 | $1.50 \times 10^6/\text{ft}$ | 325 | 835 | |
| 8 | $1.75 \times 10^6/\text{ft}$ | 380 | 840 | |
| 8 | $2.00 \times 10^6/\text{ft}$ | 425 | 840 | |
| 8 | $2.25 \times 10^6/\text{ft}$ | 500 | 850 | |
| 8 | $2.50 \times 10^6/\text{ft}$ | 545 | 850 | |
| 8 | $2.75 \times 10^6/\text{ft}$ | 605 | 860 | |
| 8 | $3.00 \times 10^6/\text{ft}$ | 675 | 870 | |
| 8 | $3.35 \times 10^6/\text{ft}$ | 765 | 880 | |
| 8 | $3.72 \times 10^6/\text{ft}$ | 860 | 880 | |
| | | | | |
| | | | | |
| | | | | |
| BALANCE UTILIZED: _____ | | | | |
| | CAPACITY: | ACCURACY: | COEFFICIENT TOLERANCE: | |
| NF | _____ | _____ | _____ | |
| SF | _____ | _____ | _____ | |
| AF | _____ | _____ | _____ | |
| PM | _____ | _____ | _____ | |
| RM | _____ | _____ | _____ | |
| YM | _____ | _____ | _____ | |
| COMMENTS: | | | | |

TABLE II.

| TEST: <i>C₁T₀</i> | | DATA SET/RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: SEPT. 29, 1973 | | | | | | | | | |
|---|-------------------------------|---------------------------------------|----|-------------------|----|----|----|-------------|------------------------------|----|----|----------------------|---|---|---|---|---|----|--|--|--|
| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | NO. OF RUNS | THERMOCOUPLE HOOKUP SCHEDULE | | | | | | | | | | | | |
| | | a | B | KVL | BF | se | NL | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | |
| * (JTK)001 | C ₁ T ₀ | -10 | 0 | 372 | 0 | 0 | 8 | 3 | 10 | 11 | 12 | | | | | | | | | | |
| | | -5 | 0 | | | | | 3 | 7 | 8 | 9 | | | | | | | | | | |
| | | 0 | 0 | | | | | 3 | 1 | 2 | 3 | | | | | | | | | | |
| | | 5 | 0 | | | | | 3 | 4 | 5 | 6 | | | | | | | | | | |
| (JTK)002 | | 0 | -2 | | | | | 3 | 13 | 14 | 15 | | | | | | | | | | |
| | | 0 | 0 | 372 | | | | 3 | 1 | 2 | 3 | | | | | | | | | | |
| (JTK)003 | | -10 | 0 | 068 | | | | 3 | 25 | 26 | 27 | | | | | | | | | | |
| | | -5 | 0 | | | | | 3 | 21 | 23 | 24 | | | | | | | | | | |
| | | 0 | 0 | | | | | 3 | 16 | 17 | 18 | | | | | | | | | | |
| | | 5 | 0 | | | | | 3 | 19 | 20 | 21 | | | | | | | | | | |
| (JTK)004 | | 0 | -2 | | | | | 3 | 28 | 29 | 30 | | | | | | | | | | |
| | | 0 | 0 | 668 | | | | 3 | 16 | 17 | 18 | | | | | | | | | | |
| (JTK)005 | | -10 | 0 | 372 | | | | 1 | | | | | | | | | | | | | |
| | | -5 | 0 | | | | | 1 | | | | | | | | | | | | | |
| | C ₁ T ₀ | 0 | 0 | 372 | 0 | 0 | 8 | 1 | | | | | | | | | | | | | |

* The first character of the dataset identifier refers to recovery factor used: r=1.0 (R), r=0.9 (A), r=0.85 (B), r=0.0 (C). The fourth character of the dataset identifier identifies component data under consideration: wing data, tank data, orbiter data etc.

01 + T10 configuration, Dep. Var. is HI/HO
 01, 02, T10 configurations, Dep. Var. is HU/HO
 IDVAR (1) IDVAR (2) NOV

TABLE II. - Continued.

| TEST: CH-B | | DATA SET RUN NUMBER COLLATION SUMMARY | | | | DATE: SEP 29 1973 |
|---------------------|---------------|---------------------------------------|---------|-------------|------------------------|--|
| DATA SET IDENTIFIER | CONFIGURATION | SCHED. PARAMETERS/VALUES | | NO. OF RUNS | THERMAL TIME AVAILABLE | TEST RUN NUMBERS |
| | | α | β | | | |
| 0TK006 | TIC | 0 | 0 | 8 | 43 | 33, 34, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 |
| 0TK007 | TIC | 0 | 0 | 8 | 43 | 33, 34, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 |
| 0TK008 | TIC | 0 | 0 | 8 | 43 | 33, 34, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 |
| 0TK009 | TIC | 0 | 0 | 8 | 43 | 33, 34, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49 |

TYPE OF DATA
 α OR β
 SCHEDULE

NAME: MAF

TABLE II. - Continued.

| TEST NUMBER | DATE | DATA SET RUN NUMBER COLLATION SUMMARY | | TEST RUN NUMBERS | |
|-------------|---------------|---------------------------------------|-------------------|------------------|-------------------|
| | | TEST RUN NUMBER | COLLATION SUMMARY | TEST RUN NUMBER | COLLATION SUMMARY |
| 1 | SEPT 29, 1973 | 60 | | 60 | |
| 2 | | 61 | | 61 | |
| 3 | | 62 | | 62 | |
| 4 | | 63 | | 63 | |
| 5 | | 64 | | 64 | |
| 6 | | 65 | | 65 | |
| 7 | | 66 | | 66 | |
| 8 | | 67 | | 67 | |
| 9 | | 68 | | 68 | |
| 10 | | 69 | | 69 | |
| 11 | | 70 | | 70 | |
| 12 | | 71 | | 71 | |
| 13 | | 72 | | 72 | |
| 14 | | 73 | | 73 | |
| 15 | | 74 | | 74 | |
| 16 | | 75 | | 75 | |
| 17 | | 76 | | 76 | |
| 18 | | 77 | | 77 | |
| 19 | | 78 | | 78 | |
| 20 | | 79 | | 79 | |
| 21 | | 80 | | 80 | |
| 22 | | 81 | | 81 | |
| 23 | | 82 | | 82 | |
| 24 | | 83 | | 83 | |
| 25 | | 84 | | 84 | |
| 26 | | 85 | | 85 | |
| 27 | | 86 | | 86 | |
| 28 | | 87 | | 87 | |
| 29 | | 88 | | 88 | |
| 30 | | 89 | | 89 | |
| 31 | | 90 | | 90 | |
| 32 | | 91 | | 91 | |
| 33 | | 92 | | 92 | |
| 34 | | 93 | | 93 | |
| 35 | | 94 | | 94 | |

TYPE OF DATA
 α OR β
 SCHEDULE

IDVAR (1) IDVAR (2) NDV

TABLE II. - Continued.

| TEST: CHAB | | DATA SET / RUN NUMBER COLLATION SUMMARY | | | | | | DATE: SEPT 29, 1973 | | | | | | | | | | |
|---------------------|----------------|---|---|-------------------|----|----|----|---------------------|----------------------------------|---|---|-----|-----|---|---|---|---|-----|
| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | NO. OF RUNS | THERMO-COUPLER ASSEMBLY SCHEDULE | | | | | | | | | |
| | | α | β | EA | PF | DE | MC | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| QTRC016 | C ₁ | 30 | 0 | 3.2 | 0 | 0 | 8 | 1 | | | | | | | | | | |
| QTRC017 | | 30 | 0 | T | 10 | 5 | T | 3 | | | | 98 | 97 | | | | | 95 |
| QTRC018 | | 35 | 0 | T | T | T | T | | | | | 99 | 100 | | | | | 96 |
| QTRC019 | | 30 | 5 | ↓ | | | | | | | | 102 | 103 | | | | | 101 |
| QTRC020 | | 35 | 5 | 3.2 | | | | | | | | 104 | 105 | | | | | |
| QTRC021 | | 30 | 5 | 2.0 | | | | | | | | 106 | 107 | | | | | |
| QTRC022 | | 35 | 5 | T | | | | | | | | 108 | 109 | | | | | |
| QTRC023 | | 30 | 0 | ↓ | | | | | | | | 113 | 114 | | | | | 115 |
| | | 35 | 0 | 2.0 | | | | | | | | 111 | 111 | | | | | 112 |
| | | 30 | 5 | 1.5 | | | | | | | | 116 | 117 | | | | | |
| | | 35 | 5 | T | | | | | | | | 118 | 119 | | | | | |
| | | 30 | 0 | | | | | | | | | 120 | 121 | | | | | 122 |
| | | 35 | 0 | | | | | | | | | 123 | 124 | | | | | 125 |
| | | 25 | 0 | | | | 10 | | | | | 132 | 133 | | | | | 134 |
| | | 30 | 0 | ↓ | | | T | | | | | 129 | 130 | | | | | 131 |
| | C ₁ | 35 | 0 | 6.5 | 10 | 10 | 8 | 3 | | | | 126 | 127 | | | | | 128 |

TYPE OF DATA
α OR β
SCHEDULE.

TABLE II. - Continued.

| TEST: C-11-B | | DATA SET RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: SEPT 29, 1973 | | | | | | | | |
|--------------|---------------|---------------------------------------|--------------------|----|----|-------------|-------------------------------|---|---|---|---|---------------------|---|-----|-----|-----|--|--|--|-----|
| TEST NUMBER | CONFIGURATION | FREQ | APPROXIMATE VALUES | | | NO. OF RUNS | THERMOCUPURE ACCURIP SCHEDULE | | | | | | | | | | | | | |
| | | | TEMP | BE | SO | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | |
| UJK(24) | C1 | 35 | 2.0 | 10 | 10 | 2 | | | | | | | | 137 | 138 | | | | | |
| | | 35 | 2.0 | 10 | 10 | 2 | | | | | | | | 139 | 140 | | | | | |
| | | 35 | 2.0 | 10 | 10 | 2 | | | | | | | | 141 | 142 | 143 | | | | |
| | | 35 | 2.0 | 10 | 10 | 2 | | | | | | | | 144 | 145 | 146 | | | | |
| | | 35 | 2.0 | 10 | 10 | 2 | | | | | | | | 147 | 148 | | | | | |
| | | 35 | 2.0 | 10 | 10 | 2 | | | | | | | | 149 | 150 | | | | | |
| UJK(27) | | 25 | 3.72 | | | 3 | | | | | | | | 151 | 152 | 153 | | | | |
| | | 30 | | | | 3 | | | | | | | | 154 | 155 | 156 | | | | |
| | | 35 | | | | 3 | | | | | | | | 157 | 158 | 159 | | | | |
| UJK(26) | | 25 | | | | 2 | | | | | | | | 166 | 167 | | | | | |
| | | 30 | | | | 2 | | | | | | | | 164 | 165 | | | | | |
| | C1 | 35 | | 10 | 10 | 2 | | | | | | | | 160 | 163 | | | | | |
| UJK(29) | C2 | 25 | | 0 | 0 | 1 | | | | | | | | | | | | | | 168 |
| | | 30 | | 10 | 10 | 1 | | | | | | | | | | | | | | 169 |
| | | 35 | 3.72 | 0 | 0 | 1 | | | | | | | | | | | | | | 170 |

TYPE OF DATA
 a OR b
 SCHEDULE

10VAR (1) 10VAR (2) NDV

TABLE II. - Continued.

| TEST: OXAB | | DATA SET / RUN NUMBER COLLATION SUMMARY | | | | | | | | | | | DATE: SEPT 29, 1973 | | | | | |
|---------------------|---------------|---|---|-------------------|-----|---|----|-------------|-------------------------------|---|---|---|---------------------|------------------|---|---|---|-----|
| DATA SET IDENTIFIER | CONFIGURATION | SCHD. | | PARAMETERS/VALUES | | | | NO. OF RUNS | THERMOCOUPLE HOOD/UP SCHEDULE | | | | | TEST RUN NUMBERS | | | | |
| | | A | B | KML | PBF | N | N' | | 1 | 2 | 3 | 4 | 5 | | 6 | 7 | 8 | 9 |
| UTK030 | C2 | 25 | 0 | 2.0 | 0 | 0 | 8 | 1 | | | | | | | | | | 171 |
| | | 30 | ↓ | ↓ | | | | 1 | | | | | | | | | | 172 |
| | | 35 | | 2.0 | | | | 1 | | | | | | | | | | 173 |
| UTK031 | | 25 | | 0.5 | | | | 1 | | | | | | | | | | 174 |
| | | 30 | ↓ | ↓ | | | | 1 | | | | | | | | | | 175 |
| | | 35 | | 0.5 | | | | 1 | | | | | | | | | | 176 |
| UTK032 | | 30 | | 1.0 | | | | 2 | | | | | | | | | | 177 |
| | | 35 | ↓ | ↓ | | | | 2 | | | | | | | | | | 178 |
| | | 45 | | 1.0 | | | | 2 | | | | | | | | | | 179 |
| UTK033 | | 30 | | 1.25 | | | | 2 | | | | | | | | | | 180 |
| | | 35 | | 1.25 | | | | 2 | | | | | | | | | | 181 |
| UTK034 | | 30 | | 1.5 | | | | 2 | | | | | | | | | | 182 |
| | | 35 | | 1.5 | | | | 2 | | | | | | | | | | 183 |
| UTK035 | ↓ | 30 | ↓ | 1.75 | ↓ | | | 2 | | | | | | | | | | 184 |
| | C2 | 35 | 0 | 1.75 | C | C | 8 | 2 | | | | | | | | | | 185 |
| | | | | | | | | | | | | | | | | | | 186 |
| | | | | | | | | | | | | | | | | | | 187 |
| | | | | | | | | | | | | | | | | | | 188 |
| | | | | | | | | | | | | | | | | | | 189 |
| | | | | | | | | | | | | | | | | | | 190 |
| | | | | | | | | | | | | | | | | | | 191 |
| | | | | | | | | | | | | | | | | | | 192 |
| | | | | | | | | | | | | | | | | | | 193 |
| | | | | | | | | | | | | | | | | | | 194 |

TYPE OF DATA
A OR B
SCHEDULES

QUARTER 2 1973

TABLE II. - Concluded.

| TEST: C-10 | | DATA SET RUN NUMBER COLLATION SUMMARY | | | | | | | | | | DATE: SEPT 29, 1973 | | | | |
|-------------------------|---------------|---------------------------------------|------|-------------|----------------------------|---|---|---|---|---|---|---------------------|---|----|-----|-----|
| DATA SET IDENTIFICATION | CONFIGURATION | SCMD: PARAMETER VALUES | | NO. OF RUNS | THERMOPILE MOCKUP SCHEDULE | | | | | | | | | | | |
| | | R | RNF | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| | C2 | 30 | 3.0 | 2 | | | | | | | | | | | 195 | 196 |
| | | 35 | 3.2 | 1 | | | | | | | | | | | 197 | 198 |
| | | 45 | 3.0 | 1 | | | | | | | | | | | 199 | 200 |
| | | 50 | 2.8 | 1 | | | | | | | | | | | 201 | 202 |
| | | 55 | 2.8 | 1 | | | | | | | | | | | 203 | 204 |
| | | 30 | 2.5 | 1 | | | | | | | | | | | 205 | 206 |
| | | 35 | 2.5 | 1 | | | | | | | | | | | 207 | 208 |
| | | 30 | 2.75 | 1 | | | | | | | | | | | 209 | 210 |
| | | 35 | 2.75 | 1 | | | | | | | | | | | 211 | 212 |
| | | 30 | 3.0 | 1 | | | | | | | | | | | 213 | 214 |
| | | 35 | 3.0 | 1 | | | | | | | | | | | 215 | 216 |
| | | 30 | 3.35 | 1 | | | | | | | | | | | 217 | 218 |
| | | 35 | 3.35 | 1 | | | | | | | | | | | 219 | 220 |
| | | 30 | 3.72 | 1 | | | | | | | | | | | 221 | 222 |
| | C2 | 35 | 3.72 | 2 | | | | | | | | | | | 223 | 224 |

TYPE OF DATA
G OR H
SCHEDULE

IOVAR (1) IOVAR (2) NDV

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT: BODY - B17

GENERAL DESCRIPTION: Fuselage, 3 configuration, lightweight orbiter per
Rockwell lines drawing No. VL70-000139

MODEL SCALE: 0.0175

DRAWING NO.: VL70-000139

DIMENSIONS:

| | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|------------------------|-----------------------------|-----------------------------|
| Length - In. | <u>1290.3</u> | <u>22.58025</u> |
| Max. width - In. | <u>267.6</u> | <u>4.6830</u> |
| Max. depth - In. | <u>244.5</u> | <u>4.27875</u> |
| Fineness Ratio | <u>4.82175</u> | <u>4.82175</u> |
| Area - ft ² | | |
| Max. Cross-sectional | <u>386.67</u> | <u>0.11842</u> |
| Planform | <u> </u> | <u> </u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u> </u> | <u> </u> |

TABLE III. - Continued.

MODEL COMPONENT: CANOPY - C7

GENERAL DESCRIPTION: Configuration 3 per Rockwell Lines VL70-000139

Insufficient information to complete dimensional data at this time.

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000139

DIMENSIONS:

| | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|---|-------------------|--------------------|
| Length ($X_0 = 433$ to $X_0 = 670$) - in FS | <u>237</u> | <u>4.148</u> |
| Max.Width | _____ | _____ |
| Max.Depth ($Z_0 =$ to $Z_0 = 501$) in FS | _____ | _____ |
| Fineness ratio | _____ | _____ |
| Area - ft ² | | |
| Max. Cross-sectional | _____ | _____ |
| Planform | _____ | _____ |
| Wetted | _____ | _____ |
| Base | _____ | _____ |

TABLE III. - Continued.

MODEL COMPONENT: OMS POD - M₄

GENERAL DESCRIPTION: Orbital maneuvering system pods located on the orbiter aft fuselage.

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000139

DIMENSIONS:

| | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|------------------------|-------------------|--------------------|
| Length - In. | <u>346.0</u> | <u>6.0550</u> |
| Max. Width - In. | <u>108.0</u> | <u>1.890</u> |
| Max. Depth - In. | <u>113.0</u> | <u>113.0</u> |
| Fineness Ratio | <u>.</u> | <u></u> |
| Area - ft ² | <u></u> | <u></u> |
| Max cross sectional | <u></u> | <u></u> |
| Planform | <u></u> | <u></u> |
| Wetted | <u></u> | <u></u> |
| Base | <u></u> | <u></u> |

⊘ of OMS Pod

WP = 463.9 In. FS; WP 400 + 63.9 = 463.9

BP = 80.0 In. FS

LENGTH: 1214.0 to 1560.0 = 346.0 In. FS

NOTE: M₄ is identical to M₃ of 2A configuration, except intersection to body.

TABLE III. - Continued.

MODEL COMPONENT: BODY FLAP - F₅

GENERAL DESCRIPTION: 3 Configuration per Rockwell Lines VL70-000139

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000139

| DIMENSIONS: | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|------------------------|-------------------|--------------------|
| Length - In. | <u>84.70</u> | <u>1.48225</u> |
| Max. width - In. | <u>267.6</u> | <u>4.6830</u> |
| Max. Depth | _____ | _____ |
| Fineness Ratio | _____ | _____ |
| Area - ft ² | | |
| Max Cross-sectional | _____ | _____ |
| Planform | <u>142.5195</u> | <u>0.04365</u> |
| Wetted | _____ | _____ |
| Base | <u>38.0958</u> | <u>0.01167</u> |

-TABLE III. - Continued.

MODEL COMPONENT: WING-W 103

GENERAL DESCRIPTION: Configuration 3 Orbiter per Lines VL70-000139.

NOTE: Same platform as W87, except dihedral at TE

Scale Model = 0.0175

| TEST NO. | DWG. NO. | FULL-SCALE | MODEL SCALE |
|--|----------|------------|-------------|
| <u>DIMENSIONS:</u> | | | |
| <u>TOTAL DATA</u> | | | |
| Area (Theo.) Ft ² | | 2690.00 | 0.82381 |
| Planform | | | |
| Span (Theo) In. | | 936.68 | 16.39190 |
| Aspect Ratio | | 2.265 | 2.277 |
| Rate of Taper | | 1.177 | 1.177 |
| Taper Ratio | | 0.200 | 0.200 |
| Dihedral Angle, degrees (@ TE of Elevon) | | 3.500 | 3.500 |
| Incidence Angle, degrees | | 3.000 | 3.000 |
| Aerodynamic Twist, degrees | | +3.000 | +3.000 |
| Sweep Back Angles, degrees | | | |
| Leading Edge | | 45.000 | 45.000 |
| Trailing Edge | | -10.24 | -10.24 |
| 0.25 Element Line | | 35.209 | 35.209 |
| Chords: | | | |
| Root (Theo) B.P.O.O. | | 689.24 | 12.06170 |
| Tip, (Theo) B.P. | | 137.85 | 2.41238 |
| MAC | | 474.81 | 8.30418 |
| Fus. Sta. of .25 MAC | | 1136.89 | 17.82558 |
| W.P. of .25 MAC | | 299.20 | 5.2360 |
| B.L. of .25 MAC | | 182.13 | 3.18728 |
| <u>EXPOSED DATA</u> | | | |
| Area (Theo) Ft ² | | 1752.29 | 0.53664 |
| Span, (Theo) In. BP108 | | 720.68 | 12.61190 |
| Aspect Ratio | | 2.058 | 2.058 |
| Taper Ratio | | 0.2451 | 0.2451 |
| Chords | | | |
| Root BP108 | | 562.40 | 9.8420 |
| Tip 1.00 $\frac{b}{2}$ | | 137.85 | 2.41238 |
| MAC | | 393.03 | 6.87802 |
| Fus. Sta. of .25 MAC | | 1185.31 | 20.74292 |
| W.P. of .25 MAC | | 300.20 | 5.23350 |
| B.L. of .25 MAC | | 251.76 | 2.51580 |
| Airfoil Section (Rockwell Mod NASA) | | | |
| XXXX-64 | | | |
| Root $\frac{b}{2}$ = | | 0.10 | 0.10 |
| Tip $\frac{b}{2}$ = | | 0.12 | 0.12 |
| Data for (1) of (2) Sides | | | |
| Leading Edge Cuff | | | |
| Planform Area Ft ² | | 120.33 | 0.03685 |
| Leading Edge Intersects Fus M. L. @ Sta | | 570.0 | 9.800 |
| Leading Edge Intersects Wing @ Sta | | 1035.0 | 18.11250 |

TABLE III. - Continued.

MODEL COMPONENT: ELEVON- E22

GENERAL DESCRIPTION: 3 configuration per W103 Rockwell Lines Drawing

VL70-000139 data for (1) of (2) sides.

SCALE MODEL: 0.0175

DRAWING NUMBER: VL70-000139

| DIMENSIONS: | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|---|-------------------|--------------------|
| Area - ft ² | <u>205.52</u> | <u>0.06294</u> |
| Span (equivalent) - In. | <u>353.34</u> | <u>6.18345</u> |
| Inb'd equivalent chord | <u>114.78</u> | <u>2.00865</u> |
| Outb'd equivalent chord | <u>55.00</u> | <u>0.96250</u> |
| Ratio movable surface chord/ total surface chord | | |
| At inb'd equiv. chord | <u>.208</u> | <u>.208</u> |
| At outb'd equiv. chord | <u>.400</u> | <u>.400</u> |
| Sweep-back angles, degrees | | |
| Leading edge | <u>0.00</u> | <u>0.00</u> |
| Trailing edge | <u>- 10.24</u> | <u>- 10.24</u> |
| Hingeline | <u>0.00</u> | <u>0.00</u> |
| Area Moment (Normal to hingeline) - ft ³ (Product of Area Moment) | <u>1548.07</u> | <u>0.00829</u> |

TABLE III. - Continued.

MODEL COMPONENT: VERTICAL, V₇ (Lightweight Orbiter Configuration)

GENERAL DESCRIPTION: Centerline vertical tail, double-wedge airfoil with rounded leading edge.

NOTE: Same as V₅ but with manipulator housing removed.

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000139, VL70-000095

DIMENSIONS:

| | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|-------------------------------|-------------------|--------------------|
| TOTAL DATA | | |
| Area (Theo) - ft ² | 425.92 | 0.13044 |
| Planform | | |
| Span (Theo) - In. | 315.72 | 5.52510 |
| Aspect ratio | 1.675 | 1.675 |
| Rate of taper | 0.507 | 0.507 |
| Taper ratio | 0.404 | 0.404 |
| Sweep-back angles, degrees | | |
| Leading edge | 45.000 | 45.000 |
| Trailing edge | 26.249 | 26.249 |
| 0.25 Element line | 41.130 | 41.130 |
| Chords: | | |
| Root (Theo) WP | 268.50 | 4.69875 |
| Tip (Theo) WP | 108.47 | 1.89822 |
| MAC | 199.81 | 3.49667 |
| Fus. Sta. of .25 MAC | 1463.50 | 25.61125 |
| W.P. of .25 MAC | 635.522 | 11.12164 |
| B.L. of .25 MAC | 0.00 | 0.00 |
| Airfoil section: | | |
| Leading wedge angle - deg. | 10.000 | 10.000 |
| Trailing wedge angle - deg. | 14.920 | 14.920 |
| Leading edge radius | 2.0 | 0.0350 |
| Void area - FT ² | 13.17 | 0.00403 |
| Blanketed area | 0.00 | 0.00 |

TABLE III. - Continued.

COMPONENT DIMENSIONAL DATA

MODEL COMPONENT: RUDDER - R5

GENERAL DESCRIPTION: 2A, 3 and 3A configuration per Rockwell Lines Drawing
VL70-000095

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000139, VL70-000095

DIMENSIONS:

| | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|---|-------------------|--------------------|
| Area - ft ² | <u>106.38</u> | <u>0.03258</u> |
| Span (equivalent) - in. | <u>201.0</u> | <u>3.5175</u> |
| Inb'd equivalent chord | <u>91.585</u> | <u>1.60274</u> |
| Outb'd equivalent chord | <u>50.833</u> | <u>0.88958</u> |
| Ratio movable surface chord/ total surface chord | | |
| At inb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| At outb'd equiv. chord | <u>0.400</u> | <u>0.400</u> |
| Sweep-back angles, degrees | | |
| Leading edge | <u>34.83</u> | <u>34.83</u> |
| Trailing edge | <u>26.25</u> | <u>26.25</u> |
| Hingeline | <u>34.83</u> | <u>34.83</u> |
| Area Moment (normal to hingeline) - ft ³ Product of area and mean chord | <u>526.13</u> | <u>0.00282</u> |

TABLE III. - Continued.

MODEL COMPONENT: EXTERNAL TANK - T10

GENERAL DESCRIPTION: External Oxygen-hydrogen tank, 3 configuration, per
Rockwell Lines drawing VL78-000041 and VL72-000088

MODEL SCALE: 0.0175

DRAWING NUMBER: VL72-000088, VL78-000041

| DIMENSIONS: | <u>FULL SCALE</u> | <u>MODEL SCALE</u> |
|-------------------------------------|-------------------|--------------------|
| Length - In. (Nose @ $X_T = 309$) | <u>1865</u> | <u>32.63750</u> |
| Max. width (Dia) - In. | <u>324</u> | <u>5.670</u> |
| Max. depth | <u>--</u> | <u>--</u> |
| Fineness Ratio | <u>5.75617</u> | <u>5.75617</u> |
| Area - ft ² | | |
| Max. Cross-Sectional | <u>572.555</u> | <u>0.17534</u> |
| Planform | <u> </u> | <u> </u> |
| Wetted | <u> </u> | <u> </u> |
| Base | <u> </u> | <u> </u> |
| WP of Tank Centerline (X_T) In. | <u>400.0</u> | <u>7.00</u> |

TABLE III. - Concluded.

MODEL COMPONENT: MPS NOZZLES - N

GENERAL DESCRIPTION: Only the exterior surface of the nozzle was simulated.

MODEL SCALE: 0.0175

DRAWING NUMBER: UL70-000139

| DIMENSIONS: | FULL SCALE | MODEL SCALE |
|----------------------------|------------|-------------|
| WASH NO. | | |
| Length - In. | | |
| Gimbal Point to Exit Plane | | |
| Throat to Exit Plane | | |
| Diameter - In. | | |
| Exit | | |
| Throat | | |
| Inlet | | |
| Area - ft ² | | |
| Exit | | |
| Throat | | |
| Gimbal Point (Station) In. | | |
| Upper Nozzle | | |
| X | | |
| Y | | |
| Z | | |
| Lower Nozzles | | |
| X | | |
| Y | | |
| Z | | |
| Nozzle Position - Deg. | | |
| Upper Nozzle | | |
| Pitch | | |
| Yaw | | |
| Lower Nozzles | | |
| Pitch | | |
| Yaw | | |

Table IV. -Orbiter T/C Locations.
Model 22-OT

| T/C NO. | $\frac{x}{L}$ | FULL SCALE | | | MODEL SCALE | | | ϕ | SKIN THICKNESS | REMARKS |
|---------|---------------|------------|---|----|-------------|---|----|--------|----------------|---------------|
| | | x_0 | y | z | x FROM NOSE | y | z | | | |
| 1 | 0 | 238.00 | 0 | -- | 0 | 0 | -- | 0 | .034 | BOTTOM ϕ |
| 2 | .005 | 244.45 | ▲ | ▲ | .113 | ▲ | ▲ | ▲ | .035 | ▲ |
| 3 | .010 | 250.90 | | | .226 | | | | .035 | |
| 4 | .020 | 263.81 | | | .452 | | | | .032 | |
| 5 | .030 | 276.71 | | | .677 | | | | .033 | |
| 6 | .040 | 289.61 | | | .903 | | | | .034 | |
| 7 | .050 | 302.52 | | | 1.129 | | | | .033 | |
| 8 | .060 | 315.42 | | | 1.355 | | | | .032 | |
| 9 | .070 | 328.32 | | | 1.581 | | | | .034 | |
| 10 | .080 | 341.22 | | | 1.806 | | | | .035 | |
| 11 | .090 | 354.13 | | | 2.032 | | | | .035 | ▼ |
| 12 | .100 | 367.03 | | | 2.258 | | | | .034 | BOTTOM ϕ |
| 13 | | | | | | | | | — | OPEN |
| 14 | .120 | 392.84 | | | 2.710 | | | | .035 | BOTTOM ϕ |
| 15 | .130 | 405.74 | | | 2.935 | | | | .035 | ▲ |
| 16 | .140 | 418.64 | | | 3.161 | | | | .035 | |
| 17 | .150 | 431.54 | | | 3.387 | | | | .034 | |
| 18 | .160 | 444.45 | | | 3.613 | | | | .035 | |
| 19 | .170 | 457.35 | | | 3.839 | | | | .035 | |
| 20 | .180 | 470.25 | | | 4.064 | | | | .035 | |
| 21 | .190 | 483.16 | | | 4.290 | | | | .035 | |
| 22 | .200 | 496.06 | | | 4.516 | | | | .031 | |
| 23 | .225 | 528.32 | | | 5.081 | | | | .031 | |
| 24 | .250 | 560.58 | | | 5.645 | | | | .033 | |
| 25 | .275 | 592.83 | | | 6.210 | | | | .033 | |
| 26 | .300 | 625.09 | | | 6.774 | | | | .032 | |
| 27 | .325 | 657.35 | | | 7.339 | | | | .033 | |
| 28 | .350 | 689.60 | | | 7.903 | | | | .020 | |
| 29 | .375 | 721.86 | | | 8.468 | | | | .028 | |
| 30 | .400 | 754.12 | | | 9.032 | | | | .033 | |
| 31 | .425 | 786.38 | ▼ | ▼ | 9.597 | ▼ | ▼ | ▼ | .035 | ▼ |
| 32 | .450 | 818.64 | 0 | -- | 10.161 | 0 | -- | 0 | .034 | BOTTOM ϕ |

Table IV. (Cont'd) Orbiter

| T/C NO. | $\frac{x}{L}$ | FULL SCALE | | | MODEL SCALE | | | ϕ | SKIN THICKNESS | REMARKS |
|---------|---------------|------------|---|----|------------------|---|----|--------|----------------|--|
| | | x_0 | y | z | (x FROM NOSE) | y | z | | | |
| 33 | .475 | 850.89 | 0 | -- | 10.726 | 0 | -- | 0 | .030 | BOTTOM ϕ |
| 34 | .500 | 883.15 | ↑ | ↑ | 11.290 | ↑ | ↑ | ↑ | .030 | ↑ |
| 35 | .525 | 915.41 | | | 11.855 | | | | .032 | |
| 36 | .550 | 947.66 | | | 12.419 | | | | .031 | |
| 37 | .575 | 979.92 | | | 12.984 | | | | .029 | |
| 38 | .600 | 1012.18 | | | 13.548 | | | | .028 | |
| 39 | .625 | 1044.44 | | | 14.113 | | | | .028 | |
| 40 | .650 | 1076.70 | | | 14.677 | | | | .033 | |
| 41 | .675 | 1108.95 | | | 15.242 | | | | .035 | |
| 42 | .700 | 1141.21 | | | 15.806 | | | | .034 | |
| 43 | .725 | 1173.47 | | | 16.371 | | | | .035 | |
| 44 | .750 | 1205.72 | | | 16.935 | | | | .035 | |
| 45 | .775 | 1237.98 | | | 17.500 | | | | .034 | |
| 46 | .800 | 1270.24 | | | 18.064 | | | | .035 | |
| 47 | .825 | 1302.50 | | | 18.624 | | | | .035 | |
| 48 | .850 | 1334.76 | | | 19.193 | | | | .033 | |
| 49 | .875 | 1367.01 | | | 19.758 | | | | .033 | |
| 50 | .900 | 1399.27 | | | 20.322 | | | | .034 | |
| 51 | .925 | 1431.53 | | | 20.887 | | | | .035 | |
| 52 | .950 | 1463.78 | | | 21.451 | | | | .032 | ↓ |
| 53 | .975 | 1496.04 | | | 22.016 | | | | .032 | BOTTOM ϕ |
| 54 | 1.000 | 1528.30 | | | 22.580 | | | | .029 | $\frac{x}{L} = 1.000, \delta_{10} = 10^\circ$.033 |
| 55 | 1.025 | 1560.56 | | | 22.812 | | | | .032 | $\delta_{BF} 10^\circ$ ONLY ↑ |
| 56 | 1.050 | 1592.82 | | | 23.145 | | | | .032 | BF ↑ |
| 57 | 1.075 | 1625.08 | | | 23.385 | | | ↓ | .032 | $\delta_{BF} 10^\circ$ ONLY ↓ |
| 58 | 1.050 | 1592.82 | | | 23.707 | | | 0 | .030 | ↓ .032 |
| 59 | .010 | 250.00 | | | .226 | | | 180 | .035 | TOP ϕ |
| 60 | .025 | 271.24 | | | .565 | | | ↑ | .035 | ↑ |
| 61 | .050 | 302.50 | | | 1.120 | | | ↑ | .035 | ↑ |
| 62 | .075 | 334.76 | | | 1.694 | | | ↑ | .033 | ↑ |
| 63 | .100 | 367.01 | ↓ | ↓ | 2.268 | ↓ | ↓ | ↓ | .033 | ↓ |
| 64 | .125 | 399.27 | 0 | -- | 2.823 | 0 | -- | 180 | .031 | TOP ϕ |

Table IV. (Cont'd) Orbiter

| T/C NO. | $\frac{x}{L}$ | FULL SCALE | | | MODEL SCALE | | | ϕ | SKIN THICKNESS | REMARKS |
|---------|---------------|------------|-------|--------|-------------|-------|-------|--------|----------------|---------------------------|
| | | x_0 | y | z | FROM NOSE | y | z | | | |
| 65 | .150 | 431.54 | 0 | -- | 3.387 | 0 | -- | 180 | .026 | TOP Q |
| 66 | .160 | 444.45 | ↑ | ↑ | 3.613 | ↑ | ↑ | ↑ | .031 | ↑ |
| 67 | .170 | 457.35 | ↑ | ↑ | 3.839 | ↑ | ↑ | ↑ | .031 | ↑ |
| 68 | .180 | 470.25 | ↑ | ↑ | 4.064 | ↑ | ↑ | ↑ | .030 | ↑ |
| 69 | .200 | 496.06 | ↑ | ↑ | 4.516 | ↑ | ↑ | ↑ | .033 | ↑ |
| 70 | .250 | 560.58 | ↑ | ↑ | 5.645 | ↑ | ↑ | ↑ | .030 | ↑ |
| 71 | .300 | 625.09 | ↑ | ↑ | 6.774 | ↑ | ↑ | ↑ | .030 | ↑ |
| 72 | .400 | 754.12 | ↑ | ↑ | 9.032 | ↑ | ↑ | ↑ | .030 | ↑ |
| 73 | .500 | 883.15 | ↑ | ↑ | 11.290 | ↑ | ↑ | ↑ | .030 | ↑ |
| 74 | .600 | 1012.18 | ↑ | ↑ | 13.548 | ↑ | ↑ | ↑ | .031 | ↑ |
| 75 | .700 | 1141.21 | ↓ | ↓ | 15.806 | ↓ | ↓ | ↓ | .032 | ↓ |
| 76 | .800 | 1270.24 | 0 | -- | 18.064 | 0 | -- | 180 | .030 | TOP Q |
| 77 | | | 29.60 | 478.00 | WINDOW #1 | 0.518 | 8.365 | -- | .035 | TOP LEFT |
| 78 | | | 12.80 | 478.00 | WINDOW #1 | 0.224 | 8.365 | -- | .035 | TOP RIGHT |
| 79 | | | 21.20 | 464.97 | ↑ | 0.371 | 8.137 | ↑ | .033 | CENTER |
| 80 | | | 34.40 | 452.00 | ↓ | 0.602 | 7.910 | ↓ | .035 | BOTTOM LEFT |
| 81 | | | 6.00 | 452.00 | WINDOW #1 | 0.105 | 7.910 | ↓ | .034 | BOTTOM RIGHT |
| 82 | | | 43.20 | 478.00 | WINDOW #2 | 0.756 | 8.365 | ↓ | .035 | TOP LEFT |
| 83 | | | 34.80 | 478.00 | WINDOW #2 | 0.609 | 8.365 | ↓ | .035 | TOP RIGHT |
| 84 | | | 44.80 | 464.97 | ↑ | 0.784 | 8.137 | ↓ | .035 | CENTER |
| 85 | | | 59.20 | 452.00 | ↓ | 1.036 | 7.910 | ↓ | .035 | BOTTOM LEFT |
| 86 | | | 40.40 | 452.00 | WINDOW #2 | 0.707 | 7.910 | -- | .035 | BOTTOM RIGHT |
| 87 | | | 62.40 | 464.97 | WINDOW #3 | 1.092 | 8.137 | 140 | .032 | CENTER |
| 88 | .100 | 367.03 | 20.00 | -- | 2.258 | 0.350 | -- | 10 | .035 | FRONT FACE BOTTOM SURFACE |
| 89 | .150 | 431.54 | 24.00 | -- | 3.387 | 0.420 | -- | 10 | .035 | ↑ |
| 90 | .050 | 302.52 | 25.00 | ↑ | 1.129 | 0.438 | -- | 14 | .033 | ↑ |
| 91 | .200 | 496.06 | 25.00 | ↑ | 4.516 | 0.438 | ↑ | 11.5 | .031 | ↑ |
| 92 | .300 | 625.09 | 25.00 | ↑ | 6.774 | 0.438 | ↑ | 12 | .033 | ↑ |
| 93 | .200 | 496.06 | 25.00 | ↑ | 4.516 | 0.438 | ↑ | 11.5 | .034 | ↑ |
| 94 | .300 | 625.09 | 50.00 | ↓ | 6.774 | 0.875 | ↓ | 23 | .036 | ↓ |
| 95 | .400 | 754.12 | 50.00 | ↓ | 9.032 | 0.875 | ↓ | 21.5 | .026 | ↓ |
| 96 | .500 | 883.15 | 50.00 | -- | 11.290 | 0.875 | -- | 21.5 | .026 | FRONT FACE BOTTOM SURFACE |

Table IV. (Cont'd) Orator

| T/C NO. | x L | FULL SCALE | | | MODEL SCALE | | | φ | SKIN THICKNESS | REMARKS |
|---------|--------|----------------|--------|--------|-------------|-------|-------|------|----------------|----------------------|
| | | x ₀ | y | z | x FROM NOSE | y | z | | | |
| 97 | .600 | 1012.19 | 50.00 | | 13.548 | 0.875 | | 21.5 | .021 | FUSELAGE SIDE |
| 98 | .700 | 1141.21 | 50.00 | | 15.806 | 0.875 | | ↑ | .033 | |
| 99 | .800 | 1270.24 | 50.00 | | 18.064 | 0.875 | | ↓ | .033 | |
| 100 | .900 | 1399.27 | 50.00 | | 20.322 | 0.875 | | 21.5 | .034 | FUSELAGE SIDE |
| 101 | 1.000 | 1528.30 | 100.00 | | 22.580 | 1.75 | | 39 | .031 | BODY FLAP 10% = .034 |
| 102 | 1.050 | 1582.82 | 100.00 | | 23.704 | 1.75 | | 39 | .028 | BODY FLAP 12% = .033 |
| 103 | 1.100 | 1637.34 | 39.20 | | 2.258 | 0.686 | | 20 | .033 | FUSELAGE SIDE |
| 104 | 1.150 | 1691.86 | 40.80 | | 3.387 | 0.714 | | 20 | .031 | |
| 105 | .950 | | | 303.60 | 1.119 | -- | 5.313 | 22 | .031 | C.C.L. TANGENT |
| 106 | 1.100 | 1637.33 | 52.00 | -- | 2.258 | 0.910 | | 24.5 | .033 | ↑ |
| 107 | 1.150 | 1691.84 | 62.00 | -- | 3.387 | 1.085 | -- | 25.5 | .031 | ↓ |
| 108 | 1.200 | 1746.36 | 65.60 | 287.20 | 4.516 | 1.148 | 5.026 | 21.5 | .035 | C.C.L. TANGENT |
| 109 | 1.250 | 1800.88 | 74.40 | -- | 6.774 | 1.303 | | 34 | .033 | |
| 110 | 1.300 | 1855.40 | 75.00 | 292.00 | 4.516 | 1.323 | 5.110 | 35 | .030 | |
| 111 | 1.350 | 1909.92 | 79.20 | 304.80 | 3.387 | 1.386 | 5.334 | 40 | .030 | |
| 112 | 1.400 | 1964.44 | 85.20 | 298.80 | 4.516 | 1.491 | 5.229 | 40 | .034 | |
| 113 | 1.450 | 2018.96 | 91.40 | | 6.774 | 1.600 | | 40 | .026 | |
| 114 | 1.500 | 2073.48 | 102.80 | | 6.774 | 1.800 | | 45 | .023 | |
| 115 | 1.550 | 2128.00 | | 125.60 | 1.119 | | 5.698 | 35 | .030 | M.H.B. TANGENT |
| 116 | 1.600 | 2182.52 | | 17.60 | 2.258 | | 5.558 | 39 | .030 | M.H.B. TANGENT |
| 117 | 1.650 | 2237.04 | 83.00 | 114.4 | 3.387 | 1.463 | 5.502 | 55.5 | .030 | M.H.B. TANGENT |
| 118 | 1.700 | 2291.56 | | 110.00 | 4.516 | | 5.660 | 51 | .030 | |
| 119 | 1.750 | 2346.08 | | 130.00 | 6.774 | | 5.715 | 57.5 | .021 | |
| 120 | 1.800 | 2400.60 | | 140.00 | 6.774 | | 5.950 | 61 | .027 | |
| 121 | 1.075 | 1166.01 | | 350.00 | 1.119 | | 6.125 | -- | .030 | RCS CENTER |
| 122 | 1.0 | 675.00 | | 350.00 | 6.774 | | 6.125 | 65 | .026 | |
| 123 | 1.0 | 675.00 | | 350.00 | 18.064 | | 6.125 | 65 | .027 | |
| 124 | 1.0 | 675.00 | | 350.00 | 20.322 | | 6.125 | 65 | .033 | |
| 125 | 1.0 | 675.00 | | 350.00 | 22.580 | | 6.125 | 65 | .034 | |
| 126 | 1.0 | 675.00 | | 350.00 | 24.838 | | 6.125 | 65 | .030 | |
| 127 | 1.0 | 675.00 | | 350.00 | 27.096 | | 6.125 | 65 | .030 | ↓ |

Table IV. (Cont'd) Orbiter

| T/C NO. | $\frac{x}{L}$ | FULL SCALE | | | MODEL SCALE | | | ϕ | SKIN THICKNESS | REMARKS |
|---------|---------------|------------|----|--------|-------------|----|-------|--------|----------------|-------------------|
| | | x_0 | y | z | FROM NOSE | y | z | | | |
| 128 | .200 | 496.06 | -- | 360.00 | 4.516 | -- | 6.300 | 67.5 | .076 | FUSELAGE SIDE |
| 129 | .300 | 625.09 | -- | 360.00 | 6.774 | | 6.300 | 70 | .023 | |
| 130 | .600 | 1012.18 | | 375.14 | 13.548 | | 6.565 | 77 | .031 | |
| 131 | .050 | 302.52 | | 378.40 | 1.129 | | 6.622 | 60 | .035 | 45° TANGENT |
| 132 | .100 | 367.03 | | 410.00 | 2.258 | | 7.175 | 119 | .034 | |
| 133 | .200 | 496.06 | | 410.00 | 4.516 | | 7.175 | 96.5 | .028 | |
| 134 | .300 | 625.09 | | 430.00 | 6.774 | | 7.525 | 106 | .032 | FUSELAGE SIDE |
| 135 | .400 | 754.12 | | 430.00 | 9.032 | | | 105 | .033 | UPPER BODY |
| 136 | .500 | 883.15 | | 430.00 | 11.290 | | | | .032 | |
| 137 | .600 | 1012.18 | | 430.00 | 13.548 | | | | .032 | |
| 138 | .700 | 1141.21 | | 430.00 | 15.806 | | | | .032 | |
| 139 | .800 | 1270.24 | | 430.00 | 18.064 | | 7.525 | | .032 | |
| 140 | .900 | 1399.27 | | 370.00 | 20.322 | | 6.475 | | .033 | |
| 141 | .300 | 625.09 | | 478.80 | 6.774 | | 8.379 | 135 | .031 | |
| 142 | .400 | 754.12 | | | 9.032 | | | 135 | .030 | |
| 143 | .500 | 883.15 | | | 11.290 | | | 135 | .033 | |
| 144 | .600 | 1012.18 | | | 13.548 | | | 135 | .033 | |
| 145 | .700 | 1141.21 | | | 15.806 | | | 135 | .032 | |
| 146 | .600 | 1012.18 | | 445.0 | 13.548 | | 7.788 | 113 | .032 | |
| 147 | .600 | 1012.18 | | 440.0 | 13.548 | | 7.70 | 112 | .032 | |
| 148 | .750 | 1205.73 | | 450.00 | 15.806 | | 7.875 | 116 | .032 | |
| 149 | .750 | 1502.73 | | 490.00 | 15.806 | | 8.575 | 149 | .034 | UPPER BODY |
| 150 | .400 | 754.12 | | | 9.032 | | | 59.5 | .031 | WING UPPER CREASE |
| 151 | .500 | 883.15 | | | 11.290 | | | 63 | .012 | |
| 152 | .600 | 1012.18 | | | 13.548 | | | 65.5 | .030 | |
| 153 | .700 | 1141.21 | | | 15.806 | | | 64 | .030 | |
| 154 | .900 | 1399.27 | | 370.0 | 20.322 | | | | .034 | WING UPPER CREASE |

Table IV. (Continued) Orbiter

| T/C NO. | $\frac{2y}{b}$ | $\frac{x}{c}$ | FULL SCALE | | MODEL SCALE | | SKIN THICKNESS | REMARKS |
|---------|----------------|---------------|------------|---------|-------------|-------|----------------|---------------|
| | | | x_0 | y | x_0 | y | | |
| 155 | .250 | .025 | 640.050 | 117.085 | 7.043 | 2.049 | .031 | WING BOTTOM |
| 156 | ▲ | .153 | 754.120 | ▲ | 9.030 | ▲ | .035 | SURFACE |
| 157 | ▼ | .200 | 883.000 | ▲ | 11.288 | ▲ | .028 | ▲ |
| 158 | ▼ | .484 | 1011.180 | ▲ | 13.545 | ▲ | .023 | ▲ |
| 159 | ▼ | .500 | 1141.200 | ▼ | 15.802 | ▼ | .034 | ▲ |
| 160 | ▼ | .736 | 1271.230 | ▼ | 18.060 | ▼ | .034 | ▲ |
| 161 | .250 | .900 | 1419.000 | 117.085 | 20.313 | 2.049 | .034 | ▲ |
| 162 | .301 | | 754.000 | | 9.030 | | .023 | 30° ROLL DOWN |
| 163 | .388 | | 883.000 | | 11.288 | | .028 | 30° ROLL DOWN |
| 164 | .400 | .025 | 1011.180 | 187.336 | 13.504 | 3.278 | .035 | ▲ |
| 165 | ▲ | .100 | 640.050 | ▲ | 14.031 | ▲ | .034 | ▲ |
| 166 | ▼ | .200 | 1030.000 | ▲ | 14.900 | ▲ | .034 | ▲ |
| 167 | ▼ | .302 | 1141.210 | ▲ | 15.802 | ▲ | .035 | ▲ |
| 168 | ▼ | .559 | 1271.230 | ▲ | 18.060 | ▲ | .032 | ▲ |
| 169 | ▼ | .700 | 1441.250 | ▼ | 19.307 | ▼ | .032 | ▲ |
| 170 | .400 | .900 | 1441.250 | 187.336 | 21.065 | 3.278 | .032 | FLEVON |
| 171 | .500 | | 1007.470 | 234.170 | 14.516 | 4.098 | .033 | 30° ROLL DOWN |
| 172 | ▲ | .025 | 1077.913 | ▲ | 14.696 | ▲ | .035 | ▲ |
| 173 | ▼ | .153 | 1141.210 | ▲ | 15.802 | ▲ | .030 | ▲ |
| 174 | ▼ | .200 | 1141.240 | ▲ | 16.796 | ▲ | .031 | ▲ |
| 175 | ▼ | .302 | 1271.230 | ▲ | 18.060 | ▲ | .034 | ▲ |
| 176 | ▼ | .400 | 1441.250 | ▲ | 18.895 | ▲ | .034 | ▲ |
| 177 | ▼ | .500 | 1441.250 | ▼ | 19.318 | ▼ | .033 | ▲ |
| 178 | ▼ | .700 | 1441.250 | 234.170 | 21.075 | 4.098 | .033 | FLEVON |
| 179 | .100 | .100 | 1141.210 | 281.004 | 15.095 | 4.918 | .033 | ▲ |
| 180 | ▲ | .200 | 1141.210 | ▲ | 16.025 | ▲ | .031 | ▲ |
| 181 | ▼ | .300 | 1271.230 | ▲ | 17.755 | ▲ | .026 | ▲ |
| 182 | ▼ | .400 | 1441.250 | ▲ | 18.064 | ▲ | .026 | ▼ |
| 183 | ▼ | .600 | 1441.250 | ▼ | 19.145 | ▼ | .027 | WING BOTTOM |
| 184 | .100 | .100 | 1141.210 | 281.004 | 19.765 | 4.918 | .024 | SURFACE |

Table IV. (Continued)

| T/C NO. | 2y b | x c | FULL SCALE | | MODEL SCALE | | SKIN THICKNESS | REMARKS |
|---------|---------|--------|----------------|---------|---------------|-------|----------------|-----------------|
| | | | x ₀ | y | x (FROM NOSE) | y | | |
| 185 | .600 | .800 | 1404.000 | 281.004 | 20.404 | 4.918 | .035 | |
| 186 | .600 | .850 | 1422.000 | ↕ | 20.720 | | .033 | SURFACE |
| 187 | .600 | .900 | 1440.000 | 281.004 | 21.034 | | .034 | FLIGHT ↑ |
| 188 | .750 | | 1185.5 | 351.255 | 16.599 | 6.147 | .035 | L.E. ROUNDED |
| 189 | ↑ | .025 | 1193.428 | ↑ | 16.720 | ↑ | .035 | DOWN 30° |
| 190 | | .100 | 1214.228 | | 17.084 | | .032 | |
| 191 | | .303 | 1270.230 | | 18.064 | | .032 | |
| 192 | | .500 | 1325.028 | | 19.023 | | .032 | |
| 193 | | .700 | 1380.400 | | 19.992 | | .027 | |
| 194 | | .800 | 1408.100 | | 20.476 | | .031 | |
| 195 | ↓ | .850 | 1422.000 | ↓ | 20.719 | ↓ | .035 | |
| 196 | .750 | .900 | 1435.800 | 351.255 | 20.962 | 6.147 | .035 | |
| 197 | .850 | .100 | 1255.200 | 398.089 | 17.801 | 6.967 | .031 | |
| 198 | .850 | .300 | 1299.600 | 398.089 | 18.578 | 6.967 | .034 | |
| 199 | .850 | .500 | 1344.000 | 398.089 | 19.355 | 6.967 | .032 | |
| 200 | .900 | .60 | 1373.028 | 421.506 | 19.863 | 7.376 | .024 | |
| 201 | .900 | .30 | 1314.743 | 421.506 | 18.846 | 7.376 | .030 | |
| 202 | .950 | | | 444.857 | | 7.785 | .035 | L.E. RELIEF 30° |
| 203 | ↑ | .050 | 1299.925 | ↑ | 19.514 | ↑ | .035 | |
| 204 | | .100 | 1303.828 | | 19.652 | | .035 | |
| 205 | | .300 | 1335.543 | | 19.407 | | .024 | |
| 206 | | .500 | 1367.257 | | 19.762 | | .022 | |
| 207 | ↓ | .700 | 1398.950 | | 20.316 | ↓ | .035 | |
| 208 | .950 | .900 | 1430.650 | ↓ | 20.870 | 7.785 | .030 | |
| 209 | .966 | 0.00 | 1307.000 | 452.416 | 18.708 | 7.917 | .032 | L.E. |
| 210 | .993 | 0.00 | 1398.950 | 464.914 | 20.316 | 8.130 | .031 | L.E. |
| 211 | .600 | | | 281.004 | | 4.918 | .035 | |
| 212 | ↑ | | | ↑ | | | .035 | |
| 213 | ↓ | | | ↓ | | | .035 | |
| 214 | .600 | | | 281.004 | | 4.918 | .035 | WIPED SURFACE |

Table IV. (Continued) Orbiter

| T/C NO. | $\frac{2y}{b}$ | $\frac{x}{c}$ | FULL SCALE | | MODEL SCALE | | SKIN THICKNESS | REMARKS |
|---------|----------------|---------------|------------|---------|---------------|-------|----------------|-------------------------|
| | | | x_0 | y | x (FROM NOSE) | y | | |
| 215 | .600 | | | 281.004 | | 4.918 | .035 | CLUSTER B SEE FIG. 6 |
| 216 | .600 | | | 281.004 | | 4.918 | .035 | ↑ |
| 217 | .600 | | | 281.004 | | 4.918 | .035 | ↓ |
| 218 | .850 | | | 398.089 | | 6.967 | .020 | CLUSTER C SEE FIG. 6 |
| 219 | ↑ | | | ↑ | | ↑ | .020 | ↑ |
| 220 | ↑ | | | ↑ | | ↑ | .020 | |
| 221 | ↓ | | | ↓ | | ↓ | .020 | |
| 222 | ↓ | | | ↓ | | ↓ | .020 | |
| 223 | ↓ | | | ↓ | | ↓ | .020 | |
| 224 | .850 | | | 398.089 | | 6.967 | .020 | ↓ |
| 225 | .400 | .050 | 1015.114 | 187.336 | 13.599 | 3.278 | .025 | WING TOP SURFACE |
| 226 | ↑ | .200 | 1080.428 | ↑ | 14.918 | ↑ | .024 | ↑ |
| 227 | ↓ | .600 | 1291.171 | ↓ | | ↓ | .033 | |
| 228 | .400 | .950 | 1466.875 | 187.336 | | 3.278 | .031 | ELEVON |
| 229 | .600 | .050 | 1134.886 | 281.004 | 15.696 | 4.918 | .032 | |
| 230 | .600 | .200 | 1188.657 | ↑ | 16.637 | ↑ | .031 | |
| 231 | .600 | .600 | 1332.028 | ↑ | 19.146 | ↑ | .0 | |
| 232 | ↑ | .300 | 1404.000 | ↓ | 20.404 | ↓ | .032 | ELEVON |
| 233 | ↓ | .900 | 1440.000 | ↓ | 21.034 | ↓ | .034 | ↑ |
| 234 | .850 | .950 | 1458.000 | 281.004 | 21.349 | 4.918 | .033 | ↑ |
| 235 | .850 | .050 | 1023.057 | 374.672 | 17.239 | 6.557 | .033 | |
| 236 | ↑ | .200 | 1260.257 | ↑ | 17.889 | ↑ | .033 | |
| 237 | ↑ | .600 | 1359.514 | ↑ | 19.627 | ↑ | .032 | |
| 238 | ↓ | .800 | 1408.780 | ↓ | 20.488 | ↓ | .030 | ELEVON |
| 239 | ↓ | .900 | 1433.690 | ↓ | 20.924 | ↓ | .030 | ELEVON |
| 240 | .850 | .950 | 1446.145 | 374.672 | 21.192 | 6.557 | .030 | ELEVON ↓ |

Table IV. (Continued)

Orbiter

| T/C NO. | x [| FULL SCALE | | | MODEL SCALE | | | φ | SKIN THICKNESS | REMARKS |
|---------|-------|----------------|-------|-------|---------------|-------|-------|-------|----------------|----------------------|
| | | x ₀ | y | z | x (FROM NOSE) | y | z | | | |
| 241 | .829 | 1307 | | | 18.715 | | | | .026 | BOTTOM CREASE OF CMS |
| 242 | .900 | 1399.27 | | | 20.318 | | | | .035 | BOTTOM CREASE OF CMS |
| 243 | .975 | 1491.04 | | | 22.011 | | | | .030 | BOTTOM CREASE OF CMS |
| 244 | 1.000 | 1528.3 | | | 22.575 | | | | .034 | BOTTOM OF RCS |
| 245 | 1.014 | 1547.0 | | | 22.902 | | | | .035 | BOTTOM OF RCS |
| 246 | .780 | 1245 | 95.0 | 474.0 | 17.608 | 1.662 | 8.295 | 127.9 | .032 | CMS PODS |
| 247 | .805 | 1276 | 112.9 | 474.0 | 18.173 | 1.976 | 8.295 | 123.8 | .031 | ↑ |
| 248 | .829 | 1307 | 124.5 | 474.0 | 18.715 | 2.179 | 8.295 | 120.8 | .031 | |
| 249 | .862 | 1350 | 132.6 | ↑ | 19.460 | 2.320 | 8.295 | 119.1 | .035 | |
| 250 | .963 | 1480 | 142.5 | ↓ | 21.740 | 2.494 | 8.295 | 117.5 | .028 | |
| 251 | 1.000 | 1528.3 | 142.5 | ↓ | 22.575 | 2.494 | 8.295 | 117.5 | .033 | |
| 252 | 1.014 | 1547.0 | | 474.0 | 22.902 | | 8.295 | | .033 | |
| 253 | .805 | 1276 | 105.5 | 488 | 18.173 | 1.846 | 8.540 | 129.5 | .032 | |
| 254 | .829 | 1307 | 117.0 | 498.7 | 18.715 | 2.048 | 8.727 | 130.0 | .033 | |
| 255 | .862 | 1350 | 126.5 | 506 | 19.460 | 2.214 | 8.855 | 130.0 | .031 | |
| 256 | .963 | 1480 | 134.5 | 513 | 21.740 | 2.354 | 8.978 | 130.0 | .028 | |
| 257 | 1.000 | 1528.3 | | 500 | 22.575 | | 8.750 | | .031 | |
| 258 | 1.014 | 1547.0 | | 500 | 22.902 | | 8.750 | | .032 | |
| 259 | .805 | 1276 | 95.0 | 494.3 | 18.173 | 1.662 | 8.650 | 135.0 | .033 | |
| 260 | .829 | 1307 | 95.0 | 511.0 | 18.715 | 1.662 | 8.942 | 139.0 | .034 | |
| 261 | .862 | 1350 | 95.0 | 521.0 | 19.460 | 1.662 | 9.118 | 142.1 | .031 | |
| 262 | .963 | 1480 | 95.0 | 530.0 | 21.740 | 1.662 | 9.275 | 144.0 | .027 | |
| 263 | .862 | 1350 | 65 | 517.5 | 19.460 | 1.138 | 9.056 | 151.2 | .031 | ↓ |
| 264 | .963 | 1480 | 65 | 517.5 | 21.740 | 1.138 | 9.275 | 153 | .026 | CMS PODS |

Table IV. (Continued) Orbiter

| T/C NO. | $\frac{z}{b_v}$ | $\frac{x}{c}$ | FULL SCALE | | MODEL SCALE | | SKIN THICKNESS | REMARKS |
|---------|-----------------|---------------|------------|--------|-----------------|--------|----------------|---------------|
| | | | x_0 | z | x (FROM NOSE) | z | | |
| 265 | .159 | .100 | 1353.00 | 550.20 | 19.513 | 9.628 | .030 | VERTICAL TAIL |
| 266 | ▲ | .300 | 1448.66 | 550.20 | 20.361 | 9.628 | .030 | ▲ |
| 267 | ▼ | .700 | 1448.66 | 550.20 | 22.062 | 9.628 | .028 | |
| 268 | .299 | 0.00 | | 594.40 | | 10.402 | .033 | L.E. |
| 269 | ▲ | .100 | 1394.94 | ▲ | 20.246 | ▲ | .031 | |
| 270 | ▲ | .300 | 1439.00 | ▲ | 21.018 | ▲ | .031 | |
| 271 | ▲ | .500 | 1483.06 | ▲ | 21.789 | ▲ | .031 | |
| 272 | ▼ | .700 | 1527.11 | ▼ | 22.559 | ▼ | .022 | |
| 273 | .299 | .900 | 1571.17 | 594.40 | 23.330 | 10.402 | .022 | |
| 274 | .532 | 0.00 | | 667.96 | | 11.689 | .034 | L.E. |
| 275 | ▲ | .100 | 1538.31 | ▲ | 22.755 | ▲ | .031 | |
| 276 | ▲ | .300 | 1574.94 | ▲ | 23.396 | ▲ | .032 | |
| 277 | ▲ | .500 | 1611.57 | ▲ | 25.094 | ▲ | .032 | |
| 278 | ▼ | .700 | 1648.14 | ▼ | 24.677 | ▼ | .023 | |
| 279 | .532 | .900 | 1624.77 | 667.96 | 25.318 | 11.689 | .026 | |
| 280 | .765 | 0.00 | | 741.53 | | 12.977 | .034 | L.E. |
| 281 | .765 | .100 | 1461.00 | ▲ | 21.403 | ▲ | .031 | |
| 282 | ▲ | .300 | 1490.14 | ▲ | 21.912 | ▲ | .031 | |
| 283 | ▲ | .500 | 1519.29 | ▲ | 22.423 | ▲ | .030 | |
| 284 | ▼ | .700 | 1548.43 | ▼ | 22.933 | ▼ | .024 | |
| 285 | .765 | .900 | 1577.57 | 741.53 | 23.442 | 12.977 | .024 | |
| 286 | .905 | 0.00 | | 785.73 | | 13.750 | .033 | L.E. |
| 287 | .905 | .100 | 1576.71 | 785.73 | 23.424 | 13.750 | .030 | ▼ |
| 288 | .905 | .500 | 1625.80 | 785.73 | 24.288 | 13.750 | .030 | VERTICAL TAIL |

Table IV. Orbiter Left Main Nozzle T/C Locations
Model 22-OTS

| T/C NO. | x FROM EXIT PLANE | | SKIN THICKNESS | ϕ CLOCKWISE LOOKING FORWARD 0° BOTTOM ϵ |
|---------|-------------------|-------|----------------|--|
| | F.S. | M.S. | | |
| 301 | 5" | 0.088 | .031 | 0° |
| 302 | ↓ | ↓ | .031 | 25° |
| 303 | ↓ | ↓ | .031 | 45° |
| 304 | ↓ | ↓ | .031 | 65° |
| 305 | ↓ | ↓ | .031 | 90° |
| 306 | ↓ | ↓ | .031 | 135° |
| 307 | ↓ | ↓ | .031 | 315° |
| 308 | 10" | 0.175 | .031 | 0° |
| 309 | ↓ | ↓ | .031 | 25° |
| 310 | ↓ | ↓ | .031 | 45° |
| 311 | ↓ | ↓ | .031 | 65° |
| 312 | ↓ | ↓ | .031 | 90° |
| 313 | 15" | 0.263 | .031 | 0° |
| 314 | ↓ | ↓ | .031 | 45° |
| 315 | ↓ | ↓ | .031 | 90° |
| 316 | 25" | 0.438 | .031 | 0° |
| 317 | ↓ | ↓ | .031 | 45° |
| 318 | ↓ | ↓ | .031 | 65° |
| 319 | ↓ | ↓ | .031 | 90° |
| 320 | 45" | 0.788 | .031 | 45° |
| 321 | | | .032 | BASE PLATE |
| 322 | | | .034 | ↓ |
| 323 | | | .031 | |
| 324 | | | .032 | ↓ |

Table IV. External Tank Locations

| T/C NO. | x_T FS | x_{ms}^* | $\frac{x}{L}$ | θ | SKIN THICKNESS | REMARKS |
|---------|----------|------------|---------------|----------|----------------|---------|
| 501 | 383.60 | 1.306 | .040 | 0° | .034 | NOSE |
| 502 | 458.20 | 2.6110 | .080 | ↑ | .034 | NOSE |
| 503 | 588.75 | 4.896 | .150 | | NOSE | |
| 504 | 1055.00 | 13.055 | .400 | ↓ | .035 | |
| 505 | 1428.00 | 19.582 | .600 | | .034 | |
| 506 | 1801.00 | 26.110 | .800 | 0° | .035 | |
| 507 | 1055.00 | 13.055 | .400 | 45° | .035 | |
| 508 | 1241.50 | 16.319 | .500 | ↑ | .035 | |
| 509 | 1428.00 | 19.582 | .600 | ↓ | .034 | |
| 510 | 1614.50 | 22.846 | .700 | ↓ | .034 | |
| 511 | 1801.00 | 26.110 | .800 | ↓ | .035 | |
| 512 | 1987.5 | 29.374 | .900 | 45° | ↑ | |
| 513 | 868.5 | 9.791 | .300 | 67.5° | | |
| 514 | 961.75 | 11.423 | .350 | ↑ | ↓ | |
| 515 | 1055.00 | 13.055 | .400 | | .035 | |
| 516 | 1241.50 | 16.319 | .500 | | .034 | |
| 517 | 1428.00 | 19.582 | .600 | | ↑ | |
| 518 | 1521.25 | 21.214 | .650 | | ↓ | |
| 519 | 1614.50 | 22.846 | .700 | | .034 | |
| 520 | 1707.75 | 24.478 | .750 | | .035 | |
| 521 | 1801.00 | 26.110 | .800 | ↓ | ↑ | |
| 522 | 1987.5 | 29.374 | .900 | 67.5° | | |
| 523 | 682.00 | 6.528 | .200 | 90° | | |
| 524 | 775.25 | 8.159 | .250 | ↑ | | |
| 525 | 821.88 | 8.975 | .275 | | | |
| 526 | 868.50 | 9.791 | .300 | | | |
| 527 | 915.12 | 10.607 | .325 | | ↓ | |
| 528 | 961.75 | 11.423 | .350 | | .035 | |
| 529 | 1055.00 | 13.055 | .400 | | .034 | |
| 530 | 1148.25 | 14.687 | .450 | | .035 | |
| 531 | 1241.50 | 16.319 | .500 | | .034 | |
| 532 | 1334.75 | 17.951 | .550 | ↓ | .035 | |
| 533 | 1428.00 | 19.582 | .600 | 90° | .034 | |

*MEASURED FROM NOSE

Table IV. (Continued)
(External Tanks)

| T/C NO. | x_T FS | x_{ms}^* | $\frac{x}{L}$ | θ | SKIN THICKNESS | REMARKS |
|---------|----------|------------|---------------|----------|----------------|---------|
| 534 | 1521.25 | 21.214 | .650 | 90° | .034 | |
| 535 | 1614.50 | 22.846 | .700 | ↑ | .034 | |
| 536 | 1707.75 | 24.478 | .750 | ↑ | .035 | |
| 537 | 1801.00 | 26.110 | .800 | ↓ | .035 | |
| 538 | 1894.25 | 27.742 | .850 | ↓ | .034 | |
| 539 | 1987.50 | 29.374 | .900 | 90° | | |
| 540 | 2080.75 | 31.006 | .950 | 112.5° | .034 | |
| 541 | 2174.00 | 32.638 | .300 | ↑ | ↑ | |
| 542 | 915.12 | 10.607 | .325 | ↑ | ↑ | |
| 543 | 961.75 | 11.423 | .350 | ↑ | ↓ | |
| 544 | 1055.00 | 13.055 | .400 | ↑ | ↓ | |
| 545 | 1148.25 | 14.687 | .450 | ↑ | .035 | |
| 546 | 1241.50 | 16.319 | .500 | ↑ | .034 | |
| 547 | 1334.75 | 17.951 | .550 | ↑ | .035 | |
| 548 | 1428.00 | 19.582 | .600 | ↑ | .034 | |
| 549 | 1521.25 | 21.214 | .650 | ↑ | .034 | |
| 550 | 1614.50 | 22.846 | .700 | ↑ | .034 | |
| 551 | 1707.75 | 24.478 | .750 | ↑ | .035 | |
| 552 | 1801.00 | 26.110 | .800 | ↓ | ↑ | |
| 553 | 1894.25 | 27.742 | .850 | ↓ | ↓ | |
| 554 | 1987.50 | 29.374 | .900 | 112.5° | .035 | |
| 555 | 1847.62 | 26.926 | .825 | 123° | .034 | |
| 556 | 1894.25 | 27.742 | .850 | ↑ | .034 | |
| 557 | 1940.88 | 28.558 | .875 | ↑ | .034 | |
| 558 | 1987.50 | 29.374 | .900 | ↓ | .035 | |
| 559 | 2034.12 | 30.190 | .925 | ↓ | .035 | |
| 560 | 2099.40 | 31.332 | .960 | 123° | .034 | |
| 561 | 915.12 | 10.607 | .325 | 135° | .035 | |
| 562 | 961.75 | 11.423 | .350 | ↑ | ↑ | |
| 563 | 1008.38 | 12.239 | .375 | ↑ | ↓ | |
| 564 | 1055.00 | 13.055 | .400 | ↑ | ↓ | |
| 565 | 1148.25 | 14.687 | .450 | ↑ | .035 | |
| 566 | 1241.50 | 16.319 | .500 | ↑ | .034 | |
| 567 | 1334.75 | 17.951 | .550 | ↑ | .035 | |
| 568 | 1428.00 | 19.582 | .600 | ↓ | .034 | |
| 569 | 1521.25 | 21.214 | .650 | 135° | .034 | |

*MEASURED FROM NOSE

Table IV. (Continued)
(External Tank)

| T/C NO. | x_T FS | x_{MS}^* | $\frac{x}{L}$ | θ | SKIN THICKNESS | REMARKS |
|---------|----------|------------|---------------|----------|----------------|---------|
| 570 | 1614.50 | 22.846 | .700 | 135° | .035 | |
| 571 | 1707.75 | 24.478 | .750 | ↑ | .034 | |
| 572 | 1801.00 | 26.110 | .800 | ↓ | .035 | |
| 573 | 1894.25 | 27.742 | .850 | ↓ | .034 | |
| 574 | 1987.50 | 29.374 | .900 | ↓ | .035 | |
| 575 | 2052.78 | 30.576 | .935 | 135° | | |
| 576 | 1055.00 | 13.055 | .400 | 151 | .035 | |
| 577 | 1101.62 | 13.871 | .425 | 157 | ↑ | |
| 578 | 1148.25 | 14.687 | .450 | ↑ | ↓ | |
| 579 | 1194.88 | 15.503 | .475 | ↑ | .035 | |
| 580 | 1241.50 | 16.319 | .500 | ↑ | .034 | |
| 581 | 1334.75 | 17.951 | .550 | ↑ | .035 | |
| 582 | 1428.00 | 19.582 | .600 | ↑ | .034 | |
| 583 | 1521.25 | 21.214 | .650 | ↑ | .034 | |
| 584 | 1614.50 | 22.846 | .700 | ↑ | .035 | |
| 585 | 1707.75 | 24.478 | .750 | ↓ | .035 | |
| 586 | 1801.00 | 26.110 | .800 | ↓ | .035 | |
| 587 | 1894.25 | 27.742 | .850 | ↓ | .034 | |
| 588 | 1987.50 | 29.374 | .900 | 157 | .034 | |
| 589 | 1101.62 | 13.871 | .425 | 161 | .035 | |
| 590 | 1241.50 | 16.319 | .500 | 165° | .034 | |
| 591 | 1414.50 | 21.846 | .700 | 165° | .035 | |
| 592 | 1987.50 | 29.374 | .900 | 165° | .034 | |
| 593 | 1055.00 | 13.055 | .400 | 165° | .035 | |
| 594 | 309.00 | 0.000 | 0.000 | 180 | .033 | NOSE |
| 595 | 318.32 | 0.163 | .005 | ↑ | .033 | |
| 596 | 327.65 | 0.326 | .010 | ↑ | .034 | |
| 597 | 382.60 | 1.306 | .040 | ↓ | .033 | |
| 598 | 458.20 | 2.611 | .080 | 125° | .035 | ↓ |

*MEASURED FROM NOSE

Table IV. (CONTINUED)
(External Tank)

| T/C NO. | x_T FS | x_{ms}^* | $\frac{x}{L}$ | θ | SKIN THICKNESS | REMARKS |
|---------|----------|------------|---------------|----------|----------------|---------|
| 599 | 588.75 | 4.896 | .150 | 180° | .035 | |
| 600 | 682.00 | 6.528 | .200 | ↑ | .034 | |
| 601 | 775.25 | 8.159 | .250 | | .035 | |
| 602 | 868.50 | 9.791 | .300 | | ↑ | |
| 603 | 961.75 | 11.423 | .350 | | ↓ | |
| 604 | 1008.38 | 12.239 | .375 | | .035 | |
| 605 | 1055.00 | 13.055 | .400 | | .034 | |
| 606 | 1101.62 | 13.871 | .425 | | ↑ | |
| 607 | 1148.25 | 14.687 | .450 | | ↑ | |
| 608 | 1194.88 | 15.503 | .475 | | ↓ | |
| 609 | 1241.50 | 16.319 | .500 | | .034 | |
| 610 | 1288.12 | 17.135 | .525 | | .035 | |
| 611 | 1334.75 | 17.951 | .550 | | .035 | |
| 612 | 1381.38 | 18.767 | .575 | | .034 | |
| 613 | 1428.00 | 19.582 | .600 | | ↑ | |
| 614 | 1474.62 | 20.398 | .625 | | ↑ | |
| 615 | 1521.25 | 21.214 | .650 | | ↓ | |
| 616 | 1567.88 | 22.030 | .675 | | ↓ | |
| 617 | 1614.50 | 22.846 | .700 | | .034 | |
| 618 | 1707.75 | 24.478 | .750 | | .035 | |
| 619 | 1801.00 | 26.110 | .800 | | .035 | |
| 620 | 1894.25 | 27.742 | .850 | | .035 | |
| 621 | 1987.5 | 29.374 | .900 | | .034 | |
| 622 | 2056.50 | 30.581 | .937 | ↓ | .034 | |
| 623 | 2127.38 | 31.822 | .975 | 180° | .034 | |
| 624 | 458.20 | 2.611 | .080 | 194° | .035 | |
| 625 | 587.75 | 4.896 | .150 | 196° | .035 | |
| 626 | 868.50 | 9.791 | .300 | 196° | .035 | |

*MEASURED FROM NOSE

Table VI. (Concluded)
(External Tank)

| T/C NO. | x_T FS | x_{ms}^* | $\frac{x}{L}$ | θ | SKIN THICKNESS | REMARKS |
|---------|----------|------------|---------------|----------|----------------|---------|
| 627 | 1241.50 | 16.319 | .500 | 196° | .034 | |
| 628 | 1614.50 | 22.846 | .700 | 196° | .034 | |
| 629 | 1987.50 | 29.374 | .900 | 197° | .034 | |
| 630 | 588.75 | 4.896 | .150 | 208° | .033 | |
| 631 | 1055.00 | 13.055 | .400 | ↑ | .034 | |
| 632 | 1428.00 | 19.582 | .600 | ↓ | .035 | |
| 633 | 1801.00 | 26.110 | .800 | ↓ | .035 | |
| 634 | 2056.50 | 30.581 | | 208 | .035 | |
| 635 | 1055.00 | 13.055 | .400 | 216° | .034 | |
| 636 | 1241.50 | 16.319 | .500 | 216° | .034 | |
| 637 | 1614.50 | 22.846 | .700 | 216° | .034 | |
| 638 | 933.78 | 10.934 | .335 | 222.5° | .036 | |
| 639 | 1055.00 | 13.055 | .400 | 229° | .034 | |
| 640 | 1428.00 | 19.582 | .600 | 229° | .035 | |
| 641 | 1801.00 | 26.110 | .800 | 229° | .035 | |

*MEASURED FROM NOSE

TABLE V.

THERMOCOUPLE HOOKUP SCHEDULE

T/C Schedule 1

| <u>Channel No.</u> | <u>T/C No.</u> | <u>Channel No.</u> | <u>T/C No.</u> | <u>Channel No.</u> | <u>T/C No.</u> |
|------------------------|--------------------|------------------------|--------------------|------------------------|--------------------|
| 1 | 1 | 33 | 34 | 65 | 68 |
| 2 | 2 | 34 | 35 | 66 | 69 |
| 3 | 3 | 35 | 36 | 67 | 71 |
| 4 | 4 | 36 | 37 | 68 | 72 |
| 5 | 5 | 37 | 38 | 69 | 74 |
| 6 | 6 | 38 | 39 | 70 | 90 |
| 7 | 7 | 39 | 40 | 71 | 91 |
| 8 | 8 | 40 | 41 | 72 | 92 |
| 9 | 9 | 41 | 42 | 73 | 93 |
| 10 | 10 | 42 | 43 | 74 | 94 |
| 11 | 11 | 43 | 44 | 75 | 95 |
| 12 | 12 | 44 | 45 | 76 | 96 |
| 13 | 14 | 45 | 46 | 77 | 97 |
| 14 | 15 | 46 | 47 | 78 | 98 |
| 15 | 16 | 47 | 48 | 79 | 99 |
| 16 | 17 | 48 | 49 | 80 | 100 |
| 17 | 18 | 49 | 50 | 81 | 101 |
| 18 | 19 | 50 | 51 | 82 | 102 |
| 19 | 20 | 51 | 52 | 83 | 103 |
| 20 | 21 | 52 | 53 | 84 | 104 |
| 21 | 22 | 53 | 54 | 85 | 105 |
| 22 | 23 | 54 | 56 | 86 | 111 |
| 23 | 24 | 55 | 58 | 87 | 115 |
| 24 | 25 | 56 | 59 | 88 | 116 |
| 25 | 26 | 57 | 60 | 89 | 134 |
| 26 | 27 | 58 | 61 | 90 | 135 |
| 27 | 28 | 59 | 62 | 91 | 150 |
| 28 | 29 | 60 | 63 | 92 | 155 |
| 29 | 30 | 61 | 64 | 93 | 156 |
| 30 | 31 | 62 | 65 | 94 | 157 |
| 31 | 32 | 63 | 66 | 95 | 158 |
| 32 | 33 | 64 | 67 | 96 | 159 |
| | | | | 97 | 160 |

TABLE V. - Continued.

THERMOCOUPLE HOOKUP SCHEDULE

T/C Schedule 2

| <u>Ch-n No.</u> | <u>T/C No.</u> | <u>Ch-n No.</u> | <u>T/C No.</u> | <u>Ch-n No.</u> | <u>T/C No.</u> |
|-----------------|----------------|-----------------|----------------|-----------------|----------------|
| 1 | 161 | 33 | 193 | 65 | 229 |
| 2 | 162 | 34 | 194 | 66 | 230 |
| 3 | 163 | 35 | 195 | 67 | 233 |
| 4 | 164 | 36 | 196 | 68 | 234 |
| 5 | 165 | 37 | 197 | 69 | 246 |
| 6 | 166 | 38 | 198 | 70 | 247 |
| 7 | 167 | 39 | 199 | 71 | 248 |
| 8 | 168 | 40 | 200 | 72 | 249 |
| 9 | 169 | 41 | 201 | 73 | 271 |
| 10 | 170 | 42 | 202 | 74 | 275 |
| 11 | 171 | 43 | 203 | 75 | 276 |
| 12 | 172 | 44 | 204 | 76 | 280 |
| 13 | 173 | 45 | 205 | 77 | 281 |
| 14 | 174 | 46 | 206 | 78 | 282 |
| 15 | 175 | 47 | 207 | 79 | 285 |
| 16 | 176 | 48 | 208 | 80 | 286 |
| 17 | 177 | 49 | 209 | 81 | 288 |
| 18 | 178 | 50 | 210 | 82 | 501 |
| 19 | 179 | 51 | 211 | 83 | 502 |
| 20 | 180 | 52 | 212 | 84 | 503 |
| 21 | 181 | 53 | 213 | 85 | 504 |
| 22 | 182 | 54 | 214 | 86 | 505 |
| 23 | 183 | 55 | 215 | 87 | 506 |
| 24 | 184 | 56 | 216 | 88 | 507 |
| 25 | 185 | 57 | 217 | 89 | 508 |
| 26 | 186 | 58 | 218 | 90 | 509 |
| 27 | 187 | 59 | 219 | 91 | 510 |
| 28 | 188 | 60 | 220 | 92 | 511 |
| 29 | 189 | 61 | 221 | 93 | 512 |
| 30 | 190 | 62 | 222 | 94 | 513 |
| 31 | 191 | 63 | 223 | 95 | 514 |
| 32 | 192 | 64 | 224 | 96 | 516 |
| | | | | 97 | 517 |

TABLE V. - Continued.

THERMOCOUPLE HOOKUP SCHEDULE

T/C Schedule 3

| <u>Chan No.</u> | <u>T/C No.</u> | <u>Chan No.</u> | <u>T/C No.</u> | <u>Chan No.</u> | <u>T/C No.</u> |
|-----------------|----------------|-----------------|----------------|-----------------|----------------|
| 1 | 519 | 33 | 574 | 65 | 609 |
| 2 | 521 | 34 | 576 | 66 | 610 |
| 3 | 523 | 35 | 577 | 67 | 611 |
| 4 | 526 | 36 | 578 | 68 | 612 |
| 5 | 529 | 37 | 579 | 69 | 613 |
| 6 | 531 | 38 | 580 | 70 | 614 |
| 7 | 533 | 39 | 581 | 71 | 615 |
| 8 | 535 | 40 | 582 | 72 | 616 |
| 9 | 537 | 41 | 583 | 73 | 617 |
| 10 | 539 | 42 | 584 | 74 | 618 |
| 11 | 541 | 43 | 585 | 75 | 619 |
| 12 | 544 | 44 | 586 | 76 | 620 |
| 13 | 546 | 45 | 587 | 77 | 621 |
| 14 | 548 | 46 | 589 | 78 | 622 |
| 15 | 550 | 47 | 590 | 79 | 623 |
| 16 | 552 | 48 | 591 | 80 | 624 |
| 17 | 555 | 49 | 592 | 81 | 625 |
| 18 | 557 | 50 | 594 | 82 | 626 |
| 19 | 558 | 51 | 595 | 83 | 627 |
| 20 | 561 | 52 | 596 | 84 | 628 |
| 21 | 562 | 53 | 597 | 85 | 629 |
| 22 | 563 | 54 | 598 | 86 | 630 |
| 23 | 564 | 55 | 599 | 87 | 631 |
| 24 | 565 | 56 | 600 | 88 | 632 |
| 25 | 566 | 57 | 601 | 89 | 633 |
| 26 | 567 | 58 | 602 | 90 | 634 |
| 27 | 568 | 59 | 603 | 91 | 635 |
| 28 | 569 | 60 | 604 | 92 | 636 |
| 29 | 570 | 61 | 605 | 93 | 637 |
| 30 | 571 | 62 | 606 | 94 | 638 |
| 31 | 572 | 63 | 607 | 95 | 639 |
| 32 | 573 | 64 | 608 | 96 | 640 |
| | | | | 97 | 641 |

TABLE V. - Continued.

THERMOCOUPLE HOOKUP SCHEDULE

| T/C Schedule 1 | | | | | |
|----------------|--------|---------|--------|---------|--------|
| Chan No | T/C No | Chan No | T/C No | Chan No | T/C No |
| 1 | 77 | 33 | 34 | 65 | 68 |
| 2 | 78 | 34 | 35 | 66 | 69 |
| 3 | 79 | 35 | 36 | 67 | 71 |
| 4 | 80 | 36 | 37 | 68 | 72 |
| 5 | 81 | 37 | 38 | 69 | 71 |
| 6 | 82 | 38 | 39 | 70 | 90 |
| 7 | 83 | 39 | 40 | 71 | 91 |
| 8 | 84 | 40 | 41 | 72 | 92 |
| 9 | 85 | 41 | 42 | 73 | 93 |
| 10 | 86 | 42 | 43 | 74 | 94 |
| 11 | 87 | 43 | 44 | 75 | 95 |
| 12 | 12 | 44 | 45 | 76 | 96 |
| 13 | 14 | 45 | 46 | 77 | 97 |
| 14 | 15 | 46 | 47 | 78 | 98 |
| 15 | 16 | 47 | 48 | 79 | 99 |
| 16 | 17 | 48 | 49 | 80 | 100 |
| 17 | 18 | 49 | 50 | 81 | 101 |
| 18 | 19 | 50 | 51 | 82 | 102 |
| 19 | 20 | 51 | 52 | 83 | 103 |
| 20 | 21 | 52 | 53 | 84 | 104 |
| 21 | 22 | 53 | 54 | 85 | 105 |
| 22 | 23 | 54 | 56 | 86 | 111 |
| 23 | 24 | 55 | 58 | 87 | 115 |
| 24 | 25 | 56 | 59 | 88 | 116 |
| 25 | 26 | 57 | 60 | 89 | 134 |
| 26 | 27 | 58 | 61 | 90 | 135 |
| 27 | 28 | 59 | 62 | 91 | 150 |
| 28 | 29 | 60 | 63 | 92 | 155 |
| 29 | 30 | 61 | 64 | 93 | 156 |
| 30 | 31 | 62 | 65 | 94 | 157 |
| 31 | 32 | 63 | 66 | 95 | 158 |
| 32 | 33 | 64 | 67 | 96 | 159 |
| | | | | 97 | 160 |

TABLE V. - Continued.

THERMOCOUPLE HOOKUP SCHEDULE

T/C Schedule 5

| Chan No | T/C No | Chan No | T/C No | Chan No | T/C No |
|---------|--------|---------|--------|---------|--------|
| 1 | Open | 33 | Open | 65 | Open |
| 2 | | 34 | | 66 | |
| 3 | | 35 | | 67 | |
| 4 | | 36 | | 68 | |
| 5 | | 37 | | 69 | |
| 6 | | 38 | | 70 | |
| 7 | | 39 | | 71 | |
| 8 | | 40 | | 72 | |
| 9 | | 41 | | 73 | |
| 10 | | 42 | | 74 | |
| 11 | | 43 | | 75 | |
| 12 | | 44 | | 76 | |
| 13 | | 45 | | 77 | |
| 14 | | 46 | | 78 | |
| 15 | | 47 | | 79 | |
| 16 | | 48 | | 80 | |
| 17 | | 49 | | 81 | |
| 18 | | 50 | | 82 | 501 |
| 19 | | 51 | | 83 | 502 |
| 20 | | 52 | | 84 | 503 |
| 21 | | 53 | | 85 | 504 |
| 22 | | 54 | | 86 | 505 |
| 23 | | 55 | | 87 | 506 |
| 24 | | 56 | | 88 | 507 |
| 25 | | 57 | | 89 | 508 |
| 26 | | 58 | | 90 | 509 |
| 27 | | 59 | | 91 | 510 |
| 28 | | 60 | | 92 | 511 |
| 29 | | 61 | | 93 | 512 |
| 30 | | 62 | | 94 | 513 |
| 31 | | 63 | | 95 | 514 |
| 32 | | 64 | | 96 | 515 |
| | | | | 97 | 516 |

TABLE V. - Continued.

T/C Schedule 6

THERMOCOUPLE HOOKUP SCHEDULE

| <u>Chan No</u> | <u>T/C No</u> | <u>Chan No</u> | <u>T/C No</u> | <u>Chan No</u> | <u>T/C No</u> |
|----------------|---------------|----------------|---------------|----------------|---------------|
| 1 | 59 | 33 | 110 | 65 | 142 |
| 2 | 60 | 34 | 111 | 66 | 143 |
| 3 | 61 | 35 | 112 | 67 | 144 |
| 4 | 62 | 36 | 113 | 68 | 145 |
| 5 | 63 | 37 | 114 | 69 | 146 |
| 6 | 64 | 38 | 115 | 70 | 147 |
| 7 | 65 | 39 | 116 | 71 | 148 |
| 8 | 66 | 40 | 117 | 72 | 149 |
| 9 | 67 | 41 | 118 | 73 | 150 |
| 10 | 68 | 42 | 119 | 74 | 151 |
| 11 | 69 | 43 | 120 | 75 | 152 |
| 12 | 70 | 44 | 121 | 76 | 153 |
| 13 | 71 | 45 | 122 | 77 | 154 |
| 14 | 72 | 46 | 123 | 78 | 155 |
| 15 | 73 | 47 | 124 | 79 | 156 |
| 16 | 74 | 48 | 125 | 80 | 157 |
| 17 | 75 | 49 | 126 | 81 | 158 |
| 18 | 76 | 50 | 127 | 82 | 159 |
| 19 | 88 | 51 | 128 | 83 | 160 |
| 20 | 89 | 52 | 129 | 84 | 161 |
| 21 | 90 | 53 | 130 | 85 | 162 |
| 22 | 91 | 54 | 131 | 86 | 163 |
| 23 | 92 | 55 | 132 | 87 | 164 |
| 24 | 101 | 56 | 133 | 88 | 165 |
| 25 | 102 | 57 | 134 | 89 | 166 |
| 26 | 103 | 58 | 135 | 90 | 167 |
| 27 | 104 | 59 | 136 | 91 | 168 |
| 28 | 105 | 60 | 137 | 92 | 169 |
| 29 | 106 | 61 | 138 | 93 | 170 |
| 30 | 107 | 62 | 139 | 94 | 171 |
| 31 | 108 | 63 | 140 | 95 | 172 |
| 32 | 109 | 64 | 141 | 96 | 173 |
| | | | | 97 | 174 |

TABLE V. - Continued.

THERMOCOUPLE HOOKUP SCHEDULET/C Schedule 7

| <u>Chan No</u> | <u>T/C No</u> | <u>Chan No</u> | <u>T/C No</u> | <u>Chan No</u> | <u>T/C No</u> |
|----------------|---------------|----------------|---------------|----------------|---------------|
| 1 | 175 | 33 | 207 | 65 | 255 |
| 2 | 176 | 34 | 208 | 66 | 256 |
| 3 | 177 | 35 | 209 | 67 | 258 |
| 4 | 178 | 36 | 210 | 68 | 259 |
| 5 | 179 | 37 | 211 | 69 | 260 |
| 6 | 180 | 38 | 212 | 70 | 261 |
| 7 | 181 | 39 | 213 | 71 | 262 |
| 8 | 182 | 40 | 214 | 72 | 263 |
| 9 | 183 | 41 | 215 | 73 | 264 |
| 10 | 184 | 42 | 216 | 74 | 265 |
| 11 | 185 | 43 | 217 | 75 | 266 |
| 12 | 186 | 44 | 218 | 76 | 267 |
| 13 | 187 | 45 | 219 | 77 | 268 |
| 14 | 188 | 46 | 220 | 78 | 269 |
| 15 | 189 | 47 | 221 | 79 | 270 |
| 16 | 190 | 48 | 222 | 80 | 271 |
| 17 | 191 | 49 | 223 | 81 | 272 |
| 18 | 192 | 50 | 224 | 82 | 273 |
| 19 | 193 | 51 | 241 | 83 | 274 |
| 20 | 194 | 52 | 242 | 84 | 275 |
| 21 | 195 | 53 | 243 | 85 | 276 |
| 22 | 196 | 54 | 244 | 86 | 277 |
| 23 | 197 | 55 | 245 | 87 | 278 |
| 24 | 198 | 56 | 246 | 88 | 279 |
| 25 | 199 | 57 | 247 | 89 | 280 |
| 26 | 200 | 58 | 248 | 90 | 281 |
| 27 | 201 | 59 | 249 | 91 | 282 |
| 28 | 202 | 60 | 250 | 92 | 283 |
| 29 | 203 | 61 | 251 | 93 | 284 |
| 30 | 204 | 62 | 252 | 94 | 285 |
| 31 | 205 | 63 | 253 | 95 | 286 |
| 32 | 206 | 64 | 254 | 96 | 287 |
| | | | | 97 | 288 |

TABLE V. - Continued.

THERMOCOUPLE HOOKUP SCHEDULE

T/C Schedule 8

| <u>Channel No.</u> | <u>T/C No.</u> | <u>Channel No.</u> | <u>T/C No.</u> | <u>Channel No.</u> | <u>T/C No.</u> |
|--------------------|----------------|--------------------|----------------|--------------------|----------------|
| 1 | 1 | 33 | 34 | 65 | 84 |
| 2 | 2 | 34 | 35 | 66 | 85 |
| 3 | 3 | 35 | 36 | 67 | 86 |
| 4 | 4 | 36 | 37 | 68 | 87 |
| 5 | 5 | 37 | 38 | 69 | 93 |
| 6 | 6 | 38 | 39 | 70 | 94 |
| 7 | 7 | 39 | 40 | 71 | 95 |
| 8 | 8 | 40 | 41 | 72 | 96 |
| 9 | 9 | 41 | 42 | 73 | 97 |
| 10 | 10 | 42 | 43 | 74 | 98 |
| 11 | 11 | 43 | 44 | 75 | 99 |
| 12 | 12 | 44 | 45 | 76 | 100 |
| 13 | 14 | 45 | 46 | 77 | 225 |
| 14 | 15 | 46 | 47 | 78 | 226 |
| 15 | 16 | 47 | 48 | 79 | 227 |
| 16 | 17 | 48 | 49 | 80 | 228 |
| 17 | 18 | 49 | 50 | 81 | 229 |
| 18 | 19 | 50 | 51 | 82 | 230 |
| 19 | 20 | 51 | 52 | 83 | 231 |
| 20 | 21 | 52 | 53 | 84 | 232 |
| 21 | 22 | 53 | 54 | 85 | 233 |
| 22 | 23 | 54 | 55 | 86 | 234 |
| 23 | 24 | 55 | 56 | 87 | 235 |
| 24 | 25 | 56 | 57 | 88 | 236 |
| 25 | 26 | 57 | 58 | 89 | 237 |
| 26 | 27 | 58 | 77 | 90 | 238 |
| 27 | 28 | 59 | 78 | 91 | 239 |
| 28 | 29 | 60 | 79 | 92 | 240 |
| 29 | 30 | 61 | 80 | 93 | Open |
| 30 | 31 | 62 | 81 | ↓ | ↑ |
| 31 | 32 | 63 | 82 | 95 | ↓ |
| 32 | 33 | 64 | 83 | 96 | ↑ |
| | | | | 97 | Open |

TABLE V. - Continued.

THERMOCOUPLE HOOKUP SCHEDULE

T/C Schedule 9

| <u>Channel</u> <u>No.</u> | <u>T/C</u> <u>No.</u> | <u>Channel</u> <u>No.</u> | <u>T/C</u> <u>No.</u> | <u>Channel</u> <u>No.</u> | <u>T/C</u> <u>No.</u> |
|------------------------------|--------------------------|------------------------------|--------------------------|------------------------------|--------------------------|
| 1 | 301 | 33 | 9 | 65 | 42 |
| 2 | 302 | 34 | 10 | 66 | 43 |
| 3 | 303 | 35 | 11 | 67 | 44 |
| 4 | 304 | 36 | 12 | 68 | 45 |
| 5 | 305 | 37 | 14 | 69 | 46 |
| 6 | 306 | 38 | 15 | 70 | 47 |
| 7 | 307 | 39 | 16 | 71 | 48 |
| 8 | 308 | 40 | 17 | 72 | 49 |
| 9 | 309 | 41 | 18 | 73 | 50 |
| 10 | 310 | 42 | 19 | 74 | 51 |
| 11 | 311 | 43 | 20 | 75 | 52 |
| 12 | 312 | 44 | 21 | 76 | 53 |
| 13 | 313 | 45 | 22 | 77 | 54 |
| 14 | 314 | 46 | 23 | 78 | 56 |
| 15 | 315 | 47 | 24 | 79 | 58 |
| 16 | 316 | 48 | 25 | 80 | 93 |
| 17 | 317 | 49 | 26 | 81 | 94 |
| 18 | 318 | 50 | 27 | 82 | 95 |
| 19 | 319 | 51 | 28 | 83 | 96 |
| 20 | 319 | 52 | 29 | 84 | 97 |
| 21 | 321 | 53 | 30 | 85 | 98 |
| 22 | 322 | 54 | 31 | 86 | 99 |
| 23 | 323 | 55 | 32 | 87 | 100 |
| 24 | 324 | 56 | 33 | 88 | 91 |
| 25 | 1 | 57 | 34 | 89 | 108 |
| 26 | 2 | 58 | 35 | 90 | 110 |
| 27 | 3 | 59 | 36 | 91 | 112 |
| 28 | 4 | 60 | 37 | 92 | 92 |
| 29 | 5 | 61 | 38 | 93 | 109 |
| 30 | 6 | 62 | 39 | 94 | 113 |
| 31 | 7 | 63 | 40 | 95 | 114 |
| 32 | 8 | 64 | 41 | 96 | Open |
| | | | | 97 | Open |

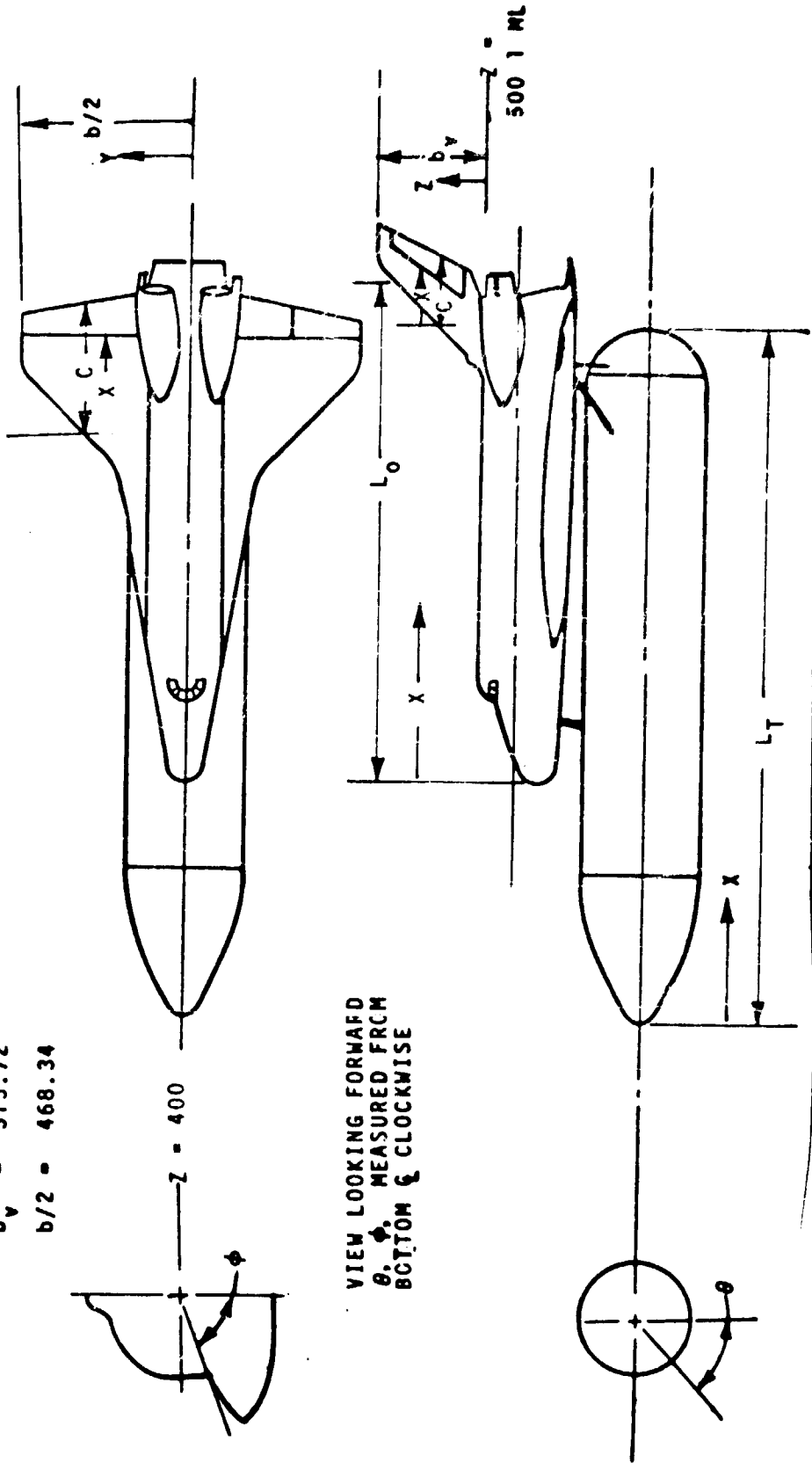
TABLE V. - Concluded.

THERMOCOUPLE HOOKUP SCHEDULE

T/C Schedule 10

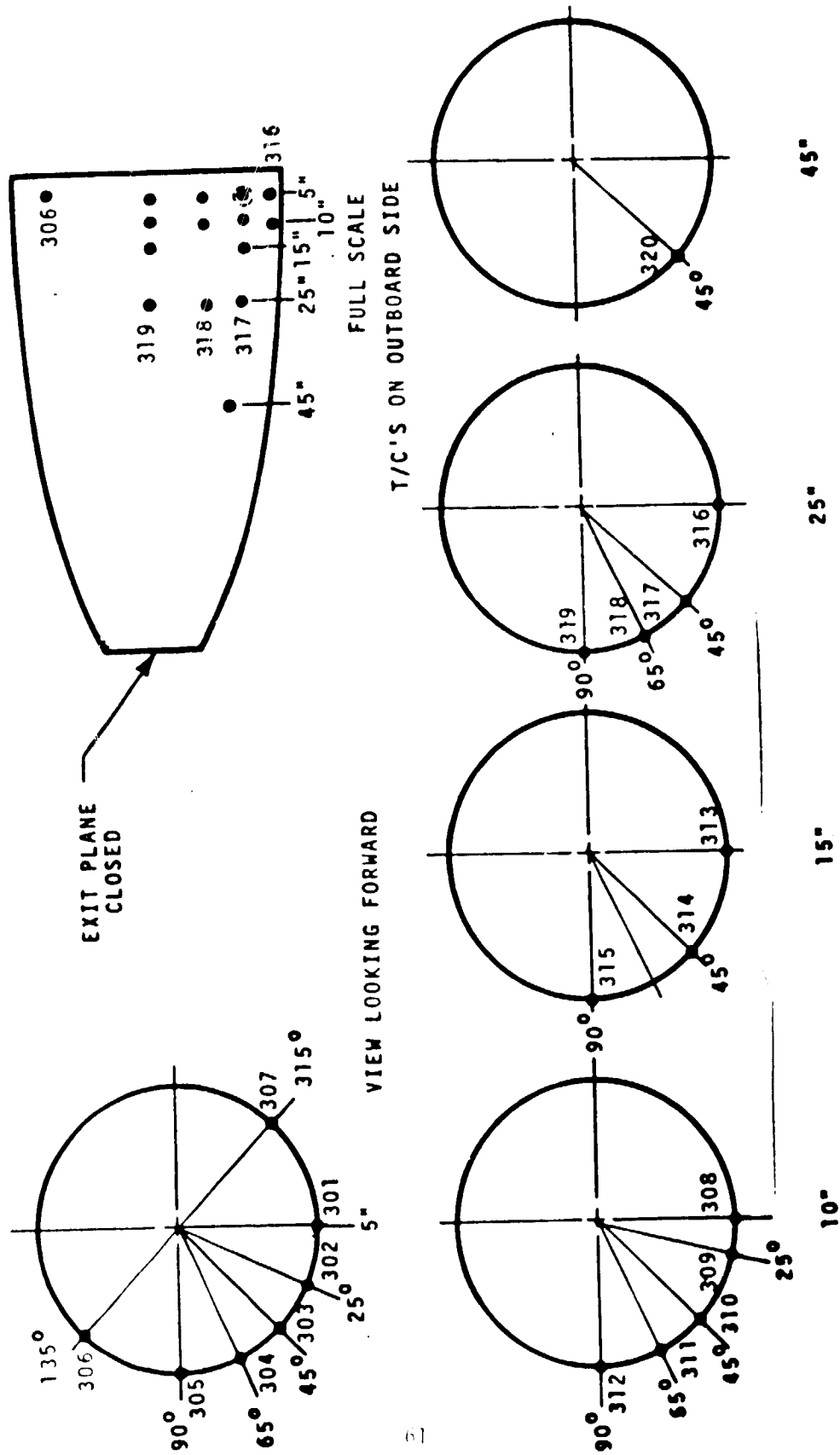
| <u>Chan No</u> | <u>T/C No</u> | <u>Chan No</u> | <u>T/C No</u> | <u>Chan No</u> | <u>T/C No</u> |
|----------------|---------------|----------------|---------------|----------------|---------------|
| 1 | 155 | 33 | 187 | 65 | 219 |
| 2 | 156 | 34 | 188 | 66 | 220 |
| 3 | 157 | 35 | 189 | 67 | 221 |
| 4 | 158 | 36 | 190 | 68 | 222 |
| 5 | 159 | 37 | 191 | 69 | 223 |
| 6 | 160 | 38 | 192 | 70 | 224 |
| 7 | 161 | 39 | 193 | 71 | Open |
| 8 | 162 | 40 | 194 | 72 | |
| 9 | 163 | 41 | 195 | 73 | |
| 10 | 164 | 42 | 196 | 74 | |
| 11 | 165 | 43 | 197 | 75 | |
| 12 | 166 | 44 | 198 | 76 | |
| 13 | 167 | 45 | 199 | 77 | |
| 14 | 168 | 46 | 200 | 78 | |
| 15 | 169 | 47 | 201 | 79 | |
| 16 | 170 | 48 | 202 | 80 | |
| 17 | 171 | 49 | 203 | 81 | |
| 18 | 172 | 50 | 204 | 82 | |
| 19 | 173 | 51 | 205 | 83 | |
| 20 | 174 | 52 | 206 | 84 | |
| 21 | 175 | 53 | 207 | 85 | |
| 22 | 176 | 54 | 208 | 86 | |
| 23 | 177 | 55 | 209 | 87 | |
| 24 | 178 | 56 | 210 | 88 | |
| 25 | 179 | 57 | 211 | 89 | |
| 26 | 180 | 58 | 212 | 90 | |
| 27 | 181 | 59 | 213 | 91 | |
| 28 | 182 | 60 | 214 | 92 | |
| 29 | 183 | 61 | 215 | 93 | |
| 30 | 184 | 62 | 216 | 94 | |
| 31 | 185 | 63 | 217 | 95 | |
| 32 | 186 | 64 | 218 | 96 | |
| | | | | 97 | |

- $L_0 = 1290.3 \text{ IN.}$
- $L_T = 1865.0$
- $b_v = 315.72$
- $b/2 = 468.34$



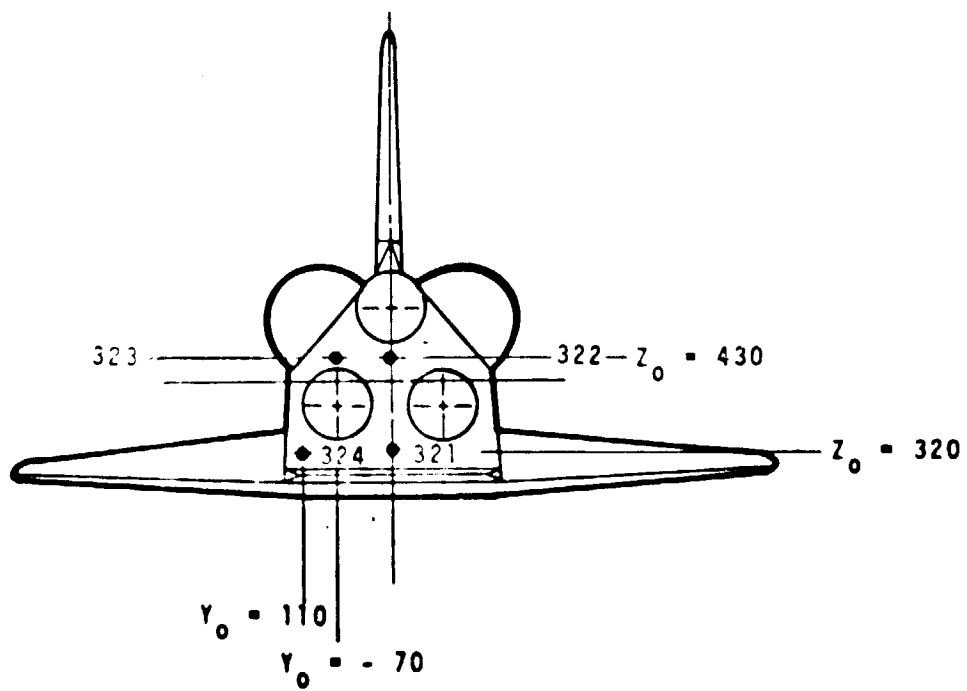
VIEW LOOKING FORWARD
 θ, ϕ MEASURED FROM
 BOTTOM & CLOCKWISE

Figure 7. - Mode Instrumentation reference system.



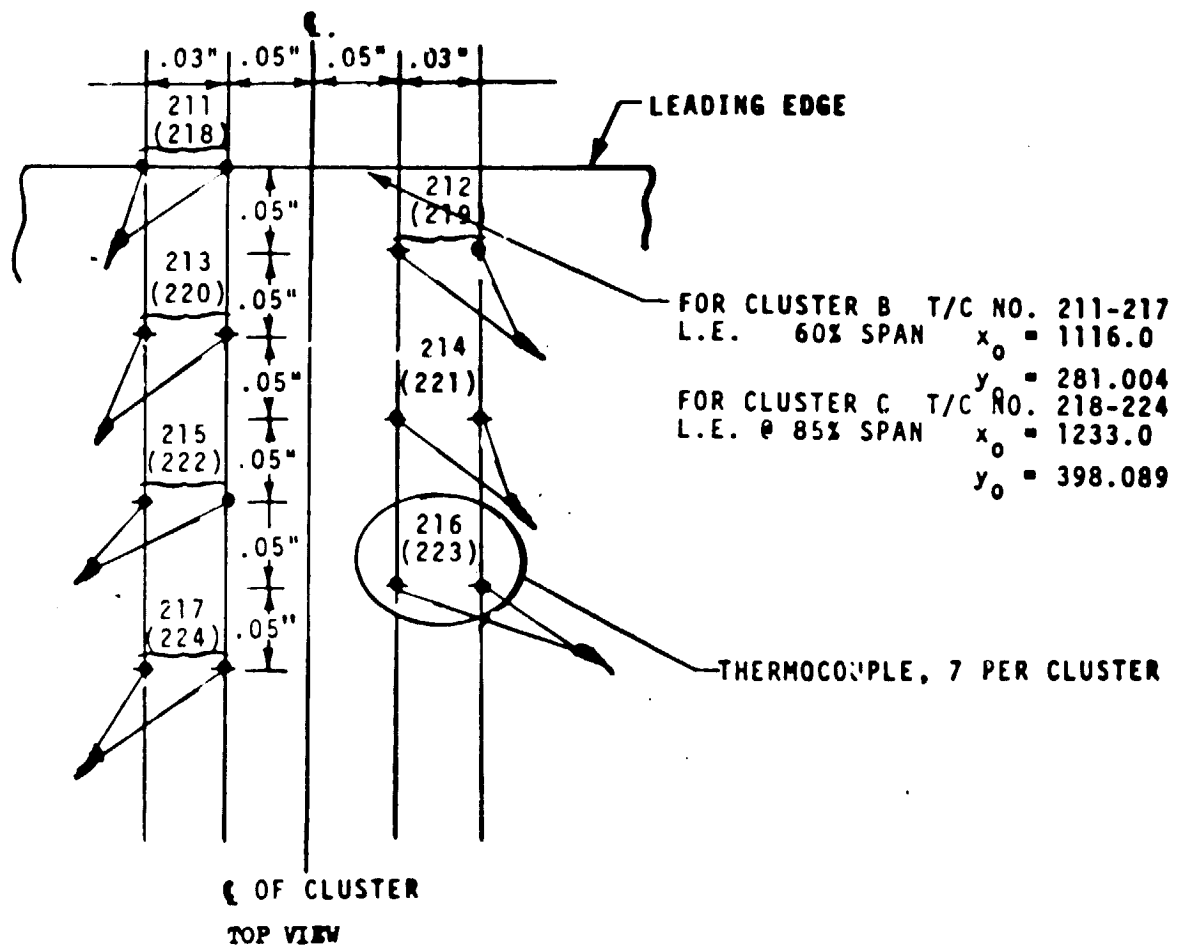
a. 22-OTS Instrumented nozzle

Figure 2. - Orbiter instrumentation.



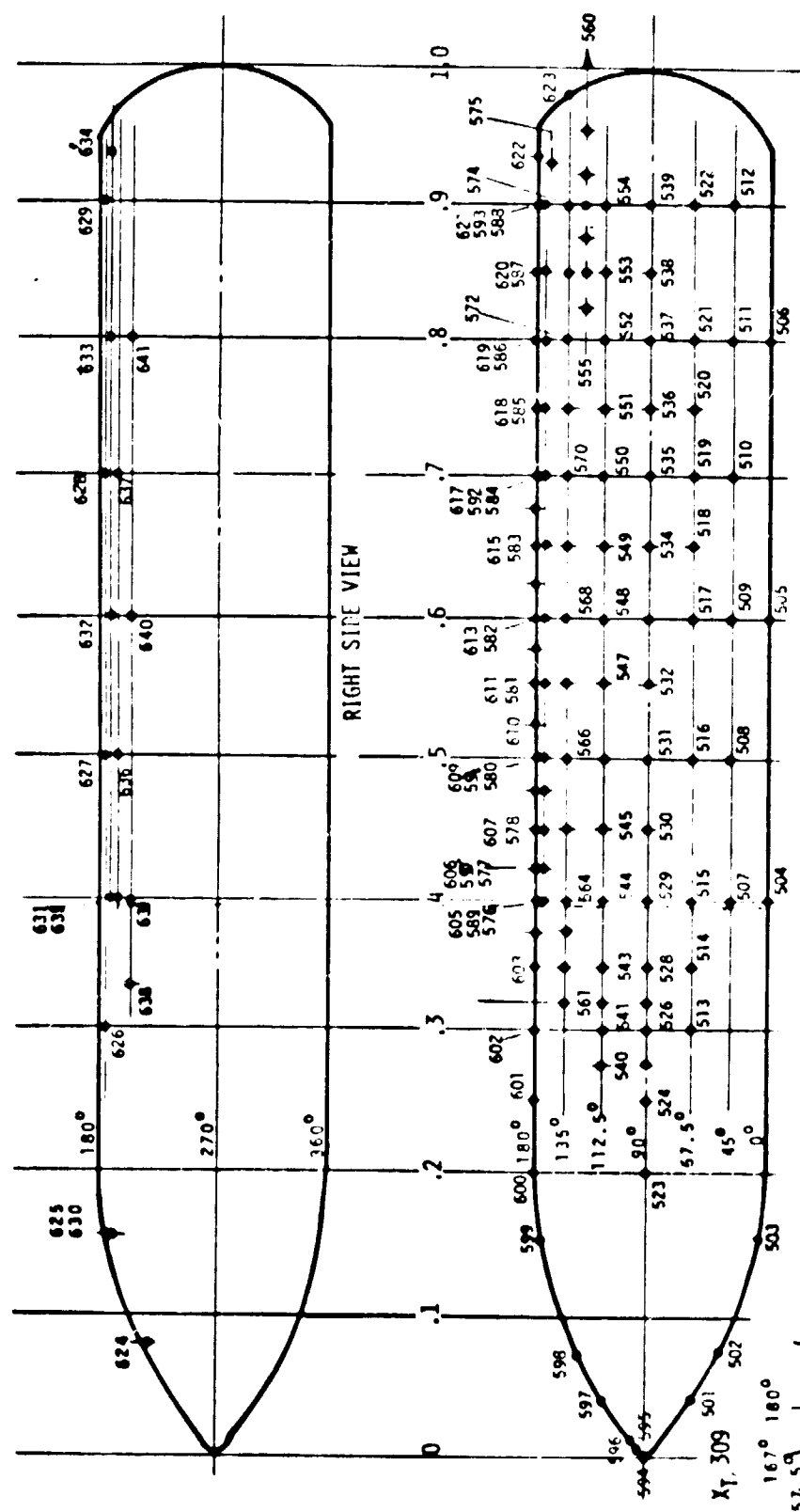
b. Instrumented Nozzle Base Plate
 Model 22-OTS

Figure 2. - Continued.



c. Wing Leading Edge Clusters B and C T/C Locations

Figure 2. - Continued.



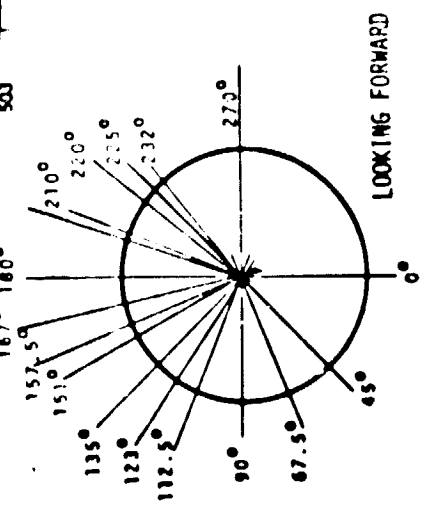
RIGHT SIDE VIEW

LEFT SIDE VIEW

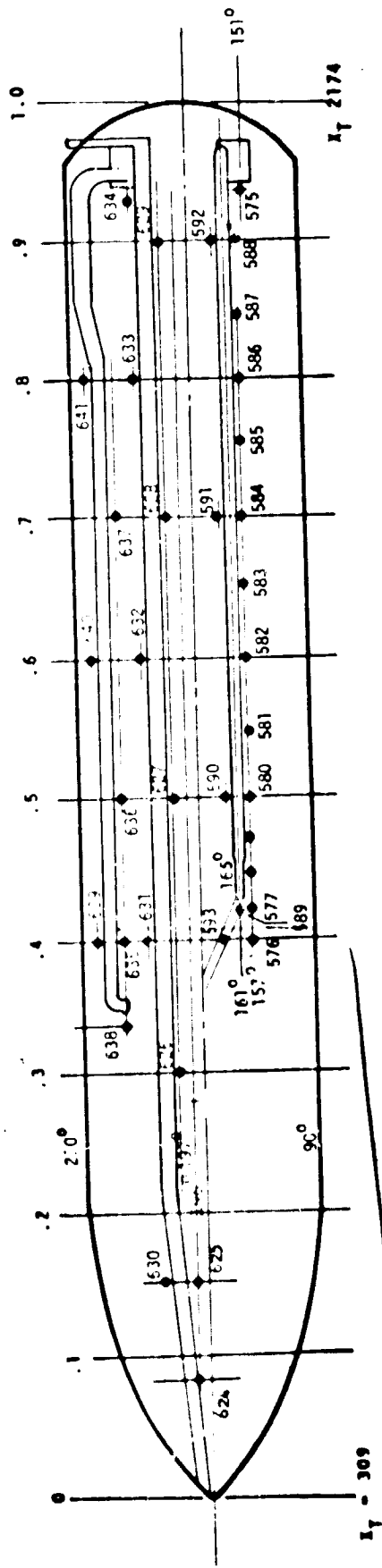
X_T 2174

External Table Locations Side Views

Figure 6 - Continued.



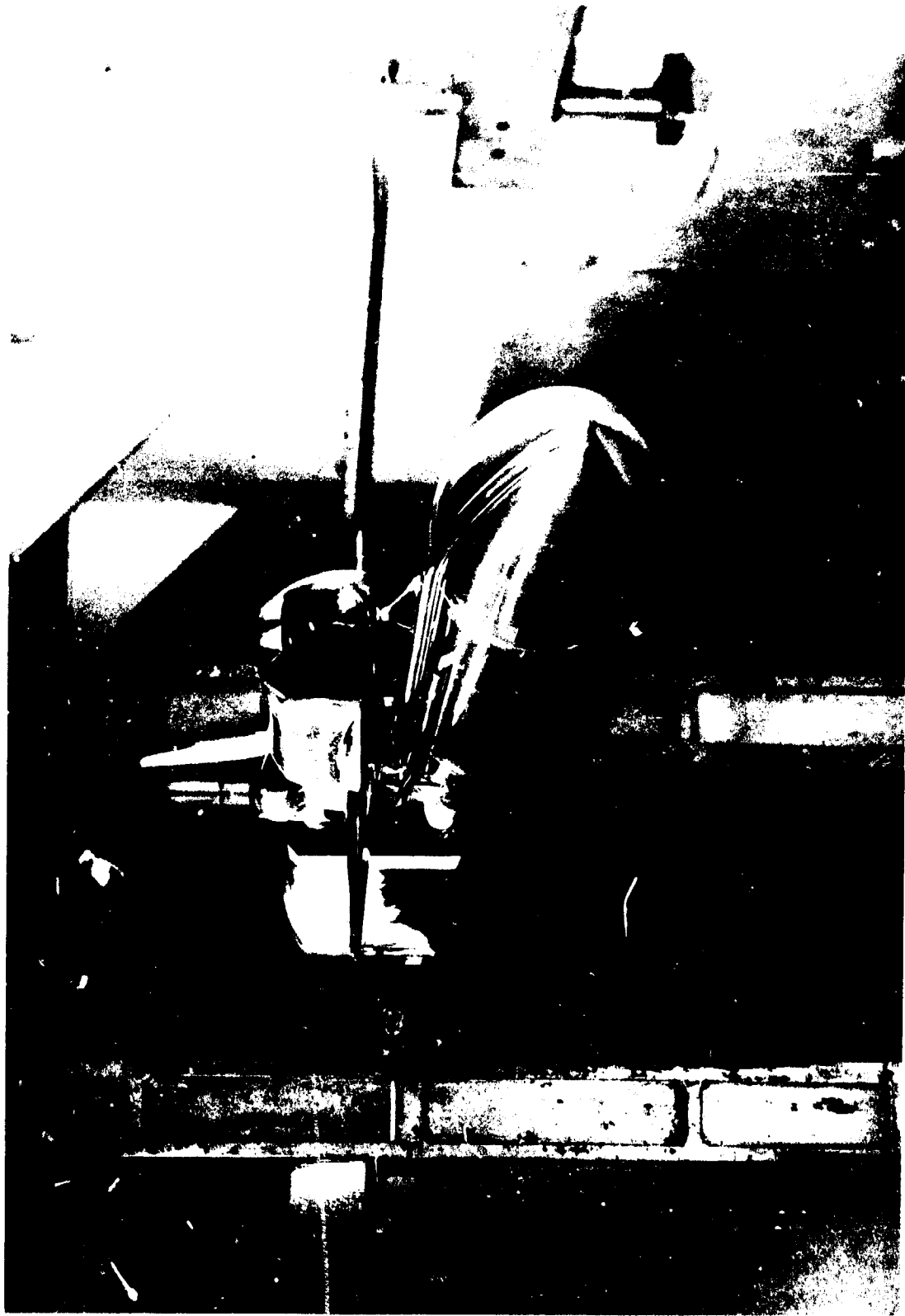
Original
Copy Quality



TOP VIEW

e. External Tank T/C Locations (Locations around plumbing only) Top View

Figure 2. - Concluded.



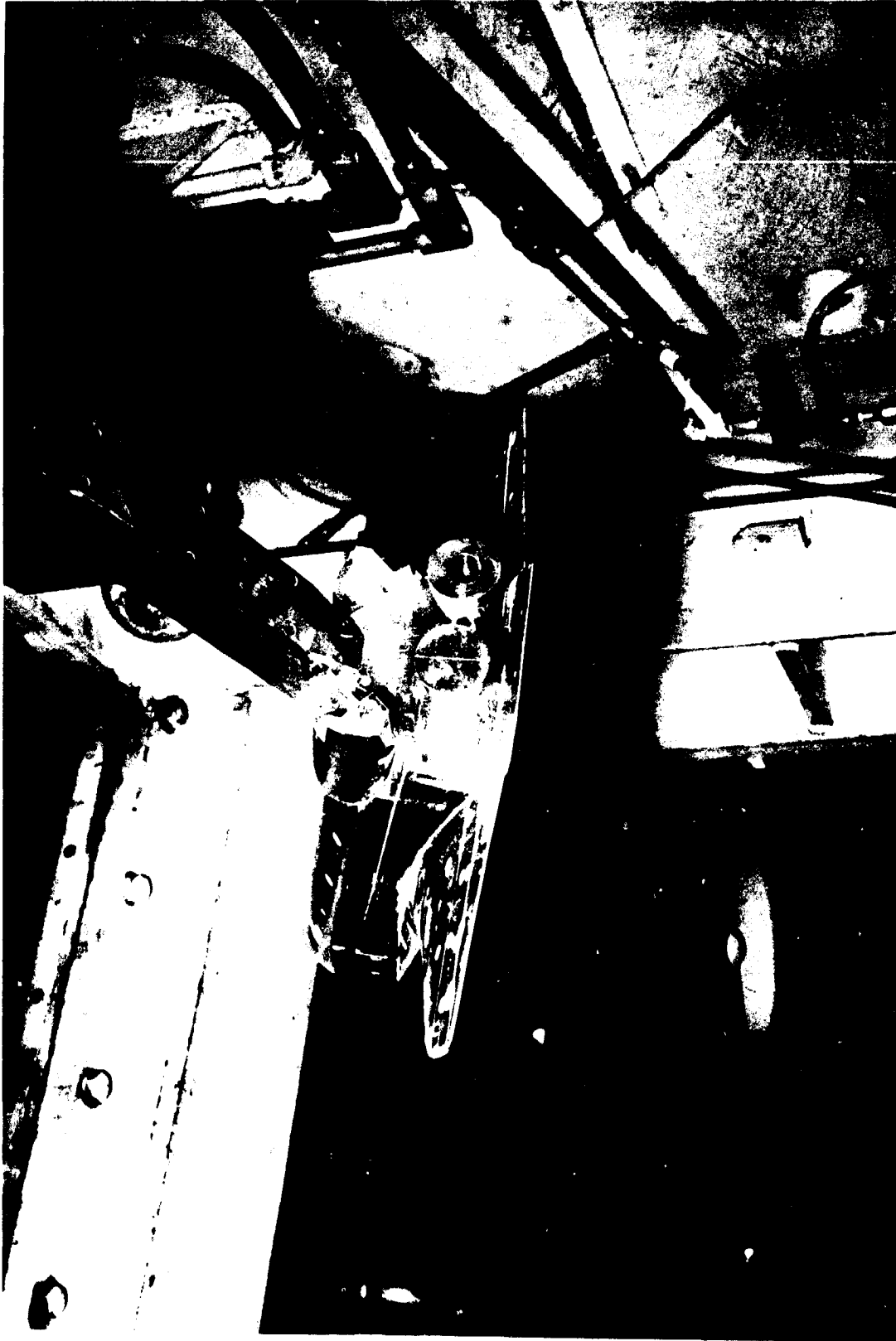
a. Second Stage Configuration Front View

Figure 3. - Model photographs.



b. Second Stage Configuration Side View

Figure 3. - Continued.



c. Re-entry Nozzle Heating Installation

Figure 3. - Concluded.

DATA FIGURES

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAW/HT | RN/L | BETA | ELEVON |
|-----------------|----------------------------|--------|-------|------|--------|
| (P)K101) | 0-45 (I+T)10 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (S)K101) | 0-45 (I+T)10 EXTERNAL TANK | .900 | 3.720 | .000 | .000 |
| (S)K101) | 0-45 (I+T)10 EXTERNAL TANK | .850 | 3.720 | .000 | .000 |

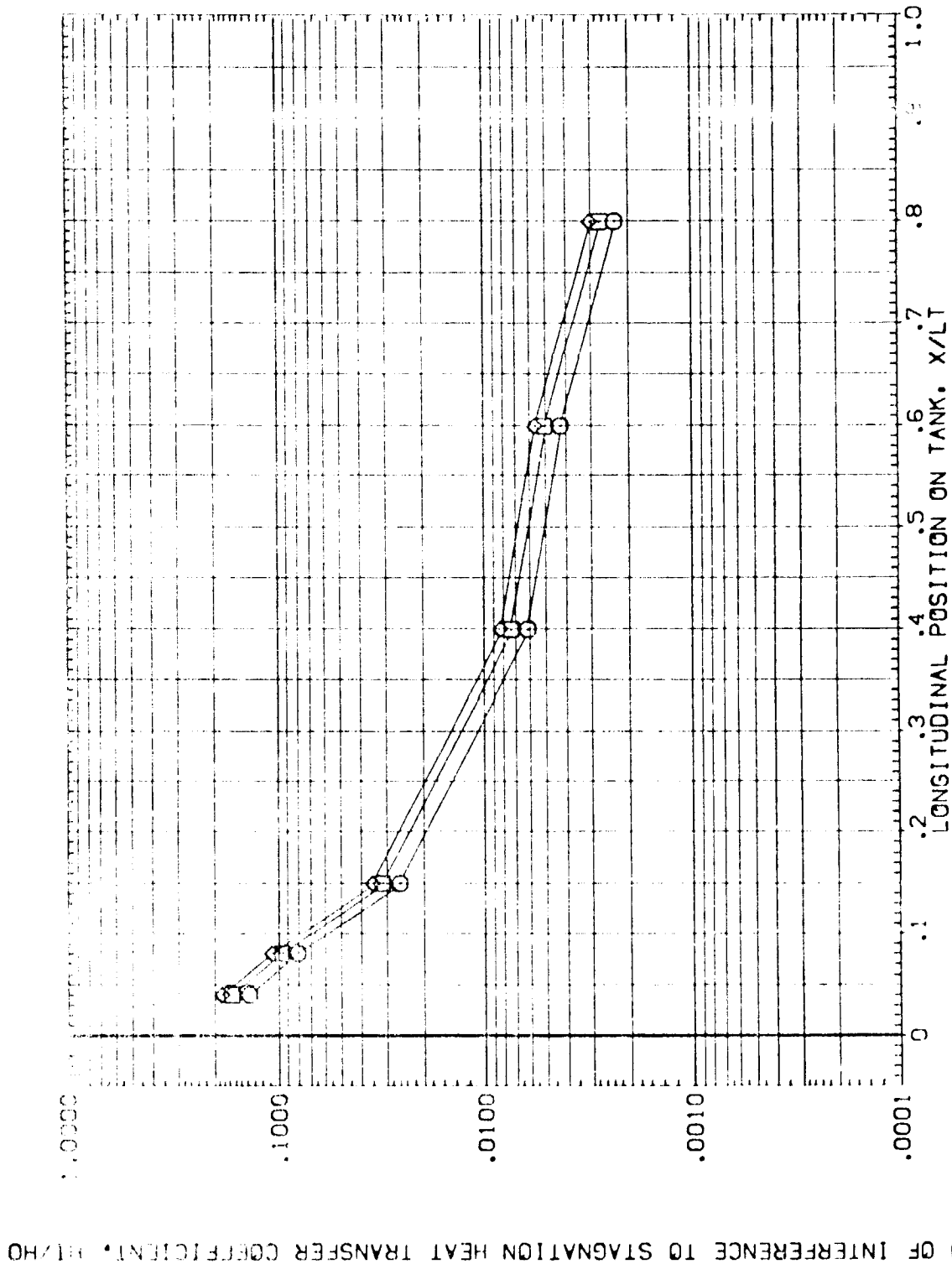


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

$MACH = 8.000$ $ALPHA = .000$ $PHI = .000$

DATA SET SYMBOL CONFIGURATION DESCRIPTION MACH ALPHA PHI HAV/HT (M/L) BETA ELEVON

(RTKT01) AEDC VA352 0418 01+110 EXTERNAL TANK 8.000 .000 .000 1.000 3.720 .000 .000

(ATKT01) AEDC VA352 0418 01+110 EXTERNAL TANK 8.000 .000 .000 .900 3.720 .000 .000

(BTKT01) AEDC VA352 0418 01+110 EXTERNAL TANK 8.000 .000 .000 .850 3.720 .000 .000

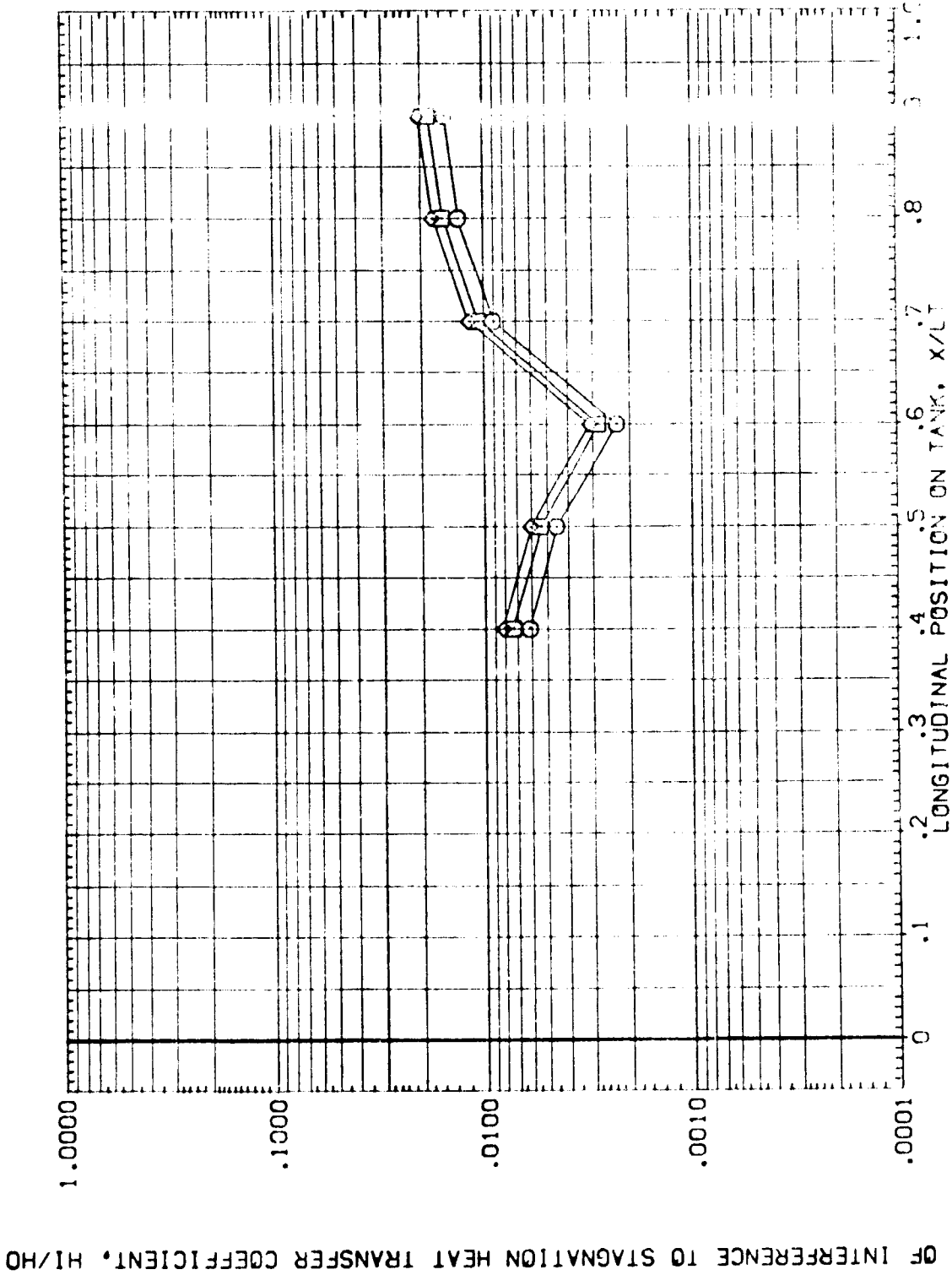


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

MACH = 8.000 ALPHA = .000 PHI = 45.000

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/HT | RV/L | BETA | ELEVON |
|-----------------|--------------------------------------|--------|-------|------|--------|
| (RTKTOI) | AEDC VA352 0-48 01+T10 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (APKTOI) | AEDC VA352 0-48 01+T10 EXTERNAL TANK | .900 | 3.720 | .000 | .000 |
| (BTKTOI) | AEDC VA352 0-48 01+T10 EXTERNAL TANK | .850 | 3.720 | .000 | .000 |

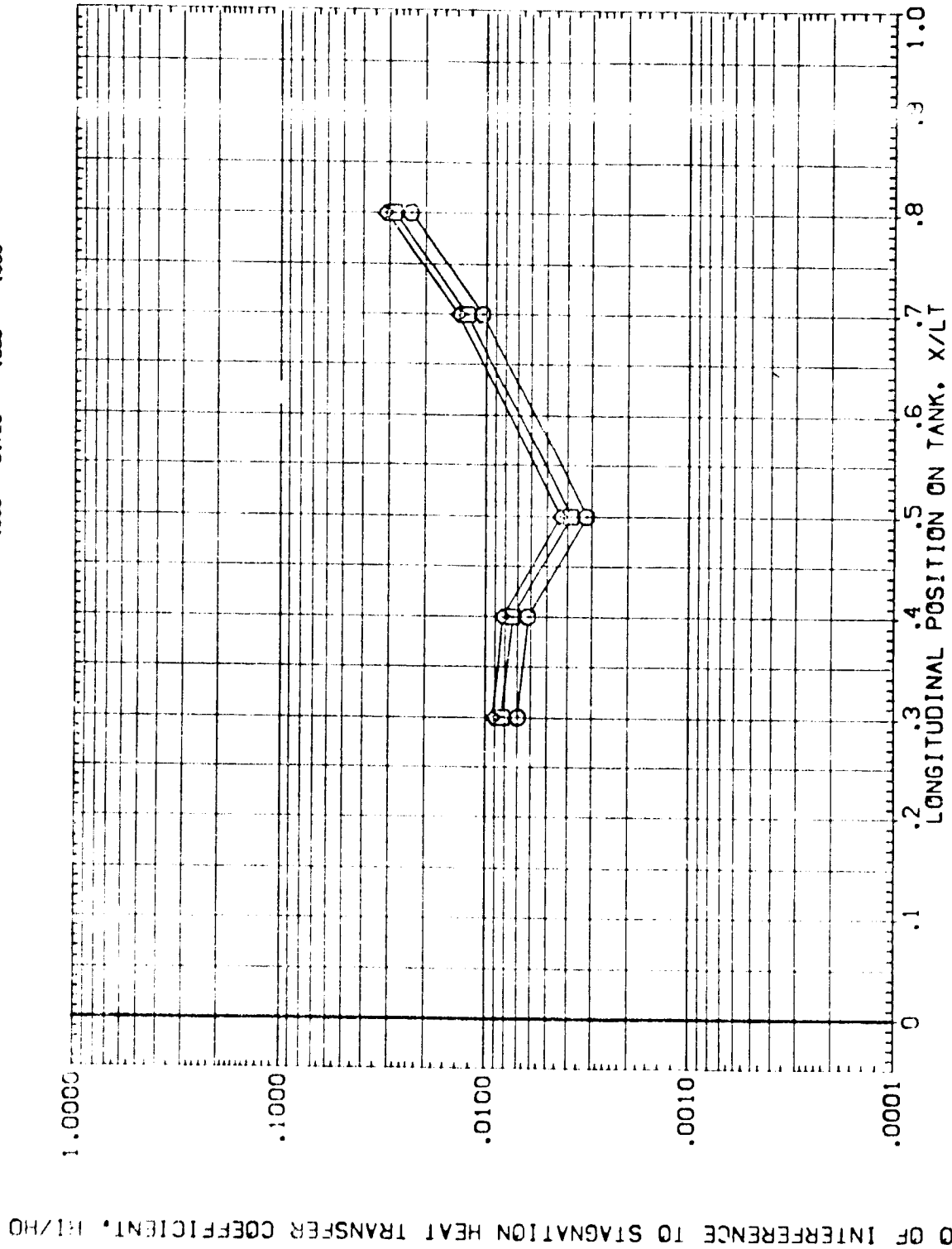


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

GMACH = 8.000 ALPHA = .000 PHI = 67.500

DATA SET SYMBOL: (RTKT01) (ATKT01) (BTKT01)
 CONFIGURATION DESCRIPTION: AECB VA352 044B 01*110 EXTERNAL TANK
 AECB VA352 044B 01*110 EXTERNAL TANK
 AECB VA352 044B 01*110 EXTERNAL TANK
 HAV/HT: .000, .500, .650
 R/V/L: 3.720, 3.720, 3.720
 BETA: .000, .000, .000
 ELEVON: .000, .000, .000

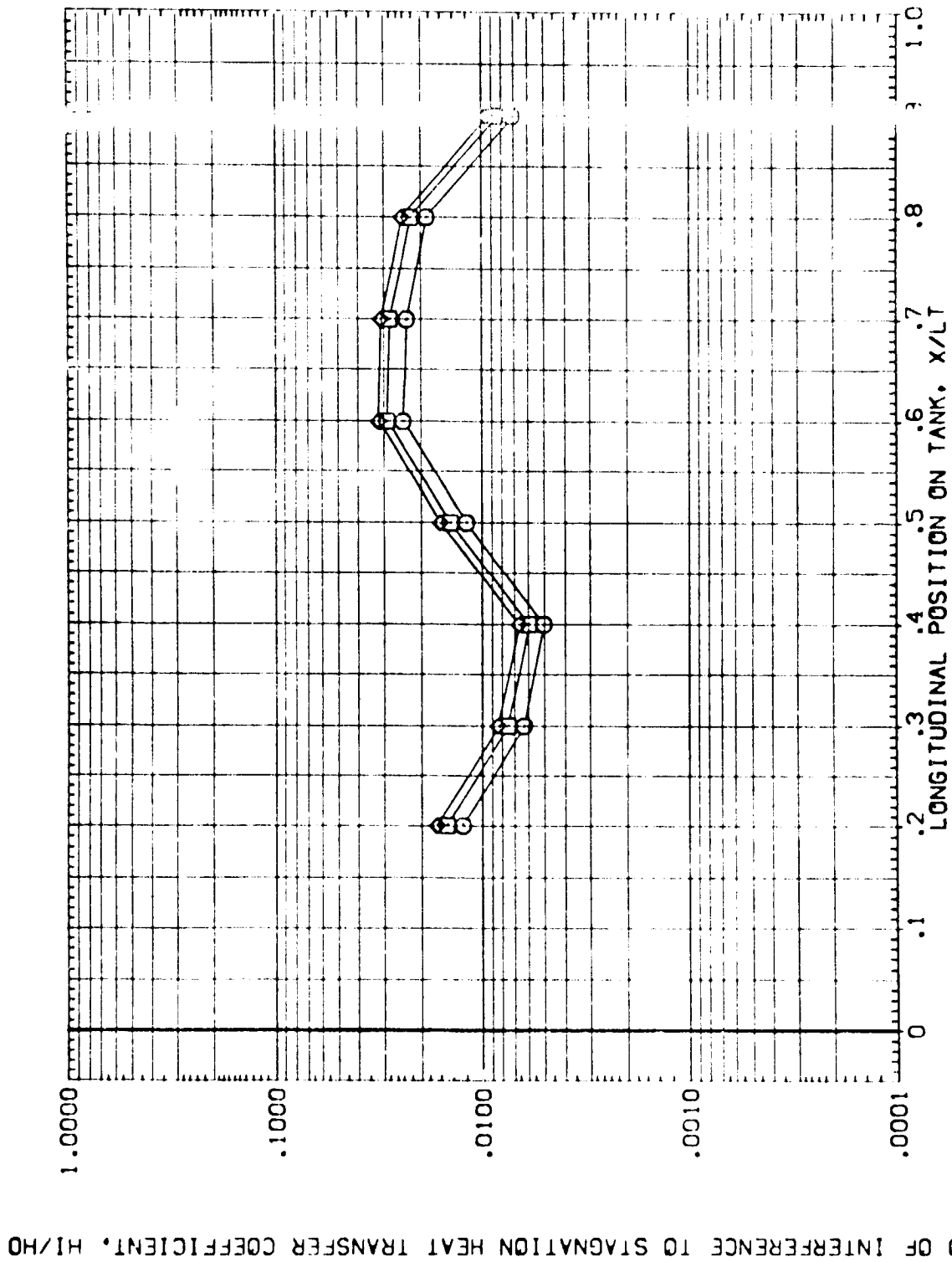


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

$\alpha_{MACH} = 8.000$ $\alpha_{PHI} = .000$ $\alpha_{TANK} = 90.000$



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAV/HT | RM/L | BETA | ELEVON |
|-----------------|--------------------------------------|--------|-------|------|--------|
| (R1KT01) | AECC VA352 0448 01+110 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (A1KT01) | AECC VA352 0443 01+110 EXTERNAL TANK | .800 | 3.720 | .000 | .000 |
| (B1KT01) | AECC VA352 0443 01+110 EXTERNAL TANK | .650 | 3.720 | .000 | .000 |

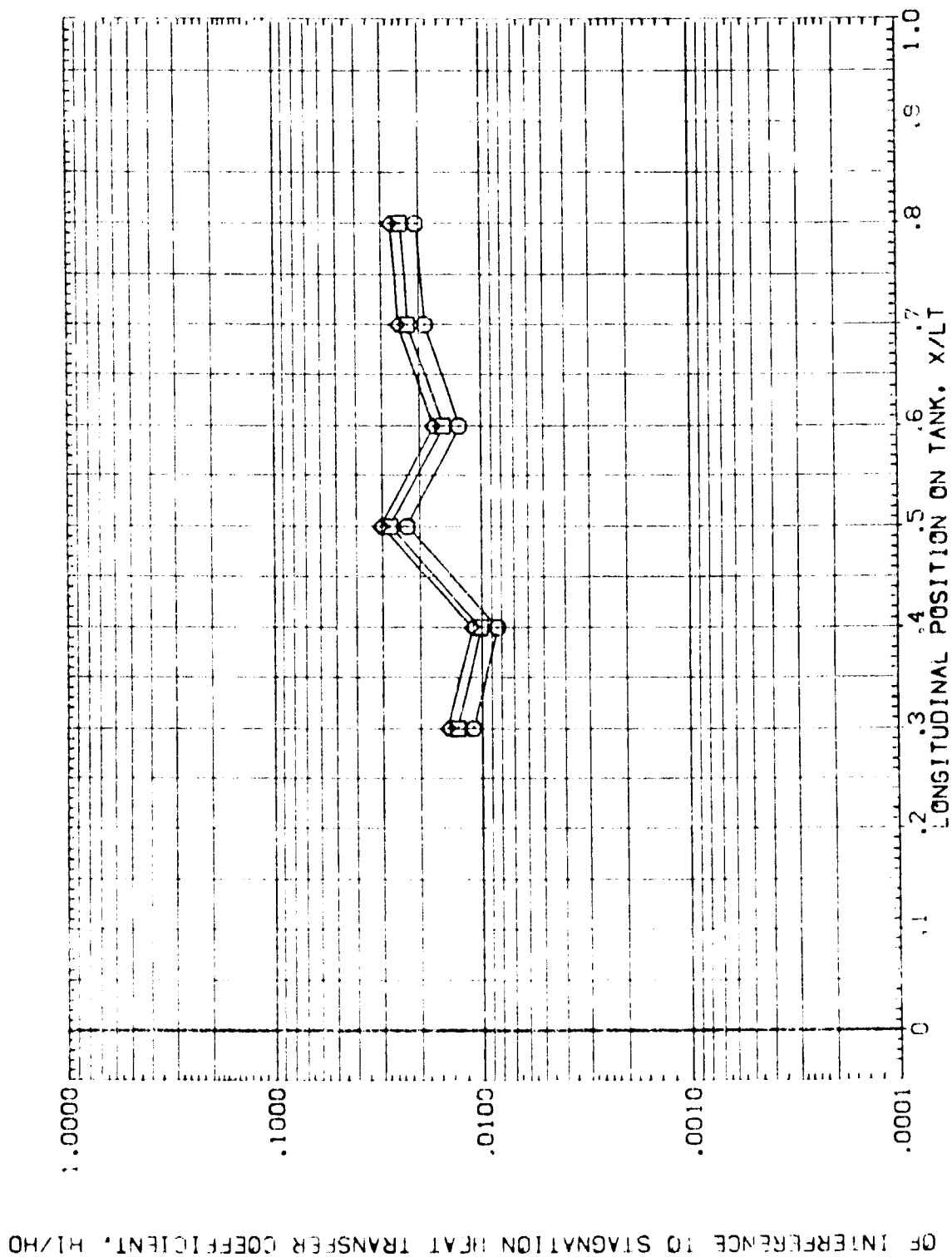


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

$MACH = 8.000$ $ALPHA = .000$ $PHI = 112.500$

RATIO OF INTERFERENCE TO STAGNATION HEAT TRANSFER COEFFICIENT, HI/HO

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAV/HAT | FR/L | BETA | ELEVON |
|-----------------|--------------------------------------|---------|-------|------|--------|
| (RTKT01) | AEDC VA352 O-48 01+T10 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (ATKT01) | AEDC VA352 O-48 01+T10 EXTERNAL TANK | .900 | 3.720 | .000 | .000 |
| (BTKT01) | AEDC VA352 O-48 01+T10 EXTERNAL TANK | .850 | 3.720 | .000 | .000 |

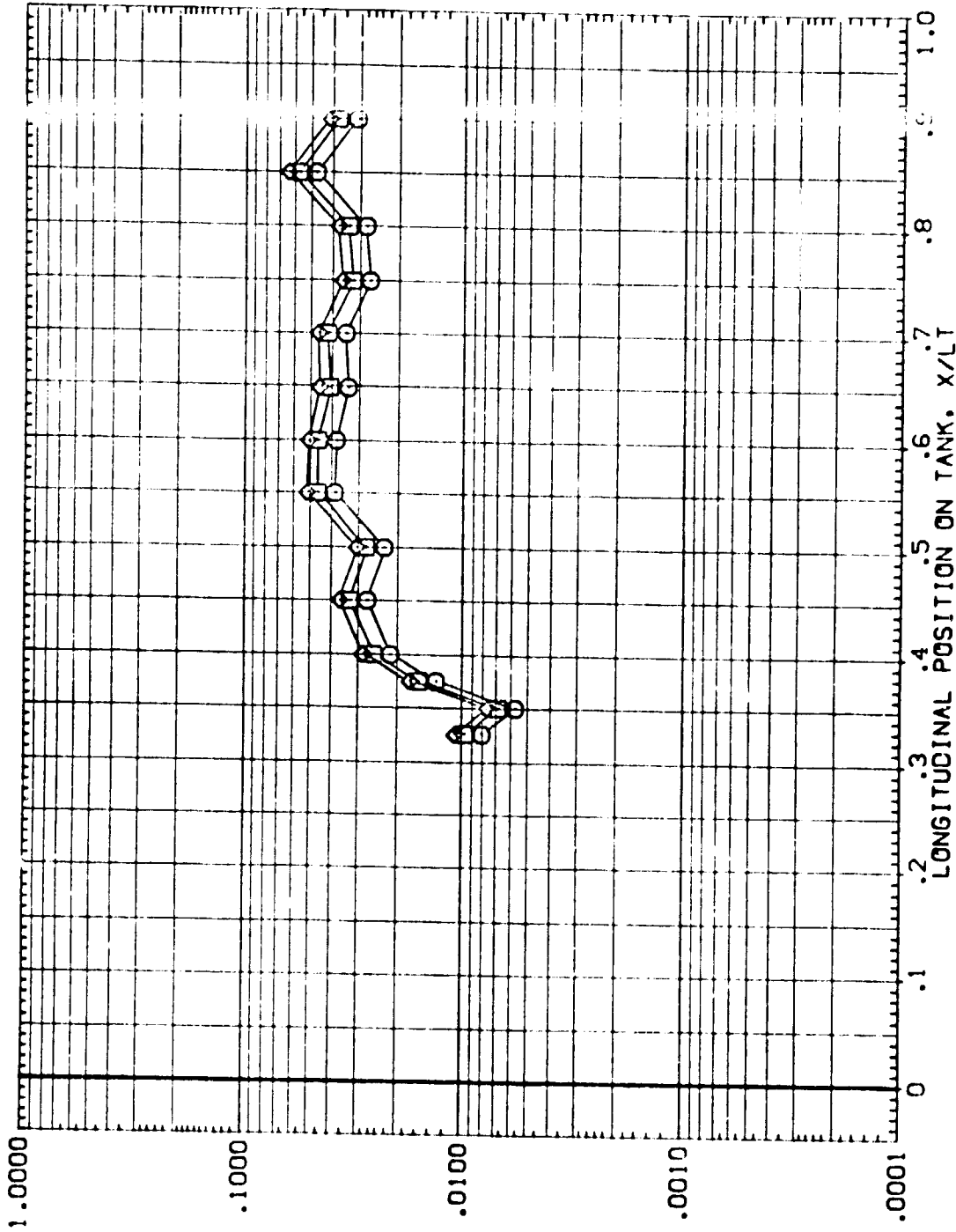


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

MACH = 8.000 ALPHA = .000 PHI = 135.000



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/HT | RVA/L | BETA | ELEVON |
|-----------------|--------------------------------------|--------|-------|------|--------|
| (RTKT01) | AEDC VA352 0448 01+T10 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (ATKT01) | AEDC VA352 0448 01+T10 EXTERNAL TANK | .900 | 3.720 | .000 | .000 |
| (BTKT01) | AEDC VA352 0448 01+T10 EXTERNAL TANK | .850 | 3.720 | .000 | .000 |

RATIO OF INTERFERENCE TO STAGNATION HEAT TRANSFER COEFFICIENT, HI/HO

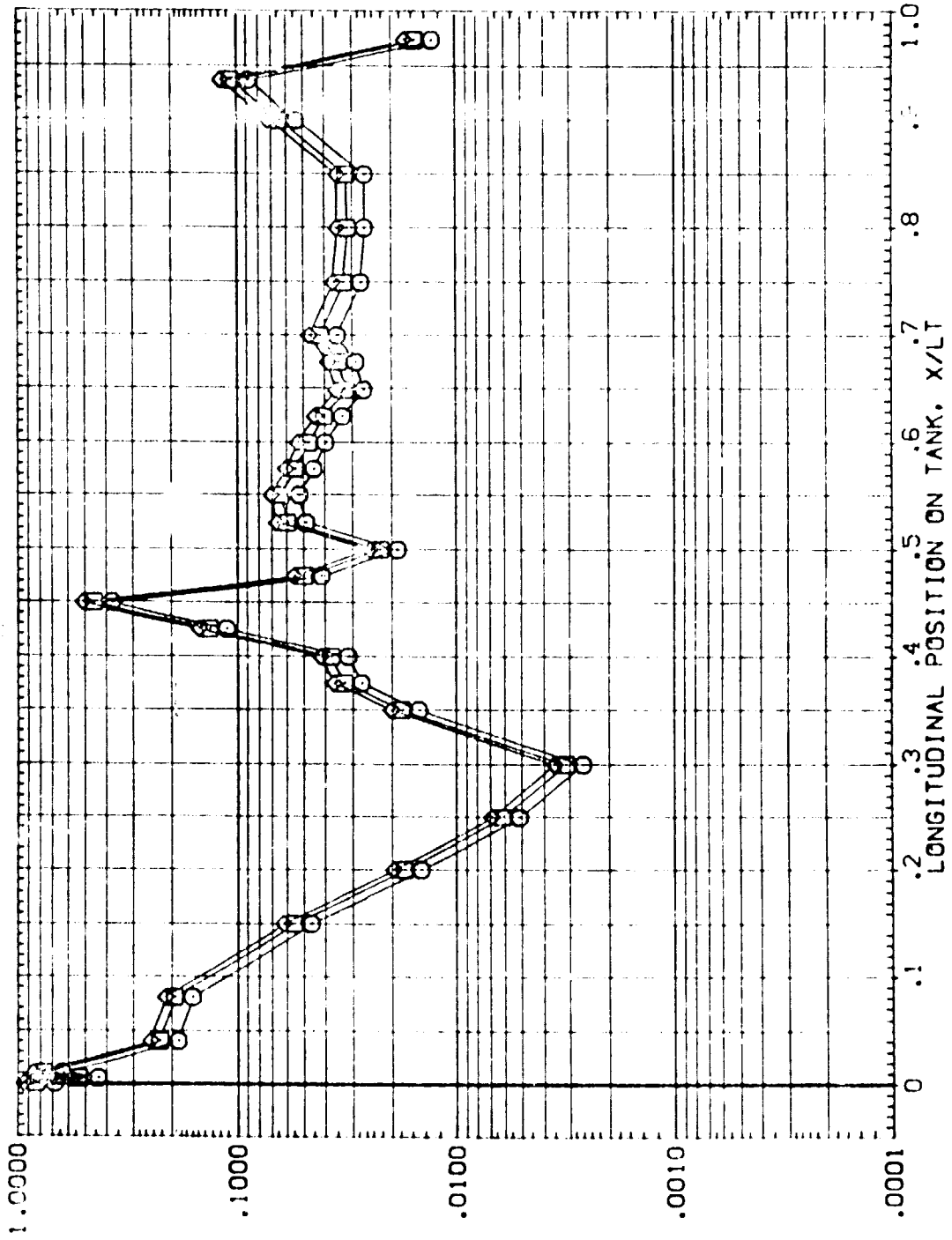


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

MACH = 8.000 ALPHA = .000 P+I = 180.000

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/MT | RV/L | BETA | ELEVON |
|-----------------|-----------------------------------|--------|-------|------|--------|
| (RTKTOS) | AEDC VA352 D-48 T10 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (LTKTOS) | AEDC VA352 D-48 T10 EXTERNAL TANK | .900 | 3.720 | .000 | .000 |
| (BTKTOS) | AEDC VA352 D-48 T10 EXTERNAL TANK | .850 | 3.720 | .000 | .000 |

RATIO OF UNDISTURBED TO STAGNATION HEAT TRANSFER COEFFICIENT, HU/HO

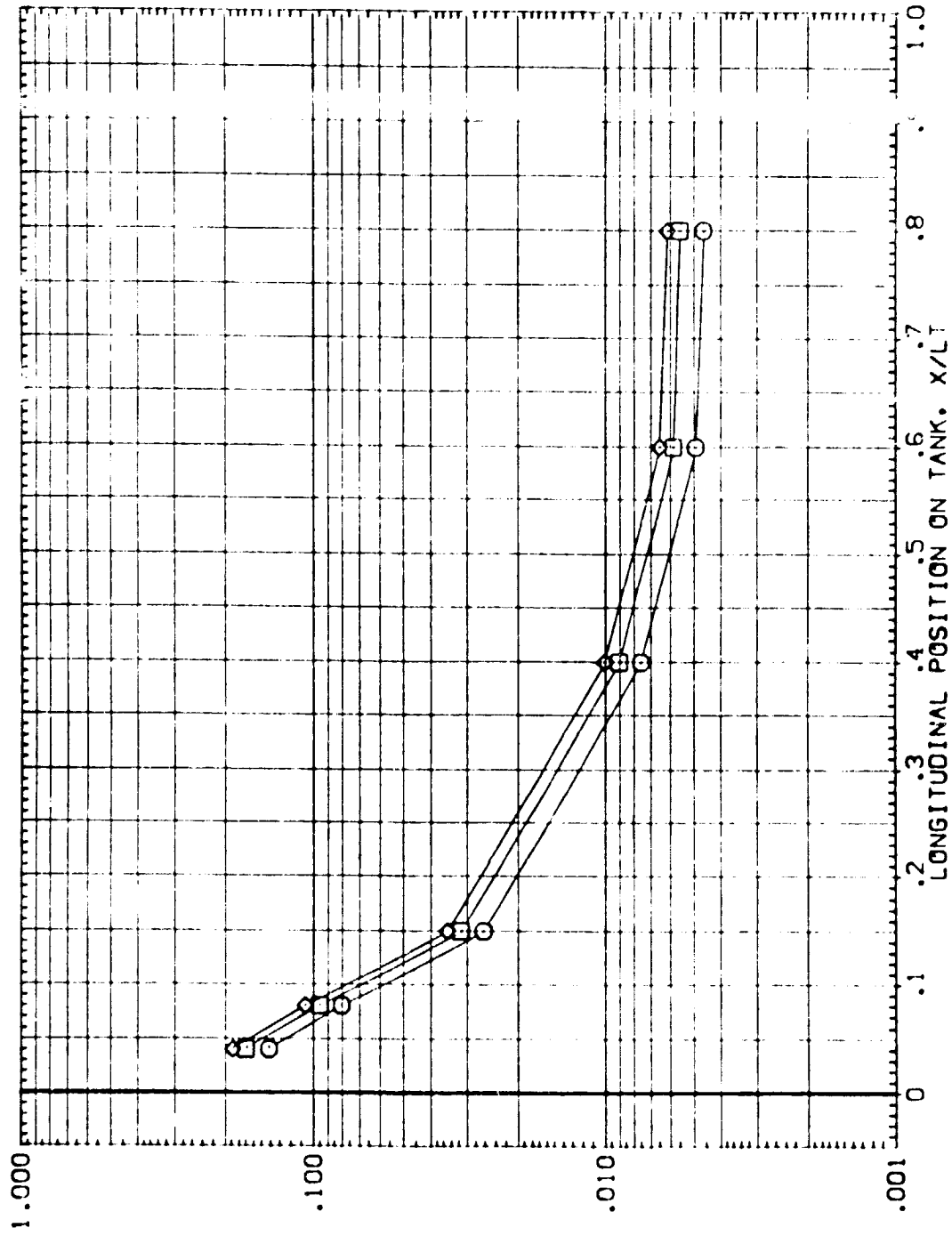


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

MACH = 8.000 ALPHA = .000 PHI = .000



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAY/HT | RV/L | BETA | ELEVON |
|-----------------|-----------------------------------|--------|-------|------|--------|
| (RTK06) | AEDE VA352 D-HB T10 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (ATK06) | AEDE VA352 D-HB T10 EXTERNAL TANK | .900 | 3.720 | .000 | .000 |
| (BTK06) | AEDE VA352 D-HB T10 EXTERNAL TANK | .850 | 3.720 | .000 | .000 |

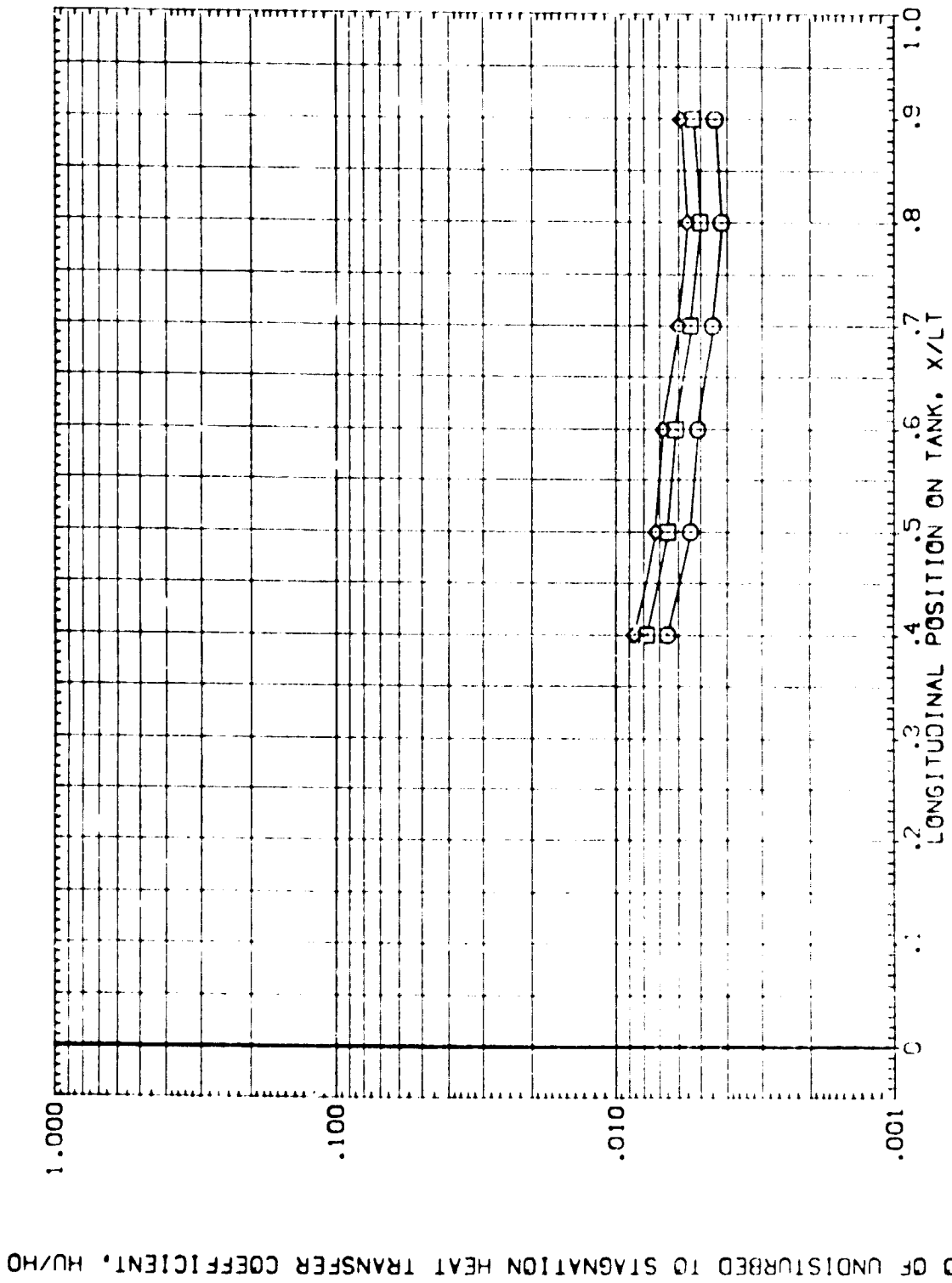


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

BRACH = 8.000 ALPHA = .000 PHI = 45.000

DATA SET SYMBOL. CONFIGURATION DESCRIPTION

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/HT | RM/L | BETA | ELEVON |
|-----------------|---------------------------|--------|-------|------|--------|
| (RTKTS) | AEDC VA352 0M48 T10 | 1.000 | 3.720 | .000 | .000 |
| (ATKTS) | AEDC VA352 0M48 T10 | .900 | 3.720 | .000 | .000 |
| (BTKTS) | AEDC VA352 0M48 T10 | .850 | 3.720 | .000 | .000 |

EXTERNAL TANK
EXTERNAL TANK
EXTERNAL TANK

RATIO OF UNDISTURBED TO STAGNATION HEAT TRANSFER COEFFICIENT, HU/HO

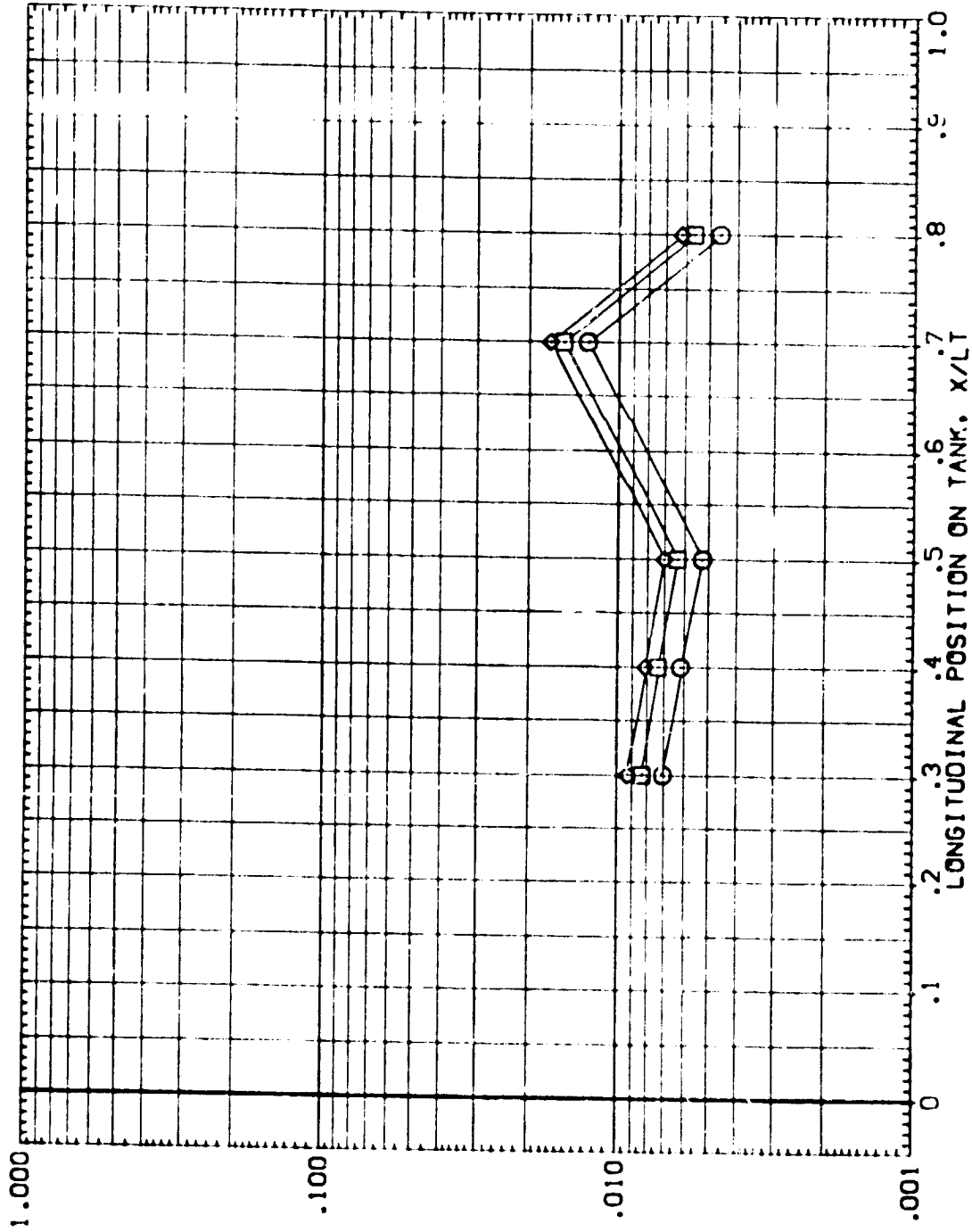


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

MACH = 8.000 ALPHA = .000 PHI = 67.500



DATA SET SYMBOL CONFIGURATION DESCRIPTION MA/HT RN/L BETA ELEVON

(RKTOS) AEDC VA352 3-HB T10 EXTERNAL TANK 1.000 3.720 .000 .000

(ATVTO5) AEDC VA352 0-HB T10 EXTERNAL TANK .900 3.720 .000 .000

(BKTOS) AEDC VA352 0-HB T10 EXTERNAL TANK .650 3.720 .000 .000

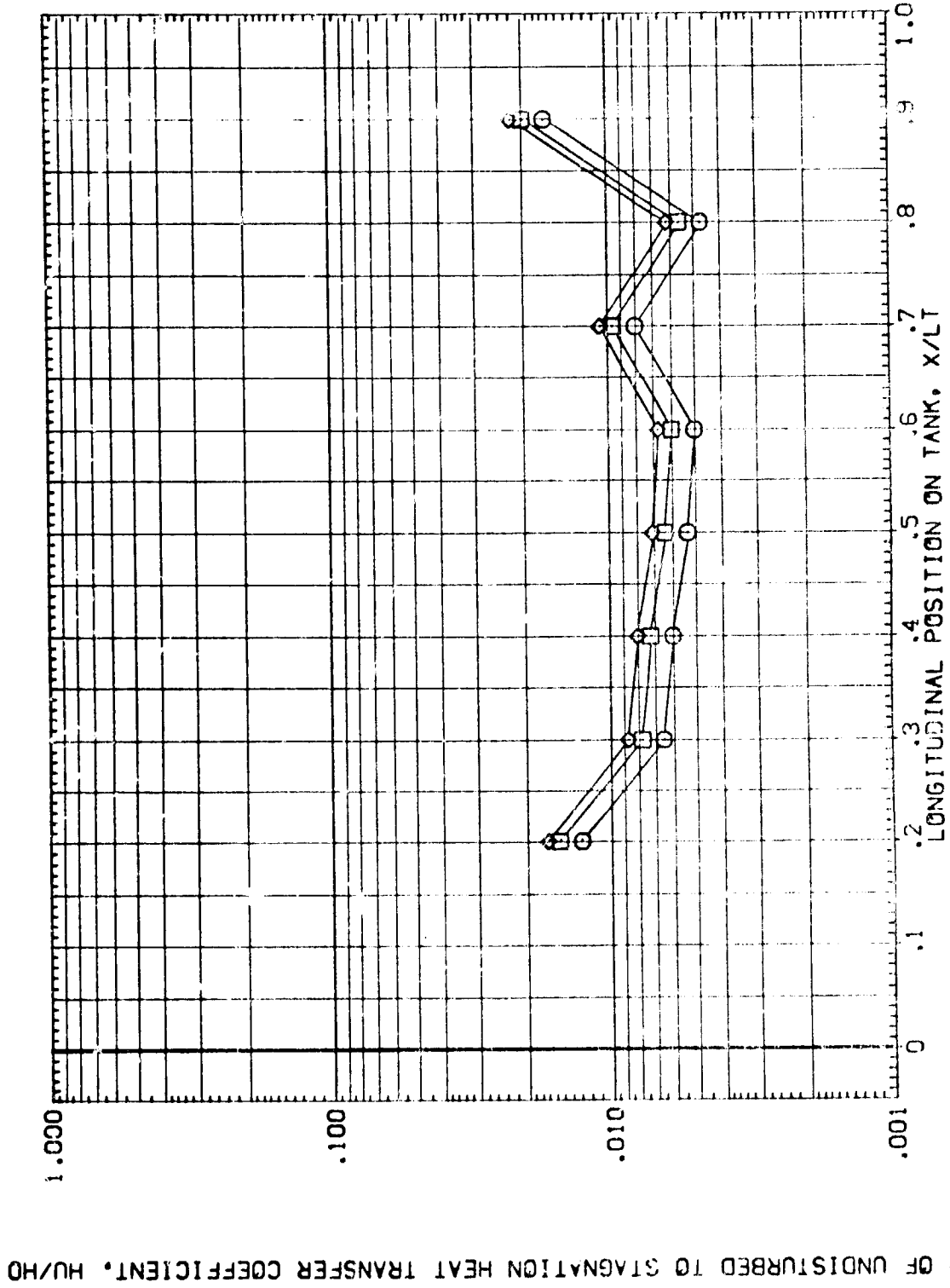


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

REYNOLDS NUMBER = 8.000 ALPHA = .000 PHI = 90.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION HEIGHT RWL BETA ELEVATION
 (RTT06) (A) AEDC VAS32 0-4B T10 EXTERNAL TANK 1.000 3.720 .000 .000
 (ATP06) (B) AEDC VAS32 0-4B T10 EXTERNAL TANK .900 3.720 .000 .000
 (BTT06) (C) AEDC VAS32 0-4B T10 EXTERNAL TANK .850 3.720 .000 .000

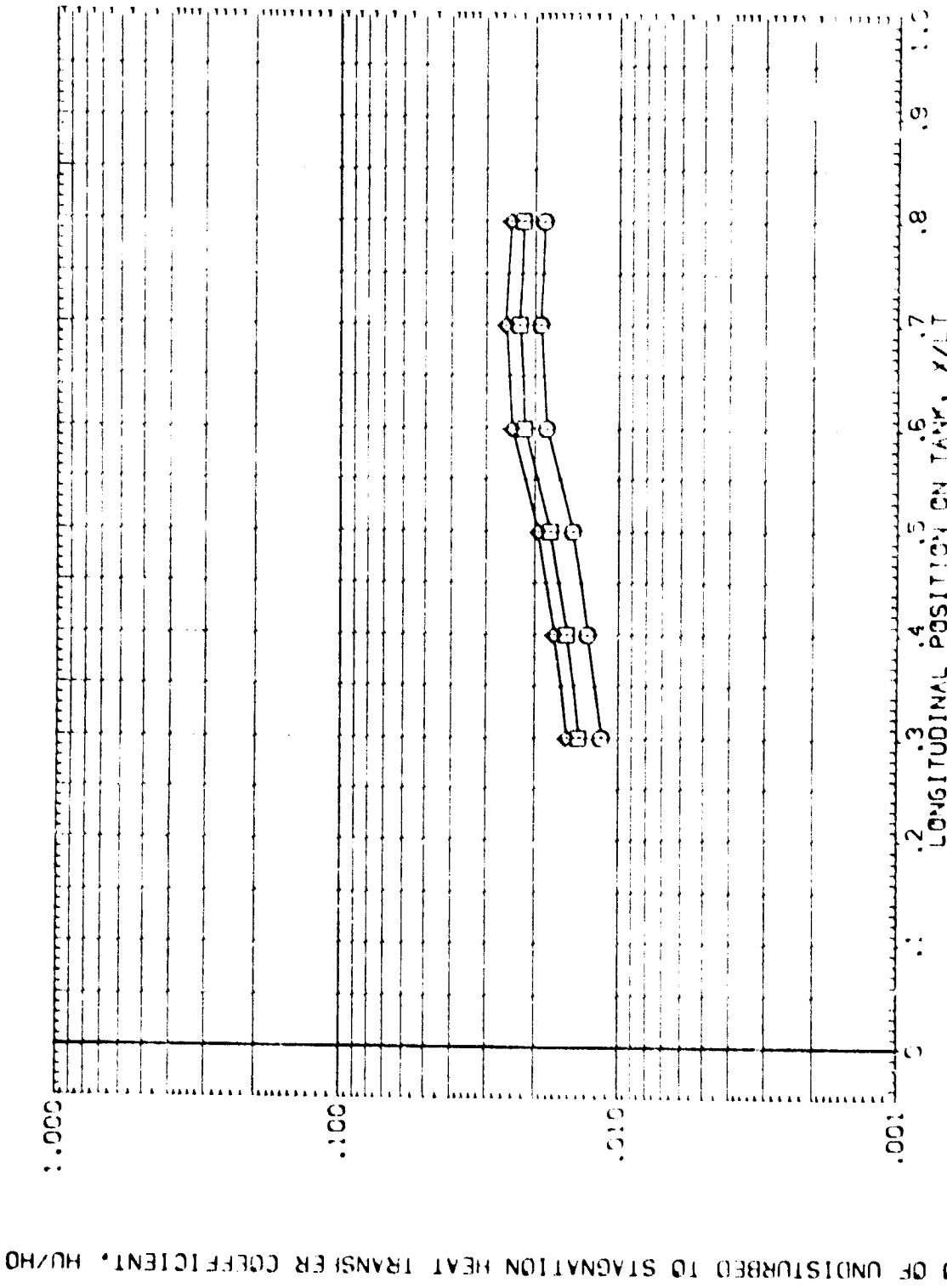


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

OMACH = 8.000 ALPHA = .000 PHI = 112.500



DATA SET SYMBOL CONFIGURATION DESCRIPTION WEIGHT RWAL BETA ELEVON

(RTK05) O AEDC VAS52 0-4B T10 EXTERNAL TANK .000 .000 .000

(ATK05) X AEDC VAS52 0-4B T10 EXTERNAL TANK .900 3.720 .000

(BTK05) X AEDC VAS52 0-4B T10 EXTERNAL TANK .950 3.720 .000

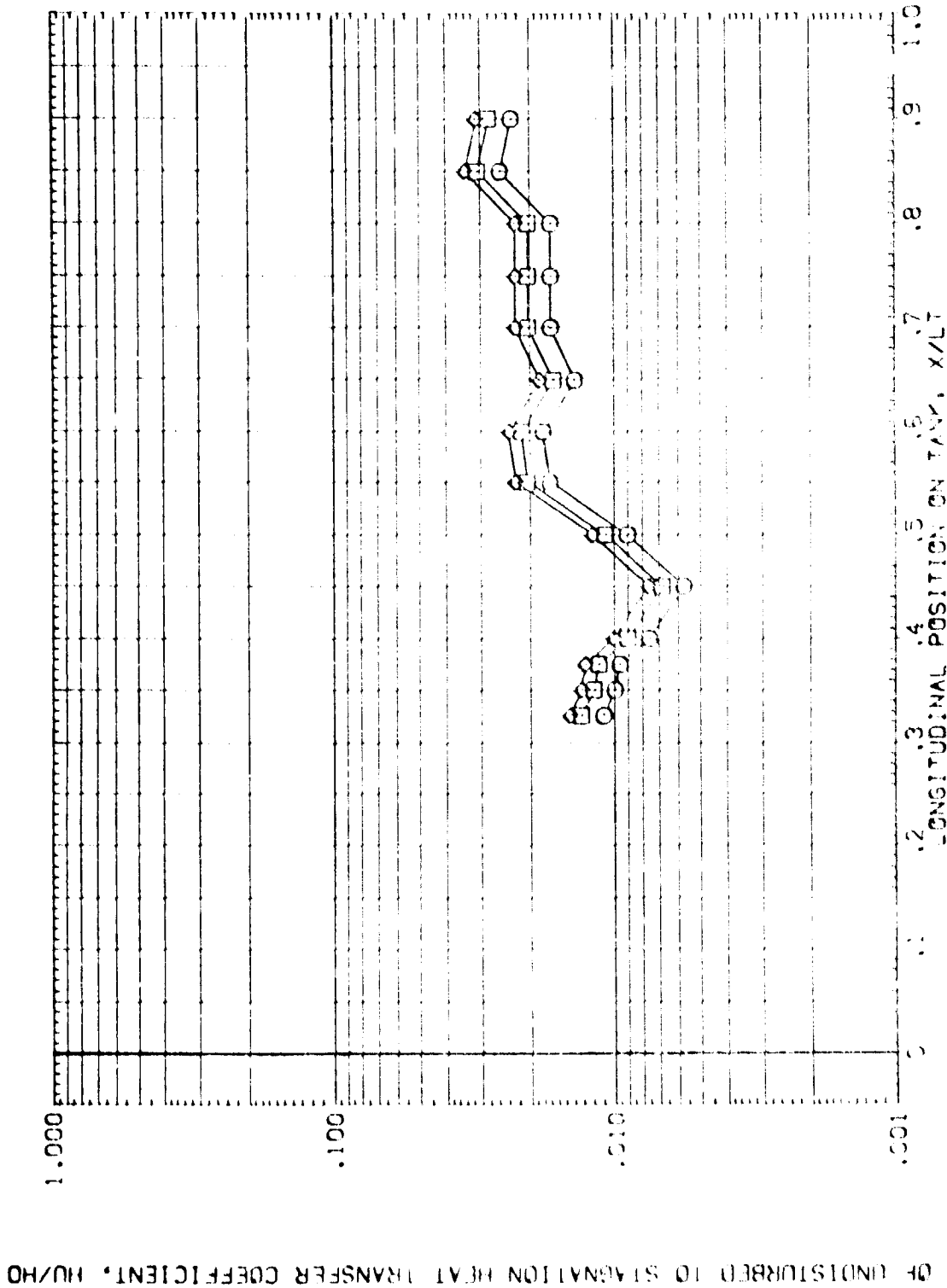


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK,

SEARCH = 8.000 ALPHA = .000 PHI = 135.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RTKT06) AEDC VA352 D-4B T10 EXTERNAL TANK
 (ATKT06) AEDC VA352 D-4B T10 EXTERNAL TANK
 (BTKT06) AEDC VA352 D-4B T10 EXTERNAL TANK

MA/HT RW/L SET/ ELEV/HT
 .000 3.720 .000 .000
 .900 3.720 .000 .000
 .850 3.720 .000 .000

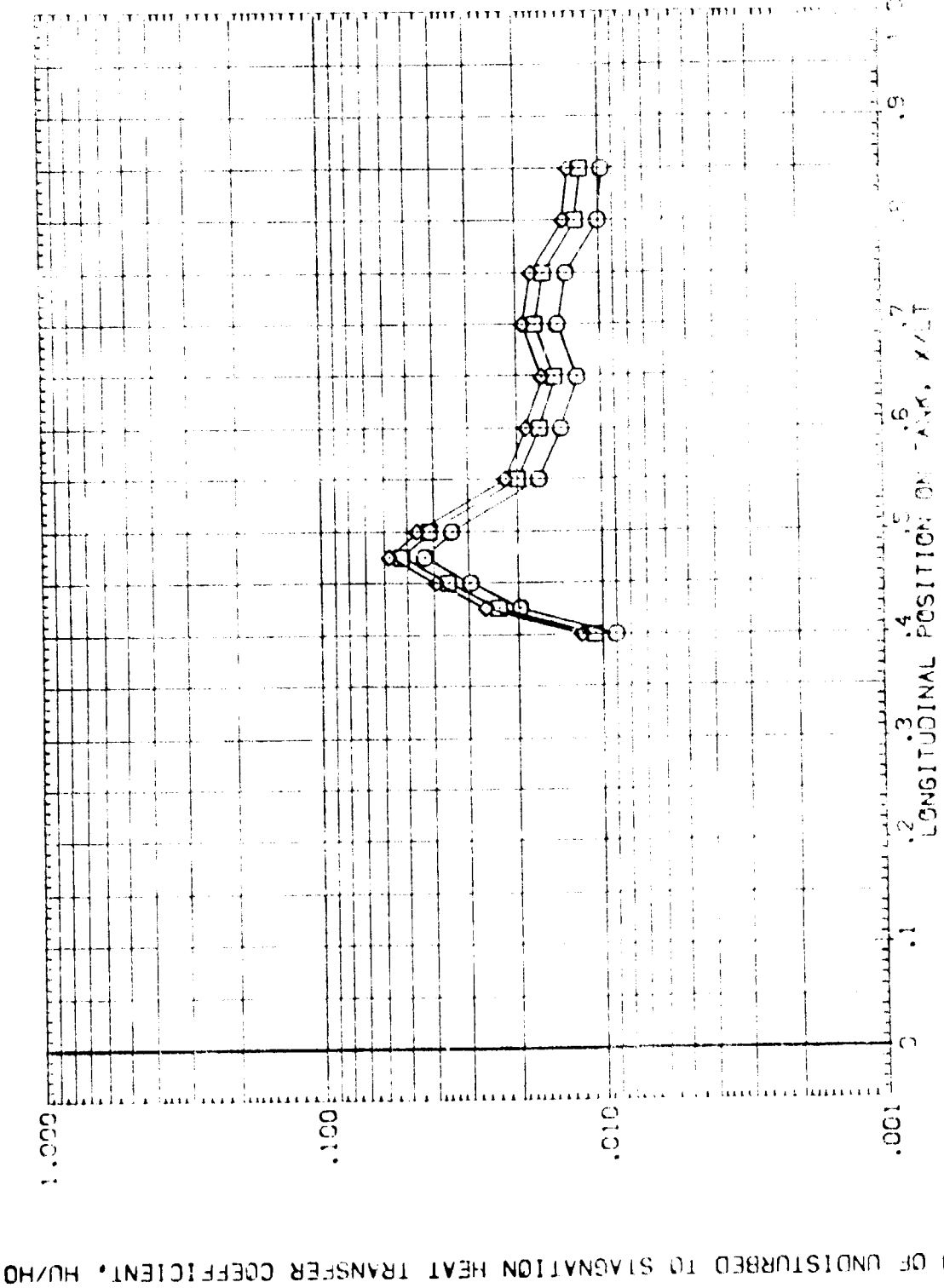


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK,

GMACH = 8.000 ALPHA = .000 PHI = 157.000



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAWAHT | RV/L | BETA | ELEVON |
|-----------------|-----------------------------------|--------|-------|------|--------|
| (RTKT06) | AEDC VAS32 D-48 T10 EXTERNAL TANK | 1.000 | 3.720 | .000 | .000 |
| (ATKT06) | AEDC VAS32 D-48 T10 EXTERNAL TANK | .900 | 3.720 | .000 | .000 |
| (BTKT06) | AEDC VAS32 D-48 T10 EXTERNAL TANK | .850 | 3.720 | .000 | .000 |

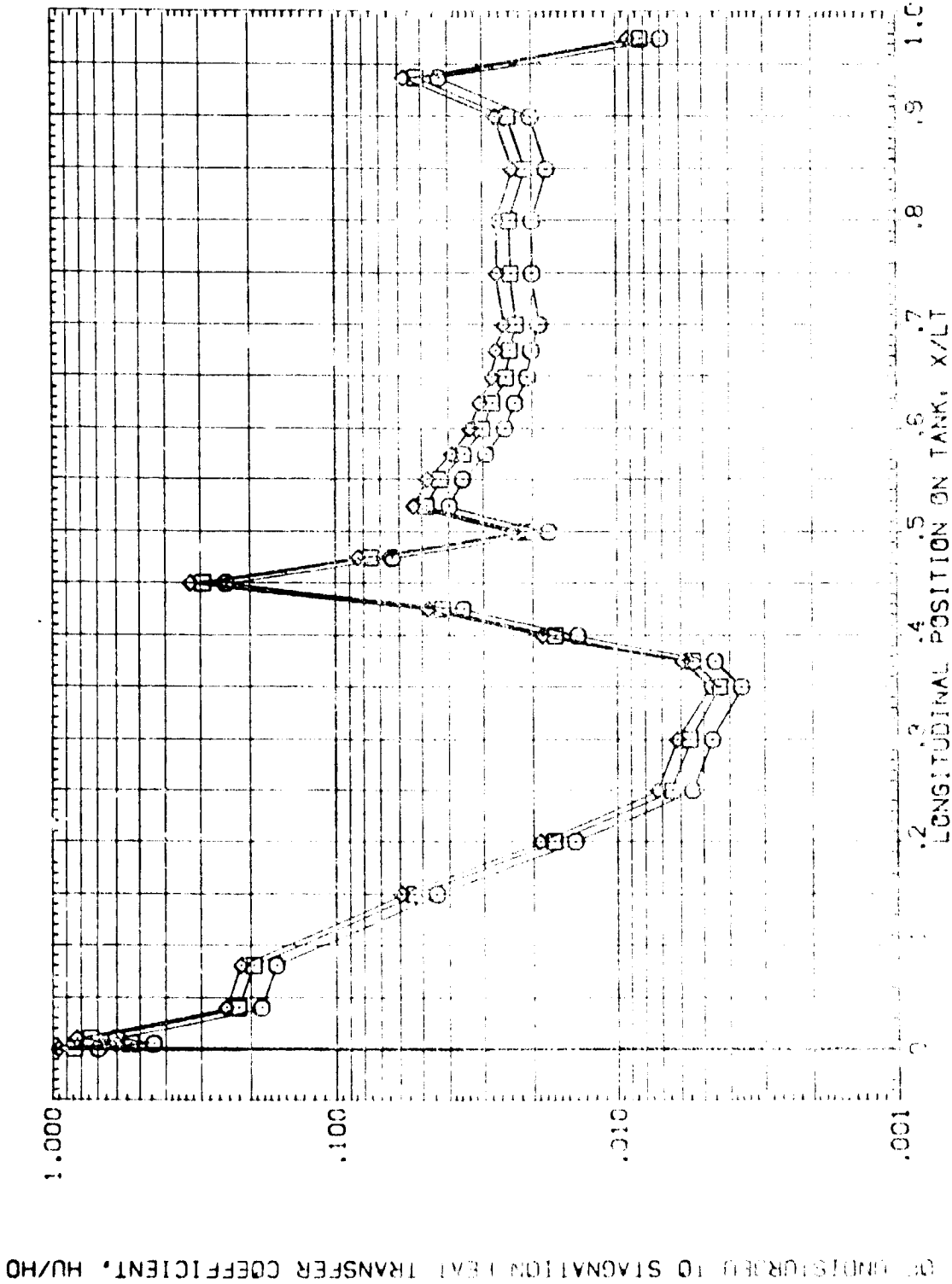


FIGURE 4 HEAT TRANSFER COEFFICIENTS ON EXTERNAL TANK.

SMACH = 8.000 ALPHA = .000 PHI = 180.000

| | | | | | |
|-----------------|--------------------------------------|--------|-------|------|---------|
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAV/HT | RM/L | BETA | ELEV/ON |
| (RTK901) | AEDC VA352 D-4B 01+T10 ORB. FUSELAGE | 1.000 | 3.720 | .000 | .000 |
| (ATK901) | AEDC VA352 D-4B 01+T10 ORB. FUSELAGE | .900 | 3.720 | .000 | .000 |
| (8TK901) | AEDC VA352 D-4B 01+T10 ORB. FUSELAGE | .650 | 3.720 | .000 | .000 |

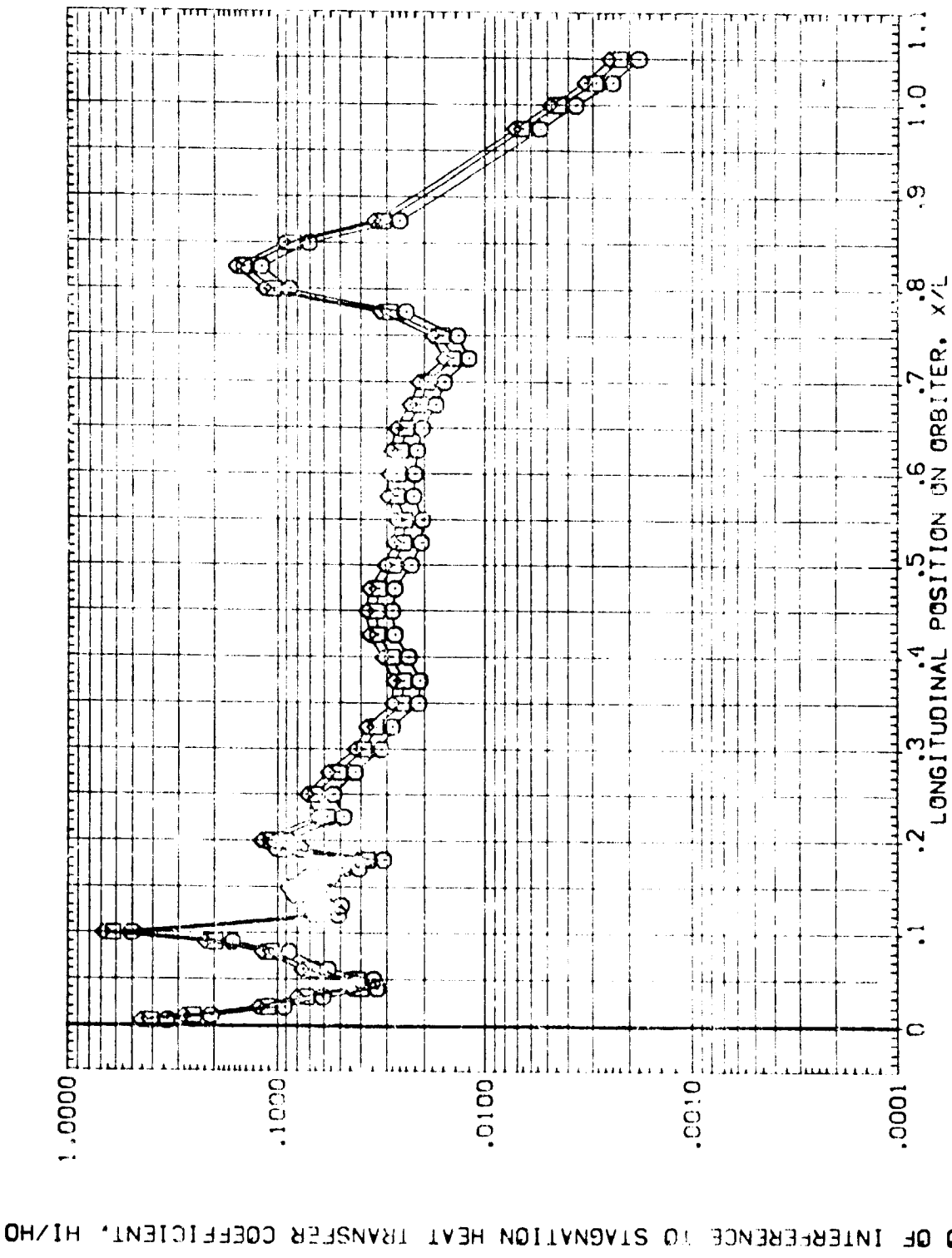


FIGURE 5 HEAT TRANSFER COEFFICIENTS ON ORBITER FUSELAGE.

MACH = 8.000 ALPHA = .000 PHI = .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (PTK801) AEDC VA352 0-48 01+T10 CRB. FUSELAGE
 (ATK801) AEDC VA352 0-48 01+T10 ORB. FUSELAGE
 (BTK801) AEDC VA352 0-48 01+T10 ORB. FUSELAGE

HAV/HT BETA ELEVON
 1.000 .000 .000
 .900 .000 .000
 .850 .000 .000

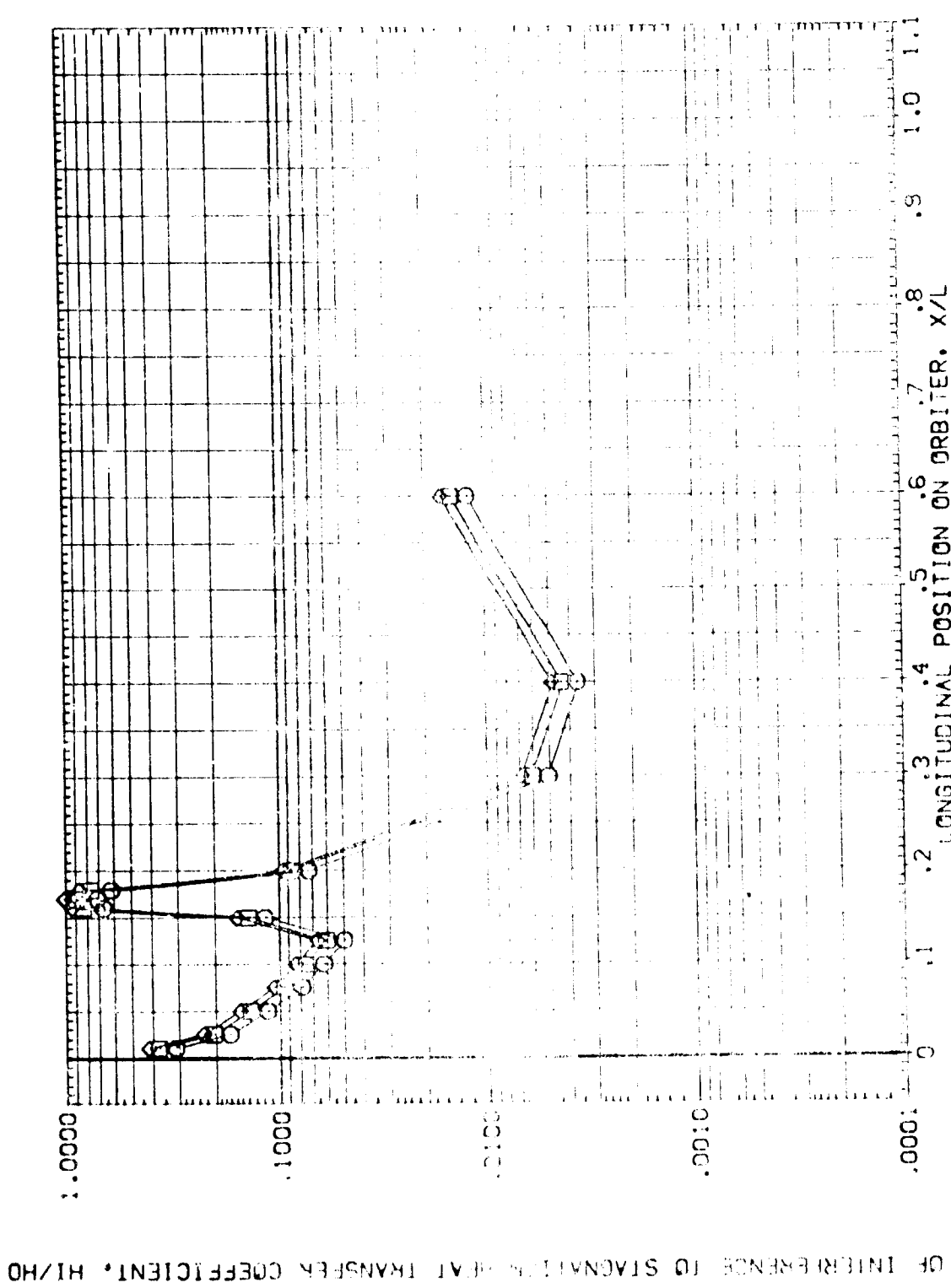


FIGURE 5 HEAT TRANSFER COEFFICIENTS ON ORBITER FUSELAGE.

MACH = 6.000 ALPHA = .000 PHI = 180.000

DATA SET SYMBOL
 (RTKB10)
 (ATKB10)
 (CTKB10)

CONFIGURATION DESCRIPTION
 AEDC VA352 D448 01
 AEDC VA352 D448 01
 AEDC VA352 D448 01

ORB. FUSELAGE
 ORB. FUSELAGE
 ORB. FUSELAGE

HAW/HT RM/L BETA ELEVON
 1.000 3.720 .000 .000
 .500 3.720 .000 .000
 .000 3.720 .000 .000

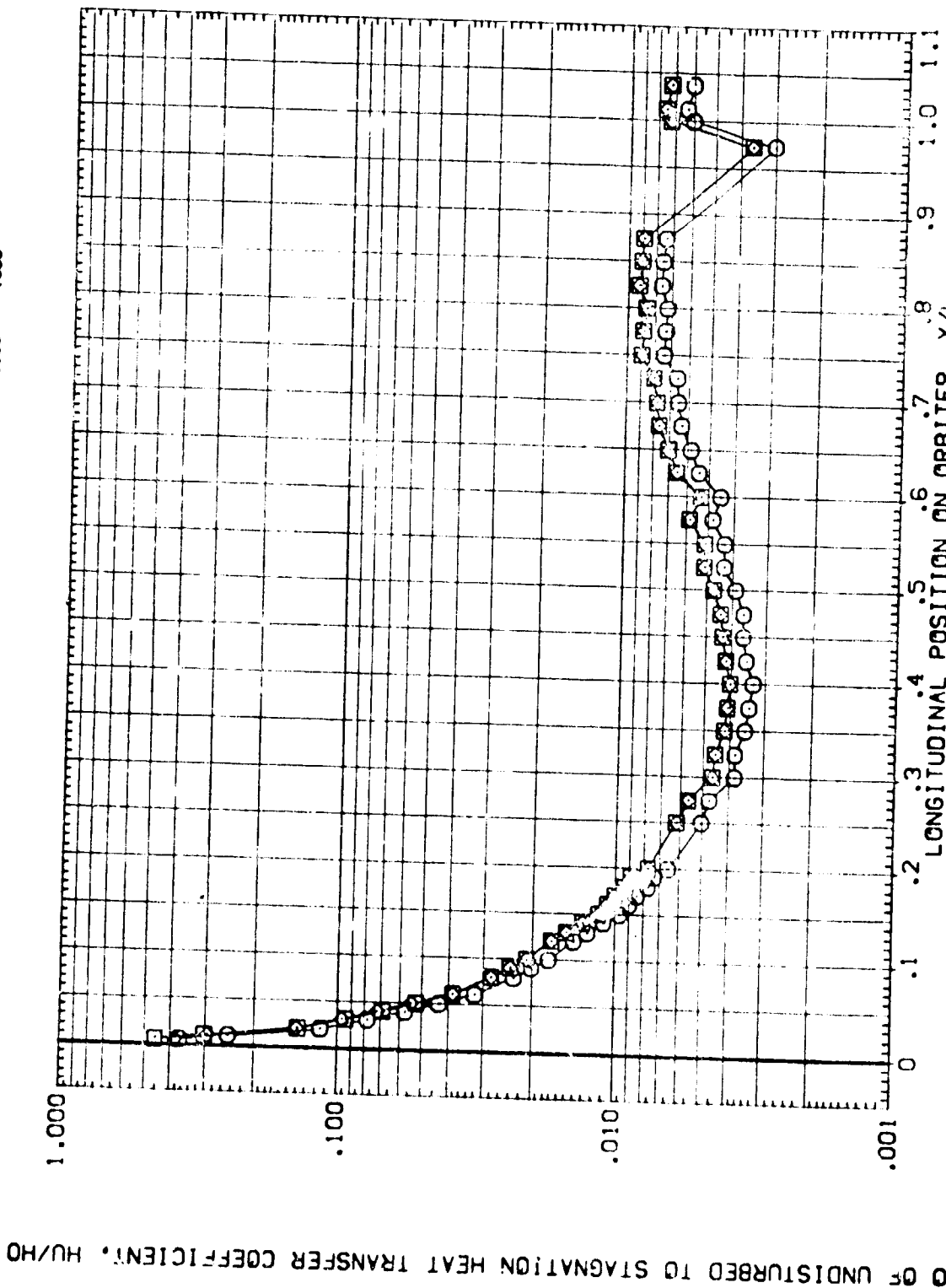


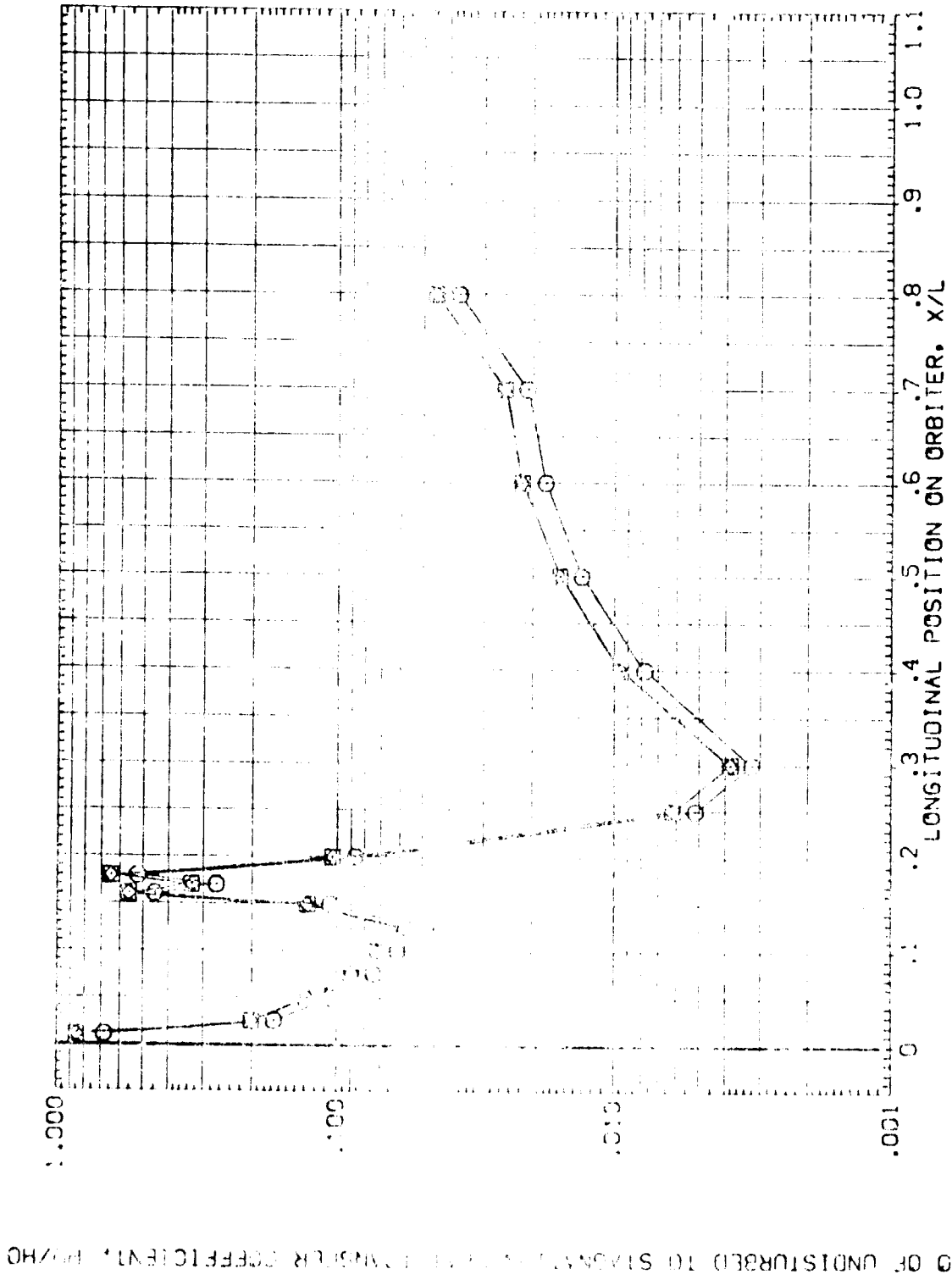
FIGURE 5 HEAT TRANSFER COEFFICIENTS ON ORBITER FUSELAGE.

MACH = 8.000 ALPHA = .000 PHI = .000



DATA SET SYMBOL CONFIGURATION DESCRIPTION HAV/HT RV/L BETA ELEVON

| | | | | | | | | | |
|-------------|------------|------|----|------|----------|-------|-------|------|------|
| (R) (A) (0) | AEDE VALS2 | 0-40 | 01 | 0P8. | FUSELAGE | 1.000 | 3.720 | .000 | .000 |
| (A) (B) (0) | AEDE VALS2 | 0-40 | 01 | 0P8. | FUSELAGE | .900 | 3.720 | .000 | .000 |
| (A) (B) (1) | AEDE VALS2 | 0-40 | 01 | 0P8. | FUSELAGE | .000 | 3.720 | .000 | .000 |



DATA SET SYMBOL CONFIGURATION DESCRIPTION HAWAHT FNVL BETA ELEVON

(RTMB29) AEDC VA352 O-4B O2 ORB, FUSELAGE 1.000 3.720 .000 .000

(ATK829) AEDC VA352 O-4B O2 ORB, FUSELAGE .900 3.720 .000 .000

(CTMB29) AEDC VA352 O-4B O2 ORB, FUSELAGE .000 3.720 .000 .000

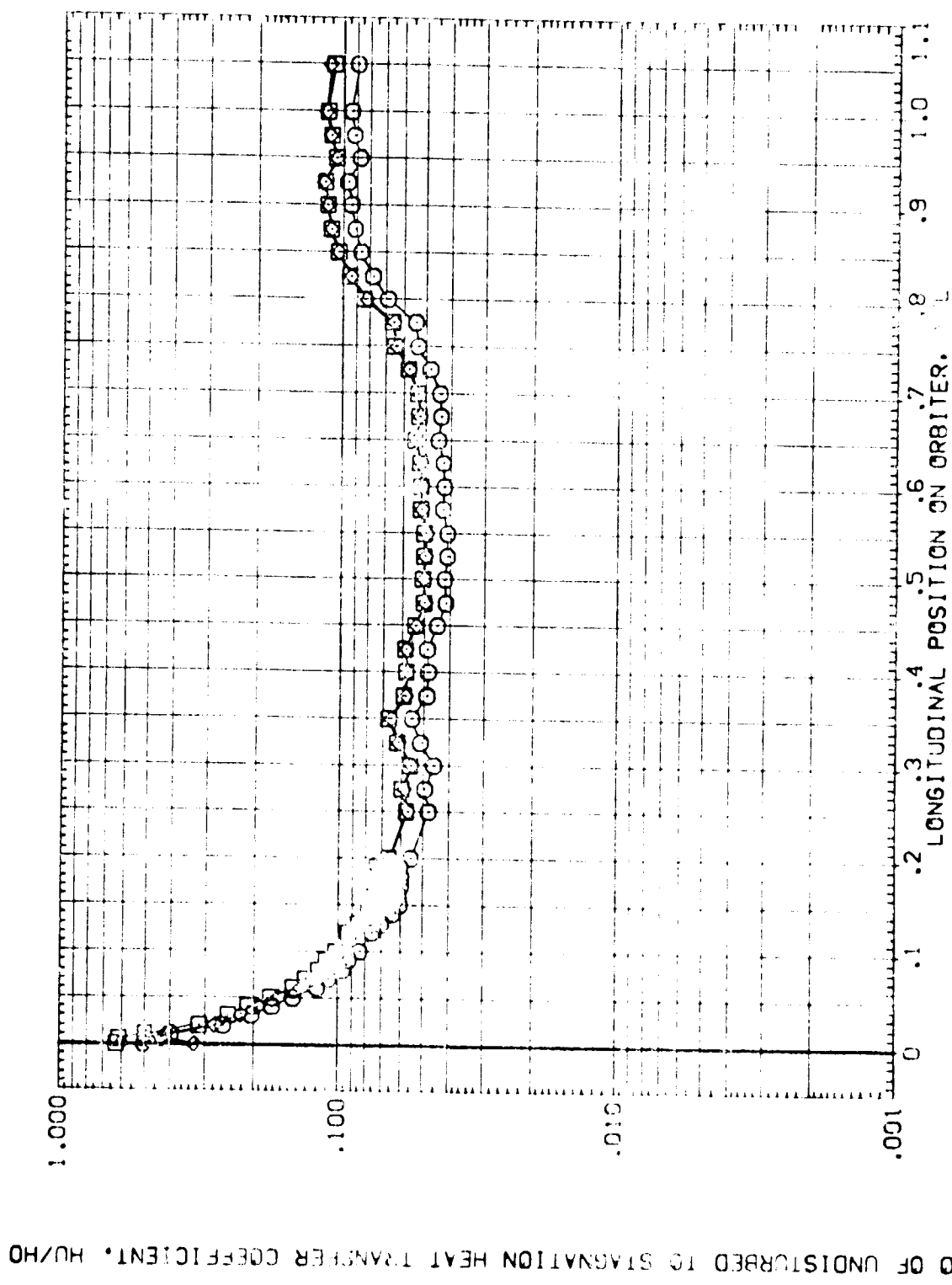


FIGURE 5 HEAT TRANSFER COEFFICIENTS ON ORBITER FUSELAGE.

OMACH = 8.000 ALPHA = 25.000 PHI = .000 PAGE 20

DATA SET 5: 80
 (PTXLOC) (CYLOC) (ATXLOC) (BTXLOC)
 CONFIGURATION DESCRIPTION:
 AEDC WIND TUNNEL 0288, BOTTOM SURFACE WING
 AEDC WIND TUNNEL 0288, BOTTOM SURFACE WING
 AEDC WIND TUNNEL 0288, BOTTOM SURFACE WING
 HAWAII RV/L BETA ELEVON
 1.000 .000 .000
 .900 .000 .000
 .850 .000 .000

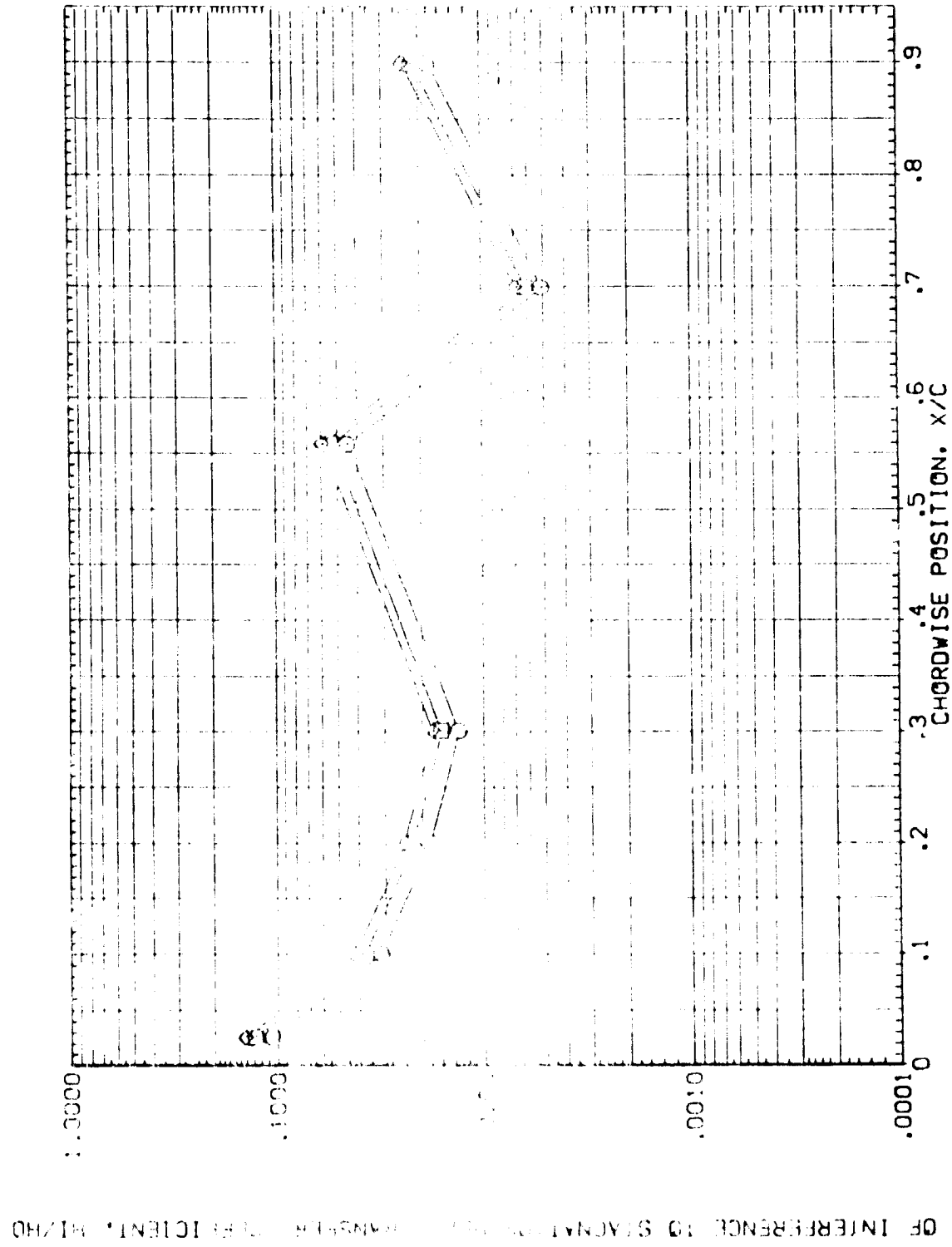


FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

$\text{MACH} = 8.000$ $\text{ALPHA} = .000$ $2Y/B = .400$

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/MT | RM/L | BETA | ELEVON |
|-----------------|-----------------------------|--------|-------|------|--------|
| (RTKLO1) | AEDC VA352 0-48 01+T10 058. | 1.000 | 3.720 | .000 | .000 |
| (ATKLO1) | AEDC VA352 0-48 01+T10 058. | .900 | 3.720 | .000 | .000 |
| (BTKLO1) | AEDC VA352 0-48 01+T10 058. | .850 | 3.720 | .000 | .000 |

RATIO OF INTERFERENCE TO STAGNATION HEAT TRANSFER COEFFICIENT, HI/HO

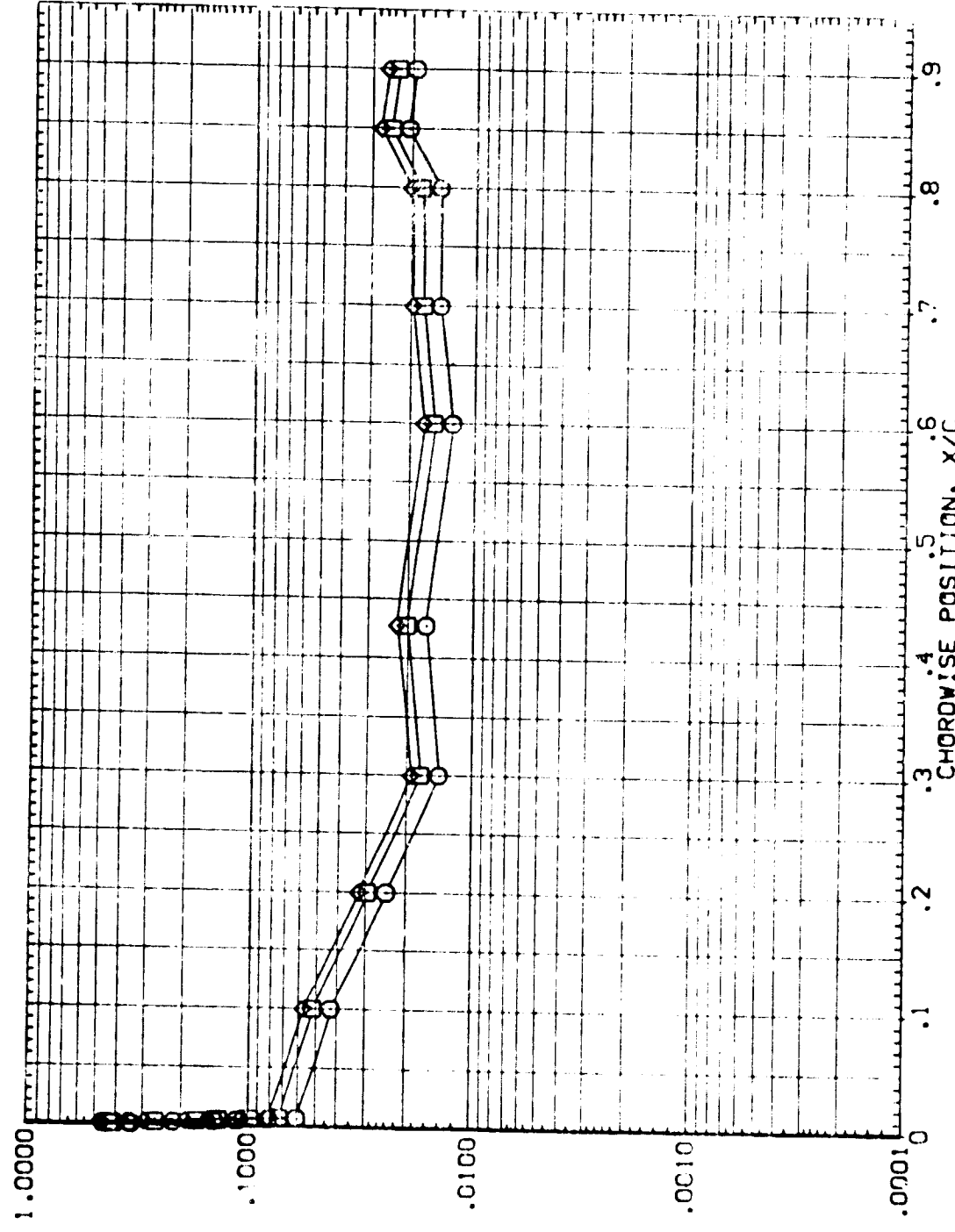


FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

MA_{CH} = 8.000 ALPHA = .000 2Y/B = .600



DATA SET SYMBOL: CONFIGURATION DESCRIPTION: ELEVON

| HEIGHT | FWAL | BETA | ELEVON |
|--------|--------|------|--------|
| 1.000 | 3.1720 | .000 | .000 |
| .900 | 3.1720 | .000 | .000 |
| .850 | 3.1720 | .000 | .000 |

AEDC VALUE: 0.18 0.25 0.32 0.40 0.50 0.60 0.70 0.80 0.90
 SURFACE WING SURFACE WING SURFACE WING SURFACE WING
 AEDC VALUE: 2.0 3.0 4.0 5.0 6.0 7.0 8.0 9.0 10.0

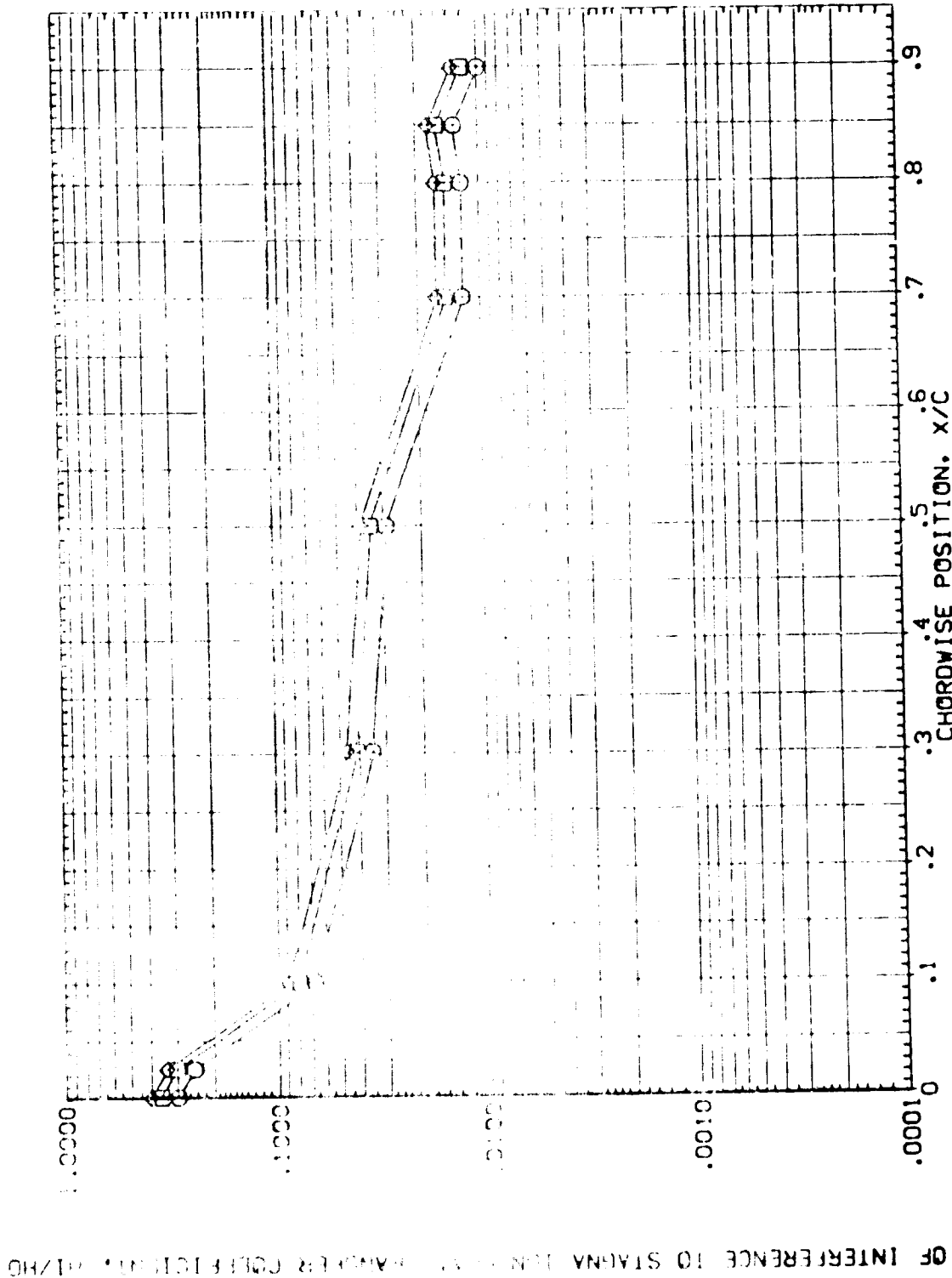


FIGURE 5 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

MACH = 8.000 ALPHA = .000 2Y/B = .750

DATA SET SYMBOL CONFIGURATION DESCRIPTION HAV/HT RNVL BETA ELEVON

(RTKL10) AEDC VA352 0-4B 01 OR8: BOTTOM SURFACE WING 1.000 3.720 .000 .000

(ATKL10) AEDC VA352 0-4B 01 OR8: BOTTOM SURFACE WING .900 3.720 .000 .000

(CTKL10) AEDC VA352 0-4B 01 OR8: BOTTOM SURFACE WING .800 3.720 .000 .000

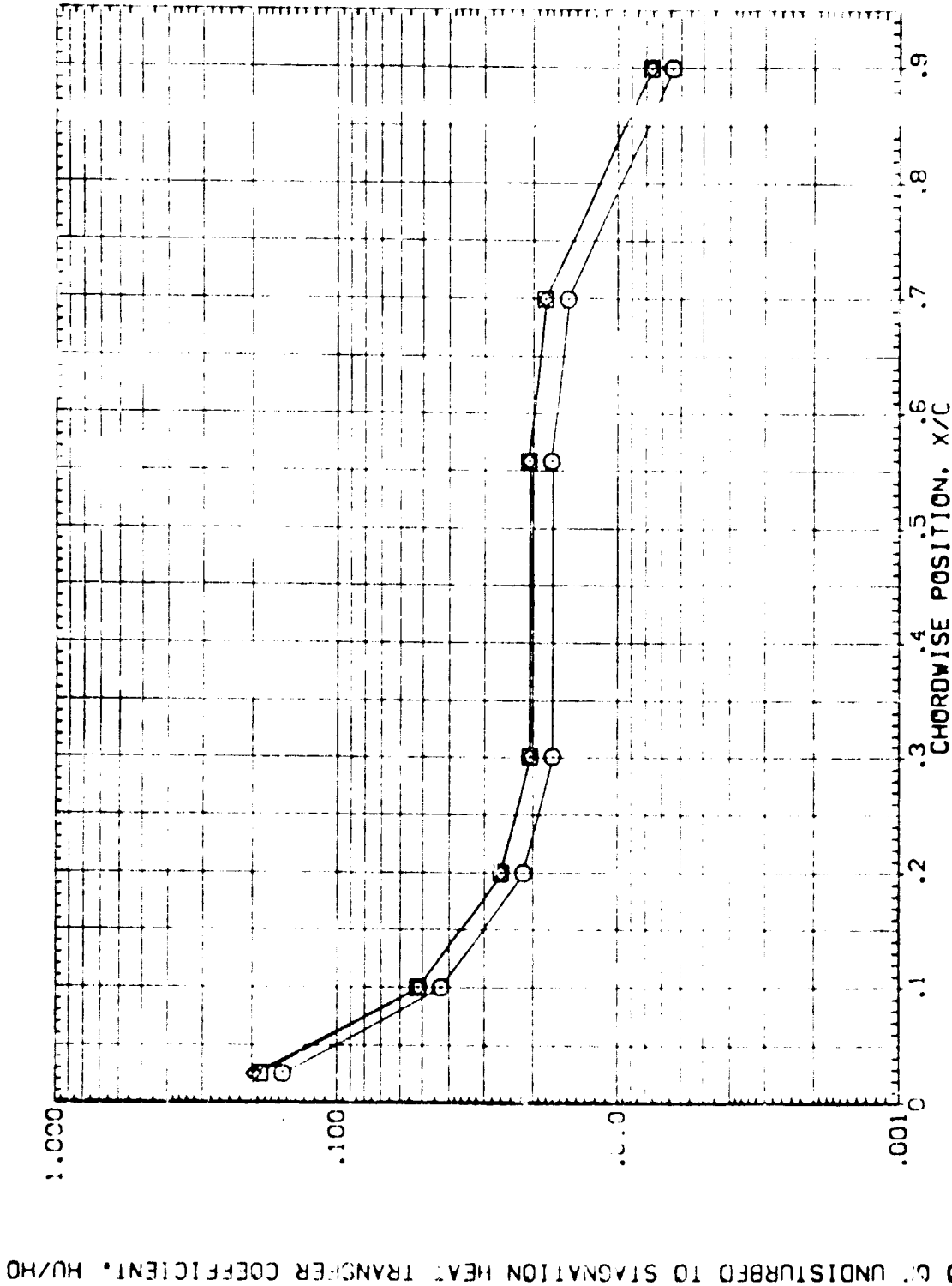


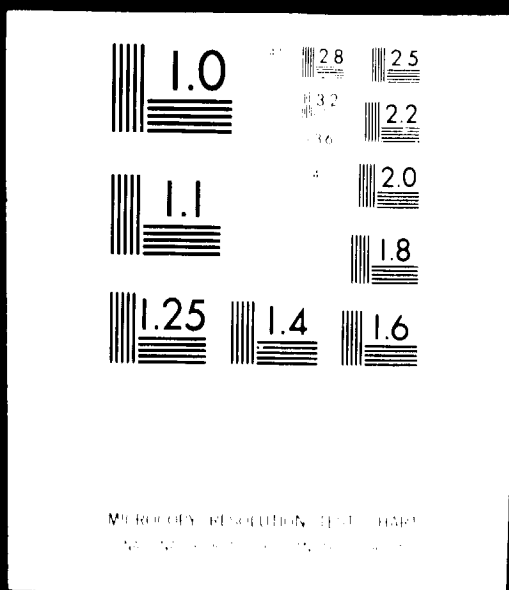
FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

MACH = 8.000 ALPHA = .000 Z/Y/B = .400



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175 18290 UNCLAS



DATA SET SYMBOL: (RTKL10) (ATKL10) (CTKL10)

| CONFIGURATION DESCRIPTION | HAV/HT | RM/L | BETA | ELEVON |
|---------------------------|--------|-------|------|--------|
| AEDC VA352 D-48 01 | 1.000 | 3.720 | .000 | .000 |
| TOP SURFACE WING | .500 | 3.720 | .000 | .000 |
| BOTTOM SURFACE WING | .000 | 3.720 | .000 | .000 |
| AEDC VA352 D-48 01 | 1.000 | 3.720 | .000 | .000 |
| TOP SURFACE WING | .500 | 3.720 | .000 | .000 |
| BOTTOM SURFACE WING | .000 | 3.720 | .000 | .000 |

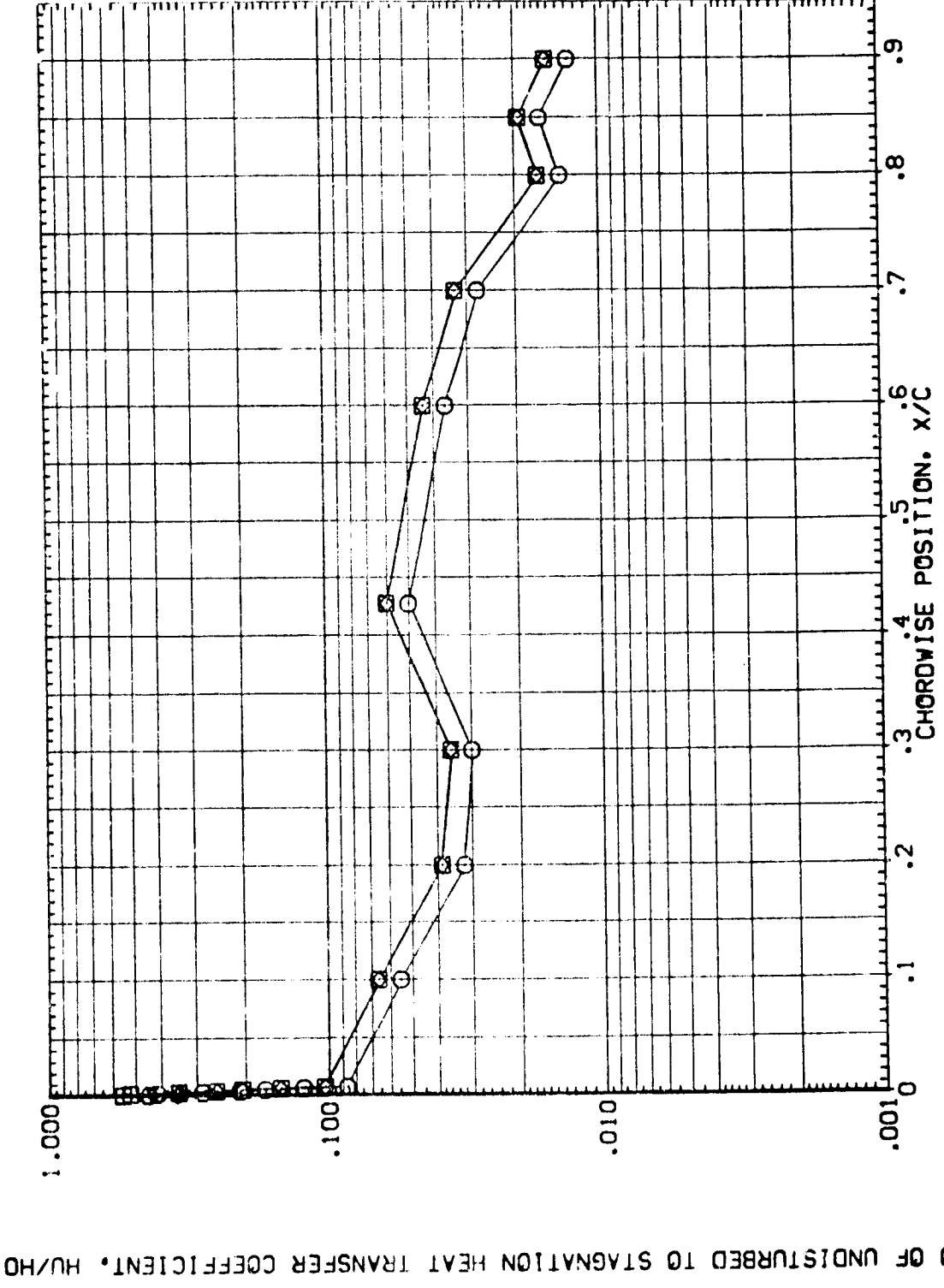


FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

$\alpha_{MACH} = 8.000$ ALPHA = .000 2Y/B = .600

DATA SET SYMBOL CONFIGURATION DESCRIPTION HAV/HT RN/L BETA ELEVON
 (RTKL10) AEDC VA352 0448 01 000 3.720 .000 .000
 (ATKL10) AEDC VA352 0448 01 .800 3.720 .000 .000
 (CTKL10) AEDC VA352 0448 01 .000 3.720 .000 .000

RATIO OF UNDISTURBED TO STAGNATION HEAT TRANSFER COEFFICIENT, HU/HO MACH = 8.000 ALPHA = .000 2Y/B = .750

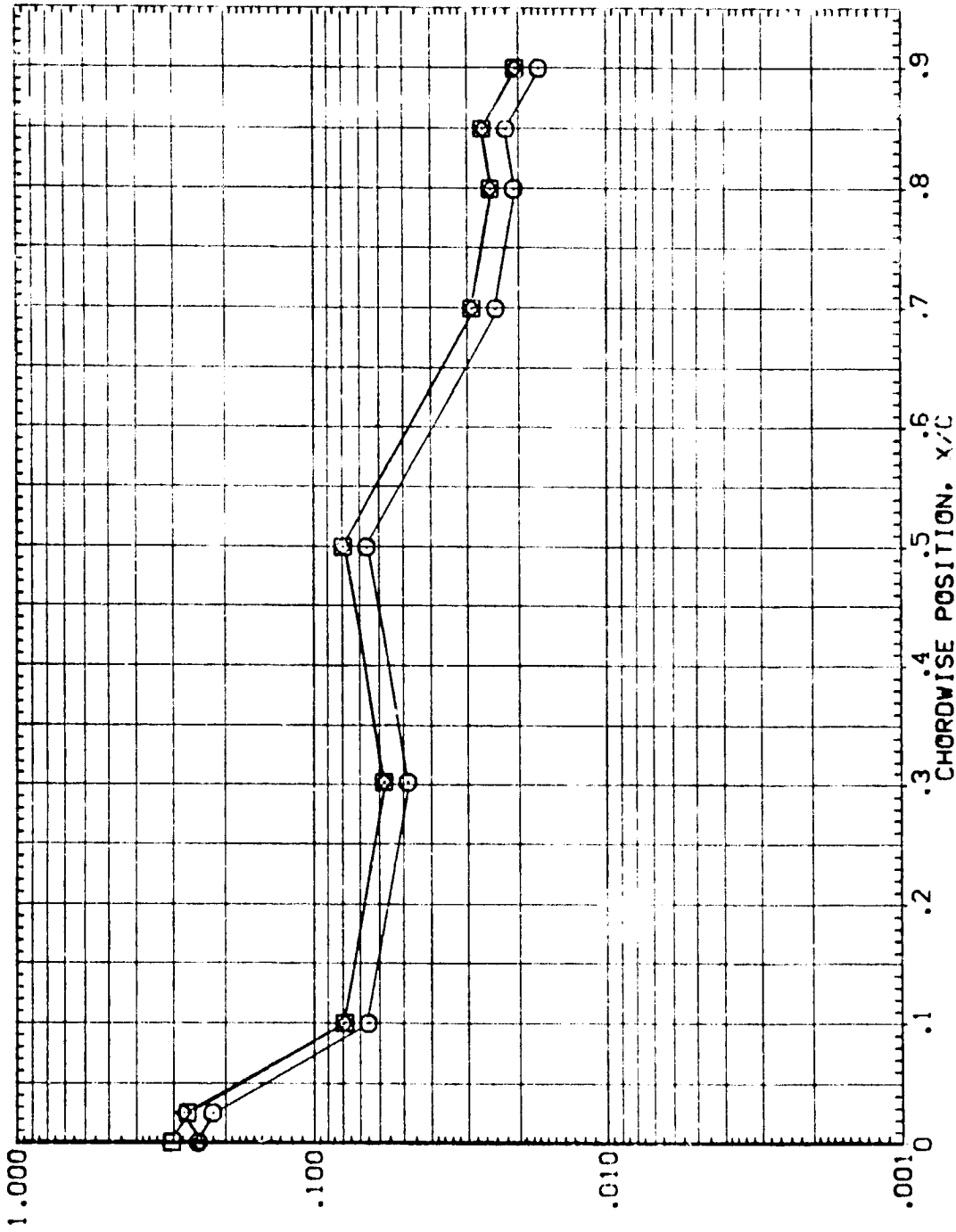


FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER



DATA SET SYMBOL CONFIGURATION DESCRIPTION

| DATA SET SYMBOL | CONFIGURATION | DESCRIPTION | MAW/HT | RNVL | BETA | ELEVON |
|-----------------|---------------|-------------|--------|-------|------|--------|
| (RTRL 42) | AEDC V4352 | D-4B 02 | 1.000 | 3.720 | .000 | .000 |
| (ATKL 42) | AEDC V4352 | D-4B 02 | .500 | 3.720 | .000 | .000 |
| (CTKL 42) | AEDC V4352 | D-4B 02 | .000 | 3.720 | .000 | .000 |

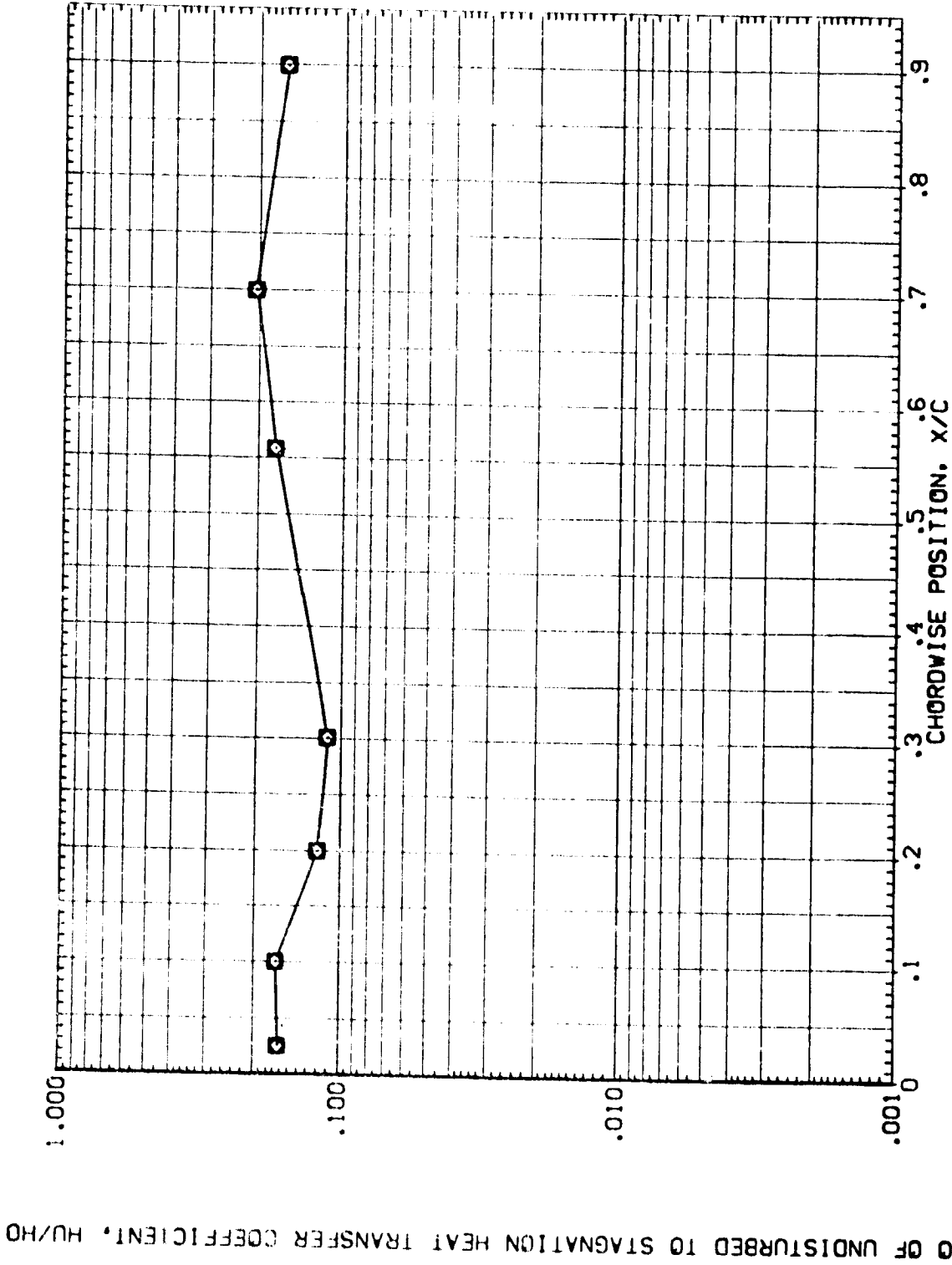


FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

MA_∞ = 8.000 ALPHA = 30.000 2Y/B = .400

DATA SET SYMBOL
 (RTKL42)
 (ATKL42)
 (CTKL42)

CONFIGURATION DESCRIPTION
 AEDC VA352 0418 02
 AEDC VA352 0418 02
 AEDC VA352 2418 02

058. BOTTOM SURFACE WING
 058. BOTTOM SURFACE WING
 058. BOTTOM SURFACE WING

HAWAHT
 1.000
 .900
 .000

RVAL
 3.720
 3.720
 3.720

BETA
 .000
 .000
 .000

ELEVON
 .000
 .000
 .000

RATIO OF UNDISTURBED TO STAGNATION HEAT TRANSFER COEFFICIENT, HU/HO

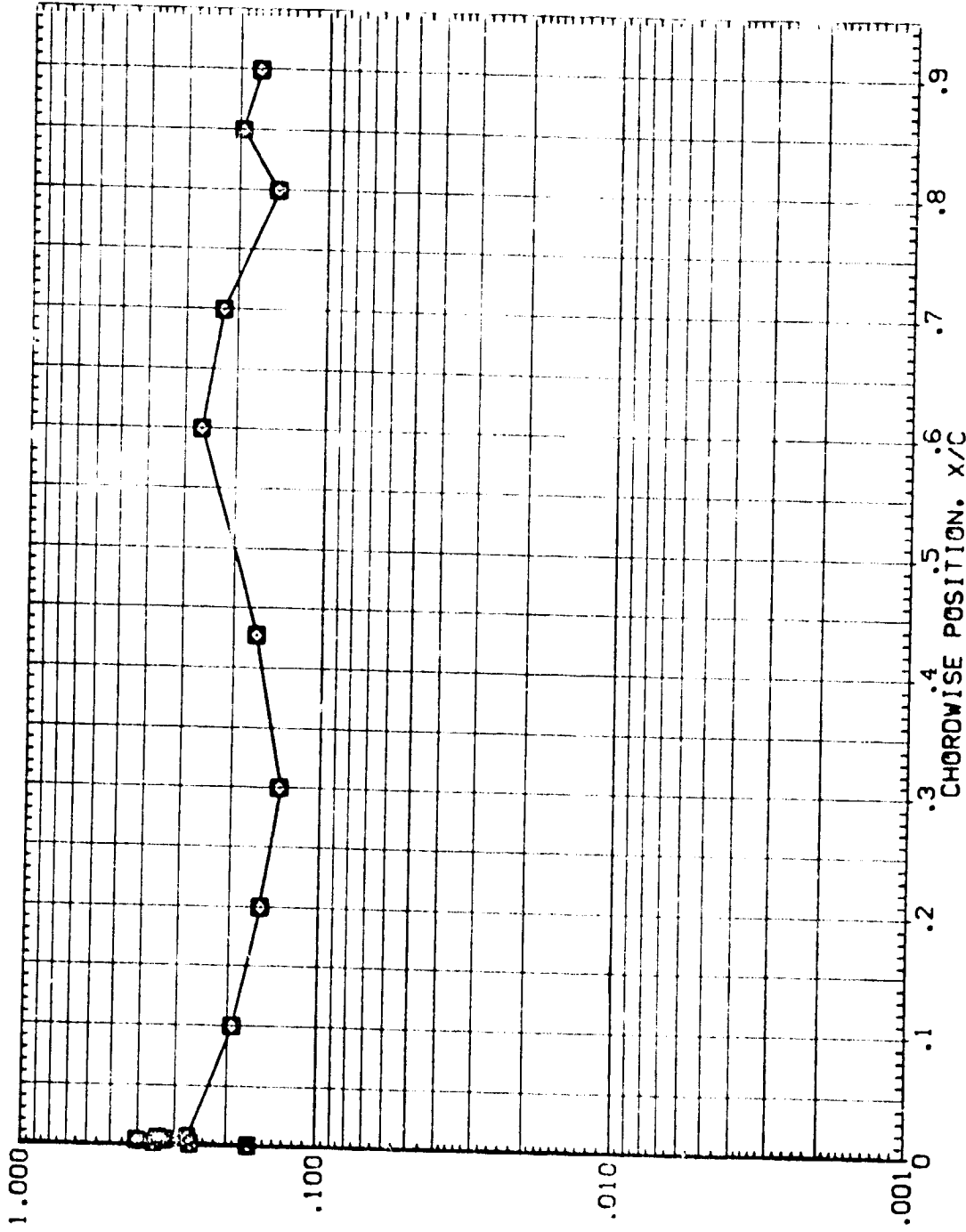


FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

MACH = 8.000 ALPHA = 30.000 2Y/B = .600



| DATA SET SYMBO. | CONFIGURATION DESCRIPTION | MAVHT | RV/L | BETA | ELEVON |
|-----------------|---------------------------|-------|-------|------|--------|
| (RTR-42) | TOP SURFACE WING | 1.000 | 3.720 | .000 | .000 |
| (RTR-43) | BOTTOM SURFACE WING | .900 | 3.720 | .000 | .000 |
| (RTR-44) | TOP SURFACE WING | 1.000 | 3.720 | .000 | .000 |

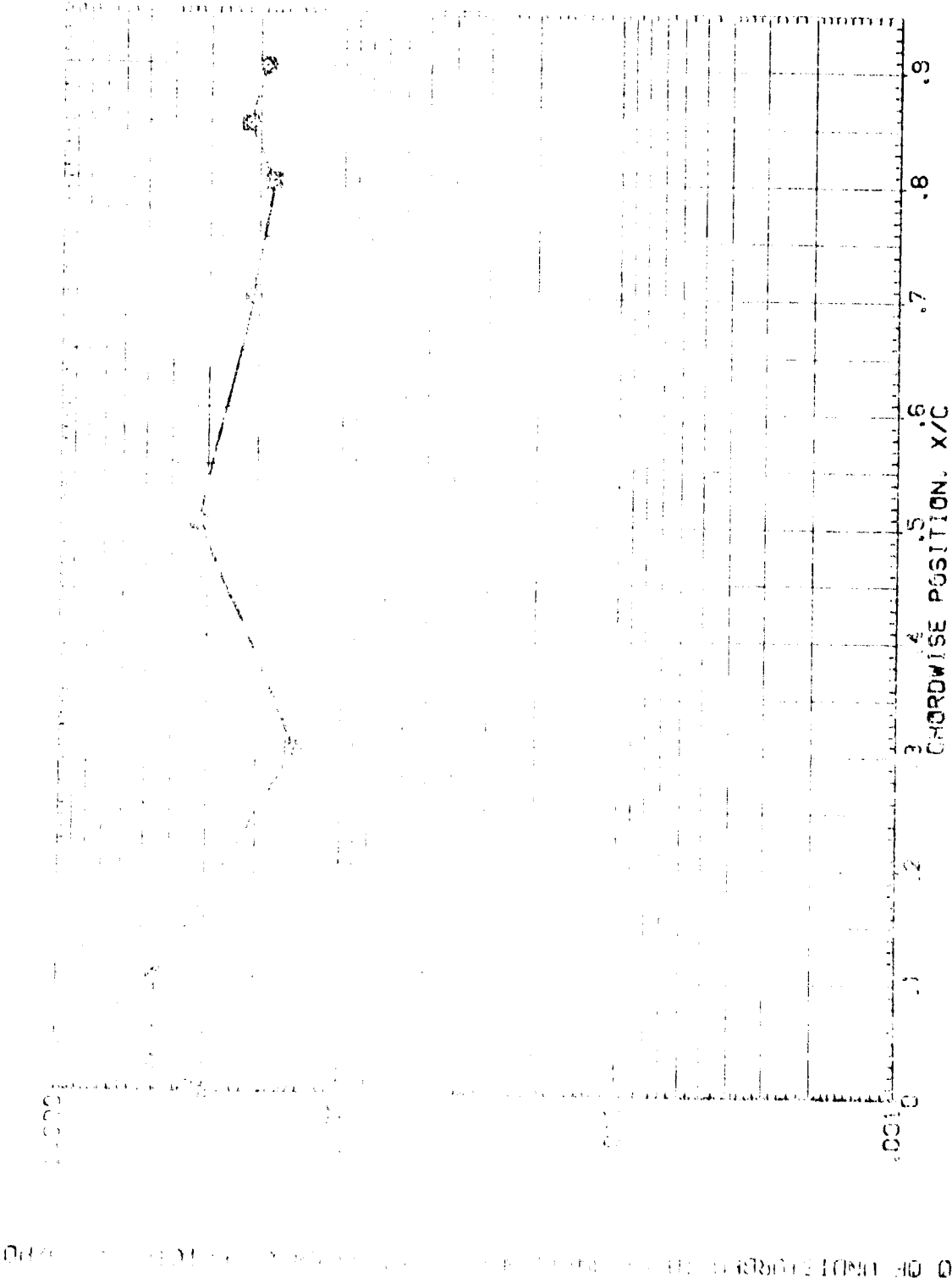


FIGURE 6 HEAT TRANSFER COEFFICIENTS ON LOWER WING SURFACE OF ORBITER.

$MACH = 8.000$ $ALPHA = 30.000$ $2Y/B = .750$

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/HT | RNVL | BETA | ELEVON |
|-----------------|---|--------|-------|------|--------|
| (R17401) | AEDC VA352 O-HAB 01+110 0PB. UPPER SURFACE WING | 1.000 | 3.720 | .000 | .000 |
| (R17401) | AEDC VA352 O-HAB 01+110 0PB. UPPER SURFACE WING | .900 | 3.720 | .000 | .000 |
| (R17401) | AEDC VA352 O-HAB 01+110 0PB. UPPER SURFACE WING | .850 | 3.720 | .000 | .000 |

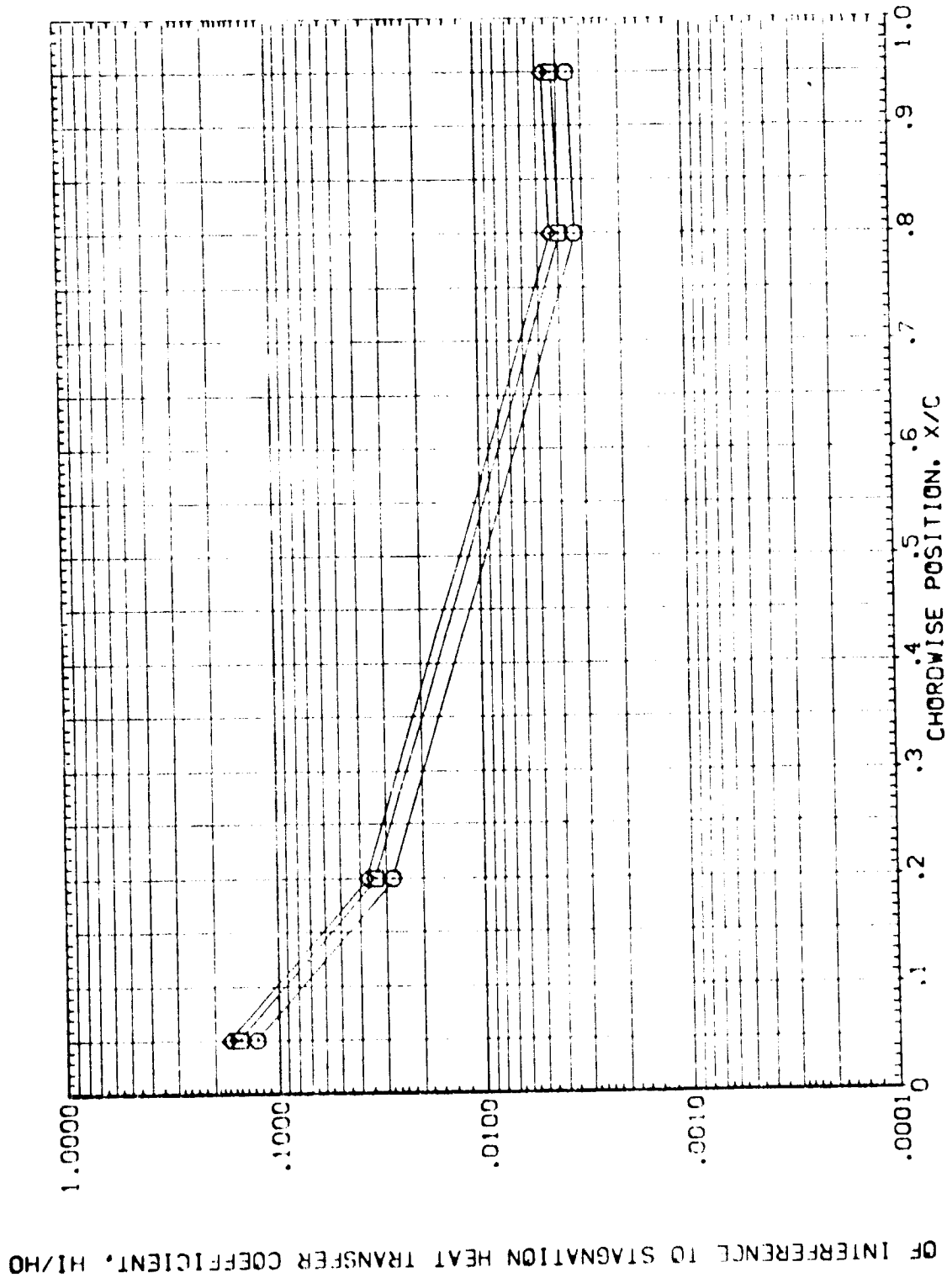


FIGURE 7 HEAT TRANSFER COEFFICIENTS ON UPPER WING SURFACE OF ORBITER.

MACH = 8.000 ALPHA = .000 2Y/B = .600 PAGE 30



DATA SET SYMBOL CONFIGURATION DESCRIPTION HAV/HT RV/L BETA ELEVON
 (P) (U) (D) AEDC VA352 0-13 C 0-13 UPPER SURFACE WING 1.000 3.720 .000 .000
 (A) (U) (S) AEDC VA352 0-13 C 0-13 UPPER SURFACE WING .500 3.720 .000 .000
 (C) (U) (S) AEDC VA352 0-13 C 0-13 UPPER SURFACE WING .000 3.720 .000 .000

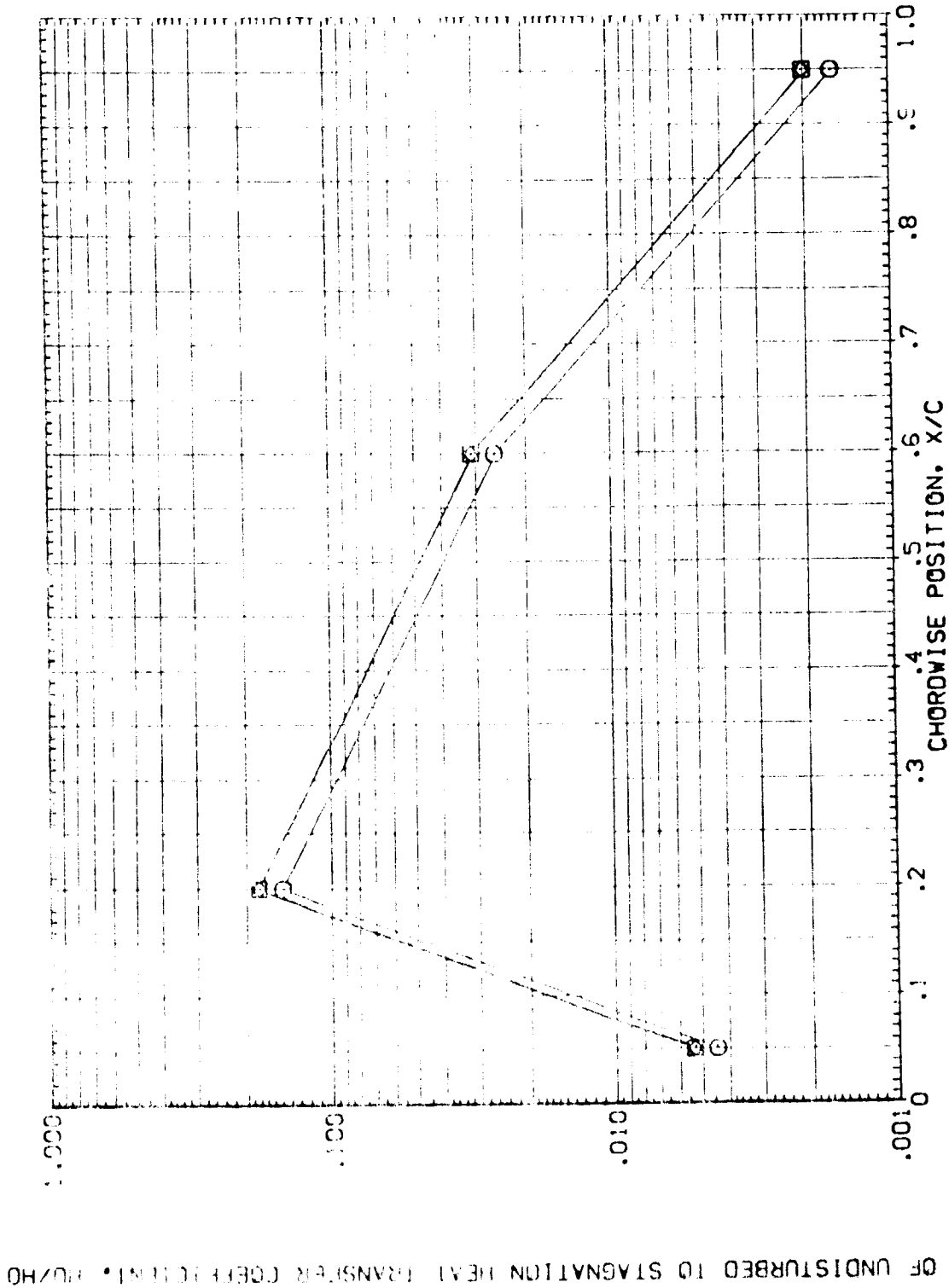


FIGURE 7 HEAT TRANSFER COEFFICIENTS ON UPPER WING SURFACE OF ORBITER.

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/NT | RVAL | BETA | ELEVON |
|-----------------|---------------------------|--------|-------|------|--------|
| (RTUJ10) | AEDC VA352 O-418 O1 | 1.000 | 3.720 | .000 | .000 |
| (ATUJ10) | ORB. UPPER SURFACE WING | .900 | 3.720 | .000 | .000 |
| (CTUJ10) | ORB. UPPER SURFACE WING | .000 | 3.720 | .000 | .000 |

Ratio of undisturbed to stagnation heat transfer coefficient, H_u/H_0

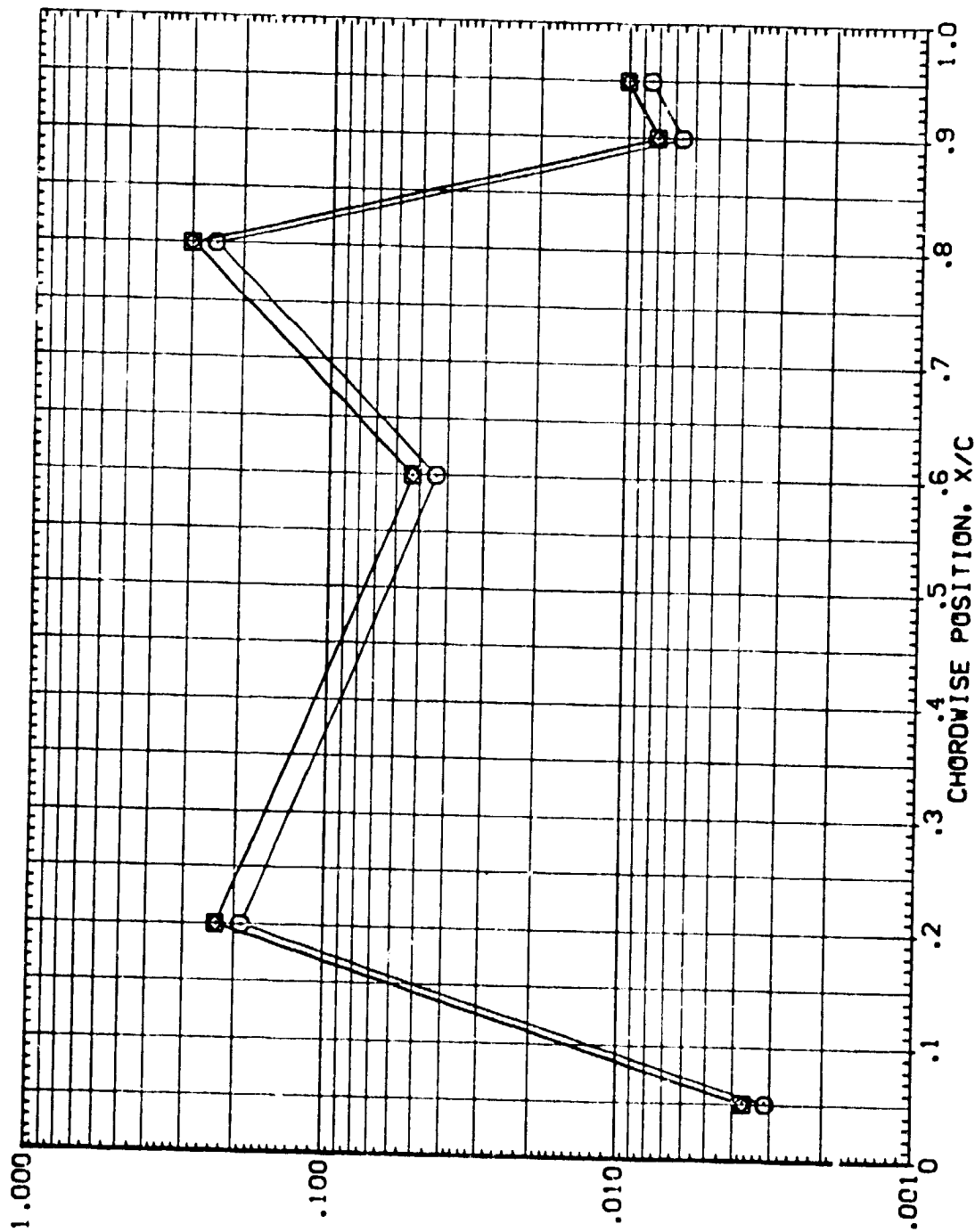


FIGURE 7 HEAT TRANSFER COEFFICIENTS ON UPPER WING SURFACE OF ORBITER.

$MACH = 8.000$ ALPHA = .000 $2Y/B = .600$



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/HT | RNVL | BETA | ELEVON |
|-----------------|---------------------------|--------|-------|------|--------|
| (RTKJ10) | AEDC VA352 O-413 O1 | 1.000 | 3.720 | .000 | .000 |
| (ATKJ10) | AEDC VA352 O-413 O1 | .500 | 3.720 | .000 | .000 |
| (CTKJ10) | AEDC VA352 O-413 O1 | .000 | 3.720 | .000 | .000 |

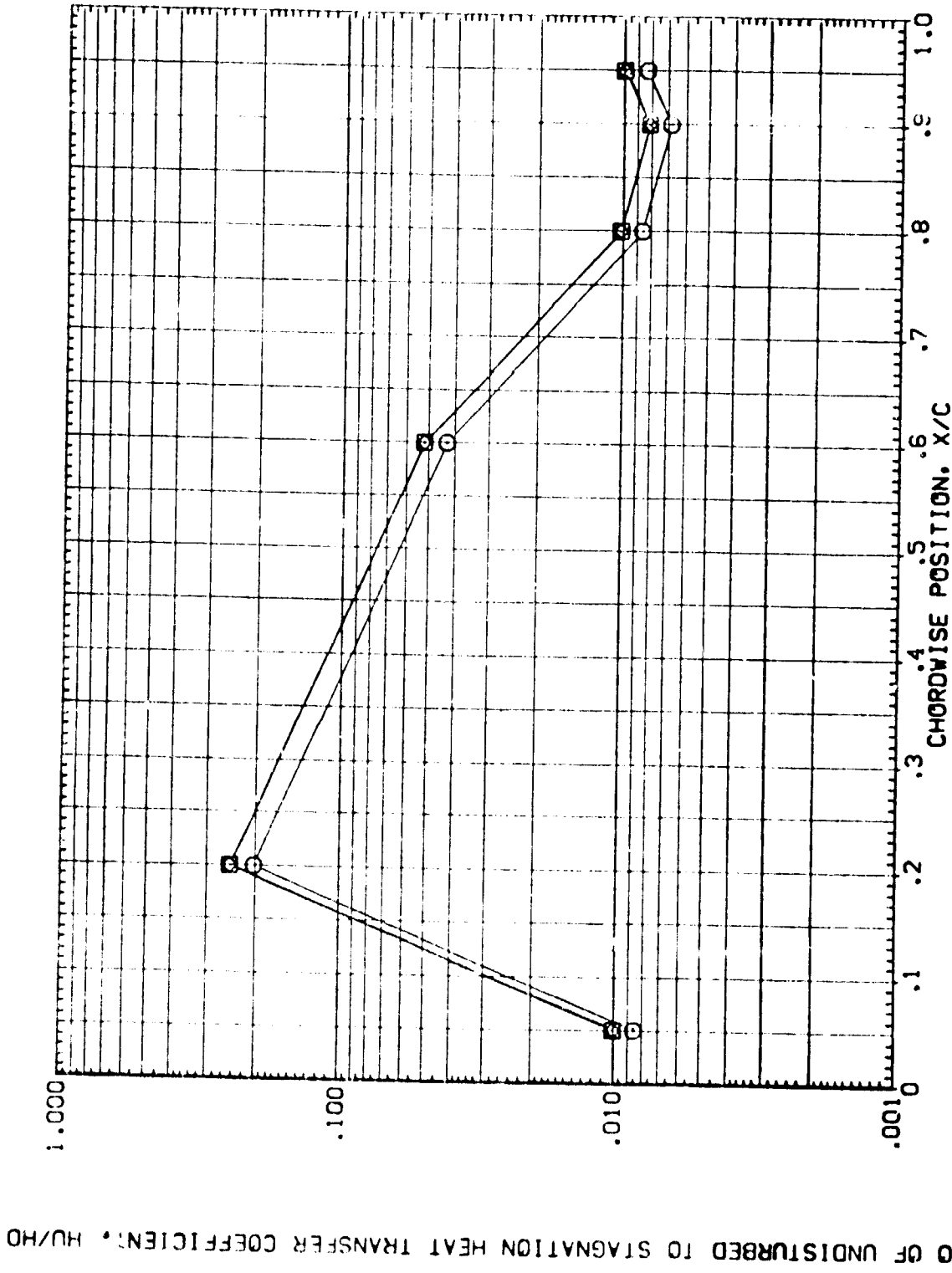


FIGURE 7 HEAT TRANSFER COEFFICIENTS ON UPPER WING SURFACE OF ORBITER.

MACH = 8.000 ALPHA = .000 2Y/B = .800

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/HT | RV/L | BETA | ELEVON |
|-----------------|---------------------------|--------|-------|------|--------|
| (RTKV10) | AEDE VA352 0448 01 | 1.000 | 3.720 | .000 | .000 |
| (ATKV10) | ORB. LEFT VERTICAL TAIL | .900 | 3.720 | .000 | .000 |
| (CTKV10) | AEDE VA352 0448 01 | .000 | 3.720 | .000 | .000 |
| | ORB. LEFT VERTICAL TAIL | | | | |

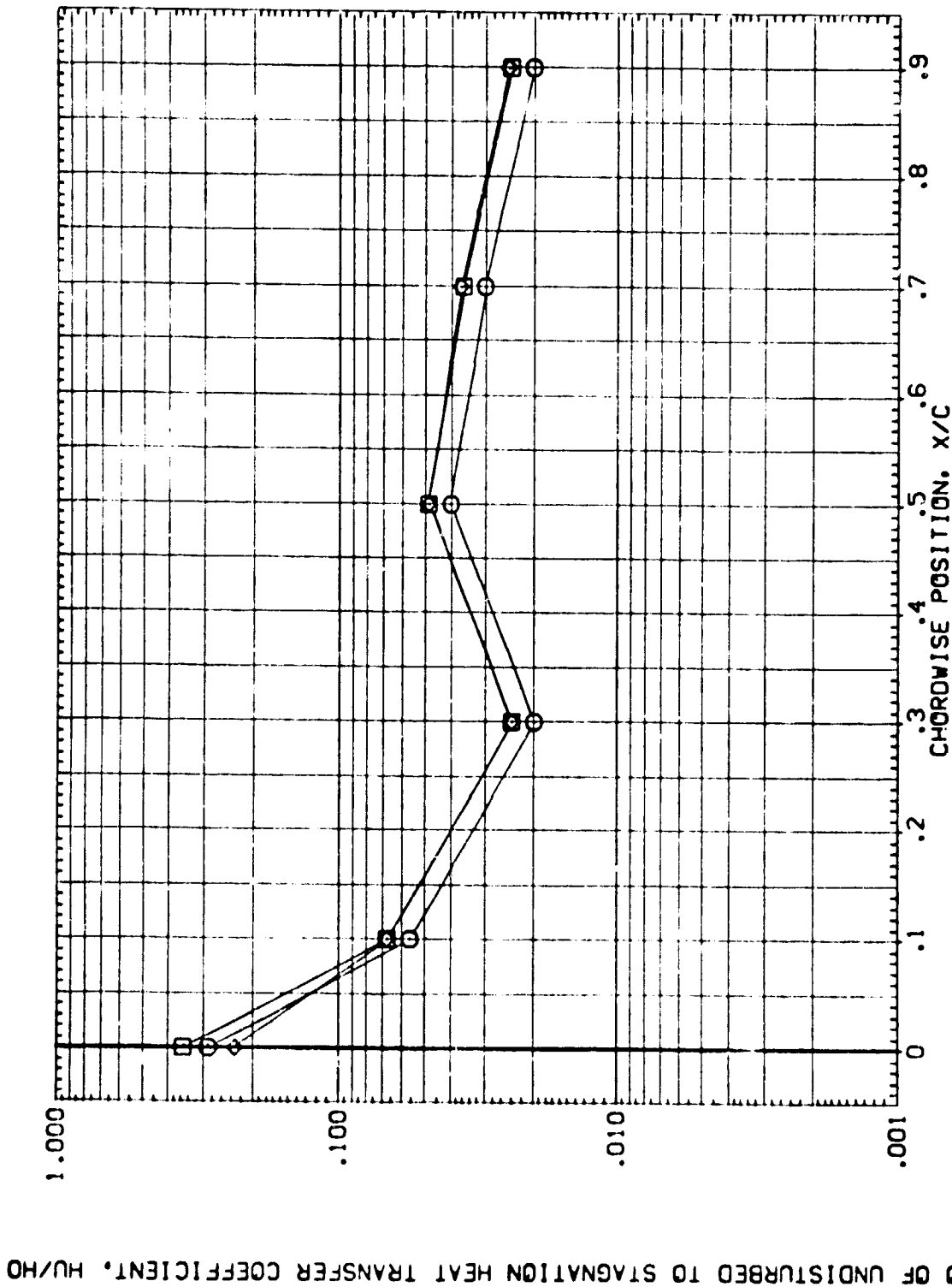


FIGURE 8 HEAT TRANSFER COEFFICIENTS ON LEFT VERTICAL TAIL OF ORBITER.

$\text{MACH} = 8.000$ $\text{ALPHA} = .000$ $\text{Z/BV} = .299$



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAW/HT | RN/L | BETA | ELEVON |
|-----------------|---------------------------|--------|-------|------|--------|
| (ATKV10) | AEDC VA352 O-4B O1 | 1.000 | 3.720 | .000 | .000 |
| (ATKV10) | CRB. LEFT VERTICAL TAIL | .500 | 3.720 | .000 | .000 |
| (CTKV10) | AEDC VA352 O-4B C1 | .000 | 3.720 | .000 | .000 |
| (CTKV10) | CRB. LEFT VERTICAL TAIL | .000 | 3.720 | .000 | .000 |

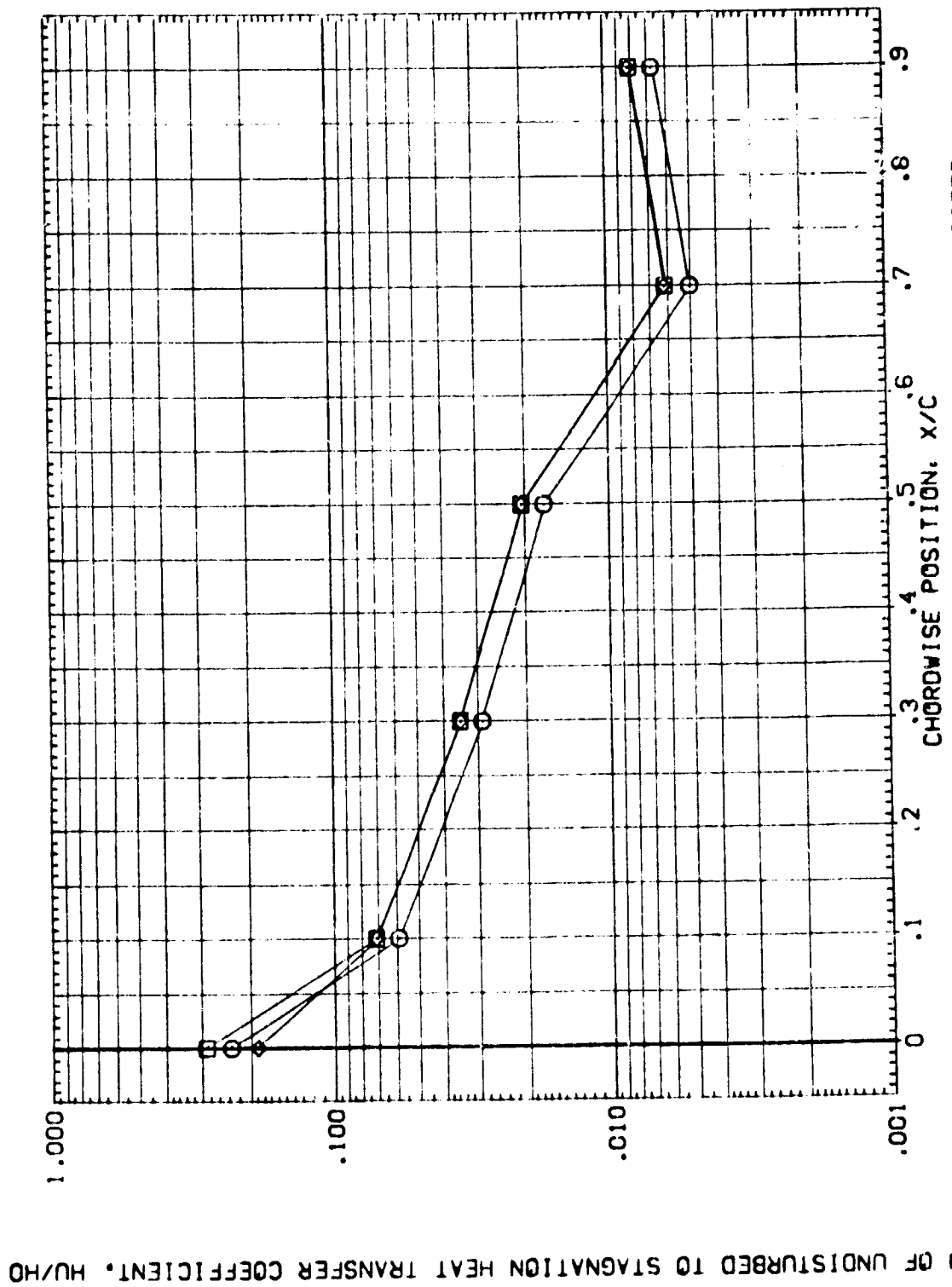


FIGURE 8 HEAT TRANSFER COEFFICIENTS ON LEFT VERTICAL TAIL OF ORBITER.

ORBITER MACH = 8.000 ALPHA = .000 Z/BV = .532

DATA SET SYMBOL : CONFIGURATION DESCRIPTION
 (RTKV10) AEDC VA352 0-419 01 098. LEFT VERTICAL TAIL
 (ATKV10) AEDC VA352 0-418 01 098. LEFT VERTICAL TAIL
 (CTKV10) AEDC VA352 0-413 01 398. LEFT VERTICAL TAIL

MAW/HT 1.000
 RV/L 3.720
 BETA .000
 ELEVON .000

RATIO OF UNDISTURBED TO STAGNATION HEAT TRANSFER COEFFICIENT, HU/HO

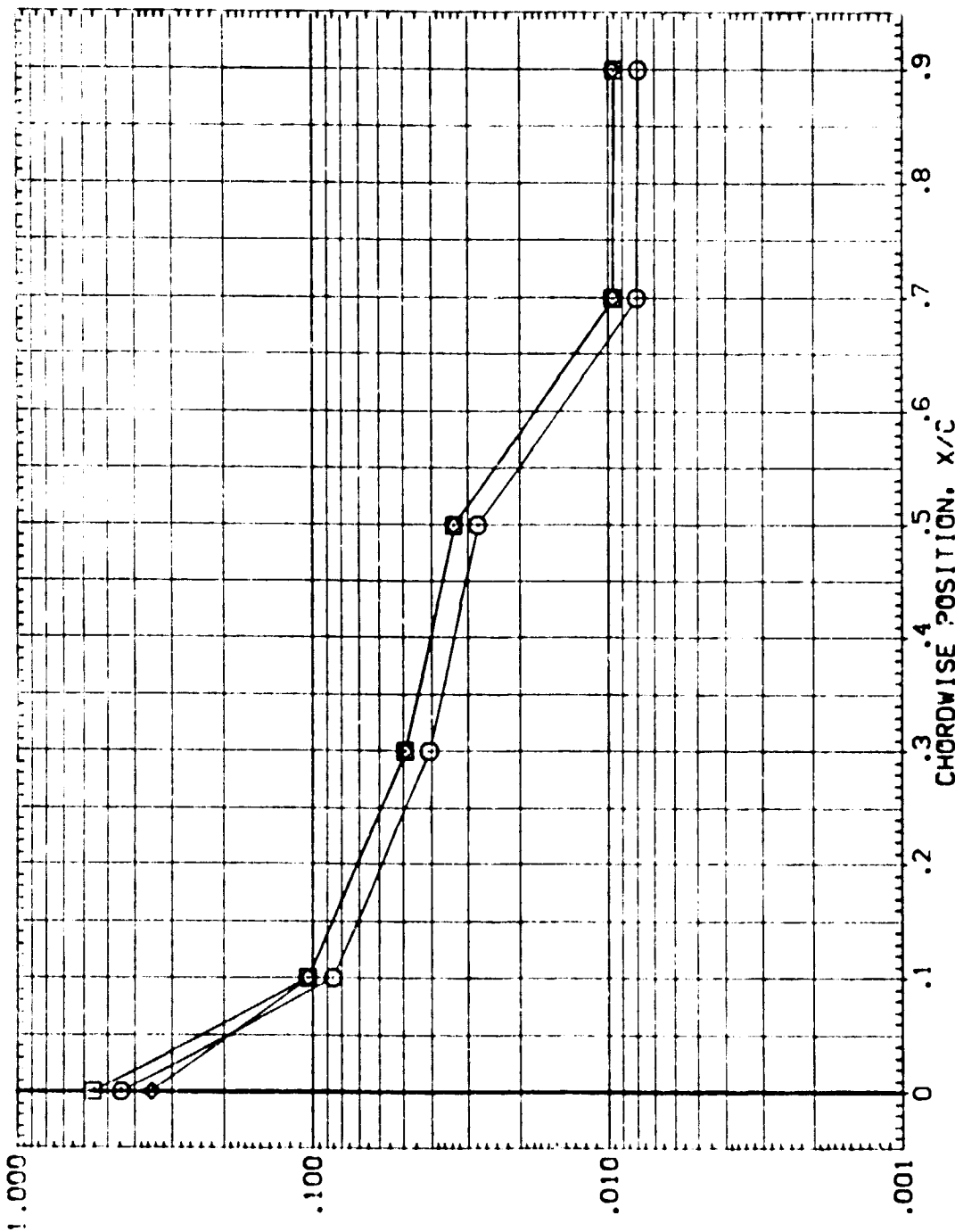


FIGURE 8 HEAT TRANSFER COEFFICIENTS ON LEFT VERTICAL TAIL OF ORBITER.

MACH = 8.000 ALPHA = .000 Z/BV = .725 PAGE 36



| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAV/AT | RNVL | BETA | ELEVON |
|-----------------|-------------------------------------|--------|-------|------|--------|
| (RTK01) | 0-48 01+T10 058. 0'S POD | 1.000 | 3.720 | .000 | .000 |
| (LTK01) | AEDC VA352 0-48 01+T10 058. 0'S POD | .900 | 3.720 | .000 | .000 |
| (BTK01) | AEDC VA352 0-48 01+T10 058. 0'S POD | .850 | 3.720 | .000 | .000 |

RATIO OF INTERFERENCE TO STAGNATION HEAT TRANSFER COEFFICIENT, HI/HO

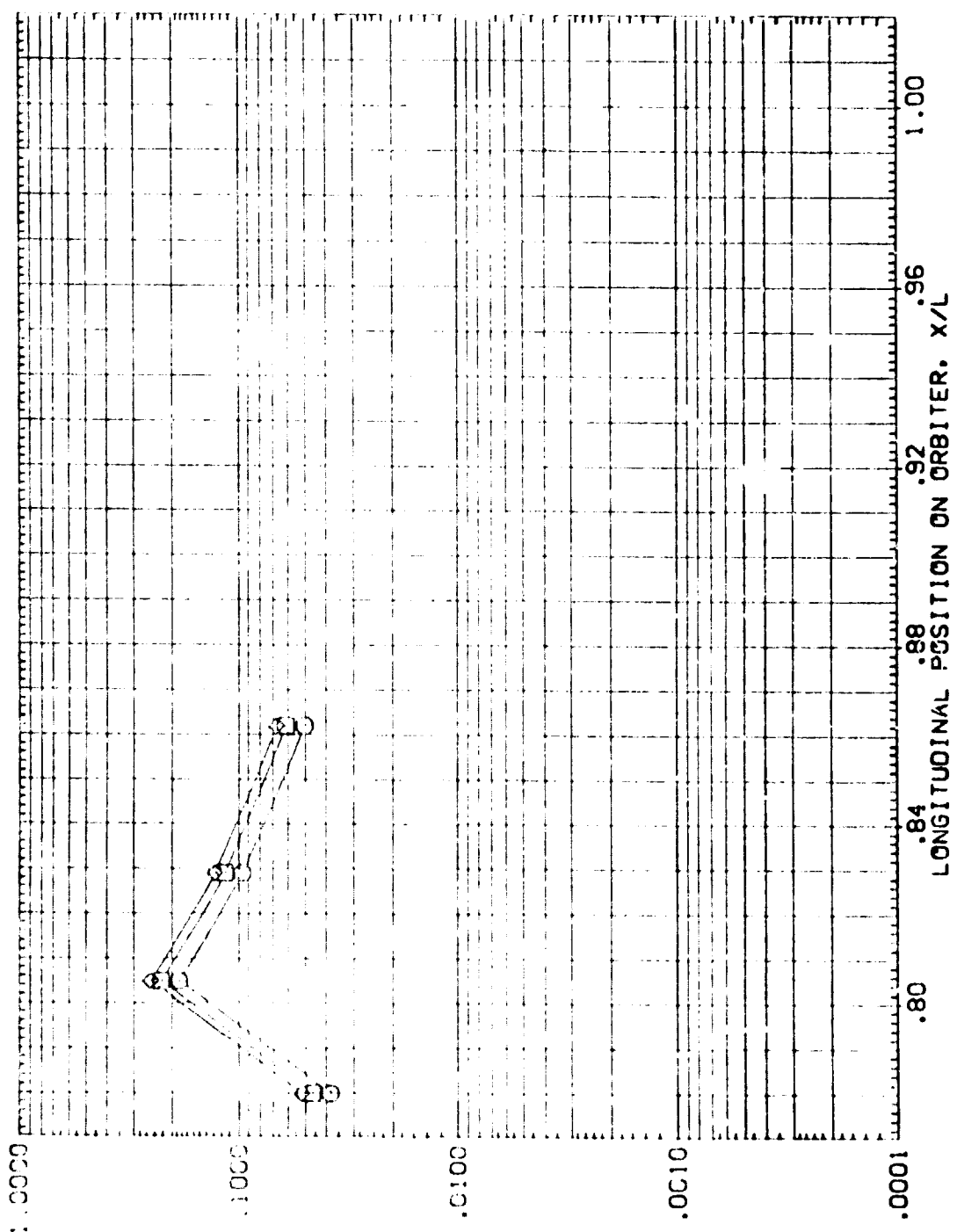


FIGURE 9 HEAT TRANSFER COEFFICIENTS ON ORBITER OMS POD.

MACH = 8.000 ALPHA = .000 Z = R.295

DATA SET SYMBOL: (RTKY01) (ATKY01) (BTKY01)

CONFIGURATION DESCRIPTION:
 AEDC VA352 0-48 01+T10 0-88. FUSELAGE Y=0.875
 AEDC VA352 0-48 01+T10 0-88. FUSELAGE Y=0.875
 AEDC VA352 0-48 01+T10 0-88. FUSELAGE Y=0.875

| MAV/HT | RMVL | BETA | ELEVON |
|--------|-------|------|--------|
| 1.000 | 3.720 | .000 | .000 |
| .900 | 3.720 | .000 | .000 |
| .850 | 3.720 | .000 | .000 |

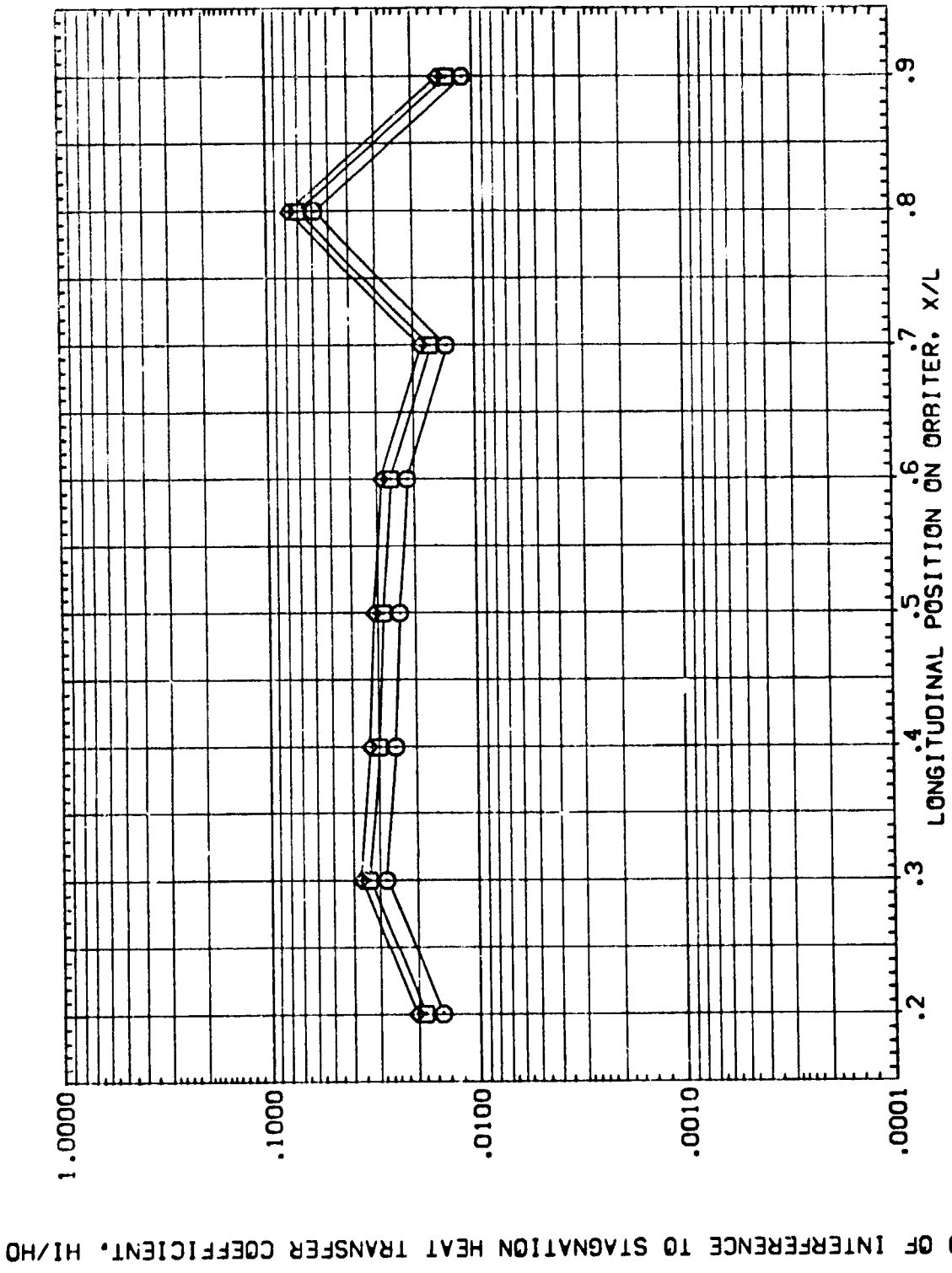


FIGURE 10 HEAT TRANSFER COEFFICIENTS ON ORBITER, Y=0.875.

MACH = 8.000 ALPHA = .000 Y = .875



| | | | | | |
|-----------------|---------------------------|--------|-------|------|--------|
| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | MAV/HT | RV/L | BETA | ELEVON |
| (RTKY10) | AEDC VA352 D-4B 01 | 1.000 | 3.720 | .000 | .000 |
| (ATKY10) | AEDC VA352 D-4B 01 | .900 | 3.720 | .000 | .000 |
| (CTKY10) | AEDC VA352 D-4B 01 | .000 | 3.720 | .000 | .000 |
| | D-4B, FUSELAGE Y=0.875 | | | | |
| | D-4B, FUSELAGE Y=0.875 | | | | |
| | D-4B, FUSELAGE Y=0.875 | | | | |

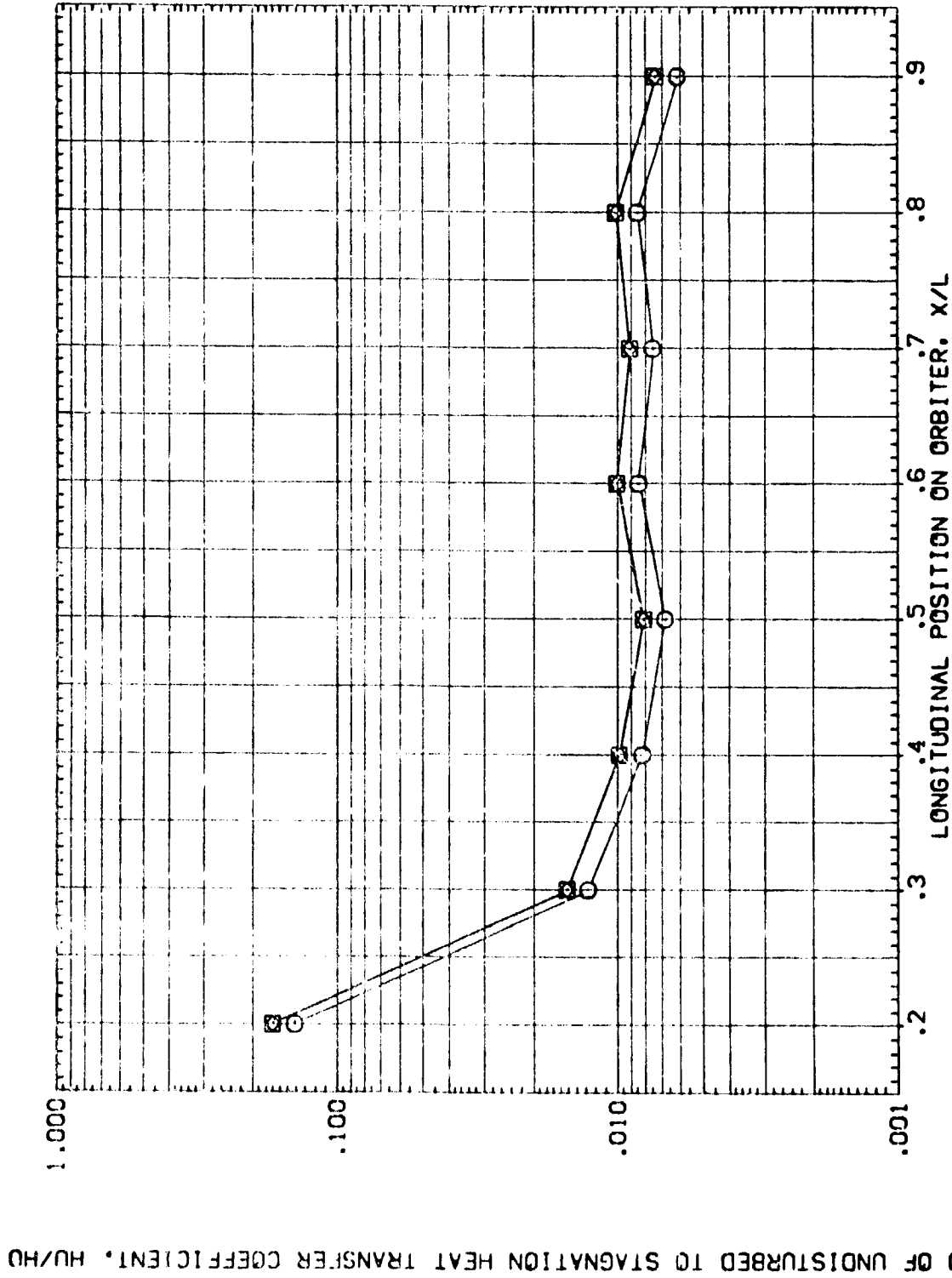


FIGURE 10 HEAT TRANSFER COEFFICIENTS ON ORBITER, Y=0.875.

MACH = 8.000 ALPHA = .000 Y = .875

DATA SET SYMBOL CONFIGURATION DESCRIPTION HW/HT RV/L BETA ELEV/EN

(RTRK29) AEDC VA352 D-HB 02 ORB, FUSELAGE 1.000 3.720 .000 .000

(ATRY28) AEDC VA352 D-HB 02 ORB, FUSELAGE .900 3.720 .000 .000

(CTRY29) AEDC VA352 D-HB 02 ORB, FUSELAGE .000 3.720 .000 .000

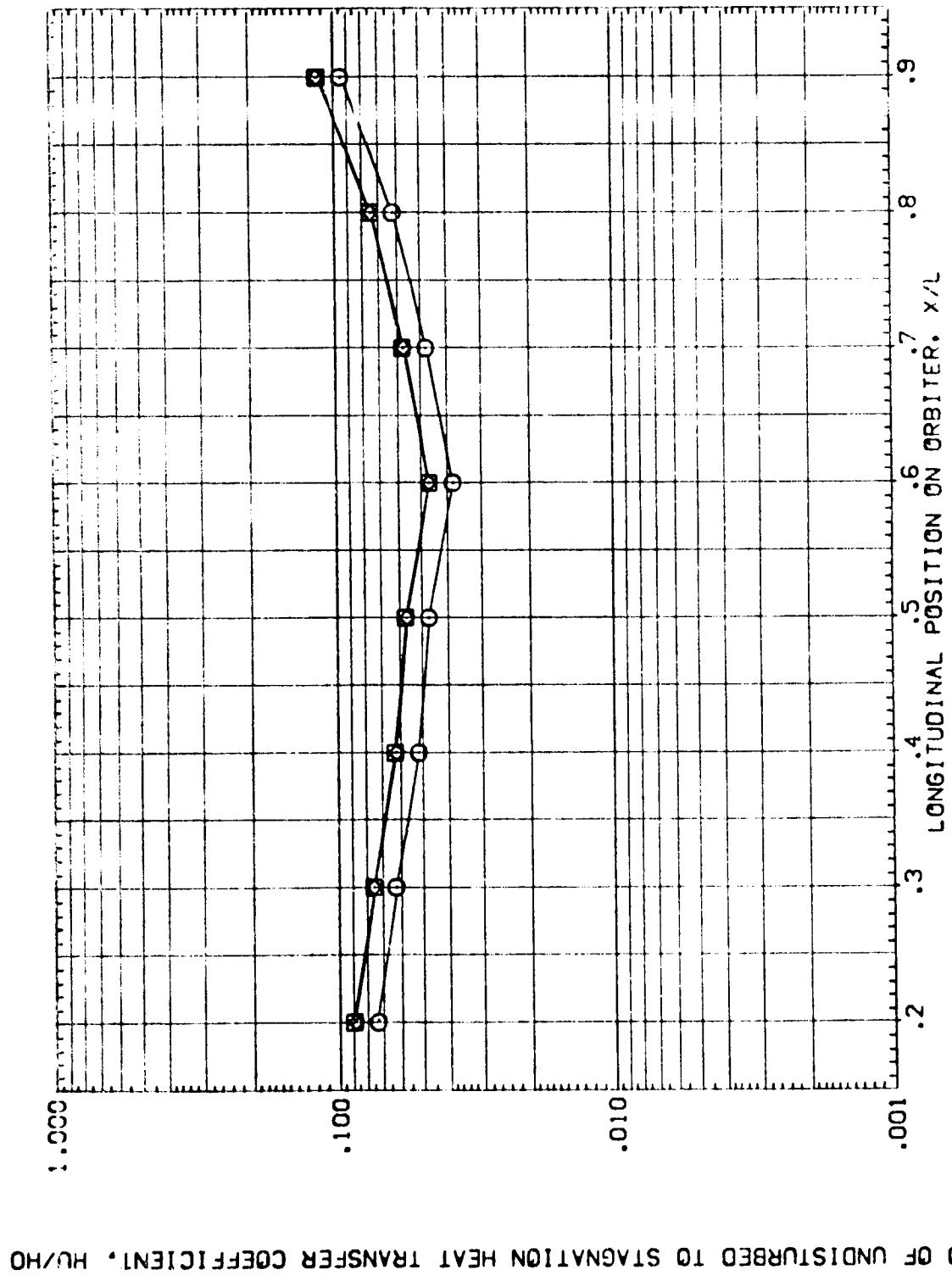


FIGURE 10 HEAT TRANSFER COEFFICIENTS ON ORBITER, Y=0.875.

MACH = 8.000 ALPHA = 25.000 Y = .875



DATA S^c SYMBOL CONFIGURATION DESCRIPTION HAV/HT RV/L BETA ELEVON
 (RTNF 10) AEDC VA352 0-4B 01 08B. FUSELAGE Z=7.525 1.000 3.720 .000 .000
 (ATNF 10) AEDC VA352 0-4B 01 08B. FUSELAGE Z=7.525 .500 3.720 .000 .000
 (CTNF 10) AEDC VA352 0-4B 01 08B. FUSELAGE Z=7.525 .000 3.720 .000 .000

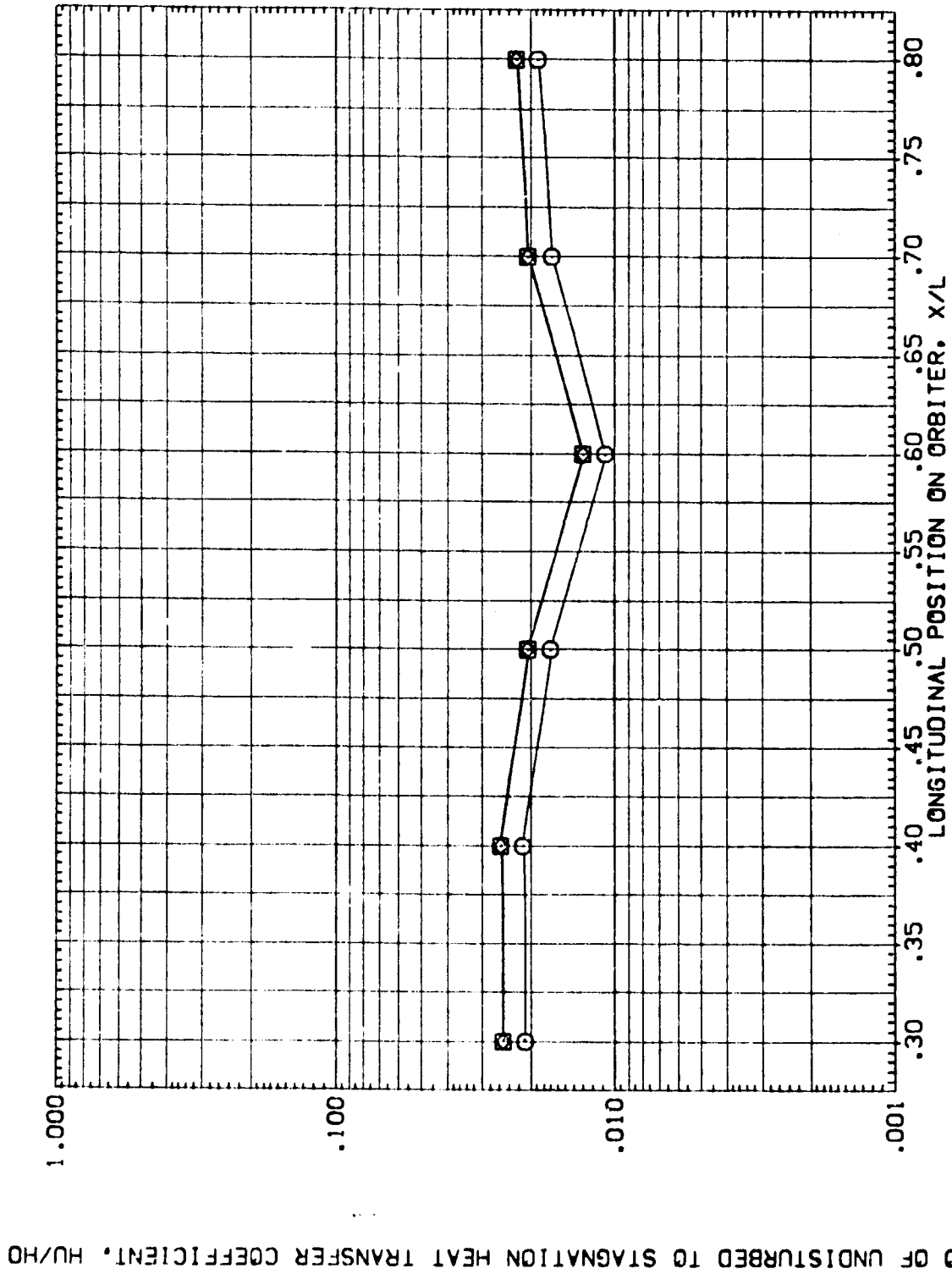


FIGURE 11 HEAT TRANSFER COEFFICIENTS ON ORBITER FUSELAGE, Z=7.525
 MACH = 8.000 ALPHA = .000 Z = 7.525

| DATA SET SYMBOL | CONFIGURATION DESCRIPTION | HAW/HT | RM/L | BETA | ELEVON |
|-----------------|---------------------------|--------|-------|------|--------|
| (RTKXZ9) | AEDC VA352 O-HAB 02 | 1.000 | 3.720 | .000 | .000 |
| (ATKXZ9) | AEDC VA352 O-HAB 02 | .900 | 3.730 | .000 | .000 |
| (CTKXZ9) | AEDC VA352 O-HAB 02 | .000 | 3.720 | .000 | .000 |

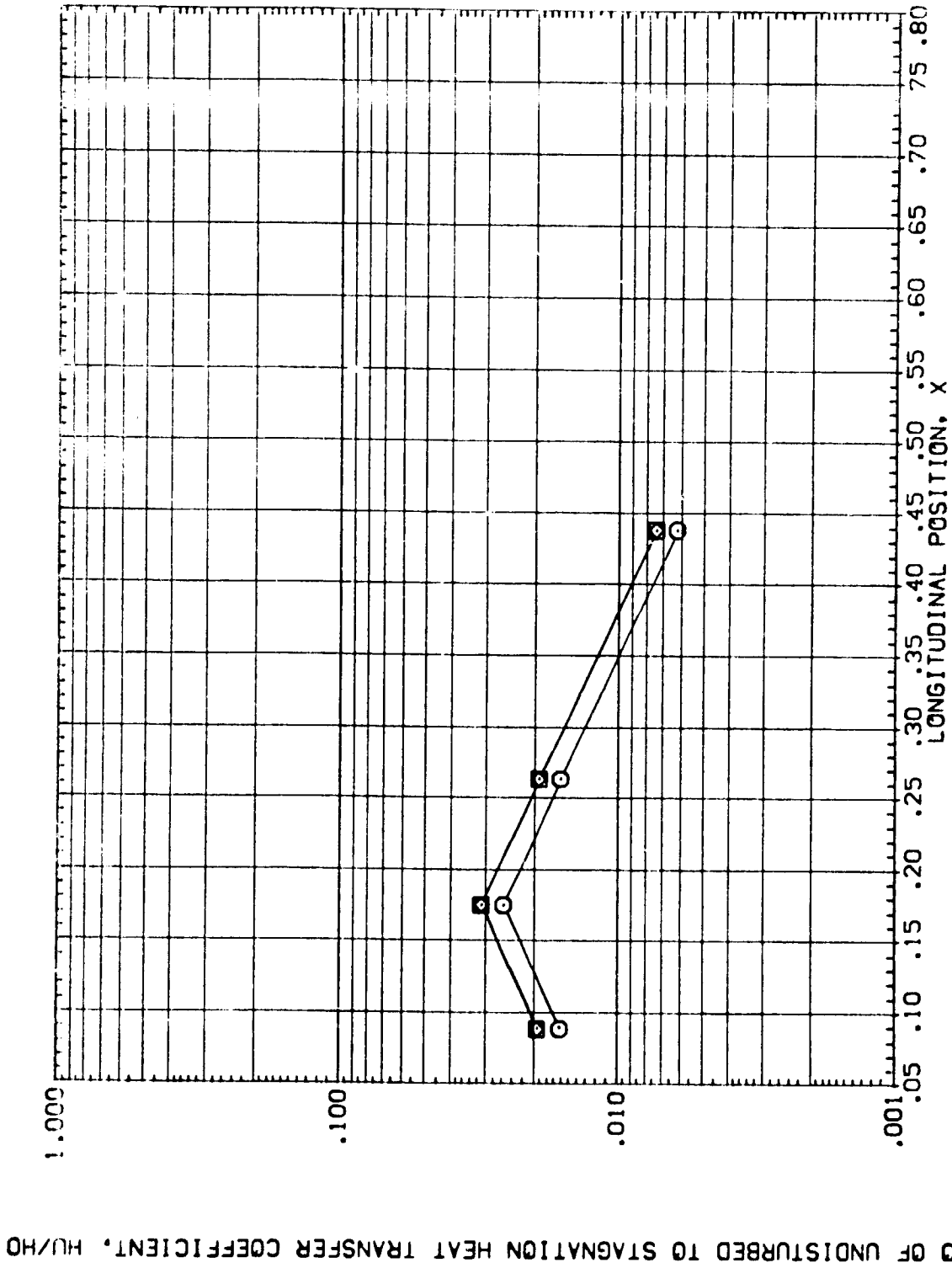


FIGURE 12 HEAT TRANSFER COEFFICIENTS ON ORBITER LEFT MAIN NOZZLE.

MACH = 8.000 ALPHA = 25.000 PHIN = .000



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RTN)28 | □ | AEDC V4322 0-18 02 | CRB. LEFT MAIN NOZZLE
 (ALN)29 | □ | AEDC V4322 0-18 02 | CRB. LEFT MAIN NOZZLE
 (CTR)29 | □ | AEDC V4322 0-18 02 | CRB. LEFT MAIN NOZZLE

HAV/HT RM/L BETA ELEVON
 1.000 3.720 .000 .000
 .500 3.720 .000 .000
 .000 3.720 .000 .000

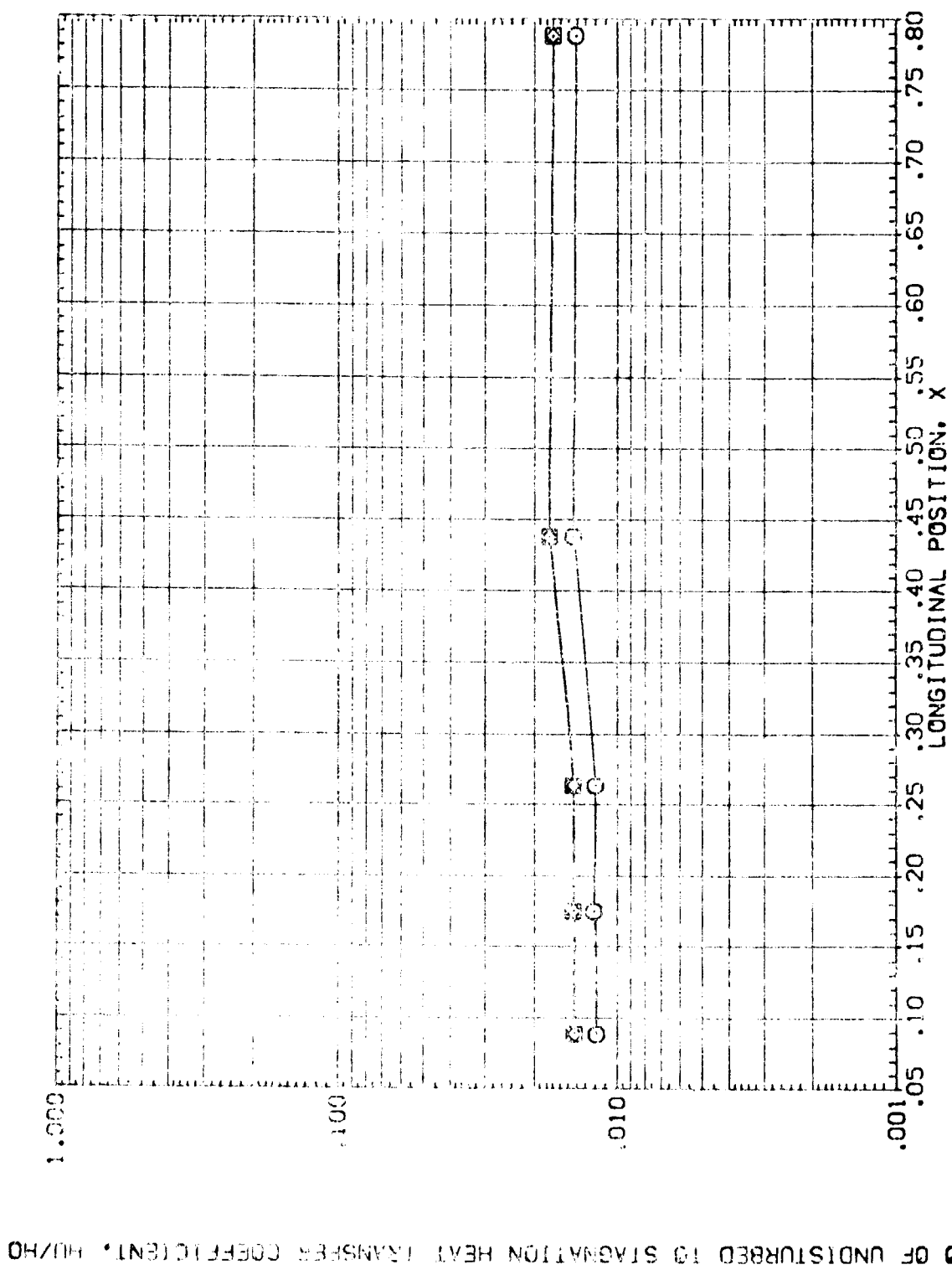


FIGURE 12 HEAT TRANSFER COEFFICIENTS ON ORBITER LEFT MAIN NOZZLE.

MACH = 8.000 ALPHA = 25.000 PHIN = 45.000

DATA SET SYMBOL: (RTM28) (ATM28) (CTM28) CONFIGURATION DESCRIPTION: AEDC VA352 O4B O2 LEFT MAIN NOZZLE ELEVON
 AEDC VA352 O4B O2 LEFT MAIN NOZZLE BETA .000
 AEDC VA352 O4B O2 LEFT MAIN NOZZLE PHIN 90.000
 AEDC VA352 O4B O2 LEFT MAIN NOZZLE MACH 8.000

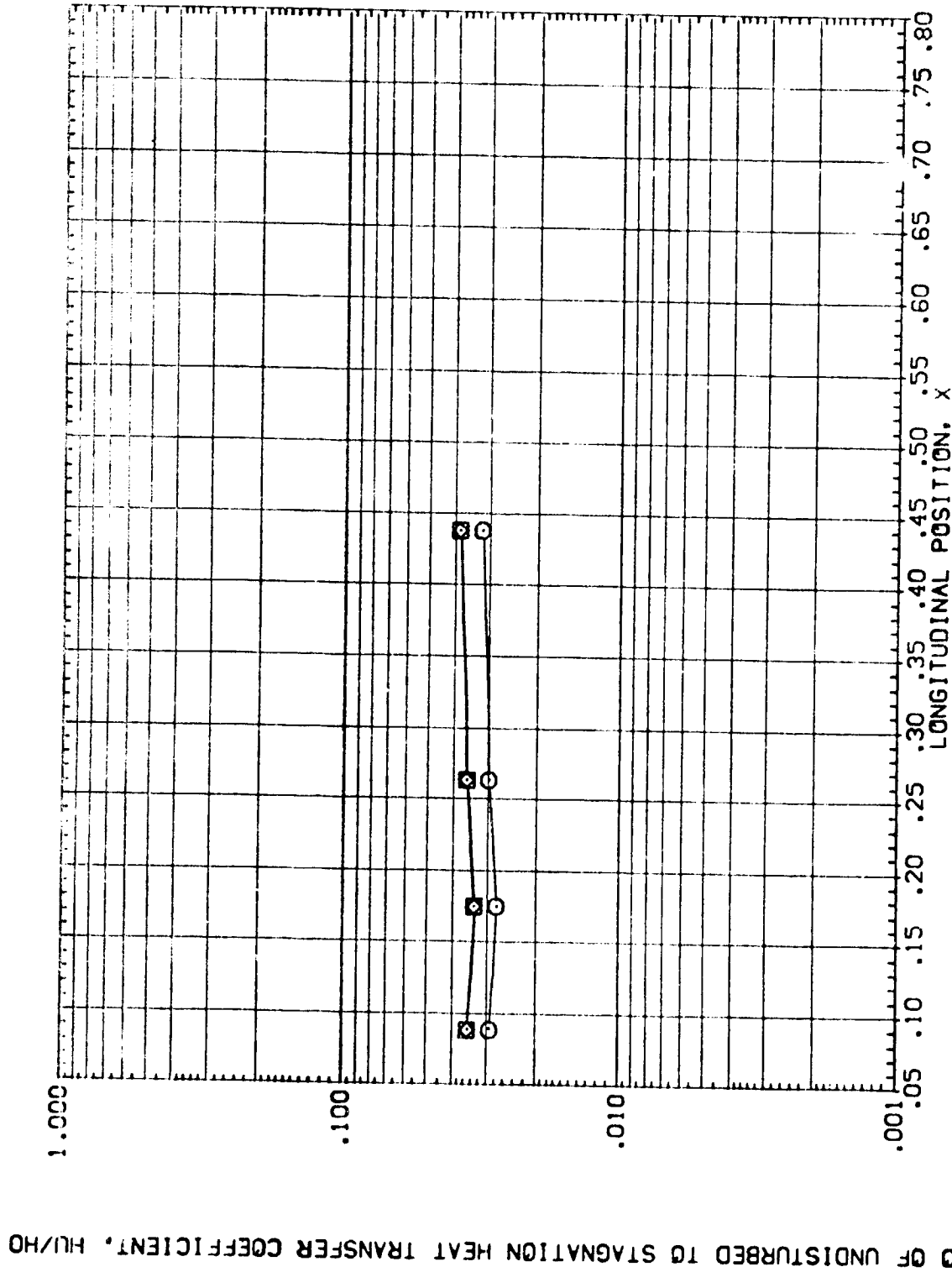


FIGURE 12 HEAT TRANSFER COEFFICIENTS ON ORBITER LEFT MAIN NOZZLE.

MACH = 8.000 ALPHA = 25.000 PHIN = 90.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION HAV/HT RMV/L BETA ELEVON

(RMGR10) AEDE VA352 0-4B 01 098 RCS CENTER 1.000 3.720 .000 .000

(ATHR10) AEDE VA352 0-4B 01 098 RCS CENTER .900 3.720 .000 .000

(CTNR10) AEDE VA352 3-4B 01 098 RCS CENTER .000 3.720 .000 .000

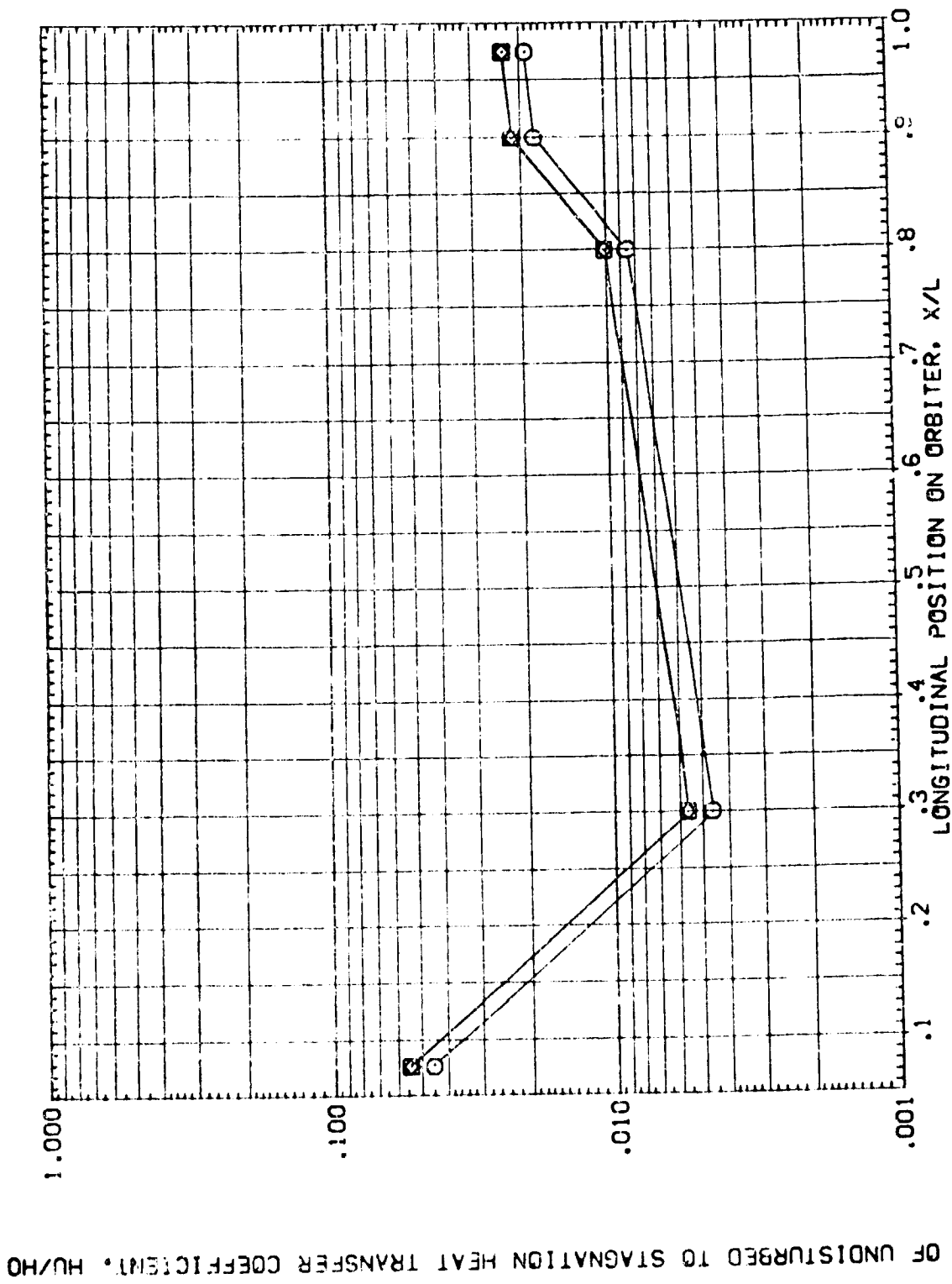


FIGURE 13 HEAT TRANSFER COEFFICIENTS ON ORBITER RCS CENTER.

MACH = 8.000 ALPHA = .000 Z = 6.125

APPENDIX
TABULATED SOURCE DATA
Recovery Factor = 1.0

Components are designated by the 4th character in the dataset identifier.

| | |
|---|-------------------------------|
| T | tank |
| B | orbiter fuselage |
| L | bottom wing surface |
| U | upper wing surface |
| V | vertical tail |
| N | left main nozzle |
| R | RCS center |
| P | base plate |
| M | OMS pod |
| Y | orbiter fuselage, $Y = 0.875$ |
| C | wing upper crease |
| F | orbiter fuselage, $Y = 7.525$ |

AEDC VA352 0448 01.710 EXTERNAL TANK

(RTN,701)

MACH (1) = 8.000 ALPHA (1) = -10.000

SECTION 1 (INTERNAL TANK) DEPENDENT VARIABLE HI/LO

PHI 1.9.0000222.9000229.0000

| K/VT | |
|-------|-------|
| .335 | .0499 |
| .400 | .0567 |
| .500 | .0700 |
| .600 | .0842 |
| .700 | .1000 |
| .800 | .1284 |
| .900 | .1600 |
| 1.000 | .2000 |

MACH (2) = 6.000 ALPHA (2) = -6.000 TI = 97.600 QI = 3.935 WEF = .049

SECTION 2 (EXTERNAL TANK) DEPENDENT VARIABLE HI/LO

PHI 1.0000 45.0000 67.9000 90.0000 112.9000 123.0000 133.0000 143.0000 153.0000 163.0000 173.0000 183.0000 193.0000 203.0000 213.0000 223.0000 233.0000 243.0000 253.0000 263.0000 273.0000 283.0000 293.0000 303.0000 313.0000 323.0000 333.0000 343.0000 353.0000 363.0000 373.0000 383.0000 393.0000 403.0000 413.0000 423.0000 433.0000 443.0000 453.0000 463.0000 473.0000 483.0000 493.0000 503.0000 513.0000 523.0000 533.0000 543.0000 553.0000 563.0000 573.0000 583.0000 593.0000 603.0000 613.0000 623.0000 633.0000 643.0000 653.0000 663.0000 673.0000 683.0000 693.0000 703.0000 713.0000 723.0000 733.0000 743.0000 753.0000 763.0000 773.0000 783.0000 793.0000 803.0000 813.0000 823.0000 833.0000 843.0000 853.0000 863.0000 873.0000 883.0000 893.0000 903.0000 913.0000 923.0000 933.0000 943.0000 953.0000 963.0000 973.0000 983.0000 993.0000

| K/VT | |
|-------|-------|
| .000 | .0719 |
| .005 | .4371 |
| .010 | .6913 |
| .015 | .2364 |
| .020 | .1102 |
| .025 | .0959 |
| .030 | .0748 |
| .035 | .0209 |
| .040 | .0101 |
| .045 | .0279 |
| .050 | .0291 |
| .055 | .0159 |
| .060 | .0454 |
| .065 | .0276 |
| .070 | .1524 |
| .075 | .4530 |
| .080 | .0553 |
| .085 | .0163 |
| .090 | .0770 |
| .095 | .0209 |
| .100 | .1036 |
| .105 | .0713 |
| .110 | .0504 |
| .115 | .0436 |
| .120 | .0454 |
| .125 | .0325 |
| .130 | .0461 |
| .135 | .0205 |
| .140 | .0316 |
| .145 | .0132 |
| .150 | .0372 |
| .155 | .0000 |
| .160 | .0464 |
| .165 | .0000 |
| .170 | .0174 |
| .175 | .0000 |
| .180 | .0000 |
| .185 | .0000 |
| .190 | .0000 |
| .195 | .0000 |
| .200 | .0000 |
| .205 | .0000 |
| .210 | .0000 |
| .215 | .0000 |
| .220 | .0000 |
| .225 | .0000 |
| .230 | .0000 |
| .235 | .0000 |
| .240 | .0000 |
| .245 | .0000 |
| .250 | .0000 |
| .255 | .0000 |
| .260 | .0000 |
| .265 | .0000 |
| .270 | .0000 |
| .275 | .0000 |
| .280 | .0000 |
| .285 | .0000 |
| .290 | .0000 |
| .295 | .0000 |
| .300 | .0000 |
| .305 | .0000 |
| .310 | .0000 |
| .315 | .0000 |
| .320 | .0000 |
| .325 | .0000 |
| .330 | .0000 |
| .335 | .0000 |
| .340 | .0000 |
| .345 | .0000 |
| .350 | .0000 |
| .355 | .0000 |
| .360 | .0000 |
| .365 | .0000 |
| .370 | .0000 |
| .375 | .0000 |
| .380 | .0000 |
| .385 | .0000 |
| .390 | .0000 |
| .395 | .0000 |
| .400 | .0000 |
| .405 | .0000 |
| .410 | .0000 |
| .415 | .0000 |
| .420 | .0000 |
| .425 | .0000 |
| .430 | .0000 |
| .435 | .0000 |
| .440 | .0000 |
| .445 | .0000 |
| .450 | .0000 |
| .455 | .0000 |
| .460 | .0000 |
| .465 | .0000 |
| .470 | .0000 |
| .475 | .0000 |
| .480 | .0000 |
| .485 | .0000 |
| .490 | .0000 |
| .495 | .0000 |
| .500 | .0000 |
| .505 | .0000 |
| .510 | .0000 |
| .515 | .0000 |
| .520 | .0000 |
| .525 | .0000 |
| .530 | .0000 |
| .535 | .0000 |
| .540 | .0000 |
| .545 | .0000 |
| .550 | .0000 |
| .555 | .0000 |
| .560 | .0000 |
| .565 | .0000 |
| .570 | .0000 |
| .575 | .0000 |
| .580 | .0000 |
| .585 | .0000 |
| .590 | .0000 |
| .595 | .0000 |
| .600 | .0000 |
| .605 | .0000 |
| .610 | .0000 |
| .615 | .0000 |
| .620 | .0000 |
| .625 | .0000 |
| .630 | .0000 |
| .635 | .0000 |
| .640 | .0000 |
| .645 | .0000 |
| .650 | .0000 |
| .655 | .0000 |
| .660 | .0000 |
| .665 | .0000 |
| .670 | .0000 |
| .675 | .0000 |
| .680 | .0000 |
| .685 | .0000 |
| .690 | .0000 |
| .695 | .0000 |
| .700 | .0000 |
| .705 | .0000 |
| .710 | .0000 |
| .715 | .0000 |
| .720 | .0000 |
| .725 | .0000 |
| .730 | .0000 |
| .735 | .0000 |
| .740 | .0000 |
| .745 | .0000 |
| .750 | .0000 |
| .755 | .0000 |
| .760 | .0000 |
| .765 | .0000 |
| .770 | .0000 |
| .775 | .0000 |
| .780 | .0000 |
| .785 | .0000 |
| .790 | .0000 |
| .795 | .0000 |
| .800 | .0000 |
| .805 | .0000 |
| .810 | .0000 |
| .815 | .0000 |
| .820 | .0000 |
| .825 | .0000 |
| .830 | .0000 |
| .835 | .0000 |
| .840 | .0000 |
| .845 | .0000 |
| .850 | .0000 |
| .855 | .0000 |
| .860 | .0000 |
| .865 | .0000 |
| .870 | .0000 |
| .875 | .0000 |
| .880 | .0000 |
| .885 | .0000 |
| .890 | .0000 |
| .895 | .0000 |
| .900 | .0000 |
| .905 | .0000 |
| .910 | .0000 |
| .915 | .0000 |
| .920 | .0000 |
| .925 | .0000 |
| .930 | .0000 |
| .935 | .0000 |
| .940 | .0000 |
| .945 | .0000 |
| .950 | .0000 |
| .955 | .0000 |
| .960 | .0000 |
| .965 | .0000 |
| .970 | .0000 |
| .975 | .0000 |
| .980 | .0000 |
| .985 | .0000 |
| .990 | .0000 |
| .995 | .0000 |
| 1.000 | .0000 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTKTD1)

AEDC VAS32 OMB 01+TD EXTERNAL TANK

MACH (1) = 8.000 ALPHA (2) = .0000

SECTION 1 (EXTERNAL TANK)

DEPENDENT VARIABLE HI/AC
P=1 216.0000222 .5000229 .0000

2000 45.0000 87.5000 92.5000 112.5000 123.0000 133.0000 151.0000 157.0000 165.0000 180.0000 196.0000 197.0000 208.0000

| X/CUT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|----|----|-------|
| 9.00 | .0098 | .0000 | .0110 | .0000 | .0242 | .0280 | .0000 | .0499 | .0478 | .0444 | | | | |
| 15.0 | | | | .0000 | | | | | .0933 | | | | | .1087 |
| 19.0 | | | | | | | | | .0143 | | | | | |

P=1 216.0000222 .5000229 .0000

X/CUT

| | | | | | | | | | | | | | | |
|------|-------|--|--|--|-------|--|--|--|--|--|--|--|--|--|
| 13.0 | .0349 | | | | | | | | | | | | | |
| 14.0 | .0486 | | | | .0466 | | | | | | | | | |
| 15.0 | .1094 | | | | | | | | | | | | | |
| 16.0 | .0154 | | | | | | | | | | | | | |
| 17.0 | .0344 | | | | | | | | | | | | | |
| 18.0 | .0100 | | | | | | | | | | | | | |

MACH (1) = 8.000 ALPHA (3) = .000 T1 = 97.600 Q1 = 3.935 HREF = .049

SECTION 1 (EXTERNAL TANK)

DEPENDENT VARIABLE HI/AC
P=1 2000 45.0000 87.5000 92.5000 112.5000 123.0000 133.0000 151.0000 157.0000 165.0000 180.0000 196.0000 197.0000 208.0000

2000 45.0000 87.5000 92.5000 112.5000 123.0000 133.0000 151.0000 157.0000 165.0000 180.0000 196.0000 197.0000 208.0000

| X/CUT | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|-------|-------|---|---|---|---|---|---|---|-------|----|----|----|----|-------|
| 9.00 | .0000 | | | | | | | | | | | | | .6020 |
| 15.0 | | | | | | | | | .4346 | | | | | .6311 |
| 19.0 | | | | | | | | | .1858 | | | | | .1596 |
| 24.0 | .1373 | | | | | | | | .0561 | | | | | .0417 |
| 28.0 | .0799 | | | | | | | | .0461 | | | | | .0439 |
| 33.0 | .0265 | | | | | | | | .0145 | | | | | .0091 |
| 38.0 | | | | | | | | | .0026 | | | | | .0191 |
| 43.0 | | | | | | | | | .0149 | | | | | .0274 |
| 48.0 | | | | | | | | | .0314 | | | | | .1113 |
| 53.0 | | | | | | | | | .0413 | | | | | .3729 |
| 58.0 | | | | | | | | | .0413 | | | | | .0413 |
| 63.0 | | | | | | | | | .0186 | | | | | .0714 |
| 68.0 | | | | | | | | | .0490 | | | | | .0490 |
| 73.0 | | | | | | | | | .0524 | | | | | .0524 |
| 78.0 | | | | | | | | | .0450 | | | | | .0450 |



AEDC VAS32 QMS G1+T10 EXTERNAL TANK

(RTK101)

MACH (1) = 6.000 ALPHA (3) = .000

SECTION 1: EXTERNAL TANK DEPENDENT VARIABLE: H/LAO

PHI 1: .0000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000 382.5000 405.0000 427.5000 450.0000

| | | | | | | | | | | |
|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| R/LT | .000 | .0042 | .0223 | .0000 | .0240 | .0129 | .0382 | .0213 | .0398 | .0251 |
| .025 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0338 | .0185 | .0332 | .0256 |
| .050 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0347 | .0141 | .0287 | .0348 |
| .075 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0270 | .0142 | .0272 | .0212 |
| .100 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0280 | .0108 | .0251 | .0185 |
| .125 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0373 | .0106 | .0283 | .0251 |
| .150 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0173 | .0000 | .0000 | .0000 |
| .175 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0221 | .0310 | .0000 | .0403 |
| .200 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0374 | .0000 | .0000 |
| .225 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .250 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .275 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .300 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .325 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .350 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .375 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .400 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .425 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .450 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .475 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .500 | .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

PHI 2: 215.0000 222.5000 229.0000

| | | |
|------|-------|-------|
| R/LT | .335 | .0033 |
| .400 | .0247 | .0266 |
| .475 | .0241 | .0146 |
| .550 | .0330 | .0000 |

MACH (1) = 6.000 ALPHA (4) = 5.000 T1 = 97.800 Q1 = 3.935 REF = .043

SECTION 1: EXTERNAL TANK DEPENDENT VARIABLE: H/LAO

PHI 1: .0000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000 382.5000 405.0000 427.5000 450.0000

| | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|
| R/LT | .000 | .000 | .010 | .040 | .080 | .150 | .200 | .250 | .300 | .325 |
| .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .008 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .010 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .040 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .080 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .150 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .200 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .250 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .300 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| .325 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |



MACH (1) = 8.000 ALPHA (4) = 5.000

AEDC VAS52 OH4B 01+T10 EXTERNAL TANK

(RTKTD1)

SECTION (1) EXTERNAL TANK DEPENDENT VARIABLE HI/40

| X/LT | .0000 | .45 | .65 | .85 | 90 | .95 | .99 | 1.00 | .0000123 | .0000135 | .0000151 | .0000157 | .0000161 | .0000165 | .0000180 | .0000197 | .0000208 | .0000 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|
| .350 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .375 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .400 | .0134 | .0111 | .0095 | .0045 | .0060 | .0000 | .0000 | .0000 | .0292 | .0232 | .0355 | .0000 | .0000 | .0382 | .1854 | .1429 | .0215 | .0113 |
| .425 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0169 | .0071 | .0000 | .0000 | .0000 | .0215 | .1429 | .0215 | .0215 | .0113 |
| .450 | .0100 | .0063 | .0060 | .0060 | .0210 | .0000 | .0000 | .0000 | .0211 | .0118 | .0346 | .0000 | .0000 | .0215 | .1429 | .0215 | .0215 | .0113 |
| .475 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .500 | .0129 | .0176 | .0700 | .0119 | .0201 | .0000 | .0000 | .0000 | .0275 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .525 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .550 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .575 | .0154 | .0154 | .0121 | .0158 | .0000 | .0000 | .0000 | .0000 | .0311 | .0168 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .600 | .0147 | .0100 | .0063 | .0044 | .0213 | .0000 | .0000 | .0000 | .0322 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .625 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .650 | .0112 | .0000 | .0157 | .0000 | .0000 | .0000 | .0000 | .0000 | .0421 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .675 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .725 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .750 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .775 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .825 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .850 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .875 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

PHI 216 .0000222 .5000229 .000

| X/LT | .0021 | .0327 | .0298 | .0000 |
|------|-------|-------|-------|-------|
| .335 | .0021 | .0327 | .0298 | .0000 |
| .400 | .0075 | .0601 | .0298 | .0000 |
| .500 | .0601 | .0298 | .0000 | .0000 |
| .600 | .0270 | .0000 | .0000 | .0000 |
| .800 | .0000 | .0000 | .0000 | .0000 |



AEDC VA352 OMB 01+110 EXTERNAL TANK (RTK102)

MACH (1) = 8.000 BETA (2) = .000

SECTION (1) EXTERNAL TANK DEPENDENT VARIABLE HI/LO

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------|-----|-------|-----|-------|-----|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|-------|-------|------|-------|
| PHI: | .0000 | 45. | .0000 | 67. | .5000 | 90. | .0000 | 112. | .5000 | 123. | .0000 | 135. | .0000 | 151. | .0000 | 157. | .0000 | 161. | .0000 | 180. | .0000 | 196. | .0000 | 208. | .0000 |
| X/L-T | .900 | | | | | | | | | | | | | | | | | | | | | | | | |
| | .925 | | .0154 | | .0000 | | .0071 | | .0000 | | .0221 | | .0310 | | .0000 | | .0374 | | .0534 | | .0403 | | | | |
| | .935 | | | | | | | | | | .0000 | | | | | | | | | | | | | | |
| | .937 | | | | | | | | | | | | | | | | | | | | | .0875 | | | .0891 |
| | .960 | | | | | | | | | | .0000 | | | | | | | | | | .0128 | | | | |
| | .975 | | | | | | | | | | | | | | | | | | | | | | | | |

PHI 215.00002229.50002229.0000

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|------|--|-------|--|-------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| X/L-T | .335 | | .0033 | | | | | | | | | | | | | | | | | | | | | | |
| | .400 | | .0247 | | .0266 | | | | | | | | | | | | | | | | | | | | |
| | .500 | | .0761 | | .0146 | | | | | | | | | | | | | | | | | | | | |
| | .700 | | .0350 | | | | | | | | | | | | | | | | | | | | | | |
| | .900 | | | | .0000 | | | | | | | | | | | | | | | | | | | | |



(RTKT03)

AEDC VA352 OH4B Q1+T10 EXTERNAL TANK

WACH (1) = 8.000 ALPHA (2) = -9.000

SECTION (1) EXTERNAL TANK DEPENDENT VARIABLE HI/HO

PHI .0000 45.0000 87.5000 95.0000 112.5000 123.0000 135.0000 151.0000 165.0000 180.0000 196.0000 208.0000

| X/Y/T | .000 | .0039 | .0000 | .0277 | .0000 | .0136 | .0161 | .0000 | .0071 | .0149 | .0110 |
|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | | | | | | | | | | | |
| .025 | | | | | | | | | | | |
| .035 | | | | | | | | | | | |
| .037 | | | | | | | | | | | |
| .040 | | | | | .0000 | | | | | | |
| .045 | | | | | .0000 | | | | .1268 | | .0805 |
| .050 | | | | | .0000 | | | | .0090 | | |

PHI 216.0000 222.5000 229.0000

| X/Y/T | .0094 | .0403 | .0265 | .0269 | .0200 |
|-------|-------|-------|-------|-------|-------|
| .0094 | | | | | |
| .0403 | | | | | |
| .0265 | | | | | |
| .0269 | | | | | |
| .0200 | | | | | |

WACH (1) = 8.000 ALPHA (3) = .000 TI = 93.425 Q1 = .682 HREF = .020

SECTION (2) EXTERNAL TANK DEPENDENT VARIABLE HI/HO

PHI .0000 45.0000 87.5000 95.0000 112.5000 123.0000 135.0000 151.0000 165.0000 180.0000 196.0000 208.0000

| X/Y/T | .0000 | .0071 | .0000 | .0040 | .0043 | .0116 | .0158 | .0000 | .0027 | .0034 | .0095 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | | | | | | | | | | | |
| .005 | | | | | | | | | | | |
| .010 | | | | | | | | | | | |
| .040 | | | | | | | | | | | |
| .086 | | | | | | | | | | | |
| .155 | | | | | | | | | | | |
| .200 | | | | .0131 | | | | | | | .0160 |
| .250 | | | | .0000 | | | | | | | |
| .275 | | | | .0000 | .0000 | | | | | | |
| .300 | | | .0071 | .0073 | .0076 | | | | | | |
| .325 | | | .0000 | .0000 | .0000 | .0048 | | | | | |
| .350 | | | .0000 | .0000 | .0000 | .0082 | | | | | |
| .375 | | | .0065 | .0067 | .0040 | .0067 | | | | | |
| .400 | | | .0000 | .0026 | .0043 | .0116 | .0000 | | | | .0095 |
| .425 | | | .0000 | .0000 | .0000 | .0137 | .0158 | | | | |
| .450 | | | .0000 | .0000 | .0106 | .0072 | .2193 | | | | |
| .475 | | | .0039 | .0025 | .0164 | .0149 | .0400 | | | | |
| .500 | | | .0000 | .0048 | .0164 | .0206 | .0336 | .0202 | .0667 | | |
| .525 | | | .0000 | .0000 | .0415 | .0090 | .0239 | .0263 | | | |
| .550 | | | .0000 | .0000 | .0415 | .0090 | .0239 | .0263 | | | |
| .575 | | | .0000 | .0000 | .0415 | .0090 | .0239 | .0263 | | | |



AEDC VA352 OMB 01+TD EXTERNAL TANK

(RTKY04) (29 APR 74)

REFERENCE DATA

REF = .0238 SQ.FT. RMRP = .0000 IN.
 REF = 22.5603 IN. RMRP = .0000 IN.
 REF = 16.3919 IN. RMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RN/L = .680
 S.F.LAP = .000 ELEVEN = .000
 MW/HT = 1.000

MACH (1) = 6.000 BETA (1) = -2.000 TI = 93.550 Q1 = .681 PTEF = .020

SECTION (1) EXTERNAL TANK

DEPENDENT VARIABLE HI/LO

P111 .5600 48 .0000 67.5000 90.0000 112.5000 135.0000 151.0000 167.0000 183.0000 199.0000 215.0000 231.0000 247.0000 263.0000 279.0000 295.0000 311.0000 327.0000 343.0000 359.0000 375.0000 391.0000 407.0000 423.0000 439.0000 455.0000 471.0000 487.0000 503.0000 519.0000 535.0000 551.0000 567.0000 583.0000 599.0000 615.0000 631.0000 647.0000 663.0000 679.0000 695.0000 711.0000 727.0000 743.0000 759.0000 775.0000 791.0000 807.0000 823.0000 839.0000 855.0000 871.0000 887.0000 903.0000 919.0000 935.0000 951.0000 967.0000 983.0000 999.0000

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Y/Z/T | .6874 | .3640 | .4190 | .1766 | .1192 | .0646 | .0360 | .0153 | .0063 | .0022 | .0024 | .0001 | .0003 | .0005 | .0007 | .0009 | .0011 | .0013 | .0015 | .0017 | .0019 | .0021 | .0023 | .0025 | .0027 | .0029 | .0031 | .0033 | .0035 | .0037 | .0039 | .0041 | .0043 | .0045 | .0047 | .0049 | .0051 | .0053 | .0055 | .0057 | .0059 | .0061 | .0063 | .0065 | .0067 | .0069 | .0071 | .0073 | .0075 | .0077 | .0079 | .0081 | .0083 | .0085 | .0087 | .0089 | .0091 | .0093 | .0095 | .0097 | .0099 | .0101 | .0103 | .0105 | .0107 | .0109 | .0111 | .0113 | .0115 | .0117 | .0119 | .0121 | .0123 | .0125 | .0127 | .0129 | .0131 | .0133 | .0135 | .0137 | .0139 | .0141 | .0143 | .0145 | .0147 | .0149 | .0151 | .0153 | .0155 | .0157 | .0159 | .0161 | .0163 | .0165 | .0167 | .0169 | .0171 | .0173 | .0175 | .0177 | .0179 | .0181 | .0183 | .0185 | .0187 | .0189 | .0191 | .0193 | .0195 | .0197 | .0199 | .0201 | .0203 | .0205 | .0207 | .0209 | .0211 | .0213 | .0215 | .0217 | .0219 | .0221 | .0223 | .0225 | .0227 | .0229 | .0231 | .0233 | .0235 | .0237 | .0239 | .0241 | .0243 | .0245 | .0247 | .0249 | .0251 | .0253 | .0255 | .0257 | .0259 | .0261 | .0263 | .0265 | .0267 | .0269 | .0271 | .0273 | .0275 | .0277 | .0279 | .0281 | .0283 | .0285 | .0287 | .0289 | .0291 | .0293 | .0295 | .0297 | .0299 | .0301 | .0303 | .0305 | .0307 | .0309 | .0311 | .0313 | .0315 | .0317 | .0319 | .0321 | .0323 | .0325 | .0327 | .0329 | .0331 | .0333 | .0335 | .0337 | .0339 | .0341 | .0343 | .0345 | .0347 | .0349 | .0351 | .0353 | .0355 | .0357 | .0359 | .0361 | .0363 | .0365 | .0367 | .0369 | .0371 | .0373 | .0375 | .0377 | .0379 | .0381 | .0383 | .0385 | .0387 | .0389 | .0391 | .0393 | .0395 | .0397 | .0399 | .0401 | .0403 | .0405 | .0407 | .0409 | .0411 | .0413 | .0415 | .0417 | .0419 | .0421 | .0423 | .0425 | .0427 | .0429 | .0431 | .0433 | .0435 | .0437 | .0439 | .0441 | .0443 | .0445 | .0447 | .0449 | .0451 | .0453 | .0455 | .0457 | .0459 | .0461 | .0463 | .0465 | .0467 | .0469 | .0471 | .0473 | .0475 | .0477 | .0479 | .0481 | .0483 | .0485 | .0487 | .0489 | .0491 | .0493 | .0495 | .0497 | .0499 | .0501 | .0503 | .0505 | .0507 | .0509 | .0511 | .0513 | .0515 | .0517 | .0519 | .0521 | .0523 | .0525 | .0527 | .0529 | .0531 | .0533 | .0535 | .0537 | .0539 | .0541 | .0543 | .0545 | .0547 | .0549 | .0551 | .0553 | .0555 | .0557 | .0559 | .0561 | .0563 | .0565 | .0567 | .0569 | .0571 | .0573 | .0575 | .0577 | .0579 | .0581 | .0583 | .0585 | .0587 | .0589 | .0591 | .0593 | .0595 | .0597 | .0599 | .0601 | .0603 | .0605 | .0607 | .0609 | .0611 | .0613 | .0615 | .0617 | .0619 | .0621 | .0623 | .0625 | .0627 | .0629 | .0631 | .0633 | .0635 | .0637 | .0639 | .0641 | .0643 | .0645 | .0647 | .0649 | .0651 | .0653 | .0655 | .0657 | .0659 | .0661 | .0663 | .0665 | .0667 | .0669 | .0671 | .0673 | .0675 | .0677 | .0679 | .0681 | .0683 | .0685 | .0687 | .0689 | .0691 | .0693 | .0695 | .0697 | .0699 | .0701 | .0703 | .0705 | .0707 | .0709 | .0711 | .0713 | .0715 | .0717 | .0719 | .0721 | .0723 | .0725 | .0727 | .0729 | .0731 | .0733 | .0735 | .0737 | .0739 | .0741 | .0743 | .0745 | .0747 | .0749 | .0751 | .0753 | .0755 | .0757 | .0759 | .0761 | .0763 | .0765 | .0767 | .0769 | .0771 | .0773 | .0775 | .0777 | .0779 | .0781 | .0783 | .0785 | .0787 | .0789 | .0791 | .0793 | .0795 | .0797 | .0799 | .0801 | .0803 | .0805 | .0807 | .0809 | .0811 | .0813 | .0815 | .0817 | .0819 | .0821 | .0823 | .0825 | .0827 | .0829 | .0831 | .0833 | .0835 | .0837 | .0839 | .0841 | .0843 | .0845 | .0847 | .0849 | .0851 | .0853 | .0855 | .0857 | .0859 | .0861 | .0863 | .0865 | .0867 | .0869 | .0871 | .0873 | .0875 | .0877 | .0879 | .0881 | .0883 | .0885 | .0887 | .0889 | .0891 | .0893 | .0895 | .0897 | .0899 | .0901 | .0903 | .0905 | .0907 | .0909 | .0911 | .0913 | .0915 | .0917 | .0919 | .0921 | .0923 | .0925 | .0927 | .0929 | .0931 | .0933 | .0935 | .0937 | .0939 | .0941 | .0943 | .0945 | .0947 | .0949 | .0951 | .0953 | .0955 | .0957 | .0959 | .0961 | .0963 | .0965 | .0967 | .0969 | .0971 | .0973 | .0975 | .0977 | .0979 | .0981 | .0983 | .0985 | .0987 | .0989 | .0991 | .0993 | .0995 | .0997 | .0999 | .1001 | .1003 | .1005 | .1007 | .1009 | .1011 | .1013 | .1015 | .1017 | .1019 | .1021 | .1023 | .1025 | .1027 | .1029 | .1031 | .1033 | .1035 | .1037 | .1039 | .1041 | .1043 | .1045 | .1047 | .1049 | .1051 | .1053 | .1055 | .1057 | .1059 | .1061 | .1063 | .1065 | .1067 | .1069 | .1071 | .1073 | .1075 | .1077 | .1079 | .1081 | .1083 | .1085 | .1087 | .1089 | .1091 | .1093 | .1095 | .1097 | .1099 | .1101 | .1103 | .1105 | .1107 | .1109 | .1111 | .1113 | .1115 | .1117 | .1119 | .1121 | .1123 | .1125 | .1127 | .1129 | .1131 | .1133 | .1135 | .1137 | .1139 | .1141 | .1143 | .1145 | .1147 | .1149 | .1151 | .1153 | .1155 | .1157 | .1159 | .1161 | .1163 | .1165 | .1167 | .1169 | .1171 | .1173 | .1175 | .1177 | .1179 | .1181 | .1183 | .1185 | .1187 | .1189 | .1191 | .1193 | .1195 | .1197 | .1199 | .1201 | .1203 | .1205 | .1207 | .1209 | .1211 | .1213 | .1215 | .1217 | .1219 | .1221 | .1223 | .1225 | .1227 | .1229 | .1231 | .1233 | .1235 | .1237 | .1239 | .1241 | .1243 | .1245 | .1247 | .1249 | .1251 | .1253 | .1255 | .1257 | .1259 | .1261 | .1263 | .1265 | .1267 | .1269 | .1271 | .1273 | .1275 | .1277 | .1279 | .1281 | .1283 | .1285 | .1287 | .1289 | .1291 | .1293 | .1295 | .1297 | .1299 | .1301 | .1303 | .1305 | .1307 | .1309 | .1311 | .1313 | .1315 | .1317 | .1319 | .1321 | .1323 | .1325 | .1327 | .1329 | .1331 | .1333 | .1335 | .1337 | .1339 | .1341 | .1343 | .1345 | .1347 | .1349 | .1351 | .1353 | .1355 | .1357 | .1359 | .1361 | .1363 | .1365 | .1367 | .1369 | .1371 | .1373 | .1375 | .1377 | .1379 | .1381 | .1383 | .1385 | .1387 | .1389 | .1391 | .1393 | .1395 | .1397 | .1399 | .1401 | .1403 | .1405 | .1407 | .1409 | .1411 | .1413 | .1415 | .1417 | .1419 | .1421 | .1423 | .1425 | .1427 | .1429 | .1431 | .1433 | .1435 | .1437 | .1439 | .1441 | .1443 | .1445 | .1447 | .1449 | .1451 | .1453 | .1455 | .1457 | .1459 | .1461 | .1463 | .1465 | .1467 | .1469 | .1471 | .1473 | .1475 | .1477 | .1479 | .1481 | .1483 | .1485 | .1487 | .1489 | .1491 | .1493 | .1495 | .1497 | .1499 | .1501 | .1503 | .1505 | .1507 | .1509 | .1511 | .1513 | .1515 | .1517 | .1519 | .1521 | .1523 | .1525 | .1527 | .1529 | .1531 | .1533 | .1535 | .1537 | .1539 | .1541 | .1543 | .1545 | .1547 | .1549 | .1551 | .1553 | .1555 | .1557 | .1559 | .1561 | .1563 | .1565 | .1567 | .1569 | .1571 | .1573 | .1575 | .1577 | .1579 | .1581 | .1583 | .1585 | .1587 | .1589 | .1591 | .1593 | .1595 | .1597 | .1599 | .1601 | .1603 | .1605 | .1607 | .1609 | .1611 | .1613 | .1615 | .1617 | .1619 | .1621 | .1623 | .1625 | .1627 | .1629 | .1631 | .1633 | .1635 | .1637 | .1639 | .1641 | .1643 | .1645 | .1647 | .1649 | .1651 | .1653 | .1655 | .1657 | .1659 | .1661 | .1663 | .1665 | .1667 | .1669 | .1671 | .1673 | .1675 | .1677 | .1679 | .1681 | .1683 | .1685 | .1687 | .1689 | .1691 | .1693 | .1695 | .1697 | .1699 | .1701 | .1703 | .1705 | .1707 | .1709 | .1711 | .1713 | .1715 | .1717 | .1719 | .1721 | .1723 | .1725 | .1727 | .1729 | .1731 | .1733 | .1735 | .1737 | .1739 | .1741 | .1743 | .1745 | .1747 | .1749 | .1751 | .1753 | .1755 | .1757 | .1759 | .1761 | .1763 | .1765 | .1767 | .1769 | .1771 | .1773 | .1775 | .1777 | .1779 | .1781 | .1783 | .1785 | .1787 | .1789 | .1791 | .1793 | .1795 | .1797 | .1799 | .1801 | .1803 | .1805 | .1807 | .1809 | .1811 | .1813 | .1815 | .1817 | .1819 | .1821 | .1823 | .1825 | .1827 | .1829 | .1831 | .1833 | .1835 | .1837 | .1839 | .1841 | .1843 | .1845 | .1847 | .1849 | .1851 | .1853 | .1855 | .1857 | .1859 | .1861 | .1863 | .1865 | .1867 | .1869 | .1871 | .1873 | .1875 | .1877 | .1879 | .1881 | .1883 | .1885 | .1887 | .1889 | .1891 | .1893 | .1895 | .1897 | .1899 | .1901 | .1903 | .1905 | .1907 | .1909 | .1911 | .1913 | .1915 | .1917 | .1919 | .1921 | .1923 | .1925 | .1927 | .1929 | .1931 | .1933 | .1935 | .1937 | .1939 | .1941 | .1943 | .1945 | .1947 | .1949 | .1951 | .1953 | .1955 | .1957 | .1959 | .1961 | .1963 | .1965 | .1967 | .1969 | .1971 | .1973 | .1975 | .1977 | .1979 | .1981 | .1983 | .1985 | .1987 | .1989 | .1991 | .1993 | .1995 | .1997 | .1999 | .2001 | .2003 | .2005 | .2007 | .2009 | .2011 | .2013 | .2015 | .2017 | .2019 | .2021 | .2023 | .2025 | .2027 | .2029 | .2031 | .2033 | .2035 | .2037 | .2039 | .2041 | .2043 | .2045 | .2047 | .2049 | .2051 | .2053 | .2055 | .2057 | .2059 | .2061 | .2063 | .2065 | .2067 | .2069 | .2071 | .2073 | .2075 | .2077 | .2079 | .2081 | .2083 | .2085 | .2087 | .2089 | .2091 | .2093 | .2095 | .2097 | .2099 | .2101 | .2103 | .2105 | .2107 | .2109 | .2111 | .2113 | .2115 | .2117 | .2119 | .2121 | .2123 | .2125 | .2127 | .2129 | .2131 | .2133 | .2135 | .2137 | .2139 | .2141 | .2143 | .2145 | .2147 | .2149 | .2151 | .2153 | .2155 | .2157 | .2159 | .2161 | .2163 | .2165 | .2167 | .2169 | .2171 | .2173 | .2175 | .2177 | .2179 | .2181 | .2183 | .2185 | .2187 | .2189 | .2191 | .2193 | .2195 | .2197 | .2199 | .2201 | .2203 | .2205 | .2207 | .2209 | .2211 | .2213 | .2215 | .2217 | .2219 | .2221 | .2223 | .2225 | .2227 | .2229 | .2231 | .2233 | .2235 | .2237 | .2239 | .2241 | .2243 | .2245 | .2247 | .2249 | .2251 | .2253 | .2255 | .2257 | .2259 | .2261 | .2263 | .2265 | .2267 | .2269 | .2271 | .2273 | .2275 | .2277 | .2279 | .2281 | .2283 | .2285 | .2287 | .2289 | .2291 | .2293 | .2295 | .2297 | .2299 | .2301 | .2303 | .2305 | .2307 | .2309 | .2311 | .2313 | .2315 | .2317 | .2319 | .2321 | .2323 | .2325 | .2327 | .2329 | .2331 | .2333 | .2335 | .2337 | .2339 | .2341 | .2343 | .2345 | .2347 | .2349 | .2351 | .2353 | .2355 | .2357 | .2359 | .2361 | .2363 | .2365 | .2367 | .2369 | .2371 | .2373 | .2375 | .2377 | .2379 | .2381 | .2383 | .2385 | .2387 | .2389 | .2391 | .2393 | .2395 | .2397 | .2399 | .2401 | .2403 | .2405 | .2407 | .2409 | .2411 | .2413 | .2415 | .2417 | .2419 | .2421 | .2423 | .2425 | .2427 | .2429 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

(RTK TOA)

AEDC VAS32 OHMB 01+110 EXTERNAL TANK

MACH (1) = 0.000 BETA (2) = .000

SECTION 111 EXTERNAL TANK DEPENDENT VARIABLE MI/NO

P=1 .0000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000 337.5000 360.0000 382.5000 405.0000 427.5000 450.0000

| | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/2Y | .0000 | .0073 | .0083 | .0000 | .0094 | .0232 | .0000 | .0076 | .0163 | .0093 |
| .225 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .335 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .435 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .540 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .645 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

P=1 216.0000 222.5000 229.0000

| | | | | | |
|------|-------|-------|-------|-------|-------|
| 1/2Y | .0000 | .0027 | .0079 | .0044 | .0000 |
| .400 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .500 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .800 | .0000 | .0000 | .0000 | .0000 | .0000 |



TABULATED DATA LISTING FOR OHB (AEDC VAS32)

(RTKTD7)

AEDC VAS32 OHB T10 EXTERNAL TANK

MACH (1) = 6.000 BETA (1) = -2.000

SECTION (1) EXTERNAL TANK

DEPENDENT VARIABLE HU/H0

PHI: 216.0565222,502229,0000

| X/LT | Y |
|------|-------|
| .335 | .0081 |
| .400 | .0337 |
| .500 | .0105 |
| .600 | .0153 |
| .700 | .0133 |
| .800 | .0000 |

MACH (1) = 8.000 BETA (2) = .000 T1 = 97.650 Q1 = 3.993 HREF = .049

SECTION (1) EXTERNAL TANK

DEPENDENT VARIABLE HU/H0

PHI: .0500 45.0700 87.5000 90.0000 112.5000 123.5000 135.0000 151.0000 157.0000 163.0000 169.0000 175.0000 181.0000 187.0000 193.0000 199.0000 205.0000 211.0000 217.0000 223.0000

| X/LT | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y | Y |
|------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| .000 | .0000 | | | | | | | | | | | | | | | | | | | |
| .002 | .0000 | | | | | | | | | | | | | | | | | | | .6000 |
| .010 | .0000 | | | | | | | | | | | | | | | | | | | .4307 |
| .040 | .1413 | | | | | | | | | | | | | | | | | | | .6000 |
| .060 | .0797 | | | | | | | | | | | | | | | | | | | .1612 |
| .100 | .0262 | | | | | | | | | | | | | | | | | | | .0442 |
| .200 | | | | | | | | | | | | | | | | | | | | .0141 |
| .250 | | | | | | | | | | | | | | | | | | | | .0000 |
| .275 | | | | | | | | | | | | | | | | | | | | .0000 |
| .300 | | | | | | | | | | | | | | | | | | | | .0000 |
| .325 | | | | | | | | | | | | | | | | | | | | .0000 |
| .350 | | | | | | | | | | | | | | | | | | | | .0000 |
| .375 | | | | | | | | | | | | | | | | | | | | .0000 |
| .400 | | | | | | | | | | | | | | | | | | | | .0000 |
| .425 | | | | | | | | | | | | | | | | | | | | .0000 |
| .450 | | | | | | | | | | | | | | | | | | | | .0000 |
| .475 | | | | | | | | | | | | | | | | | | | | .0000 |
| .500 | | | | | | | | | | | | | | | | | | | | .0000 |
| .525 | | | | | | | | | | | | | | | | | | | | .0000 |
| .550 | | | | | | | | | | | | | | | | | | | | .0000 |
| .575 | | | | | | | | | | | | | | | | | | | | .0000 |
| .600 | | | | | | | | | | | | | | | | | | | | .0000 |
| .625 | | | | | | | | | | | | | | | | | | | | .0000 |
| .650 | | | | | | | | | | | | | | | | | | | | .0000 |
| .675 | | | | | | | | | | | | | | | | | | | | .0000 |
| .700 | | | | | | | | | | | | | | | | | | | | .0000 |
| .750 | | | | | | | | | | | | | | | | | | | | .0000 |
| .800 | | | | | | | | | | | | | | | | | | | | .0000 |
| .825 | | | | | | | | | | | | | | | | | | | | .0000 |
| .850 | | | | | | | | | | | | | | | | | | | | .0000 |
| .875 | | | | | | | | | | | | | | | | | | | | .0000 |



(RTK107)

AEDC VA352 OH-8 T10 EXTERNAL TANK

MACH (1) 8 8,000 BETA (2) 5 .000

SECTION 1 EXTERNAL TANK DEPENDENT (VARIABLE HU/HO

P-HI .0000 45.0000 67.0000 90.0000 112.0000 123.0000 135.0000 151.0000 157.0000 160.0000 180.0000 196.0000 197.0000 208.0000

| Y/H-O | .0000 | .0044 | .0000 | .0159 | .0000 | .0000 | .0232 | .0000 | .0133 | .0201 | .0136 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | | | | | | | | | | | |
| .025 | | | | | | | | | | | |
| .035 | | | | | | | | | | | |
| .075 | | | | | | .0000 | | | | .0426 | .0464 |
| .150 | | | | | .0000 | | | | | | |
| .175 | | | | | | | | | | .0069 | |

P-HI 214.0000 222.0000 229.0000

| Y/H-O | .0032 | .0890 | .0149 | .0160 | .0000 |
|-------|-------|-------|-------|-------|-------|
| .335 | | | | | |
| .400 | | | | | |
| .470 | | | | | |
| .600 | | | | | |
| .700 | | | | | |
| .800 | | | | | |



REFERENCE DATA

SREF = .8238 SQ.FT. XMRP = .0000 IN.
LREF = 22.5803 IN. YMRP = .0000 IN.
BREF = 18.7919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

DELTA = .000 TRVL = .660
S.F.LAP = .000 ELEVON = .000
HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -10.000 TI = 92.367 QI = .670 HREF = .020

SECTION (1) EXTERNAL TANK

DEPENDENT VARIABLE MU/DO

PHI: .0700 45.0000 67.5000 90.0000 112.5000 135.0000 157.0000 179.0000 201.0000 223.0000 245.0000 267.0000 289.0000 311.0000 333.0000 355.0000 377.0000 399.0000 421.0000 443.0000 465.0000 487.0000 509.0000 531.0000 553.0000 575.0000 597.0000 619.0000 641.0000 663.0000 685.0000 707.0000 729.0000 751.0000 773.0000 795.0000 817.0000 839.0000 861.0000 883.0000 905.0000 927.0000 949.0000 971.0000 993.0000 1015.0000 1037.0000 1059.0000 1081.0000 1103.0000 1125.0000 1147.0000 1169.0000 1191.0000 1213.0000 1235.0000 1257.0000 1279.0000 1301.0000 1323.0000 1345.0000 1367.0000 1389.0000 1411.0000 1433.0000 1455.0000 1477.0000 1499.0000 1521.0000 1543.0000 1565.0000 1587.0000 1609.0000 1631.0000 1653.0000 1675.0000 1697.0000 1719.0000 1741.0000 1763.0000 1785.0000 1807.0000 1829.0000 1851.0000 1873.0000 1895.0000 1917.0000 1939.0000 1961.0000 1983.0000 2005.0000 2027.0000 2049.0000 2071.0000 2093.0000 2115.0000 2137.0000 2159.0000 2181.0000 2203.0000 2225.0000 2247.0000 2269.0000 2291.0000 2313.0000 2335.0000 2357.0000 2379.0000 2401.0000 2423.0000 2445.0000 2467.0000 2489.0000 2511.0000 2533.0000 2555.0000 2577.0000 2599.0000 2621.0000 2643.0000 2665.0000 2687.0000 2709.0000 2731.0000 2753.0000 2775.0000 2797.0000 2819.0000 2841.0000 2863.0000 2885.0000 2907.0000 2929.0000 2951.0000 2973.0000 2995.0000 3017.0000 3039.0000 3061.0000 3083.0000 3105.0000 3127.0000 3149.0000 3171.0000 3193.0000 3215.0000 3237.0000 3259.0000 3281.0000 3303.0000 3325.0000 3347.0000 3369.0000 3391.0000 3413.0000 3435.0000 3457.0000 3479.0000 3501.0000 3523.0000 3545.0000 3567.0000 3589.0000 3611.0000 3633.0000 3655.0000 3677.0000 3699.0000 3721.0000 3743.0000 3765.0000 3787.0000 3809.0000 3831.0000 3853.0000 3875.0000 3897.0000 3919.0000 3941.0000 3963.0000 3985.0000 4007.0000 4029.0000 4051.0000 4073.0000 4095.0000 4117.0000 4139.0000 4161.0000 4183.0000 4205.0000 4227.0000 4249.0000 4271.0000 4293.0000 4315.0000 4337.0000 4359.0000 4381.0000 4403.0000 4425.0000 4447.0000 4469.0000 4491.0000 4513.0000 4535.0000 4557.0000 4579.0000 4601.0000 4623.0000 4645.0000 4667.0000 4689.0000 4711.0000 4733.0000 4755.0000 4777.0000 4799.0000 4821.0000 4843.0000 4865.0000 4887.0000 4909.0000 4931.0000 4953.0000 4975.0000 4997.0000 5019.0000 5041.0000 5063.0000 5085.0000 5107.0000 5129.0000 5151.0000 5173.0000 5195.0000 5217.0000 5239.0000 5261.0000 5283.0000 5305.0000 5327.0000 5349.0000 5371.0000 5393.0000 5415.0000 5437.0000 5459.0000 5481.0000 5503.0000 5525.0000 5547.0000 5569.0000 5591.0000 5613.0000 5635.0000 5657.0000 5679.0000 5701.0000 5723.0000 5745.0000 5767.0000 5789.0000 5811.0000 5833.0000 5855.0000 5877.0000 5899.0000 5921.0000 5943.0000 5965.0000 5987.0000 6009.0000 6031.0000 6053.0000 6075.0000 6097.0000 6119.0000 6141.0000 6163.0000 6185.0000 6207.0000 6229.0000 6251.0000 6273.0000 6295.0000 6317.0000 6339.0000 6361.0000 6383.0000 6405.0000 6427.0000 6449.0000 6471.0000 6493.0000 6515.0000 6537.0000 6559.0000 6581.0000 6603.0000 6625.0000 6647.0000 6669.0000 6691.0000 6713.0000 6735.0000 6757.0000 6779.0000 6801.0000 6823.0000 6845.0000 6867.0000 6889.0000 6911.0000 6933.0000 6955.0000 6977.0000 6999.0000 7021.0000 7043.0000 7065.0000 7087.0000 7109.0000 7131.0000 7153.0000 7175.0000 7197.0000 7219.0000 7241.0000 7263.0000 7285.0000 7307.0000 7329.0000 7351.0000 7373.0000 7395.0000 7417.0000 7439.0000 7461.0000 7483.0000 7505.0000 7527.0000 7549.0000 7571.0000 7593.0000 7615.0000 7637.0000 7659.0000 7681.0000 7703.0000 7725.0000 7747.0000 7769.0000 7791.0000 7813.0000 7835.0000 7857.0000 7879.0000 7901.0000 7923.0000 7945.0000 7967.0000 7989.0000 8011.0000 8033.0000 8055.0000 8077.0000 8099.0000 8121.0000 8143.0000 8165.0000 8187.0000 8209.0000 8231.0000 8253.0000 8275.0000 8297.0000 8319.0000 8341.0000 8363.0000 8385.0000 8407.0000 8429.0000 8451.0000 8473.0000 8495.0000 8517.0000 8539.0000 8561.0000 8583.0000 8605.0000 8627.0000 8649.0000 8671.0000 8693.0000 8715.0000 8737.0000 8759.0000 8781.0000 8803.0000 8825.0000 8847.0000 8869.0000 8891.0000 8913.0000 8935.0000 8957.0000 8979.0000 9001.0000 9023.0000 9045.0000 9067.0000 9089.0000 9111.0000 9133.0000 9155.0000 9177.0000 9199.0000 9221.0000 9243.0000 9265.0000 9287.0000 9309.0000 9331.0000 9353.0000 9375.0000 9397.0000 9419.0000 9441.0000 9463.0000 9485.0000 9507.0000 9529.0000 9551.0000 9573.0000 9595.0000 9617.0000 9639.0000 9661.0000 9683.0000 9705.0000 9727.0000 9749.0000 9771.0000 9793.0000 9815.0000 9837.0000 9859.0000 9881.0000 9903.0000 9925.0000 9947.0000 9969.0000 9991.0000 10013.0000 10035.0000 10057.0000 10079.0000 10101.0000 10123.0000 10145.0000 10167.0000 10189.0000 10211.0000 10233.0000 10255.0000 10277.0000 10299.0000 10321.0000 10343.0000 10365.0000 10387.0000 10409.0000 10431.0000 10453.0000 10475.0000 10497.0000 10519.0000 10541.0000 10563.0000 10585.0000 10607.0000 10629.0000 10651.0000 10673.0000 10695.0000 10717.0000 10739.0000 10761.0000 10783.0000 10805.0000 10827.0000 10849.0000 10871.0000 10893.0000 10915.0000 10937.0000 10959.0000 10981.0000 11003.0000 11025.0000 11047.0000 11069.0000 11091.0000 11113.0000 11135.0000 11157.0000 11179.0000 11201.0000 11223.0000 11245.0000 11267.0000 11289.0000 11311.0000 11333.0000 11355.0000 11377.0000 11399.0000 11421.0000 11443.0000 11465.0000 11487.0000 11509.0000 11531.0000 11553.0000 11575.0000 11597.0000 11619.0000 11641.0000 11663.0000 11685.0000 11707.0000 11729.0000 11751.0000 11773.0000 11795.0000 11817.0000 11839.0000 11861.0000 11883.0000 11905.0000 11927.0000 11949.0000 11971.0000 11993.0000 12015.0000 12037.0000 12059.0000 12081.0000 12103.0000 12125.0000 12147.0000 12169.0000 12191.0000 12213.0000 12235.0000 12257.0000 12279.0000 12301.0000 12323.0000 12345.0000 12367.0000 12389.0000 12411.0000 12433.0000 12455.0000 12477.0000 12499.0000 12521.0000 12543.0000 12565.0000 12587.0000 12609.0000 12631.0000 12653.0000 12675.0000 12697.0000 12719.0000 12741.0000 12763.0000 12785.0000 12807.0000 12829.0000 12851.0000 12873.0000 12895.0000 12917.0000 12939.0000 12961.0000 12983.0000 13005.0000 13027.0000 13049.0000 13071.0000 13093.0000 13115.0000 13137.0000 13159.0000 13181.0000 13203.0000 13225.0000 13247.0000 13269.0000 13291.0000 13313.0000 13335.0000 13357.0000 13379.0000 13401.0000 13423.0000 13445.0000 13467.0000 13489.0000 13511.0000 13533.0000 13555.0000 13577.0000 13599.0000 13621.0000 13643.0000 13665.0000 13687.0000 13709.0000 13731.0000 13753.0000 13775.0000 13797.0000 13819.0000 13841.0000 13863.0000 13885.0000 13907.0000 13929.0000 13951.0000 13973.0000 13995.0000 14017.0000 14039.0000 14061.0000 14083.0000 14105.0000 14127.0000 14149.0000 14171.0000 14193.0000 14215.0000 14237.0000 14259.0000 14281.0000 14303.0000 14325.0000 14347.0000 14369.0000 14391.0000 14413.0000 14435.0000 14457.0000 14479.0000 14501.0000 14523.0000 14545.0000 14567.0000 14589.0000 14611.0000 14633.0000 14655.0000 14677.0000 14699.0000 14721.0000 14743.0000 14765.0000 14787.0000 14809.0000 14831.0000 14853.0000 14875.0000 14897.0000 14919.0000 14941.0000 14963.0000 14985.0000 15007.0000 15029.0000 15051.0000 15073.0000 15095.0000 15117.0000 15139.0000 15161.0000 15183.0000 15205.0000 15227.0000 15249.0000 15271.0000 15293.0000 15315.0000 15337.0000 15359.0000 15381.0000 15403.0000 15425.0000 15447.0000 15469.0000 15491.0000 15513.0000 15535.0000 15557.0000 15579.0000 15601.0000 15623.0000 15645.0000 15667.0000 15689.0000 15711.0000 15733.0000 15755.0000 15777.0000 15799.0000 15821.0000 15843.0000 15865.0000 15887.0000 15909.0000 15931.0000 15953.0000 15975.0000 15997.0000 16019.0000 16041.0000 16063.0000 16085.0000 16107.0000 16129.0000 16151.0000 16173.0000 16195.0000 16217.0000 16239.0000 16261.0000 16283.0000 16305.0000 16327.0000 16349.0000 16371.0000 16393.0000 16415.0000 16437.0000 16459.0000 16481.0000 16503.0000 16525.0000 16547.0000 16569.0000 16591.0000 16613.0000 16635.0000 16657.0000 16679.0000 16701.0000 16723.0000 16745.0000 16767.0000 16789.0000 16811.0000 16833.0000 16855.0000 16877.0000 16899.0000 16921.0000 16943.0000 16965.0000 16987.0000 17009.0000 17031.0000 17053.0000 17075.0000 17097.0000 17119.0000 17141.0000 17163.0000 17185.0000 17207.0000 17229.0000 17251.0000 17273.0000 17295.0000 17317.0000 17339.0000 17361.0000 17383.0000 17405.0000 17427.0000 17449.0000 17471.0000 17493.0000 17515.0000 17537.0000 17559.0000 17581.0000 17603.0000 17625.0000 17647.0000 17669.0000 17691.0000 17713.0000 17735.0000 17757.0000 17779.0000 17801.0000 17823.0000 17845.0000 17867.0000 17889.0000 17911.0000 17933.0000 17955.0000 17977.0000 17999.0000 18021.0000 18043.0000 18065.0000 18087.0000 18109.0000 18131.0000 18153.0000 18175.0000 18197.0000 18219.0000 18241.0000 18263.0000 18285.0000 18307.0000 18329.0000 18351.0000 18373.0000 18395.0000 18417.0000 18439.0000 18461.0000 18483.0000 18505.0000 18527.0000 18549.0000 18571.0000 18593.0000 18615.0000 18637.0000 18659.0000 18681.0000 18703.0000 18725.0000 18747.0000 18769.0000 18791.0000 18813.0000 18835.0000 18857.0000 18879.0000 18901.0000 18923.0000 18945.0000 18967.0000 18989.0000 19011.0000 19033.0000 19055.0000 19077.0000 19099.0000 19121.0000 19143.0000 19165.0000 19187.0000 19209.0000 19231.0000 19253.0000 19275.0000 19297.0000 19319.0000 19341.0000 19363.0000 19385.0000 19407.0000 19429.0000 19451.0000 19473.0000 19495.0000 19517.0000 19539.0000 19561.0000 19583.0000 19605.0000 19627.0000 19649.0000 19671.0000 19693.0000 19715.0000 19737.0000 19759.0000 19781.0000 19803.0000 19825.0000 19847.0000 19869.0000 19891.0000 19913.0000 19935.0000 19957.0000 19979.0000 20001.0000 20023.0000 20045.0000 20067.0000 20089.0000 20111.0000 20133.0000 20155.0000 20177.0000 20199.0000 20221.0000 20243.0000 20265.0000 20287.0000 20309.0000 20331.0000 20353.0000 20375.0000 20397.0000 20419.0000 20441.0000 20463.0000 20485.0000 20507.0000 20529.0000 20551.0000 20573.0000 20595.0000 20617.0000 20639.0000 20661.0000 20683.0000 20705.0000 20727.0000 20749.0000 20771.0000 20793.0000 20815.0000 20837.0000 20859.0000 20881.0000 20903.0000 20925.0000 20947.0000 20969.0000 20991.0000 21013.0000 21035.0000 21057.0000 21079.0000 21101.0000 21123.0000 21145.0000 21167.0000 21189.0000 21211.0000 21233.0000 21255.0000 21277.0000 21299.0000 21321.0000 21343.0000 21365.0000 21387.0000 21409.0000 21431.0000 21453.0000 21475.0000 21497.0000 21519.0000 21541.0000 21563.0000 21585.0000 21607.0000 21629.0000 21651.0000 21673.0000 21695.0000 21717.0000 21739.0000 21761.0000 21783.0000 21805.0000 21827.0000 21849.0000 21871.0000 21893.0000 21915.0000 21937.0000 21959.0000 21981.0000 22003.0000 22025.0000 22047.0000 22069.0000 22091.0000 22113.0000 22135.0000 22157.0000 22179.0000 22201.0000 22223.0000 22245.0000 22267.0000 22289.0000 22311.0000 22333.0000 22355.0000 22377.0000 22399.0000 22421.0000 22443.0000 22465.0000 22487.0000 22509.0000 22531.0000 22553.0000 22575.0000 22597.0000 22619.0000 22641.0000 22663.0000 22685.0000 22707.0000 22729.0000 22751.0000 22773.0000 22795.0000 22817.0000 22839.0000 22861.0000 22883.0000 22905.0000 22927.0000 22949.0000 22971.0000 22993.0000 23015.0000 23037.0000 23059.0000 23081.0000 23103.0000 23125.0000 23147.0000 23169.0000 23191.0000 23213.0000 23235.0000 23257.0000 23279.0000 23301.0000 23323.0000 23345.0000 23367.0000 23389.0000 23411.0000 23433.0000 23455.0000 23477.0000 23499.0000 23521.0000 23543.0000 23565.0000 23587.0000 23609.0000 23631.0000 23653.0000 23675.0000 23697.0000 23719.0000 23741.0000 23763.0000 23785.0000 23807.0000 23829.0000 23851.0000 23873.0000 23895.0000 23917.0000 23939.0000 23961.0000 23983.0000 24005.0000 24027.0000 24049.0000 24071.0000 24093.0000 24115.0000 24137.0000 24159.0000 24181.0000 24203.0000 24225.0000 24247.0000 24269.0000 24291.0000 24313.0000 24335.0000 24357.0000 24379.0000 24401.0000 24423.0000

(RTKTD8)

MACH 1.10 = 0.000 ALPHA 1.10 = 45.000

AEDC VAS32 OMB T10 EXTERNAL TANK

EXTERNAL TANK

DEPENDENT VARIABLE POUND

NO. 016,010222 000020,0000

NO.

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0101 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0102 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0103 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0104 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0105 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0106 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0107 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0108 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0109 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0111 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0112 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0113 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0114 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0115 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0116 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0117 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0118 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0119 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

EXTERNAL TANK DEPENDENT VARIABLE POUND

NO. 016,010222 000020,0000

NO.

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0101 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0102 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0103 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0104 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0105 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0106 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0107 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0108 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0109 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0110 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0111 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0112 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0113 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0114 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0115 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0116 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0117 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0118 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0119 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| 0120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |



(RTKTS)

AEDC VAS32 OMB T10 EXTERNAL TANK

MACH (1) = 0.000 BETA (2) = .000

SECTION (1) : EXTERNAL TANK

DEPENDENT VARIABLE MU/MG

..... .0000 45 .0000 67.5000 90.0000 110.5000 123.0000 135.0000 151.0000 161.0000 165.0000 197.0000 206.0000

| K/L/T | .900 | .925 | .950 | .975 | .980 | .995 |
|-------|-------|-------|-------|-------|-------|-------|
| | .0039 | .0000 | .0033 | .0000 | .0084 | .0101 |
| | | | | | .0000 | .0000 |
| | | | | | .0013 | .0096 |
| | | | | | | .0064 |
| | | | | | | .0272 |
| | | | | | | .0307 |

..... 216.0000 222.5000 229.0000

| K/L/T | .335 | .400 | .500 | .600 | .700 | .800 |
|-------|-------|-------|-------|-------|------|-------|
| | .0039 | .0080 | .0064 | .0021 | | |
| | | | | | | .0000 |



(NTN501)

WACH (1) = 0.000 ALPHA (1) = -10.000

SECTION (1) ORBITER FUELAGE DEPENDENT VARIABLE W140

| W/L | .1870 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0447 | | | | | | | |
| 21.000 | | | | | | | | .0259 | | | | .0398 | | | |
| 31.000 | | | | .1240 | | | | | | | | | | | |
| 34.000 | | | | .0000 | | | | | | | | | | | |
| 39.000 | | | | .0000 | | | | | | | | | | | |
| 43.000 | | | | .0000 | | | | | | | | | | | |
| 47.000 | | | | .0000 | | | | | | | | | | | |
| 49.000 | | | | .0000 | | | | | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | | |
| 53.000 | | | | .0000 | | | | | | | | | | | |
| 55.000 | | | | .0000 | | | | | | | | | | | |
| 57.000 | | | | .0000 | | | | | | | | | | | |
| 59.000 | | | | .0000 | | | | | | | | | | | |
| 61.000 | | | | .0000 | | | | | | | | | | | |
| 63.000 | | | | .0000 | | | | | | | | | | | |
| 65.000 | | | | .0000 | | | | | | | | | | | |
| 67.000 | | | | .0000 | | | | | | | | | | | |
| 69.000 | | | | .0000 | | | | | | | | | | | |
| 71.000 | | | | .0000 | | | | | | | | | | | |
| 73.000 | | | | .0000 | | | | | | | | | | | |
| 75.000 | | | | .0000 | | | | | | | | | | | |
| 77.000 | | | | .0000 | | | | | | | | | | | |
| 79.000 | | | | .0000 | | | | | | | | | | | |
| 81.000 | | | | .0000 | | | | | | | | | | | |
| 83.000 | | | | .0000 | | | | | | | | | | | |
| 85.000 | | | | .0000 | | | | | | | | | | | |
| 87.000 | | | | .0000 | | | | | | | | | | | |
| 89.000 | | | | .0000 | | | | | | | | | | | |
| 91.000 | | | | .0000 | | | | | | | | | | | |
| 93.000 | | | | .0000 | | | | | | | | | | | |
| 95.000 | | | | .0000 | | | | | | | | | | | |
| 97.000 | | | | .0000 | | | | | | | | | | | |
| 99.000 | | | | .0000 | | | | | | | | | | | |
| W/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| 1.000 | .0330 | .0353 | .0404 | .0416 | .0459 | .0424 | .0349 | .0287 | .0272 | .0288 | .0309 | .0230 | .0307 | .0143 | |
| 21.000 | .0331 | | | | .0353 | | | | .0244 | | | | .0004 | | |
| 63.000 | .0000 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0000 | | | | | | |
| 65.000 | | | | | | | | | | | | | .0000 | | |
| 67.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 69.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 71.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 73.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 75.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 77.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 79.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 81.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 83.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 85.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 87.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 89.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 91.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 93.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 95.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 97.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 99.000 | | | | | .0000 | | | | .0000 | | | | | | |
| W/L | .1000 | .0950 | .9000 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0360 | 1.0360 | 1.0500 | | | | |
| PHI | | | | | | | | | | | | | | | |
| 1.000 | | | | | | | | | | | | | | | |
| 21.000 | | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 67.000 | | | | | | | | | | | | | | | |
| 69.000 | | | | | | | | | | | | | | | |
| 71.000 | | | | | | | | | | | | | | | |
| 73.000 | | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | | |
| 77.000 | | | | | | | | | | | | | | | |
| 79.000 | | | | | | | | | | | | | | | |
| 81.000 | | | | | | | | | | | | | | | |
| 83.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | | |
| 87.000 | | | | | | | | | | | | | | | |
| 89.000 | | | | | | | | | | | | | | | |
| 91.000 | | | | | | | | | | | | | | | |
| 93.000 | | | | | | | | | | | | | | | |
| 95.000 | | | | | | | | | | | | | | | |
| 97.000 | | | | | | | | | | | | | | | |
| 99.000 | | | | | | | | | | | | | | | |



(RTKBD1)

AEDC VAS32 OMB 01+TIC ORS, FUSELAGE

WACH (1) = 6.000 ALPHA (2) = -9.000

SECTION (1) ORS: FUSELAGE DEPENDENT VARIABLE: N1/40

X/L .1800 .1250 .1300 .1400 .1500 .1550 .1600 .1650 .1670 .1690 .1700 .1720 .1800 .1810 .1820

P/H:

| | | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|--|--|--|--|-------|--|-------|-------|
| 156.000 | | | | | | | | | | | | | .0000 | .0000 |
| 159.200 | | | | | | | | | | | .0000 | | | .0000 |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 180.000 | .0428 | .1170 | .0000 | .6904 | .7352 | .4850 | | | | | | | | |
| X/L .1830 .1900 .1910 .2000 .2050 .2100 .2150 .3000 .3250 .3500 .3750 .4000 .4250 .4500 .4750 | | | | | | | | | | | | | | |

P/H:

| | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .0000 | .1060 | .0871 | .0616 | .0496 | .0317 | .0370 | .0254 | .0320 | .0363 | .0393 | .0356 | .0307 | | |
| 11.500 | .1201 | | | | .0364 | | | | | | .0364 | | | |
| 12.500 | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | |
| 24.000 | .1188 | | | | | | | | | | | | | |
| 31.500 | .0000 | | | | .0000 | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | |
| 35.000 | .0000 | | | | .0000 | | | | | | | | | |
| 40.000 | .0000 | | | | .0000 | | | | | | | | | |
| 45.000 | .0000 | | | | .0000 | | | | | | | | | |
| 51.000 | .0000 | | | | .0000 | | | | | | | | | |
| 57.000 | | | | | .0000 | | | | | | | | | |
| 59.000 | | | | | .0000 | | | | | | | | | |
| 61.000 | | | | | .0000 | | | | | | | | | |
| 65.000 | | | | | .0000 | | | | | | | | | |
| 70.000 | | | | | .0000 | | | | | | | | | |
| 76.500 | | | | | .0000 | | | | | | | | | |
| 102.000 | | | | | | | | | | | | | | |
| 106.000 | | | | | .0247 | | | | | | | | | |
| 135.000 | | | | | .0000 | | | | | | | | | |
| 140.000 | | | | | .0000 | | | | | | | | | |
| 141.000 | .0000 | | | | .0000 | | | | | | | | | |
| 151.000 | .0000 | .0866 | .0000 | .0000 | .0051 | | | | | | | | | |
| 140.000 | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |

P/H:

| | | | | | | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .0000 | .0281 | .0273 | .0306 | .0332 | .0344 | .0322 | .0270 | .0245 | .0235 | .0231 | .0219 | .0145 | .0789 | .1112 |
| 21.500 | .0306 | | | | .0236 | | | | | | | | .0633 | |
| 63.000 | .0000 | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | .0000 | | | | | | | | | |
| 69.500 | | | | | .0000 | | | | | | | | | |



(RTK901)

MACH (1) = 6.000 ALPHA (3) = .000
 AEDC VAS32 CHMB ORBITO ORS. FUSELAGE

SECTION (1) ORBITER FUSELAGE

| X% | DEPENDENT VARIABLE HI/HO | | | | | | | | | | | |
|---------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | .1200 | .1250 | .1300 | .1400 | .1500 | .1565 | .1600 | .1670 | .1700 | .1780 | .1810 | .1820 |
| PHI | .0509 | .0493 | .0484 | .0464 | .0452 | .0432 | .0407 | .0368 | .0306 | .0279 | .0279 | .0279 |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 146.300 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 156.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 159.800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 170.700 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 171.900 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 173.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X% | DEPENDENT VARIABLE HI/HO | | | | | | | | | | | |
|---------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | .1830 | .1900 | .1910 | .2000 | .2050 | .2750 | .3000 | .3250 | .3750 | .4000 | .4250 | .4750 |
| PHI | .0765 | .0493 | .0479 | .0479 | .0425 | .0386 | .0278 | .0278 | .0248 | .0248 | .0248 | .0248 |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 11.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 12.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 23.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 31.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 34.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 35.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 51.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 57.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 59.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 61.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 65.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 70.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 98.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 105.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 108.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 135.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 141.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 151.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 160.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTR801)

AEDC VA352 OMB 01+110 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (4) = 9.000

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE HI/HO

| Y/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 42.500 | | | | | .0000 | | | | | | | | | |
| 48.000 | | | | | .0000 | | | | | | .0000 | | | |
| 60.000 | | | | | .0000 | | | | | | | | | |
| 113.000 | | | | | .0782 | | | | | | | | | .0000 |
| 180.000 | | | .2443 | .1280 | | | | | | | .0822 | | | .0431 |
| PHI | | | | | | | | | | | | | | |
| .000 | .0257 | .0327 | .0320 | .0220 | .0191 | .0160 | | | | | .0209 | .0397 | | |
| 10.000 | | | | .0000 | | | | | | | | | | .0000 |
| 20.000 | | | | .0319 | | | | | | | | | | .0000 |
| 30.000 | | | | .0000 | | | | | | | | | | .0000 |
| 40.000 | | | | .0241 | | | | | | | | | | .0000 |
| 45.000 | | | | .0000 | | | | | | | | | | .0000 |
| 131.000 | | | | | | .0000 | | | | | | | | |
| 145.000 | | | | | | | | | | | | | | |
| 166.000 | | | | | | | | | .0000 | | | | | |
| 185.000 | | | | | | | | | | | | | | |
| 189.000 | | | | | | | | | | | | | | |
| 190.000 | | | | | | | | | | | | | | |
| 191.000 | | | | | | | | | | | | | | |
| 193.000 | | | | | | | | | | | | | | |
| 195.000 | | | | | | | | | | | | | | |
| PHI | | | | | | | | | | | | | | |
| .000 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 | .0215 |
| 11.000 | | | | .0565 | .0387 | .0374 | .0287 | .0206 | .0181 | .0168 | .0217 | .0219 | .0199 | .0176 |
| 12.000 | | | | .0396 | | | | | | | | | | |
| 21.000 | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | |
| 31.000 | | | | .0163 | | | | | | | | | | .0212 |
| 34.000 | | | | .0000 | | | | | | | | | | |
| 35.000 | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | .0000 | | | | | | | | | | |
| 45.000 | | | | .0000 | | | | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | |
| 57.000 | | | | | | | | | | | | | | |
| 59.000 | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | .0114 |
| 63.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |



AEDC VA332 C-4B 01+110 ORS. FUSELAGE

(RTK802) (25 APR 74)

REFERENCE DATA

XREF = .8238 SQ.FT. XMRP = .0000 IN.
 YREF = 22.5503 IN. YMRP = .0000 IN.
 ZREF = 16.3019 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RV/L = 3.720
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 0.000 BETA (1) = -2.000 TI = 97.350 QI = 3.942 HREF = .049

SECTION (1) ORBITED FUSELAGE DEPENDENT VARIABLE HI/40

| X/L | .0000 | .0250 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .3258 | .2018 | .0874 | .0685 | .0293 | .0428 | .0685 | .0000 | .0000 | .1234 | .1804 | .0000 | .5074 |
| 10.000 | | | | | | .0332 | | | | | | | | .0000 |
| 14.000 | | | | | | | | | | | | | | .0819 |
| 20.000 | | | | | | .0375 | | | | | | | | .0000 |
| 22.000 | | | | | | | .0717 | | | | | | | .0233 |
| 24.500 | | | | | | | | | | | | | | |
| 35.000 | | | | | | .0000 | | | | .0000 | | | | |
| 39.000 | | | | | | | | | | | | | | |
| 42.500 | | | | | | .0000 | | | | | | | | .0000 |
| 48.000 | | | | | | | | | | .0772 | | | | .0651 |
| 50.000 | | | | | | .0000 | | | | | | | | |
| 119.000 | | | | | .1630 | | | .1110 | | | | | | |
| 140.000 | | | | | | | | | | | | | | |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0423 | .0425 | .0553 | .0406 | .0000 | .0427 | | | | .0357 | | .0245 | | |
| 10.000 | | | | | .0606 | | | | | | | | | |
| 20.000 | | | | | .0606 | | | | | | | | | |
| 22.000 | | | | | .0000 | | | | | | | | | |
| 24.500 | | | | | .1421 | | | | | | | | | |
| 45.500 | | | | | .0000 | | | | .0000 | | | | | .0000 |
| 101.200 | | | | | | | .0000 | | | | | | | |
| 145.400 | | | | | | | | | | | | | | .0000 |
| 146.200 | | | | | | | | | | | | | | .0000 |
| 158.000 | | | | | | | | | .0000 | | | | | |
| 159.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 171.400 | | .0546 | | | .1213 | .0000 | .6126 | | | .7927 | | .5914 | | |
| 190.000 | | | | | | | | | | | | | | |

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0361 | .0783 | .0637 | .0677 | .0525 | .0339 | .0226 | .0213 | .0207 | .0267 | .0297 | .0274 | | | |
| 10.000 | | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | | |



AEDC VAS32 OH-9 01+110 ORS. FUSELAGE (RTK902)

MACH (1) = 8.000 BETA (1) = -2.000

SECTION 1 (1) ORS IN FUSELAGE DEPENDENT VARIABLE HI/LO

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| Phi | | | | | | | | | | | | |
| 1.000 | .0721 | .0249 | .0134 | .0127 | .0085 | .0059 | .0041 | .0000 | .0028 | .0000 | .0028 | .0028 |
| 21.500 | | .0065 | | | | | | | | | | |
| 79.000 | | | .0000 | | .0000 | | .0037 | | | | | .0081 |
| 82.500 | | | .0000 | | | | | | | | | |
| 85.000 | | | .0000 | | | | | | | | | |
| 88.500 | | | .0000 | | .0000 | | | | | | | |
| 100.000 | | | .0000 | | .0000 | | | | | | | |
| 105.000 | | | .0000 | | .0000 | | | | | | | |
| 112.000 | | | | | .0000 | | | | | | | |
| 113.000 | | | | | | .0000 | | | | | | |

MACH (2) = 8.000 BETA (2) = .000 T1 = 97.350 Q1 = 3.942 REF = .049

SECTION 2 (1) ORS IN FUSELAGE DEPENDENT VARIABLE HI/LO

| X/L | .0000 | .0050 | .0100 | .0200 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0900 | 1.000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Phi | | | | | | | | | | | | | |
| 1.000 | .0000 | .3335 | .2077 | .0914 | .0598 | .0329 | .0344 | .0583 | .0000 | .0000 | .0271 | .1641 | .4965 |
| 10.000 | | | | | | | | | | | | | .0000 |
| 14.000 | | | | | | | .0312 | | | | | | |
| 20.000 | | | | | | | .0335 | | | | | | .0070 |
| 24.500 | | | | | | | .0616 | | | | | | .0000 |
| 35.000 | | | | | | | | | | | | | .0243 |
| 39.000 | | | | | | | .0000 | | | | | | |
| 42.000 | | | | | | | .0000 | | | .0000 | | | |
| 48.000 | | | | | | | | | | | | | .0000 |
| 60.000 | | | | | | | | | | | | | .0616 |
| 119.000 | | | .3077 | .1695 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |
| 170.000 | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |

MACH (3) = 8.000 BETA (3) = .0493 Q1 = .0552

| | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 10.000 | .0000 | .0000 | .0664 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | | | .0635 | | | | | | | | | | .0000 |
| 25.500 | | | .0600 | | | | | | | | | | .0000 |
| 40.000 | | | .0330 | | | | | | | | | | .0000 |
| 45.500 | | | .0000 | | | | | | | | | | .0000 |
| 131.200 | | | | | | | | | | | | | .0000 |
| 145.400 | | | | | | | | | | | | | .0000 |
| 146.200 | | | | | | | | | | | | | .0000 |



(RTN502)

MACH (1) = 0.000 BETA (2) = .000

AEDC VAS32 Q-4B Q1+TID ORG. FUSELAGE

POSITION (1) (2) (3) FUSELAGE DEPENDENT VARIABLE HI/HO

| WZ | .5000 | .6250 | .7500 | .8750 | .9000 | .9250 | .9500 | .9750 | .9900 | 1.0140 | 1.0380 | 1.0620 | 1.0860 | 1.1100 | 1.1340 | 1.1580 | 1.1820 | 1.2060 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | | | | | | | |
| 109.000 | .0000 | | | | .0000 | | | | .0000 | | | | | .0000 | | | | .0000 |
| 111.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | | | .0000 |
| 112.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | | | .0000 |
| 113.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | | | .0000 |
| 114.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | | | .0000 |
| 115.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | | | .0000 |
| 116.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | | | .0000 |
| PHI | | | | | | | | | | | | | | | | | | |
| 21.000 | .0652 | .0258 | .0144 | .0120 | .0078 | .0064 | .0038 | .0000 | | | .0024 | .0000 | .0018 | | | | | |
| 23.000 | | | .0112 | | | | .0043 | | | | | | .0044 | | | | | |
| 29.000 | | | | | | | .0000 | | | | | | | | | | | |
| 42.000 | | | | | | | .0000 | | | | | | | | | | | |
| 54.000 | | | | | | | .0000 | | | | | | | | | | | |
| 65.000 | | | | | | | .0000 | | | | | | | | | | | |
| 68.000 | | | | | | | .0000 | | | | | | | | | | | |
| 100.000 | | | | | | | .0000 | | | | | | | | | | | |
| 116.000 | | | | | | | .0000 | | | | | | | | | | | |
| 118.000 | | | | | | | .0000 | | | | | | | | | | | |
| 119.000 | | | | | | | .0000 | | | | | | | | | | | |



AEDC VAS12 Q-48 ORBITAL ORG. FUSELAGE

(NTR003) (25 APR 74)

REFERENCE DATA

REF 1 10000 SUPPL. FUSEL = 10000 IN.
 REF 2 20000 SUPPL. FUSEL = 20000 IN.
 REF 3 30000 SUPPL. FUSEL = 30000 IN.
 REF 4 40000 SUPPL. FUSEL = 40000 IN.
 REF 5 50000 SUPPL. FUSEL = 50000 IN.

PARAMETRIC DATA

BETA = .000 TR/L = .000
 D.F. CAP = .000 EL. WGT = .000
 MAX/WT = 1.000

ALPHA 1 = 15.000 Y1 = 93.425 Z1 = .000 HREF = .000
 REF 1 10000 SUPPL. FUSEL = 10000 IN. REF 2 20000 SUPPL. FUSEL = 20000 IN.
 REF 3 30000 SUPPL. FUSEL = 30000 IN. REF 4 40000 SUPPL. FUSEL = 40000 IN.
 REF 5 50000 SUPPL. FUSEL = 50000 IN.

| REF | 10000 | 20000 | 30000 | 40000 | 50000 | 10000 | 20000 | 30000 | 40000 | 50000 | 10000 | 20000 | 30000 | 40000 | 50000 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| REF 1 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 2 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 3 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 4 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 5 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| REF | 10000 | 20000 | 30000 | 40000 | 50000 | 10000 | 20000 | 30000 | 40000 | 50000 | 10000 | 20000 | 30000 | 40000 | 50000 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| REF 1 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 2 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 3 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 4 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 5 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| REF | 10000 | 20000 | 30000 | 40000 | 50000 | 10000 | 20000 | 30000 | 40000 | 50000 | 10000 | 20000 | 30000 | 40000 | 50000 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| REF 1 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 2 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 3 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 4 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| REF 5 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



TABULATED DATA LISTING FOR Q-45 (AEDC VAS32)

(RTK503)

MACH (1) = 0.000 ALPHA (1) = -10.000

AEDC VAS32 Q-45 Q1+10 ORS. FUSELAGE

SECTION 1: 11000179 FUSELAGE DEPENDENT VARIABLE: MWAO

| WZ | 1.630 | 1.900 | 1.910 | 2.000 | 2.250 | 2.500 | 2.750 | 3.000 | 3.250 | 3.500 | 3.750 | 4.000 | 4.250 | 4.500 | 4.750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PWT | | | | | | | | .0310 | | | | .0265 | | | |
| 32.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | .0298 | | | | | | | |
| 23.000 | | | | .0942 | | | | | | | | | | | |
| 24.000 | | | .0000 | | | | | | | | | | | | |
| 25.000 | | | | | | | | .0000 | | | | | | | |
| 26.000 | | | | .0000 | | | | | | | | | | | |
| 27.000 | | | | | | | | .0000 | | | | | | | |
| 28.000 | | | | | | | | .0000 | | | | | | | |
| 29.000 | | | | .0000 | | | | | | | | | | | |
| 30.000 | | | | | | | | .0000 | | | | | | | |
| 31.000 | | | | | | | | .0000 | | | | | | | |
| 32.000 | | | | | | | | .0000 | | | | | | | |
| 33.000 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | | | | | .0000 | | | | | | | |
| 35.000 | | | | | | | | .0000 | | | | | | | |
| 36.000 | | | | | | | | .0000 | | | | | | | |
| 37.000 | | | | | | | | .0000 | | | | | | | |
| 38.000 | | | | | | | | .0000 | | | | | | | |
| 39.000 | | | | | | | | .0000 | | | | | | | |
| 40.000 | | | | | | | | .0000 | | | | | | | |
| 41.000 | | | | | | | | .0000 | | | | | | | |
| 42.000 | | | | | | | | .0000 | | | | | | | |
| 43.000 | | | | | | | | .0000 | | | | | | | |
| 44.000 | | | | | | | | .0000 | | | | | | | |
| 45.000 | | | | | | | | .0000 | | | | | | | |
| 46.000 | | | | | | | | .0000 | | | | | | | |
| 47.000 | | | | | | | | .0000 | | | | | | | |
| 48.000 | | | | | | | | .0000 | | | | | | | |
| 49.000 | | | | | | | | .0000 | | | | | | | |
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| 72.000 | | | | | | | | .0000 | | | | | | | |
| 73.000 | | | | | | | | .0000 | | | | | | | |
| 74.000 | | | | | | | | .0000 | | | | | | | |
| 75.000 | | | | | | | | .0000 | | | | | | | |
| 76.000 | | | | | | | | .0000 | | | | | | | |
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| 79.000 | | | | | | | | .0000 | | | | | | | |
| 80.000 | | | | | | | | .0000 | | | | | | | |
| 81.000 | | | | | | | | .0000 | | | | | | | |
| 82.000 | | | | | | | | .0000 | | | | | | | |
| 83.000 | | | | | | | | .0000 | | | | | | | |
| 84.000 | | | | | | | | .0000 | | | | | | | |
| 85.000 | | | | | | | | .0000 | | | | | | | |
| 86.000 | | | | | | | | .0000 | | | | | | | |
| 87.000 | | | | | | | | .0000 | | | | | | | |
| 88.000 | | | | | | | | .0000 | | | | | | | |
| 89.000 | | | | | | | | .0000 | | | | | | | |
| 90.000 | | | | | | | | .0000 | | | | | | | |
| 91.000 | | | | | | | | .0000 | | | | | | | |
| 92.000 | | | | | | | | .0000 | | | | | | | |
| 93.000 | | | | | | | | .0000 | | | | | | | |
| 94.000 | | | | | | | | .0000 | | | | | | | |
| 95.000 | | | | | | | | .0000 | | | | | | | |
| 96.000 | | | | | | | | .0000 | | | | | | | |
| 97.000 | | | | | | | | .0000 | | | | | | | |
| 98.000 | | | | | | | | .0000 | | | | | | | |
| 99.000 | | | | | | | | .0000 | | | | | | | |
| 100.000 | | | | | | | | .0000 | | | | | | | |



(RTK803)

MACH (1) = 8.000 ALPHA (2) = -3.000

AEDC VA352 CHMB 01+T10 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE HI/NO

| X/L | .1250 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1650 | .1670 | .1690 | .1700 | .1780 | .1800 | .1820 |
|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| ^{PHI} 156.000 | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | .0000 | .0000 |
| 170.700 | | | | | | | | | | .0000 | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4750 |
| ^{PHI} .0000 | | | | | | | | | | | | | | |
| 11.500 | .0467 | .0587 | .0508 | .0383 | .0407 | .0329 | .0210 | .0230 | .0210 | .0174 | .0202 | .0210 | .0223 | .0213 |
| 12.000 | | | .0698 | | | | .0336 | | | | | | | |
| 21.500 | | | | | | | .0208 | | | | | | | .0284 |
| 23.000 | | | | .0499 | | | | | | | | | | |
| 24.000 | | | | .0000 | | | | | | | | | | |
| 31.500 | | | | .0000 | | | | | | | | | | |
| 34.000 | | | | .0000 | | | | | | | | | | |
| 35.000 | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | .0000 | | | | | | | | | | |
| 45.000 | | | | .0000 | | | | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | |
| 57.500 | | | | .0000 | | | | | | | | | | |
| 59.500 | | | | .0000 | | | | | | | | | | |
| 61.000 | | | | .0000 | | | | | | | | | | |
| 65.000 | | | | .0000 | | | | | | | | | | |
| 70.000 | | | | .0000 | | | | | | | | | | |
| 76.500 | | | | .0000 | | | | | | | | | | |
| 105.000 | | | | .0000 | | | | | | | | | | |
| 106.000 | | | | .0145 | | | | | | | | | | |
| 125.000 | | | | .0000 | | | | | | | | | | |
| 140.000 | | | | .0000 | | | | | | | | | | |
| 141.400 | | | | .0000 | | | | | | | | | | |
| 171.000 | | | | .0000 | | | | | | | | | | |
| 190.000 | | | | .0542 | .0000 | .0000 | .0084 | | | | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
| ^{PHI} .0000 | | | | | | | | | | | | | | |
| 21.500 | .0213 | .0212 | .0219 | .0214 | .0202 | .0203 | .0182 | .0175 | .0153 | .0146 | .0234 | .0233 | .0160 | .0160 |
| 23.000 | .0218 | | | | .0116 | | .0142 | | .0142 | | | | .0120 | |
| 24.000 | .0000 | | | | | | | | | | | | | |
| 61.000 | | | | | .0000 | | | | | | | | | .0000 |
| 65.500 | | | | | .0000 | | | | | | | | | .0000 |



AEDC VA352 OH4B C1-T10 ORS, FUSELAGE (RTK303)

MACH (1) = 8.000 ALPHA (2) = -9.000

SECTION 1 (1) ORBITER FUSELAGE DEPENDENT VARIABLE H1/H0

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/H1 | | | | | | | | | | | | | | | |
| 104.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | .0000 |
| 111.000 | | | | | .0000 | | | | | | | | | | |
| 112.000 | | | | | .0000 | | | | | | | | | | |
| 113.000 | | | | | .0000 | | | | | | | | | | |
| 116.000 | | | | | .0000 | | | | | | .0000 | | | | |
| 117.000 | | | | | .0000 | | | | | | .0000 | | | | |
| 149.000 | | | | | .0000 | | | | | | .0000 | | | | |
| 150.000 | | | | | .0000 | | | | | | .0000 | | | | |

X/L .9500 .9750 .9900 .9250 .9500 .9750 1.0000 1.0100 1.0140 1.0250 1.0300 1.0400

P/H1

| | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 29.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 32.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 55.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 67.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 80.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 109.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 110.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 110.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 8.000 ALPHA (3) = .000 Y1 = 93.425 Q1 = .682 KEEP = .020

SECTION 1 (1) ORBITER FUSELAGE DEPENDENT VARIABLE H1/H0

| X/L | .9000 | .9250 | .9500 | .9750 | .9900 | .9950 | 1.0000 | 1.0050 | 1.0100 | 1.0150 | 1.0200 | 1.0250 | 1.0300 | 1.0350 | 1.0400 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P/H1 | | | | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 29.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 49.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 110.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 110.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

X/L .1200 .1250 .1300 .1400 .1500 .1600 .1620 .1670 .1690 .1700 .1750 .1780 .1800 .1810 .1820 .1822

(RTN603)

MACH (1) = 6.000 ALPHA (3) = .000

AEDC VAS352 OH4B 01+110 ORB. FUSELAGE

SECTION (1) ORBITRE FUSELAGE DEPENDENT VARIABLE HI/HO

| X/L | .1250 | .1280 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1700 | .1760 | .1800 | .1610 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0225 | .0192 | .0201 | .0200 | .0162 | .0161 | .0199 | | | | | | | |
| 10.000 | | | | .0000 | | | | | | | | | | |
| 20.000 | | | | .0435 | | | | | | | | | | |
| 25.500 | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | .0166 | | | | | | | | | | |
| 45.500 | | | | .0000 | | | | | | | | | | |
| 131.200 | | | | | .0000 | | | | | | | | | |
| 145.400 | | | | | | | | | | | | | | .0000 |
| 145.200 | | | | | .0000 | | | | | | | | | .0000 |
| 156.000 | | | | | | | | | | | | | | .0000 |
| 159.200 | | | | | | | | | | | | | | .0000 |
| 170.700 | | | | | | | | | | | | | | .0000 |
| 171.900 | | | | | | | | | | | | | | .0000 |
| 173.400 | | | | | | | | | | | | | | .0000 |
| 180.000 | | .0498 | | .0664 | .0000 | .2619 | .3677 | .2874 | | | | | | |
| X/L | .1630 | .1900 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | .0304 | .0335 | .0430 | .0307 | .0192 | .0179 | .0120 | .0149 | .0173 | .0183 | .0167 | .0174 | | |
| .000 | | | .0174 | | | .0473 | | | | | .0263 | | | |
| 11.500 | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | |
| 23.000 | | | | .0097 | | | | | | | | | | |
| 24.000 | | | | .0000 | | | | | | | | | | |
| 31.500 | | | | .0000 | | | | | | | | | | |
| 34.000 | | | | .0000 | | | | | | | | | | |
| 35.000 | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | .0000 | | | | | | | | | | |
| 45.000 | | | | .0000 | | | | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | |
| 57.500 | | | | .0000 | | | | | | | | | | |
| 59.500 | | | | .0000 | | | | | | | | | | |
| 61.000 | | | | .0000 | | | | | | | | | | |
| 65.000 | | | | .0000 | | | | | | | | | | |
| 70.000 | | | | .0000 | | | | | | | | | | |
| 95.500 | | | | .0000 | | | | | | | .0101 | | | |
| 105.000 | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | |
| 135.000 | | | | .0162 | | | | | | | | | | .0129 |
| 140.000 | | | | .0000 | | | | | | | | | | .0000 |
| 141.400 | | .0000 | | | | | | | | | | | | |
| 151.000 | | | .0000 | .0802 | .0000 | .0045 | | | | | | | | |
| 160.000 | | .3000 | .5250 | .5500 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
| X/L | | | | | | | | | | | | | | |



(RTK903)

AEDC VA352 OH4B 01+110 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (4) = 5.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/HG

| Y% | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 42.500 | | | | | | | | .0000 | | | | | | | |
| 46.000 | | | | | | | | .0000 | | | | .0000 | | | |
| 60.000 | | | | | | | | .0000 | | | | | | | |
| 119.000 | | | | | | | | .0787 | | | .0931 | | | | .0000 |
| 186.000 | | | .2425 | | .1270 | | | | .1620 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
| PHI | | | | | | | | | | | | | | | |
| 10.000 | .0231 | | .0175 | .0170 | .0162 | | .0187 | | | | .0210 | | .0250 | | |
| 20.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 27.500 | | | | | .0087 | | | | | | | | | | .0000 |
| 40.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 45.000 | | | | | .0349 | | | | | | | | | | .0000 |
| 121.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 147.400 | | | | | | | | | | | | | | | .0000 |
| 145.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 156.000 | | | | | | | | | | | | | | | .0000 |
| 153.000 | | | | | | | | | | | | | | | .0000 |
| 170.000 | | | | | | | | | | | | | | | .0000 |
| 171.000 | | | | | | | | | | | | | | | .0000 |
| 173.400 | | | | | | | | | | | | | | | .0000 |
| 180.000 | .0256 | | | | .0291 | | .0000 | | .0000 | | .0000 | | .0000 | | .0000 |
| PHI | | | | | | | | | | | | | | | |
| 10.000 | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| 20.000 | | | | | | | | | | | | | | | |
| 21.000 | .0254 | | | .0304 | .0223 | .0237 | .0190 | .0146 | .0158 | .0128 | .0135 | .0129 | .0127 | .0116 | .0112 |
| 23.000 | | | | .0294 | | | | | | | | | | | |
| 23.000 | | | | | | | | .0279 | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 31.000 | | | | .0143 | | | | .0178 | | | | | | | .0179 |
| 34.000 | | | | .0000 | | | | | | | | | | | |
| 35.000 | | | | .0000 | | | | | | | | | | | |
| 40.000 | | | | .0000 | | | | | | | | | | | |
| 45.000 | | | | .0000 | | | | | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | | |
| 57.000 | | | | .0000 | | | | | | | | | | | |
| 62.000 | | | | .0000 | | | | | | | | | | | |
| 61.000 | | | | .0000 | | | | | | | | | | | |
| 65.000 | | | | .0000 | | | | | | | | | | | |
| 70.000 | | | | .0000 | | | | | | | | | | | |
| | | | | | | | | | | | | | | | .0054 |



AEDC V4352 Q448 Q1+T10 ORB. FUSELAGE

(RTNSDA) (25 APR 74)

REFERENCE DATA

REF = .0038 SLFT. XMRP = .0000 IN.
 REF = 22.5003 IN. YMRP = .0000 IN.
 REF = 16.5519 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RV/L = .680
 B. FLAP = .000 ELEVON = .000
 HAWK/T = 1.000

MACH (1) = 0.000 BETA (1) = -2.000 T1 = 93.350 Q1 = .681 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H1/H0

X/L .0000 .0050 .0100 .0200 .0300 .0400 .0500 .0600 .0700 .0750 .0760 .0800 .0900 .1000

PHI
 .000 .0000 .3313 .2540 .0900 .0640 .0574 .0565 .0447 .0000 .0636 .1067 .2485 .0000
 10.000
 14.000
 20.000
 24.000
 24.500
 35.000
 39.000
 42.500
 49.000
 60.000
 110.000
 180.000

X/L .1200 .1250 .1300 .1400 .1500 .1600 .1620 .1670 .1690 .1700 .1760 .1800 .1810 .1820

PHI
 .0194 .0196 .0245 .0225 .0000 .0176 .0147 .0200
 10.000
 20.000
 25.000
 40.000
 45.000
 131.200
 145.400
 148.200
 156.000
 159.200
 170.700
 171.900
 173.400
 180.000

X/L .1850 .1900 .1910 .2000 .2250 .2500 .2750 .3000 .3250 .3500 .3750 .4000 .4250 .4500 .4750

PHI
 .0301 .0340 .0428 .0503 .0390 .0331 .0245 .0260 .0232 .0232 .0214
 .000
 11.500



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTKSD4)

AEDC VAS32 OMB 01+10 ORG. FUELS/AGE
 MATH (1) = 8.0000 BETA (1) = -2.0000

SECTION 1: 1000000000 FUELS/AGE DEPENDENT VARIABLE: H1/H0

| X% | .1830 | .1900 | .1970 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 22.000 | | | | .0353 | | | | | | | | | | | |
| 23.000 | | | | .0196 | | | | | | | | .0193 | | | |
| 24.000 | | | .0208 | | | | | | | | | | | | |
| 25.000 | | | .0000 | | | | | | | | | | | | |
| 26.000 | | | .0000 | | | | | | | | | | | | |
| 27.000 | | | .0000 | | | | | | | | | | | | |
| 28.000 | | | .0000 | | | | | | | | | | | | |
| 29.000 | | | .0000 | | | | | | | | | | | | |
| 30.000 | | | .0000 | | | | | | | | | | | | |
| 31.000 | | | .0000 | | | | | | | | | | | | |
| 32.000 | | | .0000 | | | | | | | | | | | | |
| 33.000 | | | .0000 | | | | | | | | | | | | |
| 34.000 | | | .0000 | | | | | | | | | | | | |
| 35.000 | | | .0000 | | | | | | | | | | | | |
| 36.000 | | | .0000 | | | | | | | | | | | | |
| 37.000 | | | .0000 | | | | | | | | | | | | |
| 38.000 | | | .0000 | | | | | | | | | | | | |
| 39.000 | | | .0000 | | | | | | | | | | | | |
| 40.000 | | | .0000 | | | | | | | | | | | | |
| 41.000 | | | .0000 | | | | | | | | | | | | |
| 42.000 | | | .0000 | | | | | | | | | | | | |
| 43.000 | | | .0000 | | | | | | | | | | | | |
| 44.000 | | | .0000 | | | | | | | | | | | | |
| 45.000 | | | .0000 | | | | | | | | | | | | |
| 46.000 | | | .0000 | | | | | | | | | | | | |
| 47.000 | | | .0000 | | | | | | | | | | | | |
| 48.000 | | | .0000 | | | | | | | | | | | | |
| 49.000 | | | .0000 | | | | | | | | | | | | |
| 50.000 | | | .0000 | | | | | | | | | | | | |
| 51.000 | | | .0000 | | | | | | | | | | | | |
| 52.000 | | | .0000 | | | | | | | | | | | | |
| 53.000 | | | .0000 | | | | | | | | | | | | |
| 54.000 | | | .0000 | | | | | | | | | | | | |
| 55.000 | | | .0000 | | | | | | | | | | | | |
| 56.000 | | | .0000 | | | | | | | | | | | | |
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| 59.000 | | | .0000 | | | | | | | | | | | | |
| 60.000 | | | .0000 | | | | | | | | | | | | |
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| 68.000 | | | .0000 | | | | | | | | | | | | |
| 69.000 | | | .0000 | | | | | | | | | | | | |
| 70.000 | | | .0000 | | | | | | | | | | | | |
| 71.000 | | | .0000 | | | | | | | | | | | | |
| 72.000 | | | .0000 | | | | | | | | | | | | |
| 73.000 | | | .0000 | | | | | | | | | | | | |
| 74.000 | | | .0000 | | | | | | | | | | | | |
| 75.000 | | | .0000 | | | | | | | | | | | | |
| 76.000 | | | .0000 | | | | | | | | | | | | |
| 77.000 | | | .0000 | | | | | | | | | | | | |
| 78.000 | | | .0000 | | | | | | | | | | | | |
| 79.000 | | | .0000 | | | | | | | | | | | | |
| 80.000 | | | .0000 | | | | | | | | | | | | |
| 81.000 | | | .0000 | | | | | | | | | | | | |
| 82.000 | | | .0000 | | | | | | | | | | | | |
| 83.000 | | | .0000 | | | | | | | | | | | | |
| 84.000 | | | .0000 | | | | | | | | | | | | |
| 85.000 | | | .0000 | | | | | | | | | | | | |
| 86.000 | | | .0000 | | | | | | | | | | | | |
| 87.000 | | | .0000 | | | | | | | | | | | | |
| 88.000 | | | .0000 | | | | | | | | | | | | |
| 89.000 | | | .0000 | | | | | | | | | | | | |
| 90.000 | | | .0000 | | | | | | | | | | | | |
| 91.000 | | | .0000 | | | | | | | | | | | | |
| 92.000 | | | .0000 | | | | | | | | | | | | |
| 93.000 | | | .0000 | | | | | | | | | | | | |
| 94.000 | | | .0000 | | | | | | | | | | | | |
| 95.000 | | | .0000 | | | | | | | | | | | | |
| 96.000 | | | .0000 | | | | | | | | | | | | |
| 97.000 | | | .0000 | | | | | | | | | | | | |
| 98.000 | | | .0000 | | | | | | | | | | | | |
| 99.000 | | | .0000 | | | | | | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | | | | |



AEDC VA352 OH4B 01+T10 ORR. FUSELAGE (RTK804)

MACH (1) = 0.000 BETA (1) = -2.000

SECTION (1) ORRITER FUSELAGE DEPENDENT VARIABLE HI/LO

| Y/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| PHI | .0217 | .0242 | .0199 | .0101 | .0060 | .0043 | .0020 | .0000 | | .0022 | .0000 | .0024 |
| 41.9140 | | | | | | | | | | | | |
| 39.0000 | | | | | | .0057 | | | | | | .0040 |
| 35.0000 | | | .0000 | | .0000 | | | | | | | |
| 30.0000 | | | .0000 | | .0000 | | | | | | | |
| 25.0000 | | | .0000 | | .0000 | | | | | | | |
| 20.0000 | | | .0000 | | .0000 | | | | | | | |
| 15.0000 | | | .0000 | | .0000 | | | | | | | |
| 10.0000 | | | .0000 | | .0000 | | | | | | | |
| 5.0000 | | | .0000 | | .0000 | | | | | | | |

MACH (1) = 0.000 BETA (2) = .000 T1 = 93.550 Q1 = .681 HIREF = .020

SECTION (1) ORRITER FUSELAGE DEPENDENT VARIABLE HI/LO

| Y/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .1000 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | |
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.0000 | | | | | | | | | | | | | |
| 14.0000 | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.0000 | | | | | | | | | | | | | |
| 22.0000 | | | | | | | | | | | | | |
| 24.0000 | | | | | | | | | | | | | |
| 25.0000 | | | | | | | | | | | | | |
| 29.0000 | | | | | | | | | | | | | |
| 35.0000 | | | | | | | | | | | | | |
| 40.0000 | | | | | | | | | | | | | |
| 45.0000 | | | | | | | | | | | | | |
| 50.0000 | | | | | | | | | | | | | |
| 119.0000 | | | | | | | | | | | | | |
| 180.0000 | | | | | | | | | | | | | |

MACH (1) = 0.200 BETA (2) = .1250 Q1 = .1400 T1 = .1560 Q1 = .1670 T1 = .1690 Q1 = .1700 T1 = .1800 Q1 = .1810 T1 = .1820

SECTION (1) ORRITER FUSELAGE DEPENDENT VARIABLE HI/LO

| Y/L | .0200 | .0225 | .0192 | .0201 | .0200 | .0000 | .0435 | .0000 | .0166 | .0000 | .0000 | .0000 | .0000 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | |
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.0000 | | | | | | | | | | | | | |
| 20.0000 | | | | | | | | | | | | | |
| 25.0000 | | | | | | | | | | | | | |
| 30.0000 | | | | | | | | | | | | | |
| 35.0000 | | | | | | | | | | | | | |
| 40.0000 | | | | | | | | | | | | | |
| 45.0000 | | | | | | | | | | | | | |
| 131.0000 | | | | | | | | | | | | | |
| 145.0000 | | | | | | | | | | | | | |
| 146.0000 | | | | | | | | | | | | | |



AEDC VAS32 OMB 01+110 OPS. FUSELAGE (RTKSDA1)

MACH (1) = 6.000 BETA (2) = .000

SECTION 1: 10001-10000 FUSELAGE

DEPENDENT VARIABLE MI40

| MI | 10001 | 10002 | 10003 | 10004 | 10005 | 10006 | 10007 | 10008 | 10009 | 10010 | 10011 | 10012 | 10013 | 10014 | 10015 | 10016 | 10017 | 10018 | 10019 | 10020 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MI | | | | | | | | | | | | | | | | | | | | |
| 10001 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10002 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10003 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10004 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10005 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10006 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10007 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10008 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10009 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10010 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10011 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10012 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10013 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10014 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10015 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10016 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10017 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10018 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10019 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10020 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

SECTION 2: 10021-10030 FUSELAGE

| MI | 10021 | 10022 | 10023 | 10024 | 10025 | 10026 | 10027 | 10028 | 10029 | 10030 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MI | | | | | | | | | | |
| 10021 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10022 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10023 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10024 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10025 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10026 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10027 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10028 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10029 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10030 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



AEDC VA352 C-4B C1+T10 ORB. FUSELAGE (RTKS05)

MACH (1) = 8.000 ALPHA (1) = -10.000

SECTION (1) INGBETER FUSELAGE DEPENDENT VARIABLE HI/HO

| X/Z | .0950 | .0975 | .0999 | .9250 | .9500 | .9750 | 1.0000 | 1.0100 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|-----|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| | 21.500 | | | | | | | | | | | |
| | 39.000 | | | | | | | | | | | |
| | 52.500 | | | | | | | | | | | |
| | 57.000 | | | | | | | | | | | |
| | 65.000 | | | | | | | | | | | |
| | 85.000 | | | | | | | | | | | |
| | 100.000 | | | | | | | | | | | |
| | 109.000 | | | | | | | | | | | |
| | 112.000 | | | | | | | | | | | |
| | 113.000 | | | | | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = -8.000 T1 = 98.067 Q1 = 4.007 HIEF = .049

SECTION (1) INGBETER FUSELAGE DEPENDENT VARIABLE HI/HO

| X/Z | .0900 | .0925 | .0950 | .0975 | .1000 | .1025 | .1050 | .1075 | .1100 | .1125 | .1150 | .1175 | .1200 |
|-----|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | |
| | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| | 10.000 | | | | | | | | | | | | |
| | 14.000 | | | | | | | | | | | | |
| | 20.000 | | | | | | | | | | | | |
| | 22.000 | | | | | | | | | | | | |
| | 24.500 | | | | | | | | | | | | |
| | 35.000 | | | | | | | | | | | | |
| | 39.000 | | | | | | | | | | | | |
| | 42.500 | | | | | | | | | | | | |
| | 49.000 | | | | | | | | | | | | |
| | 60.000 | | | | | | | | | | | | |
| | 119.000 | | | | | | | | | | | | |
| | 180.000 | | | | | | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = -12.000 ALPHA (3) = -13.000 ALPHA (4) = -14.000 ALPHA (5) = -15.000 ALPHA (6) = -16.000 ALPHA (7) = -16.870 ALPHA (8) = -17.600 ALPHA (9) = -18.000 ALPHA (10) = -18.610 ALPHA (11) = -19.200

SECTION (1) INGBETER FUSELAGE DEPENDENT VARIABLE HI/HO

| X/Z | .0900 | .0925 | .0950 | .0975 | .1000 | .1025 | .1050 | .1075 | .1100 | .1125 | .1150 | .1175 | .1200 |
|-----|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | |
| | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| | 10.000 | | | | | | | | | | | | |
| | 20.000 | | | | | | | | | | | | |
| | 25.500 | | | | | | | | | | | | |
| | 40.000 | | | | | | | | | | | | |
| | 45.500 | | | | | | | | | | | | |
| | 131.200 | | | | | | | | | | | | |
| | 145.400 | | | | | | | | | | | | |
| | 149.200 | | | | | | | | | | | | |

.4378

.4609

.4087

FORM WAB22 (44) (REV. 08-1-66) (10/14/68)

WAB22 - 1. = 0.000 ALPHA (2) = 0.000

SECTION 1: DEPENDENT VARIABLE MEAN

| Y | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0800 | .0900 | .1000 | .1200 | .1500 | .1800 | .2000 |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

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|---------|--|--|--|--|-------|-------|-------|--|-------|--|-------|-------|--|-------|
| 195,000 | | | | | | | | | | | | | | |
| 199,000 | | | | | | | | | | | | | | .2934 |
| 197,000 | | | | | | | | | | | .1908 | | | .2493 |
| 191,000 | | | | | | | | | .5104 | | | | | |
| 193,000 | | | | | | | | | | | | | | |
| 189,000 | | | | | .0000 | .4118 | .0000 | | | | | .0000 | | |

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|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 196,000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 192,000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 198,000 | | | | | | | | | | | | | | | |
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(RTKBOS)

AEDC VAS32 OMB 01+110 ORB. FUSELAGE

MACH (3) = 6.000 ALPHA (3) = .000

SECTION 1: ORBITED FUSELAGE DEPENDENT VARIABLE HI/AC

| X/1 | .1800 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1750 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 121.200 | | | | | | | .5543 | | | | | | | |
| 145.400 | | | | | | | .3631 | | | | | | .4160 | |
| 146.200 | | | | | | | | | | | | | .3681 | |
| 156.000 | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | |
| 175.000 | | | | | | | | .7128 | | | .7145 | | | .2412 |
| 171.000 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 160.000 | | .0000 | | | .3166 | | .0000 | | .0000 | .0000 | | | | |

| X/1 | .1830 | .1900 | .1910 | .2000 | .2250 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 11.000 | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | |
| 21.000 | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | |
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| 51.000 | | | | | | | | | | | | | | |
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| 70.000 | | | | | | | | | | | | | | |
| 74.000 | | | | | | | | | | | | | | |
| 102.000 | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | |
| 141.400 | | .3555 | | | .1752 | | | | | | | | | |
| 151.000 | | | .3756 | | | | | | | | | | | |
| 150.000 | | | | .0000 | | | .0000 | | .0000 | | .0000 | | | |

| X/1 | .5000 | .5850 | .5900 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 160.000 | | | | | | | | | | | | | | |
| 161.000 | | | | | | | | | | | | | | |
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AEDC VAS32 OMB 01 ORB. FUSELAGE

(RTK010) (25 APR 74)

REFERENCE DATA

STEP = .6236 SQ.FT. XMRP = .0000 IN.
STEP = 22.5803 IN. YMRP = .0000 IN.
STEP = 16.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
B.FLAP = .000 ELEWON = .000
MAN/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -5.000 TI = 96.800 OI = 3.961 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .3404 | .2165 | .0941 | .0810 | .0448 | .0325 | .0233 | .0000 | .0158 | .0137 | .0117 | .0182 | .0250 |
| 10.000 | | | | | | | | | | | | | | |
| 14.000 | | | | | | | .0455 | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 22.500 | | | | | | | .0484 | | | | | | | |
| 24.500 | | | | | | | | | | | | | | |
| 35.000 | | | | | | | .0651 | | | | | | | |
| 39.000 | | | | | | | | | | | | | | |
| 42.500 | | | | | | | .0470 | | | | | | | |
| 48.000 | | | | | | | | | | | | | | |
| 60.000 | | | | | | | .1275 | | | | | | | |
| 119.000 | | | | | | | .1333 | | .0955 | | | | | |
| 160.000 | | | | | .2013 | | | | | .0479 | | | | |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0096 | .0089 | .0076 | .0068 | .0066 | .0083 | .0086 | .0106 | .0103 | .0111 | .0111 | .0163 | .0215 | |
| 10.000 | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 25.500 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.500 | | | | | | | | | | | | | | |
| 131.200 | | | | | | | | | .2776 | | | | | |
| 145.400 | | | | | | | | | | | | | | |
| 146.200 | | | | | | | .4313 | | | | | | | |
| 156.000 | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | .0209 | | | | .4969 |
| 173.400 | | | | | | | | | | | | | | |
| 190.000 | | .0893 | .1852 | .4642 | .6851 | | | | | | | | | |
| X/L | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 |
| PHI | .0052 | .0052 | .0034 | .0034 | .0036 | .0050 | .0073 | .0086 | .0098 | .0106 | .0111 | | | |
| .000 | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | |



(RTK810)

MACH (1) = 8.000 ALPHA (1) = -9.000

AEOC VA392 OMB 01 ORS. FUSELAGE

SECTION (1) ORS PER FUSELAGE DEPENDENT VARIABLE HU/HO

| X% | .1950 | .1950 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 12.000 | | | | .0037 | | | | | | | | .0041 | | | |
| 21.000 | | | | .0044 | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | .0025 | | | | | | | | | | | | |
| 31.000 | | | .0072 | | | | | | | | | | | | |
| 34.000 | | | | .0079 | | | | | | | | | | | |
| 35.000 | | | | .0115 | | | | | | | | | | | |
| 41.000 | | | | .0203 | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | .0058 | | | | | | | .0312 |
| 55.000 | | | | | | | | .0052 | | | | | | | |
| 59.000 | | | | | | | | .0057 | | | | | | | |
| 65.000 | | | | | | | | .0073 | | | | | | | |
| 70.000 | | | | .0181 | | | | | | | | | | | |
| 76.000 | | | | | | | | | | | | | | | .0122 |
| 82.000 | | | | | | | | .0163 | | | | | | | |
| 86.000 | | | | | | | | .0216 | | | | | | | .0059 |
| 91.000 | | | | | | | | | | | | | | | |
| 94.000 | .4037 | | | | | | | | | | | | | | |
| 95.000 | | .3500 | | .0702 | .0079 | .0042 | .0042 | .0042 | .0042 | .0042 | .0042 | .0042 | .0042 | .0042 | .0042 |
| P=1 | | | | | | | | | | | | | | | |
| .000 | .0114 | .0118 | .0116 | .0117 | .0121 | .0123 | .0114 | .0107 | .0098 | .0093 | .0087 | .0080 | .0081 | .0080 | |
| 21.000 | .0060 | | | .0082 | | | .0142 | | | | | | .0215 | | |
| 43.000 | .0147 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | .0292 | | | | | | | | .0175 |
| 81.000 | | | | .0388 | | | | | | | | | | | |
| 89.000 | | | | .0117 | | | .0286 | | | | | | | | .0275 |
| 109.000 | .0048 | | | | .0079 | | | | | | | | | | .0336 |
| 111.000 | | | | | .0094 | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | | | | |
| 115.000 | | | | | | | | | | | | | | | |
| 139.000 | .0201 | | | .0276 | | | .0317 | | | | | | | | .0302 |
| 149.000 | | | | | | | | | | | | | | | .0323 |
| 180.000 | .0431 | | | .0399 | | | .0336 | | | | | | | | .0410 |
| X% | .6500 | .8750 | .9000 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0290 | 1.0360 | 1.0500 | | | | | |

P=1



(RTKS10)

MAC (1) = 6.000 ALPHA (1) = -5.000 AEDC VA352 OH4B 01 ORB. FUELSAGE

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HU/NO

| X/ | .6750 | .8750 | .9000 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | .000 | .0079 | .0072 | .0038 | .0049 | .0000 | .0051 | .0000 | .0092 | .0038 |
| 21.500 | | | .0184 | | | | | | | |
| 39.000 | | | | .0598 | | | | | | |
| 52.500 | | | .0268 | | | | | | | |
| 55.000 | | | .0321 | | | | | | | |
| 59.000 | | | .0347 | | | | | | | |
| 100.000 | | | .0383 | .0281 | | | | | | |
| 112.000 | | | | | .0081 | | | | | |
| 115.000 | | | | | | .0075 | | | | |

MAC (2) = 6.000 ALPHA (2) = .000 TI = 98.800 QI = 3.981 HREF = .049

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HU/NO

| X/ | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .0000 | .0093 | .0245 | .1148 | .0778 | .0872 | .0431 | .0320 | .0000 | | .0232 | .0200 | .0174 | .0219 |
| 10.000 | | | | | | | | .0808 | | | | | | | |
| 14.000 | | | | | | | | .0833 | | | | | | | |
| 20.000 | | | | | | | | .0696 | | | | | | | |
| 24.000 | | | | | | | | .0668 | | | | | | | |
| 35.000 | | | | | | | | .1073 | | | | .0448 | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 42.000 | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 119.000 | | | | .0771 | .1681 | .1500 | .1580 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
| 100.000 | .1200 | .1280 | .1300 | .1400 | .1400 | .1500 | .1580 | .1600 | .1620 | .1670 | .1700 | .1760 | .1800 | .1810 | .1820 |

MAC (1) = 6.000 ALPHA (1) = -5.000 AEDC VA352 OH4B 01 ORB. FUELSAGE

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HU/NO

| X/ | .00 | .0142 | .0126 | .0110 | .0098 | .0090 | .0084 | .0077 | .0070 | .0068 |
|---------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .00 | .0142 | .0126 | .0110 | .0098 | .0090 | .0084 | .0077 | .0070 | .0068 |
| 10.000 | | | | | | | | | | |
| 20.000 | | | | | | | | | | |
| 25.000 | | | | | | | | | | |
| 40.000 | | | | | | | | | | |
| 45.000 | | | | | | | | | | |
| 131.000 | | | | | | | | | .3270 | |
| 145.400 | | | | | | | | | | .3173 |
| 146.200 | | | | | | | | | | .5208 |



(RTN810)

AEDC VA352 OMB O1 ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (2) = .000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

| X/L | .9000 | .9250 | .9500 | .9750 | .0000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | | |
| 125.000 | .0170 | | | | .0108 | | | | .0169 | | | | .0188 | | | .0283 |
| 111.000 | | | | | .0132 | | | | | | | | | | | |
| 112.000 | | | | | .0147 | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | .0165 | | | | | |
| 116.000 | | | | | .0071 | | | .0088 | | | | | | | | |
| 135.000 | .0035 | | | | | | | .0209 | | | | | | | | |
| 149.000 | | | | | .0180 | | | | | | | | | | | .0371 |

MACH (1) = 0.000 ALPHA (2) = .000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

| X/L | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | |
| 1.000 | .0075 | .0074 | .0081 | .0030 | .0060 | .0083 | .0000 | .0080 | .0000 | .0030 |
| 21.500 | | | | | .0044 | | | | | |
| 39.000 | | | | | .0083 | | | | | |
| 52.500 | | | | .0137 | | | | | | |
| 55.000 | | | | .0160 | | | | | | |
| 68.000 | | | | .0191 | | | | | | |
| 100.000 | | .0210 | | | | | | | | |
| 129.000 | | .0288 | .0197 | | | | | | | |
| 112.000 | | | | .0064 | | | | | | .0049 |
| 113.000 | | | | | | | | | | |



AEDC VA352 0-48 Q1 ORB. FUSELAGE

(RTKB11) (25 APR 74)

REFERENCE DATA

SEP = .8238 SQ.FT. WMP = .0000 IN.
 REF = 22.2803 IN. WMP = .0000 IN.
 SEP = 35.3919 IN. WMP = .0000 IN.
 SCALE = .0175 SCALE

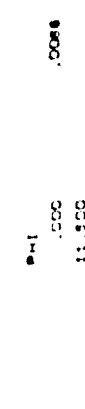
PARAMETRIC DATA

BETA = .0000 FN/L = .880
 S.FLAP = .0000 ELEVON = .000
 MAW/HT = 1.0000

WIND (1) = 8.000 ALPHA (1) = -5.000 TI = 93.000 Q1 = .877 WREF = .020

DEPENDENT VARIABLE NUMB

| VAR. | .0000 | .0250 | .0500 | .0750 | .1000 | .1250 | .1500 | .1750 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 | .5000 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)
(RTN811)
AEDC VAS32 OMB 01 ORB. FUELS

MACH (1) = 0.000 ALPHA (1) = -5.000

SECTION (1) ORBITER FUELS DEPENDENT VARIABLE MU/NO

| | .1830 | .1900 | .1910 | .2000 | .2255 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | .0043 | | | | .0037 | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | .0065 | | | | | | | |
| 23.000 | | | | .0068 | | | | | | | | | | | |
| 24.000 | | | | .0092 | | | | | | | | | | | |
| 25.000 | | | | .0097 | | | | | | | | | | | |
| 26.000 | | | | .0134 | | | | | | | | | | | |
| 42.000 | | | | .0208 | | | | | | | | .0132 | | | |
| 43.000 | | | | | | | | .0063 | | | | | | | |
| 44.000 | | | | | | | | .0066 | | | | | | | |
| 45.000 | | | | | | | | .0071 | | | | | | | |
| 46.000 | | | | .0158 | | | | | | | | .0136 | | | |
| 47.000 | | | | | | | | .0170 | | | | .0104 | | | |
| 48.000 | | | | .1028 | | | | .0246 | | | | | | | |
| 134.000 | | | .1844 | | | | | | | | | .0100 | | | |
| 141.000 | | .2593 | | .0836 | | .0082 | | .0047 | | | | .0100 | | | |
| 151.000 | | .5500 | .5250 | .3750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| 1.000 | .0065 | .0068 | .0076 | .0076 | .0792 | .0091 | .0098 | .0098 | .0102 | .0102 | .0108 | .0108 | .0118 | .0124 | |
| 21.500 | .0034 | | .0037 | | | | | | .0061 | | | | .0063 | | |
| 43.000 | .0066 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0164 | | | | .0270 | | |
| 85.000 | | | | | .0124 | | | | | | | | .0049 | | .0072 |
| 105.000 | .0073 | | | | .0031 | | | | .0032 | | | | | | |
| 111.000 | | | | | .0038 | | | | | | | | | | |
| 112.000 | | | | | .0042 | | | | | | | | | | |
| 113.000 | | | | | | | | | | .0052 | | | | | |
| 116.000 | | | | | .0171 | | | | | .0256 | | | | | |
| 135.000 | .0069 | | | | .0149 | | | | | | | | | .0142 | |
| 149.000 | .0139 | | | | | | | | | | | | | | |
| PHI | | | | | | | | | | | | | | | |
| 1.000 | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |



TABLED DATA LISTING FOR Q448 (NEDC VAS52)

8000 VAS52 Q448 CI 065. FUELSAGE (374511)

WIND SPEED 5.000 ALPHA 1.100

DEPENDENT VARIABLE: FUELSAGE

| WIND SPEED | ALPHA | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | Y11 | Y12 | Y13 | Y14 | Y15 | Y16 | Y17 | Y18 | Y19 | Y20 |
|------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5.000 | 1.100 | 1.0122 | 1.0119 | 1.0120 | 1.0107 | 1.0222 | 1.0097 | 1.0000 | 1.0140 | 1.0250 | 1.0360 | 1.0480 | 1.0610 | 1.0750 | 1.0900 | 1.1060 | 1.1230 | 1.1410 | 1.1600 | 1.1800 | 1.2010 |
| 5.000 | 1.100 | 1.0244 | | | | | | | | | | | | | | | | | | | |
| 5.000 | 1.100 | 1.0471 | | | | | | | | | | | | | | | | | | | |
| 5.000 | 1.100 | 1.0706 | | | | | | | | | | | | | | | | | | | |
| 5.000 | 1.100 | 1.0952 | | | | | | | | | | | | | | | | | | | |
| 5.000 | 1.100 | 1.1200 | | | | | | | | | | | | | | | | | | | |
| 5.000 | 1.100 | 1.1450 | | | | | | | | | | | | | | | | | | | |
| 5.000 | 1.100 | 1.1703 | | | | | | | | | | | | | | | | | | | |

DEPENDENT VARIABLE: MU/MC

| WIND SPEED | ALPHA | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | Y11 | Y12 | Y13 | Y14 | Y15 | Y16 | Y17 | Y18 | Y19 | Y20 |
|------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 5.000 | 1.100 | 1.0000 | 1.0100 | 1.0200 | 1.0300 | 1.0400 | 1.0500 | 1.0600 | 1.0700 | 1.0800 | 1.0900 | 1.1000 | 1.1100 | 1.1200 | 1.1300 | 1.1400 | 1.1500 | 1.1600 | 1.1700 | 1.1800 | 1.1900 |
| 5.000 | 1.100 | 1.0244 | 1.0488 | 1.0733 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 |
| 5.000 | 1.100 | 1.0488 | 1.0733 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 |
| 5.000 | 1.100 | 1.0733 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 |
| 5.000 | 1.100 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 |
| 5.000 | 1.100 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 |
| 5.000 | 1.100 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 | 1.6123 |
| 5.000 | 1.100 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 | 1.6123 | 1.6368 |
| 5.000 | 1.100 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 | 1.6123 | 1.6368 | 1.6613 |

WIND SPEED 6.000 ALPHA 1.100

DEPENDENT VARIABLE: FUELSAGE

| WIND SPEED | ALPHA | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | Y11 | Y12 | Y13 | Y14 | Y15 | Y16 | Y17 | Y18 | Y19 | Y20 |
|------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 6.000 | 1.100 | 1.0122 | 1.0119 | 1.0120 | 1.0107 | 1.0222 | 1.0097 | 1.0000 | 1.0140 | 1.0250 | 1.0360 | 1.0480 | 1.0610 | 1.0750 | 1.0900 | 1.1060 | 1.1230 | 1.1410 | 1.1600 | 1.1800 | 1.2010 |
| 6.000 | 1.100 | 1.0244 | | | | | | | | | | | | | | | | | | | |
| 6.000 | 1.100 | 1.0471 | | | | | | | | | | | | | | | | | | | |
| 6.000 | 1.100 | 1.0706 | | | | | | | | | | | | | | | | | | | |
| 6.000 | 1.100 | 1.0952 | | | | | | | | | | | | | | | | | | | |
| 6.000 | 1.100 | 1.1200 | | | | | | | | | | | | | | | | | | | |
| 6.000 | 1.100 | 1.1450 | | | | | | | | | | | | | | | | | | | |
| 6.000 | 1.100 | 1.1703 | | | | | | | | | | | | | | | | | | | |

DEPENDENT VARIABLE: MU/MC

| WIND SPEED | ALPHA | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 | Y11 | Y12 | Y13 | Y14 | Y15 | Y16 | Y17 | Y18 | Y19 | Y20 |
|------------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 6.000 | 1.100 | 1.0000 | 1.0100 | 1.0200 | 1.0300 | 1.0400 | 1.0500 | 1.0600 | 1.0700 | 1.0800 | 1.0900 | 1.1000 | 1.1100 | 1.1200 | 1.1300 | 1.1400 | 1.1500 | 1.1600 | 1.1700 | 1.1800 | 1.1900 |
| 6.000 | 1.100 | 1.0244 | 1.0488 | 1.0733 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 |
| 6.000 | 1.100 | 1.0488 | 1.0733 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 |
| 6.000 | 1.100 | 1.0733 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 |
| 6.000 | 1.100 | 1.0978 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 |
| 6.000 | 1.100 | 1.1223 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 |
| 6.000 | 1.100 | 1.1468 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 | 1.6123 |
| 6.000 | 1.100 | 1.1713 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 | 1.6123 | 1.6368 |
| 6.000 | 1.100 | 1.1958 | 1.2203 | 1.2448 | 1.2693 | 1.2938 | 1.3183 | 1.3428 | 1.3673 | 1.3918 | 1.4163 | 1.4408 | 1.4653 | 1.4898 | 1.5143 | 1.5388 | 1.5633 | 1.5878 | 1.6123 | 1.6368 | 1.6613 |

(RTM811)

WASH (1) = 0.500 ALPHA (2) = .000

SECTION 1: OMB RET FUELSAGE DEPENDENT VARIABLE MU/HC

K/L .1200 .1250 .1300 .1350 .1400 .1500 .1550 .1600 .1620 .1670 .1700 .1750 .1800 .1810 .1820

PHI
195.000
197.200
199.400
201.600
203.800
206.000
208.200
210.400
212.600
214.800
217.000
219.200
221.400
223.600
225.800

PHI
195.000
197.200
199.400
201.600
203.800
206.000
208.200
210.400
212.600
214.800
217.000
219.200
221.400
223.600
225.800

PHI
195.000
197.200
199.400
201.600
203.800
206.000
208.200
210.400
212.600
214.800
217.000
219.200
221.400
223.600
225.800

PHI
195.000
197.200
199.400
201.600
203.800
206.000
208.200
210.400
212.600
214.800
217.000
219.200
221.400
223.600
225.800

PHI
195.000
197.200
199.400
201.600
203.800
206.000
208.200
210.400
212.600
214.800
217.000
219.200
221.400
223.600
225.800

PHI
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208.200
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214.800
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214.800
217.000
219.200
221.400
223.600
225.800



6-3

AEDC VAS32 OMB 01 ORS. FUSELAGE (ITK911)

MACH (1) = 6.000 ALPHA (2) = .000

| SECTION (1) ORBITER FUSELAGE | DEPENDENT VARIABLE HUND | | | | | | | | | | | | | | |
|------------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| 105.000 | .0068 | | | | .0034 | | | .0036 | | | | | .0033 | | .0052 |
| 111.000 | | | | | .0061 | | | | | | | | | | |
| 112.000 | | | | | .0068 | | | | | | | | | | |
| 113.000 | | | | | | | | | | .0063 | | | | | |
| 116.000 | | | | | | | | | .0033 | | | | | | |
| 135.000 | .0070 | | | | .0028 | | | | | .0070 | | | | | |
| 149.000 | | | | | | | | | .0112 | | | | | | .0207 |
| 180.000 | .0091 | | | | .0110 | | | | | | | | | | |

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .0025 | .0024 | .0022 | .0025 | .0024 | .0032 | .0021 | .0000 | .0026 | .0000 | .0022 | .0032 |
| 21.500 | | | | | | | .0045 | | | | | |
| 39.000 | | | | | | .0762 | | | | | | |
| 52.500 | | | | | | | | | | | | |
| 55.000 | | | .0206 | | | | | | | | | |
| 65.000 | | | .0207 | | | | | | | | | |
| 68.000 | | | | | | .0148 | | | | | | |
| 100.000 | | | .0090 | | | | | | | | | |
| 108.000 | | | .0100 | | | .0091 | | | | | | |
| 112.000 | | | | | | | .0061 | | | | | |
| 113.000 | | | | | | | | .0047 | | | | |



AEDC VA352 OMB Q1 ORB. FUSELAGE

(RTK812) (25 APR 74)

REFERENCE DATA

SREF = .8238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .500
 S.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 93.400 Q1 = .524 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| | | | | | | | | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

| | | | | | | | | | | | | | | | | |
|---------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .0000 | .5020 | .4120 | .2594 | .2088 | .1759 | .1481 | .1199 | .0000 | | .1023 | .0944 | .0864 | .0777 | |
| 10.000 | | | | | | | .1755 | | | | | | | | | |
| 14.000 | | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | .1699 | | | | | | | | .1040 | |
| 22.000 | | | | | | | | | | | | | | | | |
| 24.500 | | | | | | | .0869 | | | | | | | | .1131 | |
| 35.000 | | | | | | | | | | | | | | | .0652 | |
| 39.000 | | | | | | | .0677 | | | | .0478 | | | | | |
| 48.000 | | | | | | | .0372 | | | | | | | | | |
| 65.000 | | | | | | | .0232 | | | .0129 | | | | | .0160 | |
| 119.000 | | | | .0268 | .0512 | | | | | | | | | | .0099 | |
| 180.000 | | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |

| | | | | | | | | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/L | .1820 | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

| | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|--|-------|-------|-------|
| PHI | .0621 | .0779 | .0736 | .0654 | .0666 | .0747 | .0917 | .0699 | .0605 | | .0062 | | .0104 | .0152 | .0182 |
| .000 | | | | .0053 | .0097 | .0134 | .1175 | .0267 | | | .0145 | | | | |
| 10.000 | | | | | | | | | .0064 | | | | | | |
| 20.000 | | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 131.000 | | | | | | | | | | | | | | | |
| 145.400 | | | | | | | | | | | | | | | |
| 146.200 | | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | | |
| 170.000 | | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|

| | | | | | | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|--|--|--|-------|--|--|--|
| PHI | .0629 | .0689 | .0057 | .0093 | .0134 | .1175 | .0267 | | | | .0123 | | | |
| .000 | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | |



(RTKB12)

MACH (1) = 6.000 ALPHA (1) = 25.000

AEDC VA352 OMB 01 ORB. FUSELAGE

SECTION 1: ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .1830 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | .0546 | | | | | | | | | | | | |
| 21.500 | | | | .0612 | | | | | | | .0515 | | | | |
| 23.000 | | | .0761 | | | | | | | | | | | | |
| 24.000 | | | .0882 | | | | | | | | | | | | |
| 31.500 | | | | | | .0715 | | | | | | | | | |
| 34.000 | | | .0883 | | | | | | | | | | | | |
| 35.000 | | | .0991 | | | .0714 | | | | | | | | | |
| 40.000 | | | | | | .0716 | | | | | | | | | |
| 45.000 | | | .0374 | | | | | | | | | | | | |
| 51.000 | | | | | | .0102 | | | | | | | | | |
| 57.500 | | | | | | .0208 | | | | | .0033 | | | | |
| 59.500 | | | | | | .0207 | | | | | | | | | |
| 61.000 | | | | | | .0154 | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 96.500 | | | .0187 | | | | | | | | | | | | |
| 109.000 | | | | | | | | | | | .0105 | | | | |
| 135.000 | | | | | | .0124 | | | | | | | | | |
| 140.000 | | | | | | .0029 | | | | | | | | | |
| 141.450 | .0064 | | .0056 | | | | | | | | | | | | |
| 151.000 | | .0176 | | | | | | | | | | | | | |
| 180.000 | | | | | .0029 | | | | | | .0043 | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| .000 | | | .0424 | .0414 | .0404 | .0413 | .0400 | .0390 | .0358 | .0357 | .0349 | .0326 | .0305 | .0274 |
| 21.500 | | | .0471 | | | .0392 | | | .0378 | | | | .0305 | |
| 23.000 | | | .0029 | | | | | | .0011 | | | | .0004 | |
| 24.000 | | | | | | | | | | | | | | |
| 31.500 | | | | | | .0012 | | | .0075 | | | | .0029 | |
| 34.000 | | | .0238 | | | .0189 | | | | | | | | .0034 |
| 35.000 | | | | | | .0294 | | | | | | | | |
| 40.000 | | | | | | .0321 | | | | | | | | |
| 45.000 | | | | | | .0027 | | | .0045 | | .0083 | | | |
| 51.000 | | | .0021 | | | .0047 | | | .0046 | | .0024 | | | |
| 57.500 | | | .0049 | | | | | | | | | | | .0033 |
| 59.500 | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |
| 96.500 | | | | | | | | | | | | | | |
| 109.000 | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | |
| 141.450 | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | |

PHI



(RTN812)

MACH (1) = 0.000 ALPHA (1) = 25.000

AEDC VA352 OH4B 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H4/H0

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| P=1 | | | | | | | | | | | | |
| .000 | .0232 | .0254 | .0219 | .0210 | .0171 | .0215 | .0144 | .0000 | .0145 | .0000 | .0136 | |
| 21.500 | | .0244 | | | | .0259 | | | | | .0215 | |
| 39.000 | | | | | .0032 | | | | | | | |
| 52.500 | | | .0003 | | | | | | | | | |
| 55.000 | | | .0011 | | | | | | | | | |
| 62.000 | | | | .0012 | | | | | | | | |
| 68.000 | | | .0015 | | | | | | | | | |
| 100.000 | | | .0031 | | .0025 | .0019 | | .0024 | | | | |
| 108.000 | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | |

MACH (1) = 0.000 ALPHA (2) = 30.000 T1 = 93.400 Q1 = .524 HREF = .010

SECTION (1) ORB. FUSELAGE DEPENDENT VARIABLE H4/H0

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | 1.000 |
|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P=1 | | | | | | | | | | | | | | |
| .000 | .0000 | .0106 | .0300 | .0240 | .0239 | .0182 | .0198 | .0149 | .0000 | .0000 | .0139 | .01203 | .01139 | .01099 |
| 10.000 | | | | | | | | .02015 | | | | | | .1163 |
| 14.000 | | | | | | | | | | | | | | .1201 |
| 20.000 | | | | | | | | .01862 | | | | | | .1295 |
| 22.000 | | | | | | | | | | | | | | .0649 |
| 24.500 | | | | | | | | .00856 | | | | | | |
| 35.000 | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | .06413 | | | | | | |
| 42.500 | | | | | | | | | | | | | | |
| 46.000 | | | | | | | | .0290 | | | | | | .0127 |
| 60.000 | | | | | | | | | | | | | | .0075 |
| 119.000 | | | .0341 | | .0361 | | | .0167 | | .0104 | | | | .0120 |
| 120.000 | .01200 | .01250 | .01300 | .01400 | .01500 | .01600 | .01600 | .01670 | .01690 | .01700 | .01780 | .01800 | .01810 | .01820 |

MACH (1) = 0.000 ALPHA (2) = 30.000 T1 = 93.400 Q1 = .524 HREF = .010

SECTION (1) ORB. FUSELAGE DEPENDENT VARIABLE H4/H0

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | 1.000 |
|---------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P=1 | | | | | | | | | | | | | | |
| .000 | .0000 | .00940 | .00604 | .00617 | .00620 | .00620 | .00620 | .00620 | .00620 | .00620 | .00620 | .00620 | .00620 | .00620 |
| 10.000 | | | | | | | | | | | | | | .0062 |
| 20.000 | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 131.000 | | | | | | | | .0046 | | | | | | |
| 143.000 | | | | | | | | | | | | | | |
| 146.000 | | | | | | | | .0046 | | | | | | |



(RTM312)

AEDC VA332 OMB 01 ORG. FUELS

MACH (1) = 6.000 ALPHA (2) = 30.000

SECTION (1) ORG. FUELS DEPENDENT VARIABLE MU/MD

| Y/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1910 | .1820 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | | | |
| PHI | | | | | | | | | | | | | | | | | |
| .000 | | | | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | | | |
| 86.500 | | | | | | | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | | | |
| 141.400 | | | | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | | | |
| PHI | | | | | | | | | | | | | | | | | |
| .000 | | | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | | | |
| 65.500 | | | | | | | | | | | | | | | | | |



(RTM812)

AEDC VA352 OMB 01 OMB, FUSELAGE

MACH (1) = 0.000 ALPHA (2) = 30.000

SECTION (1) OMBIER FUSELAGE DEPENDENT VARIABLE MU/AG

| PHI | .8500 | .8250 | .8000 | .7750 | .7500 | .7250 | .7000 | .6750 | .6500 | .6250 | .6000 | .5750 | .5500 | .5250 | .5000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 105.000 | .0287 | | .0090 | .0044 | | | .0044 | | | | .0010 | | | | .0017 |
| 111.000 | | | .0130 | | | | | | | | | | | | |
| 112.000 | | | .0149 | | | | | | | | | | | | |
| 113.000 | | | .0038 | | | | .0028 | | .0080 | | | | | | |
| 115.000 | | | .0047 | | | | .0043 | | .0025 | | | | | | |
| 119.000 | | | | | | | | | | | | | | | |
| 120.000 | | | | | | | | | | | | | | | |

MACH (1) = 0.000 ALPHA (3) = 35.000 TI = 93.400 Q1 = .524 KEF = .018

SECTION (1) OMBIER FUSELAGE DEPENDENT VARIABLE MU/AG

| PHI | .8500 | .8250 | .8000 | .7750 | .7500 | .7250 | .7000 | .6750 | .6500 | .6250 | .6000 | .5750 | .5500 | .5250 | .5000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 105.000 | .0312 | .0310 | .0278 | .0242 | .0209 | .0198 | .0000 | .0168 | .0000 | .0184 | | | | | .0289 |
| 111.000 | | | .0306 | | | | | | | | | | | | |
| 112.000 | | | .0009 | | | | | | | | | | | | |
| 113.000 | | | .0003 | | | | | | | | | | | | |
| 115.000 | | | .0003 | | | | .0017 | | | | | | | | |
| 119.000 | | | .0012 | | | | .0004 | | | | | | | | |
| 120.000 | | | | | | | | | | | | | | | |
| 123.000 | | | | | | | .0010 | | .0028 | | | | | | |

SECTION (1) OMBIER FUSELAGE DEPENDENT VARIABLE MU/AG

| PHI | .8500 | .8250 | .8000 | .7750 | .7500 | .7250 | .7000 | .6750 | .6500 | .6250 | .6000 | .5750 | .5500 | .5250 | .5000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 105.000 | .0000 | .0080 | .0106 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0750 | .0800 | .0900 | .1000 |
| 111.000 | | | .4428 | .3045 | .2582 | .2201 | .1941 | .1632 | .0000 | | .1401 | .1330 | .1208 | .1198 | .1181 |
| 112.000 | | | | | | | .2234 | | | | | | | | .1367 |
| 113.000 | | | | | | | .2058 | | | | | | | | .1435 |
| 115.000 | | | | | | | .0854 | | | | | | | | .0843 |
| 119.000 | | | | | | | .0618 | | | | | | | | |
| 120.000 | | | | | | | .0232 | | | | | | | | |
| 123.000 | | | .0408 | .0285 | .0133 | .0133 | .0445 | | | | | | | | .0110 |
| 125.000 | .1200 | .1250 | .1300 | .1400 | .1500 | .1580 | .1620 | .1670 | .1690 | .1750 | .1780 | .1800 | .1810 | .1820 | .1820 |



(RTH912)

AEDC VAS32 OMB 01 ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (3) = 35.000

SECTION 1 SUPERWEAR FUSELAGE DEPENDENT VARIABLE MU/MC

| W/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 30.000 | .1154 | | .1134 | .1056 | .0991 | .1002 | | | .0937 | | | .0945 | | |
| 30.000 | | | | .1207 | .1124 | | | | | | | | | |
| 35.500 | | | | .1211 | | | | | | | | | | |
| 45.000 | | | | .0812 | | | | | | | | | | |
| 45.500 | | | | .0454 | | | | | | | | | | |
| 131.200 | | | | | | | .0035 | | | | | | .0082 | |
| 142.400 | | | | | | | .0042 | | | | | | | |
| 146.200 | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | |
| W/L | .1850 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |
| PHI | | | | | | | | | | | | | | |
| 30.000 | .0925 | | .0865 | .0800 | .0697 | .0165 | .0284 | | | .0135 | | .0368 | | |
| 31.500 | | | .0328 | | | | | | | | | | | |
| 32.000 | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | |
| 33.000 | | | | .1055 | | | | | | | | | | |
| 33.500 | | | | .1164 | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | |
| 35.000 | | | | .1141 | | | | | | | | | | |
| 40.000 | | | | .1041 | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 51.000 | | | | .0383 | | | | | | | | | | |
| 57.000 | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | |
| 62.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |
| 98.000 | | | | .0181 | | | | | | | | | | |
| 104.000 | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | |
| 141.400 | .0037 | | .0086 | .0033 | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | |
| 100.000 | | | | .0145 | .0028 | .0019 | | | | | | | | |
| W/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
| PHI | | | | | | | | | | | | | | |
| 30.000 | | | | | | | | | | | | | | |
| 35.500 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | |
| 100.000 | | | | | | | | | | | | | | |



AEDC VAS352 OHMB 01 ORS. FUSELAGE

(RTWB13) (25 APR 74)

REFERENCE DATA

STEP = 10215 SQ.FT. XMRP = .0000 IN. BETA = .000 TRVL = 1.000
STEP = 22.5103 IN. YMRP = .0000 IN. 9.8 LAP = .000
STEP = 16.3319 IN. ZMRP = .0000 IN. MAW/MT = 1.000

PARAMETRIC DATA

MACH = 1.5 ALPHA (1) = 30.000 TI = 94.100 Q1 = 1.000 KREF = .025

SECTION (1) OHMB FUSELAGE DEPENDENT VARIABLE MU/MD

| Y% | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .4265 | .4187 | .2786 | .2277 | .1950 | .1637 | .1398 | .0000 | .1167 | .1123 | .0924 | .1150 | .0924 |
| 10.000 | | | | | | | .1998 | | | | | | | .1195 |
| 14.000 | | | | | | | .1860 | | | | | | | .1282 |
| 20.000 | | | | | | | .0636 | | | | | | | .0636 |
| 24.000 | | | | | | | .0816 | | | | | | | |
| 30.000 | | | | | | | .0273 | | .0439 | | | | | .0129 |
| 40.000 | | | | | | | .0153 | | .0056 | | | | | .0071 |
| 50.000 | | | | | | | .0361 | | .0056 | | | | | .0129 |
| 60.000 | | | | | | | .0452 | | .0056 | | | | | .0071 |
| 70.000 | | | | | | | .0452 | | .0056 | | | | | .0129 |
| 80.000 | | | | | | | .0452 | | .0056 | | | | | .0071 |
| 90.000 | | | | | | | .0452 | | .0056 | | | | | .0129 |
| PHI | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1820 |
| 10.000 | | | | | | | .0791 | | .0794 | | .0766 | | .0755 | |
| 15.000 | | | | | | | .1010 | | | | | | | |
| 20.000 | | | | | | | .0908 | | | | | | | |
| 25.000 | | | | | | | .1156 | | | | | | | |
| 30.000 | | | | | | | .0749 | | | | | | | |
| 35.000 | | | | | | | .0492 | | .0042 | | | | | .0089 |
| 40.000 | | | | | | | | | | | | | | .0099 |
| 45.000 | | | | | | | | | | | | | | .0140 |
| 50.000 | | | | | | | | | | | | | | |
| 55.000 | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | |
| PHI | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 |
| 10.000 | | | | | | | .0280 | | .0135 | | .0387 | | .4500 | .4750 |
| 15.000 | | | | | | | .0079 | | | | | | | |
| 20.000 | | | | | | | .0098 | | | | | | | |
| 25.000 | | | | | | | .0157 | | | | | | | |
| 30.000 | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 50.000 | | | | | | | | | | | | | | |
| 55.000 | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | |



TABULATED DATA LISTING FOR Q-4B (AEDC VA352)

(RTK913)

MACH (1) = 6.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE MU/NO

| Y/A | .1820 | .1950 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0677 | | | | .0616 | | | |
| 21.500 | | | | | | | | .0756 | | | | | | | |
| 23.000 | | | | .0663 | | | | | | | | | | | |
| 24.000 | | | .1006 | | | | | | | | | | | | |
| 31.500 | | | | .0364 | | | | .0854 | | | | | | | |
| 34.500 | | | | .0960 | | | | .0849 | | | | | | | |
| 35.000 | | | | .0355 | | | | .0004 | | | | | | | |
| 40.000 | | | | | | | | .0065 | | | | .0023 | | | |
| 45.000 | | | | | | | | .0170 | | | | .0104 | | | |
| 50.000 | | | | | | | | .0180 | | | | .0011 | | | |
| 65.000 | | | | | | | | .0169 | | | | | | | |
| 70.000 | | | | .0181 | | | | | | | | | | | |
| 105.000 | | | | | | | | .0128 | | | | | | | |
| 106.000 | | | | .0036 | | | | .0016 | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |
| 141.400 | .0045 | | .0120 | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | |
| 150.000 | | | | | | | | .0029 | | | | .0049 | | | |
| PHI | | | | | | | | | | | | | | | |
| 1.000 | .0517 | .0511 | .0499 | .0500 | .0510 | .0497 | .0482 | .0469 | .0444 | .0429 | .0419 | .0397 | .0392 | .0341 | |
| 21.500 | | | | .0474 | | | | | .0474 | | | | .0344 | | |
| 63.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0001 | | | | .0003 | | |
| 65.000 | | | | | .0010 | | | | | | | | | | |
| 65.500 | | | | | .0114 | | | | .0045 | | | | .0010 | | |
| 105.000 | .0358 | | | | | | | | | | | | | | .0015 |
| 111.000 | | | | | | | | | | | | | | | |
| 112.000 | | | | | .0176 | | | | | | | | | | |
| 113.000 | | | | | .0211 | | | | | | | | | | |
| 116.000 | | | | | .0427 | | | | | | | | | | |
| 135.000 | .0416 | | | | | | | | .0034 | | | | .0063 | | |
| 140.000 | | | | | | | | | | | | | .0028 | | |
| 150.000 | .0055 | | | | .0052 | | | | .0043 | | | | | | .0032 |
| PHI | | | | | | | | | | | | | | | |
| Y/A | .0700 | .0750 | .0900 | .0950 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0300 | 1.0400 | 1.0500 | | |



TABULATED DATA LISTING FOR QM9 (AEDC VAS32)

ASDC VAS32 QM9 01 OR9, FUSELAGE (MFK513)

ALPHA (1) = 30.000

SECTION 1: 1000 PER FUSELAGE DEPENDENT VARIABLE MU/40

| Y | 8.000 | 8.750 | 9.500 | 9.250 | 9.750 | 1.0000 | 1.0130 | 1.0140 | 1.0290 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 0.000 | .0322 | .0303 | .0284 | .0294 | .0232 | .0270 | .0184 | .0000 | .0104 | .0000 | .0164 |
| 21.000 | | | | | | | | | | | .0270 |
| 30.000 | | | | | | | | | | | |
| 42.000 | | | | | | | | | | | |
| 55.000 | | | | | | | | | | | |
| 68.000 | | | | | | | | | | | |
| 84.000 | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | |
| 132.000 | | | | | | | | | | | |
| 165.000 | | | | | | | | | | | |

ALPHA (2) = 35.000 TI = 94.100 QI = 1.003 REF = .025

SECTION 2: 1000 PER FUSELAGE DEPENDENT VARIABLE MU/40

| Y | 8.000 | 8.750 | 9.500 | 9.250 | 9.750 | 1.0000 | 1.0130 | 1.0140 | 1.0290 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 0.000 | .0000 | .0049 | .0100 | .0200 | .0290 | .0300 | .0400 | .0500 | .0700 | .0750 | .0900 |
| 10.000 | | | | | | | | | | | .1000 |
| 24.000 | | | | | | | | | | | .1177 |
| 42.000 | | | | | | | | | | | .1331 |
| 68.000 | | | | | | | | | | | .1336 |
| 105.000 | | | | | | | | | | | .1423 |
| 132.000 | | | | | | | | | | | .0829 |
| 165.000 | | | | | | | | | | | |

ALPHA (3) = 40.000 TI = 94.100 QI = 1.003 REF = .025

SECTION 3: 1000 PER FUSELAGE DEPENDENT VARIABLE MU/40

| Y | 8.000 | 8.750 | 9.500 | 9.250 | 9.750 | 1.0000 | 1.0130 | 1.0140 | 1.0290 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| 0.000 | .0250 | .0290 | .0350 | .0450 | .0550 | .0600 | .0700 | .0800 | .1000 | .1050 | .1200 |
| 10.000 | | | | | | | | | | | .1300 |
| 24.000 | | | | | | | | | | | .1423 |
| 42.000 | | | | | | | | | | | .0829 |
| 68.000 | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | |
| 132.000 | | | | | | | | | | | |
| 165.000 | | | | | | | | | | | |

AEDC VA352 OH4B 01 ORG. FUELSAGE (RTN813)

MACH (1) = 6.000 ALPHA (2) = 35.000

SECTION (1) ORGIVER FUELSAGE DEPENDENT VARIABLE: MU/HD

| WT | .1250 | .1250 | .1300 | .1400 | .1500 | .1550 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | .0314 | .0421 | | | .0684 | | .0492 | | |
| 155,000 | | | | | | | | | | | | | .0069 | .0115 |
| 159,200 | | | | | | | | | | | | | | |
| 170,700 | | | | | | | | | .0024 | | | | | |
| 171,900 | | | | | | | | | | .0150 | | | | |
| 173,400 | | | | | | | | | | | | | | |
| 180,000 | | .0093 | | | .0152 | | | | | | | | | |
| WT | .1690 | .1700 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 |
| PHI | | | | .0633 | .0900 | .0765 | .0692 | .0703 | .0792 | .0902 | .0760 | .0724 | .0709 | .0670 |
| .0000 | | | | .0933 | | | | | | | | | | |
| 31,800 | | | | | | | | .0801 | | | | | | .0750 |
| 32,000 | | | | | | | | .0800 | | | | | | |
| 31,800 | | | | | | | | | | | | | | |
| 24,000 | | | | .1048 | | | | | | | | | | |
| 31,800 | | | | .1174 | | | | | | | | | | |
| 35,000 | | | | .1124 | | | | .1002 | | | | | | |
| 43,000 | | | | .1023 | | | | .0931 | | | | | | |
| 45,000 | | | | .0346 | | | | .0899 | | | | | | |
| 51,000 | | | | | | | | .0076 | | | | | | |
| 57,500 | | | | | | | | | | | | | | .0016 |
| 59,500 | | | | | | | | | | | | | | |
| 61,000 | | | | | | | | .0158 | | | | | | |
| 65,000 | | | | | | | | .0172 | | | | | | |
| 70,000 | | | | | | | | .0177 | | | | | | |
| 76,500 | | | | | | | | | | | | | | |
| 102,000 | | | | | | | | .0187 | | | | | | |
| 104,000 | | | | | | | | | | | | .0140 | | |
| 106,000 | | | | | | | | | | | | .0010 | | |
| 140,000 | | | | | | | | | | | | | | |
| 141,600 | .0690 | | | .0033 | | | | | | | | | | |
| 141,600 | | | | | | | | | | | | | | |
| 141,600 | | | | | .0098 | | | | | | | | | .0012 |
| WT | .4500 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
| PHI | | | | | | .0028 | | .0019 | | | | | | |
| .0000 | | | | | | | | | | | | | | |
| 21,800 | | .0615 | .0609 | .0619 | .0601 | .0795 | .0691 | .0571 | .0536 | .0528 | .0512 | .0475 | .0471 | .0409 |
| 22,800 | | | | | .0348 | | | | .0260 | | | | .0433 | |
| 23,800 | | | | | | | | | | | | | | |
| 24,800 | | | | | | | | | | | | | | |
| 25,800 | | | | | | | | | | | | | | |
| 26,800 | | | | | | | | | .0011 | | | | | .0001 |
| 27,800 | | | | | .0008 | | | | | | | | | |



TABLE 23 (CONT.) TABLE 23 DATA LISTING FOR OMB (AEDC VAS32)

(RTKR13)

AD01 VAS32 OMB D1 OMB FUELSAGE

TABLE 23 (CONT.) TABLE 23 DATA LISTING FOR OMB (AEDC VAS32)

AD01 VAS32 OMB D1 OMB FUELSAGE

DEPENDENT VARIABLE HU/40

| | | | | | | | | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Y | 11000 | 12000 | 13000 | 14000 | 15000 | 16000 | 17000 | 18000 | 19000 | 20000 | 21000 | 22000 | 23000 | 24000 | 25000 |
| B-1 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 |
| B-2 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 |
| B-3 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 |
| B-4 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 |
| B-5 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 |
| B-6 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 |

TABLE 23 (CONT.) TABLE 23 DATA LISTING FOR OMB (AEDC VAS32)

AD01 VAS32 OMB D1 OMB FUELSAGE

DEPENDENT VARIABLE HU/40

| | | | | | | | | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Y | 26000 | 27000 | 28000 | 29000 | 30000 | 31000 | 32000 | 33000 | 34000 | 35000 | 36000 | 37000 | 38000 | 39000 | 40000 |
| B-1 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 |
| B-2 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 |
| B-3 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 |
| B-4 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 |
| B-5 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 |
| B-6 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 |

TABLE 23 (CONT.) TABLE 23 DATA LISTING FOR OMB (AEDC VAS32)

AD01 VAS32 OMB D1 OMB FUELSAGE

DEPENDENT VARIABLE HU/40

| | | | | | | | | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Y | 41000 | 42000 | 43000 | 44000 | 45000 | 46000 | 47000 | 48000 | 49000 | 50000 | 51000 | 52000 | 53000 | 54000 | 55000 |
| B-1 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 |
| B-2 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 |
| B-3 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 |
| B-4 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 |
| B-5 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 |
| B-6 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 |

TABLE 23 (CONT.) TABLE 23 DATA LISTING FOR OMB (AEDC VAS32)

AD01 VAS32 OMB D1 OMB FUELSAGE

DEPENDENT VARIABLE HU/40

| | | | | | | | | | | | | | | | |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Y | 56000 | 57000 | 58000 | 59000 | 60000 | 61000 | 62000 | 63000 | 64000 | 65000 | 66000 | 67000 | 68000 | 69000 | 70000 |
| B-1 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 | .0276 |
| B-2 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 | .0023 |
| B-3 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 | .0034 |
| B-4 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 | .0028 |
| B-5 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 | .0008 |
| B-6 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 | .0004 |

(RTK913)

AEDC VA352 OHMB 01 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (3) = 40.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| pHt | .1337 | .1274 | .1173 | .1118 | .1114 | | | | .1100 | .1080 | | | | |
| 10.000 | | | | .1341 | | | | | | | | | | |
| 20.000 | | | | .1216 | | | | | | | | | | |
| 25.500 | | | | .1307 | | | | | | | | | | |
| 40.000 | | | | .0658 | | | | | | | | | | |
| 45.500 | | | | .0503 | | | | | | | | | | |
| 131.200 | | | | .0041 | | | | | | | | | | |
| 145.400 | | | | | | | | .0076 | | | | | .0076 | |
| 145.200 | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | |
| 155.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | .0177 | | .0044 | | | .0109 |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 190.000 | | | | .0126 | .0394 | .0204 | .0535 | | .0526 | | .0461 | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 |
| pHt | .1106 | .1106 | .0967 | .0600 | .0923 | .0627 | .0638 | .0680 | .0630 | .0672 | .0635 | .0600 | .0767 | .0731 |
| 11.500 | | | .1069 | | | | .0929 | | | | .0877 | | | |
| 12.000 | | | | | | | .0995 | | | | | | | |
| 21.500 | | | | .1198 | | | | | | | | | | |
| 23.000 | | | | .1293 | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | |
| 31.500 | | | | .1242 | | | | | | | | | | |
| 34.000 | | | | .1130 | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | |
| 40.000 | | | | .0340 | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | .0016 | | |
| 65.000 | | | | | | | | | | | | | .0195 | |
| 70.000 | | | | | | | | | | | | | | .0010 |
| 96.500 | | | | .0186 | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | |
| 140.000 | | | | .0035 | | | | | | | | | | |
| 141.400 | | | | | | | | | | | | | | |
| 151.000 | .0064 | | .0090 | .0143 | .0019 | .0010 | | | | | | | | |
| 160.000 | | .9000 | .9290 | .9900 | .9750 | .6000 | .6250 | .6500 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
| X/L | | | | | | | | | | | | | | |



(RTRB13)

AEDC VA352 CHMB 01 ORG. FUSELAGE

MACH (1) = 8.000 ALPHA (3) = 40.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0741 | .0739 | .0707 | .0700 | .0683 | .0686 | .0685 | .0653 | .0602 | .0610 | .0606 | .0563 | .0542 | .0480 | |
| 21.500 | .0787 | | | | .0644 | | | | .0660 | | | | .0506 | | |
| 63.000 | .0004 | | | | | | | | .0007 | | | | .0004 | | |
| 64.000 | | | | | | | | | | | | | .0008 | | .0003 |
| 65.000 | | | | | .0004 | | | | | | | | | | |
| 65.500 | | | | | .0067 | | | | .0013 | | | | | | |
| 105.000 | .0180 | | | | | | | | | | | | | | |
| 111.000 | | | | | | | | | | | | | | | |
| 112.000 | | | | | .0104 | | | | | | .0015 | | | | |
| 113.000 | | | | | .0117 | | | | | | .0047 | | | | |
| 116.000 | | | | | .0024 | | | | .0019 | | | | | | |
| 135.000 | .0021 | | | | | | | | .0028 | | | | | | |
| 149.000 | .0026 | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | |

| X/L | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|
| PHI | .0466 | .0468 | .0430 | .0411 | .0382 | .0412 | .0314 | .0000 | .0312 | .0000 | .0318 | | | | | | | | | | |
| 21.500 | | | .0488 | | | | .0612 | | | | | | | | | | | | | | .0412 |
| 39.000 | | | | | | | .0081 | | | | | | | | | | | | | | |
| 52.500 | | | .0016 | | | | .0028 | | | | | | | | | | | | | | |
| 55.000 | | | .0017 | | | | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | | | | | | | |
| 65.500 | | | .0018 | | | | | | | | | | | | | | | | | | |
| 100.000 | | | .0013 | | | | | | | | | | | | | | | | | | |
| 109.000 | | | | | | | | | | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | | | | | | | | | | .0073 |



AEDC VAS32 OMB Q1 ORG. FUSELAGE

(RTK814) (25 APR 74)

REFERENCE DATA

REF = .9236 SQ.FT. XMRP = .0000 IN.
REF = 22.5803 IN. XMRP = .0000 IN.
REF = 16.3919 IN. XMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
D.FLAP = .000 ELEVON = .000
MAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 95.550 QI = 1.994 HREF = .039

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

| X/L | .0000 | .0080 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .4966 | .4204 | .2693 | .2239 | .1992 | .1658 | .1387 | .0000 | .1166 | .1093 | .1012 | .1154 | .1198 |
| 10.000 | | | | | | | .1975 | | | | | | | |
| 14.000 | | | | | | | .1857 | | | | | | | |
| 20.000 | | | | | | | .0841 | | | | | | | |
| 24.500 | | | | | | | .0820 | | | | | | | |
| 35.000 | | | | | | | .0266 | | | | | | | |
| 39.000 | | | | | | | .0347 | | | .0077 | | | | |
| 42.500 | | | | | | | | | | .0437 | | | | |
| 48.000 | | | | | | | | | | | | | | .0119 |
| 50.000 | | | | | | | | | | | | | | .0086 |
| 119.000 | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1580 | .1680 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0980 | .0916 | .0843 | .0782 | .0766 | .0766 | .0776 | .0759 | | | | | | |
| 10.000 | | | | .1021 | | | | | | | | | | |
| 20.000 | | | | .0927 | | | | | | | | | | |
| 25.500 | | | | .1053 | | | | | | | | | | |
| 40.000 | | | | .0748 | | | | | | | | | | |
| 45.500 | | | | .0484 | | | | | | | | | | |
| 131.200 | | | | .0045 | | | | | | | | | | |
| 145.400 | | | | .0066 | | | | | | | | | .0068 | |
| 149.200 | | | | | | | | | | | | | .0121 | |
| 156.000 | | | | | | | | | | | | | | .0175 |
| 159.200 | | | | | | | | | .0169 | | | | | |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | .0273 | | | | | | | | | |
| 173.400 | | .0066 | | .0121 | .0373 | | | | .0685 | | | .0453 | | |
| 180.000 | | | | | | | | | | | | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0733 | .0733 | .0702 | .0637 | .0643 | .0586 | .0661 | .0645 | .0623 | .0609 | .0583 | .0563 | .0536 | .0536 |
| 11.500 | | | .0754 | | | | | | | | | | | |



(RTN814)

AEDC VA352 OHMB 01 ORB, FUSELAGE

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION 1: ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0688 | | | | .0631 | | | |
| 21.500 | | | | | | | | .0743 | | | | | | | |
| 23.000 | | | | .0893 | | | | | | | | | | | |
| 24.000 | | | .1015 | | | | | | | | | | | | |
| 31.500 | | | | .0994 | | | | | | | | | | | |
| 34.000 | | | | .0943 | | | | | | | | | | | |
| 35.000 | | | | .0350 | | | | | | | | | | | |
| 40.000 | | | | | | | | .0088 | | | | | | | |
| 45.000 | | | | | | | .0176 | | | | | | | | .0021 |
| 51.000 | | | | | | | .0193 | | | | | | | | |
| 57.500 | | | | | | | .0167 | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | .0092 |
| 65.000 | | | | | | | | .0126 | | | | | | | |
| 70.000 | | | | | | | | .0013 | | | | | | | .0009 |
| 76.500 | | | | .0179 | | | | | | | | | | | |
| 126.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | .0126 | | | | | | | |
| 135.000 | | | | | | | | .0013 | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |
| 141.400 | .0046 | | | | | | | | | | | | | | |
| 151.000 | | | .0145 | | | | | | | | | | | | |
| 160.000 | | | | | | .0023 | | .0024 | | | | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| PHI | | | | | | | | | | | | | | | |
| .0000 | .0526 | .0532 | .0534 | .0520 | .0532 | .0519 | .0534 | .0512 | .0487 | .0503 | .0509 | .0491 | .0522 | .0530 | |
| 21.500 | .0543 | | | | .0451 | | | | .0515 | | | | .0484 | | |
| 63.000 | .0006 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0007 | | | | | | .0004 |
| 65.000 | | | | | .0008 | | | | | | | | | | |
| 65.500 | | | | | .0170 | | | | | | | | | | .0018 |
| 105.000 | .0270 | | | | | | | .0055 | | | | | | | |
| 111.000 | | | | | | | | | | | | | | | |
| 112.000 | | | | | .0324 | | | | | | | | | | |
| 113.000 | | | | | .0356 | | | | | | | | | | |
| 119.000 | | | | | | | | | | | .0065 | | | | |
| 135.000 | .0014 | | | | .0024 | | | .0039 | | | | | | | |
| 149.000 | | | | | .0054 | | | .0046 | | | | | | | .0018 |
| 160.000 | .0084 | | | | | | | | | | | | | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | .0020 |

PHI

(RTKS14)

AEDC VA352 OMB 01 ORB. FUSELAGE

MACH (1) = 6.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HD

| Y/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .0558 | .0577 | .0571 | .0584 | .0556 | .0692 | .0611 | .0000 | .0649 | .0000 | .0698 | |
| 21.500 | | .0585 | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | |
| 52.500 | | | .0012 | | .0036 | | | | | | .0692 | |
| 55.000 | | | .0016 | | | | | | | | | |
| 68.000 | | | | | | .0014 | | | | | | |
| 100.000 | | | .0023 | | | | | | | | | |
| 106.000 | | | .0018 | | | .0017 | | | | | | |
| 112.000 | | | | | .0022 | | | | | | | |
| 113.000 | | | | | | | .0035 | | | | | |

MACH (1) = 6.000 ALPHA (2) = 39.000 TI = 99.950 QI = 1.994 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HD

| Y/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| .000 | .0010 | .4966 | .4313 | .2967 | .2467 | .2161 | .1867 | .1603 | .0000 | .0000 | .1363 | .1289 | .1162 | .1343 |
| 10.000 | | | | | | | .2194 | | | | | | | .1371 |
| 14.000 | | | | | | | | | | | | | | .1416 |
| 20.000 | | | | | | | .2049 | | | | | | | .0627 |
| 22.000 | | | | | | | | | | | | | | |
| 24.500 | | | | | | | .0818 | | | | | | | |
| 35.000 | | | | | | | | | | | | | | |
| 39.000 | | | | | | | .0592 | | | | .0410 | | | |
| 42.500 | | | | | | | | | | | | | | .0090 |
| 46.000 | | | | | | | .0206 | | | | | | | .0062 |
| 60.000 | | | | | | | | | | | | | | |
| 119.000 | | | | | | .0681 | .0235 | | | .0073 | | | | |
| 180.000 | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1820 |

| Y/L | .1154 | .1049 | .0999 | .0916 | .1193 | .1077 | .1169 | .0807 | .0491 | .0044 | .0092 | .0072 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | |
| .000 | | | | .0923 | | | | | | | | |
| 10.000 | | | | | | | | | .0906 | | | |
| 20.000 | | | | | | | | | | | | |
| 29.500 | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | |
| 49.500 | | | | | | | | | | | | |
| 131.200 | | | | | | | | | | | | |
| 149.400 | | | | | | | | | | | | |
| 146.200 | | | | | | | | | | | | |



AEDC VA352 OMB 01 ORB. FUSELAGE (RTK914)

MACH (1) = 8.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/NO

| | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/L | .1200 | .1253 | .1300 | .1400 | .1300 | .1360 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
| PHI | | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | | .0089 |
| 170.700 | | | | | | | | | | | | | | | .0126 |
| 171.900 | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | | | | | | | | | | | | | | | |
| .000 | | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.100 | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | | |
| 70.500 | | | | | | | | | | | | | | | |
| 96.500 | | | | | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |
| 141.400 | | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | |
| 190.000 | | | | | | | | | | | | | | | |
| X/L | .9000 | .9250 | .9500 | .9750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 65.500 | | | | | | | | | | | | | | | |



(RTKS14)

MACH (1) = 8.000 ALPHA (2) = 35.000

AEDC VAS32 OHB 01 ORB, FUSELAGE

SECTION (3) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|----------------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| ^{PHI} | | | | | | | | | | | | | | | |
| 105.000 | .0273 | | | .0104 | | | | | .0040 | | | | .0009 | | .0007 |
| 111.000 | | | | .0169 | | | | | | | | | | | |
| 112.000 | | | | .0196 | | | | | | | | | | | |
| 113.000 | | | | | | | | | | .0029 | | | | | |
| 116.000 | | | | .0022 | | | | | .0042 | | .0006 | | | | |
| 135.000 | .0013 | | | | | | | | | | | | | | |
| 149.000 | | | | .0013 | | | | | .0013 | | | | | .0025 | |
| 180.000 | .0015 | | | | | | | | | | | | | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| ^{PHI} | | | | | | | | | | | | | | | |
| .000 | .0967 | .0874 | .0676 | .0532 | .0474 | .0416 | .0362 | .0300 | | .0297 | .0200 | .1058 | | | |
| 21.500 | | .0908 | | | | | | | | | | | | | |
| 39.000 | | | | | | | .0328 | | | | | | | | |
| 52.500 | | | | | | .0054 | | | | | | | | | |
| 55.000 | | | .0007 | | | | | | | | | | | | |
| 65.000 | | | .0007 | | | | | | | | | | | | |
| 88.000 | | | | | | .0036 | | | | | | | | | |
| 100.000 | | | .0006 | | | | | | | | | | | | |
| 108.000 | | | .0005 | | | .0017 | | | | | | | | | |
| 112.000 | | | | | | .0054 | | | | | | | | | |
| 113.000 | | | | | | | | | .0089 | | | | | | |



DATE 23 SEP 74
 TABULATED DATA LISTING FOR OMB (AEDC VA352)
 AEDC VA352 OMB 01 ORB. FUSELAGE
 (RTK815) (25 APR 74)

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 S.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

REFERENCE DATA

REF = .6239 53.FT. XMRP = .0000 IN.
 REF = 22.5853 IN. YMRP = .0000 IN.
 REF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.667 QI = 3.955 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/AD

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .4941 | .4079 | .2560 | .2061 | .1724 | .1467 | .1212 | .0000 | .0996 | .0939 | .0857 | .0897 | .0962 |
| 10.000 | | | | | | | .1810 | | | | | | | |
| 14.000 | | | | | | | .1735 | | | | | | | .1028 |
| 20.000 | | | | | | | .0870 | | | | | | | .1139 |
| 22.000 | | | | | | | .0658 | | | .0449 | | | | .0854 |
| 24.500 | | | | | | | .0345 | | | | | | | |
| 35.000 | | | | | | | .0206 | | | .0108 | | | | .0160 |
| 39.000 | | | | | | | .0464 | | | | | | | .0090 |
| 42.500 | | | | | | | .0666 | | | .0108 | | | | .1820 |
| 48.000 | | | | | | | .0466 | | | .1700 | | .1780 | .1600 | .1810 |
| 50.000 | | | | | | | .0666 | | | .1700 | .1690 | .1670 | .1600 | .1810 |
| 119.000 | | | | | | | .0464 | | | | | | | |
| 180.000 | | | | | | | .0464 | | | | | | | |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0810 | .0762 | .0692 | .0621 | .0621 | .0621 | .0621 | .0621 | .0621 | .0621 | .0621 | .0621 | .0621 | .0621 |
| 10.000 | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | .0070 | | | | | .0180 |
| 131.200 | | | | | | | | .0074 | | | | | | .0235 |
| 145.400 | | | | | | | | | | | | | | .0344 |
| 148.200 | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | .0220 | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | .1124 | | .0357 | |
| 180.000 | | | | | | | | | | | | | | |

PHI
 .000
 11.900



TABULATED DATA LISTING FOR QMB (AEDC VA352)

(RT1315)

MACH (1) = 8.000 ALPHA (1) = 25.000

AEDC VA352 QMB 01 QMB FUELSAGE

SECTION (1) QMB FUELSAGE DEPENDENT VARIABLE H4/H0

| K/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | .0540 | | | | | | | .0511 | | | |
| 21.000 | | | | | .0809 | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | .0745 | | | | | | | | | | | | |
| 31.000 | | | .0852 | | | | | | | | | | | | |
| 34.000 | | | | .0825 | | | | | | | | | | | |
| 35.000 | | | | .0846 | | | | | | | | | | | |
| 40.000 | | | | | .0339 | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | .0115 | | | | | .0034 | | | |
| 59.000 | | | | | | | | .0270 | | | | | | | |
| 61.000 | | | | | | | | .0219 | | | | | | | |
| 65.000 | | | | | | | | .0138 | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 76.000 | | | | .0161 | | | | | | | | | | | |
| 104.000 | | | | | | | | .0115 | | | | | | | |
| 106.000 | | | | | | | | .0017 | | | | | | | |
| 139.000 | | | | | | | | | | | | | | | |
| 141.000 | .0089 | | | .0117 | | | | | | | | | | | |
| 151.000 | | .0256 | | | .0094 | | .0015 | | .0020 | | | | | .0079 | |
| 160.000 | | | | | | | | | | | | | | | |
| K/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| 21.000 | .0420 | .0420 | .0415 | .0416 | .0430 | .0437 | .0450 | .0460 | .0455 | .0508 | .0532 | .0460 | .0722 | .0815 | |
| 23.000 | .0485 | | | .0388 | | | | | .0483 | | | | .0630 | | |
| 63.000 | .0014 | | | | | | | | .0009 | | | | .0011 | | |
| 64.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | .0018 | | | | .0260 | | | | .0067 | | .0076 |
| 103.000 | .0161 | | | | .0364 | | | | | | | | | | |
| 111.000 | | | | | .0231 | | | | | | | | | | |
| 113.000 | | | | | .0210 | | | | | | | | | | |
| 116.000 | | | | | .0050 | | | | .0048 | | .0501 | | | | |
| 139.000 | .0024 | | | | .0067 | | | | .0049 | | .0052 | | | | |
| 149.000 | .0081 | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | |
| K/L | .6500 | .6750 | .6900 | .6250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |

PHI



(RTK815)

AEDC VA352 OMB D1 ORB, FUSELAGE

MACH (1) = 0.000 ALPHA (2) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

X/L .1200 .1250 .1300 .1350 .1400 .1450 .1500 .1550 .1600 .1620 .1670 .1690 .1700 .1780 .1800 .1810 .1820

PHI
 156.000
 159.200
 170.700
 171.900
 173.400
 180.000
 .0081 .0379 .0174 .0460 .0683 .0189 .0107 .0156 .0208

X/L .1830 .1900 .1910 .2000 .2250 .2500 .2750 .3000 .3250 .3500 .3750 .4000 .4250 .4500 .4750

PHI
 .000
 11.500
 12.000
 21.500
 23.000
 24.070
 31.500
 34.000
 35.000
 40.000
 45.000
 51.000
 57.500
 59.500
 61.000
 65.000
 70.000
 76.500
 105.000
 108.000
 139.000
 140.000
 141.400
 151.000
 160.000
 .0747 .0712 .0764 .0682 .0659 .0586 .0661 .0653 .0637 .0604 .0581 .0657 .0749 .0041 .0618 .0764 .0093 .0201 .0216 .0177 .0126 .0012 .0163 .0086 .0107 .0169 .0128 .0594 .0812 .0856 .0899 .0752 .0845 .0983 .1089 .1236 .1383 .1461 .1770 .1905

X/L .5000 .5250 .5500 .5750 .6000 .6250 .6500 .6750 .7000 .7250 .7500 .7750 .8000 .8250 .8500

PHI
 .000
 21.500
 63.000
 64.000
 65.000
 66.500
 .0567 .0594 .0812 .0856 .0899 .0752 .0845 .0983 .1089 .1236 .1383 .1461 .1770 .1905
 .0008 .0009 .0008 .0008 .0008 .0008 .0008 .0008 .0008 .0008 .0008 .0008 .0008 .0008 .0008



TABULATED DATA LISTING FOR O-4B (AEDC VAS32)

(RTK815)

AEDC VAS32 O-4B 01 ORG. FUSELAGE

MACH (1) = 0.000 ALPHA (2) = 30.000

SECTION (1) FEET PER FUSELAGE DEPENDENT VARIABLE MU/NO

| Y/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | .0394 | | | .0063 | | | | | .0035 | | .0029 |
| 100.000 | .0196 | | | | | | | | | | | | | | |
| 111.000 | | | | | .0337 | | | | | | | | | | |
| 112.000 | | | | | .0278 | | | | | | | | | | |
| 113.000 | | | | | | | | | | | .0173 | | | | |
| 115.000 | | | .0019 | | .0037 | | | .0046 | | | .0027 | | | | |
| 149.000 | | | .0060 | | .0042 | | | .0040 | | | | | | .0028 | |

MACH (1) = 0.000 ALPHA (3) = 35.000 T1 = 57.667 Q1 = 3.955 MEF = .049

SECTION (1) FEET PER FUSELAGE DEPENDENT VARIABLE MU/NO

| Y/L | .1976 | .1687 | .1727 | .1642 | .1433 | .1223 | .1414 | .0000 | .1360 | .0000 | .1369 | .1223 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | .0060 | .1423 | | | | | .0030 |
| 100.000 | .0000 | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | |
| 39.000 | | | | | | .0023 | | | | | | |
| 42.500 | | | | | .0026 | | | | | | | |
| 44.000 | | | | | .0026 | | | | | | | |
| 45.000 | | | | | .0029 | | | | | | | |
| 46.000 | | | | | .0031 | | .0022 | | | | | |
| 100.000 | | | .0032 | | | | | | | | | |
| 125.000 | | | .0036 | | | | | | | | | |
| 112.000 | | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | |

MACH (1) = 0.000 ALPHA (3) = 35.000 T1 = 57.667 Q1 = 3.955 MEF = .049

SECTION (1) FEET PER FUSELAGE DEPENDENT VARIABLE MU/NO

| Y/L | .0000 | .4947 | .4319 | .2987 | .2499 | .2142 | .1916 | .1612 | .0000 | .1353 | .1312 | .1205 | .1346 | .1396 | .1437 | .0626 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | .2237 | | | | | | | | .0428 |
| 10.000 | .0000 | | | | | | | | | | | | | | | |
| 14.000 | | | | | | | | .2092 | | | | | | | | |
| 20.000 | | | | | | | | .0639 | | | | | | | | |
| 22.000 | | | | | | | | .0805 | | | | | | | | |
| 24.500 | | | | | | | | .0212 | | | | | | | | |
| 34.000 | | | | | | | | .0106 | | | | | | | | |
| 39.000 | | | | | | | | .0244 | | | | | | | | |
| 42.500 | | | | | | | | .0078 | | | | | | | | |
| 44.000 | | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | | .0065 |
| 119.000 | | | | | | | | | | | | | | | | .0104 |
| 140.000 | .1800 | .1850 | .1500 | .1400 | .1500 | .1600 | .1600 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 | | .1820 |



(RTNLS7)

AEDC VAS32 QMB 01 QMB, FUSELAGE

WACH (1) = 6.000 ALPHA (3) = 39.000

SECTION (1) QMB FUSELAGE DEPENDENT VARIABLE MU/NO

| W/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| .000 | .1182 | .1110 | .1017 | .0939 | .0941 | | | | | .0933 | | .0936 | | |
| 10.000 | | | | .1153 | | | | | | | | | | |
| 20.000 | | | | .1116 | | | | | | | | | | |
| 25.000 | | | | .1212 | | | | | | | | | | |
| 40.000 | | | | .0832 | | | | | | | | | | |
| 45.000 | | | | .0496 | | | | | | | | | | |
| 131.200 | | | | | | | | .0049 | | | | | | .0069 |
| 145.400 | | | | | | | .0109 | | | | | | | |
| 146.200 | | | | | | | | | | | | | | .0130 |
| 156.000 | | | | | | | | | | | | | | |
| 159.250 | | | | | | | | | | | | | | .0161 |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 180.000 | | .0131 | | | | .0120 | | | .0161 | | .0082 | | | |
| W/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |

| | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| .000 | .0966 | .0889 | .0869 | .0820 | .0861 | .0896 | .0807 | .0746 | .0624 | .0770 | .0792 | .0792 | .0763 | .0756 |
| 11.000 | | .0920 | | | | | | .0620 | | | | | | |
| 12.000 | | | | | | | | | | | | | | |
| 21.000 | | | | | | | | .0922 | | | | | .0776 | |
| 23.000 | | | | | | | | | | | | | | |
| 24.000 | | | .1072 | | | | | | | | | | | |
| 31.000 | | | .1184 | | | | | | | | | | | |
| 34.000 | | | | | | | | .0999 | | | | | | |
| 39.000 | | | .1143 | | | | | | | | | | | |
| 40.000 | | | .1062 | | | | | .0964 | | | | | | |
| 49.000 | | | | | | | | .0902 | | | | | | |
| 51.000 | | | .0380 | | | | | .0070 | | | | | | .0015 |
| 57.000 | | | | | | | | | | | | | | |
| 59.000 | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | .0163 | | | | | | |
| 69.000 | | | | | | | | .0196 | | | | | | |
| 70.000 | | | | | | | | .0193 | | | | | | |
| 86.000 | | | .0160 | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | | | |
| 108.000 | | | | | | | | .0131 | | | | | | |
| 135.000 | | | | | | | | .0006 | | | | | | |
| 140.000 | | | .0092 | | | | | | | | | | | |
| 141.400 | .0079 | | .0130 | | | | | | | | | | | |
| 151.000 | | | | | .0017 | | | .0013 | | | | | | |
| 160.000 | | | | | | | | | | | | | | |
| W/L | .5000 | .6250 | .6950 | .9750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7450 | .7500 | .7500 | .8000 | .8250 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTS13)

AEDC VAS32 OMB ID: OMB, FUSELAGE

MACH (1) = 0.000 ALPHA (3) = 35.000

SECTION 11 ORBITER FUSELAGE

DEPENDENT VARIABLE MU/MD

| P/W | .9000 | .9250 | .9500 | .9750 | .6500 | .6250 | .6000 | .6750 | .7000 | .7250 | .7500 | .7750 | .6000 | .6250 | .6500 |
|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | .0000 | .0823 | .0887 | .1006 | .1132 | .1324 | .1569 | .1776 | .1942 | .2111 | .2312 | .2548 | .2548 | .2439 | .2333 |
| 21.000 | .0828 | | | | .1227 | | | | .2235 | | | | | | |
| 23.000 | .0914 | | | | | | | .0016 | | | | | .0004 | | |
| 24.000 | | | | | .0006 | | | | | | | | | | .0004 |
| 25.000 | | | | | .0179 | | | .0093 | | | | | .0016 | | .0012 |
| 26.000 | .0233 | | | | | | | | | | | | | | |
| 27.000 | | | | | .0222 | | | | | | .0083 | | | | |
| 28.000 | | | | | .0290 | | | | | | .0049 | | | | |
| 29.000 | .0013 | | | | .0027 | | | .0091 | | | | | | | |
| 30.000 | .0020 | | | | .0024 | | | .0039 | | | | | .0046 | | |
| 31.000 | .0100 | .0710 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| PHI | .0000 | .2152 | .2043 | .1992 | .1730 | .1416 | .1673 | .0000 | .1632 | .0000 | .1622 | .1416 | | | |
| 21.000 | | .2227 | | | | .0060 | .1623 | | | | | | | | |
| 23.000 | | | .0014 | | | | | | | | | | | | |
| 24.000 | | | .0012 | | | | .0049 | | | | | | | | |
| 25.000 | | | .0012 | | | | | | | | | | | | |
| 26.000 | | | .0012 | | | | .0021 | | .0081 | | | | | | |
| 27.000 | | | .0012 | | | | | | | | | | | | |
| 28.000 | | | | | | | | | | | | | | | |
| 29.000 | | | | | | | | | | | | | | | |
| 30.000 | | | | | | | | | | | | | | | |
| 31.000 | | | | | | | | | .0076 | | | | | | |

AEDC VAS32 OMB 01 ORB. FUSELAGE

(RTK016) (25 APR 74)

REFERENCE DATA

SREF = .8238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 S.FLAP = .000 ELEVON = .000
 HMM/HT = 1.000

MACH (1) = 3.000 ALPHA (1) = 30.000 TI = 97.500 QI = 3.958 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HMMFD

| X% | .0000 | .0650 | .1300 | .1950 | .2600 | .3250 | .3900 | .4550 | .5200 | .5850 | .6500 | .7150 | .7800 | .8450 | .9100 | .9750 | .0400 | .1050 | .1700 | .2350 | .3000 | .3650 | .4300 | .4950 | .5600 | .6250 | .6900 | .7550 | .8200 | .8850 | .9500 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .5003 | .4237 | .2733 | .2262 | .1953 | .1684 | .1412 | .0000 | .1174 | .1125 | .1014 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| X% | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X% | .0000 | .0979 | .0925 | .0853 | .0778 | .0768 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0979 | .0925 | .0853 | .0778 | .0768 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| X% | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



AEDC VAS32 OMB 01 ORB. FUSELAGE (RTRE18)

MACH (1) = 8.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/AD

| X/L | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| #HI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0000 | | | | | | | |
| 21.500 | | | | | | | | .0747 | | | | .0640 | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | .0910 | | | | | | | | | | | | |
| 31.500 | | | .0000 | | | | | | | | | | | | |
| 34.000 | | | | .0070 | | | | .0000 | | | | | | | |
| 35.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 45.000 | | | | | | | | .0000 | | | | | | | |
| 48.000 | | | | | | | | .0000 | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 57.500 | | | | | | | | .0000 | | | | | | | |
| 59.500 | | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 63.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.500 | | | | .0000 | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | | | | |
| 116.000 | | | | | | | | | | | | | | | |
| 117.000 | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 149.000 | | | | | | | | | | | | | | | |
| 150.000 | | | | | | | | | | | | | | | |
| X/L | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| #HI | | | | | | | | | | | | | | | |
| 1.000 | .0575 | .0590 | .0609 | .0642 | .0685 | .0754 | .0843 | .0925 | .1048 | .1207 | .1396 | .1463 | .1797 | .1943 | |
| 21.500 | .0591 | | | .0610 | | | | .1117 | | | | | .1788 | | |
| 23.000 | .0000 | | | | | | | .0000 | | | | | .0000 | | |
| 24.000 | | | | | | | | | | | | | .0000 | | |
| 31.500 | .0000 | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 34.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 35.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 45.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 48.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 51.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 57.500 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 59.500 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 61.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 63.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 70.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 76.500 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 108.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 116.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 117.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 135.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 149.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |
| 150.000 | | | | .0000 | | | | .0000 | | | | | .0000 | | .0000 |

(RTKG10)

MACH (1) = 0.000 ALPHA (1) = 30.000

AEDC VA352 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/C | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.2500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .1919 | .1836 | .1773 | .1618 | .1456 | .0000 | .1419 | .0000 | .1391 | .0000 | .1368 | .0000 |
| 21.500 | | | .1788 | | | | | | | | | |
| 39.000 | | | | | | .0000 | | | | | | .0000 |
| 52.500 | | | | | | | | | | | | |
| 75.000 | | | .0000 | | | | | | | | | |
| 85.000 | | | .0000 | | | | | | | | | |
| 89.000 | | | | | | .0000 | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 105.000 | | | .0000 | | | .0000 | | | | | | |
| 112.000 | | | | | | | .0000 | | | .0000 | | |
| 113.000 | | | | | | | | | | | | |



AEDC VA352 OMB 01 ORB. FUSELAGE

(RTNBI7) (25 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
 XREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.700 QI = 3.949 HIREF = .049

PARAMETRIC DATA

BETA = .000 TNAL = 3.720
 S.F.LAP = 10.000 ELEVON = 5.000
 WAW/HT = 1.000

SECTION (1) ORBINAIR FUSELAGE

DEPENDENT VARIABLE H/M/O

| X/L | .0000 | .0050 | .0100 | .0250 | .0300 | .0400 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|-----|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PMI | .000 | .0004 | .4237 | .2792 | .2285 | .1936 | .1689 | .1420 | .0000 | .1186 | .1123 | .1020 |
| | 10.000 | | | | | .2047 | | | | | | .1154 |
| | 14.000 | | | | | | | | | | | .1215 |
| | 20.000 | | | | | .1936 | | | | | | .1306 |
| | 22.000 | | | | | | | | | | | .0640 |
| | 24.000 | | | | | .0670 | | | | | | |
| | 35.000 | | | | | .0627 | | | | | | |
| | 42.000 | | | | | .0257 | | .0444 | | | | |
| | 45.000 | | | | | | | .0092 | | | | .0119 |
| | 60.000 | | | .0620 | | .0140 | | | | | | .0076 |
| | 110.000 | | | | | | | | | .1760 | .1800 | .1810 |
| | 190.000 | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 |
| X/L | | | | | | | | | | | | .1820 |

| X/L | .0000 | .0050 | .0100 | .0250 | .0300 | .0400 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|-----|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PMI | .000 | .0099 | .0899 | .0892 | .0775 | .0778 | | .0760 | | .0766 | | |
| | 10.000 | | | .1028 | | | | | | | | .0080 |
| | 20.000 | | | .0925 | | | | | | | | .0151 |
| | 25.000 | | | .1064 | | | | | | | | .0205 |
| | 40.000 | | | .0771 | | | | | | | | |
| | 45.000 | | | .0490 | | | .0043 | | | | | |
| | 131.000 | | | | | | | | | | | |
| | 145.000 | | | | | | | | | | | |
| | 146.000 | | | | | .0087 | | | | | | |
| | 156.000 | | | | | | | | .0169 | | | |
| | 179.000 | | | | | | | | | | | |
| | 171.000 | | | | | | | | | | | |
| | 173.000 | | | | | | | | | | | |
| | 190.000 | .1630 | .1900 | .1910 | .2000 | .2230 | .2500 | .2730 | .3000 | .3250 | .3500 | .3750 |
| X/L | | | | | | | | | | .4000 | .4250 | .4500 |
| | | | | | | | | | | | | .4750 |

PMI
 .000
 11.500

(RTK817)

MACH (1) = 8.000 ALPHA (1) = 30.000

AEDC VA352 OH4B 01 ORB, FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H0/H0

X/L .1630 .1900 .1910 .2000 .2250 .2500 .2750 .3000 .3250 .3500 .3750 .4000 .4250 .4500 .4750

| PHI | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 12.000 | | | | | | | | .0683 | | | | | | | |
| 21.500 | | | | | | | | .0732 | | | | .0651 | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .0912 | | | | | | | | | | | |
| 31.500 | | | | .1026 | | | | | | | | | | | |
| 34.000 | | | | | | | | .0653 | | | | | | | |
| 37.000 | | | | .0989 | | | | .0816 | | | | | | | |
| 40.000 | | | | .0959 | | | | .0805 | | | | | | | |
| 45.000 | | | | .0351 | | | | .0069 | | | | | | | |
| 57.500 | | | | | | | | | | | | .0022 | | | |
| 59.500 | | | | | | | | .0203 | | | | | | | |
| 61.000 | | | | | | | | .0211 | | | | | | | |
| 65.000 | | | | | | | | .0176 | | | | | | | |
| 70.000 | | | | .0176 | | | | | | | | | | | |
| 76.500 | | | | | | | | | | | | .0067 | | | |
| 105.000 | | | | | | | | .0127 | | | | .0008 | | | |
| 106.000 | | | | | | | | .0011 | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | .0056 | | | | .0030 | | | | | | | |
| 141.400 | | .0043 | | | | | | | | | | | | | |
| 151.000 | | | .0166 | | | | | .0026 | | | | | | | |
| 190.000 | | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .8000 | .8250 | .8250 |

| PHI | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8250 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0588 | .0589 | .0528 | .0649 | .0691 | .0756 | .0860 | .0973 | .1079 | .1257 | .1420 | .1502 | .1790 | .1962 | |
| 21.500 | .0602 | | | | .0606 | | | | .1155 | | | | .1791 | | |
| 63.000 | .0006 | | | | | | | | .0003 | | | | .0005 | | |
| 64.000 | | | | | | | | | | | | | .0005 | | |
| 65.000 | | | | | .0010 | | | | | | | | .0005 | | |
| 65.500 | .0193 | | | | .0362 | | | | .0078 | | | | .0035 | | .0030 |
| 105.000 | | | | | | | | | | | | | | | |
| 111.000 | | | | | | | | | | | | | | | |
| 112.000 | | | | | .0341 | | | | | | | | | | |
| 113.070 | | | | | .0283 | | | | | | | | | | |
| 116.000 | | | | | | | | | .0044 | | .0166 | | | | |
| 135.000 | .0018 | | | | .0039 | | | | | | .0028 | | | | |
| 149.000 | | | | | | | | | .0040 | | | | | | |
| 180.000 | .0061 | | | | .0042 | | | | | | | | | | .0027 |
| X/L | .6500 | .6750 | .8000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |

PHI



(RTK917)

AEDC VA352 OH4B 01 ORG. FUSELAGE

MACH (1) = 6.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .1250 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 176.000 | | | | | | | | | | | | | | .0127 | .0182 |
| 159.200 | | | | | | | | | | | | .0076 | | | |
| 170.700 | | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | | |
| 180.000 | .0156 | | | | .0260 | .0518 | .0612 | | | .0176 | | | .0668 | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0911 | | | .0863 | .0000 | .0863 | .0823 | .0750 | .0832 | .0777 | .0769 | .0795 | .0802 | .0771 | .0776 |
| 11.500 | | | | .0920 | | | | .0835 | | | | | | | |
| 17.500 | | | | | | | | .0917 | | | | .0772 | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .1065 | | | | | | | | | | | |
| 31.500 | | | | .1191 | | | | .1009 | | | | | | | |
| 34.000 | | | | .1147 | | | | .0982 | | | | | | | |
| 35.000 | | | | .1110 | | | | .0895 | | | | | | | |
| 40.000 | | | | .0393 | | | | .0060 | | | | | | | |
| 45.000 | | | | | | | | | | | | .0015 | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | .0165 | | | | | | | |
| 65.000 | | | | | | | | .0198 | | | | | | | |
| 70.000 | | | | | | | | .0190 | | | | | | | |
| 76.500 | | | | .0189 | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | .0192 | | | |
| 106.000 | | | | | | | | .0132 | | | | | | | |
| 135.000 | | | | | | | | .0010 | | | | | | | |
| 140.000 | | | | .0054 | | | | | | | | | | | |
| 141.400 | .0076 | | | | | | | | | | | | | | |
| 171.000 | | | .0132 | | | | | | | | | | | | |
| 180.000 | | | | .0120 | | .0019 | .0014 | | | | | | | .0016 | |
| X/L | 5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0823 | .0893 | .1004 | .1111 | .1326 | .1589 | .1756 | .1980 | .2101 | .2263 | .2361 | .2395 | .2533 | .2574 | |
| 21.500 | .0816 | | | | .1236 | | | | .2221 | | | | .2437 | | |
| 63.000 | .0004 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0016 | | | | | | |
| 65.000 | | | | | | | | | | | | | | | .0009 |
| 65.500 | | | | | .0006 | | | | | | | | | | |



TABULATED DATA LISTING FOR OH-8 (AEDC VA352)

(RTKB17)

AEDC VA352 OH-8 01 ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (2) = 35.000

| SECTION (1) ORBITER FUSELAGE | | DEPENDENT VARIABLE MU/HO | | | | | | | | | | | | | | |
|------------------------------|-----|--------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| Y/L | | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| | PHI | | | | | | | | | | | | | | | |
| 105.000 | | .0243 | | | | .0181 | | | | .0053 | | | | .0015 | | .0014 |
| 111.000 | | | | | | .0288 | | | | | | | | | | |
| 112.000 | | | | | | .0291 | | | | | | .0052 | | | | |
| 113.000 | | | | | | | | | | | | .0048 | | | | |
| 116.000 | | | | | | .0028 | | | | .0053 | | | | | | |
| 135.000 | | .0013 | | | | .0025 | | | | .0037 | | | | | | .0047 |
| 149.000 | | .0019 | | | | | | | | | | | | | | |
| 190.000 | | | | | | | | | | | | | | | | |
| X/L | | .6900 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| | PHI | | | | | | | | | | | | | | | |
| .000 | | .2409 | .2163 | .2054 | .1934 | .1736 | .3151 | .3323 | .4045 | | .3659 | .3585 | .3492 | | | |
| 21.500 | | | | .2001 | | | | .2771 | | | | | | | .3151 | |
| 30.000 | | | | | | | .0045 | | | | | | | | | |
| 52.500 | | | | .0017 | | | | | | | | | | | | |
| 55.000 | | | | .0015 | | | | | | | | | | | | |
| 65.000 | | | | | | | .0041 | | | | | | | | | |
| 69.000 | | | | | | | | | | | | | | | | |
| 100.000 | | | | .0014 | | | | | | | | | | | | |
| 109.000 | | | | .0013 | | | | .0025 | | | | | | | | |
| 112.000 | | | | | | | | | .0023 | | | | | | | |
| 113.000 | | | | | | | | | | .0034 | | | | | | |

AEDC VA352 CH4B 01 ORB. FUSELAGE

(RTKS16) (25 APR 74)

REFERENCE DATA

REF = .9230 SQ.FT. WHP = .0000 IN.
REF = 22.5403 IN. WHP = .0000 IN.
REF = 16.3919 IN. WHP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -9.000 RN/L = 3.720
S.FLAP = 10.000 ELEVON = 5.000
WAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 97.200 ZI = 3.933 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| Y% | .0000 | .0080 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | | | | | | | | | | | | | | | .1202 |
| 14.000 | | | | | | | | | | | | | | | .1310 |
| 20.000 | | | | | | | | | | | | | | | .1442 |
| 22.000 | | | | | | | | | | | | | | | .0797 |
| 24.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 42.000 | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | |

| Y% | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | | | | | | | | | | | | | | | .0136 |
| 20.000 | | | | | | | | | | | | | | | .0062 |
| 25.000 | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 131.200 | | | | | | | | | | | | | | | |
| 145.400 | | | | | | | | | | | | | | | .0000 |
| 146.200 | | | | | | | | | | | | | | | .0000 |
| 156.000 | | | | | | | | | | | | | | | .0000 |
| 159.200 | | | | | | | | | | | | | | | .0000 |
| 160.700 | | | | | | | | | | | | | | | .0000 |
| 171.900 | | | | | | | | | | | | | | | .0000 |
| 175.400 | | | | | | | | | | | | | | | .0000 |
| 180.000 | | | | | | | | | | | | | | | .0000 |



(RTN818)

AEDC VA352 OMB 01 ORB. FUSELAGE

MACH (1) = 6.000 ALPHA (1) = 30.000

SECTION 1: ORBITER FUSELAGE DEPENDENT VARIABLE MU/ND

| Y/L | .1835 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| Phi | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0726 | | | | .0000 | | | |
| 21.500 | | | | | | | | .0000 | | | | | | | |
| 23.000 | | | | .0000 | | | | | | | | | | | |
| 24.000 | | | .1150 | | | | | | | | | | | | |
| 31.500 | | | | | | | | .0942 | | | | | | | |
| 34.000 | | | | .1148 | | | | .0911 | | | | | | | |
| 35.000 | | | .1161 | | | | | .0741 | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | .0471 | | | | | .0156 | | | | .0048 | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | .0337 | | | | | | | |
| 61.000 | | | | | | | | .0321 | | | | | | | |
| 65.000 | | | | | | | | .0219 | | | | | | | |
| 70.000 | | | | .0221 | | | | | | | | | | | |
| 76.500 | | | | | | | | | | | | .0124 | | | |
| 104.000 | | | | | | | | .0155 | | | | .0011 | | | |
| 106.000 | | | | | | | | .0016 | | | | | | | |
| 135.000 | | | | | | | | | | | | .0054 | | | |
| 140.000 | | | .0000 | | | | | .0032 | | | | | | | |
| 141.400 | | | | | | | | | | | | | | | |
| 151.000 | | | .0000 | | | .0061 | | | | | | | | | |
| 150.000 | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| Phi | | | | | | | | | | | | | | | |
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 23.000 | .0016 | | | | | | | | .0007 | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 25.000 | | | | | .0026 | | | | | | | | .0019 | | |
| 26.000 | .0223 | | | | .0391 | | | | .0531 | | | | .0124 | | .0648 |
| 27.000 | | | | | .0272 | | | | | | | | | | |
| 28.000 | | | | | .0274 | | | | | | | | | | |
| 29.000 | | | | | | | | | .0034 | | .0505 | | | | |
| 30.000 | .0022 | | | | .0032 | | | | .0034 | | .0104 | | | | |
| 31.000 | | | | | .0041 | | | | .0020 | | | | | | |
| 32.000 | .0085 | | | | .0041 | | | | | | | | | | |
| 33.000 | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |

AEDC VA352 OMB O1 ORS. FUSELAGE (RTK816)

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X/L | .6800 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 53.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 65.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 88.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 108.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 112.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 113.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 97.200 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X/L | .0000 | .0080 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 35.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 46.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 119.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 97.200 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 146.200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



AEDC VAS32 OMS 01 ORB. FUSELAGE (RTKS18)

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

| M/W | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PMI | | | | | .0366 | | | .0366 | | | | .0194 | | | .0046 |
| 108.000 | .0272 | | | | | | | | | | | | | | |
| 111.000 | | | | | .0372 | | | | | | | | | | |
| 112.000 | | | | | .0340 | | | | | | | | | | |
| 113.000 | | | | | | | | | | .0076 | | | | | |
| 116.000 | | | | | | | | .0044 | | | .0064 | | | | |
| 135.000 | .0019 | | | | .0034 | | | | | | | | | | |
| 149.000 | | | | | | | | .0043 | | | | | | | .0036 |
| 160.000 | .0027 | | | | .0029 | | | | | | | | | | |

M/W .6500 .6750 .9000 .9250 .9500 .9750 1.0000 1.0130 1.0140 1.0250 1.0360 1.0400

| M/W | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PMI | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | .3461 |
| 52.500 | | | | | | | | | | | | | | | |
| 55.000 | | | | | .0066 | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 68.000 | | | | | | | | | | | | | | | |
| 100.000 | .0067 | | | | | | | | | | | | | | |
| 106.000 | .0052 | | | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | | | | .0037 |
| 113.000 | | | | | | | | | | | | | | | |



(RTKB19)

AEDC VA352 OHMB 01 ORB, FUSELAGE

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | .0715 | | | | | | | | .0000 | | | |
| 21.500 | | | | .0000 | | | | | | | | | | | |
| 23.000 | | | | .1148 | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 31.500 | | | | .0974 | | | | | | | | | | | |
| 34.000 | | | | .0994 | | | | | | | | | | | |
| 35.000 | | | | .1218 | | | | | | | | | | | |
| 40.000 | | | | .0929 | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | .0203 | | | | | | | | | | | |
| 59.500 | | | | .0426 | | | | | | | | | | | |
| 61.000 | | | | .0390 | | | | | | | | | | | |
| 65.000 | | | | .0249 | | | | | | | | | | | |
| 70.000 | | | | .0255 | | | | | | | | | | | |
| 96.500 | | | | | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 106.500 | | | | | | | | | | | | | | | |
| 135.000 | | | | .0177 | | | | | | | | | | | |
| 140.000 | | | | .0021 | | | | | | | | | | | |
| 141.400 | | | | .0000 | | | | | | | | | | | |
| 151.000 | | | | .0000 | | | | | | | | | | | |
| 160.000 | | | | .0067 | | .0032 | .0019 | | | | | .0089 | | | |

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .0000 | | | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | | | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 63.000 | | | | .0024 | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0026 | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 65.500 | | | | | .0026 | | | | | | | | .0009 | | |
| 105.000 | | | | .0253 | | | | | .0409 | | | | .0100 | | .0134 |
| 111.000 | | | | | | | | | | | | | | | |
| 112.000 | | | | | .0316 | | | | | | | | | | |
| 113.000 | | | | | .0280 | | | | | | | | | | |
| 116.000 | | | | | | | | | | | | | | | |
| 135.000 | | | | .0020 | | | | | .0040 | | | .0895 | | | |
| 149.000 | | | | | | | | | | | | .0091 | | | |
| 160.000 | | | | .0046 | | .0035 | .0031 | | | | | | | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | |



(RTR019)

AEDC VA352 OMB 01 ORB. FUSELAGE

MACH (1) = 6.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X% | .1200 | .1250 | .1300 | .1400 | .1500 | .1550 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 155.000 | | | | | | | | | | | | | | .0000 | .0000 |
| 159.200 | | | | | | | | | | | | | | .0000 | .0000 |
| 170.700 | | | | | | | | | | | | | | .0000 | .0000 |
| 171.900 | | | | | | | | | | | | | | .0000 | .0000 |
| 173.400 | | | | | | | | | .0000 | | | | | .0000 | .0000 |
| 180.000 | .0061 | | | | .0080 | | .0151 | | | | .0703 | | | .0119 | |
| X% | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3150 | .3100 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0000 | | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 11.500 | | | .0368 | | | | | .0838 | | | | | | | |
| 12.000 | | | | | | | | .0000 | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 23.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 24.000 | | | | .1304 | | | | | | | | | | | |
| 31.500 | | | | | | | | .1110 | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | .1309 | | | | .1086 | | | | | | | |
| 40.000 | | | | .1323 | | | | .1076 | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | .0831 | | | | .0158 | | | | | | .0042 | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | .0342 | | | | | | | |
| 65.000 | | | | | | | | .0363 | | | | | | | |
| 70.000 | | | | | | | | .0303 | | | | | | | |
| 84.500 | | | | .0254 | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | .0184 | | | | | | .0163 | |
| 135.000 | | | | | | | | .0016 | | | | | | .0012 | |
| 140.000 | | | | .0000 | | | | | | | | | | | |
| 141.400 | .0000 | | | | | | | | | | | | | | |
| 151.000 | | .0000 | | .0070 | | | .0081 | .0040 | | | | | | .0028 | |
| 180.000 | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 63.000 | .0013 | | | | | | | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 84.000 | | | | | | | | | .0010 | | | | | | |
| 85.000 | | | | | | | | | | | | | | .0018 | |
| 89.500 | | | | | .0019 | | | | | | | | | | |



(RTN819)

MACH (1) = 8.000 ALPHA (2) = 35.000
 AEDC VA352 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 105.000 | .0310 | | | .0577 | | | | .0176 | | | | | .0066 | | .0099 |
| 111.000 | | | | .0584 | | | | | | | | | | | |
| 112.000 | | | | .0469 | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | | | | |
| 116.000 | | | | | | | | | | | .0366 | | | | |
| 135.000 | .0619 | | | .0031 | | | | .0046 | | | | | | | |
| 149.000 | | | | | | | | | | | .0058 | | | | |
| 160.000 | .0018 | | | .0021 | | | | .0027 | | | | | | | .0025 |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | | | | | | | | | | .0000 | .0000 | .0000 | .0000 | .0000 | .2417 |
| 39.000 | | | | | | | | | | | | | | | |
| 52.500 | | | | | | | | | | | | | | | |
| 55.000 | | | | | | .0764 | | | | | | | | | |
| 65.000 | .0026 | | | | | | | | | | | | | | |
| 68.000 | .0033 | | | | | | | | | | | | | | |
| 69.000 | | | | | | | | | | | | | | | |
| 100.000 | .0051 | | | | | | | | | | | | | | |
| 108.000 | .0083 | | | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | | | | .0034 |



AEDC VA352 OH4B 01 ORG. FUSELAGE

(RTN320) (25 APR 74)

REFERENCE DATA

REF Z = .6238 SQ.FT. XMRP = .0000 IN.
LREF Z = 22.5803 IN. YMRP = .0000 IN.
BREF Z = 16.3919 IN. ZMRP = .0000 IN.
SCALE Z = .0175 SCALE

PARAMETRIC DATA

BETA = .000 TML/L = 2.000
B.FLAP = 10.000 ELEVON = 5.000
HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 99.900 Q1 = 1.980 HREF = .035

SECTION (1) ORG. FUSELAGE DEPENDENT VARIABLE MU/MD

| X/- | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .4954 | .4225 | .2702 | .2270 | .1937 | .1674 | .1403 | .0000 | .1173 | .1094 | .1022 | .1152 | .1186 |
| | | | | | | .1984 | | | | | | | | .1287 |
| | | | | | | | .0653 | | | .0451 | | | | .0635 |
| | | | | | | | .0633 | | | .0088 | | | | .0124 |
| | | | | | | .0273 | | | | | | | | .0066 |
| | | | .0873 | | .0350 | .0147 | | | | | | | | |
| X/- | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
| PHI | .5972 | .0915 | .0637 | .0767 | .1110 | .0764 | | | | .0760 | .0733 | | | |
| | | | | | .0919 | | | | | | | | | |
| | | | | | .1059 | | | | | | | | | |
| | | | | | .0761 | | | | | | | | | .0175 |
| | | | | | .0465 | | | .0044 | | | | | .0086 | |
| | | | | | | | .0053 | | | | | | .0123 | |
| | | | | | | .0274 | | | .0171 | .0081 | | | | |
| | | .0065 | | .0120 | .0382 | | | | | | | | | |
| X/- | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |
| PHI | .0711 | .0696 | .0600 | .0598 | .0376 | .0652 | .0666 | .0654 | .0630 | .0629 | .0610 | .0573 | .0531 | |
| | | | .0760 | | | | | | | | | | | |



(RTK20)

MACH (1) = 0.000 ALPHA (1) = 30.000

AEDC V4352 OHMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

| X% | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| P/H1 | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | .0879 | | | | | | | | |
| 21.500 | | | | | | | | .0763 | | | | .0624 | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.500 | | | | .0901 | | | | | | | | | | | |
| 31.500 | | | .1032 | | | | | | | | | | | | |
| 34.000 | | | | | | | .0844 | | | | | | | | |
| 35.000 | | | | .1000 | | | | | | | | | | | |
| 40.000 | | | | .0969 | | | .0778 | | | | | | | | |
| 45.000 | | | | | | | .0782 | | | | | | | | |
| 51.000 | | | | .0345 | | | | | | | | | | | |
| 57.500 | | | | | | | .0086 | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | .0023 |
| 61.000 | | | | | | | .0184 | | | | | | | | |
| 65.000 | | | | | | | .0196 | | | | | | | | |
| 70.000 | | | | | | | .0177 | | | | | | | | |
| 96.500 | | | | .0178 | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | .0095 |
| 106.000 | | | | | | | | | | | | | | | .0005 |
| 135.000 | | | | | | | .0131 | | | | | | | | |
| 140.000 | | | | .0042 | | | .0013 | | | | | | | | |
| 141.400 | .0047 | | | | | | | | | | | | | | |
| 151.000 | | | .0144 | | | | | | | | | | | | |
| 180.000 | | | | .0124 | .0023 | .0024 | | | | | | | | | .0073 |
| X% | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| P/H1 | | | | | | | | | | | | | | | |
| .000 | .0624 | .0527 | .0327 | .0499 | .0523 | .0624 | .0627 | .0519 | .0477 | .0501 | .0516 | .0499 | .0554 | .0568 | |
| 21.500 | .0345 | | | | .0437 | | | | .0516 | | | | .0504 | | |
| 63.000 | .0006 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0004 | | | | | | |
| 65.000 | | | | | .0008 | | | | | | | | .0004 | | |
| 65.500 | | | | | .0171 | | | | | | | | | | |
| 106.000 | .0269 | | | | | .0067 | | | | | | | | | .0021 |
| 111.000 | | | | | | | | | | | | | | | |
| 112.000 | | | | | .0327 | | | | | | | | | | |
| 113.000 | | | | | .0369 | | | | | | | | | | |
| 116.000 | | | | | | | | | | | | | | | |
| 125.00 | .0015 | | | | .0024 | | | | .0039 | | .0083 | | | | |
| 149.000 | | | | | | | | | | | | | | .0043 | |
| 180.000 | .0063 | | | | .0056 | .0044 | | | | | | | | | .0016 |
| X% | .9500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |

(RTK520)

MACH (1) = 8.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| P/H | .0000 | .0592 | .0808 | .0895 | .0904 | .0965 | .2928 | .1489 | .2420 | .2990 | .3135 | .3126 |
| 21.500 | | .0823 | | | | | | | | | | |
| 39.000 | | | | | | .0035 | .1606 | | | | | .2928 |
| 55.000 | | | | .0006 | | | | | | | | |
| 65.000 | | | .0012 | | | | | | | | | |
| 98.000 | | | | .0021 | | | | | | | | |
| 109.000 | | | .0017 | | | | | | | | | |
| 112.000 | | | | | | .0014 | | | | | | |
| 113.000 | | | | | | | .0016 | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.900 QI = 1.980 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/H | .0000 | .4995 | .4337 | .2957 | .2468 | .2147 | .1879 | .1585 | .0000 | .1353 | .1304 | .1165 | .1337 | .1369 |
| 10.000 | | | | | | | | | | | | | | .1423 |
| 14.000 | | | | | | | .2203 | | | | | | | .0627 |
| 20.000 | | | | | | | .2067 | | | | | | | |
| 22.000 | | | | | | | .0834 | | | | | | | |
| 24.500 | | | | | | | | | | | | | | |
| 35.000 | | | | | | | .0812 | | | | | | | .0415 |
| 39.000 | | | | | | | .0221 | | | | | | | |
| 42.500 | | | | | | | .0108 | | | | | | | .0067 |
| 48.000 | | | | | | | | | | | | | | .0089 |
| 60.000 | | | .0670 | .0258 | | | | | | .0068 | | | | |
| 119.000 | | | | | | | | | | | | | | |
| 180.000 | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1820 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.900 QI = 1.980 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/H | .1170 | .1105 | .1021 | .0947 | .0973 | .0934 | .0932 | .0934 | .0934 | .0934 | .0934 | .0934 | .0932 | .0932 |
| 10.000 | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 25.500 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 43.500 | | | | | | | | | | | | | | |
| 131.200 | | | | | | | | | .0042 | | | | | |
| 145.400 | | | | | | | | | .0092 | | | | | |
| 146.200 | | | | | | | | | | | | | | .0067 |



AEDC VA352 OHB 01 ORB, FUSELAGE

(RTK820)

WASH (1) = 0.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X% | .1200 | .1250 | .1300 | .1400 | .1500 | .1550 | .1600 | .1620 | .1670 | .1690 | .1700 | .1750 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | | | |
| 180.000 | | .0118 | | | .0214 | .0451 | .0556 | | .0184 | | .0683 | | .0043 | | .0091 | .0132 |
| X% | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 | |
| PHI | | | | | | | | | | | | | | | | |
| .000 | | .0987 | | .0653 | .0000 | .0756 | .0777 | .0706 | .0822 | .0782 | .0780 | .0754 | .0728 | .0694 | .0643 | |
| 11.500 | | | | .0916 | | | | .0805 | | | | | .0742 | | | |
| 12.000 | | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | .0881 | | | | | | | | |
| 23.000 | | | | | | | .1073 | | | | | | | | | |
| 24.000 | | | | | | | .1179 | | | | | | | | | |
| 31.500 | | | | | | | | .0994 | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | .1113 | | | | | | | | | |
| 40.000 | | | | | | | .1062 | | | | | | | | | |
| 45.000 | | | | | | | | .0916 | | | | | | | | |
| 51.000 | | | | | | | .0393 | | | | | | | | | |
| 57.500 | | | | | | | | .0079 | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | | |
| 76.500 | | | | | | | .0184 | | | | | | | | | |
| 103.000 | | | | | | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | .0045 | | | | | | | | | |
| 141.400 | .0086 | | | | | | | | | | | | | | | |
| 151.000 | | | | | | | .0108 | | | | | | | | | |
| 180.000 | | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| PHI | | | | | | | .0027 | .0015 | | | | | .0014 | | | |
| .000 | | .0636 | .0629 | .0645 | .0653 | .0632 | .0646 | .0671 | .0670 | .0647 | .0669 | .0704 | .0698 | .0798 | .0830 | |
| 21.500 | | .0658 | | | .0535 | | | .0676 | | | | | | .0729 | | |
| 63.000 | | .0024 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | | |
| 83.000 | | | | | | | | .0004 | | | | | | | | |
| 83.900 | | | | | | | .0005 | | | | | | | | | .0002 |



(RTH820)

MACH (1) = 0.000 ALPHA (2) = 35.000

AEDC VAS32 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|----------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| Phi | | | | | | | | | | | | | | | |
| 105.0000 | .0278 | | | | .0095 | | | | .0040 | | | | .0008 | | |
| 111.0000 | | | | | | .0169 | | | | | | | | | .0006 |
| 112.0000 | | | | | .0197 | | | | | | | | | | |
| 113.0000 | | | | | | | | | | | .0032 | | | | |
| 116.0000 | | | | | | | | | .0041 | | | | | | |
| 135.0000 | .0013 | | | | .0022 | | | | .0041 | | | | | | |
| 149.0000 | | | | | | | | | | | .0060 | | | | |
| 190.0000 | .0013 | | | | .0012 | | | | .0014 | | | | | | .0026 |
| X/L | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| Phi | | | | | | | | | | | | | | | |
| 106.0000 | .0827 | .0870 | .0859 | .0896 | .0844 | .02964 | .1866 | .3094 | | .3433 | .3446 | .3276 | | | |
| 21.5000 | | .0885 | | | | | | | | | | | | | .2964 |
| 59.0000 | | | | | | | | | | | | | | | |
| 52.5000 | | | | | | | | | | .2094 | | | | | |
| 44.0000 | | | .0005 | | | | | | | .0046 | | | | | |
| 65.0000 | | | .0005 | | | | | | | | | | | | |
| 49.0000 | | | | | | | | | | .0015 | | | | | |
| 100.0000 | | | .0007 | | | | | | | | | | | | |
| 106.0000 | | | .0005 | | | | | | | .0012 | | | | | |
| 112.0000 | | | | | | | | | .0017 | | | | | | |
| 113.0000 | | | | | | | | | | | | | | | .0032 |



AEDC VAS32 OMB 01 OMB, FUSELAGE

(RTKB21) (25 APR 74)

REFERENCE DATA

STEP = .0239 32.FT. XMRP = .0000 IN.
 STEP = 22.5403 IN. YMRP = .0000 IN.
 STEP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -0.000 RN/L = .500
 B.FLAP = 10.000 ELEVON = 9.000
 HAWKNT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 91.980 Q1 = .017 HREF = .017

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE MU/AD

| X% | PHI | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0780 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 35.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 49.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 119.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X% | PHI | .1200 | .1250 | .1300 | .1400 | .1500 | .1580 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 149.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 156.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 179.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 179.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 181.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 183.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 190.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X% | PHI | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 149.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 156.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 179.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 179.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 181.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 183.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 190.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTMB21)

MACH (1) = 6.000 ALPHA (1) = 30.000

AEDC VAS32 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| PHI | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 12.000 | | | | .0727 | | | | | | | | .0000 | | | |
| 21.500 | | | | .0000 | | | | | | | | | | | |
| 23.500 | | | | .1171 | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 31.500 | | | | .1182 | | | | | | | | | | | |
| 34.000 | | | | .1237 | | | | | | | | | | | |
| 35.000 | | | | .0544 | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | .0257 | | | | | | | | | | | |
| 76.500 | | | | | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | .0000 | | | | | | | | | | | |
| 141.400 | | | | .0000 | | | | | | | | | | | |
| 151.000 | | | | .0052 | | .0046 | | .0015 | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | |
| PHI | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0016 | | | | | | |
| 65.000 | | | | | | | | | | | | | | .0008 | |
| 65.500 | | | | | .0022 | | | | .0144 | | | | | .0059 | |
| 109.000 | | | | .0334 | .0486 | | | | | | | | | | .0062 |
| 111.000 | | | | | | | | | | | | | | | |
| 112.000 | | | | | .0866 | | | | | | | | | | |
| 113.000 | | | | | .0519 | | | | | | | | | | |
| 116.000 | | | | | | | | | | | .0171 | | | | |
| 135.000 | | | | .0029 | .0035 | | | | .0084 | | | | | | |
| 149.000 | | | | | | | | | | | .0039 | | | | |
| 160.000 | | | | .0041 | .0034 | | | | .0036 | | | | | | .0029 |
| PHI | .6500 | .6750 | .6900 | .7050 | .7200 | .7350 | .7500 | .7650 | .7800 | .7950 | .8100 | .8250 | .8400 | .8550 | .8700 |
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTK821)

MACH (1) 2 8.000 ALPHA (2) 2 35.000

SECTION (1) ORB: PER FUELSAGE DEPENDENT VARIABLE NUMB

| R/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| PH1 | | | | | | | | | | | | | | |
| 158.000 | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | |
| R/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .4000 | .4250 | .4500 | .4750 |
| PH1 | | | | | | | | | | | | | | |
| 1.000 | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | |
| 24.500 | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | |
| 35.700 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | |
| 58.500 | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |
| 76.500 | | | | | | | | | | | | | | |
| 109.000 | | | | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | | | |
| 139.000 | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | |
| 141.400 | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | |
| R/L | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0250 | 1.0500 | 1.0750 | 1.1000 | 1.1250 | 1.1500 | 1.1750 | 1.2000 | 1.2250 |
| PH1 | | | | | | | | | | | | | | |
| 1.000 | | | | | | | | | | | | | | |
| 21.900 | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | |
| 69.500 | | | | | | | | | | | | | | |



AEDC VA352 CHMB Q1 ORB. FUSELAGE

(RIKB22) (25 APR 74)

REFERENCE DATA

SPEE = .6238 SQ.FT. XMRP = .0000 IN.
 XREF = 22.5903 IN. XMRP = .0000 IN.
 ZREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = .500
 B.FLAP = 10.000 ELEVON = 5.000
 HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 93.400 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .5116 | .4295 | .2820 | .2342 | .1934 | .1737 | .1415 | .0000 | .1213 | .1160 | .1065 | .1194 | .1229 | .1307 |
| | .0000 | .0000 | .0305 | .0379 | .0167 | .0458 | .0268 | .0643 | .0093 | .0130 | .0071 | .0182 | .0000 | .0086 | .0063 |
| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
| PHI | .0999 | .0942 | .0876 | .0801 | .0971 | .0813 | .0778 | .0790 | .0000 | .0048 | .0086 | .0066 | .0086 | .0130 | .0130 |
| | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| X/L | .1850 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | .0721 | .0681 | .0645 | .0642 | .0645 | .0642 | .0642 | .0645 | .0642 | .0645 | .0642 | .0642 | .0645 | .0642 | .0645 |
| | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| X/L | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



TABULATED DATA LISTING FOR CHMB (AEDC VAS32)

(RTHD22)

WACH 11.3 8.000 ALPHA 1.1 30.000

AEDC VAS32 CHMB 01 002, FUELSAGE

SECTION 1: OPERATED FUELSAGE DEPENDENT VARIABLE MUJMG

| Y/L | .1810 | .1900 | .1910 | .2000 | .2220 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 8-1 | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | .0679 | | | | | .0640 | | | |
| 21.000 | | | | | | | .0747 | | | | | | | | |
| 23.000 | | | | .0608 | | | | | | | | | | | |
| 24.000 | | | .0597 | | | | | | | | | | | | |
| 31.000 | | | | | | | .0698 | | | | | | | | |
| 34.000 | | | | .1072 | | | | | | | | | | | |
| 35.000 | | | .0947 | | | | .0670 | | | | | | | | |
| 45.000 | | | | | | | .0831 | | | | | | | | |
| 51.000 | | | | .0342 | | | | | | | | .0022 | | | |
| 57.000 | | | | | | | | | | | | | | | |
| 59.000 | | | | | | | .0196 | | | | | | | | |
| 65.000 | | | | | | | .0163 | | | | | | | | |
| 70.000 | | | | | | | .0179 | | | | | | | | |
| 76.000 | | | | .0192 | | | | | | | | | | | |
| 82.000 | | | | | | | | | | | | | | | |
| 84.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | .0641 | | | | | | | | | | | |
| 91.000 | | | | | | | | | | | | | | | |
| 93.000 | | | | | | | .0132 | | | | | | | | |
| 94.000 | | | | | | | .0222 | | | | | | | | |
| 95.000 | | | | | | | | | | | | | | | |
| 96.000 | | | | | | | | | | | | | | | |
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| 141.000 | | | | | | | | | | | | | | | |
| 142.000 | | | | | | | | | | | | | | | |
| 143.000 | | | | | | | | | | | | | | | |
| 144.000 | | | | | | | | | | | | | | | |
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| 147.000 | | | | | | | | | | | | | | | |
| 148.000 | | | | | | | | | | | | | | | |
| 149.000 | | | | | | | | | | | | | | | |
| 150.000 | | | | | | | | | | | | | | | |



(RTN822)

AEDC VAS32 CHAB 01 ORG. FUSELAGE

MACH (1) = 8.000 ALPHA (1) = 30.000

SECTION (1) ORG. FUSELAGE DEPENDENT VARIABLE HU/HO

X% .0500 .0750 .0900 .9250 .9500 .9750 .9850 1.0000 1.0100 1.0140 1.0250 1.0300 1.0500

R=1

| | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| .000 | .0331 | .0325 | .0275 | .0155 | .0075 | .0068 | .0102 | .0293 | .0589 | .0524 | .1224 | |
| 21.500 | .0317 | | | | | .0203 | | | | | .1068 | |
| 39.500 | | | | | | .0015 | | | | | | |
| 52.500 | | | | | | | | | | | | |
| 59.000 | | | | | | .0026 | | | | | | |
| 65.000 | | | | | | .0011 | | | | | | |
| 69.000 | | | | | | | .0015 | | | | | |
| 100.000 | | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | |

MACH (2) = 8.000 ALPHA (2) = 35.000 TI = 93.400 QI = .123 HREF = .018

SECTION (1) ORG. FUSELAGE DEPENDENT VARIABLE HU/HO

X% .0000 .0600 .0650 .0700 .0750 .0800 .0850 .0900 .0950 .1000 .1050 .1100 .1150

R=1

| | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .0000 | .0079 | .0396 | .1043 | .2034 | .2213 | .1869 | .1791 | .0000 | .1417 | .1344 | .1236 |
| 10.000 | | | | | | | | | | | | .1366 |
| 14.000 | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | .1334 |
| 24.500 | | | | | | | | | | | | .1439 |
| 31.000 | | | | | | | | | | | | .0648 |
| 39.000 | | | | | | | | | | | | |
| 42.500 | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | .0106 |
| 160.000 | | | | | | | | | | | | .0070 |

R=1

| | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|--|--|--|--|-------|
| .000 | .1175 | .1129 | .1050 | .0961 | .0992 | .0943 | .0941 | | | | | |
| 10.000 | | | | .1259 | | | | | | | | |
| 20.000 | | | | .1012 | | | | | | | | |
| 25.500 | | | | .1211 | | | | | | | | |
| 40.000 | | | | .0822 | | | | | | | | |
| 43.500 | | | | .0517 | | | | | | | | |
| 131.200 | | | | | .0038 | | | | | | | |
| 145.400 | | | | | .0044 | | | | | | | .0054 |
| 146.200 | | | | | | | | | | | | |



(RTN822)

MACH (1) = 8.000 ALPHA (2) = 35.000

AEDC VA352 OHB 01 ORB. FUSELAGE

SECTION (1) ORBITED FUSELAGE DEPENDENT VARIABLE HU/HD

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P-HI | | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | | .0111 |
| 170.700 | | | | | | | | | | | | .0045 | | | |
| 171.900 | | | | | | | | | | .0145 | | | | | |
| 173.400 | | .0070 | | | .0097 | .0190 | .0291 | | | .0729 | | | .0362 | | |
| 180.000 | | | | | | | | | | | | | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| P-HI | | | | | | | | | | | | | | | |
| .000 | .1022 | | .0882 | .0000 | .0772 | .0786 | .0737 | .0835 | .0819 | .0755 | .0736 | .0716 | .0694 | .0662 | |
| 11.900 | | | .0265 | | | | .0824 | | | | | | | | |
| 12.000 | | | | | | | .0804 | | | | | .0755 | | | |
| 21.900 | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .1048 | | | | | | | | | | | |
| 31.900 | | | | .1176 | | | | | | | | | | | |
| 34.000 | | | | | | | .1020 | | | | | | | | |
| 35.000 | | | | .1139 | | | | | | | | | | | |
| 40.000 | | | | .1091 | | | .0968 | | | | | | | | |
| 45.000 | | | | | | | .0944 | | | | | | | | |
| 51.000 | | | | .0359 | | | | | | | | | | | |
| 57.900 | | | | | | | .0081 | | | | | .0018 | | | |
| 59.900 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | .0160 | | | | | | | | |
| 65.000 | | | | | | | .0174 | | | | | | | | |
| 70.000 | | | | | | | .0177 | | | | | | | | |
| 76.900 | | | | .0187 | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | .0195 | | | |
| 106.000 | | | | | | | .0137 | | | | | | | | |
| 135.000 | | | | | | | .0020 | | | | | .0015 | | | |
| 140.000 | | | | .0035 | | | | | | | | | | | |
| 141.400 | .0037 | | | | | | | | | | | | | | |
| 151.000 | | | .0083 | | | | | | | | | | | | |
| 160.000 | | | | .0123 | | .0030 | .0019 | | | | | | | | |
| X/L | .5000 | .5250 | .5300 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| P-HI | | | | | | | | | | | | | | | |
| .000 | .0638 | .0637 | .0633 | .0626 | .0630 | .0621 | .0602 | .0580 | .0594 | .0557 | .0547 | .0492 | .0491 | .0433 | |
| 21.900 | .0697 | | | | .0589 | | | | .0684 | | | | .0454 | | |
| 63.000 | .0006 | | | | | | | | | | | | | | |
| 94.000 | | | | | | | | | | | | | | | |
| 95.000 | | | | | | | | | | .0008 | | | | | |
| 95.900 | | | | | | | | | | | | | | | .0004 |



(RTK822)

AEDC VA352 OMB 01 ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION 1 (1) ORBITER FUSELAGE DEPENDENT VARIABLE H4/H0

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| P/H1 | | | | | | | | | | | | | | | |
| 108.000 | .0182 | | | | .0071 | | | | .0031 | | | | .0007 | | .0008 |
| 111.000 | | | | | .0102 | | | | | | | | | | |
| 112.000 | | | | | .0116 | | | | | | .0024 | | | | |
| 113.000 | | | | | | | | | | | | | | | |
| 116.000 | | | | | .0032 | | | | .0023 | | | | | | |
| 135.000 | .0027 | | | | | | | | .0041 | | | | | | .0046 |
| 149.000 | .0026 | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| P/H1 | | | | | | | | | | | | | | | |
| .000 | .0419 | .0399 | .0346 | .0214 | .0066 | .1522 | .0241 | .0421 | | .0691 | .1407 | .1083 | | | |
| 21.500 | | | .0381 | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | .0285 | | | | | .1522 |
| 52.500 | | | | | | | | | | | | | | | |
| 55.000 | | | | | .0021 | | | | | | | | | | |
| 65.000 | | | | | .0016 | | | | | | | | | | |
| 68.000 | | | | | | | | | .0034 | | | | | | |
| 100.000 | | | | | .0016 | | | | | | | | | | |
| 108.000 | | | | | .0008 | | | | .0013 | | | | | | |
| 112.000 | | | | | | | | | | .0010 | | | | | |
| 113.000 | | | | | | | | | | | | | | | .0012 |



(RTK923) (23 APR 74)

AEDC VAS32 OH4B 01 ORB. FUSELAGE

PARAMETRIC DATA

BETA = .000 RN/L = .500
 S,FLAP = 10.000 ELEVON = 10.000
 HAWAHT = 1.000

REFERENCE DATA

STEP = .8238 SQ.FT. XMRP = .0000 IN.
 REF = 22.5803 IN. YMRP = .0000 IN.
 STEP = 16.3319 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

WACH (1) = 0.000 ALPHA (1) = 25.000 TI = 93.433 QI = .521 HREF = .018

SECTION (1) COMPUTER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .5109 | .4156 | .2592 | .2103 | .1763 | .1504 | .1214 | .0000 | .1006 | .0560 | .0896 | .0977 | .1033 | .1132 |
| 10.000 | | | | | | | .1763 | | | | | | | | |
| 14.000 | | | | | | | .1666 | | | | | | | | |
| 20.000 | | | | | | | .0676 | | | | | | | | |
| 22.000 | | | | | | | .0667 | | | .0459 | | | | | |
| 24.500 | | | | | | | .0375 | | | .0133 | | | | | |
| 35.000 | | | | | | | .0237 | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 42.500 | | | | | | | | | | | | | | | |
| 49.000 | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1680 | .1780 | .1800 | .1810 | .1820 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0821 | .0766 | .0712 | .0664 | .0641 | .0647 | .0616 | .0610 | | | | | | |
| 10.000 | | | | | | | | | | | | | | |
| 15.000 | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | |
| 30.000 | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 50.000 | | | | | | | | | | | | | | |
| 55.000 | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | |
| 90.000 | | | | | | | | | | | | | | |
| 95.000 | | | | | | | | | | | | | | |

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0070 | .0070 | .0098 | .0054 | .0133 | .0144 | .1172 | .0276 | | | | | | | |
| 10.000 | | | | | | | | | | | | | | | |
| 15.000 | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | | |
| 30.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 50.000 | | | | | | | | | | | | | | | |
| 55.000 | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | | |
| 90.000 | | | | | | | | | | | | | | | |
| 95.000 | | | | | | | | | | | | | | | |



(RTXB23)

AEDC VAS32 CH4B 01 ORB. FUELSAGE

MACH (1) = 0.000 ALPHA (1) = 25.000

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/FO

| X% | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0535 | | | | | | | |
| 21.000 | | | | | | | | .0608 | | | | | .0506 | | |
| 24.000 | | | | .0756 | | | | | | | | | | | |
| 31.000 | | | .0865 | | | | | | | | | | | | |
| 34.000 | | | | .0846 | | | | .0732 | | | | | | | |
| 40.000 | | | | .0805 | | | | .0729 | | | | | | | |
| 45.000 | | | | .0865 | | | | .0708 | | | | | | | |
| 51.000 | | | | .0865 | | | | .0108 | | | | | | | |
| 59.000 | | | | | | | | .0206 | | | | | .0032 | | |
| 61.000 | | | | | | | | .0209 | | | | | | | |
| 65.000 | | | | | | | | .0156 | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 81.000 | | | | .0201 | | | | | | | | | | | |
| 100.000 | | | | .0060 | | | | .0125 | | | | | .0107 | | |
| 131.000 | | | | | | | | .0033 | | | | | .0017 | | |
| 150.000 | | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | |
| X% | .5500 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0429 | .0430 | .0404 | .0435 | .0407 | .0420 | .0399 | .0381 | .0364 | .0349 | .0343 | .0319 | .0308 | .0279 | |
| 21.000 | .0476 | | | | .0392 | | | | .0391 | | | | .0238 | | |
| 53.000 | .0011 | | | | | | | | | | | | | | |
| 54.000 | | | | | | | | | .0008 | | | | | | |
| 65.000 | | | | | | | | | | | | | .0002 | | |
| 65.500 | | | | | .0017 | | | | | | | | | | |
| 100.000 | .0250 | | | | .0198 | | | | .0074 | | | | .0031 | | .0033 |
| 111.000 | | | | | .0277 | | | | | | | | | | |
| 112.000 | | | | | .0304 | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | | | | |
| 118.000 | | | | | .0030 | | | | .0047 | | | | .0062 | | |
| 150.000 | .0026 | | | | .0050 | | | | .0049 | | | | .0027 | | |
| 149.000 | | | | | | | | | | | | | | | |
| 150.000 | .0053 | | | | | | | | | | | | | | |
| X% | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | |



(RTM223)

AEDC VAS32 OMB 01 OPS. FUELSAGE

MACH (1) = 8.000 ALPHA (1) = 25.000

SECTION (1) OPER. FUELSAGE DEPENDENT VARIABLE HUARD

| | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| X% | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
| h=1 | .0000 | .0216 | .0248 | .0204 | .0109 | .0087 | .0080 | .0128 | .0186 | .0356 | .0541 | .0703 |
| 21.500 | | | .0273 | | | | | | | | | .0360 |
| 39.500 | | | | | | | .0011 | | | | | |
| 52.500 | | | .0008 | | | | | | | | | |
| 65.500 | | | .0003 | | | | .0020 | | | | | |
| 78.500 | | | | | | | | | | | | |
| 100.000 | | | .0015 | | | | .0023 | | | | | |
| 125.000 | | | .0031 | | | | | | | | | |
| 150.000 | | | | | | | .0018 | | .0022 | | | |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 93.433 QI = .521 HREF = .018

SECTION (1) OPER. FUELSAGE DEPENDENT VARIABLE HUARD

| | | | | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| X% | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0100 | 1.0200 | 1.0250 | 1.0300 | 1.0400 | 1.0500 | 1.0600 | 1.0700 | 1.0750 | 1.0760 | 1.0800 | 1.0900 | 1.1000 |
| h=1 | .0000 | .0000 | .5137 | .4327 | .3048 | .2312 | .2010 | .1719 | .1416 | .0000 | .1211 | .1140 | .1062 | .1186 | .1223 | .1294 | .0833 | .0139 |
| 10.000 | | | | | | | | | | | | | | | | | | .0076 |
| 14.000 | | | | | | | | | .2044 | | | | | | | | | |
| 20.000 | | | | | | | | .1903 | | | | | | | | | | |
| 24.500 | | | | | | | | .0994 | | | | | | | | | | |
| 30.000 | | | | | | | | .0629 | | | | | | | | | | |
| 42.500 | | | | | | | | .0299 | | | | | | | .0441 | | | |
| 48.000 | | | | | | | | | | | | | | | | | | .0139 |
| 60.000 | | | | | | | | .0389 | | | | | | .0115 | | | | .0076 |
| 110.000 | | | .0345 | | .0389 | .0181 | | | | | | | | | | | | .1820 |
| 150.000 | | | | | | | | | | | | | | | | | | .1820 |

SECTION (1) OPER. FUELSAGE DEPENDENT VARIABLE HUARD

| | | | | | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X% | .1013 | .0934 | .0865 | .0814 | .0779 | .0777 | .0779 | .0779 | .0777 | .0777 | .0777 | .0777 | .0777 | .0777 | .0777 | .0777 | .0777 | .0777 | .0777 |
| h=1 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | | | | | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | | | | | |
| 131.200 | | | | | | | | | | | | | | | | | | | |
| 145.400 | | | | | | | | | | | | | | | | | | | |
| 149.200 | | | | | | | | | | | | | | | | | | | .0062 |



TABULATED DATA LISTING FOR OMB (AEDC VA352)

(RTK623)

MACH (1) = 0.000 ALPHA (2) = 30.000
 AEDC VA352 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X% | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | |
| 159.250 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | |
| X% | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 |
| PHI | | | | | | | | | | | | | | |
| 170.000 | | | | | | | | | | | | | | |
| 171.500 | | | | | | | | | | | | | | |
| 172.000 | | | | | | | | | | | | | | |
| 173.000 | | | | | | | | | | | | | | |
| 174.000 | | | | | | | | | | | | | | |
| 175.000 | | | | | | | | | | | | | | |
| 176.000 | | | | | | | | | | | | | | |
| 177.000 | | | | | | | | | | | | | | |
| 178.000 | | | | | | | | | | | | | | |
| 179.000 | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | |
| X% | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
| PHI | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | |
| 181.000 | | | | | | | | | | | | | | |
| 182.000 | | | | | | | | | | | | | | |
| 183.000 | | | | | | | | | | | | | | |
| 184.000 | | | | | | | | | | | | | | |
| 185.000 | | | | | | | | | | | | | | |
| 186.000 | | | | | | | | | | | | | | |
| 187.000 | | | | | | | | | | | | | | |
| 188.000 | | | | | | | | | | | | | | |
| 189.000 | | | | | | | | | | | | | | |
| 190.000 | | | | | | | | | | | | | | |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC VA352)

(RTAB23)

AEDC VA352 OMB 01 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (2) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

| Y/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | .0106 | | .0043 | | | | | | .0010 | | .0014 |
| 106.0000 | .0266 | | | | | | | | | | | | | | |
| 111.0000 | | | | | .0138 | | | | | | | | | | |
| 112.0000 | | | | | .0162 | | | | | | | | | | |
| 113.0000 | | | | | | | | .0055 | | | | | | | |
| 116.0000 | | | | | | | .0042 | | | | | | | | |
| 117.0000 | .0027 | | | | | | | | .0028 | | | | | | |
| 143.0000 | | | | | | | .0043 | | | | | | | | |
| 145.0000 | .0040 | | | | | | | | .0040 | | | | | | .0042 |
| Y/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |

SECTION (2) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

| PHI | .0000 | .0336 | .0310 | .0269 | .0153 | .0083 | .1417 | .0180 | .0267 | .0570 | .0901 | .1199 | .1417 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 21.5000 | | | | | | | .0269 | | | | | | |
| 33.0000 | | | | | | | .0015 | | | | | | |
| 52.5000 | | | | | | | | | | | | | |
| 64.0000 | | | | | | .0011 | | | | | | | |
| 65.0000 | | | | | | .0014 | | | | | | | |
| 68.0000 | | | | | | | .0019 | | | | | | |
| 100.0000 | | | | | | .0011 | | | | | | | |
| 108.0000 | | | | | | .0010 | | | | | | | |
| 112.0000 | | | | | | | .0007 | | | | | | |
| 113.0000 | | | | | | | .0009 | | | .0017 | | | |

MACH (1) = 8.000 ALPHA (3) = 30.000 TI = 93.433 OI = .921 HREF = .018

SECTION (3) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

| PHI | .0000 | .0000 | .5071 | .4422 | .2364 | .2554 | .2230 | .1970 | .1646 | .0000 | .0750 | .0760 | .0600 | .0900 | .1000 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 10.0000 | | | | | | | | | | | | | | | |
| 15.0000 | | | | | | | | | | | | | | | |
| 14.0000 | | | | | | | .2227 | | | | | | | | .1248 |
| 20.0000 | | | | | | | | | | | | | | | .1363 |
| 20.0000 | | | | | | | | | | | | | | | .1393 |
| 23.0000 | | | | | | | | | | | | | | | .1437 |
| 24.0000 | | | | | | | | | | | | | | | .0634 |
| 34.0000 | | | | | | | | | | | | | | | |
| 39.0000 | | | | | | | | | | | | | | | |
| 42.0000 | | | | | | | | | | | | | | | |
| 48.0000 | | | | | | | | | | | | | | | |
| 60.0000 | | | | | | | | | | | | | | | |
| 119.0000 | | | | | | .0482 | .0290 | .0128 | | | .0077 | | | | .0101 |
| 160.0000 | | | | | | | | | | | | | | | .0087 |
| Y/L | .1300 | .1250 | .1300 | .1400 | .1400 | .1500 | .1580 | .1600 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |

(RTW923)

AEDC VA352 Q-4B O1 ORG. FUELSAGE

MACH (1) = 8.000 ALPHA (3) = 35.000

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HU/HO

| X% | .1200 | .1250 | .1300 | .1400 | .1500 | .1550 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | .0040 | | | | | | |
| 30.000 | .1217 | .1160 | .1086 | .0969 | .0977 | | | | | .0961 | | .0943 | | | .0083 |
| 35.000 | | | | .1355 | | | | | | | | | | | .0071 |
| 40.000 | | | | .1089 | | | | | | | | | | | .0119 |
| 45.000 | | | | .1226 | | | | | | | | | | | |
| 50.000 | | | | .0819 | | | | | | | | | | | |
| 55.000 | | | | .0611 | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | | |
| 90.000 | | | | | | | | | | | | | | | |
| 95.000 | | | | | | | | | | | | | | | |
| 100.000 | | | | | | | | | | | | | | | |
| X% | .1630 | .1500 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | | | | | | | | | .0043 | | | | | | |
| 50.000 | .0946 | .0000 | .0773 | .0761 | .0726 | .0608 | .0601 | .0756 | .0742 | .0727 | .0697 | .0673 | | | |
| 55.000 | | | | .0842 | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | | |
| 90.000 | | | | | | | | | | | | | | | |
| 95.000 | | | | | | | | | | | | | | | |
| 100.000 | | | | | | | | | | | | | | | |
| X% | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| 50.000 | .0066 | .0101 | .0276 | | | | | | | | | | | | |
| 55.000 | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 75.000 | | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | | |
| 90.000 | | | | | | | | | | | | | | | |
| 95.000 | | | | | | | | | | | | | | | |
| 100.000 | | | | | | | | | | | | | | | |



TABULATED DATA LISTING FOR QMB (AEDC VA352)

(RTH823)

AEDC VA352 QMB 01 QRS. FUSELAGE

MACH (3) = 6.000 ALPHA (3) = 35.000

SECTION (3) QMB FUSELAGE DEPENDENT VARIABLE MU/MO

| Y/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0648 | .0635 | .0646 | .0651 | .0636 | .0629 | .0626 | .0692 | .0660 | .0662 | .0690 | .0507 | .0493 | .0434 | |
| .0706 | | | | .0676 | | | | | .0698 | | | | .0499 | | |
| .0006 | | | | | | | | | .0005 | | | | .0003 | | |
| .04.000 | | | | | .0008 | | | | .0030 | | | | .0005 | | .0006 |
| .05.000 | | | | | .0060 | | | | | | | | | | |
| .06.000 | .0176 | | | | | | | | | | | | | | |
| .11.000 | | | | | .0096 | | | | | | | | | | |
| .12.000 | | | | | .0114 | | | | | | | | | | |
| .13.000 | | | | | | | | | | .0022 | | | | | |
| .16.000 | .0024 | | | | .0029 | | | | .0016 | | .0024 | | | | |
| .19.000 | | | | | | | | | .0040 | | | | | | |
| .160.000 | .0028 | | | | .0033 | | | | | | | | .0044 | | |
| Y/L | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0415 | .0352 | .0345 | .0197 | .0099 | .0167 | .0290 | .0404 | | .0729 | .1446 | .1692 | | | |
| .07.000 | | | .0377 | | | | | | | | | | | | |
| .02.500 | | | | | | .0023 | .0402 | | | | | | | .1767 | |
| .05.000 | | | .0010 | | | | | | | | | | | | |
| .05.000 | | | .0009 | | | | | | | | | | | | |
| .05.000 | | | | | | .0015 | | | | | | | | | |
| .05.000 | | | .0010 | | | | | | | | | | | | |
| .05.000 | | | .0007 | | | .0030 | .0093 | | | | | | | | |
| .13.000 | | | | | | | | | .0050 | | | | | | |

AEDC VAS32 OMB 01 URB. FUSELAGE

(RTR824) (23 APR 74)

REFERENCE DATA

SEP = .0239 33.FT. HWP = .0000 IN.
REF = 22.5603 IN. HWP = .0000 IN.
SEP = 16.3919 IN. HWP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -8.0000 RV/L = .500
S.F.LAP = 10.0000 ELEVON = 10.000
MAW/HT = 1.0000

MACH (1) = 4.0000 ALPHA (1) = 29.0000 TI = 93.233 QI = .923 HREF = .016

SECTION (1) OMB URB. FUSELAGE DEPENDENT VARIABLE MU/NO

| WING | REF | SEP | SCALE | TI | QI | HREF | RV/L | ELEVON | MAW/HT | MU/NO |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|-------|
| 1000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 2000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 2200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 2400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 2600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 2800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 3000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 3200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 3400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 3600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 3800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 4000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 4200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 4400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 4600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 4800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 5000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 5200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 5400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 5600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 5800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 7000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 7200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 7400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 7600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 7800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 8000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 8200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 8400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 8600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 8800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9600 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTTB24)

MACH 1.15 8,000 ALPHA (1) 29,000

AEDC VA352 OMB 01 ORB. FUELS/AGE

SECTION 11 ORBITER FUELS/AGE DEPENDENT VARIABLE WU/HD

| | | | | | | | | | | | | | | | |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/ | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PWT | | | | .0963 | | | | .0900 | | | | | | | |
| 32,000 | | | | | | | | | | | | | | | |
| 33,000 | | | | .0000 | | | | .0000 | | | | | | | |
| 34,000 | | | | .0987 | | | | | | | | | | | |
| 35,000 | | | | .1011 | | | | .0817 | | | | | | | |
| 36,000 | | | | .1103 | | | | .0862 | | | | | | | |
| 37,000 | | | | .0673 | | | | .0928 | | | | | | | |
| 38,000 | | | | | | | | .0280 | | | | | | | |
| 39,000 | | | | | | | | .0404 | | | | | | | |
| 40,000 | | | | | | | | .0325 | | | | | | | |
| 41,000 | | | | | | | | .0226 | | | | | | | |
| 42,000 | | | | .0286 | | | | | | | | | | | |
| 43,000 | | | | .0000 | | | | .0174 | | | | | | | |
| 44,000 | | | | .0000 | | | | .0044 | | | | | | | |
| 45,000 | | | | .0000 | | | | | | | | | | | |
| 46,000 | | | | .0117 | | .0066 | | .0017 | | | | | | | |
| 47,000 | .5200 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PWT | | | | | .0000 | | | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 50,000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 51,000 | | | | | | | | | | | | | | | |
| 52,000 | | | | | | | | | | | | | | | |
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| 73,000 | | | | | | | | | | | | | | | |
| 74,000 | | | | | | | | | | | | | | | |
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| 76,000 | | | | | | | | | | | | | | | |
| 77,000 | | | | | | | | | | | | | | | |
| 78,000 | | | | | | | | | | | | | | | |
| 79,000 | | | | | | | | | | | | | | | |
| 80,000 | | | | | | | | | | | | | | | |



AEDC VAS32 OH48 01 ORB. FUSELAGF (R1A824)

MACH (1) = 8.000 ALPHA (1) = 59.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 52.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 65.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 69.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 108.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 112.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 113.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 93.233 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0000 | .0100 | .0250 | .0370 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 119.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 146.800 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTRB24)

AEDC VA332 OHB Q1 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (2) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X% | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 105.000 | .0338 | | | .0436 | | | | | .0145 | | | | .0083 | | .0068 |
| 111.000 | | | | | .0828 | | | | | | | | | | |
| 112.000 | | | | .0805 | | | | | | | | | | | |
| 113.000 | | | | | | | | | .0173 | | | | | | |
| 116.000 | | | | | | | | | | .0036 | | | | | |
| 139.000 | .0027 | | | .0038 | | | | | .0069 | | | | | | |
| 149.000 | | | | | .0039 | | | | | | | | | | |
| 190.000 | .0037 | | | | | | | | .0039 | | | | | .0023 | |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.233 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X% | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | | | | | | | | |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | | | | | | | | | | | | | | | | | | | |
| 52.500 | | | | | | .0015 | | | | .0433 | | | | | | | | | .2417 |
| 55.000 | | | .0711 | | | | | | | | | | | | | | | | |
| 65.000 | | | .0610 | | | | | | | | | | | | | | | | |
| 69.000 | | | | | | .0018 | | | | | | | | | | | | | |
| 100.000 | | | .0033 | | | | | | | | | | | | | | | | |
| 109.000 | | | .0072 | | | | | | | | | | | | | | | | |
| 112.000 | | | | | | .0067 | | | | | | | | | | | | | |
| 113.000 | | | | | | | .0048 | | | | | | | | | | | | |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.233 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X% | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | | | | | | | |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | | | | | | | | | | | | | | | | | | |
| 14.000 | | | | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | | | | |
| 22.000 | | | | | | | | | | | | | | | | | | |
| 24.500 | | | | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | | | | | |
| 42.500 | | | | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | | | | | | | |
| 190.000 | | .1200 | .1250 | .1300 | .1400 | .1300 | .1360 | .1600 | .1870 | .1950 | .1700 | .1710 | .1600 | .1600 | .1600 | .1600 | .1600 | .1600 |



(RTK824)

MACH (1) = 8.000 ALPHA (3) = 35.000

AEDC VA352 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/D

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 |
| 63.000 | .0012 | | | | | | | | | | | | | |
| 94.000 | | | | | | | | | .0009 | | | | | |
| 65.000 | | | | | .0014 | | | | | | | | .0005 | |
| 95.000 | | | | | .0196 | | | | .0093 | | | | .0042 | |
| 100.000 | .0465 | | | | | | | | | | | | | .0051 |
| 111.000 | | | | | | | | | | | | | | |
| 112.000 | | | | | .0320 | | | | | | .0138 | | | |
| 113.000 | | | | | .0379 | | | | | | | | | |
| 116.000 | | | | | | | | | | | | | | |
| 135.000 | .0030 | | | | .0051 | | | | .0095 | | | | | |
| 145.000 | | | | | | | | | | | .0039 | | | |
| 146.000 | .0023 | | | | .0028 | | | | .0034 | | | | .0046 | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0400 | | |
| PHI | | | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 | .0600 |
| 39.000 | | | | | | | | | | | | | | |
| 52.500 | | | | | | .0023 | .0671 | | | | | | .2365 | |
| 95.000 | | | .0028 | | | | | | | | | | | |
| 65.000 | | | .0020 | | | | | | | | | | | |
| 59.000 | | | | | | .0024 | | | | | | | | |
| 100.000 | .0028 | | | | | | | | | | | | | |
| 109.000 | .0045 | | | | | .0039 | .0031 | | | | | | | |
| 112.000 | | | | | | | | | .0034 | | | | | |
| 113.000 | | | | | | | | | | | | | | |



(RTK823) (25 APR 74)

REFERENCE DATA

REF = .8238 33.FT. XMRP = .0000 IN.
 JREF = 22.5803 IN. XMRP = .0000 IN.
 ZREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

WACH (1) = 8.000 ALPHA (1) = 30.000 T1 = 94.650 Q1 = 1.985 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/RO

| X/L | .0000 | .0080 | .0160 | .0240 | .0320 | .0400 | .0480 | .0560 | .0640 | .0720 | .0800 | .0900 | .1000 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .4943 | .4190 | .2753 | .2249 | .1925 | .1652 | .1387 | .0000 | .1182 | .1162 | .1016 | .1160 |
| 15.000 | | | | | | | | | | | | | |
| 16.000 | | | | | | | .2008 | | | | | | |
| 20.000 | | | | | | | .1889 | | | | | | .1194 |
| 24.500 | | | | | | | .0851 | | | | | | .1282 |
| 33.000 | | | | | | | .0623 | | | | | | .0462 |
| 42.000 | | | | | | | .0283 | | .0444 | | | | |
| 48.000 | | | | | | | .0150 | | .0082 | | | | .0121 |
| 53.000 | | | | .0502 | .0746 | | .0150 | | .0082 | | | | .0063 |
| 58.000 | | | | | | | .0150 | .1620 | .1750 | .1800 | .1810 | .1820 | |
| X/L | .1200 | .1275 | .1350 | .1425 | .1500 | .1580 | .1660 | .1740 | .1820 | .1900 | .1980 | .2060 | .2140 |

PARAMETRIC DATA

BETA = .000 RW/L = 2.000
 B.FLAP = 10.000 ELEVON = 10.000
 HAWAHT = 1.000

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0931 | .0285 | .0654 | .0793 | .0766 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 |
| 15.000 | | | | | | | | | | | | | | | |
| 16.000 | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | |
| 24.500 | | | | | | | | | | | | | | | |
| 33.000 | | | | | | | | | | | | | | | |
| 42.000 | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | |
| 53.000 | | | | | | | | | | | | | | | |
| 58.000 | | | | | | | | | | | | | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |

PHI
 .0000
 11.500

(RTK925)

MACH (1) = 8.000 ALPHA (1) = 30.000

AEDC VA332 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HO

| X% | .1850 | .1900 | .1950 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 12.000 | | | | .0876 | | | | | | | | | | | |
| 21.500 | | | | .0760 | | | | | | | | .0627 | | | |
| 23.000 | | | | .0909 | | | | | | | | | | | |
| 24.000 | | | | .1037 | | | | | | | | | | | |
| 31.500 | | | | .1002 | | | | | | | | | | | |
| 34.000 | | | | .0963 | | | | | | | | | | | |
| 37.000 | | | | .0771 | | | | | | | | | | | |
| 40.000 | | | | .0090 | | | | | | | | | | | |
| 45.000 | | | | .0178 | | | | | | | | | | | |
| 51.000 | | | | .0191 | | | | | | | | | | | |
| 57.500 | | | | .0172 | | | | | | | | | | | |
| 59.500 | | | | .0093 | | | | | | | | | | | |
| 61.000 | | | | .0009 | | | | | | | | | | | |
| 63.000 | | | | .0093 | | | | | | | | | | | |
| 70.000 | | | | .0009 | | | | | | | | | | | |
| 76.500 | | | | .0064 | | | | | | | | | | | |
| 109.000 | | | | .0131 | | | | | | | | | | | |
| 106.000 | | | | .0015 | | | | | | | | | | | |
| 135.000 | | | | .0042 | | | | | | | | | | | |
| 140.000 | | | | .0177 | | | | | | | | | | | |
| 141.400 | | | | .0123 | | .0026 | | | | | | | | | |
| 151.000 | | | | .0145 | | | | | | | | | | | |
| 170.000 | | | | .0123 | | .0026 | | | | | | | | | |
| X% | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| P=1 | | | | | | | | | | | | | | | |
| 1.000 | .0624 | .0620 | .0522 | .0524 | .0625 | .0516 | .0526 | .0518 | .0497 | .0505 | .0523 | .0511 | .0567 | .0582 | |
| 21.500 | .0547 | | | .0419 | | | | | .0505 | | | | .0521 | | |
| 63.000 | .0006 | | | | | | | | .0005 | | | | .0004 | | |
| 64.000 | | | | | | | | | | | | | .0004 | | |
| 65.000 | | | | | .0008 | | | | | | | | .0004 | | |
| 106.000 | .0271 | | | .0180 | | | | | .0054 | | | | .0004 | | |
| 111.000 | | | | .0329 | | | | | | | | | .0004 | | |
| 112.000 | | | | .0362 | | | | | | | | | .0004 | | |
| 113.000 | | | | .0023 | | | | | | | | | .0004 | | |
| 134.000 | .0014 | | | .0023 | | | | | .0038 | | | | .0004 | | |
| 140.000 | .0044 | | | .0033 | | | | | .0043 | | | | .0004 | | |
| 170.000 | .0410 | .0750 | .0000 | .0250 | .9500 | .9750 | 1.0000 | 1.0190 | 1.0140 | 1.0250 | 1.0350 | 1.0400 | 1.0500 | | |

(RTN923)

AEDC VA332 OMB 01 ORB, FUSELAGE

MACH (1) = 6.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/D

X / L .1250 .1250 .1300 .1400 .1500 .1560 .1600 .1620 .1670 .1690 .1700 .1760 .1800 .1810 .1820

| | | | | | | | | | | | | | | |
|---------|--|-------|--|-------|-------|--|--|--|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 136.000 | | | | | | | | | | | | | .0090 | .0136 |
| 159.200 | | | | | | | | | | | .0051 | | | |
| 170.700 | | | | | | | | | .0166 | | | | | |
| 171.900 | | | | | | | | | | .0877 | | .0635 | | |
| 173.400 | | .0116 | | | .0435 | | | | | | .4000 | .4250 | .4500 | .4750 |
| 190.000 | | | | .0222 | .0698 | | | | | | | | | |

X / L .1830 .1900 .1910 .2000 .2250 .2500 .2750 .3000 .3250 .3500 .3750 .3960 .4250 .4500 .4750

| | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| PHI | | | | | | | | | | | | | | |
| .000 | .0939 | .0864 | .0000 | .0751 | .0775 | .0711 | .0816 | .0767 | .0760 | .0760 | .0727 | .0673 | .0652 | |
| 11.500 | | .0907 | | | | .0808 | | | | | | | | |
| 12.000 | | | | | | .0888 | | | | | .0738 | | | |
| 21.500 | | | | | | | | | | | | | | |
| 23.500 | | | | | | | | | | | | | | |
| 24.500 | | .1074 | | | | .1008 | | | | | | | | |
| 31.500 | | .1182 | | | | | | | | | | | | |
| 34.000 | | | .1119 | | | .0888 | | | | | | | | |
| 35.000 | | .1070 | | | | .0908 | | | | | | | | |
| 40.000 | | | | | | .0076 | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | .0017 | | | |
| 59.500 | | | | | | | | | | | | | | |
| 61.000 | | | | | | .0166 | | | | | | | | |
| 65.000 | | | | | | .0181 | | | | | | | | |
| 70.000 | | | | | | .0187 | | | | | | | | |
| 74.500 | | | | | | .0189 | | | | | .0146 | | | |
| 105.000 | | | | | | | | | | | | | | |
| 108.000 | | | | | | .0132 | | | | | | | | |
| 135.000 | | | | | | .0011 | | | | | .0009 | | | |
| 140.000 | | | | | .0044 | | | | | | | | | |
| 143.400 | .0072 | | .0102 | | | | | | | | | | | |
| 151.000 | | | | .0141 | | .0017 | | | | | .0012 | | | |
| 190.000 | | | | | .0029 | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X / L .5000 .5250 .5500 .5750 .6000 .6250 .6500 .6750 .7000 .7250 .7500 .7750 .8000 .8250 .8500 | | | | | | | | | | | | | | |
| PHI | | | | | | | | | | | | | | |
| .000 | .0627 | .0644 | .0635 | .0645 | .0653 | .0650 | .0671 | .0660 | .0672 | .0674 | .0723 | .0715 | .0617 | .0670 |
| 21.500 | | | | | .0558 | | | | .0672 | | | | .0720 | |
| 63.000 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | |
| 65.500 | | | | | .0008 | | | | | | | | | |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OH-6 (AEDC VA352)

(RTK925)

AEDC VA352 OH-6 01 ORG. FUELS

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUELS DEPENDENT VARIABLE MU/NO

| PHI | .5500 | .5210 | .5100 | .5750 | .1000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .8000 | .8250 | .8290 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|
| 106.000 | .0289 | | | .0096 | | | | .0039 | | | | .0008 | | .0008 |
| 111.000 | | | | .5174 | | | | | | | | | | |
| 112.000 | | | | .0157 | | | | | | | .0032 | | | |
| 113.000 | | | | | | | | | .0040 | | | | | |
| 115.000 | | | | .0021 | | | | | .0015 | | | | | |
| 116.000 | .0014 | | | | | | | | | | | | | .0026 |
| 149.000 | .0012 | | | | | | | | | | | | | |
| 150.000 | .0000 | .6750 | .6000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | |
| PHI | .0000 | .0000 | .0075 | .0912 | .0272 | .2996 | .1937 | .3111 | | .3474 | .3374 | .3245 | | |
| 21.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | | .2641 | | .2956 | | |
| 29.000 | | | | | | .0038 | | | | | | | | |
| 32.000 | | | | .0012 | | | | | | | | | | |
| 45.000 | | | | .0112 | | | | | | | | | | |
| 47.000 | | | | | | .0024 | | | | | | | | |
| 60.000 | | | | .0004 | | | | | | | | | | |
| 104.000 | | | | .0007 | | | | | | | | | | |
| 112.000 | | | | | | .0024 | | | .0030 | | | | | |
| 113.000 | | | | | | | | | | | | | | |



AEDC VAS32 OMB 01 ORS. FUSELAGE

(RTRB28) (25 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XIMP = .0000 IN.
 STEP = 22.5803 IN. XIMP = .0000 IN.
 STEP = 16.3219 IN. XIMP = .0000 IN.
 SCALE = .5175 SCALE

PARAMETRIC DATA

BETA = -5.000 RN/L = 2.000
 9, FLAP = 10.000 ELEVON = 10.000
 MAWHT = 1.000

WACH (1) = 8.000 ALPHA (1) = 30.000 T1 = 95.450 Q1 = 1.983 HIEEF = .035

SECTION (1) GREATER FUSELAGE DEPENDENT VARIABLE MU/AD

| Y/L | .0000 | .0059 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0780 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | | | | | | | | | | | | | | | .1217 |
| 14.000 | | | | | | | | .2122 | | | | | | | .1324 |
| 20.000 | | | | | | | | .2087 | | | | | | | .1490 |
| 22.770 | | | | | | | | .1073 | | | | | | | .0807 |
| 24.500 | | | | | | | | .0810 | | | | | | | |
| 31.000 | | | | | | | | .0348 | | | | .0576 | | | |
| 39.000 | | | | | | | | .0149 | | .0084 | | | | | .0163 |
| 42.900 | | | | | .0386 | | | | | | | | | | .0085 |
| 48.000 | | | .0108 | | | | | | | | | | | | |
| 119.000 | | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
| 140.000 | | | | | | | | | | | | | | | |

SECTION (2) GREATER FUSELAGE DEPENDENT VARIABLE MU/AD

| Y/L | .0000 | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0049 | .0000 | .0000 | .0000 | .0000 | .0123 | .0000 | .0000 |
| 10.000 | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | |
| 24.500 | | | | | | | | | | | | | | | |
| 28.000 | | | | | | | | | | | | | | | |
| 31.000 | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 42.900 | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | |
| 119.000 | | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3750 | .4000 | .4250 | .4500 | .4750 |
| 140.000 | | | | | | | | | | | | | | | |



REGULATED DATA LISTING FOR OMB (AEDC VA352)

(RTK926)

DATA 1 1 3 8.000 ALPHA 1 1 3 30.000

AEDC CLASS OMB 01 ORB. FUSELAGE

SECTION 1: RESTRICTED FUSELAGE DEPENDENT VARIABLE MU40

| 1/1 | 1.035 | 1.560 | 1.510 | 2.000 | 2.250 | 2.200 | 2.750 | 3.000 | 3.250 | 3.500 | 3.750 | 4.000 | 4.250 | 4.500 | 4.750 |
|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 18.000 | | | | | | | | .0718 | | | | .0000 | | | |
| 21.000 | | | | | | | | .0000 | | | | | | | |
| 24.000 | | | | .0000 | | | | | | | | | | | |
| 27.000 | | | | .1108 | | | | | | | | | | | |
| 30.000 | | | | .1158 | | | | .0976 | | | | | | | |
| 33.000 | | | | .1203 | | | | .1000 | | | | | | | |
| 36.000 | | | | .0517 | | | | .1007 | | | | | | | |
| 39.000 | | | | | | | | .0196 | | | | | | | |
| 42.000 | | | | | | | | .0420 | | | | .0085 | | | |
| 45.000 | | | | | | | | .0306 | | | | | | | |
| 48.000 | | | | | | | | .0249 | | | | | | | |
| 51.000 | | | | .0256 | | | | | | | | | | | |
| 54.000 | | | | | | | | .0175 | | | | .0157 | | | |
| 57.000 | | | | | | | | .0023 | | | | .0012 | | | |
| 60.000 | | | | .0000 | | | | | | | | | | | |
| 63.000 | | | | .0056 | | | .0032 | .0019 | | | | .0007 | | | |
| 66.000 | | | | .0000 | .0000 | .6000 | .6250 | .6500 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| 69.000 | | | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 72.000 | | | | | | | | .0016 | | | | | | | |
| 75.000 | | | | .0027 | | | | | | | | | | .0009 | |
| 78.000 | | | | .0228 | | | .0383 | | | | | | | .0037 | |
| 81.000 | | | | .0314 | | | | | | | | | | | .0133 |
| 84.000 | | | | .0286 | | | | | | | | | | | |
| 87.000 | | | | .0019 | | | | .0040 | | | | | | | |
| 90.000 | | | | .0048 | | | .0035 | | | | | | | | .0023 |
| 93.000 | | | | .0000 | .0000 | .9500 | .9750 | 1.0000 | 1.0140 | 1.0250 | 1.0360 | 1.0470 | 1.0580 | 1.0690 | 1.0800 |

END

| 1/1 | 1.035 | 1.560 | 1.510 | 2.000 | 2.250 | 2.200 | 2.750 | 3.000 | 3.250 | 3.500 | 3.750 | 4.000 | 4.250 | 4.500 | 4.750 |
|--------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 18.000 | | | | | | | | | | | | | | | |
| 21.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .0000 | | | | | | | | | | | |
| 27.000 | | | | .1108 | | | | | | | | | | | |
| 30.000 | | | | .1158 | | | | .0976 | | | | | | | |
| 33.000 | | | | .1203 | | | | .1000 | | | | | | | |
| 36.000 | | | | .0517 | | | | .1007 | | | | | | | |
| 39.000 | | | | | | | | .0196 | | | | .0085 | | | |
| 42.000 | | | | | | | | .0420 | | | | | | | |
| 45.000 | | | | | | | | .0306 | | | | | | | |
| 48.000 | | | | | | | | .0249 | | | | | | | |
| 51.000 | | | | .0256 | | | | | | | | | | | |
| 54.000 | | | | | | | | .0175 | | | | .0157 | | | |
| 57.000 | | | | | | | | .0023 | | | | .0012 | | | |
| 60.000 | | | | .0000 | | | | | | | | | | | |
| 63.000 | | | | .0056 | | | .0032 | .0019 | | | | .0007 | | | |
| 66.000 | | | | .0000 | .0000 | .6000 | .6250 | .6500 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| 69.000 | | | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 72.000 | | | | | | | | .0016 | | | | | | | |
| 75.000 | | | | .0027 | | | | | | | | | | .0009 | |
| 78.000 | | | | .0228 | | | .0383 | | | | | | | .0037 | |
| 81.000 | | | | .0314 | | | | | | | | | | | .0133 |
| 84.000 | | | | .0286 | | | | | | | | | | | |
| 87.000 | | | | .0019 | | | | .0040 | | | | | | | |
| 90.000 | | | | .0048 | | | .0035 | | | | | | | | .0023 |
| 93.000 | | | | .0000 | .0000 | .9500 | .9750 | 1.0000 | 1.0140 | 1.0250 | 1.0360 | 1.0470 | 1.0580 | 1.0690 | 1.0800 |

END



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTK228)

MACH (1) = 8.000 ALPHA (1) = 30.000

SECTION 1: 110RB1NER FUSELAGE DEPENDENT VARIABLE MU/MD

| X/L | .6500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 52.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 71.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 85.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 118.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 133.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (2) = 8.000 ALPHA (2) = 35.000 T1 = 99.450 Q1 = 1.983 MEF = .035

SECTION 1: 110RB1NER FUSELAGE DEPENDENT VARIABLE MU/MD

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 23.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 35.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 119.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (3) = 8.000 ALPHA (3) = 40.000 T1 = 99.450 Q1 = 1.983 MEF = .035

SECTION 1: 110RB1NER FUSELAGE DEPENDENT VARIABLE MU/MD

| X/L | .1250 | .1250 | .1300 | .1400 | .1500 | .1600 | .1600 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 15.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 29.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 148.200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTKB26)

MACH (1) = 0.1000 ALPHA (2) = 35.0000

AEDC VA352 OMB 01 ORB. FUSELAGE

SECTION (1) ORBITTER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 106.000 | .0306 | | | | .0634 | | | .0170 | | | | | .0071 | | |
| 111.000 | | | | | .0577 | | | | | | | | | | .0101 |
| 112.000 | | | | | .0473 | | | | | | | | | | |
| 113.000 | | | | | | | | | | .0362 | | | | | |
| 114.000 | .0018 | | | | .0031 | | | .0046 | | | .0061 | | | | |
| 135.000 | | | | | .0020 | | | .0026 | | | | | | | .0025 |
| 140.000 | | | | | | | | | | | | | | | |

X/L .6500 .6750 .7000 .7250 .7500 .7750 .8000 .8250 .8500 .8750 .9000 .9250 .9500 .9750 1.0000 1.0130 1.0140 1.0200 1.0360 1.0500

| X/L | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0200 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | |
| 106.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 111.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 112.000 | | | | | | | | | | |
| 113.000 | | | | | | | | | | |
| 114.000 | .0029 | | | .0045 | | .3179 | | | | .3337 |
| 135.000 | .0032 | | | | | | | | | |
| 140.000 | | | | .0079 | | | | | | |
| 106.000 | .0049 | | | .0043 | | .0037 | | .0046 | | |
| 108.000 | .0087 | | | | | | | | | |
| 112.000 | | | | | | | | | | |
| 113.000 | | | | | | | | | | |



AEDC V10312 OH-6B 01 DIRT, FUELSAGE

(RTK927) (25 APR 74)

REFERENCE DATA

SREF = .6239 SLPFT, XREF = .0000 IN, YREF = .0000 IN, ZREF = .0000 IN, SCALE = .00175 SCALE

DELTA = .0000 RN/L = 3.720, U.F.LAP = 10.0000 ELEVON = 10.0000, HAWAHT = 1.0000

PARAMETRIC DATA

MACH (1) = 0.0000 ALPHA (1) = 25.0000 T1 = 97.367 Q1 = 3.936 HREF = .049

SECTION 1: INCREMENTED FUELSAGE DEPENDENT VARIABLE HU/HO

Table with columns for Y/L, P/H, and various parametric values. Includes rows for Y/L values from 0.000 to 1.000 and P/H values from 0.000 to 1.000.

P/H:

Table with columns for Y/L, P/H, and various parametric values. Includes rows for P/H values from 0.000 to 1.000.



TABULATED DATA LISTING FOR CHMB (AEDC VAS32)

AEDC VAS32 CHMB C1 OPS. FUELSAGE (RTS27)

MACH (1) = 0.000 ALPHA (1) = 29.000

SECTION 1 - OPERATED FUELSAGE DEPENDENT VARIABLE HJ/HC

| PL | 1.930 | 1.900 | 1.810 | 1.8000 | 1.8250 | 1.8500 | 1.8750 | 1.9000 | 1.9250 | 1.9500 | 1.9750 | 1.9900 | 1.9950 | 1.9990 |
|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P=1 | | | | | | | | | | | | | | |
| 12.000 | | | | | .0234 | | | | | | | | .0227 | |
| 21.000 | | | | | .0220 | | | | | | | | | |
| 23.000 | | | | | .0232 | | | | | | | | | |
| 24.000 | | | | .0758 | | | | | | | | | | |
| 31.000 | | | | .0762 | | | | | | | | | | |
| 34.000 | | | | .0632 | | | | | | | | | | |
| 35.000 | | | | .0624 | | | | | | | | | | |
| 40.000 | | | | .0671 | | | | | | | | | | |
| 43.000 | | | | .0347 | | | | | | | | | | |
| 51.000 | | | | .0119 | | | | | | | | | .0034 | |
| 53.000 | | | | .0248 | | | | | | | | | | |
| 55.000 | | | | .0218 | | | | | | | | | | |
| 56.000 | | | | .0141 | | | | | | | | | | |
| 100.000 | | | | .0161 | | | | | | | | | | |
| 105.000 | | | | .0119 | | | | | | | | | | |
| 140.000 | | | | .0093 | | | | | | | | | | |
| 141.400 | .0070 | | | .0293 | .0017 | .0000 | .0250 | .0500 | .0750 | .1000 | .1250 | .1500 | .1750 | .2000 |
| 150.000 | .0000 | .0200 | .0300 | .0400 | .0500 | .0600 | .0700 | .0800 | .0900 | .1000 | .1100 | .1200 | .1300 | .1400 |
| P=1 | | | | | | | | | | | | | | |
| 1005 | .0417 | .0412 | .0410 | .0407 | .0401 | .0401 | .0401 | .0401 | .0401 | .0401 | .0401 | .0401 | .0401 | .0401 |
| 21.000 | .0494 | | | .0428 | .0437 | .0451 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 |
| 23.000 | .0018 | | | .0392 | | | .0451 | .0451 | .0451 | .0451 | .0451 | .0451 | .0451 | .0451 |
| 24.000 | | | | | | | .0011 | | | | | | | |
| 25.000 | | | | .0018 | | | | | | | | | | |
| 26.000 | | | | .0410 | | | .0280 | | | | | | | |
| 100.000 | .0183 | | | .0229 | | | .0229 | | | | | | | |
| 110.000 | | | | .0206 | | | .0206 | | | | | | | |
| 112.000 | | | | .0010 | | | .0010 | | | | | | | |
| 113.000 | | | | .0007 | | | .0007 | | | | | | | |
| 115.000 | .0628 | | | .0010 | | | .0010 | .0432 | | | | | | .0076 |
| 140.000 | .0090 | | | .0007 | | | .0007 | .0043 | | | | | | |
| 145.000 | .0400 | .0750 | .1000 | .1250 | .1500 | .1750 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 |



TABULATED DATA LISTING FOR OMS (MEDC VARS)

(01/1987)

HELD VALUE OMS ON OMS FUELAGE

DATE 01 01 1987 12 31 23 00Z

EXPERIMENT VARIABLE NAME

| NAME | 0000 | 0010 | 0020 | 0030 | 0040 | 0050 | 0060 | 0070 | 0080 | 0090 | 0100 | 0110 | 0120 | 0130 | 0140 | 0150 | 0160 | 0170 | 0180 | 0190 | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| 0000 | | | | | | | | | | | | | | | | | | | | | |
| 0010 | | | | | | | | | | | | | | | | | | | | | |
| 0020 | | | | | | | | | | | | | | | | | | | | | |
| 0030 | | | | | | | | | | | | | | | | | | | | | |
| 0040 | | | | | | | | | | | | | | | | | | | | | |
| 0050 | | | | | | | | | | | | | | | | | | | | | |
| 0060 | | | | | | | | | | | | | | | | | | | | | |
| 0070 | | | | | | | | | | | | | | | | | | | | | |
| 0080 | | | | | | | | | | | | | | | | | | | | | |
| 0090 | | | | | | | | | | | | | | | | | | | | | |
| 0100 | | | | | | | | | | | | | | | | | | | | | |
| 0110 | | | | | | | | | | | | | | | | | | | | | |
| 0120 | | | | | | | | | | | | | | | | | | | | | |
| 0130 | | | | | | | | | | | | | | | | | | | | | |
| 0140 | | | | | | | | | | | | | | | | | | | | | |
| 0150 | | | | | | | | | | | | | | | | | | | | | |
| 0160 | | | | | | | | | | | | | | | | | | | | | |
| 0170 | | | | | | | | | | | | | | | | | | | | | |
| 0180 | | | | | | | | | | | | | | | | | | | | | |
| 0190 | | | | | | | | | | | | | | | | | | | | | |

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EXPERIMENT VARIABLE NAME

| NAME | 0000 | 0010 | 0020 | 0030 | 0040 | 0050 | 0060 | 0070 | 0080 | 0090 | 0100 | 0110 | 0120 | 0130 | 0140 | 0150 | 0160 | 0170 | 0180 | 0190 | |
|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| 0000 | | | | | | | | | | | | | | | | | | | | | |
| 0010 | | | | | | | | | | | | | | | | | | | | | |
| 0020 | | | | | | | | | | | | | | | | | | | | | |
| 0030 | | | | | | | | | | | | | | | | | | | | | |
| 0040 | | | | | | | | | | | | | | | | | | | | | |
| 0050 | | | | | | | | | | | | | | | | | | | | | |
| 0060 | | | | | | | | | | | | | | | | | | | | | |
| 0070 | | | | | | | | | | | | | | | | | | | | | |
| 0080 | | | | | | | | | | | | | | | | | | | | | |
| 0090 | | | | | | | | | | | | | | | | | | | | | |
| 0100 | | | | | | | | | | | | | | | | | | | | | |
| 0110 | | | | | | | | | | | | | | | | | | | | | |
| 0120 | | | | | | | | | | | | | | | | | | | | | |
| 0130 | | | | | | | | | | | | | | | | | | | | | |
| 0140 | | | | | | | | | | | | | | | | | | | | | |
| 0150 | | | | | | | | | | | | | | | | | | | | | |
| 0160 | | | | | | | | | | | | | | | | | | | | | |
| 0170 | | | | | | | | | | | | | | | | | | | | | |
| 0180 | | | | | | | | | | | | | | | | | | | | | |
| 0190 | | | | | | | | | | | | | | | | | | | | | |

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MACH (1) = 8.000 ALPHA (2) = 30.000
 AEDC VAS32 OMB 01 ORR. FUSELAGE (RTN827)

SECTION 11: ORRITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X1 | .1250 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 155,000 | | | | | | | | | | | | | | | |
| 179,200 | | | | | | | | | | | | | | .0162 | .0206 |
| 170,750 | | | | | | | | | | | | .0153 | | | |
| 171,500 | | | | | | | | | | | | | | | |
| 173,450 | | | | | | | | | | | | | | | |
| 170,500 | | .0082 | | | .0379 | .0470 | | | | .0194 | .0885 | | .0466 | | |
| 171,100 | .1030 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3700 | .3750 | .4000 | .4250 | .4500 | .4750 |
| P=1 | | | | | | | | | | | | | | | |
| 170,000 | | .0758 | | .0714 | .0000 | .0602 | .0607 | .0579 | .0666 | .0651 | .0590 | .0691 | .0642 | .0618 | .0572 |
| 11,900 | | | | .0758 | | | | | .0665 | | | | | | |
| 12,000 | | | | | | | | | | | | | | | |
| 21,900 | | | | | | | | | | | | | | | |
| 23,700 | | | | | | | | .0751 | | | | | | | |
| 24,700 | | | | | | | | | | | | | | | |
| 31,700 | | | | .0920 | | | | | | | | | | | |
| 34,000 | | | | .1041 | | | | | | | | | | | |
| 35,700 | | | | .0986 | | | | .0847 | | | | | | | |
| 40,000 | | | | .0965 | | | | .0860 | | | | | | | |
| 43,000 | | | | | | | | .0797 | | | | | | | |
| 51,000 | | | | .0356 | | | | .0093 | | | | | | | |
| 57,500 | | | | | | | | | | | | | | | |
| 59,500 | | | | | | | | | | | | | | | |
| 61,000 | | | | | | | | | | | | | | | |
| 62,000 | | | | | | | | | | | | | | | |
| 70,000 | | | | | | | | | | | | | | | |
| 78,500 | | | | .0182 | | | | | | | | | | | |
| 102,000 | | | | | | | | | | | | | | | |
| 108,700 | | | | | | | | | | | | | | | |
| 135,000 | | | | | | | | | | | | | | | |
| 140,000 | | | | .0087 | | | | .0128 | | | | .0102 | | | |
| 141,400 | | .0094 | | | | | | .0011 | | | | .0008 | | | |
| 151,000 | | | .0171 | | | | | | | | | | | | |
| 170,000 | | .0000 | .0290 | .0500 | .0000 | .0250 | .0500 | .0750 | .0000 | .0750 | .0500 | .0750 | .0500 | .0250 | .0000 |
| P=1 | | | | | | | | | | | | | | | |
| 150,000 | | .0591 | .0592 | .0502 | .0658 | .0774 | .0807 | .0592 | .1094 | .1276 | .1442 | .1518 | .1629 | .1967 | |
| 21,000 | | .0605 | | | | .0601 | | | .1141 | | | | | | |
| 63,000 | | .0096 | | | | | | | | | | | | | |
| 64,000 | | | | | | | | | | | | | | | |
| 61,000 | | | | | | | | | .0011 | | | | | | |
| 63,000 | | | | | .0009 | | | | | | | | | | |



RELATED DATA LISTING FOR CH4B (AEDC VAS32)

(RTK927)

AEDC VAS32 CH4B 01 ORB. FUELSLAGE

WASH 11 = 6,000 ALPHA 12 = 30,000

SECTION 1: ORBITER FUELSLAGE DEPENDENT VARIABLE MU/HO

| Y/L | 05000 | 05200 | 05500 | 05750 | 06000 | 06250 | 06500 | 06750 | 07000 | 07250 | 07500 | 07750 | 08000 | 08250 | 08500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| B/H: | | | | | | | | | | | | | | | |
| 174,000 | | | | | .0334 | | | | .0082 | | | | .0036 | | .0028 |
| 111,000 | | | | | | | | | | | | | | | |
| 112,000 | | | | | .0343 | | | | | | | | | | |
| 113,000 | | | | | .0294 | | | | | | | | | | |
| 114,000 | | | | | | | | | | | .0169 | | | | |
| 115,000 | | | | | .0037 | | | | .0048 | | .0027 | | | | |
| 169,000 | | | | | | | | | .0040 | | | | | | |
| 190,000 | | | | | .0043 | | | | | | | | .0031 | | |

WASH 11 = 8,000 ALPHA 12 = 30,000

SECTION 2: ORBITER FUELSLAGE DEPENDENT VARIABLE MU/HO

| Y/L | 05000 | 05200 | 05500 | 05750 | 06000 | 06250 | 06500 | 06750 | 07000 | 07250 | 07500 | 07750 | 08000 | 08250 | 08500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| B/H: | | | | | | | | | | | | | | | |
| 174,000 | | | | .1722 | .1667 | .1454 | .2212 | .3302 | .3467 | .3476 | .3493 | | | | |
| 21,000 | | | | .1700 | | | .2353 | | | | | | | | |
| 39,000 | | | | | | | .0038 | | | | | | | | |
| 52,000 | | | | .0022 | | | | | | | | | | | |
| 57,000 | | | | .0024 | | | | | | | | | | | |
| 61,000 | | | | | | | .0030 | | | | | | | | |
| 100,000 | | | | .0030 | | | | | | | | | | | |
| 109,000 | | | | .0035 | | | .0036 | | | | | | | | |
| 110,000 | | | | | | | .0025 | | | | | | | | |
| 111,000 | | | | | | | | | .0031 | | | | | | |

WASH 11 = 6,000 ALPHA 12 = 30,000 T1 = 97.367 Q1 = 3.936 F1E1 = .049

SECTION 3: ORBITER FUELSLAGE DEPENDENT VARIABLE MU/HO

| Y/L | 05000 | 05200 | 05500 | 05750 | 06000 | 06250 | 06500 | 06750 | 07000 | 07250 | 07500 | 07750 | 08000 | 08250 | 08500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| B/H: | | | | | | | | | | | | | | | |
| 1,000 | | | | .4352 | .2938 | .2494 | .2158 | .1910 | .1619 | .0000 | | | .1364 | .1304 | .1195 |
| 10,000 | | | | | | | | | | | | | | | .1353 |
| 14,000 | | | | | | | | | | | | | | | .1410 |
| 20,000 | | | | | | | | | | | | | | | .1444 |
| 22,000 | | | | | | | | | | | | | | | .0626 |
| 24,000 | | | | | | | | | | | | | | | |
| 29,000 | | | | | | | | | | | | | | | |
| 42,000 | | | | | | | | | | | | | | | |
| 46,000 | | | | | | | | | | | | | | | |
| 61,000 | | | | | | | | | | | | | | | .0086 |
| 119,000 | | | | .0763 | .0252 | .0103 | | | | | .0074 | | | | .0106 |
| 160,000 | | | | | | | | | | | | .0419 | | | |

WASH 11 = 1200 ALPHA 12 = 1300 ALPHA 13 = 1400 ALPHA 14 = 1500 ALPHA 15 = 1600 ALPHA 16 = 1670 ALPHA 17 = 1700 ALPHA 18 = 1800 ALPHA 19 = 1810 ALPHA 20 = 1820

(RTRB27)

AEDC VA352 CH4B 01 ORB. FUSELAGE

MACH (1) = 6.000 ALPHA (3) = 35.000

SECTION 1: ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| MACH | 1.200 | 1.250 | 1.300 | 1.400 | 1.500 | 1.560 | 1.600 | 1.620 | 1.670 | 1.690 | 1.700 | 1.780 | 1.800 | 1.810 | 1.820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Part | | | | | | | | | | | | | | | |
| 10.000 | .1173 | .1073 | .1017 | .0946 | .0958 | | | | | .0545 | | | .0929 | | |
| 11.000 | | | | .1164 | | | | | | | | | | | |
| 20.000 | | | | .1117 | | | | | | | | | | | |
| 25.000 | | | | .1246 | | | | | | | | | | | |
| 30.000 | | | | .0820 | | | | | | | | | | | |
| 40.000 | | | | .0497 | | | | | | | | | | | |
| 101.200 | | | | | | | .0090 | | | | | | | | |
| 140.400 | | | | | | | | | | | | | | .0088 | |
| 146.000 | | | | | | .0111 | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | |
| 170.000 | | | | | | | | | | | | | | .0129 | |
| 170.700 | | | | | | | | | | | | | | | |
| 171.000 | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | .0181 | | | | | | .0183 |
| 180.000 | | | | | .0263 | .0819 | .0620 | | | .0877 | | .0082 | | .0971 | |
| 180.000 | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| 180.000 | | | | .0920 | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .1076 | .0674 | .0762 | .0605 | .0730 | .0816 | .0768 | .0756 | .0803 | .0803 | .0761 | .0771 |
| 31.000 | | | | .1192 | | | | .0834 | | | | | | | .0773 |
| 34.000 | | | | | | | | | | | | | | | |
| 40.000 | | | | .1190 | | | | | | | | | | | |
| 43.000 | | | | .1043 | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | .0355 | | | | | | | | | | | |
| 57.000 | | | | | | | | | | | | | | | |
| 59.000 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 90.000 | | | | .0183 | | | | | | | | | | | |
| 100.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | |
| 120.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | .0053 | | | | | | | | | | | |
| 141.400 | .0076 | | | | | | | | | | | | | | |
| 151.000 | | | | .0131 | .0124 | .0016 | .0013 | | | | | | | | |
| 140.000 | | .0500 | .0250 | .0500 | .0600 | .0250 | .0500 | .0750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |



(RTN827)

AEDC VA352 Q-4B 01 ORG. FUSELAGE

MAXIMUM SPEED 8,000 ALPHA 13.5 35,000

DEPENDENT VARIABLE MU/NO

| INDEPENDENT VARIABLE | 8000 | 8250 | 8500 | 8750 | 9000 | 9250 | 9500 | 9750 | 1,0000 | 1,0250 | 1,0500 | 1,0750 | 1,1000 | 1,1250 | 1,1500 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | | | | |
| 0.000 | .0828 | .0806 | .0984 | .1151 | .1358 | .1636 | .1900 | .1992 | .2141 | .2290 | .2387 | .2324 | .2560 | .2570 | |
| 21.500 | .0827 | | | .1222 | | | | .2180 | | | | | .2560 | .4428 | |
| 43.000 | .0824 | | | | | | | | | | | | | | |
| 64.500 | | | | | | | | .0011 | | | | | | | |
| 86.000 | | | | | | | | | | | | | .0007 | | |
| 107.500 | | | | | | | | .0007 | | | | | | | |
| 129.000 | .0835 | | | | | | | .0187 | .0054 | | | | .0015 | | .0010 |
| 150.500 | | | | | | | | | | | | | | | |
| 172.000 | | | | | | | | .0310 | | | | | | | |
| 193.500 | | | | | | | | .0353 | | | | | | | |
| 215.000 | | | | | | | | | | | | | .0061 | | |
| 236.500 | .0013 | | | | | | | .0027 | .0054 | | | | .0052 | | |
| 258.000 | .0020 | | | | | | | .0026 | .0038 | | | | .0048 | | |

PHI

| INDEPENDENT VARIABLE | 8000 | 8250 | 8500 | 8750 | 9000 | 9250 | 9500 | 9750 | 1,0000 | 1,0250 | 1,0500 | 1,0750 | 1,1000 | 1,1250 | 1,1500 |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | | | | |
| 0.000 | .2401 | .2310 | .2737 | .3244 | .3728 | .3232 | .2422 | .3608 | | .3642 | .3579 | .3510 | | | |
| 21.500 | | | .2641 | | | | | | | | | | | | |
| 43.000 | | | | | | | | .2429 | | | | | | .3232 | |
| 64.500 | | | | | | .0038 | | | | | | | | | |
| 86.000 | | | .0022 | | | | | | | | | | | | |
| 107.500 | | | .0021 | | | | | .0022 | | | | | | | |
| 129.000 | | | .0021 | | | | | | | | | | | | |
| 150.500 | | | .0015 | | | .0024 | | .0028 | | | | | | | |
| 172.000 | | | | | | | | | | | | | | | |
| 193.500 | | | | | | | | | .0034 | | | | | | |



AEDC VA352 OMB O1 ORB. FUSELAGE

(RTNS28) (23 APR 74)

REFERENCE DATA

STEP # .0238 39. FT. XHP# = .0000 IN.
 STEP # .0260 603 IN. WHP# = .0000 IN.
 STEP # 16.3919 IN. ZHP# = .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

SETA = 9.000 RN/L = 3.720
 S.F.LAP = 10.000 ELEVON = 10.000
 HAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 97.300 QI = 3.930 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .0000 .0050 .0100 .0200 .0250 .0300 .0400 .0500 .0600 .0700 .0750 .0760 .0800 .0900 .1000

Phi .000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000

10.000 .1909

14.000 .1883

20.000 .1106

24.000 .0637

30.000 .0436

40.000 .0209

50.000 .0467

100.000 .1200 .1250 .1300 .1400 .1500 .1560 .1600 .1620 .1670 .1690 .1700 .1760 .1800 .1810 .1820

Phi .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000

10.070 .0981

20.000 .0658

30.000 .1084

40.000 .0946

50.000 .0657

100.000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000 .0000

140.000 .0000

150.000 .0000

170.000 .0000

180.000 .0000

190.000 .0000

200.000 .0000

210.000 .0000

220.000 .0000

230.000 .0000

240.000 .0000

250.000 .0000

260.000 .0000



TABULATED DATA LISTING FOR Q4B (AEDC VAS32)

(RTN928)

AEDC VAS32 Q4B Q1 OPS. FUELSAGE

WACH 1 1 6.000 ALPHA (1) = 25.000

SECTION 1: OPERATED FUELSAGE DEPENDENT VARIABLE: M/J/G

| WACH | 1 | 1 | 6.000 | ALPHA (1) = | 25.000 | AEDC VAS32 | Q4B Q1 | OPS. FUELSAGE | DEPENDENT VARIABLE: M/J/G | | | | | | |
|------|-------|-------|-------|-------------|--------|------------|--------|---------------|---------------------------|-------|-------|-------|-------|-------|-------|
| 171 | .1832 | .1955 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| 181 | | | | | | | | | | | | | | | |
| 191 | | | | | | | | | | | | | | | |
| 201 | | | | | | | | | | | | | | | |
| 211 | | | | | | | | | | | | | | | |
| 221 | | | | | | | | | | | | | | | |
| 231 | | | | | | | | | | | | | | | |
| 241 | | | | | | | | | | | | | | | |
| 251 | | | | | | | | | | | | | | | |
| 261 | | | | | | | | | | | | | | | |
| 271 | | | | | | | | | | | | | | | |
| 281 | | | | | | | | | | | | | | | |
| 291 | | | | | | | | | | | | | | | |
| 301 | | | | | | | | | | | | | | | |
| 311 | | | | | | | | | | | | | | | |
| 321 | | | | | | | | | | | | | | | |
| 331 | | | | | | | | | | | | | | | |
| 341 | | | | | | | | | | | | | | | |
| 351 | | | | | | | | | | | | | | | |
| 361 | | | | | | | | | | | | | | | |
| 371 | | | | | | | | | | | | | | | |
| 381 | | | | | | | | | | | | | | | |
| 391 | | | | | | | | | | | | | | | |
| 401 | | | | | | | | | | | | | | | |
| 411 | | | | | | | | | | | | | | | |
| 421 | | | | | | | | | | | | | | | |
| 431 | | | | | | | | | | | | | | | |
| 441 | | | | | | | | | | | | | | | |
| 451 | | | | | | | | | | | | | | | |
| 461 | | | | | | | | | | | | | | | |
| 471 | | | | | | | | | | | | | | | |
| 481 | | | | | | | | | | | | | | | |
| 491 | | | | | | | | | | | | | | | |
| 501 | | | | | | | | | | | | | | | |
| 511 | | | | | | | | | | | | | | | |
| 521 | | | | | | | | | | | | | | | |
| 531 | | | | | | | | | | | | | | | |
| 541 | | | | | | | | | | | | | | | |
| 551 | | | | | | | | | | | | | | | |
| 561 | | | | | | | | | | | | | | | |
| 571 | | | | | | | | | | | | | | | |
| 581 | | | | | | | | | | | | | | | |
| 591 | | | | | | | | | | | | | | | |
| 601 | | | | | | | | | | | | | | | |
| 611 | | | | | | | | | | | | | | | |
| 621 | | | | | | | | | | | | | | | |
| 631 | | | | | | | | | | | | | | | |
| 641 | | | | | | | | | | | | | | | |
| 651 | | | | | | | | | | | | | | | |
| 661 | | | | | | | | | | | | | | | |
| 671 | | | | | | | | | | | | | | | |
| 681 | | | | | | | | | | | | | | | |
| 691 | | | | | | | | | | | | | | | |
| 701 | | | | | | | | | | | | | | | |
| 711 | | | | | | | | | | | | | | | |
| 721 | | | | | | | | | | | | | | | |
| 731 | | | | | | | | | | | | | | | |
| 741 | | | | | | | | | | | | | | | |
| 751 | | | | | | | | | | | | | | | |
| 761 | | | | | | | | | | | | | | | |
| 771 | | | | | | | | | | | | | | | |
| 781 | | | | | | | | | | | | | | | |
| 791 | | | | | | | | | | | | | | | |
| 801 | | | | | | | | | | | | | | | |
| 811 | | | | | | | | | | | | | | | |
| 821 | | | | | | | | | | | | | | | |
| 831 | | | | | | | | | | | | | | | |
| 841 | | | | | | | | | | | | | | | |
| 851 | | | | | | | | | | | | | | | |
| 861 | | | | | | | | | | | | | | | |
| 871 | | | | | | | | | | | | | | | |
| 881 | | | | | | | | | | | | | | | |
| 891 | | | | | | | | | | | | | | | |
| 901 | | | | | | | | | | | | | | | |
| 911 | | | | | | | | | | | | | | | |
| 921 | | | | | | | | | | | | | | | |
| 931 | | | | | | | | | | | | | | | |
| 941 | | | | | | | | | | | | | | | |
| 951 | | | | | | | | | | | | | | | |
| 961 | | | | | | | | | | | | | | | |
| 971 | | | | | | | | | | | | | | | |
| 981 | | | | | | | | | | | | | | | |
| 991 | | | | | | | | | | | | | | | |
| 1001 | | | | | | | | | | | | | | | |



AEDC VAS32 OMB 01 ORB. FUSELAGE (RTM828)

WACH (1) = 6,000 ALPHA (1) = 25,000

SECTION (1) ORB. FUSELAGE DEPENDENT VARIABLE HJ/HD

| W/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21,000 | | | | | | | | | | | | |
| 30,000 | | | | | | | | | | | | |
| 42,000 | | | | | | .0045 | | .2412 | | | | .3493 |
| 55,000 | | | .0033 | | | | | | | | | |
| 65,000 | | | .0045 | | | | | | | | | |
| 80,000 | | | .0077 | | | .0152 | | | | | | |
| 100,000 | | | .0242 | | | .0259 | | | | | | |
| 120,000 | | | | | .0089 | | | | | | | |
| 140,000 | | | | | | | .0085 | | | | | |

WACH (1) = 6,000 ALPHA (2) = 30,000 TI = 97,300 dl = 3,930 HREF = .049

SECTION (1) ORB. FUSELAGE DEPENDENT VARIABLE HJ/HD

| W/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 10,000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14,000 | | | | | | | | | | | | | | .1229 |
| 20,000 | | | | | | | | .2179 | | | | | | .1352 |
| 22,000 | | | | | | | | .2104 | | | | | | .1534 |
| 24,000 | | | | | | | | .1104 | | | | | | .0899 |
| 34,000 | | | | | | | | .0827 | | | | | | |
| 39,000 | | | | | | | | .0341 | | | | | | |
| 40,000 | | | | | | | | | | | | .0871 | | |
| 43,000 | | | | | | | | | | | | | | .0153 |
| 110,000 | | | | | .0114 | .0364 | | .0153 | | .0077 | | .1780 | .1600 | .1820 |
| 140,000 | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1600 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |

WACH (1) = 6,000 ALPHA (2) = 30,000 TI = 97,300 dl = 3,930 HREF = .049

SECTION (1) ORB. FUSELAGE DEPENDENT VARIABLE HJ/HD

| W/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 10,000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14,000 | | | | | | | | | | | | | | .0000 |
| 20,000 | | | | | | | | .1133 | | | | | | .0000 |
| 22,000 | | | | | | | | .1045 | | | | | | .0000 |
| 24,000 | | | | | | | | .1239 | | | | | | .0000 |
| 34,000 | | | | | | | | .0999 | | | | | | .0000 |
| 39,000 | | | | | | | | .0688 | | | | | | .0000 |
| 40,000 | | | | | | | | | | | | | | .0000 |
| 43,000 | | | | | | | | | | | | | | .0000 |
| 110,000 | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1600 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
| 140,000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTN28)

AECV VAS32 OMB 01 ORE, FUELS

ALPHA (2) 30,000

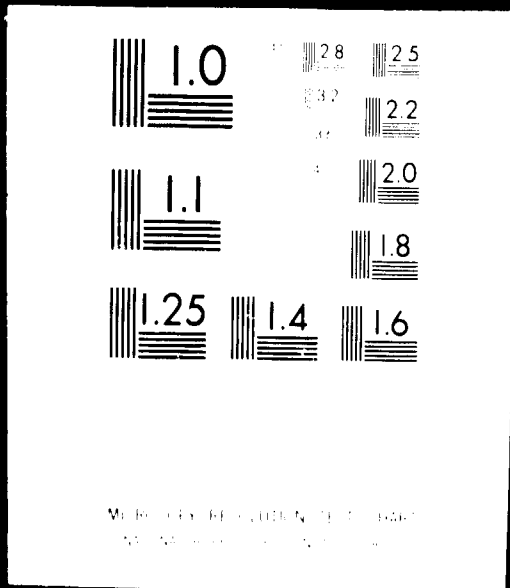
PERCENT VARIABLE H/M/O

| PERCENT VARIABLE H/M/O | 0.000 | 0.005 | 0.010 | 0.015 | 0.020 | 0.025 | 0.030 | 0.035 | 0.040 | 0.045 | 0.050 | 0.055 | 0.060 | 0.065 | 0.070 | 0.075 | 0.080 | 0.085 | 0.090 | 0.095 | 0.100 | |
|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| 0.000 | | | | | | | | | | | | | | | | | | | | | | |
| 0.005 | | | | | | | | | | | | | | | | | | | | | | |
| 0.010 | | | | | | | | | | | | | | | | | | | | | | |
| 0.015 | | | | | | | | | | | | | | | | | | | | | | |
| 0.020 | | | | | | | | | | | | | | | | | | | | | | |
| 0.025 | | | | | | | | | | | | | | | | | | | | | | |
| 0.030 | | | | | | | | | | | | | | | | | | | | | | |
| 0.035 | | | | | | | | | | | | | | | | | | | | | | |
| 0.040 | | | | | | | | | | | | | | | | | | | | | | |
| 0.045 | | | | | | | | | | | | | | | | | | | | | | |
| 0.050 | | | | | | | | | | | | | | | | | | | | | | |
| 0.055 | | | | | | | | | | | | | | | | | | | | | | |
| 0.060 | | | | | | | | | | | | | | | | | | | | | | |
| 0.065 | | | | | | | | | | | | | | | | | | | | | | |
| 0.070 | | | | | | | | | | | | | | | | | | | | | | |
| 0.075 | | | | | | | | | | | | | | | | | | | | | | |
| 0.080 | | | | | | | | | | | | | | | | | | | | | | |
| 0.085 | | | | | | | | | | | | | | | | | | | | | | |
| 0.090 | | | | | | | | | | | | | | | | | | | | | | |
| 0.095 | | | | | | | | | | | | | | | | | | | | | | |
| 0.100 | | | | | | | | | | | | | | | | | | | | | | |



4 of 7

N75 18290 UNCLAS



(RTK528)

AEDC VA352 OMB 01 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (3) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HO

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 63.000 | .0015 | | | | | | | | | | | | | | |
| 64.000 | | | | | .0019 | | | | | | | | | | |
| 65.000 | | | | | .0027 | | | | | | | | | | .0017 |
| 65.500 | | | | | .0534 | | | | | | | | | | .0136 |
| 106.000 | .0269 | | | | | | | | | | | | | | |
| 111.000 | | | | | | | | | | | | | | | .0240 |
| 112.000 | | | | | .0367 | | | | | | | | | | |
| 113.000 | | | | | .0339 | | | | | | | | | | |
| 116.000 | | | | | | | | | | .0600 | | | | | |
| 136.000 | .0019 | | | | .0035 | | | | .0046 | | | | | | |
| 149.000 | | | | | | | | | | .0055 | | | | | |
| 160.000 | .0028 | | | | .0030 | | | | .0042 | | | | | | .0038 |

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | | | | | | | | | | | | |
| 52.500 | | | | | | .2949 | | | | | | .3709 |
| 55.000 | | | .0064 | | | .0080 | | | | | | |
| 65.000 | | | .0082 | | | .0069 | | | | | | |
| 68.000 | | | | | | | | | | | | |
| 100.000 | | | .0081 | | | | | | | | | |
| 106.000 | | | .0094 | | | | | | | | | |
| 112.000 | | | | | | .0086 | | | | | | |
| 113.000 | | | | | | | | | .0067 | | | |



(RTKB29)

AEDC VA352 OMB 02 ORB. FUSELAGE

MACH (1) = 0.1000 ALPHA (1) = 29.0000

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE MU/HO

| Y/L | .1930 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | .0000 | | | | | | | | .0314 | | | |
| 21.500 | | | | | | | | .0624 | | | | | | | |
| 23.000 | | | | .0732 | | | | | | | | | | | |
| 24.000 | | | | .0845 | | | | | | | | | | | |
| 31.500 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | .0819 | | | | | | | | | | | |
| 35.000 | | | | .0933 | | | | .0648 | | | | | | | |
| 40.000 | | | | | | | | .0655 | | | | | | | |
| 51.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 57.500 | | | | | | | | .0000 | | | | | | | |
| 59.500 | | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.500 | | | | .0000 | | | | | | | | | | | |
| 105.000 | | | | | | | | .0000 | | | | | | | |
| 106.500 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 140.000 | | | | | | | | .0000 | | | | | | | |
| 141.400 | | | | | | | | .0000 | | | | | | | |
| 151.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 180.000 | | | | | | | | .0000 | | | | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0416 | .0411 | .0409 | .0425 | .0423 | .0427 | .0445 | .0434 | .0438 | .0477 | .0532 | .0542 | .0685 | .0780 | |
| 21.500 | .0469 | | | | .0382 | | | .0474 | | | | | .0816 | | |
| 63.000 | .0000 | | | | | | | .0000 | | | | | .0000 | | |
| 64.000 | | | | | | | | .0000 | | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 65.500 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 105.000 | .0000 | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 111.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 112.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 113.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 116.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 135.000 | .0000 | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 149.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 180.000 | .0000 | | | | .0000 | | | .0000 | | | | | .0000 | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0300 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | |



AEDC VA352 QM48 CR QM8. FUSELAGE (RTM829)

MACH (1) = 8.000 ALPHA (1) = 25.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| Y/L | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | .0000 | .0688 | .0909 | .0934 | .0960 | .0989 | .0913 | .0934 | .0900 | .0000 | .0000 | .0889 |
| 21.000 | | | .0949 | | | | .0000 | | | | | .0000 |
| 39.000 | | | | | .0000 | | | | | | | |
| 57.000 | | | .0000 | | | | | | | | | |
| 75.000 | | | .0000 | | | | | | | | | |
| 93.000 | | | .0000 | | | | | | | | | |
| 111.000 | | | .0000 | | | | | | | | | |
| 129.000 | | | .0000 | | | | | | | | | |
| 147.000 | | | .0000 | | | | | | | | | |
| 165.000 | | | | | .0000 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.087 QI = 3.940 KEF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| Y/L | .0000 | .0250 | .0500 | .0750 | .1000 | .1250 | .1500 | .1600 | .1620 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .4865 | .4948 | .4146 | .2799 | .2253 | .1563 | .1690 | .1408 | .1263 | .0700 | .0750 | .0760 | .0900 | .1000 |
| 10.000 | | | | | | | | | | | | | | .1103 | .1014 |
| 14.000 | | | | | | | | | | | | | | | .0000 |
| 20.000 | | | | | | | | | | | | | | | .0000 |
| 22.000 | | | | | | | | | | | | | | | .0000 |
| 24.000 | | | | | | | | | | | | | | | .0000 |
| 30.000 | | | | | | | | | | | | | | | .0000 |
| 39.000 | | | | | | | | | | | | | | | .0000 |
| 42.000 | | | | | | | | | | | | | | | .0000 |
| 48.000 | | | | | | | | | | | | | | | .0000 |
| 50.000 | | | | | | | | | | | | | | | .0000 |
| 119.000 | | | | | | | | | | | .0000 | | | | .0000 |
| 150.000 | | | .0000 | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.087 QI = 3.940 KEF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| Y/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0966 | .0903 | .0845 | .0769 | .0000 | .0766 | .0739 | .0745 | .0739 | .0739 | .0745 | .0745 | .0745 | .0745 |
| 10.000 | | | | | | | | | | | | | | |
| 14.000 | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 131.000 | | | | | | | | | | | | | | |
| 145.000 | | | | | | | | | | | | | | |
| 146.000 | | | | | | | | | | | | | | |



(RTS29)

MACH (1) = 8.000 ALPHA (2) = 30.000

AEDC VA352 OHB OR ORB. FUSELAGE

SECTION 1 (1) ORB FUSELAGE

DEPENDENT VARIABLE HU/HO

| Y/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | | |
| 180.500 | | | | | | | | | | | | | | | |

| Y/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 11.500 | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 76.500 | | | | | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |
| 141.400 | | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |

| Y/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 65.500 | | | | | | | | | | | | | | | |



MACH (1) = 6.000 ALPHA (2) = 30.000 (RTN829)

AEDC VA352 OH4B 02 ORB. FUELSAGE

SECTION (1) ORB. FUELSAGE DEPENDENT VARIABLE MU/NO

| P/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 106.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | .0000 |
| 111.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 112.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 113.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 115.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 135.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 145.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 190.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |

MACH (1) = 6.000 ALPHA (2) = 30.000

| P/L | .1908 | .1823 | .1750 | .1637 | .1398 | .1424 | .1387 | .0000 | .0000 | .0000 | .1265 | .0000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | |
| 21.000 | .0000 | | | | .0000 | | | | .0000 | | | .0000 |
| 35.000 | | | | | .0000 | | | | | | | .0000 |
| 52.000 | | | | | .0000 | | | | | | | .0000 |
| 55.000 | | | | | .0000 | | | | | | | .0000 |
| 65.000 | | | | | .0000 | | | | | | | .0000 |
| 94.000 | | | | | .0000 | | | | | | | .0000 |
| 100.000 | | | | | .0000 | | | | | | | .0000 |
| 108.000 | | | | | .0000 | | | | | | | .0000 |
| 112.000 | | | | | .0000 | | | | | | | .0000 |
| 113.000 | | | | | .0000 | | | | | | | .0000 |

MACH (1) = 6.000 ALPHA (3) = 35.000 T1 = 97.087 Q1 = 3.940 HFEF = .049

SECTION (1) ORB. FUELSAGE DEPENDENT VARIABLE MU/NO

| P/L | .0000 | .0525 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| .0000 | .4272 | .4503 | .4141 | .2344 | .2487 | .2176 | .1891 | .1603 | .1461 | | | | .1342 | .1265 | .1171 |
| 10.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 14.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 20.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 22.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 24.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 35.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 39.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 42.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 48.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 52.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 119.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 140.000 | | | | | | | .0000 | | | | | | | | .0000 |

MACH (1) = 6.000 ALPHA (3) = 35.000 T1 = 97.087 Q1 = 3.940 HFEF = .049



(RIND29)

MACH (1) = 0.000 ALPHA (3) = 35.000

SECTION 1 (1) ORBITER FUSELAGE

DEPENDENT VARIABLE MU/NO

| M/L | .1250 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | .1089 | .1008 | .0932 | .0937 | | | | .0934 | | | .0921 | | |
| 10.000 | .1151 | | | | .0000 | | | | | | | | | | |
| 20.000 | | | | | .0000 | | | | | | | | | | |
| 25.500 | | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | | .0000 | | | | | | | | | | |
| 45.500 | | | | | .0000 | | | | | | | | | | |
| 131.200 | | | | | .0000 | | | | .0000 | | | | | | |
| 145.400 | | | | | | .0000 | | | | | | | | .0000 | |
| 145.200 | | | | | | | .0000 | | | | | | | .0000 | |
| 155.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 159.200 | | | | | | | | | .0000 | | | | | | .0000 |
| 170.700 | | | | | | | | | | .0000 | | | | | .0000 |
| 171.000 | | | | | | | | | | | .0000 | | | | |
| 173.400 | | | | | | | | | | | | .0000 | | | |
| 180.000 | | | | | | | | | | | | | .0000 | | |

| M/L | .1630 | .1700 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | .0934 | .0849 | .0000 | .0750 | .0782 | .0713 | .0793 | .0844 | .0774 | .0769 | .0768 | .0747 | .0744 |
| 11.500 | | | | .0000 | | | | .0000 | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | .0877 | | | | | | | |
| 25.000 | | | | .1047 | | | | | | | | | | | |
| 24.000 | | | | .1181 | | | | | | | | | | | |
| 31.500 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | .1145 | | | | | | | | | | | |
| 40.000 | | | | .1050 | | | | .0935 | | | | | | | |
| 45.000 | | | | | | | | .0835 | | | | | | | |
| 51.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 57.500 | | | | | | | | | .0000 | | | | | | |
| 59.500 | | | | | | | | | | .0000 | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 76.500 | | | | .0000 | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | .0000 | |
| 135.000 | | | | | | | | | | | | | | .5000 | |
| 140.000 | | | | | | | | | | | | | | | |
| 141.000 | .0000 | | | .0000 | | | | | | | | | | | |
| 151.000 | | | .0000 | .0000 | | | | .0000 | | | | | | | |
| 180.000 | | | | | .0000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |



TABULATED DATA LISTING FOR OMB (AEDC VA352)

(RTK829)

MACH (1) = 8.000 ALPHA (3) = 35.000

AEDC VA352 OMB OR ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/40

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | .0000 | .0765 | .0835 | .0945 | .1040 | .1101 | .1130 | .1178 | .1214 | .1268 | .1312 | .1262 | .1246 | .1242 | .1242 |
| 21.500 | .0805 | | | | .1123 | | | | .2014 | .2168 | | | .2496 | .2412 | .2542 |
| 63.000 | .0000 | | | | | | .0000 | | .2087 | | | | | | |
| 64.000 | | | | | | | | .0000 | | | | | .0000 | | |
| 65.000 | | | | | .0000 | .0000 | | | .0000 | | | | .0000 | | |
| 65.500 | | | | | .0000 | .0000 | | | .0000 | | | | .0000 | | |
| 105.000 | .0000 | | | | | | | | .0000 | | | | .0000 | | |
| 111.000 | | | | | | | | | | | | | .0000 | | |
| 112.000 | | | | | .0000 | .0000 | | | .0000 | | | | .0000 | | |
| 113.000 | | | | | .0000 | .0000 | | | .0000 | | | | .0000 | | |
| 116.000 | | | | | .0000 | .0000 | | | .0000 | | | | .0000 | | |
| 125.000 | .0000 | | | | | | | .0000 | | | | | .0000 | | |
| 149.000 | .0000 | | | | | | | .0000 | | | | | .0000 | | |
| 180.000 | .0000 | | | | .0000 | .0000 | | | .0000 | | | | .0000 | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| PHI | .0000 | .2346 | .2146 | .2008 | .1950 | .1669 | .1676 | .1640 | .0000 | .0695 | .0000 | .1503 | | | |
| 21.500 | | | .2026 | | | | .0000 | | | | | .0000 | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 52.500 | | | | | | | | | | | | | | | |
| 55.000 | | | .0000 | | | | | | | | | | | | |
| 65.000 | | | .0000 | | | | | | | | | | | | |
| 66.000 | | | | | | .0000 | | | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | | | | |
| 104.000 | | | .0000 | | | | | | | | | | | | |
| 112.000 | | | .0000 | | | | .0000 | | | | | | | | |
| 113.000 | | | | | | | | | .0000 | | | | | | |



AEDC VA392 OMB 02 OMB. FUELSAGE

(RTGSSD) (25 APR 74)

REFERENCE DATA

REF = .0238 SQ.FT. 1MRP = .0000 IN.
 REF = 22.5803 IN. 1MRP = .0000 IN.
 REF = 16.3316 IN. 2MRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 R/L = 2.000
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 29.000 TI = 94.933 QI = 1.986 HREF = .031

SECTION (1) OBSERVED FUELSAGE

DEPENDENT VARIABLE MU/DO

| PHI | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .4591 | .4596 | .3965 | .2491 | .1998 | .1709 | .1442 | .1200 | .1064 | .0973 | .0949 | .0882 | .0882 | .0882 |
| 10.000 | | | | | | | .0000 | | | | | | | |
| 14.000 | | | | | | | .0000 | | | | | | | |
| 20.000 | | | | | | | .0000 | | | | | | | |
| 24.000 | | | | | | | .0000 | | | | | | | |
| 30.000 | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | | | | .0000 | | | | | | | |
| 40.000 | | | | | | | .0000 | | | | | | | |
| 44.000 | | | | | | | .0000 | | | | | | | |
| 60.000 | | | | | | | .0000 | | | | | | | |
| 110.000 | | | | | | | .0000 | | | | | | | |
| 160.000 | | | | | | | .0000 | | | | | | | |

| R/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0768 | .0729 | .0668 | .0616 | .0622 | .0596 | .0572 | | | | | | | |
| .000 | | | | | | | | | | | | | | |
| 10.000 | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | |
| 131.200 | | | | | | | | | .0000 | | | | | |
| 149.400 | | | | | | | | | .0000 | | | | | |
| 148.200 | | | | | | | | | .0000 | | | | | |
| 156.000 | | | | | | | | | .0000 | | | | | |
| 159.200 | | | | | | | | | .0000 | | | | | |
| 170.700 | | | | | | | | | .0000 | | | | | |
| 171.900 | | | | | | | | | .0000 | | | | | |
| 173.400 | | | | | | | | | .0000 | | | | | |
| 180.000 | | | | | | | | | .0000 | | | | | |

| R/L | .1850 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0582 | .0527 | .0527 | .0527 | .0471 | .0471 | .0471 | .0456 | .0500 | .0529 | .0459 | .0468 | .0444 | .0430 |
| .000 | | | | | | | | | | | | | | |
| 11.900 | | | | | | | | | | | | | | |



(RTB30)

AEDC VAS32 OMB OR ORB. FUELS

MACH (1) = 0.000 ALPHA (1) = 25.000

SECTION (1) ORBITER FUELS DEPENDENT VARIABLE MU/MO

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | .0000 | | | | .0000 | | | | .0494 | | | |
| 21.500 | | | | | | | | .0813 | | | | | | | |
| 23.000 | | | | .0743 | | | | | | | | | | | |
| 24.000 | | | | .0871 | | | | | | | | | | | |
| 31.500 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | .0852 | | | | .0848 | | | | | | | |
| 35.000 | | | | .0820 | | | | .0884 | | | | | | | |
| 40.000 | | | | | | | | .0000 | | | | | | | |
| 45.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 57.500 | | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 63.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 96.500 | | | | | | | | .0000 | | | | | | | |
| 105.000 | | | | | | | | .0000 | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 140.000 | | | | | | | | .0000 | | | | | | | |
| 141.400 | | | | .0000 | | | | .0000 | | | | | | | |
| 151.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 160.000 | | | | | | | | .0000 | | | | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0385 | .0409 | .0387 | .0378 | .0387 | .0387 | .0382 | .0369 | .0345 | .0344 | .0326 | .0308 | .0302 | .0272 | |
| 21.500 | .0452 | | | | .0366 | | | | .0378 | | | | .0282 | | |
| 63.000 | .0000 | | | | | | | | .0000 | | | | .0000 | | |
| 64.000 | | | | | | | | | .0000 | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 65.500 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 105.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 111.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 112.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 113.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 116.000 | | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 135.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 149.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 160.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |

PHI



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTK83D)

AEDC VAS32 OMB 02 ORB. FUELSAGE

MACH (1) = 0.000 ALPHA (1) = 29.000

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/MO

| K/L | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0300 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| P=1 | .000 | .0266 | .0236 | .0226 | .0213 | .0216 | .0207 | .0000 | .0213 | .0000 | .0205 | .0000 |
| 21.500 | .0263 | | | | | | | | | | | .0000 |
| 30.000 | | | | | | .0000 | | | | | | |
| 32.500 | | | .0000 | | | | | | | | | |
| 35.000 | | | .0000 | | | | | | | | | |
| 45.000 | | | .0000 | | | | | | | | | |
| 60.000 | | | .0000 | | | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 120.000 | | | .0000 | | | | | | | | | |
| 132.000 | | | .0000 | | | | | | | | | |
| 133.000 | | | .0000 | | | | | | | | | |

MACH (1) = 0.000 ALPHA (2) = 30.000 T1 = 94.933 Q1 = 1.986 MCF = .035

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/MO

| K/L | .0000 | .0050 | .0100 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | .000 | .4811 | .4925 | .4233 | .2763 | .2262 | .1940 | .1693 | .1399 | .1261 | .1181 | .1114 | .1029 |
| 10.000 | | | | | | | .0000 | | | | | | .0000 |
| 14.000 | | | | | | | .0000 | | | | | | .0000 |
| 20.000 | | | | | | | .0000 | | | | | | .0000 |
| 22.000 | | | | | | | .0000 | | | | | | .0000 |
| 24.500 | | | | | | | .0000 | | | | | | .0000 |
| 35.000 | | | | | | | .0000 | | | | | | .0000 |
| 39.000 | | | | | | | .0000 | | | | | | .0000 |
| 42.500 | | | | | | | .0000 | | | | | | .0000 |
| 48.000 | | | | | | | .0000 | | | | | | .0000 |
| 60.000 | | | | | | | .0000 | | | | | | .0000 |
| 119.000 | | | | | | | .0000 | | | | | | .0000 |
| 140.000 | | | | | | | .0000 | | | | | | .0000 |

MACH (1) = 0.000 ALPHA (2) = 30.000 T1 = 94.933 Q1 = 1.986 MCF = .035

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/MO

| K/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | .000 | .0962 | .0903 | .0868 | .0769 | .0766 | .0766 | .0766 | .0746 | .0747 | .0746 | .0746 | .0747 | .0747 |
| 10.000 | | | | | .0000 | | | | | | | | | |
| 20.000 | | | | | .0000 | | | | | | | | | |
| 29.500 | | | | | .0000 | | | | | | | | | |
| 40.000 | | | | | .0000 | | | | | | | | | |
| 49.500 | | | | | .0000 | | | | | | | | | |
| 131.200 | | | | | .0000 | | | | | | | | | |
| 149.400 | | | | | .0000 | | | | | | | | | |
| 149.800 | | | | | .0000 | | | | | | | | | |



(RTN030)

AEDC VAS32 OMB OE OMB, FUELSAGE

MACH (1) = 8.000 ALPHA (2) = 30.000

SECTION (1) OMB FUELSAGE DEPENDENT VARIABLE MU/MD

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 1.06,000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 1.11,000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1.12,000 | | | | | .0000 | | | | | | | | | | .0000 |
| 1.13,000 | | | | | .0000 | | | | | | | | | | .0000 |
| 1.16,000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 1.23,000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 1.45,000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 1.46,000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |

MACH (1) = 8.000 ALPHA (3) = 30.000 T1 = 94.933 Q1 = 1.966 MREF = .035

SECTION (2) OMB FUELSAGE DEPENDENT VARIABLE MU/MD

| X/L | .4500 | .4750 | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 1.07,000 | .0512 | .0876 | .0586 | .0869 | .0839 | .0875 | .0808 | .0000 | .0822 | .0000 | .0842 | | | | .0000 |
| 21.000 | .0247 | | | | | | .0000 | | | | | | | | .0000 |
| 39.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 52.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 75.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 85.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 66.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 100.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 106.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 112.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |
| 119.000 | | | | | .0000 | | .0000 | | | | | | | | .0000 |

(RTN030)

AEDC VAS32 OMB OE OMB, FUELSAGE

MACH (1) = 8.000 ALPHA (3) = 30.000 T1 = 94.933 Q1 = 1.966 MREF = .035

SECTION (3) OMB FUELSAGE DEPENDENT VARIABLE MU/MD

| X/L | .0000 | .0080 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0780 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 1.000 | .4220 | .4866 | .4276 | .2962 | .2449 | .2135 | .1665 | .1584 | .1442 | | | | .1344 | .1274 | .1192 |
| 10.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 14.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 20.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 22.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 24.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 35.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 39.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 42.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 46.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 60.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 119.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 140.000 | | | | | | | .0000 | | | | | | | | .0000 |



(RTAB3D)

AEDC VA352 OH4B OR ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (3) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .1176 | | .1078 | .1025 | .0912 | .0940 | | | | .0924 | | | .0930 | | |
| .000 | | | | | | | | | | | | | | | |
| 10.000 | | | | | .0000 | | | | | | | | | | |
| 20.000 | | | | | .0000 | | | | | | | | | | |
| 25.500 | | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | | .0000 | | | | | | | | | | |
| 45.500 | | | | | .0000 | | | | | | | | | | |
| 131.200 | | | | | .0000 | | | | .0000 | | | | | | |
| 145.400 | | | | | | | | | | | | | | | .0000 |
| 146.200 | | | | | | | .0000 | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | .0000 |
| 159.200 | | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | | |
| 171.500 | | | | | | | | | .0000 | | | | | | .0000 |
| 173.400 | | | | | | | | | | | | | | | |
| 180.000 | | .0000 | | | .0000 | .0000 | .0000 | | | .0000 | .0000 | | | | |

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0923 | | .0855 | .0800 | .0764 | .0764 | .0764 | .0709 | .0818 | .0877 | .0771 | .0718 | .0711 | .0681 | .0644 |
| .000 | | | .0000 | | | | | .0000 | | | | | | | |
| 11.500 | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .1035 | | | .0872 | | | | | | | | |
| 31.500 | | | | .1157 | | | | | | | | .0730 | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | .1112 | | | | | | | | | | | |
| 40.000 | | | | .1051 | | | | | | | | | | | |
| 49.000 | | | | .0000 | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 96.900 | | | | .0000 | | | | | | | | | | | |
| 109.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 140.000 | | .0000 | | .0000 | | | | | | | | | | | |
| 141.400 | | | | | | | | | | | | | | | |
| 151.000 | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |



WACH (1) = 8.000 ALPHA (3) = 35.000

AEDC VA332 OMB OR CRB. FUSELAGE

(RTMBS0)

SECTION (110)PIPER FUSELAGE DEPENDENT VARIABLE MU/HO

| W/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0630 | .0625 | .0629 | .0603 | .0643 | .0646 | .0659 | .0667 | .0653 | .0709 | .0730 | .0723 | .0853 | .0902 | |
| 21.500 | .0666 | | | | .0556 | | | | .0680 | | | | .0796 | | |
| 43.000 | .0000 | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 87.500 | | | | | .0000 | | | | | | | | .0000 | | |
| 109.000 | .0000 | | | | .0000 | | | | | | | | | | .0000 |
| 131.000 | | | | | .0000 | | | | | .0000 | | | | | |
| 153.000 | | | | | .0000 | | | | | .0000 | | | | | |
| 175.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | |
| 197.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | |

| W/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .0948 | .0959 | .0936 | .0976 | .0907 | .0976 | .1023 | .0000 | .0981 | .0000 | .1026 | |
| 21.500 | | .0972 | | | | | | | | | | |
| 39.000 | | | | | | .0000 | | | | | | .0000 |
| 52.500 | | | .0000 | | | | | | | | | |
| 55.000 | | | .0000 | | | | | | | | | |
| 65.000 | | | .0000 | | | | | | | | | |
| 88.000 | | | .0000 | | | | | | | | | |
| 109.000 | | | .0000 | | | | | | | | | |
| 131.000 | | | .0000 | | | .0000 | | | .0000 | | | |



AEDC VAS32 OMB OR ORB. FUSELAGE

(RTM831) (25 APR 74)

REFERENCE DATA

SFEF = .8236 SQ.FT. XMP = .0000 IN.
REF = 22.5803 IN. YMP = .0000 IN.
SFEF = 16.3919 IN. ZMP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

SETA = .000 RN/L = .500
B.FLAP = .000 ELEVON = .000
HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 92.933 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/Hi | .0000 | .4978 | .4940 | .4033 | .2370 | .2071 | .1739 | .1473 | .1230 | .1075 | .1001 | .0925 | .0888 | .0888 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 35.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 49.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 119.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/Hi | .0813 | .0751 | .0691 | .0646 | .0633 | .0623 | .0610 | .0610 | .0610 | .0610 | .0610 | .0610 | .0610 | .0610 | .0610 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 148.200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 148.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 150.200 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 170.700 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 171.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 173.400 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/Hi | .0599 | .0552 | .0519 | .0481 | .0456 | .0428 | .0419 | .0419 | .0419 | .0419 | .0419 | .0419 | .0419 | .0419 | .0419 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 11.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTK631)

AEDC VA352 OH4B 02 ORB, FUSELAGE

MACH (1) = 8.000 ALPHA (1) = 25.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0000 | | | | | | | |
| 21.500 | | | | | | | .0619 | | | | | .0512 | | | |
| 23.000 | | | | .0741 | | | | | | | | | | | |
| 24.000 | | | .0646 | | | | | | | | | | | | |
| 31.500 | | | | .0850 | | | | .0694 | | | | | | | |
| 34.000 | | | | .0837 | | | | .0700 | | | | | | | |
| 35.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 40.000 | | | | | | | | .0000 | | | | | | | |
| 45.000 | | | | | | | | .0000 | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 57.500 | | | | | | | | .0000 | | | | | | | |
| 59.500 | | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.500 | | | | .0000 | | | | .0000 | | | | | | | |
| 107.000 | | | | | | | | .0000 | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 141.400 | | | | | | | | .0000 | | | | | | | |
| 151.000 | | | .0000 | | | | | .0000 | | | | | | | |
| 160.000 | | | | | | | | .0000 | | | | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0419 | .0666 | .0456 | .0415 | .0409 | .0408 | .0406 | .0378 | .0354 | .0350 | .0338 | .0334 | .0303 | .0273 | |
| 21.500 | .0470 | | | .0384 | | | | | .0390 | | | | | | |
| 63.000 | .0000 | | | | | | | | .0000 | | | | | | |
| 64.000 | | | | | | | | | .0000 | | | | | | |
| 65.000 | | | | | | | | | .0000 | | | | | | |
| 73.500 | | | | | | | | | .0000 | | | | | | |
| 106.000 | .0000 | | | | | | | | .0000 | | | | | | |
| 111.000 | | | | | | | | | .0000 | | | | | | |
| 112.000 | | | | | | | | | .0000 | | | | | | |
| 113.000 | | | | | | | | | .0000 | | | | | | |
| 115.000 | | | | | | | | | .0000 | | | | | | |
| 135.000 | .0000 | | | | | | | | .0000 | | .0000 | | | | |
| 149.000 | | | | | | | | | .0000 | | .0000 | | | | |
| 160.000 | .0000 | | | | | | | | .0000 | | .0000 | | | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |



AEDC VA352 OMB O2 ORB. FUELSAGE (RTN311)

MACH (1) = 6.000 ALPHA (2) = 30.000

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HU/HO

PHI
 175,000
 179,200
 179,700
 171,000
 173,400
 170,000

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1700 | .1700 | .1600 | .1510 | .1400 |
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .1830 | .1900 | .1910 | .2000 | .2500 | .2750 | .3000 | .3250 | .3300 | .4000 | .4250 | .4500 | .4750 |

PHI
 .000
 11,500
 12,000
 21,500
 23,000
 24,000
 31,500
 34,000
 35,000
 40,000
 45,000
 51,000
 57,500
 59,500
 61,000
 65,000
 70,000
 76,500
 105,000
 106,000
 135,000
 140,000
 141,400
 131,000
 180,000

| | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .0777 | .0714 | .0000 | .0644 | .0635 | .0635 | .0635 | .0635 | .0635 | .0632 | .0607 | .0564 | .0541 |
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .0699 | .1024 | .1005 | .0976 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

PHI
 .19
 21,500
 63,000
 64,000
 65,000
 65,500

| | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| .0562 | .0543 | .0567 | .0532 | .0519 | .0511 | .0495 | .0448 | .0433 | .0414 | .0392 | .0367 | .0360 | .0360 | .0360 |
| .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 | .0477 |

PHI
 .000
 21,500
 63,000
 64,000
 65,000
 65,500

| | | | | | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTRN831)

AEDC VA352 OHMB 02 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (2) = 30.000

SECTION : TORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8590 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 105.0000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | .0000 |
| 111.0000 | | | | | .0000 | | | | | | | | | | .0000 |
| 112.0000 | | | | | .0000 | | | | | | | | | | .0000 |
| 113.0000 | | | | | .0000 | | | | | | | | | | .0000 |
| 116.0000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 135.0000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 149.0000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 150.0000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |

MACH (1) = 8.000 ALPHA (2) = 30.000

SECTION : TORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/L | .0341 | .0386 | .0290 | .0272 | .0223 | .0225 | .0200 | .0000 | .0191 | .0000 | .0176 | .0000 | .0000 | .0000 | .0000 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 105.0000 | | | | | | | | | | | | | | | |
| 111.0000 | | | | | | | | | | | | | | | |
| 112.0000 | | | | | | | | | | | | | | | |
| 113.0000 | | | | | | | | | | | | | | | |
| 116.0000 | | | | | | | | | | | | | | | |
| 135.0000 | | | | | | | | | | | | | | | |
| 149.0000 | | | | | | | | | | | | | | | |
| 150.0000 | | | | | | | | | | | | | | | |

MACH (1) = 6.000 ALPHA (3) = 30.000 TI = 92.33 GI = .523 HREF = .018

SECTION : TORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/L | .4344 | .5063 | .4454 | .3036 | .2542 | .2247 | .1922 | .1544 | .1491 | .1397 | .1311 | .1274 | .1274 | .1274 | .1274 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 10.0000 | | | | | | | | | | | | | | | |
| 14.0000 | | | | | | | | | | | | | | | |
| 20.0000 | | | | | | | | | | | | | | | |
| 28.0000 | | | | | | | | | | | | | | | |
| 34.0000 | | | | | | | | | | | | | | | |
| 37.0000 | | | | | | | | | | | | | | | |
| 39.0000 | | | | | | | | | | | | | | | |
| 42.0000 | | | | | | | | | | | | | | | |
| 48.0000 | | | | | | | | | | | | | | | |
| 60.0000 | | | | | | | | | | | | | | | |
| 110.0000 | | | | | | | | | | | | | | | |
| 140.0000 | | | | | | | | | | | | | | | |

X/L .1200 .1250 .1300 .1400 .1500 .1560 .1600 .1620 .1670 .1690 .1700 .1780 .1800 .1810 .1820

(RTM321)

MACH (1) = 0.000 ALPHA (3) = 35.000
AEDC V4352 Q-MB 02 CRZ. FUSELAGE

SECTION (1) CRZITER FUSELAGE DEPENDENT VARIABLE MU/MO

| X% | .1250 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1700 | .1760 | .1800 | .1820 | .1820 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0-1 | | | .1132 | .1036 | .0983 | .0968 | | | .0093 | | .0334 | | |
| 1-1 | | | | | | | | | | | | | |
| 2-1 | | | | | | | | | | | | | |
| 3-1 | | | | | | | | | | | | | |
| 4-1 | | | | | | | | | | | | | |
| 5-1 | | | | | | | | | | | | | |
| 6-1 | | | | | | | | | | | | | |
| 7-1 | | | | | | | | | | | | | |
| 8-1 | | | | | | | | | | | | | |
| 9-1 | | | | | | | | | | | | | |
| 10-1 | | | | | | | | | | | | | |
| 11-1 | | | | | | | | | | | | | |
| 12-1 | | | | | | | | | | | | | |
| 13-1 | | | | | | | | | | | | | |
| 14-1 | | | | | | | | | | | | | |
| 15-1 | | | | | | | | | | | | | |
| 16-1 | | | | | | | | | | | | | |
| 17-1 | | | | | | | | | | | | | |
| 18-1 | | | | | | | | | | | | | |
| 19-1 | | | | | | | | | | | | | |
| 20-1 | | | | | | | | | | | | | |
| 21-1 | | | | | | | | | | | | | |
| 22-1 | | | | | | | | | | | | | |
| 23-1 | | | | | | | | | | | | | |
| 24-1 | | | | | | | | | | | | | |
| 25-1 | | | | | | | | | | | | | |
| 26-1 | | | | | | | | | | | | | |
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| 28-1 | | | | | | | | | | | | | |
| 29-1 | | | | | | | | | | | | | |
| 30-1 | | | | | | | | | | | | | |
| 31-1 | | | | | | | | | | | | | |
| 32-1 | | | | | | | | | | | | | |
| 33-1 | | | | | | | | | | | | | |
| 34-1 | | | | | | | | | | | | | |
| 35-1 | | | | | | | | | | | | | |
| 36-1 | | | | | | | | | | | | | |
| 37-1 | | | | | | | | | | | | | |
| 38-1 | | | | | | | | | | | | | |
| 39-1 | | | | | | | | | | | | | |
| 40-1 | | | | | | | | | | | | | |
| 41-1 | | | | | | | | | | | | | |
| 42-1 | | | | | | | | | | | | | |
| 43-1 | | | | | | | | | | | | | |
| 44-1 | | | | | | | | | | | | | |
| 45-1 | | | | | | | | | | | | | |
| 46-1 | | | | | | | | | | | | | |
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| 68-1 | | | | | | | | | | | | | |
| 69-1 | | | | | | | | | | | | | |
| 70-1 | | | | | | | | | | | | | |
| 71-1 | | | | | | | | | | | | | |
| 72-1 | | | | | | | | | | | | | |
| 73-1 | | | | | | | | | | | | | |
| 74-1 | | | | | | | | | | | | | |
| 75-1 | | | | | | | | | | | | | |
| 76-1 | | | | | | | | | | | | | |
| 77-1 | | | | | | | | | | | | | |
| 78-1 | | | | | | | | | | | | | |
| 79-1 | | | | | | | | | | | | | |
| 80-1 | | | | | | | | | | | | | |
| 81-1 | | | | | | | | | | | | | |
| 82-1 | | | | | | | | | | | | | |
| 83-1 | | | | | | | | | | | | | |
| 84-1 | | | | | | | | | | | | | |
| 85-1 | | | | | | | | | | | | | |
| 86-1 | | | | | | | | | | | | | |
| 87-1 | | | | | | | | | | | | | |
| 88-1 | | | | | | | | | | | | | |
| 89-1 | | | | | | | | | | | | | |
| 90-1 | | | | | | | | | | | | | |
| 91-1 | | | | | | | | | | | | | |
| 92-1 | | | | | | | | | | | | | |
| 93-1 | | | | | | | | | | | | | |
| 94-1 | | | | | | | | | | | | | |
| 95-1 | | | | | | | | | | | | | |
| 96-1 | | | | | | | | | | | | | |
| 97-1 | | | | | | | | | | | | | |
| 98-1 | | | | | | | | | | | | | |
| 99-1 | | | | | | | | | | | | | |
| 100-1 | | | | | | | | | | | | | |



AEDC VA332 OMB 02 ORB, FUSELAGE

(RTN831)

MACH (1) = 8.000 ALPHA (3) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HO/HO

| K/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0634 | .0636 | .0610 | .0616 | .0622 | .0598 | .0592 | .0551 | .0531 | .0526 | .0494 | .0466 | .0431 | |
| 21.500 | .0667 | | | | | | | | | | | | | | |
| 63.000 | .0000 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | .0000 | | | | | | |
| 65.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 95.000 | | | | | .0000 | | | | | | | | | | |
| 102.000 | .0000 | | | | .0000 | | | | | | | | | | |
| 111.000 | | | | | .0000 | | | | | | | | | | |
| 112.000 | | | | | .0000 | | | | | | | | | | |
| 113.000 | | | | | .0000 | | | | | | | | | | |
| 115.000 | | | | | .0000 | | | | | | | | | | |
| 139.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | |
| 149.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 195.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |

K/L .6500 .6750 .7000 .7250 .7500 .7750 .8000 .8250 .8290 1.0130 1.0140 1.0250 1.0360 1.0500

PHI

| | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|-------|
| .0000 | .0409 | .0356 | .0356 | .0343 | .0297 | .0275 | .0257 | .0000 | .0000 | .0000 | .0245 | .0000 | .0229 | | |
| 21.500 | | | | | | | | | | | | | | | |
| 63.000 | | | | | | | | | | | | | | | |
| 64.000 | | | | | | .0000 | .0000 | | | | | | | | |
| 65.000 | | | | | .0000 | | | | | | | | | | |
| 95.000 | | | | | .0000 | | | | | | | | | | |
| 102.000 | .0000 | | | | .0000 | | | | | | | | | | |
| 111.000 | | | | | .0000 | | | | | | | | | | |
| 112.000 | | | | | .0000 | | | | | | | | | | |
| 113.000 | | | | | .0000 | | | | | | | | | | |
| 115.000 | | | | | .0000 | | | | | | | | | | |
| 139.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | |
| 149.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 195.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | .0000 |



AEDC VAS32 OMB OR OMB FUSELAGE

(RTN332) (29 APR 74)

REFERENCE DATA

REF = 0.000 54.0 FT. WHP = 0.000 IN.
REF = 22.500 IN. WHP = 0.000 IN.
REF = 16.500 IN. WHP = 0.000 IN.
SCALE = 0.0175 SCALE

PARAMETRIC DATA

DELTA = 0.000 RN/L = 1.000
S.FLAP = 0.000 ELEVON = 0.000
HAWKHT = 1.000

WCH (1) = 0.000 ALPHA (1) = 30.000 TI = 93.400 QI = 1.000 HREF = .024

SECTION 1 (1) OMB FUSELAGE DEPENDENT VARIABLE MU/RO

| W/L | 0.000 | 0.000 | 0.010 | 0.020 | 0.030 | 0.040 | 0.050 | 0.060 | 0.070 | 0.080 | 0.090 | 0.100 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .4576 | .4158 | .2773 | .2270 | .1976 | .1735 | .1417 | .1308 | .1174 | .1107 | .1000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 28.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 32.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 36.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 44.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 52.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 56.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 64.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 68.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 72.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 76.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 80.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 84.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 88.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 92.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 96.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| W/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1580 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0961 | .0902 | .0859 | .0767 | .0797 | .0763 | .0733 | .0700 | .0650 | .0600 | .0550 | .0500 | .0450 | .0400 | .0350 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 28.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 32.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 36.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 44.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 52.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 56.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 64.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 68.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 72.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 76.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 80.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 84.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 88.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 92.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 96.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



WACH (1) = 0.000 ALPHA (1) = 30.000

AEDC VA352 OMB O2 OMB FUSELAGE

(RTM352)

SECTION 1: CORRECTED FUSELAGE DEPENDENT VARIABLE MU/MD

SECTION 1: CORRECTED FUSELAGE

| W/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 21.500 | | | | | | | | .0722 | | | | .0898 | | | |
| 23.000 | | | | .0879 | | | | | | | | | | | |
| 24.000 | | | | .1007 | | | | | | | | | | | |
| 31.500 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | .0974 | | | | .0822 | | | | | | | |
| 39.000 | | | | .0938 | | | | .0605 | | | | | | | |
| 45.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 57.000 | | | | | | | | .0000 | | | | | | | |
| 73.000 | | | | | | | | .0000 | | | | | | | |
| 81.000 | | | | | | | | .0000 | | | | | | | |
| 85.000 | | | | | | | | .0000 | | | | | | | |
| 90.000 | | | | | | | | .0000 | | | | | | | |
| 96.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 104.000 | | | | | | | | .0000 | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 131.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 141.000 | .0000 | | | | | | | .0000 | | | | | | | |
| 151.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 160.000 | | | | | | | | .0000 | | | | | | | |
| W/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0813 | .0816 | .0808 | .0835 | .0830 | .0701 | .0495 | .0466 | .0430 | .0438 | .0422 | .0390 | .0372 | .0331 | |
| 21.500 | .0564 | | | | .0456 | | | | .0472 | | | | .0337 | | |
| 31.500 | .0000 | | | | | | | | .0000 | | | | .0000 | | |
| 34.000 | | | | | | | | | .0000 | | | | .0000 | | |
| 39.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 45.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 57.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 73.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 81.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 85.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 90.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 96.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 104.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 106.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 131.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 141.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 151.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 160.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | |
| W/L | .6500 | .7350 | .8000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | |
| PHI | | | | | | | | | | | | | | | |
| .000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 57.000 | | | | | | | | | | | | | | | |
| 73.000 | | | | | | | | | | | | | | | |
| 81.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | | |
| 90.000 | | | | | | | | | | | | | | | |
| 96.000 | | | | | | | | | | | | | | | |
| 104.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | |
| 131.000 | | | | | | | | | | | | | | | |
| 141.000 | | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | |

AEDC VA352 OMB 02 OIB, FUELSAGE (RTM32)

WASH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) OMB PER FUELSAGE DEPENDENT VARIABLE MU/MD

| | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| P/L | .0000 | .0850 | .0750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0390 | 1.0500 |
| PHI | .000 | .0308 | .0363 | .0274 | .0233 | .0214 | .0204 | .0181 | .0000 | .0173 | .0000 | .0190 | .0000 |
| 10.000 | | | | | | | | .0000 | | | | | |
| 14.000 | | | | | | | | .0000 | | | | | |
| 20.000 | | | | .0000 | | | | | | | | | |
| 25.000 | | | | .0000 | | | | | | | | | |
| 34.000 | | | | .0000 | | | | | | | | | |
| 39.000 | | | | .0000 | | | | | | | | | |
| 42.000 | | | | .0000 | | | | | | | | | |
| 48.000 | | | | .0000 | | | | | | | | | |
| 50.000 | | | | .0000 | | | | | | | | | |
| 119.000 | | | | .0000 | | | | | | | | | |
| 140.000 | | | | .0000 | | | | | .0000 | | | | |

WASH (1) = 0.000 ALPHA (2) = 35.000 Y1 = 93.400 Q1 = 1.000 HREF = .024

SECTION (1) OMB PER FUELSAGE DEPENDENT VARIABLE MU/MD

| | | | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/L | .0000 | .4305 | .4972 | .4405 | .2922 | .0900 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
| PHI | .000 | .4305 | .4972 | .4405 | .2922 | .0900 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
| 10.000 | | | | | | | | | | | | | | | | | |
| 14.000 | | | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | | | |
| 42.000 | | | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | | | |
| 50.000 | | | | | | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | | | |

WASH (1) = .1800 ALPHA (2) = .1300 Y1 = .1900 Y2 = .1670 Y3 = .1690 Y4 = .1700 Y5 = .1780 Y6 = .1810 Y7 = .1820

SECTION (1) OMB PER FUELSAGE DEPENDENT VARIABLE MU/MD

| | | | | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/L | .0000 | .1193 | .1068 | .1018 | .0962 | .0900 | .0850 | .0800 | .0750 | .0700 | .0650 | .0600 | .0550 | .0500 | .0450 | .0400 | .0350 | .0300 |
| PHI | .000 | .1193 | .1068 | .1018 | .0962 | .0900 | .0850 | .0800 | .0750 | .0700 | .0650 | .0600 | .0550 | .0500 | .0450 | .0400 | .0350 | .0300 |
| 10.000 | | | | | | | | | | | | | | | | | | |
| 14.000 | | | | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | | | | |
| 25.000 | | | | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | | | | |
| 42.000 | | | | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | | | | |
| 50.000 | | | | | | | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | | | | |



(RTS32)

AEDC VA352 OMB OR OMB. FUELAG

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION (1) OMB OR FUELAG DEPENDENT VARIABLE MUAD

| PHI | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1817 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 196.000 | | | | | | | | | | | | | | |
| 199.200 | | | | | | | | | | | | | | |
| 190.700 | | | | | | | | | | | | | | |
| 191.900 | | | | | | | | | | | | | | |
| 193.400 | | | | | | | | | | | | | | |
| 190.000 | | | | | | | | | | | | | | |
| PHI | .1830 | .1900 | .1910 | .2000 | .2250 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| 000 | .0536 | | | .0659 | .0747 | .0761 | .0716 | .0604 | .0681 | .0734 | .0725 | .0667 | .0636 | .0641 |
| 11.900 | | | | .0000 | | | | | | | | | | |
| 12.000 | | | | | | | .0000 | | | | | | | |
| 21.900 | | | | | | | .0900 | | | | | | | |
| 22.000 | | | | | | | | | | | | | | |
| 24.000 | | | | .1072 | | | | | | | | | | |
| 31.900 | | | | .1168 | | | | | | | | | | |
| 34.000 | | | | | | | .0000 | | | | | | | |
| 35.000 | | | | .1135 | | | | | | | | | | |
| 40.000 | | | | .1036 | | | .0965 | | | | | | | |
| 45.000 | | | | | | | .0917 | | | | | | | |
| 51.000 | | | | .0000 | | | .0000 | | | | | | | |
| 57.900 | | | | | | | | | | | | | | |
| 59.900 | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | .0000 | | | | | | | |
| 63.000 | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | .0000 | | | | | | | |
| 76.900 | | | | .0000 | | | | | | | | | | |
| 104.000 | | | | | | | .0000 | | | | | | | |
| 108.000 | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | .0000 | | | | | | | |
| 141.400 | | | | | | | .0000 | | | | | | | |
| 151.000 | | | | .0000 | | | | | | | | | | |
| 160.000 | | | | | | | .0000 | | | | | | | |
| PHI | .9000 | .9250 | .9500 | .9750 | .6000 | .6250 | .6500 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| 000 | .0420 | .0571 | .0613 | .0577 | .0817 | .0599 | .0594 | .0580 | .0539 | .0524 | .0462 | .0465 | .0431 | |
| 21.900 | .0668 | | | .0546 | | | .0556 | | | | | | | |
| 63.000 | | | | | | | .0000 | | | | | | | |
| 64.000 | | | | | | | | | | | | | | |
| 63.000 | | | | | .0000 | | | | | | | | | |
| 63.900 | | | | | | | .0000 | | | | | | | |



RTK332

WACH (1) = 8.000 ALPHA (2) = 35.000

SECTION (1) OMB PER FUSELAGE DEPENDENT VARIABLE MU/NO

| Y/L | .5500 | .5250 | .5000 | .4750 | .4500 | .4250 | .4000 | .3750 | .3500 | .3250 | .3000 | .2750 | .2500 | .2250 | .2000 | .1750 | .1500 | .1250 | .1000 | .0750 | .0500 | .0250 | .0000 | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| P=1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | |
| 111.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 114.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 115.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 116.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 117.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 118.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 120.000 | | | | | | | | | | | | | | | | | | | | | | | | | |

WACH (1) = 8.000 ALPHA (3) = 45.000

SECTION (1) OMB PER FUSELAGE DEPENDENT VARIABLE MU/NO

| Y/L | .5500 | .5250 | .5000 | .4750 | .4500 | .4250 | .4000 | .3750 | .3500 | .3250 | .3000 | .2750 | .2500 | .2250 | .2000 | .1750 | .1500 | .1250 | .1000 | .0750 | .0500 | .0250 | .0000 | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| P=1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.970 | .0401 | .0397 | .0390 | .0382 | .0377 | .0371 | .0365 | .0359 | .0353 | .0347 | .0341 | .0335 | .0329 | .0323 | .0317 | .0311 | .0305 | .0299 | .0293 | .0287 | .0281 | .0275 | .0269 | .0263 | |
| 32.900 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 100.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 117.000 | | | | | | | | | | | | | | | | | | | | | | | | | |

WACH (1) = 8.000 ALPHA (3) = 45.000

SECTION (1) OMB PER FUSELAGE DEPENDENT VARIABLE MU/NO

| Y/L | .5500 | .5250 | .5000 | .4750 | .4500 | .4250 | .4000 | .3750 | .3500 | .3250 | .3000 | .2750 | .2500 | .2250 | .2000 | .1750 | .1500 | .1250 | .1000 | .0750 | .0500 | .0250 | .0000 | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| P=1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10.000 | .3437 | .4708 | .4332 | .3222 | .2824 | .2509 | .2054 | .1893 | .1755 | .1659 | .1581 | .1523 | .1481 | .1441 | .1401 | .1361 | .1321 | .1281 | .1241 | .1201 | .1161 | .1121 | .1081 | .1041 | |
| 14.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 119.000 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | | | | | | | | | | | |



(RTK332)

AEDC VA352 OMB 28 ORB. FUSELAGE

MACH (1) = 6.000 ALPHA (3) = 45.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X% | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Phi | .1444 | .1385 | .1321 | .1220 | .1220 | .1253 | | | .1235 | | .1207 | | | |
| 10.000 | | | | .0000 | .0000 | | | | | | | | | |
| 20.000 | | | | .0000 | .0000 | | | | | | | | | |
| 25.500 | | | | .0000 | .0000 | | | | | | | | | |
| 40.000 | | | | .0000 | .0000 | | | | | | | | | |
| 45.500 | | | | .0000 | .0000 | | | | | | | | | |
| 131.200 | | | | | .0000 | | | | | | | | | |
| 145.400 | | | | | .0000 | | | | | | | | | .0000 |
| 146.200 | | | | | .0000 | | | | | | | | | .0000 |
| 156.000 | | | | | .0000 | | | | | | | | | .0000 |
| 159.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | .0000 | | | | | | .0000 |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 180.000 | | | | | .0000 | | | | | | | | | |

| X% | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Phi | .1211 | | .1102 | .1003 | .1011 | .0951 | .1078 | .1146 | .0977 | .0953 | .0931 | .0915 | .0915 | .0860 | |
| 11.500 | | | .0000 | | | .0000 | | | | | | | | | |
| 12.000 | | | | | | .0000 | | | | | | | | | |
| 21.500 | | | | | | .1137 | | | | | .0973 | | | | |
| 24.000 | | | .1322 | | | | | | | | | | | | |
| 31.500 | | | .1456 | | | | | | | | | | | | |
| 34.000 | | | | | | .0000 | | | | | | | | | |
| 35.000 | | | | | | .1378 | | | | | | | | | |
| 40.000 | | | .1224 | | | .1153 | | | | | | | | | |
| 45.000 | | | | | | .1079 | | | | | | | | | |
| 51.000 | | | .0000 | | | .0000 | | | | | | .0000 | | | |
| 57.500 | | | | | | .0000 | | | | | | .0000 | | | |
| 59.500 | | | | | | .0000 | | | | | | .0000 | | | |
| 61.000 | | | | | | .0000 | | | | | | .0000 | | | |
| 65.000 | | | | | | .0000 | | | | | | .0000 | | | |
| 70.200 | | | | | | .0000 | | | | | | .0000 | | | |
| 96.500 | | | | .0000 | | | | | | | | .0000 | | | |
| 109.000 | | | | | | | | | | | | .0000 | | | |
| 108.000 | | | | | | | | | | | | .0000 | | | |
| 135.000 | | | | | | | | | | | | .0000 | | | |
| 140.000 | | | .0000 | | | | | | | | | .0000 | | | |
| 141.400 | | | | | | | | | | | | .0000 | | | |
| 151.000 | | .0000 | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |

(RTAB32)

AEDC VA352 OMB 02 ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (3) = 45.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU-10

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0827 | .0757 | .0812 | .0813 | .0796 | .0772 | .0741 | .0738 | .0699 | .0701 | .0662 | .0609 | .0666 | .0526 | |
| 21.000 | .0899 | | | | .0721 | | | | | | | | .0251 | | |
| 63.000 | .0700 | | | | | | | | | | | | | | |
| 84.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 109.000 | .0000 | | | | | | | | | | | | | | |
| 111.000 | | | | | .0000 | | | | | | | | | | |
| 112.000 | | | | | .0000 | | | | | | | | | | |
| 113.000 | | | | | .0000 | | | | | | | | | | |
| 118.000 | | | | | .0000 | | | | | | .0000 | | | | |
| 135.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | |
| 149.000 | | | | | .0000 | | | | .0000 | | .0000 | | | | |
| 180.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | |
| X/L | .9000 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0900 | | | |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0425 | .0523 | .0502 | .0507 | .0448 | .0430 | .0421 | .0000 | | .0424 | .0000 | .0420 | | | |
| 21.000 | | | .0531 | | | | .0000 | | | | | | | | |
| 39.000 | | | | | | .0000 | | | | | | | | | |
| 92.000 | | | .0000 | | | | | | | | | | | | |
| 95.000 | | | .0000 | | | | | | | | | | | | |
| 65.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 69.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 100.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 109.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 112.000 | | | | | .0000 | | .0000 | | | | | | | | |
| 113.000 | | | | | | | | | | | | | | | |



AEDC VA352 OHMB 02 ORB. FUSELAGE

(RTN933) (23 APR 74)

REFERENCE DATA

REF = .8238 SQ.FT. XMIP = .0000 IN.
 LIFE = 22.980 IN. YMIP = .0000 IN.
 SREF = 16.3919 IN. ZMIP = .0000 IN.
 SCALE = .5175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.250 QI = 1.233 HTEF = .027

PARAMETRIC DATA

DELTA = .000 DM/L = 1.250
 S.F.LAP = .000 ELEVON = .000
 MAX/HT = 1.000

SECTION (1) ORBITEP FUSELAGE DEPENDENT VARIABLE HU/HG

| X/L | .0000 | .0650 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .4611 | .4991 | .4264 | .2738 | .2278 | .1595 | .1690 | .1366 | .1272 | .1168 | .1093 | .1029 | .0000 | .0000 |
| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
| PHI | .000 | .0671 | .0891 | .0844 | .0775 | .0764 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 | .0763 |
| X/L | .1900 | .1910 | .2000 | .2250 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | .000 | .0755 | .0690 | .0607 | .0614 | .0606 | .0576 | .0637 | .0713 | .0698 | .0573 | .0562 | .0544 | .0528 | .0528 |



(RTN533)

MACH (1) = 8.000 ALPHA (1) = 30.000

AEDC VA352 OMB 02 ORB. FUSELAGE

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE HU/DO

| X/L | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| P-HI | | | | .0000 | | | | .0000 | | | | .0617 | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | .0886 | | | | | | | | | | | |
| 23.000 | | | | .1000 | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | .0975 | | | | | | | | | | | |
| 43.000 | | | | .0934 | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 74.500 | | | | .0000 | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | .0000 | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 141.000 | | | | .0000 | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | |
| 180.000 | | | | .0000 | | | | | | | | | | | |
| X/L | .5000 | .7250 | .5500 | .9750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| P-HI | | | | .0000 | | | | .0000 | | | | .0000 | | | |
| 21.500 | .0448 | .0408 | .0508 | .0493 | .0508 | .0491 | .0483 | .0461 | .0436 | .0436 | .0429 | .0402 | .0379 | .0340 | |
| 63.000 | .0200 | | | .0440 | | | | | .0463 | | | | | | |
| 64.000 | | | | | | | | | .0000 | | | | | | |
| 65.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 108.000 | .0000 | | | | .0000 | | | | .0000 | | | | | | |
| 111.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 112.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 113.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 116.000 | | | | | .0000 | | | | .0000 | | | | | | |
| 135.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | |
| 149.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | |
| 180.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | |
| X/L | .6500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| P-HI | | | | | | | | | | | | | | | |



AEDC VA352 OMB 02 ORB. FUSELAGE (RTMB33)

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .9500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | .000 | .0326 | .0315 | .0282 | .0235 | .0231 | .0212 | .0000 | .0202 | .0000 | .0194 | .0000 |
| 21.500 | | | | .0308 | | | | | | | | |
| 39.000 | | | | | .0000 | | | | | | | .0000 |
| 52.500 | | | .0000 | | | | | | | | | |
| 59.000 | | | .0000 | | | | | | | | | |
| 65.000 | | | .0000 | | | | | | | | | |
| 68.000 | | | .0000 | | | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 108.000 | | | .0000 | | | | | | | | | |
| 112.000 | | | .0000 | | | | | | | | | |
| 115.000 | | | .0000 | | | | | | .0000 | | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.250 QI = 1.253 HREF = .027

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .4243 | .4565 | .4288 | .2943 | .2454 | .2155 | .1872 | .1597 | .1451 | .1335 | .1260 | .1194 | .0000 |
| 10.000 | | | | | | | | .0000 | | | | | | .0000 |
| 14.000 | | | | | | | | .0000 | | | | | | .0000 |
| 20.000 | | | | | | | | .0000 | | | | | | .0000 |
| 22.000 | | | | | | | | .0000 | | | | | | .0000 |
| 24.500 | | | | | | | | .0000 | | | | | | .0000 |
| 35.000 | | | | | | | | .0000 | | | | | | .0000 |
| 39.000 | | | | | | | | .0000 | | | | | | .0000 |
| 42.500 | | | | | | | | .0000 | | | | | | .0000 |
| 48.000 | | | | | | | | .0000 | | | | | | .0000 |
| 60.000 | | | | | | | | .0000 | | | | | | .0000 |
| 115.000 | | | | | .0000 | | | .0000 | | | .0000 | | | .0000 |
| 160.000 | | | | | .0000 | | | .0000 | | | .0000 | | | .0000 |
| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1580 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |
| PHI | .1158 | .1083 | .1010 | .0936 | .0939 | .0929 | .0902 | | | | | | | |
| 10.000 | | | | .0000 | | | | | | | | | | |
| 20.000 | | | | .0000 | | | | | | | | | | |
| 25.500 | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | .0000 | | | | | | | | | | |
| 45.500 | | | | .0000 | | | | | | | | | | |
| 131.200 | | | | .0000 | | | | | .0000 | | | | | |
| 145.400 | | | | .0000 | | | | | .0000 | | | | | |
| 148.200 | | | | .0000 | | | | | .0000 | | | | | .0000 |

(RTK833)

AEDC VA352 OMB Q2 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE MU/NO

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | .0000 | .0000 |
| 159.200 | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | .0000 | | | | | |
| 171.900 | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | |
| 190.000 | | .0000 | | | .0000 | .0000 | .0000 | | .0000 | .0000 | | .0000 | | |

| X/L | .1630 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0931 | | .0848 | .0000 | .0743 | .0731 | .0710 | .0604 | .0677 | .0754 | .0708 | .0708 | .0663 | .0626 | |
| 11.500 | | | .0000 | | | | | .0000 | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | .0884 | | | .0724 | | | | |
| 23.000 | | | | .1039 | | | | | | | | | | | |
| 24.000 | | | | .1165 | | | | | | | | | | | |
| 31.500 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 36.000 | | | | .1117 | | | | | | | | | | | |
| 40.000 | | | | .1036 | | | | | | | | | | | |
| 43.000 | | | | | | | | .0884 | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | | |
| 57.500 | | | | | | | | .0000 | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.500 | | | | .0000 | | | | | | | | | | | |
| 103.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | | | | | | | | | |
| 141.400 | .0000 | | | | | | | | | | | | | | |
| 151.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 190.000 | | | | | | | | | | | | | | | |

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0619 | .0623 | .0611 | .0624 | .0614 | .0608 | .0601 | .0581 | .0530 | .0538 | .0523 | .0492 | .0490 | .0451 | |
| 21.500 | .0656 | | | | .0531 | | | | .0562 | | | | | | |
| 63.000 | .0000 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 61.400 | | | | | .0000 | | | | | | | | | | |



(RTMB33)

MACH (1) = 8.000 ALPHA (2) = 35.000

| SECTION (1) ORBITER FUSELAGE | | AEDC VA352 OH4B O2 ORB. FUSELAGE | | | | | | | | | | | | | | |
|------------------------------|-------|----------------------------------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| | | DEPENDENT VARIABLE HU/HO | | | | | | | | | | | | | | |
| X/L | PHI | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| 108.000 | .0000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 111.000 | .0000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 112.000 | .0000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 113.000 | .0000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 116.000 | .0000 | | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 135.000 | .0000 | | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 149.000 | .0000 | | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 160.000 | .0000 | | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| X/L | PHI | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |
| | | | | | | | | | | | | | | | | |
| 21.500 | .0391 | | | | | .0342 | | .0329 | .0317 | .0300 | | .0343 | .0331 | | | |
| 39.000 | .0399 | | | | | .0342 | | .0329 | .0317 | .0300 | | .0343 | .0331 | | | |
| 52.500 | .0000 | | | | | .0000 | | .0000 | .0000 | .0000 | | .0000 | .0000 | | | |
| 65.000 | .0000 | | | | | .0000 | | .0000 | .0000 | .0000 | | .0000 | .0000 | | | |
| 68.000 | .0000 | | | | | .0000 | | .0000 | .0000 | .0000 | | .0000 | .0000 | | | |
| 100.000 | .0000 | | | | | .0000 | | .0000 | .0000 | .0000 | | .0000 | .0000 | | | |
| 108.000 | .0000 | | | | | .0000 | | .0000 | .0000 | .0000 | | .0000 | .0000 | | | |
| 112.000 | .0000 | | | | | .0000 | | .0000 | .0000 | .0000 | | .0000 | .0000 | | | |
| 113.000 | .0000 | | | | | .0000 | | .0000 | .0000 | .0000 | | .0000 | .0000 | | | |



AEDC VA332 OH4B 02 ORS, FUSELAGE

(RTK834) (25 APR 74)

REFERENCE DATA

REF = .0228 SQ.FT. WHP = .0000 IN.
REF = 22.5503 IN. WTP = .0000 IN.
REF = 19.3919 IN. ZWP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 94.900 QI = 1.934 HREF = .030

PARAMETRIC DATA

BETA = .000 RW/L = 1.900
B.FLAP = .000 ELEVON = .000
HAW/HT = 1.000

SECTION (1) ORS: W/F FUSELAGE DEPENDENT VARIABLE HU/DO

| X/L | .0000 | .0612 | .4959 | .4253 | .2775 | .2239 | .1944 | .1662 | .1395 | .1263 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| X/L | .1200 | .1250 | .1300 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 | .1820 |

| X/L | .0977 | .0900 | .0836 | .0775 | .0766 | .0751 | .0740 |
|-----|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| X/L | .1930 | .1900 | .1910 | .1910 | .2000 | .2000 | .2000 |

| X/L | .1830 | .1900 | .1910 | .1910 | .2000 | .2000 | .2000 | .2000 | .2000 | .2000 | .2000 | .2000 | .2000 | .2000 | .2000 | .2000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 |
| X/L | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 | .0890 |



(RTN334)

AEDC VA352 OH4B 02 ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | .0000 | | | | .0000 | | | | .0815 | | | |
| 21.500 | | | | | | | | .0743 | | | | | | | |
| 23.000 | | | | .0894 | | | | | | | | | | | |
| 24.000 | | | | .1015 | | | | | | | | | | | |
| 31.500 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | .0978 | | | | | | | | | | | |
| 35.000 | | | | .0926 | | | | .0834 | | | | | | | |
| 45.000 | | | | | | | | .0789 | | | | | | | |
| 49.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 57.500 | | | | | | | | .0000 | | | | | | | |
| 59.500 | | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.500 | | | | .0000 | | | | | | | | | | | |
| 105.000 | | | | | | | | .0000 | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 125.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | | | | | | | | | |
| 141.400 | | | | .0000 | | | | | | | | | | | |
| 151.000 | | | | | | | | .0000 | | | | | | | |
| 180.000 | | | | | | | | .0000 | | | | | | | |

| X/L | .5070 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0602 | .0499 | .0499 | .0551 | .0501 | .0492 | .0483 | .0465 | .0440 | .0440 | .0436 | .0408 | .0404 | .0369 | |
| 21.500 | .0546 | | | | .0441 | | | | .0466 | | | | .0351 | | |
| 63.000 | .0000 | | | | | | | | .0000 | | | | .0000 | | |
| 64.000 | | | | | | | | | | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 65.500 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 105.000 | .0000 | | | | | | | | .0000 | | | | .0000 | | .0000 |
| 111.000 | | | | | | | | | | | | | .0000 | | |
| 112.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 113.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 116.000 | | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 135.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 149.000 | | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |
| 180.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | .0000 | | |

PHI

AEDC VAS32 OMB OE ORB, FUSELAGE (RTM534)

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HO

| X/L | .6900 | .6750 | .8000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| P/HI | | | | | | | | | | | | |
| .000 | .0352 | .0352 | .0330 | .0315 | .0285 | .0290 | .0279 | .0000 | .0281 | .0000 | .0276 | .0000 |
| 21.500 | | | .0346 | | | | | | | | | |
| 39.000 | | | | | .0000 | | | | | | | .0000 |
| 52.500 | | | .0000 | | | | | | | | | |
| 65.000 | | | .0000 | | | | | | | | | |
| 66.000 | | | .0000 | | | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 109.000 | | | .0000 | | | | | | | | | |
| 112.000 | | | .0000 | | | | | | | | | |
| 113.000 | | | .0000 | | | | | .0000 | | | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.900 QI = 1.534 HREF = .030

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HO

| X/L | .0000 | .0080 | .0100 | .0200 | .0250 | .0300 | .0400 | .0600 | .0700 | .0750 | .0760 | .0800 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P/HI | | | | | | | | | | | | | |
| .000 | .4232 | .4261 | .4300 | .2934 | .2476 | .2141 | .1668 | .1592 | .1449 | .1337 | .1268 | .1211 | .0000 |
| 10.000 | | | | | | | | | | | | | .0000 |
| 14.000 | | | | | | | | | | | | | .0000 |
| 20.000 | | | | | | | | | | | | | .0000 |
| 22.000 | | | | | | | | | | | | | .0000 |
| 24.500 | | | | | | | | | | | | | .0000 |
| 35.000 | | | | | | | | | | | | | .0000 |
| 39.000 | | | | | | | | | | | | | .0000 |
| 42.500 | | | | | | | | | | | | | .0000 |
| 46.000 | | | | | | | | | | | | | .0000 |
| 60.000 | | | | | | | | | | | | | .0000 |
| 119.000 | | | .0000 | | .0000 | | .0000 | | .0000 | | | | .0000 |
| 160.000 | | | | | | | | | | | | | .0000 |

X/L .1200 .1250 .1300 .1400 .1500 .1560 .1600 .1620 .1670 .1690 .1700 .1760 .1810 .1820

P/HI .1182 .1088 .1016 .0930 .0961 .0931 .0929

| | | | | | | | | | | | | | |
|---------|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| .000 | | | | | | | | | | | | | |
| 10.000 | | | | | | | | | | | | | .0000 |
| 20.000 | | | | | | | | | | | | | .0000 |
| 25.500 | | | | | | | | | | | | | .0000 |
| 40.000 | | | | | | | | | | | | | .0000 |
| 45.500 | | | | | | | | | | | | | .0000 |
| 131.200 | | | | | | | | | | | | | .0000 |
| 145.400 | | | | | | | | | | | | | .0000 |
| 146.200 | | | | | | | | | | | | | .0000 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

MACH (1) = 6.000 ALPHA (2) = 39.000 (RTB34)

| SECTION (1) ORBITER FUELSAGE | | DEPENDENT VARIABLE MU/MO | | | | | | | | | | | | | | |
|------------------------------|-------|--------------------------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| X/L | | .9000 | .9250 | .9500 | .9750 | .9000 | .9250 | .9500 | .9750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| PH1 | | | | | | | | | | | | | | | | |
| 108.000 | .0000 | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 111.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 112.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 113.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 118.000 | | | | | .0000 | | | | .0000 | | | .0000 | | .0000 | | |
| 139.000 | .0000 | | | | .0000 | | | | .0000 | | | .0000 | | .0000 | | |
| 149.000 | | | | | .0000 | | | | .0000 | | | .0000 | | .0000 | | |
| 180.000 | .0000 | | | | .0000 | | | | .0000 | | | .0000 | | .0000 | | |
| PH2 | | | | | | | | | | | | | | | | |
| 85.00 | .8950 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | | | | |
| .0532 | .0529 | .0517 | .0521 | .0462 | .0507 | .0495 | .0000 | | .0502 | .0000 | .0496 | | | | | |
| | | .0511 | | | | | | | | | | | | | | |
| 21.500 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 39.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 52.500 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 55.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 68.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 100.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 106.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 112.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |
| 119.000 | | | | | .0000 | | | | .0000 | | | | | .0000 | | |



AEDC V4352 OH8 OR ORB. FUSELAGE

(RTKBS5) (23 APR 74)

REFERENCE DATA

WGT = .0236 30.FT. WAPP = .0000 IN.
LIFT = 22.5803 IN. WAPP = .0000 IN.
DREF = 16.5319 IN. ZAPP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 MM/L = 1.750
B.FLAP = .000 ELEVON = .000
DMIT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 98.200 Q1 = 1.797 WREF = .033

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU40

| | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| W/L | .0000 | .0050 | .0100 | .0200 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .1000 | |
| PW1 | .4829 | .4289 | .3463 | .2749 | .2258 | .1830 | .1439 | .1263 | .1155 | .1047 | .1046 | .1046 | .1046 | |
| 10.000 | | | | | | .0000 | | | | | | | .0000 | |
| 14.000 | | | | | | .0000 | | | | | | | .0000 | |
| 20.000 | | | | | | .0000 | | | | | | | .0000 | |
| 22.000 | | | | | | .0000 | | | | | | | .0000 | |
| 24.500 | | | | | | .0000 | | | | | | | .0000 | |
| 35.000 | | | | | | .0000 | | | | | | | .0000 | |
| 42.500 | | | | | | .0000 | | | .0000 | | | | .0000 | |
| 48.000 | | | | | | .0000 | | | .0000 | | | | .0000 | |
| 60.000 | | | | | | .0000 | | | .0000 | | | | .0000 | |
| 119.000 | | | | | | .0000 | | | .0000 | | | | .0000 | |
| 160.000 | | | | | | .0000 | | | .0000 | | | | .0000 | |
| W/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |

SECTION (2) ORBITER FUSELAGE DEPENDENT VARIABLE MU40

| | | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| W/L | .1850 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PW1 | .0951 | .0898 | .0841 | .0749 | .0634 | .0500 | .0350 | .0200 | .0050 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | | | | | | .0000 | | | | | | | | | .0000 |
| 20.000 | | | | | | .0000 | | | | | | | | | .0000 |
| 25.500 | | | | | | .0000 | | | | | | | | | .0000 |
| 40.000 | | | | | | .0000 | | | | | | | | | .0000 |
| 45.500 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 131.200 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 145.400 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 148.200 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 159.200 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 170.700 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 171.900 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 175.400 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| 180.000 | | | | | | .0000 | | | .0000 | | | | | | .0000 |
| W/L | .0773 | .0773 | .0814 | .0824 | .0872 | .0876 | .0893 | .0904 | .0926 | .0926 | .0926 | .0926 | .0926 | .0926 | .0926 |



AEDC VAS32 OMB OZ ORB. FUELAGE (RTK33)

WIND (1) = 0.000 ALPHA (1) = 30.000

SECTION 1: COMPUTER FUELAGE DEPENDENT VARIABLE MU/RO

| PHI | .0650 | .1900 | .1910 | .2000 | .2250 | .2300 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| 12.000 | | | | | | | .0000 | | | | | | | | |
| 21.500 | | | | | | | .0746 | | | | .0607 | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .0085 | | | | | | | | | | | |
| 31.500 | | | .0567 | | | | | | | | | | | | |
| 34.000 | | | | .0346 | | | | | | | | | | | |
| 35.000 | | | .0327 | | | | | .0621 | | | | | | | |
| 40.000 | | | | | | | .0773 | | | | | | | | |
| 45.000 | | | | .0000 | | | | | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 96.500 | | | | .0000 | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 108.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | | | | | | | | | |
| 141.400 | | | | | | | | | | | | | | | |
| 141.000 | | | .0000 | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |
| PHI | .5000 | .5250 | .5300 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| 150 | | | | | | | | | | | | | | | |
| 150.500 | | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | |
| 151.500 | | | | | | | | | | | | | | | |
| 152.000 | | | | | | | | | | | | | | | |
| 152.500 | | | | | | | | | | | | | | | |
| 153.000 | | | | | | | | | | | | | | | |
| 153.500 | | | | | | | | | | | | | | | |
| 154.000 | | | | | | | | | | | | | | | |
| 154.500 | | | | | | | | | | | | | | | |
| 155.000 | | | | | | | | | | | | | | | |
| 155.500 | | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | | | |
| PHI | .9100 | .9250 | .9400 | .9250 | .9400 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0340 | 1.0500 | | | |
| 156.500 | | | | | | | | | | | | | | | |
| 157.000 | | | | | | | | | | | | | | | |
| 157.500 | | | | | | | | | | | | | | | |
| 158.000 | | | | | | | | | | | | | | | |
| 158.500 | | | | | | | | | | | | | | | |
| 159.000 | | | | | | | | | | | | | | | |
| 159.500 | | | | | | | | | | | | | | | |
| 160.000 | | | | | | | | | | | | | | | |



AEDC VA352 OHB 02 ORB. FUSELAGE (RTK839)

MACH (1) = 8.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .6500 | .6750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | .000 | .0440 | .0451 | .0439 | .0390 | .0417 | .0425 | .0000 | .0437 | .0000 | .0444 | .0000 |
| 21.500 | | | .0441 | | | | | | | | | |
| 39.000 | | | | | | .0000 | | | | | | .0000 |
| 52.500 | | | | | | | | | | | | |
| 55.000 | | | .0000 | | | | | | | | | |
| 65.000 | | | .0000 | | | | | | | | | |
| 68.000 | | | | .0000 | | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 108.000 | | | .0000 | | | | | | | | | |
| 112.000 | | | | | | | .0000 | | | | | |
| 119.000 | | | | | | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.200 QI = 1.797 KEF = .033

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .4233 | .4911 | .4124 | .2967 | .2466 | .2133 | .1876 | .1573 | .1437 | .1334 | .1259 | .1192 | .0000 |
| 10.000 | | | | | | | .0000 | | | | | | | .0000 |
| 14.000 | | | | | | | .0000 | | | | | | | .0000 |
| 20.000 | | | | | | | .0000 | | | | | | | .0000 |
| 22.000 | | | | | | | .0000 | | | | | | | .0000 |
| 24.500 | | | | | | | .0000 | | | | | | | .0000 |
| 35.000 | | | | | | | .0000 | | | | | | | .0000 |
| 39.000 | | | | | | | .0000 | | | | | | | .0000 |
| 42.500 | | | | | | | .0000 | | | | | | | .0000 |
| 46.000 | | | | | | | .0000 | | | | .0000 | | | .0000 |
| 60.000 | | | | | | | .0000 | | | | | | | .0000 |
| 119.000 | | | | | | | .0000 | | | | .0000 | | | .0000 |
| 160.000 | | | | | | | .0000 | | | | | | | .0000 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.200 QI = 1.797 KEF = .033

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1620 | .1620 | .1670 | .1690 | .1700 | .1760 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .000 | .1129 | .1083 | .1000 | .0944 | .0943 | .0919 | .0926 | .0919 | .0926 | .0919 | .0919 | .0919 | .0919 |
| 10.000 | | | | | .0000 | | | | | | | | | .0000 |
| 20.000 | | | | | .0000 | | | | | | | | | .0000 |
| 29.500 | | | | | .0000 | | | | | | | | | .0000 |
| 40.000 | | | | | .0000 | | | | | | | | | .0000 |
| 49.500 | | | | | .0000 | | | | | | | | | .0000 |
| 131.200 | | | | | .0000 | | | | .0000 | | | | | .0000 |
| 145.400 | | | | | .0000 | | | | .0000 | | | | | .0000 |
| 146.200 | | | | | .0000 | | | | .0000 | | | | | .0000 |



TABULATED DATA LISTING FOR OH4B (AEDC VA352)

(RTK835)

AEDC VA352 OH4B C2 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|
| PHI | | | | | | | | | | | | | | |
| 109.0000 | .0000 | | | | .0000 | | | .0000 | | | | .0000 | | .0000 |
| 111.0000 | | | | | .0000 | | | | | | | | | |
| 112.0000 | | | | | .0000 | | | | | | | | | |
| 113.0000 | | | | | .0000 | | | | | .0000 | | | | |
| 119.0000 | | | | | .0000 | | | .0000 | | | | | | |
| 135.0000 | | | | | .0000 | | | .0000 | | .0000 | | | | |
| 149.0000 | | | | | .0000 | | | .0000 | | .0000 | | | | |
| 180.0000 | | | | | .0000 | | | .0000 | | .0000 | | | | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | | |
| PHI | | | | | | | | | | | | | | |
| 1.000 | .0663 | .0672 | .0663 | .0672 | .0630 | .0664 | .0720 | .0000 | .0724 | .0000 | .0743 | | | |
| 21.500 | | | | | | | | | | | | | | |
| 39.000 | | | | | | .0000 | | | | | | | | |
| 52.500 | | | | | | | .0000 | | | | | | | |
| 55.000 | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | .0000 | | | | | | | |
| 68.000 | | | | | | | .0000 | | | | | | | |
| 100.000 | | | | | | | .0000 | | | | | | | |
| 108.000 | | | | | | | .0000 | | | | | | | |
| 112.000 | | | | | | | .0000 | | | | | | | |
| 113.000 | | | | | | | .0000 | | | | | | | |

AEDC VAS32 OMB ORB. FUSELAGE

(RTK836) (23 APR 74)

REFERENCE DATA

REF = .8238 33.FT. XHIP = .0000 IN.
 REF = 22.5803 IN. YHIP = .0000 IN.
 REF = 16.3919 IN. ZHIP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.967 QI = 1.984 HREF = .035

PARAMETRIC DATA

BETA = .000 RV/L = 2.000
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0650 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .4525 | .4920 | .1234 | .2746 | .2257 | .1955 | .1877 | .1410 | .1276 | .1163 | .1089 | .0964 | .0864 | .0800 |
| 10.000 | | | | | | | .0000 | | | | | | | | |
| 14.000 | | | | | | | .0000 | | | | | | | | |
| 20.000 | | | | | | | .0000 | | | | | | | | |
| 22.000 | | | | | | | .0000 | | | | | | | | |
| 24.500 | | | | | | | .0000 | | | | | | | | |
| 35.000 | | | | | | | .0000 | | | | | | | | |
| 39.000 | | | | | | | .0000 | | | | | | | | |
| 42.500 | | | | | | | .0000 | | | | | | | | |
| 48.000 | | | | | | | .0000 | | | | | | | | |
| 60.000 | | | | | | | .0000 | | | | | | | | |
| 119.000 | | | | | | | .0000 | | | | | | | | |
| 190.000 | | | | | | | .0000 | | | | | | | | |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0928 | .0696 | .0634 | .0764 | .0768 | .0752 | .0747 | | | | | | | | |
| 10.000 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 20.000 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 25.500 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 40.000 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 45.500 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 131.200 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 145.400 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 146.200 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 156.000 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 159.200 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 170.700 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 171.900 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 173.400 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |
| 180.000 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | | |

| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0744 | .0685 | .0616 | .0626 | .0639 | .0681 | .0605 | .0586 | .0544 | .0507 | | | | |
| 11.500 | | | | .0000 | .0000 | .0000 | .0000 | | | | | | | |



TABULATED DATA LISTING FOR OMB (AEDC VA352)

(RTK336)

MACH (1) = 8.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE

DEPENDENT VARIABLE MU/40

| Y/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 12.000 | | | | .0000 | | | | .0000 | | | | .0625 | | | |
| 21.000 | | | | | | | .0760 | | | | | | | | |
| 23.500 | | | | .0895 | | | | | | | | | | | |
| 24.000 | | | | .0993 | | | | | | | | | | | |
| 31.000 | | | | | | | | .0000 | | | | | | | |
| 34.000 | | | | .0965 | | | | .0815 | | | | | | | |
| 35.000 | | | | .0935 | | | .0771 | | | | | | | | |
| 40.000 | | | | | | | .0000 | | | | | .0000 | | | |
| 45.000 | | | | | | | | .0000 | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 57.000 | | | | | | | | | | | | .0000 | | | |
| 59.000 | | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.000 | | | | .0000 | | | | | | | | .0000 | | | |
| 105.000 | | | | | | | | .0000 | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | .0000 | | | | .0000 | | | | .0000 | | | |
| 140.000 | | | | | | | | .0000 | | | | | | | |
| 141.400 | .0000 | | | | | | | | | | | | | | |
| 171.000 | | | .0000 | | | | | .0000 | | | | .0000 | | | |
| 180.000 | | | | .0000 | | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| Y/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 100 | .0511 | .0504 | .0496 | .0542 | .0504 | .0499 | .0509 | .0495 | .0470 | .0497 | .0468 | .0457 | .0504 | .0502 | |
| 21.000 | .0554 | | | .0452 | | | | | .0489 | | | | | | |
| 63.000 | .0000 | | | | | | | | .0000 | | | | .0000 | | |
| 64.000 | | | | | | | | | | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 65.500 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 105.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | .0000 |
| 111.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 112.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 113.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 135.000 | .0000 | | | .0000 | .0000 | | | .0000 | .0000 | | .0000 | | .0000 | | |
| 135.000 | .0000 | | | .0000 | .0000 | | | .0000 | .0000 | | .0000 | | .0000 | | |
| 140.000 | .0000 | | | .0000 | .0000 | | | .0000 | .0000 | | .0000 | | .0000 | | |
| 160.000 | .0000 | | | .0000 | .0000 | | | .0000 | .0000 | | .0000 | | .0000 | | |

Y/L .8500 .8750 .9000 .9250 .9500 .9750 1.0000 1.0130 1.0140 1.0250 1.0390 1.0500

P=1

AEDC VA352 OMB OR ORB. FUSELAGE (RTK636)

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .0521 | .0547 | .0544 | .0516 | .0527 | .0563 | .0586 | .0600 | .0600 | .0600 | .0600 | .0610 |
| 21.500 | .0549 | | | | | | .0000 | | | | | .0000 |
| 39.000 | | | | | | .0000 | | | | | | |
| 52.500 | | | .0000 | | | | | | | | | |
| 75.000 | | | .0000 | | | | | | | | | |
| 65.000 | | | .0000 | | | | | | | | | |
| 69.000 | | | .0000 | | | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 108.000 | | | .0000 | | | | | | | | | |
| 112.000 | | | .0000 | | | | | | | | | |
| 113.000 | | | .0000 | | | | | | | | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.967 QI = 1.984 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | .0000 | .0060 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .4203 | .4921 | .4208 | .2982 | .2459 | .2144 | .1864 | .1583 | .1451 | | | .1350 | .1300 | .1161 | .0000 |
| 10.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 14.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 20.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 22.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 24.500 | | | | | | | .0000 | | | | | | | | .0000 |
| 35.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 39.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 42.500 | | | | | | | .0000 | | | | | .0000 | | | .0000 |
| 46.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 60.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 119.000 | | | .0000 | | .0000 | | .0000 | | | | .0000 | | | | .0000 |
| 180.000 | | | .0000 | | .0000 | | .0000 | | | | .0000 | | | | .0000 |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .1159 | .1097 | .1093 | .0990 | .0931 | .0650 | | | | | .0931 | | .0823 | | |
| 10.000 | | | | | .0000 | | | | | | | | | | |
| 20.000 | | | | | .0000 | | | | | | | | | | |
| 24.500 | | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | | .0000 | | | | | | | | | | |
| 45.000 | | | | | .0000 | | | | | | | | | | |
| 131.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 145.400 | | | | | .0000 | | | | | | | | | | .0000 |
| 146.000 | | | | | .0000 | | | | | | | | | | .0000 |



(RTK836)

AEDC VAS32 OMB OR ORB. FUSELAGE

MACH (1) = 6.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 106.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 111.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 112.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 113.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 116.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 118.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 149.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

X/L .8750 .9000 .9250 .9500 .9750 1.0000 1.0130 1.0140 1.0250 1.0360 1.0500

| PHI | .0899 | .0961 | .0922 | .0997 | .0867 | .0963 | .1002 | .0000 | .0969 | .0000 | .1016 | .0000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 21.500 | .0942 | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | |
| 52.500 | | | | | | | | | | | | |
| 55.000 | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | |
| 68.000 | | | | | | | | | | | | |
| 100.000 | | | | | | | | | | | | |
| 108.000 | | | | | | | | | | | | |
| 112.000 | | | | | | | | | | | | |
| 113.000 | | | | | | | | | | | | |

MACH (1) = 6.000 ALPHA (3) = 45.000 TI = 94.967 QI = 1.984 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 10.000 | .3384 | .4665 | .4413 | .3235 | .2785 | .2520 | .2243 | .1888 | .1748 | .1658 | .1491 | .1534 | .1000 | .0000 | .0000 |
| 14.000 | | | | | | | | | | | | | | | |
| 20.000 | | | | | | | | | | | | | | | |
| 22.000 | | | | | | | | | | | | | | | |
| 24.500 | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 42.500 | | | | | | | | | | | | | | | |
| 48.000 | | | | | | | | | | | | | | | |
| 60.000 | | | | | | | | | | | | | | | |
| 110.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |

X/L .1200 .1250 .1300 .1400 .1500 .1560 .1600 .1670 .1700 .1750 .1800 .1810 .1850



(RTKB36)

AEDC VA392 OMB O2 ORB. FUSELAGE

MACH (1) = 8.000 ALPHA (3) = 45.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X% | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | .1371 | .1309 | .1223 | | .1235 | | .0000 | | .1231 | | .1214 | | |
| 10.000 | .1431 | | | | .0000 | | | | | | | | | | |
| 20.000 | | | | | .0000 | | | | | | | | | | |
| 25.000 | | | | | .0000 | | | | | | | | | | |
| 40.000 | | | | | .0000 | | | | | | | | | | |
| 45.000 | | | | | .0000 | | | | | | | | | | |
| 131.000 | | | | | | | | | .0000 | | | | | | .0000 |
| 145.400 | | | | | | | | | | | | | | | .0000 |
| 146.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 155.000 | | | | | | | | | | | | | | | .0000 |
| 159.000 | | | | | | | | | | | | | | | .0000 |
| 170.000 | | | | | | | | | | .0000 | | | | | .0000 |
| 171.000 | | | | | | | | | | | | | | | .0000 |
| 173.400 | | | | | | | | | | | | | | | .0000 |
| 190.000 | | .0000 | | | .0000 | | .0000 | | | | | .0000 | | | .0000 |

| X% | .1630 | .1700 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | .1212 | | .1026 | .0000 | .1024 | .1007 | .0962 | .1045 | .1127 | .0978 | .0936 | .0929 | .0693 | .0666 |
| 11.500 | | | | .0000 | | | | .0000 | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | .1319 | | | .1139 | | | | | | | | .0982 |
| 34.000 | | | | .1437 | | | | | | | | | | | |
| 35.000 | | | | | | | | .0000 | | | | | | | |
| 40.000 | | | | .1383 | | | | .1144 | | | | | | | |
| 45.000 | | | | .1342 | | | | .1096 | | | | | | | |
| 45.000 | | | | .0000 | | | | .0000 | | | | | | | .0000 |
| 51.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 57.500 | | | | | | | | .0000 | | | | | | | .0000 |
| 59.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 61.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 63.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 70.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 76.000 | | | | .0000 | | | | | | | | | | | .0000 |
| 76.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 135.000 | | | | | | | | .0000 | | | | | | | .0000 |
| 140.000 | | | | .0000 | | | | | | | | | | | .0000 |
| 141.400 | | .0000 | | | | | | .0000 | | | | | | | .0000 |
| 151.000 | | | | | | | | | | | | | | | .0000 |
| 170.000 | | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |

(RTAB36)

MACH (1) = 6.000 ALPHA (3) = 45.000

AEDC VA352 ORB 02 ORB. FUELSAGE

SECTION 111 ORBITER FUELSAGE DEPENDENT VARIABLE MU/HD

| WZ | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .829 |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .0996 | .0769 | .0629 | .0648 | .0403 | .0613 | .0607 | .0788 | .0744 | .0775 | .0782 | .0739 | .0770 | .0787 | |
| 21.500 | .0996 | | | .0711 | | | | | .0793 | | | | .0736 | | |
| 43.000 | .0000 | | | | | | | | .0000 | | | | .0000 | | |
| 64.000 | | | | | | | | | | | | | .0000 | | |
| 85.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 106.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 127.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 148.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 169.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 190.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 211.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 232.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 253.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 274.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 295.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 316.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 337.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 358.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 379.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 400.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 421.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 442.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 463.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 484.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 505.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 526.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 547.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 568.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 589.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 610.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 631.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 652.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 673.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 694.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 715.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 736.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 757.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 778.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 799.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 820.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 841.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 862.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 883.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 904.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 925.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 946.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 967.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 988.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1009.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1030.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1051.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1072.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1093.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1114.000 | | | | | .0000 | | | | | | | | .0000 | | |
| 1135.000 | | | | | .0000 | | | | | | | | .0000 | | |



(RTKBS3) (25 APR 74)

AEDC VAS32 C-4B 02 ORG. FUSELAGE

PARAMETRIC DATA

BETA = .000 RN/L = 2.250
 S.FLAP = .000 ELEVSN = .000
 HAW/HT = 1.000

REFERENCE DATA

WING AREA = 9.000 ALPHA (1) = 30.000 TI = 95.200 CI = 2.341 HREF = .036
 STEP # .0235 SQ.FT. XMRP = .0000 IN.
 STEP # 22.5500 IN. XMRP = .0000 IN.
 STEP # 18.3300 IN. XMRP = .0000 IN.
 SCALE = .0015 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 95.200 CI = 2.341 HREF = .036

SECTION (1) C-4B FUSELAGE DEPENDENT VARIABLE MU/40

| WING AREA | 0.000 | .4580 | 4.940 | 41.60 | 416.0 | 2739 | .2283 | .1928 | .1362 | .1293 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|-----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| MU/40 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 44.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| MU/40 | .1250 | .1250 | .1300 | .1400 | .1400 | .1400 | .1500 | .1500 | .1600 | .1600 | .1670 | .1630 | .1780 | .1600 | .1610 | .1620 |
| MU/40 | .0980 | .0906 | .0906 | .0836 | .0836 | .0756 | .0756 | .0756 | .0756 | .0756 | .0756 | .0749 | .0733 | .0733 | .0733 | .0733 |
| 10.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 44.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| MU/40 | .1630 | .1906 | .1910 | .2000 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| MU/40 | .0736 | .0736 | .0736 | .0666 | .0666 | .0666 | .0616 | .0616 | .0616 | .0616 | .0616 | .0604 | .0582 | .0569 | .0543 | .0520 |
| 10.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 44.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

TABULATED DATA LISTING FOR OH4B (AEDC VA332)

(RTAS37)

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION (1) ORIGINATOR FUELSAGE DEPENDENT VARIABLE MU/MD

| W/L | .1650 | .1900 | .1910 | .2000 | .2250 | .2450 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0000 | | | | | | | |
| 13.970 | | | | | | | | .0796 | | | | .0824 | | | |
| 23.000 | | | | .0868 | | | | | | | | | | | |
| 24.000 | | | | .0280 | | | | | | | | | | | |
| 31.000 | | | | .0948 | | | | .0000 | | | | | | | |
| 34.000 | | | | .0931 | | | | .0791 | | | | | | | |
| 35.000 | | | | | | | | .0763 | | | | | | | |
| 40.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 57.000 | | | | | | | | .0000 | | | | | | | |
| 59.000 | | | | | | | | .0000 | | | | | | | |
| 63.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 78.000 | | | | .0000 | | | | | | | | | | | |
| 115.000 | | | | | | | | .0000 | | | | | | | |
| 108.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 143.000 | | | | | | | | .0000 | | | | | | | |
| 151.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 180.000 | | | | | | | | .0000 | | | | | | | |

| W/L | .5000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0100 | 1.0140 | 1.0250 | 1.0300 | 1.0400 | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|--|
| PHI | | | | | | | | | | | | | | | | | | | | | | | | |
| .0000 | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.000 | | | | .0513 | | .0523 | .0523 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | .0530 | |
| 63.000 | | | | .0436 | | | | | | | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | | | | | | | | | | |
| 67.000 | | | | .0000 | | | | | | | | | | | | | | | | | | | | |
| 106.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 111.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 112.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 113.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 114.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 144.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 145.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 146.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 147.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 148.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |
| 149.000 | | | | .0000 | | | | .0000 | | | | | | | | | | | | | | | | |



(TK337)

MACH 1.150 6.000 ALPHA (2) = 35.000

AEDC VASJR OMB ORS FUSELAGE

SECTION 1: OMB FUSELAGE DEPENDENT VARIABLE MU=0

WZL .1200 .1250 .1300 .1400 .1500 .1550 .1600 .1620 .1670 .1700 .1750 .1800 .1810 .1820

| | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Phi | | | | | | | | | | | | | |
| 196.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 197.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 198.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 199.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 200.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

WZL .1850 .1900 .1910 .2000 .2200 .2250 .2300 .2750 .3000 .3250 .3500 .3750 .4000 .4250 .4500 .4750

| | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Phi | | | | | | | | | | | | | | |
| 201.000 | .0543 | .0687 | .0687 | .0757 | .0757 | .0796 | .0796 | .0796 | .0796 | .0796 | .0796 | .0796 | .0796 | .0796 |
| 202.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 203.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 204.000 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 | .1064 |
| 205.000 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 | .1166 |
| 206.000 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 | .1113 |
| 207.000 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 | .1046 |
| 208.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 209.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 210.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 211.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 212.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 213.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 214.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 215.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

WZL .1500 .1550 .1600 .1650 .1700 .1750 .1800 .1850 .1900 .1950 .2000 .2050 .2100 .2150 .2200

| | | | | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Phi | | | | | | | | | | | | | | |
| 216.000 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 | .0428 |
| 217.000 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 | .0461 |
| 218.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 219.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 220.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 221.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 222.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 223.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 224.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 225.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



DATE 23 SEP 74

TABULATED DATA LISTING FOR OMB (AEDC VAS32)

PAGE 227

(RTKS37)

MACH (1) = 8.000 ALPHA (2) = 35.000

AEDC VAS32 OMB 02 OR3. FUSELAGE

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H/H0

| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 106.000 | .0000 | | | | .0000 | | | | .0000 | | | | .0000 | | .0000 |
| 111.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 112.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 113.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 114.000 | | | | | .0000 | | | | | | .0000 | | | | .0000 |
| 115.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | .0000 |
| 149.000 | | | | | .0000 | | | | .0000 | | .0000 | | | | .0000 |
| 150.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | .0000 |
| X/L | .6900 | .6750 | .9000 | .9250 | .9400 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0400 | | | |
| PHI | | | | | | | | | | | | | | | |
| .000 | .1303 | .1304 | .1296 | .1331 | .1191 | .1275 | .1312 | .0000 | .0000 | .1260 | .0000 | .1266 | | | |
| 21.500 | | | .1367 | | | .0000 | | | | | | .0000 | | | |
| 39.000 | | | | | | | | | | | | | | | |
| 52.500 | | | .0000 | | | .0000 | | | | | | | | | |
| 55.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 65.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 68.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 100.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 108.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 112.000 | | | .0000 | | | .0000 | | | | | | | | | |
| 113.000 | | | | | | .0000 | | | .0000 | | | | | | |

REFERENCE DATA

STEP = .0238 IN. FT. WAP = .0000 IN.
STEP = 22.543 IN. WAP = .0000 IN.
STEP = 15.1515 IN. WAP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 96.550 QI = 2.536 HREF = .039

PARAMETRIC DATA

BETA = .000 RW/L = 2.500
B.FLAP = .000 ELEVON = .000
HAWK/T = 1.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/WO

| X/L | .0000 | .0250 | .0400 | .0600 | .0800 | .0900 | .0750 | .0750 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | .000 | .4882 | .4973 | .4229 | .2773 | .2259 | .1982 | .1407 | .1277 | .1185 | .1118 |
| 10.000 | | | | | | | | | | | .0998 |
| 14.000 | | | | | | | | | | | .0000 |
| 20.000 | | | | | | | | | | | .0000 |
| 22.000 | | | | | | | | | | | .0000 |
| 24.000 | | | | | | | | | | | .0000 |
| 25.000 | | | | | | | | | | | .0000 |
| 30.000 | | | | | | | | | | | .0000 |
| 40.000 | | | | | | | | | | | .0000 |
| 60.000 | | | | | | | | | | | .0000 |
| 100.000 | | | | | | | | | | | .0000 |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1750 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | .0969 | .0916 | .0840 | .0762 | .0777 | .0754 | .0792 | | | | | | | | |
| 10.000 | | | | | | | | | | | | | | | .0000 |
| 20.000 | | | | | | | | | | | | | | | .0000 |
| 25.000 | | | | | | | | | | | | | | | .0000 |
| 40.000 | | | | | | | | | | | | | | | .0000 |
| 45.000 | | | | | | | | | | | | | | | .0000 |
| 131.000 | | | | | | | | | | | | | | | .0000 |
| 145.000 | | | | | | | | | | | | | | | .0000 |
| 148.000 | | | | | | | | | | | | | | | .0000 |
| 158.000 | | | | | | | | | | | | | | | .0000 |
| 170.000 | | | | | | | | | | | | | | | .0000 |
| 171.000 | | | | | | | | | | | | | | | .0000 |
| 173.000 | | | | | | | | | | | | | | | .0000 |
| 180.000 | | | | | | | | | | | | | | | .0000 |

| X/L | .1 | .0 | .1900 | .1810 | .2000 | .2250 | .2450 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | .0744 | .0744 | .0687 | .0634 | .0628 | .0661 | .0702 | .0743 | .0811 | .0835 | .0860 | .0880 | .0910 | .0935 | .0960 | .0980 |
| 10.000 | | | | | | | | | | | | | | | | .0520 |
| 11.000 | | | | | | | | | | | | | | | | .0520 |



DATE 23 SEP 74 TABULATED DATA LISTING FOR CH4B (AEDC VA332)

(RTM338)

AEDC VA332 CH4B CR CRB. FUELSAGE

NACH 11.5 8.000 ALPHA 11.5 30.000

SECTION 11: CRB17ER FUELSAGE DEPENDENT VARIABLE MU/NG

| Y/L | .1930 | .1950 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| PH1 | | | | | | | | .0000 | | | | .0634 | | | |
| 12.000 | | | | | | | | .0785 | | | | | | | |
| 21.000 | | | | .0868 | | | | .0000 | | | | | | | |
| 23.000 | | | .1062 | | | | | .0813 | | | | | | | |
| 24.000 | | | | .0955 | | | | .0795 | | | | | | | |
| 31.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 35.000 | | | | | | | | .0000 | | | | | | | |
| 40.000 | | | | | | | | .0000 | | | | | | | |
| 45.000 | | | | | | | | .0000 | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 57.000 | | | | | | | | .0000 | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 62.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 76.000 | | | | | | | | .0000 | | | | | | | |
| 105.000 | | | | | | | | .0000 | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 141.000 | .0000 | | .0000 | | | | | .0000 | | | | | | | |
| 171.000 | | | | | | | | .0000 | | | | | | | |
| 176.000 | | | | | | | | .0000 | | | | | | | |
| PH1 | | | | | | | | .0000 | | | | | | | |
| 21.000 | .0523 | .0530 | .0518 | .0535 | .0536 | .0539 | .0563 | .0559 | .0557 | .0519 | .0550 | .0571 | .0737 | .0583 | |
| 22.000 | .0267 | | | | .0484 | | | .0597 | | | | | .0731 | | |
| 63.000 | .0000 | | | | | | | .0000 | | | | | | | |
| 64.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 66.000 | | | | | .0000 | | | .0000 | | | | | .0000 | | |
| 102.000 | .0000 | | | | | | | .0000 | | | | | | | .0000 |
| 111.000 | | | | | .0000 | | | .0000 | | | | | | | |
| 112.000 | | | | | .0000 | | | .0000 | | | | | | | |
| 113.000 | | | | | .0000 | | | .0000 | | | | | | | |
| 115.000 | | | | | .0000 | | | .0000 | | | .0000 | | | | |
| 135.000 | .0000 | | | | .0000 | | | .0000 | | | .0000 | | | | |
| 143.000 | | | | | .0000 | | | .0000 | | | .0000 | | | | |
| 180.000 | .0000 | | | | .0000 | | | .0000 | | | .0000 | | | | |
| PH1 | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | | | |

PH1

(RTK938)

AEDC VA352 OMB 02 ORB, FUSELAGE

MACH (1) = 8.000 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0150 | 1.0140 | 1.0250 | 1.0300 | 1.0500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .0944 | .0969 | .0994 | .1017 | .0837 | .0968 | .0989 | .0000 | .1003 | .0000 | .1003 | .1003 |
| 21.500 | | | .0962 | | | | | | | | | .0000 |
| 39.000 | | | | | .0000 | | .0000 | | | | | .0000 |
| 52.500 | | | .0000 | | | | | | | | | |
| 95.000 | | | .0000 | | | | | | | | | |
| 95.000 | | | .0000 | | | | | | | | | |
| 99.000 | | | .0000 | | .0000 | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 109.000 | | | .0000 | | .0000 | | | | | | | |
| 112.000 | | | .0000 | | | | | | | | | |
| 113.000 | | | .0000 | | .0000 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.990 QI = 2.536 REF = .039

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/L | .0000 | .0060 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .4223 | .4950 | .4419 | .2971 | .2450 | .2167 | .1674 | .1581 | .1444 | | .1350 | .1269 | .1196 | .1196 | .0000 |
| 10.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 14.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 20.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 22.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 24.500 | | | | | | | .0000 | | | | | | | | .0000 |
| 35.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 39.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 42.500 | | | | | | | .0000 | | | | | .0000 | | | .0000 |
| 48.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 60.000 | | | | | | | .0000 | | | | | | | | .0000 |
| 119.000 | | | .0000 | | .0000 | | .0000 | | | .0000 | | | | | .0000 |
| 160.000 | | | .0000 | | .0000 | | .0000 | | | .0000 | | | | | .0000 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.990 QI = 2.536 REF = .039

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HO

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1600 | .1620 | .1670 | .1690 | .1700 | .1750 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .1130 | .1069 | .1000 | .0923 | .0800 | .0935 | .0935 | .0935 | .0923 | .0900 | .0923 | .0908 | .0908 | .0908 | .0908 |
| 10.000 | | | | .0000 | | | | | | | | | | | .0000 |
| 20.000 | | | | .0000 | | | | | | | | | | | .0000 |
| 25.000 | | | | .0000 | | | | | | | | | | | .0000 |
| 40.000 | | | | .0000 | | | | | | | | | | | .0000 |
| 45.000 | | | | .0000 | | | | | | | | | | | .0000 |
| 131.200 | | | | .0000 | | | | .0000 | | | | | | | .0000 |
| 145.400 | | | | .0000 | | | | .0000 | | | | | | | .0000 |
| 146.200 | | | | .0000 | | | | .0000 | | | | | | | .0000 |



(RTK939)

AEDC VA332 OH4B 02 ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 176.000 | | | | | | | | | | | | | | .0000 | .0000 |
| 179.200 | | | | | | | | | | | | .0000 | | | |
| 176.700 | | | | | | | | | .0000 | | | | | | |
| 171.000 | | | | | | | | | | .0000 | | | | | |
| 173.400 | | | | | .0000 | | | | | | | | | | |
| 150.000 | | | | | | .0000 | | | | | | | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| P=1 | | | | | | | | | | | | | | | |
| .000 | .0925 | .0862 | .0862 | .0862 | .0862 | .0763 | .0763 | .0708 | .0776 | .0673 | .0772 | .0750 | .0722 | .0685 | .0636 |
| 11.500 | | .0000 | | | | | | .0000 | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | .0000 | | | | .0732 | | | |
| 23.000 | | | | | | | | .0674 | | | | | | | |
| 24.000 | | | .1038 | | | | | .0000 | | | | | | | |
| 31.500 | | | .1172 | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | .1111 | | | | | | | | | | | |
| 40.000 | | | | .1045 | | | | .0925 | | | | | | | |
| 45.000 | | | | | | | | .0902 | | | | | | | |
| 51.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 57.500 | | | | | | | | | | | | .0000 | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.500 | | | | .0000 | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | .0000 | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 135.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | | | | | .0000 | | | | | | | |
| 141.400 | .0700 | | | .0000 | | | | | | | | | | | |
| 151.000 | | | | .0000 | | | | | | | | | | | |
| 190.000 | | | | | | | | | | | | .0000 | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8290 |
| P=1 | | | | | | | | | | | | | | | |
| .000 | .0653 | .0652 | .0671 | .0722 | .0714 | .0756 | .0809 | .0881 | .0929 | .1022 | .1143 | .1194 | .1435 | .1549 | |
| 21.500 | .0687 | | | .0603 | | | | | .0987 | | | | .1348 | | |
| 63.000 | .0000 | | | | | | | | | | | | | | |
| 84.000 | | | | | | | | | | | | | | | |
| 85.000 | | | | | | | | | | | | | | | |
| 85.500 | | | | | .0000 | | | | .0000 | | | | | | .0000 |

AEDC VA332 C-4B 02 ORB, FUSELAGE (RTK538)

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

| X% | .9500 | .9250 | .9000 | .8750 | .8500 | .8250 | .8000 | .7750 | .7500 | .7250 | .7000 | .6750 | .6500 | .6250 | .6000 | .5750 | .5500 | .5250 | .5000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 105.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 111.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 112.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 113.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 115.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 125.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

X% .9500 .9250 .9000 .8750 .8500 .8250 .8000 .7750 .7500 .7250 .7000 .6750 .6500 .6250 .6000 .5750 .5500 .5250 .5000

| PHI | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 21.500 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 52.500 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 55.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 65.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 68.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 108.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 112.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 113.000 | .1937 | .1949 | .1929 | .1931 | .1371 | .1442 | .1436 | .0000 | .0000 | .1366 | .0000 | .1339 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



AEDC VAS32 OMB OR ORB, FUSELAGE

(RTK339) (25 APR 74)

REFERENCE DATA

STEP = .8238 SQ.FT. XMRP = .0000 IN.
 STEP = 22.8803 IN. YMRP = .0000 IN.
 STEP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

WACH (1) = 6.000 ALPHA (1) = 30.000 TI = 98.100 QI = 2.818 MEF = .041
 BETA = .000 TR/L = 2.750
 S.FLAP = .000 ELEVON = .000
 WAWHT = 1.000

PARAMETRIC DATA

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/Q

| X/L | .0000 | .0660 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .4837 | .4937 | .4328 | .2761 | .2280 | .1885 | .1690 | .1399 | .1287 | .1165 | .1102 | .1029 | .1029 | .1029 | .1029 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 35.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 48.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 65.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 119.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | .0984 | .0908 | .0948 | .0765 | .0700 | .0770 | .0741 | .0752 | .0741 | .0752 | .0741 | .0752 | .0741 | .0752 | .0741 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 146.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 156.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 159.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 170.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 171.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 173.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

X/L .1830 .1900 .1910 .2000 .2250 .2300 .2750 .3000 .3250 .3300 .3750 .4000 .4250 .4500 .4750
 PHI .0735 .0881 .0000 .0828 .0825 .0844 .0890 .0818 .0598 .0579 .0537 .0523

(RTK839)

MACH (1) = 6.000 ALPHA (1) = 30.000

AEDC VA332 CH4B Q2 ORG. FUELSLAGE

SECTION 1: DIRECT FUELSLAGE DEPENDENT VARIABLE MU/FC

| Y/L | .1930 | .1950 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| P=1 | | | | | | | | | | | | | | | |
| 12.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 21.000 | | | | | | | .0783 | | | | | .0596 | | | |
| 31.000 | | | | | | | | | | | | | | | |
| 34.000 | | | | .0904 | | | | | | | | | | | |
| 31.000 | | | | .0983 | | | | | | | | | | | |
| 34.000 | | | | | | | | .0000 | | | | | | | |
| 31.000 | | | | .0999 | | | | | | | | | | | |
| 45.000 | | | | .0935 | | | | .0904 | | | | | | | |
| 47.000 | | | | | | | | .0902 | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | | |
| 57.000 | | | | | | | | .0000 | | | | | | | |
| 59.000 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | .0000 | | | | | | | |
| 65.000 | | | | | | | | .0000 | | | | | | | |
| 70.000 | | | | | | | | .0000 | | | | | | | |
| 76.000 | | | | .0000 | | | | | | | | | | | |
| 109.000 | | | | | | | | .0000 | | | | | | | |
| 106.000 | | | | | | | | .0000 | | | | | | | |
| 175.000 | | | | | | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | | | | | | | | | |
| 141.400 | | | | | | | | .0000 | | | | | | | |
| 151.000 | | | | .0000 | | | | | | | | | | | |
| 190.000 | | | | | | | | .0000 | | | | | | | |

| Y/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P=1 | | | | | | | | | | | | | | | |
| 200 | .0918 | .0935 | .0921 | .0936 | .0955 | .0967 | .0999 | .0615 | .0627 | .0717 | .0761 | .0806 | .1002 | .1093 | |
| 21.000 | .0664 | | | | .0696 | | | | .0660 | | | | .0922 | | |
| 63.000 | .0000 | | | | | | | | .0000 | | | | .0070 | | |
| 64.000 | | | | | | | | | | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 65.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | |
| 104.000 | .0000 | | | | | | | | | | | | | | .0000 |
| 111.000 | | | | | .0000 | | | | | | | | | | |
| 112.000 | | | | | .0000 | | | | | | | | | | |
| 113.000 | | | | | .0000 | | | | | | | | | | |
| 116.000 | | | | | .0000 | | | | .0000 | | .0000 | | | | |
| 171.000 | .0600 | | | | .0000 | | | | .0000 | | | | | | |
| 143.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | |
| 146.000 | .0000 | | | | .0000 | | | | .0000 | | .0000 | | | | |
| P=2 | .6100 | .6750 | .8000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0350 | 1.0360 | 1.0500 | 1.0500 | 1.0500 | 1.0500 |



AEDC VAS32 C-4B Q2 ORB. FUELSAGE

(RTRB40) (29 APR 74)

REFERENCE DATA

STEP = .9238 33.FT. HWP = .0000 IN.
STEP = 22.1503 IN. HWP = .0000 IN.
STEP = 16.9919 IN. HWP = .0000 IN.
SCALE = 1000 SCALE

PARAMETRIC DATA

SETA = .000 RW/L = 3.000
S.FLAP = .000 ELEVSN = .000
HAWK/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 96.900 Q1 = 3.118 HREF = .044

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE H/W/O

R/W = .0000 .0000 .0100 .0200 .0250 .0300 .0400 .0500 .0700 .0750 .0760 .0800 .0900 .1000

R/W1
.0000
.0000
14.1000
20.0000
22.1000
24.1000
26.1000
28.1000
30.1000
32.1000
34.1000
36.1000
38.1000
40.1000
42.1000
44.1000
46.1000
48.1000
50.1000
52.1000
54.1000
56.1000
58.1000
60.1000
62.1000
64.1000
66.1000
68.1000
70.1000
72.1000
74.1000
76.1000
78.1000
80.1000
82.1000
84.1000
86.1000
88.1000
90.1000
92.1000
94.1000
96.1000
98.1000
100.1000

R/W = .1200 .1250 .1300 .1400 .1500 .1600 .1670 .1690 .1700 .1760 .1800 .1810 .1820
R/W1
.0000
.0000
14.1000
20.0000
22.1000
24.1000
26.1000
28.1000
30.1000
32.1000
34.1000
36.1000
38.1000
40.1000
42.1000
44.1000
46.1000
48.1000
50.1000
52.1000
54.1000
56.1000
58.1000
60.1000
62.1000
64.1000
66.1000
68.1000
70.1000
72.1000
74.1000
76.1000
78.1000
80.1000
82.1000
84.1000
86.1000
88.1000
90.1000
92.1000
94.1000
96.1000
98.1000
100.1000

R/W = .0750 .0750 .0750 .0750 .0750 .0750 .0750 .0750 .0750 .0750 .0750 .0750 .0750
R/W1
.0000
.0000
14.1000
20.0000
22.1000
24.1000
26.1000
28.1000
30.1000
32.1000
34.1000
36.1000
38.1000
40.1000
42.1000
44.1000
46.1000
48.1000
50.1000
52.1000
54.1000
56.1000
58.1000
60.1000
62.1000
64.1000
66.1000
68.1000
70.1000
72.1000
74.1000
76.1000
78.1000
80.1000
82.1000
84.1000
86.1000
88.1000
90.1000
92.1000
94.1000
96.1000
98.1000
100.1000

FABULATED DATA LISTING FOR Q448 (AEDC VAS32)

(ITK940)

AEDC VAS32 Q448 Q2 Q19. FUELSAGE

WACH 11 5 8.000 ALPHA (1) 3 30.000

SECTION 1: FUELSAGE DEPENDENT VARIABLE HU/40

| ITER | .1930 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | .0000 | | | | | | | |
| 21.000 | | | | | | | | .0775 | | | | .0847 | | | |
| 30.000 | | | | .0683 | | | | | | | | | | | |
| 34.000 | | | | .0989 | | | | | | | | | | | |
| 38.000 | | | | .0963 | | | | .0000 | | | | | | | |
| 42.000 | | | | .0948 | | | | .0796 | | | | | | | |
| 46.000 | | | | .0000 | | | | .0769 | | | | | | | |
| 50.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 54.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 58.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 62.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 66.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 70.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 74.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 78.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 82.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 86.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 90.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 94.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 98.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 102.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 106.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 110.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 114.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 118.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 122.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 126.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 130.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 134.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 138.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 142.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 146.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 150.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 154.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 158.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 162.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 166.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 170.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 174.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 178.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 182.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 186.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 190.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 194.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 198.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 202.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 206.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 210.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 214.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 218.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 222.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 226.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 230.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 234.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 238.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 242.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 246.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 250.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 254.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 258.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 262.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 266.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 270.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 274.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 278.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 282.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 286.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 290.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 294.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 298.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 302.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 306.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 310.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 314.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 318.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 322.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 326.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 330.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 334.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 338.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 342.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 346.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 350.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 354.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 358.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 362.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 366.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 370.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 374.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 378.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 382.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 386.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 390.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 394.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 398.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 402.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 406.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 410.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 414.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 418.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 422.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 426.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 430.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 434.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 438.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 442.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 446.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 450.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 454.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 458.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 462.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 466.000 | | | | .0000 | | | | .0000 | | | | | | | |
| 470.000 | | | | .0000 | | | | | | | | | | | |

TABULATED DATA LISTING FOR C-4B (A/D, VAS32)

(RTMBAD)

AEDC VAS32 C-4B 02 OPS. FUSELAGE

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION 1) OPERATES FUSELAGE DEPENDENT VARIABLE HUARD

| WZ | .6950 | .8750 | .9500 | .9250 | .9600 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 |
|--------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .1349 | .1356 | .1371 | .1349 | .1344 | .1233 | .1242 | .0000 | .1193 | .0000 | .1167 | .0000 |
| 21.000 | | | .1333 | | | | .0000 | | | | | |
| 20.000 | | | | | | | | | | | | |
| 22.000 | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | |
| 26.000 | | | | | | | | | | | | |
| 28.000 | | | | | | | | | | | | |
| 30.000 | | | | | | | | | | | | |
| 32.000 | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | |

MACH (1) = 0.000 ALPHA (2) = 75.000 TI = 98.900 OI = 3.118 MEF = .044

SECTION 2) OPERATES FUSELAGE DEPENDENT VARIABLE HUARD

| WZ | .0000 | .4294 | .4931 | .4320 | .2981 | .0200 | .0200 | .0350 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | | | |
| .000 | | | | | .2173 | .2136 | .1893 | .1995 | .1444 | | | | | .1332 | .1284 | .1185 | .0000 |
| 10.000 | | | | | | | .0000 | | | | | | | | | | .0000 |
| 14.000 | | | | | | | | | | | | | | | | | .0000 |
| 20.000 | | | | | | | | | | | | | | | | | .0000 |
| 24.000 | | | | | | | | | | | | | | | | | .0000 |
| 26.000 | | | | | | | | | | | | | | | | | .0000 |
| 28.000 | | | | | | | | | | | | | | | | | .0000 |
| 30.000 | | | | | | | | | | | | | | | | | .0000 |
| 32.000 | | | | | | | | | | | | | | | | | .0000 |
| 34.000 | | | | | | | | | | | | | | | | | .0000 |

MACH (1) = 0.1200 ALPHA (1) = 1.000 ALPHA (2) = 1.000 TI = 1.000 OI = 1.000 MEF = 1.000

SECTION 3) OPERATES FUSELAGE DEPENDENT VARIABLE HUARD

| WZ | .000 | .1147 | .1086 | .0982 | .0931 | .0500 | .0500 | .0500 | .0500 | .0500 | .0500 | .0500 | .0500 | .0500 | .0500 | .0500 | .0500 |
|--------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | | | |
| .000 | | | | | .0929 | | | | | | | | | | | | .0910 |
| 10.000 | | | | | | | | | | | | | | | | | .0000 |
| 20.000 | | | | | | | | | | | | | | | | | .0000 |
| 30.000 | | | | | | | | | | | | | | | | | .0000 |
| 40.000 | | | | | | | | | | | | | | | | | .0000 |
| 50.000 | | | | | | | | | | | | | | | | | .0000 |
| 60.000 | | | | | | | | | | | | | | | | | .0000 |
| 70.000 | | | | | | | | | | | | | | | | | .0000 |
| 80.000 | | | | | | | | | | | | | | | | | .0000 |
| 90.000 | | | | | | | | | | | | | | | | | .0000 |



AEDC VA352 OMB OR ORB, FUSELAGE (RTKBAD)

MACH (1) = 8.000 ALPHA (2) = 35.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HUAD

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .17 | .1600 | .1620 | .1670 | .1690 | .1700 | .1780 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 155.000 | | | | | | | | | | | | | | | |
| 159.200 | | | | | | | | | | | | | | | |
| 170.700 | | | | | | | | | | | | | | | |
| 171.900 | | | | | | | | | | | | | | | |
| 173.400 | | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | |
| X/L | .1830 | .1900 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0932 | .0000 | .0773 | .0760 | .0702 | .0797 | .0879 | .0772 | .0741 | .0744 | .0710 | .0678 | | | |
| 11.500 | | | | | | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | | |
| 31.500 | | | | | | | | | | | | | | | |
| 34.000 | | | | | | | | | | | | | | | |
| 35.000 | | | | | | | | | | | | | | | |
| 40.000 | | | | | | | | | | | | | | | |
| 45.000 | | | | | | | | | | | | | | | |
| 51.000 | | | | | | | | | | | | | | | |
| 57.500 | | | | | | | | | | | | | | | |
| 59.500 | | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | | |
| 76.500 | | | | | | | | | | | | | | | |
| 105.000 | | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | | |
| 135.000 | | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | | |
| 141.400 | .0000 | | | | | | | | | | | | | | |
| 151.000 | | | | | | | | | | | | | | | |
| 180.000 | | | | | | | | | | | | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| .000 | .0682 | .0767 | .0740 | .0767 | .0868 | .0985 | .1123 | .1278 | .1376 | .1563 | .1700 | .1760 | .2073 | .2174 | |
| 21.500 | .0741 | | | | .0782 | | | | .1420 | | | | | | |
| 63.000 | .0000 | | | | | | | | | | | | | | |
| 64.000 | | | | | | | | | | | | | | | |
| 65.000 | | | | | | | | | | | | | | | |
| 65.500 | | | | | .0000 | | | | | | | | | | |



AEDC V4332 C448 02 ORG. FUSELAGE (RTK84D)

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION 1 - HELICOPTER FUSELAGE DEPENDENT VARIABLE PL/AD

| PL | 0.000 | 0.250 | 0.500 | 0.750 | 0.900 | 0.950 | 0.9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | 0.8000 | 0.8250 | 0.8250 |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P=1 | | | | | | | | | | | | | | | | |
| 170.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 171.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 172.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 173.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 174.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 175.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

SECTION 2 - HELICOPTER FUSELAGE DEPENDENT VARIABLE PL/AD

| PL | 0.000 | 0.250 | 0.500 | 0.750 | 0.900 | 0.950 | 0.9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0380 | 1.0500 | 0.8000 | 0.8250 | 0.8250 |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| P=1 | | | | | | | | | | | | | | | | |
| 176.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 177.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 178.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 179.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 180.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 181.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 182.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 183.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 184.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 185.0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



AEDC VAS32 OMB 02 ORB, FUSELAGE

(RTKB41) (29 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 15.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .0000 RM/L = 3.350
 S,FLAP = .0000 ELEVON = .0000
 HAWAHT = 1.0000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.600 QI = 3.536 HIEF = .046

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE: RU/40

| X/L | .0000 | .0050 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Ru/40 | .0000 | .4577 | .4956 | .4260 | .2749 | .2277 | .1966 | .1684 | .1400 | .1260 | .1160 | .1092 | .0992 | .0900 | .0800 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 14.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 22.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 24.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 35.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 39.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 42.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 49.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 119.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 140.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

| X/L | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1650 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Ru/40 | .0978 | .0906 | .0842 | .0762 | .0660 | .0566 | .0466 | .0366 | .0266 | .0166 | .0066 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 25.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 45.500 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 131.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 145.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 146.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 156.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 179.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 171.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 173.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 190.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTNR41)

AEDC VA352 OH4B OR ORB. FUSELAGE

MACH (1) = 0.000 ALPHA (1) = 30.000

SECTION 1 (1) ORBITER FUSELAGE

DEPENDENT VARIABLE HU/HO

| Y/L | .1830 | .1900 | .1910 | .2000 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | | | |
| 12.000 | | | | .0000 | | | .0000 | | | | | | | |
| 21.500 | | | | .0769 | | | .0769 | | | | .063 | | | |
| 23.000 | | | | .0863 | | | .0863 | | | | | | | |
| 24.000 | | | | .0987 | | | .0987 | | | | | | | |
| 31.500 | | | | .0964 | | | .0964 | | | | | | | |
| 34.000 | | | | .0275 | | | .0740 | | | | | | | |
| 35.000 | | | | .0000 | | | .0000 | | | | | | | |
| 40.000 | | | | .0000 | | | .0000 | | | | | | | |
| 45.000 | | | | .0000 | | | .0000 | | | | | | | |
| 51.000 | | | | .0000 | | | .0000 | | | | | | | |
| 57.500 | | | | .0000 | | | .0000 | | | | | | | |
| 59.500 | | | | .0000 | | | .0000 | | | | | | | |
| 65.000 | | | | .0000 | | | .0000 | | | | | | | |
| 65.000 | | | | .0000 | | | .0000 | | | | | | | |
| 70.000 | | | | .0000 | | | .0000 | | | | | | | |
| 74.500 | | | | .0000 | | | .0000 | | | | | | | |
| 105.000 | | | | .0000 | | | .0000 | | | | | | | |
| 106.000 | | | | .0000 | | | .0000 | | | | | | | |
| 135.000 | | | | .0000 | | | .0000 | | | | | | | |
| 140.000 | | | | .0000 | | | .0000 | | | | | | | |
| 141.400 | | | | .0000 | | | .0000 | | | | | | | |
| 151.000 | | | | .0000 | | | .0000 | | | | | | | |
| 150.000 | | | | .0000 | | | .0000 | | | | | | | |
| X/L | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 |
| PHI | | | | | | | | | | | | | | |
| .000 | .0536 | .0767 | .0864 | .0968 | .0809 | .0659 | .0723 | .0776 | .0630 | .0754 | .1117 | .1079 | .1422 | .1570 |
| 21.500 | .0590 | | | .0526 | | | | .0860 | | | | | .1298 | |
| 63.000 | .0500 | | | .0000 | | | | .0000 | | | | | .0500 | |
| 64.000 | | | | .0000 | | | | .0000 | | | | | .0000 | |
| 55.000 | | | | .0000 | | | | .0000 | | | | | .0000 | |
| 65.000 | | | | .0000 | | | | .0000 | | | | | .0000 | |
| 105.000 | .0500 | | | .0000 | | | | .0000 | | | | | .0000 | |
| 111.000 | | | | .0000 | | | | .0000 | | | | | .0000 | |
| 112.000 | | | | .0000 | | | | .0000 | | | | | .0000 | |
| 113.000 | | | | .0000 | | | | .0000 | | | | | .0000 | |
| 115.000 | | | | .0000 | | | | .0000 | | | | | .0000 | |
| 135.000 | .0000 | | | .0000 | | | | .0000 | | | | | .0000 | |
| 149.000 | .0000 | | | .0000 | | | | .0000 | | | | | .0000 | |
| 150.000 | .0000 | | | .0000 | | | | .0000 | | | | | .0000 | |
| X/L | .8500 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0250 | 1.0250 | 1.0500 | 1.0500 |
| PHI | | | | | | | | | | | | | | |



AEDC VA352 OH4B 02 ORB. FUSELAGE (RTN841)

MACH (1) = 0.800 ALPHA (1) = 30.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H/M/D

Y/Z .8500 .8750 .9000 .9250 .9500 .9750 1.0000 1.0130 1.0140 1.0250 1.0380 1.0500

PHI

| | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .1983 | .1929 | .1498 | .4297 | .1335 | .1311 | .0000 | .1245 | .0000 | .1199 | .0000 |
| 21.000 | .1532 | | | | | | | | | | |
| 39.000 | | | | .0000 | | .0000 | | | | | |
| 57.000 | | .0000 | | | | | | | | | |
| 75.000 | | .0000 | | | | | | | | | |
| 93.000 | | .0000 | | .0000 | | | | | | | |
| 111.000 | | .0000 | | .0000 | | | | | | | |
| 129.000 | | .0000 | | .0000 | | | | | | | |
| 147.000 | | .0000 | | .0000 | | | | | | | |
| 165.000 | | .0000 | | .0000 | | | | | | | |
| 183.000 | | .0000 | | .0000 | | | | | | | |

MACH (1) = 0.800 ALPHA (2) = 30.000 Y1 = 97.800 Q1 = 3.336 HREF = .046

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H/M/D

Y/Z .9000 .9250 .9500 .9750 1.0000 1.0130 1.0140 1.0250 1.0380 1.0500

PHI

| | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .4249 | .4938 | .4310 | .2950 | .2416 | .2147 | .1669 | .1442 | .1334 | .1298 | .1186 |
| 10.000 | | | | | | | .0000 | | | | .0000 |
| 14.000 | | | | | | | .0000 | | | | .0000 |
| 18.000 | | | | | | | .0000 | | | | .0000 |
| 22.000 | | | | | | | .0000 | | | | .0000 |
| 26.000 | | | | | | | .0000 | | | | .0000 |
| 30.000 | | | | | | | .0000 | | | | .0000 |
| 34.000 | | | | | | | .0000 | | | | .0000 |
| 38.000 | | | | | | | .0000 | | | | .0000 |
| 42.000 | | | | | | | .0000 | | | | .0000 |
| 46.000 | | | | | | | .0000 | | | | .0000 |
| 50.000 | | | | | | | .0000 | | | | .0000 |
| 54.000 | | | | | | | .0000 | | | | .0000 |
| 58.000 | | | | | | | .0000 | | | | .0000 |
| 62.000 | | | | | | | .0000 | | | | .0000 |
| 66.000 | | | | | | | .0000 | | | | .0000 |
| 70.000 | | | | | | | .0000 | | | | .0000 |
| 74.000 | | | | | | | .0000 | | | | .0000 |
| 78.000 | | | | | | | .0000 | | | | .0000 |
| 82.000 | | | | | | | .0000 | | | | .0000 |
| 86.000 | | | | | | | .0000 | | | | .0000 |
| 90.000 | | | | | | | .0000 | | | | .0000 |
| 94.000 | | | | | | | .0000 | | | | .0000 |
| 98.000 | | | | | | | .0000 | | | | .0000 |
| 102.000 | | | | | | | .0000 | | | | .0000 |
| 106.000 | | | | | | | .0000 | | | | .0000 |
| 110.000 | | | | | | | .0000 | | | | .0000 |
| 114.000 | | | | | | | .0000 | | | | .0000 |
| 118.000 | | | | | | | .0000 | | | | .0000 |
| 122.000 | | | | | | | .0000 | | | | .0000 |
| 126.000 | | | | | | | .0000 | | | | .0000 |
| 130.000 | | | | | | | .0000 | | | | .0000 |
| 134.000 | | | | | | | .0000 | | | | .0000 |
| 138.000 | | | | | | | .0000 | | | | .0000 |
| 142.000 | | | | | | | .0000 | | | | .0000 |
| 146.000 | | | | | | | .0000 | | | | .0000 |

MACH (1) = 0.800 ALPHA (2) = 30.000 Y1 = 97.800 Q1 = 3.336 HREF = .046

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H/M/D

Y/Z .9000 .9250 .9500 .9750 1.0000 1.0130 1.0140 1.0250 1.0380 1.0500

PHI

| | | | | | | | | | | | |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .000 | .1193 | .1074 | .0999 | .0903 | .0844 | .0918 | .0914 | .0914 | .0914 | .0914 | .0914 |
| 10.000 | | | | .0000 | | | | | | | |
| 14.000 | | | | .0000 | | | | | | | |
| 18.000 | | | | .0000 | | | | | | | |
| 22.000 | | | | .0000 | | | | | | | |
| 26.000 | | | | .0000 | | | | | | | |
| 30.000 | | | | .0000 | | | | | | | |
| 34.000 | | | | .0000 | | | | | | | |
| 38.000 | | | | .0000 | | | | | | | |
| 42.000 | | | | .0000 | | | | | | | |
| 46.000 | | | | .0000 | | | | | | | |
| 50.000 | | | | .0000 | | | | | | | |
| 54.000 | | | | .0000 | | | | | | | |
| 58.000 | | | | .0000 | | | | | | | |
| 62.000 | | | | .0000 | | | | | | | |
| 66.000 | | | | .0000 | | | | | | | |
| 70.000 | | | | .0000 | | | | | | | |
| 74.000 | | | | .0000 | | | | | | | |
| 78.000 | | | | .0000 | | | | | | | |
| 82.000 | | | | .0000 | | | | | | | |
| 86.000 | | | | .0000 | | | | | | | |
| 90.000 | | | | .0000 | | | | | | | |
| 94.000 | | | | .0000 | | | | | | | |
| 98.000 | | | | .0000 | | | | | | | |
| 102.000 | | | | .0000 | | | | | | | |
| 106.000 | | | | .0000 | | | | | | | |
| 110.000 | | | | .0000 | | | | | | | |
| 114.000 | | | | .0000 | | | | | | | |
| 118.000 | | | | .0000 | | | | | | | |
| 122.000 | | | | .0000 | | | | | | | |
| 126.000 | | | | .0000 | | | | | | | |
| 130.000 | | | | .0000 | | | | | | | |
| 134.000 | | | | .0000 | | | | | | | |
| 138.000 | | | | .0000 | | | | | | | |
| 142.000 | | | | .0000 | | | | | | | |
| 146.000 | | | | .0000 | | | | | | | |

(RTX5A1)

MACH (1) = 0.000 ALPHA (2) = 35.000

AEDC VAS32 OMB 02 ORB. FUELSLAGE

SECTION (1) ORBITER FUELSLAGE DEPENDENT VARIABLE HU/HG

| Y1 | .1200 | .1250 | .1300 | .1400 | .1500 | .1550 | .1600 | .1620 | .1670 | .1700 | .1750 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Phi | | | | | | | | | | | | | | |
| 156.000 | | | | | | | | | | | | | .0000 | .0000 |
| 153.200 | | | | | | | | | | | | | | .0000 |
| 170.700 | | | | | | | | | | | | | | .0000 |
| 171.000 | | | | | | | | | | | | | | .0000 |
| 173.400 | | | | | | | | | | | | | | .0000 |
| 180.000 | | | | | | | | | | | | | | .0000 |
| Y1 | .1630 | .1700 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 |
| Phi | | | | | | | | | | | | | | |
| .000 | .0929 | .0000 | .0772 | .0782 | .0707 | .0807 | .0774 | .0784 | .0746 | .0721 | .0639 | | | |
| 11.500 | | | | .0000 | | | | | | | | | | |
| 12.000 | | | | | | | | | | | | | | |
| 21.500 | | | | | | | | | | | | | | |
| 23.000 | | | | | | | | | | | | | | |
| 24.000 | | | | .1039 | | | | | | | | | | |
| 31.000 | | | | .1166 | | | | | | | | | | .0756 |
| 34.000 | | | | | | | | | | | | | | |
| 37.000 | | | | | | | | | | | | | | |
| 40.000 | | | | .1116 | | | | | | | | | | |
| 45.000 | | | | .1084 | | | | | | | | | | |
| 51.000 | | | | .0000 | | | | | | | | | | |
| 57.000 | | | | | | | | | | | | | | |
| 59.000 | | | | | | | | | | | | | | |
| 61.000 | | | | | | | | | | | | | | |
| 62.000 | | | | | | | | | | | | | | |
| 70.000 | | | | | | | | | | | | | | |
| 76.000 | | | | .0000 | | | | | | | | | | |
| 104.000 | | | | | | | | | | | | | | |
| 106.000 | | | | | | | | | | | | | | |
| 131.000 | | | | | | | | | | | | | | |
| 140.000 | | | | | | | | | | | | | | |
| 141.000 | | | | | | | | | | | | | | |
| 141.000 | .0000 | | | .0000 | | | | | | | | | | |
| 141.000 | | | | .0000 | | | | | | | | | | |
| 142.000 | | | | | | | | | | | | | | |
| 142.000 | | | | | | | | | | | | | | |
| Y1 | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8290 |
| Phi | | | | | | | | | | | | | | |
| .000 | .0724 | .0816 | .0896 | .1014 | .1105 | .1333 | .1558 | .1682 | .1874 | .2006 | .2031 | .2316 | .2548 | |
| 21.000 | | | | | | | | | | | | | | |
| 21.000 | .0746 | | | | | | | | | | | | | |
| 21.000 | .0000 | | | | | | | | | | | | | |
| 24.000 | | | | | | | | | | | | | | |
| 27.000 | | | | | | | | | | | | | | |
| 27.000 | | | | | | | | | | | | | | |



TABULATED DATA LISTING FOR OMB (AEDC VA352)

(RTM941)

DATE 23 SEP 74

AEDC VA352 OMB OR ORB. FUSELAGE

MACH 1.5 8.000 ALPHA (2) = 35.000

| SECTION (1) ORB. FUSELAGE | DEPENDENT VARIABLE HUND | | | | | | | | | | | | | | |
|---------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| 105.000 | | | | | .0000 | | | | .0000 | | | | .0000 | | .0000 |
| 111.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 112.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 113.000 | | | | | .0000 | | | | | | | | | | .0000 |
| 114.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 115.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 116.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |
| 117.000 | | | | | .0000 | | | | .0000 | | | | | | .0000 |

| SECTION (2) ORB. FUSELAGE | DEPENDENT VARIABLE HUND | | | | | | | | | | | | | | |
|---------------------------|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
| PHI | | | | | | | | | | | | | | | |
| 105.000 | .2277 | .0687 | .1054 | .1895 | .1631 | .1645 | .1602 | .0000 | .0000 | .1529 | .0000 | .1422 | | | .5000 |
| 111.000 | | | | | | | | | .0000 | | | | | | |
| 112.000 | | | | | | | | | .0000 | | | | | | |
| 113.000 | | | | | | | | | .0000 | | | | | | |
| 114.000 | | | | | | | | | .0000 | | | | | | |
| 115.000 | | | | | | | | | .0000 | | | | | | |
| 116.000 | | | | | | | | | .0000 | | | | | | |
| 117.000 | | | | | | | | | .0000 | | | | | | |

AEDC VAS32 CH4B OR ORB. FUSELAGE

(RT:042) (25 APR 74)

REFERENCE DATA

REF = 1.938 SLFT. XMRP = 10.000 IN.
 REF = 22.2403 IN. XMRP = 10.000 IN.
 REF = 18.3915 IN. XMRP = 10.000 IN.
 SCALE = 1.0175 SCALE

PARAMETRIC DATA

DELTA = 1.000 REYN = 3.720
 DELTA = 1.000 REYN = 1.000
 DELTA = 1.000 REYN = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.060 QI = 3.937 XREF = 1.045

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/C

| Y% | 0.000 | 0.100 | 0.200 | 0.300 | 0.400 | 0.500 | 0.600 | 0.700 | 0.800 | 0.900 | 1.000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 30.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 50.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 70.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 80.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 90.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 0.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 30.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 50.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 70.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 80.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 90.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 0.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 30.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 50.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 70.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 80.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 90.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 0.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 10.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 20.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 30.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 40.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 50.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 60.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 70.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 80.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 90.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 100.000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTK842)

AEDC VA352 OH4B OR OH4B FUSELAGE

MACH (1) = 9.000 ALPHA (1) = 30.000

SECTION 11 OPERATOR FUSELAGE DEPENDENT VARIABLE MU/MD

| PHI | .1635 | .1950 | .1910 | .2000 | .2250 | .2500 | .2750 | .3000 | .3250 | .3500 | .3750 | .4000 | .4250 | .4500 | .4750 |
|----------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 12.0660 | | | | .0000 | | | | .0000 | | | | .0677 | | | |
| 21.3500 | | | | | | | .0784 | | | | | | | | |
| 23.0700 | | | | .0670 | | | | | | | | | | | |
| 24.5000 | | | .1013 | | | | | | | | | | | | |
| 31.3500 | | | | | | | .0000 | | | | | | | | |
| 34.0000 | | | | .0981 | | | | | | | | | | | |
| 35.0000 | | | .0995 | | | | .0801 | | | | | | | | |
| 40.0000 | | | | | | | .0769 | | | | | | | | |
| 41.0000 | | | .0000 | | | | | | | | | | | | |
| 57.5000 | | | | | | | .0000 | | | | | | | | |
| 59.5000 | | | | | | | .0000 | | | | | | | | |
| 61.0000 | | | | | | | .0000 | | | | | | | | |
| 65.0000 | | | | | | | .0000 | | | | | | | | |
| 70.0000 | | | | .0000 | | | .0000 | | | | | | | | |
| 78.5000 | | | | | | | .0000 | | | | | | | | |
| 85.0000 | | | | | | | .0000 | | | | | | | | |
| 89.0000 | | | .0000 | | | | .0000 | | | | | | | | |
| 91.0000 | | | | | | | .0000 | | | | | | | | |
| 93.0000 | | | | .0000 | | | .0000 | | | | | | | | |
| 95.0000 | | | | | | | .0000 | | | | | | | | |
| 97.0000 | | | | | | | .0000 | | | | | | | | |
| 98.0000 | | | | | | | .0000 | | | | | | | | |
| 99.0000 | | | | | | | .0000 | | | | | | | | |
| PHI | .5000 | .6582 | .0609 | .0556 | .0634 | .0675 | .0686 | .0662 | .1049 | .1236 | .1390 | .1466 | .1771 | .1898 | |
| 21.3500 | .0723 | | | .0989 | | | .1032 | | | | | | .1679 | | |
| 43.0000 | .0600 | | | | | | .0000 | | | | | | .0000 | | |
| 65.0000 | | | | .0000 | | | .0000 | | | | | | .0000 | | |
| 85.0000 | .0000 | | | .0000 | | | .0000 | | | | | | .0000 | | |
| 111.0000 | | | | .0000 | | | .0000 | | | | | | .0000 | | |
| 133.0000 | | | | .0000 | | | .0000 | | | | | | .0000 | | |
| 154.0000 | | | | .0000 | | | .0000 | | | | | | .0000 | | |
| 175.0000 | | | | .0000 | | | .0000 | | | | | | .0000 | | |
| 190.0000 | | | | .0000 | | | .0000 | | | | | | .0000 | | |
| PHI | .8150 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0500 | 1.0620 | 1.0750 | 1.0890 |
| 21.3500 | | | | | | | .0000 | | | | | | | | |
| 43.0000 | | | | | | | .0000 | | | | | | | | |
| 65.0000 | | | | | | | .0000 | | | | | | | | |
| 85.0000 | | | | | | | .0000 | | | | | | | | |
| 111.0000 | | | | | | | .0000 | | | | | | | | |
| 133.0000 | | | | | | | .0000 | | | | | | | | |
| 154.0000 | | | | | | | .0000 | | | | | | | | |
| 175.0000 | | | | | | | .0000 | | | | | | | | |
| 190.0000 | | | | | | | .0000 | | | | | | | | |

MACH (1) = 6.000 ALPHA (1) = 30.000 AEDC VAS32 OMB OR ORB. FUSELAGE (RTKB42)

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H4/H0

| Y/A | .9100 | .8750 | .9000 | .9250 | .9500 | .9750 | 1.0000 | 1.0130 | 1.0140 | 1.0250 | 1.0360 | 1.0400 |
|---------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|
| PHI | | | | | | | | | | | | |
| .000 | .1899 | .1913 | .1693 | .1647 | .1306 | .1416 | .1371 | .0000 | .1359 | .0000 | .1262 | .0000 |
| 21.900 | .1733 | | | | | | | | | | | |
| 39.000 | | | | | .0000 | | | | | | | |
| 52.900 | | | .0000 | | | | | | | | | |
| 93.000 | | | .0000 | | | | | | | | | |
| 65.000 | | | | .0000 | | | | | | | | |
| 44.000 | | | | | .0000 | | | | | | | |
| 100.000 | | | .0000 | | | | | | | | | |
| 149.000 | | | .0000 | | | | | | | | | |
| 112.000 | | | .0000 | | | | | | | | | |
| 113.000 | | | | .0000 | | | | | | | | |

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 97.080 Q1 = 3.937 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H4/H0

| Y/A | .0000 | .0060 | .0100 | .0200 | .0250 | .0300 | .0400 | .0500 | .0600 | .0700 | .0750 | .0760 | .0800 | .0900 | .1000 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .4277 | .4916 | .4268 | .2970 | .2476 | .2137 | .1906 | .1502 | .1446 | .1342 | .1266 | .1172 | .1172 | .0000 | .0000 |
| 10.000 | | | | | | | .0000 | | | | | | | | |
| 14.000 | | | | | | | .0000 | | | | | | | | |
| 20.000 | | | | | | | .0000 | | | | | | | | |
| 22.000 | | | | | | | .0000 | | | | | | | | |
| 24.900 | | | | | | | .0000 | | | | | | | | |
| 35.000 | | | | | | | .0000 | | | | | | | | |
| 39.000 | | | | | | | .0000 | | | | | | | | |
| 42.500 | | | | | | | .0000 | | | | | .0000 | | | |
| 46.000 | | | | | | | .0000 | | | | | | | | |
| 60.000 | | | | | | | .0000 | | | | | | | .0000 | .0000 |
| 119.000 | | | | | | | .0000 | | | | .0000 | | | | |
| 140.000 | | | | | | | .0000 | | | | | | | | |

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.080 Q1 = 3.937 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H4/H0

| Y/A | .1200 | .1250 | .1300 | .1400 | .1500 | .1560 | .1600 | .1620 | .1670 | .1690 | .1700 | .1760 | .1800 | .1810 | .1820 |
|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| .000 | .1155 | .1063 | .1001 | .0922 | .0937 | .0926 | .0913 | | | | | | | | |
| 10.000 | | | | .0000 | | | | | | | | | | | |
| 20.000 | | | | .0000 | | | | | | | | | | | |
| 25.000 | | | | .0000 | | | | | | | | | | | |
| 40.000 | | | | .0000 | | | | | | | | | | | |
| 45.000 | | | | .0000 | | | | | | | | | | | |
| 131.200 | | | | .0000 | | | | | | | | | | | |
| 149.400 | | | | .0000 | | | | | | | | | | | |
| 146.200 | | | | .0000 | | | | | | | | | | | .0000 |



TABLE 23 (P. 74) TABULATED DATA LISTING FOR CHB (AEDC VAS32)

(DTK942)

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION 11 ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| Y/Z | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 1.0 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.1 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.2 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.3 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.4 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.5 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 0.000 ALPHA (2) = 35.000

SECTION 11 ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

| Y/Z | .5000 | .5250 | .5500 | .5750 | .6000 | .6250 | .6500 | .6750 | .7000 | .7250 | .7500 | .7750 | .8000 | .8250 | .8500 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| PHI | | | | | | | | | | | | | | | |
| 1.0 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.1 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.2 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.3 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.4 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 1.5 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



AEDC VAS32 OMB 01-110 OMB, BOTTOM SURFACE WING (RTRLO1) (25 APR 74)

REFERENCE DATA

STEP 1 = .6236 SQ.FT. RHP = .0000 IN.
 STEP 2 = 22.5003 IN. WHP = .0000 IN.
 STEP 3 = 16.3919 IN. RHP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000
 S.FLAP = .000
 ELEVON = .000
 MAW/MT = 1.000

MACH (1) = 0.000 ALPHA (1) = -10.000 TI = 97.800 Q1 = 3.935 MREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HI/40

| R/C | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9400 | .9680 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | | .0454 | .0504 | .2833 | .4914 | .2852 | .1058 | | .2812 | .1306 | .0368 |
| .002 | | | | | | .4798 | | .1663 | | | | |
| .003 | | | | | | .2856 | | .1147 | | | | |
| .004 | | | | | | .1675 | | .0727 | | | | |
| .005 | | | | | | .1312 | | .0629 | | | | |
| .006 | | | | | | .0912 | | .0334 | | | | |
| .007 | .0776 | | | .1450 | .1606 | .0643 | .2287 | | | | | |
| .008 | | | | | | | | | | .1302 | | |
| .009 | | | | .0320 | | .0452 | .0623 | .0636 | | .1383 | | |
| .010 | | | | | .0200 | | | | | | | |
| .011 | | | | .0143 | | .0245 | | | | | | |
| .012 | | | | | | | | | .0363 | .0385 | .0639 | |
| .013 | | | | .0175 | | .0179 | | | | | | |
| .014 | | | | | | | .0332 | | | | | |
| .015 | | | | | .0200 | | | | | | | |
| .016 | | | | .0548 | | | .0335 | .0393 | | .0445 | | |
| .017 | | | | | | | | | | | | |
| .018 | | | | | .0376 | .0327 | | | .0190 | | | |
| .019 | | | | .0049 | .0359 | .0223 | .0139 | | | .0180 | | |
| .020 | | | | | | | | | | | | |
| .021 | | | | | .0130 | .0111 | | | | | | |
| .022 | | | | | .0189 | .0114 | | | | | | |
| .023 | | | | .0192 | .0195 | .0228 | .0087 | | | | | .0129 |

TABULATED DATA LISTING FOR GAMB (AEDC VA352)

AEDC VA352 GAMB (2) 11 = 97,600 Q1 = 3,935 WEP = .049 (RTKLD1)

MACH (1) = 8.000 ALPHA (2) = 34.80 T1 = 97,600 Q1 = 3,935 WEP = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HI/AC

| RTK | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0281 | .0324 | .2404 | .4096 | .3071 | .1129 | .1228 | .124 | .0374 | | |
| .002 | | | .3936 | .1862 | | | | | | | |
| .003 | | | .2304 | .1336 | | | | | | | |
| .004 | | | .1478 | .0791 | | | | | | | |
| .005 | | | .1112 | .0638 | | | | | | | |
| .006 | | | .0704 | .0482 | | | | | | | |
| .007 | | | .0479 | .0423 | | | | | | | |
| .008 | .0726 | .1108 | .1408 | .2431 | | | | | | | |
| .009 | | | | | | | | | .1008 | | |
| .010 | | | | | | | | | .0374 | | |
| .015 | .0289 | .0415 | .0607 | .0616 | | | | | | | |
| .017 | | | .0197 | .0245 | | | | | | | |
| .018 | .0144 | .0245 | | | | | | | | | |
| .019 | .0197 | .0245 | | | | | | | | | |
| .020 | .0144 | .0245 | | | | | | | | | |
| .021 | .0209 | .0152 | .0143 | .0429 | .0459 | .0549 | | | | | |
| .022 | | | | .0301 | | | | | | | |
| .023 | | | .0161 | | | | | | | | |
| .024 | .0237 | .0073 | | | | | | | | | |
| .025 | | .0418 | | | | | | | | | |
| .026 | | | | | | | | | | | |
| .027 | .0178 | .0294 | .0131 | .0179 | .0179 | .0266 | | | | | |
| .028 | .0043 | .0290 | .0161 | .0102 | | | | | | | |
| .029 | | | .0174 | .0091 | | | | | | | |
| .030 | | | .0218 | .0026 | | | | | | | |
| .031 | .0398 | .0154 | .0199 | .0171 | .0076 | .0172 | | | | | |

MACH (1) = 8.000 ALPHA (3) = 34.80 T1 = 97,600 Q1 = 3,935 WEP = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HI/AC

| RTK | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0281 | .0324 | .2404 | .4096 | .3071 | .1129 | .1228 | .124 | .0374 | | |
| .002 | | | .3936 | .1862 | | | | | | | |
| .003 | | | .2304 | .1336 | | | | | | | |
| .004 | | | .1478 | .0791 | | | | | | | |
| .005 | | | .1112 | .0638 | | | | | | | |
| .006 | | | .0704 | .0482 | | | | | | | |
| .007 | | | .0479 | .0423 | | | | | | | |
| .008 | .0726 | .1108 | .1408 | .2431 | | | | | | | |
| .009 | | | | | | | | | .1208 | .1050 | .0279 |
| .010 | | | | | | | | | | | |
| .015 | .0289 | .0415 | .0607 | .0616 | | | | | | | |
| .017 | | | .0197 | .0245 | | | | | | | |
| .018 | .0144 | .0245 | | | | | | | | | |
| .019 | .0197 | .0245 | | | | | | | | | |
| .020 | .0144 | .0245 | | | | | | | | | |
| .021 | .0209 | .0152 | .0143 | .0429 | .0459 | .0549 | | | | | |
| .022 | | | | .0301 | | | | | | | |
| .023 | | | .0161 | | | | | | | | |
| .024 | .0237 | .0073 | | | | | | | | | |
| .025 | | .0418 | | | | | | | | | |
| .026 | | | | | | | | | | | |
| .027 | .0178 | .0294 | .0131 | .0179 | .0179 | .0266 | | | | | |
| .028 | .0043 | .0290 | .0161 | .0102 | | | | | | | |
| .029 | | | .0174 | .0091 | | | | | | | |
| .030 | | | .0218 | .0026 | | | | | | | |
| .031 | .0398 | .0154 | .0199 | .0171 | .0076 | .0172 | | | | | |



AEDC VA382 0418 01+10 088. 90110M SURFACE WING (077.01)

MACH (1) = 0.000 ALPHA (4) = 5.000

SECTION (1) 10+10M SURF. WING DEPENDENT VARIABLE H/C

| RY/B | .2500 | .3510 | .3480 | .4000 | .5000 | .6000 | .7000 | .8000 | .9000 | .9500 | .9800 | .9900 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .303 | | | | | | | .0223 | | | | | |
| .428 | | | | | .0229 | | | | | | | |
| .444 | | | | | | | | | | | | |
| .487 | | | | | .0142 | | .0431 | .0409 | | .0182 | | |
| .500 | | | | | | | | | | | | |
| .529 | | | | .0279 | | | | | | | | |
| .550 | | | | | | | | | | | | |
| .600 | | | | | .0188 | .0182 | | .0218 | | | | |
| .700 | | | | .0084 | .0339 | .0190 | .0172 | | | .0201 | | |
| .750 | | | | | | | | | | | | |
| .800 | | | | | .0184 | .0184 | | | | | | |
| .850 | | | | | .0148 | .0179 | | | | | | |
| .900 | | | | .0304 | .0328 | .0119 | .0143 | | | | | .0172 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

AEDC VAS32 OMB CLUSTERS, BOTTOM SURFACE WING (OTYU02) (25 APR 74)

REFERENCE DATA

MACH = 0.15 = 8,000 FEET (1) = -2,000 FT = 97,350 SL = 3,942 REEF = .049
 SECTION = 1: BOTTOM SURF. WING DEPENDENT VARIABLE HEAD
 REF = 19236 SLFT. AMP = 0.000 IN. ALPHA = .000 RAD. = 3.720
 REF = 22.5523 IN. AMP = 0.000 IN. S.F. CAP = .000 ELEVON = .000
 REF = 18.3519 IN. AMP = 0.000 IN. TANK WT = 1,000
 SCALE = 0.175 SCALE

PARAMETRIC DATA

SECTION = 1: BOTTOM SURF. WING DEPENDENT VARIABLE HEAD

| REF | 2050 | 3050 | 3450 | 4000 | 5000 | 6000 | 7500 | 9000 | 9500 | 9950 | 9955 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 001 | .0312 | .0415 | .2454 | .4397 | .4108 | .1409 | .2198 | .1932 | .0702 | | |
| 002 | | | | .6528 | | .2448 | | | | | |
| 003 | | | | .3280 | | .1375 | | | | | |
| 004 | | | | .2644 | | .0785 | | | | | |
| 005 | | | | .1812 | | .0992 | | | | | |
| 006 | | | | .1104 | | .0570 | | | | | |
| 007 | | | | .0874 | | .0412 | | | | | |
| 008 | .0258 | .1344 | .1351 | | | .2618 | | | | | |
| 009 | .0100 | .0360 | | .0630 | .0600 | .0475 | | | .2331 | .1858 | |
| 010 | .0133 | | | .0287 | | | | | | | |
| 011 | .0231 | | | .0351 | | | | | | | |
| 012 | .0202 | | | | | | | .0655 | .0270 | .0818 | |
| 013 | | .0191 | | | | .0297 | | | | | |
| 014 | .0277 | | | | | | | | | | |
| 015 | | | .0188 | | | | .0659 | .0628 | | .0679 | |
| 016 | | .0272 | | | | | | | | | |
| 017 | .0218 | | | | | | | | | | |
| 018 | | .0211 | .0219 | | | | | .0307 | | .0310 | |
| 019 | .0000 | .0078 | .0326 | .0179 | .0198 | | | | | | |
| 020 | | | .0101 | | .0216 | | | | | | |
| 021 | | | .0139 | | .0178 | | | | | | |
| 022 | | .0254 | .0238 | .0134 | .0132 | | | | | | .0209 |

MACH (1) = 6.000 BETA (2) = .000 Y1 = 97.350 Q1 = 3.942 HREF = .049
 AEDC VAS32 OMB C1+T10 ORB. BOTTOM SURFACE WING (RTRLD2)

SECTION 1: BOTTOM SURF. WING DEPENDENT VARIABLE WING

| Z Y 9 | 2500 | 3010 | 3480 | 4000 | 5000 | 6000 | 7500 | 8500 | 9000 | 9500 | 10500 | 10790 |
|-------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .014 | .0227 | | .2108 | .3338 | .2950 | .0313 | | .1298 | .1058 | .0279 |
| .002 | | | | | .3449 | | .1149 | | | | | |
| .003 | | | | | .2131 | | .0762 | | | | | |
| .004 | | | | | .1115 | | .0592 | | | | | |
| .005 | | | | | .0600 | | .0496 | | | | | |
| .006 | | | | | .0258 | | .0375 | | | | | |
| .007 | | | | .1087 | .1297 | | .2462 | | | | | |
| .008 | | | | .0314 | | .0426 | .0664 | .0789 | | .1093 | | .1063 |
| .009 | | | | .0181 | .0191 | | .0242 | | | | | |
| .010 | | | | .0181 | .0141 | | .0141 | .0381 | .0411 | .0489 | | |
| .012 | | | | .0132 | | | .0344 | | | | | |
| .013 | | | | | | .0163 | | | | | | |
| .014 | | | | | .0114 | | | | | .0289 | .0331 | .0326 |
| .015 | | | | .0441 | | | | | | | | |
| .016 | | | | .0061 | .0233 | .0127 | .0122 | | .0234 | | | |
| .017 | | | | .0061 | .0261 | .0145 | .0122 | | | | | |
| .018 | | | | | .0148 | .0121 | | | | | | |
| .019 | | | | .0176 | .0225 | .0130 | | | | | | |
| .020 | | | | .0176 | .0175 | .0151 | .0070 | | | | | .0181 |



AEDC VAS32 O-43 OI+TIO ORB, BOTTOM SURFACE WING (RTKLOS)

MACH (1) = 0.000 ALPHA (2) = -0.000 TI = 93.425 QI = .662 HREF = .020

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HI/LO

| X/C | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | | | | | .3976 | .2963 | .1176 | | .1339 | .0593 | .0264 |
| .002 | | .0239 | .0317 | | .2348 | .3906 | .1093 | | | | | |
| .003 | | | | | .2179 | .1296 | | | | | | |
| .004 | | | | | .1477 | .0846 | | | | | | |
| .005 | | | | | .1128 | .0652 | | | | | | |
| .006 | | | | | .0794 | .0467 | | | | | | |
| .007 | | | | | .0600 | .0414 | | | | | | |
| .025 | .0820 | | | .0986 | .1399 | | .2403 | | | | | |
| .040 | | | | .0292 | | .0405 | .0607 | .0605 | | .1198 | | |
| .100 | .0106 | | | | | | | | | .1060 | | |
| .177 | | | | .0127 | .0213 | | | | | | | |
| .200 | | | | | | .0241 | | | | | | |
| .299 | .0110 | | | | .0152 | .0143 | .0410 | .0484 | .0571 | | | |
| .300 | | | | .0090 | | | .0309 | | | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | | | | | | | | |
| .428 | .0102 | | | | .0052 | | .0234 | .0342 | .0353 | | | |
| .487 | | | | | | | | | | | | |
| .500 | | | | | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0079 | | | | .0071 | .0104 | | .0172 | .0198 | | | |
| .600 | | | | .0024 | .0087 | .0057 | .0096 | | | | | |
| .700 | | | | | | .0030 | .0086 | | | | | |
| .736 | .0000 | | | .0042 | .0094 | | .0094 | | | | | |
| .800 | | | | .0119 | .0076 | .0035 | .0075 | | .0136 | | | |
| .850 | | | | | | | | | | | | |
| .900 | .0203 | | | | | | | | | | | |

MACH (1) = 0.000 ALPHA (3) = .000 TI = 93.425 QI = .662 HREF = .020

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HI/LO

| X/C | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | | | | | .3390 | .2918 | .0870 | | .1348 | .1026 | .0279 |
| .002 | | .0176 | .0237 | | .2034 | .3417 | .1461 | | | | | |
| .003 | | | | | .2263 | .1087 | | | | | | |
| .004 | | | | | .1482 | .0897 | | | | | | |
| .005 | | | | | .1165 | .0607 | | | | | | |
| .006 | | | | | .0808 | .0534 | | | | | | |
| .007 | | | | | .0630 | .0470 | | | | | | |
| .025 | .0263 | | | .0991 | .1890 | | .2496 | | | | | |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC Y3352)

(RTKLOS)

MACH (1) = 8.000 ALPHA (3) = .000

SECTION 1: BOTTOM SURF. HING DEPENDENT VARIABLE HING

| 2+76 | .2950 | .3010 | .3480 | .4000 | .5000 | .6000 | .7000 | .8000 | .9000 | .9500 | .9800 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 176 | .0360 | .0350 | .0353 | .0453 | .0691 | .0726 | .1116 | .1089 | | | | |
| 177 | .0063 | .0199 | .0224 | .0277 | .0397 | .0488 | | | | | | |
| 178 | .0064 | .0125 | .0189 | .0341 | | | | | | | | |
| 179 | .0109 | .0133 | .0189 | | | | | | | | | |
| 180 | .0109 | .0080 | .0133 | .0246 | .0379 | .0339 | | | | | | |
| 181 | .0102 | .0069 | .0140 | .0189 | .0189 | .0189 | | | | | | |
| 182 | .0066 | .0024 | .0069 | .0101 | .0117 | .0189 | | | | | | |
| 183 | .0066 | .0062 | .0113 | .0062 | .0113 | .0113 | | | | | | |
| 184 | .0066 | .0066 | .0120 | .0066 | .0120 | .0120 | | | | | | |
| 185 | .0199 | .0113 | .0064 | .0064 | .0109 | .0109 | .0143 | | | | | |

MACH (1) = 8.000 ALPHA (4) = 9.000 HEF = .020

SECTION 1: BOTTOM SURF. HING DEPENDENT VARIABLE HING

| 2+76 | .2950 | .3010 | .3480 | .4000 | .5000 | .6000 | .7000 | .8000 | .9000 | .9500 | .9800 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 176 | .0361 | .0351 | .0353 | .0453 | .0691 | .0726 | .1116 | .1089 | | | | |
| 177 | .0063 | .0199 | .0224 | .0277 | .0397 | .0488 | | | | | | |
| 178 | .0064 | .0125 | .0189 | .0341 | | | | | | | | |
| 179 | .0109 | .0133 | .0189 | | | | | | | | | |
| 180 | .0109 | .0080 | .0133 | .0246 | .0379 | .0339 | | | | | | |
| 181 | .0102 | .0069 | .0140 | .0189 | .0189 | .0189 | | | | | | |
| 182 | .0066 | .0024 | .0069 | .0101 | .0117 | .0189 | | | | | | |
| 183 | .0066 | .0062 | .0113 | .0062 | .0113 | .0113 | | | | | | |
| 184 | .0066 | .0066 | .0120 | .0066 | .0120 | .0120 | | | | | | |
| 185 | .0199 | .0113 | .0064 | .0064 | .0109 | .0109 | .0143 | | | | | |



AEDC VAS32 OMB 21+TIC ORB, BOTTOM SURFACE WING (RTKLD3)

MACH (1) = 8.000 ALPHA (4) = 5.000

SECTION (1) BOTTOM SURF, WING DEPENDENT VARIABLE HI/NO

| RTK | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9400 | .9600 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .303 | | | | | | | | | | | | |
| .425 | | | | | | .0236 | | | | | | |
| .444 | .0080 | | | | | | | | | | | |
| .497 | | | | | .0219 | | | | | | | |
| .500 | | | | | | | | | | | | |
| .559 | | | | .0102 | | | .0366 | .0414 | | | .0397 | |
| .590 | .0094 | | | | | | | | | | | |
| .650 | | | | | .0166 | .0164 | | | .0161 | | | |
| .700 | | | | .0080 | .0117 | .0140 | .0161 | | | | .0244 | |
| .736 | .0000 | | | | | | | | | | | |
| .800 | | | | | | .0079 | .0164 | | | | | |
| .850 | | | | | .0113 | .0176 | .0176 | | | | | |
| .900 | .0154 | | | .0114 | .0059 | .0051 | .0154 | | | | | .0210 |



AEDC VA352 OMB OMB ORB, BOTTOM SURFACE WING (RTKLOM) (23 APR 74)

REFERENCE DATA

WREF = .8236 33.FT. XMRP = .0000 IN.
 YREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RN/L = .680
 S.F.LAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 6.000 BETA (1) = -2.000 TI = 93.550 QI = .681 HREF = .020

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HI/LO

XYZS .2500 .3010 .3480 .4000 .5000 .6000 .7500 .8500 .9000 .9500 .9860 .9930

XYZ

| | | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0300 | .0379 | .1310 | .1560 | .2515 | .4899 | .4166 | .1314 | .1620 | .1399 | .0597 |
| .002 | | | .0392 | | .7037 | | .2418 | | | | |
| .003 | | | | | .3088 | | .1283 | | | | |
| .004 | | | | | .1921 | | .0773 | | | | |
| .006 | | | | | .1485 | | .0651 | | | | |
| .007 | | | | | .1056 | | .0548 | | | | |
| .009 | .0453 | | | .1110 | .0939 | | .0483 | | | | |
| .010 | | | | | .2533 | | | | .1565 | | |
| .110 | | | .0135 | | .0640 | .0646 | .0910 | | .1537 | | |
| .111 | | | | | .0281 | | | | | | |
| .200 | | | .0242 | | .0328 | | | | | | |
| .205 | .0047 | | | | .0207 | .0190 | .0479 | .0607 | .0622 | | |
| .300 | | | .0167 | | | | .0489 | | | | |
| .303 | | | | | .0249 | | | | | | |
| .409 | | | | | | | | | | | |
| .404 | .0032 | | | | .0177 | | .0454 | .0492 | .0415 | | |
| .407 | | | | | .0099 | | | | | | |
| .500 | | | | | | | | | | | |
| .519 | .0049 | | | | .0141 | .0179 | .0162 | .0205 | .0282 | | |
| .600 | | | .0066 | .0099 | .0138 | .0162 | | | | | |
| .700 | .0000 | | .0066 | .0152 | .0066 | .0152 | | | | | |
| .800 | | | .0104 | .0158 | .0104 | .0158 | | | | | |
| .900 | .0281 | | .0108 | .0049 | .0079 | .0120 | | | .0182 | | |

TABULATED DATA LISTING FOR OHMB (AEDC VAS32)

WACH (1) = 5.000 BETA (2) = .000 TI = 93.450 Q1 = .681 HREP = .020
 SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HI/HO (RTL/D4)

| ZYR | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9900 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1001 | | | | | .2034 | .3390 | .2918 | .0870 | | .1348 | .1098 | .0279 |
| 1002 | | .0176 | .0237 | | .3417 | .1461 | | | | | | |
| 1003 | | | | | .0293 | .1077 | | | | | | |
| 1004 | | | | | .1482 | .0107 | | | | | | |
| 1005 | | | | | .1185 | .0817 | | | | | | |
| 1006 | | | | | .0308 | .0531 | | | | | | |
| 1007 | | | | | .0630 | .0470 | | | | | | |
| 1008 | .0283 | | | .0991 | .1290 | .2498 | | | | | | |
| 1009 | | | | .0353 | .0453 | .0667 | .0728 | | | .1118 | .1089 | |
| 1010 | .0683 | | | | .0224 | | | | | | | |
| 1011 | | | | .0195 | .0277 | | | | | | | |
| 1012 | .0044 | | | | | | | .0397 | .0453 | .0488 | | |
| 1013 | | | | .0129 | .0185 | .0148 | | | | | | |
| 1014 | | | | | | .0341 | | | | | | |
| 1015 | .0109 | | | | .0189 | | | | | | | |
| 1016 | | | | | .0133 | | .0265 | .0379 | | .0339 | | |
| 1017 | | | | .0060 | | | | | | | | |
| 1018 | .0102 | | | | .0096 | .0140 | | | .0188 | | | |
| 1019 | | | | .0024 | .0066 | .0101 | .0117 | | | | | .0189 |
| 1020 | .0000 | | | | .0052 | .0113 | | | | | | |
| 1021 | | | | .0113 | .0064 | .0066 | .0129 | | | | | |
| 1022 | .0155 | | | | .0027 | .0109 | | | | | | .0143 |



AEDC VA352 CH-8 Q1 CR8. BOTTOM SURFACE WING (RTKL10) (25 APR 74)

REFERENCE DATA

STEP 1 .0238 SQ.FT. XAMP = .0000 IN.
STEP 2 22.5963 IN. XAMP = .0000 IN.
STEP 3 18.3915 IN. XAMP = .0000 IN.
SCALE 1 .0175 SCALE

PARAMETRIC DATA

BETA = .000 TR/L = 3.720
B.F.LAP = .000 E.L.FOM = .000
MAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 9.000 TI = 94.800 QI = 3.361 REF = .049

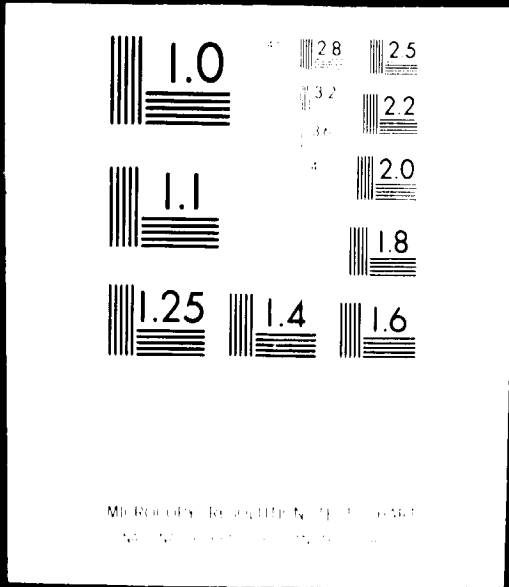
SECTION 1: BOTTOM SURF. WING DEPENDENT VARIABLE MUMAC

| Y/C | 2000 | 2500 | 3010 | 3490 | 4000 | 5000 | 6000 | 7500 | 8770 | 9000 | 9500 | 9660 | 9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| .041 | .0142 | .0248 | | | .2530 | .4279 | .2040 | .0797 | .1124 | .0560 | .0192 | | |
| .042 | | | | | .3776 | .1453 | | | | | | | |
| .043 | | | | | .0406 | .1000 | | | | | | | |
| .044 | | | | | .1734 | .0726 | | | | | | | |
| .045 | | | | | .1377 | .0551 | | | | | | | |
| .046 | | | | | .0590 | .0372 | | | | | | | |
| .047 | .0371 | | .1049 | .1955 | | .0675 | .1776 | | | | | | |
| .048 | | | | | | | | | .0918 | | | | |
| .049 | .0283 | | .0219 | | .0424 | .0483 | .3620 | | .0732 | | | | |
| .050 | | | | | | | | | | | | | |
| .051 | .0017 | | .0096 | .0164 | | .0044 | | | | | | | |
| .052 | | | | | .0135 | .0160 | .0266 | .0240 | .0325 | | | | |
| .053 | | | .0061 | | | | .0271 | | | | | | |
| .054 | .0017 | | | | | .0309 | | | | | | | |
| .055 | | | | .0356 | | | .0191 | .0272 | .0176 | | | | |
| .056 | | | .0025 | | | | | | | | | | |
| .057 | .0037 | | | | .0166 | .0134 | | | | .0116 | | | |
| .058 | | | .0023 | .0143 | .0172 | .0071 | | | | | | | |
| .059 | .0071 | | | | .0068 | .0060 | | | | | | | |
| .060 | | | .0095 | .0072 | | | | | | | | | |
| .061 | | | .0009 | .0043 | .0073 | .0025 | | | | | | | .0093 |
| .062 | | | | | | | | | | | | | |



5 of 7

N75 18290 UNCLAS



AEDC VA352 OH-8 Q1 ORB. BOTTOM SURFACE WING (RTKL11) (23 APR 74)

REFERENCE DATA

STEP = .8238 SQ.FT. XMRP = .0000 IN.
 LEFF = 22.3803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARABOLIC DATA

BETA = .000 RM/L = .660
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -8.000 TI = 93.000 Q1 = .877 rREF = .020

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| X/C | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9300 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | .0175 | .0261 | | .2465 | .4339 | .2566 | .0872 | | .1195 | .0930 | .0161 |
| .002 | | | | | .3881 | .1364 | | | | | | |
| .003 | | | | | .2462 | .1032 | | | | | | |
| .004 | | | | | .1745 | .0767 | | | | | | |
| .005 | | | | | .1398 | .0257 | | | | | | |
| .006 | | | | | .0994 | .0413 | | | | | | |
| .007 | | | | | .0673 | .0352 | | | | | | |
| .025 | .0292 | | | .1006 | .1985 | | .1967 | | | | | |
| .030 | | | | .0292 | | .0423 | .0261 | .0621 | | .0904 | | .0903 |
| .100 | .0097 | | | | | | | | | | | |
| .177 | | | | | .0113 | .0244 | | | | | | |
| .200 | .0041 | | | | .0160 | | | | | | | |
| .299 | | | | | | .0143 | | .0310 | .0284 | .0340 | | |
| .300 | | | | .0081 | | | | | | | | |
| .302 | | | | | | | .0302 | | | | | |
| .303 | | | | | | | | | | | | |
| .428 | | | | | | .0160 | | | | | | |
| .444 | .0029 | | | | | | | | | | | |
| .487 | | | | | .0154 | | | | | | | |
| .500 | | | | | | | .0237 | .0319 | | .0196 | | |
| .559 | | | | .0043 | | | | | | | | |
| .590 | .0019 | | | | | | | | | | | |
| .600 | | | | | .0089 | | | | .0102 | | | |
| .700 | | | | .0036 | .0082 | .0084 | | | | | | |
| .736 | .0023 | | | | | | | | | | | |
| .800 | | | | | .0044 | .0068 | | | | | | |
| .850 | | | | | .0056 | .0080 | | | | | | |
| .900 | .0011 | | | .0019 | .0040 | .0051 | .0066 | | | | | .0105 |



TABULATED DATA LISTING FOR OMB (AEDC VA332)

AEDC VA332 OMB OI ORB. BOTTOM SURFACE WING (RTKL11)

MACH (1) = 8.000 ALPHA (2) = .001 TI = 93.000 OI = .877 HREF = .020

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| Z/Y/S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | |
| .001 | | .0340 | .0415 | .2768 | .4512 | .2985 | .0807 | | .1250 | .1025 | .0256 |
| .002 | | | | .4243 | .1536 | | | | | | |
| .003 | | | | .2871 | .1160 | | | | | | |
| .004 | | | | .2096 | .0883 | | | | | | |
| .005 | | | | .1573 | .0974 | | | | | | |
| .006 | | | | .1236 | .0482 | | | | | | |
| .007 | | | | .0870 | .0411 | | | | | | |
| .025 | .0364 | | | .1509 | .1859 | .2236 | | | | | |
| .053 | | | | | | | | | | | |
| .100 | | | | .0467 | .0597 | .0715 | .0775 | | .1081 | .1082 | |
| .153 | .0192 | | | | | | | | | | |
| .177 | | | | .0237 | | | | | | | |
| .200 | | | | .0236 | .0313 | | | | | | |
| .239 | .0121 | | | | | | | | | | |
| .300 | | | | .0212 | .0195 | .0340 | .0352 | .0422 | | | |
| .302 | | | | .0168 | | | | | | | |
| .303 | | | | | | .0470 | | | | | |
| .428 | .0107 | | | | .0243 | | | | | | |
| .487 | | | | | | | | | | | |
| .500 | | | | .0228 | | | | | | | |
| .559 | | | | .0137 | .0323 | .0294 | | .0246 | | | |
| .590 | .0068 | | | | | | | | | | |
| .600 | | | | .0159 | .0143 | | | | | | |
| .700 | | | | .0108 | .0135 | .0131 | .0121 | .0131 | .0135 | | |
| .736 | .0097 | | | | | | | | | | |
| .800 | | | | .0071 | .0106 | | | | | | |
| .850 | | | | .0087 | .0122 | | | | | | |
| .900 | .0037 | | | .0095 | .0089 | .0081 | .0096 | | .0116 | | |

REFERENCE DATA

STEP = .0236 SQ.FT. YMRP = .0000 IN.
 LREP = 22.5603 IN. YMRP = .0000 IN.
 STEP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .0000 FN/L = .5000
 S.FLAP = .0000 ELEVON = .0000
 HAWK/T = 1.0000

MACH (1) = 8.0000 ALPHA (1) = 85.0000 TI = 93.4000 Q1 = .524 HREF = .018

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/RO

2 Y/S .2500 .3010 .3480 .4000 .5000 .6000 .7500 .8500 .9000 .9500 .9660 .9930

X/C

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0231 | .0301 | .4088 | .2716 | .3098 | .0822 | .1362 | .0908 | .0391 |
| .002 | | | .2908 | .2908 | .1755 | | | | |
| .003 | | | .3082 | .3082 | .1669 | | | | |
| .004 | | | .2802 | .2802 | .1509 | | | | |
| .005 | | | .2436 | .2436 | .1367 | | | | |
| .006 | | | .2122 | .2122 | .1141 | | | | |
| .007 | | | .1774 | .1774 | .1018 | | | | |
| .023 | .0443 | | .1724 | .3612 | .3137 | | | | |
| .050 | | | | | | | | | .1261 |
| .100 | .0830 | | .1369 | .1229 | .1534 | .1768 | | | .1059 |
| .153 | | | | | | | | | |
| .177 | | | | | | | | | |
| .200 | .0867 | | .1021 | .0811 | | | | | |
| .299 | | | | | | | | | |
| .300 | .0840 | | .0997 | .0726 | .0689 | .1080 | .0964 | | |
| .302 | | | .0741 | | | | | | |
| .303 | | | | | .0764 | | | | |
| .426 | | | | .0868 | | | | | |
| .444 | .0809 | | | | | | | | |
| .467 | | | .0667 | | | | | .0686 | |
| .500 | | | | | .0769 | .0698 | | | |
| .599 | | | .0807 | | | | | | |
| .590 | .0360 | | | | | | | | |
| .600 | | | .0765 | .0873 | | | | | |
| .700 | | | .0555 | .0879 | .0491 | .0351 | .0431 | .0536 | |
| .736 | .0424 | | | | | | | | |
| .800 | | | | .0282 | .0323 | | | | |
| .850 | | | | .0363 | .0412 | | | | |
| .900 | .0133 | | .0311 | .0392 | .0355 | .0366 | | .0491 | |



MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 93.400 QI = .524 WEF = .010
 AEDC VA352 OHB 01 ORB. BOTTOM SURFACE WING (RTKL12)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9680 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | .0476 | .0304 | | .3781 | .2581 | .2642 | .0734 | | .1259 | .0883 | | .0342 |
| .002 | | | | .3429 | .1637 | | | | | | | |
| .003 | | | | .3122 | .1606 | | | | | | | |
| .004 | | | | .3395 | .1511 | | | | | | | |
| .006 | | | | .2820 | .1389 | | | | | | | |
| .008 | | | | .2890 | .1141 | | | | | | | |
| .007 | | | | .2369 | .1037 | | | | | | | |
| .025 | .0430 | | | .1723 | .3984 | .2983 | | | | | .1226 | |
| .050 | | | | .1427 | .1608 | .1662 | .1678 | | | | .1246 | |
| .100 | .0989 | | | | | | | | | | | |
| .133 | | | | | .1169 | | | | | | | |
| .177 | | | | .0980 | .1189 | | | | | | | |
| .200 | .0947 | | | | | | | | | | | |
| .299 | | | | .0966 | .0929 | .0813 | .1122 | .1167 | | | | |
| .300 | | | | .0323 | | | | | | | | |
| .302 | | | | | | .0987 | | | | | | |
| .303 | | | | | .1020 | | | | | | | |
| .428 | .0668 | | | | | | | | | | | |
| .444 | | | | .0994 | | .0871 | .0858 | | .0807 | | | |
| .487 | | | | | | | | | | | | |
| .500 | | | | .0851 | | | | | | | | |
| .539 | | | | | | | | | | | | |
| .590 | .0437 | | | .0716 | .0861 | | | .0423 | .0450 | | | |
| .600 | | | | .0598 | .0631 | .0539 | .0429 | | | | | |
| .700 | | | | | | | | | | | | |
| .736 | .0500 | | | | .0325 | .0380 | | | | | | |
| .800 | | | | | .0443 | .0500 | | | | | | |
| .850 | | | | | .0404 | .0443 | | | .0463 | | | |
| .900 | .0186 | | | .0350 | .0462 | .0404 | | | | | | |

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 93.400 QI = .524 WEF = .010

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9680 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | .0612 | .0298 | | .3474 | .3141 | .2998 | .0838 | | .1108 | .0795 | | .0396 |
| .002 | | | | .4412 | .1430 | | | | | | | |
| .003 | | | | .4219 | .1445 | | | | | | | |
| .004 | | | | .4409 | .1397 | | | | | | | |
| .005 | | | | .3742 | .1320 | | | | | | | |
| .006 | | | | .3418 | .1159 | | | | | | | |
| .007 | | | | .2823 | .1091 | | | | | | | |
| .025 | .0448 | | | .1522 | .3388 | .2628 | | | | | | |

MACH (1) = 0.000 ALPHA (3) = 35.000
 AEDC VA352 OMB 01 ORG. BOTTOM SURFACE WING (RTKL12)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/AG

| 21/2 | .2500 | .3010 | .3480 | .4000 | .4500 | .5000 | .6000 | .7500 | .8500 | .9500 | .9880 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/4 | | | | | | | | | | | | |
| .090 | | | | | | | | | | | | |
| .100 | | | | | | | | | | | .1074 | |
| .123 | .1008 | | | .1503 | | .1959 | .1685 | .1825 | | | .1583 | |
| .177 | | | | .1029 | .1082 | | | | | | | |
| .200 | | | | | | .1386 | | | | | | |
| .239 | .0739 | | | | | | | | | | | |
| .300 | | | | | .0792 | .0988 | | .1109 | .1211 | .1107 | | |
| .302 | | | | .0880 | | | | | | | | |
| .303 | | | | | | .1114 | | | | | | |
| .428 | | | | | | .1234 | | | | | | |
| .444 | .0890 | | | | | | | | | | | |
| .497 | | | | | .1220 | | | .0937 | .0970 | | .0903 | |
| .500 | | | | | | | | | | | | |
| .559 | | | | | .0711 | | | | | | | |
| .590 | .0643 | | | | | | | | | | | |
| .600 | | | | | | .0751 | .0870 | | | .0808 | | |
| .700 | | | | .0840 | .0839 | .0836 | .0809 | | | | .0808 | .0802 |
| .736 | .0894 | | | | | .0861 | .0454 | | | | | |
| .800 | | | | | | .0825 | .0802 | | | | | |
| .900 | | | | .0402 | .0467 | .0479 | .0244 | | | | | .0370 |
| .900 | .0235 | | | | | | | | | | | |



AEDC VAS32 OMB 01 ORB. BOTTOM SURFACE WING (RTKL13) (25 APR 74)

REFERENCE DATA

REF = .6236 SQ.FT. XREF = .0000 IN.
REF = 22.5803 IN. YREF = .0000 IN.
REF = 16.3319 IN. ZREF = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.000
B.FLAP = .000 ELEVON = .000
HAWAHT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 94.100 QI = 1.003 HREF = .023

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/4D

| ZY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| K/C | | | | | | | | | | | | |
| .001 | | .0870 | .0298 | .3744 | .2522 | .2783 | .0707 | | | .1241 | .0879 | .0460 |
| .002 | | | | .3438 | | | .1641 | | | | | |
| .003 | | | | .3094 | | | .1564 | | | | | |
| .004 | | | | .3375 | | | .1471 | | | | | |
| .005 | | | | .2759 | | | .1350 | | | | | |
| .006 | | | | .2843 | | | .1140 | | | | | |
| .007 | | | | .2288 | | | .1021 | | | | | |
| .025 | .0448 | | .1802 | .3550 | | .2820 | | | | .1204 | | |
| .075 | | | .1414 | | .1585 | .1581 | .1841 | | | .1222 | | |
| .133 | .0946 | | | | | | | | | | | |
| .177 | | | .0973 | .0980 | .1172 | | | | | | | |
| .200 | | | | | | | | | | | | |
| .279 | .0866 | | .0829 | .0947 | .1397 | .1210 | .1130 | | | | | |
| .300 | | | .0828 | | | | .1008 | | | | | |
| .322 | | | | | | | | | | | | |
| .353 | | | | | | | | | | | | |
| .421 | | | | .1017 | | | | | | | | |
| .444 | .0669 | | | | | | | | | | | |
| .487 | | | .0987 | | | .0685 | .1421 | | | .1071 | | |
| .500 | | | | | | | | | | | | |
| .559 | | | .0845 | | | | | | | | | |
| .590 | .0432 | | | | | | | | | | | |
| .600 | | | .0722 | .0647 | | | | | .0990 | | | |
| .700 | | | .0607 | .0636 | .0513 | .0435 | | | | | | .0982 |
| .736 | .0486 | | | | | | | | | | | |
| .800 | | | .0293 | .0360 | | | | | | | | |
| .850 | | | .0430 | .0499 | | | | | | | | |
| .900 | .0195 | | .0396 | .0449 | .0396 | .0442 | | | | | | .0894 |

TABULATED DATA LISTING FOR OMB (AEDC VAS32)

MACH (1) = 0.000 ALPHA (2) = 35.000 T1 = 94.100 Q1 = 1.003 WREF = .025 (RTKL13)

AEDC VAS32 OMB 01 ORB. BOTTOM SURFACE WING

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/NO

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | .0031 | .0295 | | .3422 | .3092 | .2536 | .0830 | | | .1075 | .0602 | .0500 |
| .002 | | | | .4307 | | | .1375 | | | | | |
| .003 | | | | .4066 | | | .1369 | | | | | |
| .074 | | | | .4209 | | | .1297 | | | | | |
| .008 | | | | .3677 | | | .1218 | | | | | |
| .008 | | | | .3402 | | | .1065 | | | | | |
| .007 | | | | .2801 | | | .0978 | | | | | |
| .025 | | | | .1489 | .3378 | | .2724 | | | | | |
| .030 | | | | | | | | | | | | |
| .100 | | | | .1473 | .1920 | .1685 | .1724 | | | .1090 | | |
| .133 | | | | | | | | | | .1099 | | |
| .177 | | | | | | | | | | | | |
| .200 | | | | .1011 | .1391 | | | | | | | |
| .259 | | | | .0744 | | | | | | | | |
| .300 | | | | | .0920 | .0966 | .1046 | .1499 | .1565 | | | |
| .302 | | | | .0660 | | | | | | | | |
| .303 | | | | | | | | | | | | |
| .426 | | | | | | | .1082 | | | | | |
| .444 | | | | | | | .1234 | | | | | |
| .487 | | | | | | | | | | | | |
| .900 | | | | | .1136 | | .0966 | .0966 | .1298 | | | |
| .959 | | | | .0996 | | | | | | | | |
| .990 | | | | .0903 | | | | | | | | |
| .600 | | | | .0732 | .0899 | | | | .0822 | .0708 | | |
| .700 | | | | .0831 | .0834 | .0566 | .0516 | | | | | |
| .736 | | | | .0964 | | | | | | | | |
| .800 | | | | | .0333 | .0427 | | | | | | |
| .850 | | | | | .0506 | .0607 | | | | | | |
| .900 | | | | .0411 | .0497 | .0456 | .0533 | | | .0801 | | |

MACH (1) = 0.000 ALPHA (3) = 40.000 T1 = 94.100 Q1 = 1.003 WREF = .025

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/NO

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | .0615 | .0319 | | .3052 | .2926 | .2439 | .0833 | | | .0236 | .0702 | .0423 |
| .002 | | | | .3653 | | | .1196 | | | | | |
| .003 | | | | .4269 | | | .1290 | | | | | |
| .004 | | | | .4075 | | | .1276 | | | | | |
| .005 | | | | .3761 | | | .1243 | | | | | |
| .006 | | | | .3298 | | | .1148 | | | | | |
| .007 | | | | .2853 | | | .1098 | | | | | |
| .025 | .0473 | | | .1427 | .3065 | | .2843 | | | | | |



(RTKL13)

MACH (1) = 0.000 ALPHA (3) = 40.000

SECTION (1) BOTTOM SURF. WING

DEPENDENT VARIABLE MU/NO

ORF. BOTTOM SURFACE WING

| z/c | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .050 | | | | .1466 | .2111 | .1948 | .1819 | | .0972 | | |
| .100 | | | | | | | | | .1004 | | |
| .150 | .1139 | | | | .0873 | | | | | | |
| .177 | | | | .1048 | .1388 | | | | | | |
| .200 | | | | | | | | | | | |
| .299 | .0658 | | | | | | | | | | |
| .300 | | | | .0909 | .0987 | .1179 | .1285 | .1179 | | | |
| .302 | | | | .0910 | | | | | | | |
| .303 | | | | | | | .1127 | | | | |
| .428 | | | | | .1146 | | | | | | |
| .444 | .0740 | | | | | | | | | | |
| .487 | | | | | .1234 | | | | | | |
| .500 | | | | | | | .1079 | .1086 | | .1004 | |
| .539 | | | | .0721 | | | | | | | |
| .590 | .0598 | | | | .0797 | .0878 | | | .0537 | | |
| .600 | | | | .0889 | .0894 | .0832 | .0879 | | | | .0669 |
| .700 | | | | | | | | | | | |
| .736 | .0878 | | | | | | | | | | |
| .800 | | | | | .0371 | .0468 | | | | | |
| .850 | | | | | .0595 | .0699 | | | | | |
| .900 | .0281 | | | .0447 | .0536 | .0564 | .0634 | | | .0674 | |

AEDC VAS32 OMB 01 ORB. BOTTOM SURFACE WING

(RTRK14) (23 APR 74)

REFERENCE DATA

REF # .0238 30.FT. XMRP = .0000 IN.
 LREF # 22.5803 IN. YMRP = .0000 IN.
 BREF # 16.3919 IN. ZMRP = .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 2.000
 S.FLAP = .000 ELEVON = .000
 HAWK/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 96.950 QI = 1.994 HREF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/RO

| TY'S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9860 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| K/C | | | | | | | | | | | | |
| .001 | | .0536 | .0291 | | .3734 | .2517 | .2660 | .0768 | | .1213 | .0866 | .0640 |
| .002 | | | | | .3325 | .2999 | | .1638 | | | | |
| .003 | | | | | .2974 | | | .1974 | | | | |
| .004 | | | | | .3326 | .3509 | | .1509 | | | | |
| .005 | | | | | .2779 | .1412 | | .1412 | | | | |
| .006 | | | | | .2827 | .1264 | | .1264 | | | | |
| .007 | | | | | .2300 | .1204 | | .1204 | | | | |
| .025 | .0431 | | | .1538 | .3501 | | .2660 | | | | | |
| .050 | | | | .1408 | | .1562 | .1970 | .1960 | | .1169 | | |
| .100 | .0944 | | | | | | | | | .1214 | | |
| .177 | | | | .0964 | .0968 | .1142 | | | | | | |
| .200 | .0872 | | | | | | | | | | | |
| .299 | | | | .0968 | .1001 | | .2698 | .1708 | .1321 | | | |
| .300 | | | | .0792 | | | | | | | | |
| .302 | | | | | | | .1050 | | | | | |
| .303 | | | | | | .1009 | | | | | | |
| .428 | .0697 | | | | | | | | | | | |
| .444 | | | | .0934 | | | .0680 | .2746 | | .1593 | | |
| .487 | | | | | | | | | | | | |
| .500 | | | | .0840 | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .790 | .0428 | | | | | | | | .1300 | | | |
| .800 | | | | .0715 | .0836 | | | | | | | |
| .700 | | | | .0820 | .0465 | .0465 | .0452 | | | .1219 | | |
| .736 | .0826 | | | | | | | | | | | |
| .600 | | | | .0286 | .0321 | | | | | | | |
| .650 | | | | .0428 | .0503 | | | | | | | |
| .900 | .0356 | | | .0406 | .0472 | .0390 | .0445 | | | | | .1111 |



AEDC VAS32 OMB 01 ORG. BOTTOM SURF. Z WING (RTKL15) (23 APR 74)

REFERENCE DATA

MCP = .0238 SQ.FT. WHP = .0000 IN.
WEP = 22.5603 IN. WHP = .0000 IN.
ZEP = 16.3919 IN. ZHP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .0000 RN/L = 3.720
S.F.LAP = .0000 ELEVON = .0000
MAN/WT = 1.0000

MACH (1) = 6.000 ALPHA (1) = 29.000 T1 = 97.687 Q1 = 3.955 MDEP = .049

SECTION (1) SURF. SURF. WING DEPENDENT VARIABLE MU/AD

| Y/C | .2510 | .3010 | .3480 | .4000 | .5000 | .7500 | .8500 | .9000 | .9500 | .9850 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | | .0497 | .0294 | .3844 | .2793 | .3224 | .2814 | .1328 | .0918 | .0480 |
| .002 | | | | | .2840 | .1730 | .1640 | | | | |
| .003 | | | | | .2983 | .2502 | .1520 | | | | |
| .004 | | | | | .2378 | .1358 | | | | | |
| .006 | | | | | .2089 | .1128 | | | | | |
| .007 | | | | | .1710 | .1014 | | | | | |
| .008 | .0420 | | | .1811 | .3584 | .3397 | | | | | |
| .010 | | | | .1281 | .1284 | .2741 | .1781 | | .1221 | | |
| .100 | .0801 | | | | | | | | .1219 | | |
| .177 | | | | .0888 | .0970 | | | | | | |
| .200 | .0848 | | | | | | | | | | |
| .299 | | | | .1188 | .1344 | .1985 | .1027 | .1008 | | | |
| .300 | | | | .0721 | | .3280 | | | | | |
| .302 | | | | | | .2810 | | | | | |
| .303 | | | | | | | | | | | |
| .428 | .0487 | | | | .3402 | .3308 | .2840 | .0949 | | | |
| .444 | | | | | | | | | | | |
| .487 | | | | | | | | | | | |
| .500 | | | | .0723 | | | | | | | |
| .559 | .0400 | | | | | | | | | | |
| .590 | | | | | .1889 | .0888 | .1073 | .1117 | | | |
| .600 | | | | .0683 | .2028 | .1998 | .1345 | | | | |
| .736 | .0880 | | | | | | | | | | |
| .870 | | | | .1171 | .1324 | | | | | | |
| .890 | | | | .1484 | .1337 | | | | | | |
| .900 | .0814 | | | .0714 | .1239 | .1239 | .1254 | .1022 | | | |



AEDC VA352 OMB 01 ORG. BOTTOM SURFACE WING (RTKL15)

MACH (1) = 0.000 ALPHA (3) = 35.000

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| RY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | |
| .080 | | | | .1735 | | .2318 | .2277 | .4012 | | .1717 | |
| .100 | | | | | .1405 | .1801 | | | | .1840 | |
| .153 | .0986 | | | | | | | | | | |
| .177 | | | | .1520 | | | | | | | |
| .200 | | | | | | | | | | | |
| .299 | .0749 | | | | | | | | | | |
| .300 | | | | .1654 | .1463 | .4081 | .4131 | .2926 | | | |
| .302 | | | | .1683 | | | .1672 | | | | |
| .428 | | | | | .1973 | | | | | | |
| .444 | .1078 | | | | .3058 | | .1590 | .3623 | | .2556 | |
| .487 | | | | | | | | | | | |
| .500 | | | | .2839 | | | | | | | |
| .539 | | | | | | | | | | | |
| .590 | .2002 | | | | | | | | | | |
| .600 | | | | .2340 | .1747 | | | .1046 | | | |
| .700 | | | | .2384 | .2263 | .2010 | .1040 | | | .1921 | |
| .736 | .3087 | | | | | | | | | | |
| .800 | | | | | .1398 | .1611 | | | | | |
| .800 | | | | | .1797 | .2169 | | | | | |
| .900 | .1072 | | | .1667 | .1374 | .1379 | .1332 | | | .1646 | |



AEDC VAS32 OMB 01 ORB. BOTTOM SURFACE WING (RTKL17) (25 APR 74)

REFERENCE DATA

REF = .0238 SQ.FT. XMRP = .0000 IN.
 YREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 16.3319 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 S.FLAP = 10.000 ELEVON = 3.000
 HAW/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.700 OI = 3.949 HREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE H4/H0

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | .001 | .0518 | .0901 | .1498 | .3522 | .4201 | .3663 | .0817 | .1231 | .1050 | .0907 | |
| .002 | | | | | .3426 | .1712 | | | | | | |
| .003 | | | | | .3046 | .1728 | | | | | | |
| .004 | | | | | .3369 | .1624 | | | | | | |
| .005 | | | | | .2795 | .1797 | | | | | | |
| .006 | | | | | .2937 | .1892 | | | | | | |
| .007 | .0464 | | | | .2398 | .1879 | | | | | | |
| .025 | | | | | | .4201 | | | | | | |
| .050 | | | | | | | | .1248 | | | | |
| .153 | .0879 | | | | .1477 | .1634 | .3774 | .2734 | | | | |
| .177 | | | | | | | | | | | | |
| .200 | | | | | .1031 | .1022 | .1342 | | | | | |
| .299 | .0619 | | | | | | | | | | | |
| .300 | | | | | | | | | | | | |
| .302 | | | | | .1123 | .1201 | .3660 | .2990 | .2390 | | | |
| .303 | | | | | .0968 | | | | | | | |
| .429 | | | | | | | | | | | | |
| .444 | .0606 | | | | | .1329 | | | | | | |
| .507 | | | | | .2536 | | .1251 | | | | | |
| .500 | | | | | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0906 | | | | | | .2219 | .3736 | .1906 | | | |
| .600 | | | | | | | | | | | | |
| .700 | | | | | .1613 | .1081 | | | .1567 | | | |
| .736 | .2115 | | | | .1740 | .2026 | .1775 | .1537 | .1990 | | | |
| .800 | | | | | | | .1718 | .2203 | | | | |
| .890 | | | | | | | .2221 | .2579 | | | | |
| .900 | .1174 | | | | .1904 | .1919 | .1979 | .2191 | .1850 | | | |

AEDC VAS32 OH48 O1 ORB. BOTTOM SURFACE WING (RTKL17)

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 97.700 Q1 = 3.949 MIEF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/MD

| 2 Y/B | .2570 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| x/c | | | | | | | | | | | | |
| .001 | .0654 | .0308 | .3319 | .3207 | .2609 | .0742 | .1617 | .1261 | .1150 | | | |
| .002 | | | .4288 | .1631 | | | | | | | | |
| .003 | | | .4299 | .2073 | | | | | | | | |
| .004 | | | .4467 | .2175 | | | | | | | | |
| .006 | | | .3993 | .2408 | | | | | | | | |
| .006 | | | .3778 | .2237 | | | | | | | | |
| .007 | | | .3204 | .2303 | | | | | | | | |
| .025 | .0478 | | .1558 | .3474 | .2778 | | | | | | | |
| .050 | | | .1745 | .2336 | .2214 | .3975 | | | .1738 | | | |
| .100 | | | | | | | | | .1854 | | | |
| .193 | .1003 | | | | | | | | | | | |
| .177 | | | .1419 | | | | | | | | | |
| .200 | | | .1542 | .1770 | | | | | | | | |
| .299 | .0753 | | | | | | | | | | | |
| .300 | | | .1667 | .1485 | .2588 | .4121 | .2991 | | | | | |
| .302 | | | .1718 | | | | | | | | | |
| .303 | | | | | | | | | | | | |
| .428 | | | | .2025 | .1378 | | | | | | | |
| .467 | .1077 | | | | | | | | | | | |
| .500 | | | .3123 | | .1819 | .1733 | .2649 | | | | | |
| .559 | | | .2871 | | | | | | | | | |
| .590 | .2064 | | | | | | | | | | | |
| .600 | | | .2358 | .1732 | | | | | .1349 | .2612 | | |
| .700 | | | .2359 | .2284 | .2015 | .0861 | | | | | | |
| .736 | .3046 | | | | | | | | | | | |
| .800 | | | .1863 | .1084 | | | | | | | | |
| .850 | | | .2413 | .1533 | | | | | | | | |
| .900 | .1351 | | .2244 | .2086 | .2204 | .1415 | | | | | | .1932 |



AEDC VA352 OMB 01 ORB. BOTTOM SURFACE WING (RTKL18) (25 APR 74)

REFERENCE DATA

REF = .8236 SQ.FT. XMRP = .0000 IN.
 YREF = 22.9803 IN. YMRP = .0000 IN.
 ZREF = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -5.000 RW/L = 3.720
 B.FLAP = 10.000 ELEVON = 5.000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.200 QI = 3.933 HREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/AD

| Y/X | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9600 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0663 | .0349 | .4240 | .2688 | .3761 | .0801 | .1935 | .1393 | .0642 | | |
| .002 | | | .3482 | .2186 | | | | | | | |
| .003 | | | .3480 | .2021 | | | | | | | |
| .004 | | | .3404 | .1793 | | | | | | | |
| .006 | | | .3011 | .1515 | | | | | | | |
| .006 | | | .2791 | .1238 | | | | | | | |
| .007 | | | .2238 | .1118 | | | | | | | |
| .025 | .1908 | .3693 | .3671 | | | | | | | | |
| .050 | | | | | | | | .1792 | | | |
| .100 | .1589 | | .1638 | .1815 | .1992 | | | .1818 | | | |
| .153 | .1108 | | | | | | | | | | |
| .177 | | | .1273 | .1167 | | | | | | | |
| .200 | .1097 | | | | | | | | | | |
| .299 | .0724 | | | | | | | | | | |
| .300 | | | .1118 | .0880 | .1016 | .1113 | .1192 | | | | |
| .302 | .0982 | | | | | | | | | | |
| .303 | | | | .2188 | | | | | | | |
| .428 | | | .0594 | | | | | | | | |
| .444 | .0662 | | | | | | | | | | |
| .467 | | | .1157 | .3137 | .1253 | | | .0928 | | | |
| .500 | | | | | | | | | | | |
| .553 | .1145 | | | | | | | | | | |
| .590 | .0757 | | | | | | | | | | |
| .600 | | | .1139 | .0811 | | | | .0900 | | | |
| .700 | .1289 | .1179 | .0869 | .1519 | | | | .0736 | | | |
| .736 | .1614 | | | | | | | | | | |
| .800 | | | .0872 | .2491 | | | | | | | |
| .850 | | | .1092 | .2631 | | | | | | | |
| .900 | .1470 | .1790 | .1778 | .1192 | .2287 | | | .1639 | | | |

AEDC VA352 OMB 01 OMB, BOTTOM SURFACE WING (RTKL18)

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 97.200 Q1 = 3.933 MREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/H/D

2Y/B .2500 .3010 .3480 .4000 .5000 .6000 .7500 .8500 .9000 .9500 .9650 .9930

X/C

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0682 | .0413 | .3734 | .2746 | .2700 | .0802 | .1604 | .1372 | .1078 |
| .002 | | | .3691 | .1743 | | | | | |
| .003 | | | .3706 | .1916 | | | | | |
| .004 | | | .3976 | .2108 | | | | | |
| .006 | | | .3583 | .2235 | | | | | |
| .007 | | | .3492 | .2328 | | | | | |
| .025 | .0677 | .1633 | .3705 | .2911 | | | | | |
| .050 | | | | | | | | | |
| .100 | .1739 | .2360 | .2398 | .3622 | | .1719 | .1843 | | |
| .153 | .1202 | | | | | | | | |
| .177 | | | .1227 | .1826 | | | | | |
| .200 | .1240 | | | | | | | | |
| .299 | .0799 | | | | | | | | |
| .300 | | | .1220 | .1411 | .4129 | .3623 | .2549 | | |
| .302 | | .1086 | | | | | | | |
| .303 | | | | .1632 | .1662 | | | | |
| .428 | .0792 | | | | | | | | |
| .444 | | | .2436 | | | | | | |
| .487 | | | | | | | | | |
| .500 | | .1300 | | .1668 | .2658 | .2309 | | | |
| .559 | | | | | | | | | |
| .590 | .1008 | | .2176 | .1534 | | .1654 | | | |
| .600 | | .1474 | .2077 | .1729 | .0871 | | .2259 | | |
| .700 | .1923 | | | .1593 | .1031 | | | | |
| .736 | | | | .2137 | .1467 | | | | |
| .600 | | | | .1970 | .1308 | | | | |
| .650 | | .1745 | .2033 | .1970 | .1308 | | | | |
| .900 | .1364 | | | | | | | | .2155 |



AEDC VA332 OMB 01 OMB. BOTTOM SURFACE WING (RTKL19) (23 APR 74)

REFERENCE DATA

REF Z = .8238 SQ.FT. XMRP = .0000 IN.
 LREF Z = 22.5603 IN. YMRP = .0000 IN.
 SREF Z = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = 4.000 RN/L = 2.000
 B.FLAP = 10.000 ELEVON = 5.000
 HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 99.850 QI = 1.983 HREF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE H/U/D

| X/C | Y/S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | | .0759 | .0383 | | .4335 | .2799 | .3577 | .0795 | | .1614 | .1146 | .0650 |
| .002 | | | | | | .3640 | .3754 | .1889 | .1999 | | | | |
| .003 | | | | | | .3754 | .3404 | .1639 | .1899 | | | | |
| .004 | | | | | | .3404 | .3087 | .1491 | .1491 | | | | |
| .005 | | | | | | .3087 | .2534 | .1204 | .1204 | | | | |
| .006 | | | | | | .2534 | .2202 | .1098 | .1098 | | | | |
| .007 | | | | | .2074 | .4109 | .3631 | | | | | | |
| .008 | | | | | .1638 | | .1732 | .1814 | .1936 | | | .1543 | .1550 |
| .009 | | | | | | .1217 | | | | | | | |
| .010 | | | | | .1071 | | .1164 | | | | | | |
| .011 | | | | | | .1116 | .0822 | .1036 | .1194 | .1271 | | | |
| .012 | | | | | .0676 | | | .2747 | | | | | |
| .013 | | | | | | | .0946 | | | | | | |
| .014 | | | | | | .0967 | | | | | | .0960 | |
| .015 | | | | | .0728 | | | .1752 | .1695 | | | | |
| .016 | | | | | | .0776 | .0799 | | | .0482 | | | |
| .017 | | | | | .0722 | .0672 | .0530 | .0532 | | | | .0561 | |
| .018 | | | | | | .0363 | .0325 | | | | | | |
| .019 | | | | | | .0650 | .0746 | | | | | | |
| .020 | | | | | .0577 | .0532 | .0565 | .0625 | | | | | .0718 |

AEDC VA352 OMB Q1 OMB BOTTOM SURFACE WING (RTKL19)

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 95.650 Q1 = 1.983 HREF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/CO

| 279 | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| x/c | | | | | | | | | | | | |
| .001 | .0706 | .0417 | | .3886 | .2626 | .2046 | .0717 | | .1351 | .1074 | .0860 | |
| .002 | | | | .1326 | .1618 | | | | | | | |
| .003 | | | | .3549 | .1635 | | | | | | | |
| .004 | | | | .3469 | .1578 | | | | | | | |
| .006 | | | | .3173 | .1483 | | | | | | | |
| .008 | | | | .2926 | .1278 | | | | | | | |
| .007 | | | | .2438 | .1207 | | | | | | | |
| .025 | .0667 | | | .1646 | .3770 | .2975 | | | | | | |
| .050 | | | | .1659 | | .1822 | .1837 | .2079 | | .1353 | | .1373 |
| .133 | .1233 | | | | | | | | | | | |
| .177 | | | | .1154 | .1204 | .1169 | | | | | | |
| .200 | | | | | | | | | | | | |
| .299 | .0609 | | | | | | | | | | | |
| .300 | | | | .0969 | .1099 | .0919 | .2792 | .1605 | .1353 | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | | | .1074 | | | | | |
| .428 | .0668 | | | | .1080 | .1004 | | | | .1464 | | |
| .467 | | | | | | | | | | | | |
| .500 | | | | .0746 | | | .0968 | .2916 | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0524 | | | | | | | | | | | |
| .600 | | | | .0916 | .0864 | | | | .1172 | | | |
| .700 | | | | .0747 | .0762 | .0860 | .0477 | | | .1647 | | |
| .736 | .0701 | | | | | | | | | | | |
| .800 | | | | | .0374 | .0390 | | | | | | |
| .850 | | | | | .0713 | .0721 | | | | | | |
| .900 | .1238 | | | .0633 | .0660 | .0664 | .0675 | | | .1541 | | |



(RTKL20) (25 APR 74)

AEDC VA352 OMB O1 ORB. BOTTOM SURFACE WING

REFERENCE DATA

REF = .8238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
 S.FLAP = 10.000 ELEVON = 5.000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 99.900 OI = 1.980 WREF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8000 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| K/C | | | | | | | | | | | | |
| .001 | | .0528 | .0294 | .3741 | .2469 | .2671 | .0743 | | .1253 | .0891 | .0832 | |
| .002 | | | | .3322 | .3082 | .1573 | .1618 | | | | | |
| .003 | | | | .3245 | .1508 | | | | | | | |
| .004 | | | | .2739 | .1404 | | | | | | | |
| .005 | | | | .2814 | .1289 | | | | | | | |
| C/S | | | | .2288 | .1203 | | | | | | | |
| .007 | | | | .1563 | .3507 | .2804 | | | .1212 | | | |
| .050 | | | | .1417 | .1583 | .1990 | .1959 | | .1228 | | | |
| .100 | | | | | | | | | | | | |
| .153 | | | | | .0973 | | | | | | | |
| .200 | | | | .0960 | .1154 | | | | | | | |
| .259 | | | | .0861 | .0997 | .0992 | .2679 | .1716 | .1328 | | | |
| .300 | | | | .0808 | | .1029 | | | | | | |
| .302 | | | | | .1005 | | | | | | | |
| .303 | | | | | | | | | | | | |
| .426 | | | | | | | | | | | | |
| .444 | | | | | | | | | | | | |
| .467 | | | | | .0911 | | .0882 | .2746 | .1571 | | | |
| .500 | | | | .0637 | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | | | | .0418 | | | | | | | | |
| .600 | | | | .0732 | .0642 | | | | .1250 | | | |
| .700 | | | | .0628 | .0676 | .0464 | .0427 | | | | | .1675 |
| .736 | | | | .0592 | | | | | | | | |
| .800 | | | | .0289 | .0391 | | | | | | | |
| .810 | | | | .0874 | .0642 | | | | | | | |
| .900 | | | | .0533 | .0592 | .0533 | .0601 | | | | | .1474 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.900 Q1 = 1.980 MREF = .035
 AEDC VA352 OMB 01 OMB, BOTTOM SURFACE WING (RTKL20)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/HO

| Z/Y/S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | | | .1474 | .3220 | | .2610 | | | | | |
| .002 | .0664 | .0302 | | .1474 | .3404 | .3103 | .2448 | .0893 | | .1263 | .1117 | .1043 |
| .003 | | | | | .4246 | .4246 | | .1359 | | | | |
| .004 | | | | | .4071 | .4071 | | .1453 | | | | |
| .005 | | | | | .4258 | .4258 | | .1363 | | | | |
| .006 | | | | | .3692 | .3692 | | .1413 | | | | |
| .007 | | | | | .3436 | .3436 | | .1220 | | | | |
| .025 | .0492 | | | | .2814 | .2814 | | .1222 | | | | |
| .050 | | | | | | | | | | | | |
| .100 | | | | | | | | | | | | |
| .153 | .1016 | | | | .1873 | .1873 | .1612 | .2294 | | .1386 | | |
| .177 | | | | | | | | | | .1528 | | |
| .200 | | | | .1030 | .0982 | .1351 | | | | | | |
| .299 | .0735 | | | | | | | | | | | |
| .300 | | | | | .0945 | .1034 | | .1505 | .3137 | .2437 | | |
| .352 | | | | .0687 | | | | | | | | |
| .363 | | | | | | | | | | | | |
| .428 | | | | | | | .1084 | | | | | |
| .444 | .0821 | | | | | | | | | | | |
| .487 | | | | | .1161 | | | | | | | |
| .500 | | | | .0744 | | | .0660 | .0991 | | .2108 | | |
| .559 | | | | | | | | | | | | |
| .590 | .0645 | | | | .0796 | .0876 | | | .0639 | | | |
| .600 | | | | .0735 | .0705 | .0565 | .0603 | | | | | .1775 |
| .700 | | | | | | | | | | | | |
| .736 | .0637 | | | | | | | | | | | |
| .800 | | | | | | .0336 | .0436 | | | | | |
| .850 | | | | | | .0674 | .0770 | | | | | |
| .900 | .1192 | | | .0727 | .0773 | .0653 | .0705 | | | | | .1112 |



AEDC VAS32 OMB 01 ORB. BOTTOM SURFACE WING (RTKL21)

MACH (1) = 8.000 ALPHA (2) = 39.000 TL = 91.950 Q1 = .516 HREF = .017

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/NO

| RY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/C | | | | | | | | | | | |
| .001 | | | | | .4012 | .2709 | .2980 | .0736 | | .1407 | .1110 |
| .002 | | .0793 | .0413 | | .3466 | .1879 | .1879 | .1879 | | | .0900 |
| .003 | | | | | .3659 | | | .1680 | | | |
| .004 | | | | | .3593 | | | .1608 | | | |
| .005 | | | | | .3286 | | | .1523 | | | |
| .006 | | | | | .3025 | | | .1316 | | | |
| .007 | | | | | .2543 | | .3151 | .1207 | | | |
| .025 | .0866 | | | .2000 | .3663 | | | | | | |
| .050 | | | | | | | | | | | |
| .100 | | | | .1724 | .1879 | .1897 | .2166 | | .1426 | .1462 | |
| .153 | .1254 | | | | | | | | | | |
| .177 | | | | | .1294 | .1271 | | | | | |
| .200 | | | | .1208 | | | | | | | |
| .299 | .0835 | | | | .1142 | .0888 | .0996 | .1369 | .1316 | | |
| .302 | | | | .1017 | | | | | | | |
| .303 | | | | | | | .1120 | | | | |
| .428 | | | | | | .1055 | | | | | |
| .444 | .0756 | | | | | | | | | | |
| .487 | | | | | .1116 | | | | | | |
| .500 | | | | | | | .1083 | .0980 | .0956 | | |
| .559 | | | | .0807 | | | | | | | |
| .590 | .0812 | | | | .0942 | .0675 | | | .0413 | | |
| .600 | | | | .0764 | .0768 | .0614 | .0479 | | | .0559 | |
| .700 | | | | | | | | | | | |
| .736 | .0691 | | | | | .0433 | .0474 | | | | |
| .800 | | | | | .0719 | .0783 | | | | | |
| .850 | | | | .0622 | .0590 | .0633 | .0637 | | | | .0673 |
| .900 | .0865 | | | | | | | | | | |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

WAKE (1) = 8.000 ALPHA (2) = 35.000 ORB. BOTTOM SURFACE WING (RTKL22)
 T1 = 93.400 Q1 = .523 HREF = .018

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/MO

| Z/H | .2500 | .3510 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9850 | .9950 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | .0818 | .0305 | .3470 | .3180 | .2654 | .0833 | | .1088 | .0778 | .0452 | |
| .002 | | | | .4360 | .4260 | .4119 | .1427 | | | | | |
| .003 | | | | .4250 | .4332 | .4338 | .1338 | | | | | |
| .004 | | | | .3717 | .3717 | .3317 | .1166 | | | | | |
| .005 | | | | .3495 | .2480 | .1002 | | | | | | |
| .007 | .0000 | | .1558 | .3362 | | .2813 | | | | | | |
| .010 | | | .1503 | | .1586 | .1690 | .1846 | | .1104 | | .1108 | |
| .013 | .1083 | | | | | | | | | | | |
| .017 | | | .1037 | .1048 | | .1365 | | | | | | |
| .200 | | | | | | | | | | | | |
| .254 | .0770 | | | | | | | | .1135 | .1215 | .1092 | |
| .310 | | | .0987 | .0963 | | | | | | | | |
| .382 | | .0858 | | | | .1092 | | | | | | |
| .423 | | | .1191 | | | | | | | | | |
| .444 | .0887 | | | | | | | | | | | |
| .467 | | | .1194 | | | | | | | | | |
| .500 | | | | | | .1019 | .1028 | | .0899 | | | |
| .559 | | .0708 | | | | | | | | | | |
| .590 | .0538 | | | | | | | | | | | |
| .600 | | | .0774 | .0862 | | | | .0801 | | .0710 | | |
| .700 | | .0843 | .0843 | .0827 | .0483 | | | | | | | |
| .738 | .0598 | | | | | | | | | | | |
| .800 | | | .0394 | .0802 | | | | | | | | |
| .850 | | | .0641 | .0760 | | | | | | | | |
| .900 | .0484 | .0819 | .0894 | .0608 | .0712 | | | | | | .0712 | |



AEDC VA352 OMB Q1 ORB. BOTTOM SURFACE WING (RTKL23)

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 93.433 Q1 = .521 HREF = .018

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| 2 Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | |
| .001 | .0588 | .0301 | | .3911 | .2597 | .2884 | .0726 | | .1273 | .0024 | .0263 |
| .002 | | | | .2857 | | .1654 | | | | | |
| .003 | | | | .3196 | | .1612 | | | | | |
| .004 | | | | .3439 | | .1497 | | | | | |
| .005 | | | | .2889 | | .1393 | | | | | |
| .006 | | | | .2926 | | .1149 | | | | | |
| .007 | | | | .2354 | | .1047 | | | | | |
| .025 | .0466 | | .1629 | .3561 | | .2976 | | | | | |
| .050 | | | .1441 | | .1603 | .1700 | .1868 | | .1274 | | |
| .100 | .0641 | | | | | | | | .1275 | | |
| .153 | .177 | | .1056 | | | | | | | | |
| .200 | .0962 | | .1187 | | | | | | | | |
| .299 | .0666 | | .0983 | .0910 | | .0874 | .1150 | .1200 | | | |
| .300 | .0811 | | | | | .0990 | | | | | |
| .302 | | | | | | | | | | | |
| .303 | | | | | | | | | | | |
| .428 | .0596 | | .1037 | | | | | | | | |
| .444 | | | | | | | | | | | |
| .487 | | | .1026 | | | .0885 | .0933 | | .0759 | | |
| .500 | | | | | | | | | | | |
| .559 | .0477 | | .0648 | | | | | | | | |
| .590 | | | | | | | | | | | |
| .600 | | | .0732 | .0662 | | .0421 | | .0442 | | | |
| .700 | .0627 | .0647 | .0818 | .0421 | | | | | | | |
| .736 | .0466 | | | | | | | | | | |
| .800 | | | .0334 | .0638 | | | | | | | |
| .850 | | | .0771 | .0937 | | | | | | | |
| .900 | .0752 | .0664 | .0685 | .0746 | .0691 | | | | .0901 | | |

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 93.433 Q1 = .521 HREF = .018

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| 2 Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | |
| .001 | .0817 | .0303 | | .3491 | .3144 | .2872 | .0648 | | .1121 | .0761 | .0351 |
| .002 | | | | .4375 | | .1441 | | | | | |
| .003 | | | | .4191 | | .1426 | | | | | |
| .004 | | | | .4346 | | .1387 | | | | | |
| .005 | | | | .3743 | | .1299 | | | | | |
| .006 | | | | .3754 | | .1168 | | | | | |
| .007 | | | | .0856 | | .1071 | | | | | |
| .025 | .0464 | | .1556 | .3341 | | .2820 | | | | | |



AEDC VA352 OH4B 01 ORG. BOTTOM SURFACE WING (RTKL23)

MACH (1) = 0.000 ALPHA (3) = 35.000

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| RY/B | .2500 | .3010 | .3460 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .090 | | | | .1489 | | .1961 | .1862 | .1611 | | .1121 | | |
| .100 | | | | | | | | | | .1118 | | |
| .123 | .1037 | | | | | | | | | | | |
| .177 | | | | .1031 | .1084 | .1371 | | | | | | |
| .200 | | | | | | | | | | | | |
| .233 | .0738 | | | | | | | | | | | |
| .300 | | | | .0868 | .0948 | .0984 | .1090 | .1208 | .1142 | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | | | .1112 | | | | | |
| .428 | | | | | | .1208 | | | | | | |
| .444 | .0874 | | | | | | | | | | | |
| .487 | | | | | .1195 | | .1034 | .1068 | .0918 | | | |
| .500 | | | | .0707 | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0547 | | | | | | | | .0519 | .0519 | | |
| .600 | | | | | .0768 | .0669 | | | | | | |
| .700 | | | | .0647 | .0532 | .0564 | .0480 | | | | | |
| .736 | .0591 | | | | | .0307 | .0581 | | | | | |
| .800 | | | | | | .0785 | .1022 | | | | | |
| .890 | | | | | | .0767 | .1018 | | | | | |
| .900 | .0863 | | | .0682 | .0878 | .0767 | .1018 | | | | .0873 | |

AEDC VAS32 OMB G1 OMB. BOTTOM SURFACE WING. (RTKL24) (25 APR 74)

REFERENCE DATA

WING AREA = .9238 SQ.FT. XMRP = .0000 IN.
 LEAP = 22.9903 IN. YMRP = .0000 IN.
 REF = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -9.000 RW/L = .900
 S.FLAP = 10.000 ELEVON = 10.000
 HAWK/HT = 1.000

MACH (1) = 9.000 ALPHA (1) = 25.000 TI = 93.233 QI = .523 REF = .016

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/RO

| Y/Z | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0750 | .0453 | .4603 | .3107 | .3623 | .0914 | | .1837 | .1324 | .0448 | |
| .002 | | | | .3780 | .2080 | .1900 | | | | | | |
| .003 | | | | .3622 | .3279 | .1678 | | | | | | |
| .004 | | | | .2962 | .1478 | | | | | | | |
| .006 | | | | .2588 | .1170 | | | | | | | |
| .007 | | | | .2141 | .1043 | | | | | | | |
| .025 | .0692 | | | .2369 | .4001 | .3631 | | | | | | |
| .050 | | | | .1596 | .1563 | .1869 | .1878 | | .1725 | .1699 | | |
| .153 | .1008 | | | | | | | | | | | |
| .177 | | | | | .1071 | | | | | | | |
| .200 | | | | .0983 | | .1096 | | | | | | |
| .299 | .0671 | | | | | | | | | | | |
| .300 | | | | | .1007 | .0885 | .0972 | .1025 | .1116 | | | |
| .302 | | | | .0799 | | | | | | | | |
| .303 | | | | | | | .0903 | | | | | |
| .428 | | | | | | .0885 | | | | | | |
| .444 | .0594 | | | | | | | | | | | |
| .487 | | | | | | | | | | | | |
| .500 | | | | | | | | | | | | |
| .519 | | | | | | .0671 | | .0601 | .0670 | .0667 | | |
| .590 | .0463 | | | | .0700 | | | | | | | |
| .600 | | | | | | | | | | | | |
| .700 | | | | | .0728 | .0649 | | | .0480 | | .0450 | |
| .736 | .0809 | | | | .0670 | .0604 | .0482 | .0299 | | | | |
| .800 | | | | | | .0408 | .0532 | | | | | |
| .850 | | | | | | .0760 | .0788 | | | | | |
| .900 | .0727 | | | | .0728 | .0677 | .0746 | .0695 | | | | .0781 |



TABULATED DATA LISTING FOR OHB (AEDC VAS32)

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 93.233 Q1 = .523 HREF = .018
 AEDC VAS32 OHB 01 ORB. BOTTOM SURFACE WING (RTKL24)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| 2Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0746 | .0410 | .4599 | .2696 | .3633 | .0815 | | .1644 | .1161 | .0391 | |
| .002 | | | | .3662 | .2014 | | | | | | | |
| .003 | | | | .3806 | .1918 | | | | | | | |
| .004 | | | | .3443 | .1728 | | | | | | | |
| .005 | | | | .3141 | .1518 | | | | | | | |
| .006 | | | | .2632 | .1241 | | | | | | | |
| .007 | | | | .2189 | .1143 | | | | | | | |
| .025 | .0870 | | | .2165 | .4166 | .3678 | | | | | | |
| .050 | | | | | | | | | .1376 | | | |
| .100 | | | | .1631 | .1728 | .1787 | .2004 | | .1570 | | | |
| .153 | .1102 | | | | | | | | | | | |
| .177 | | | | .1086 | .1126 | | | | | | | |
| .200 | | | | | | | | | | | | |
| .299 | .0736 | | | | .1116 | .0753 | .1100 | .1246 | .1364 | | | |
| .300 | | | | .0908 | | .0811 | | | | | | |
| .302 | | | | | | .0941 | | | | | | |
| .303 | | | | | | | | | | | | |
| .428 | | | | | | | | | | | | |
| .444 | .0703 | | | | .1029 | .0928 | .1082 | | .1072 | | | |
| .487 | | | | | | | | | | | | |
| .500 | | | | .0770 | | | | | | | | |
| .559 | | | | | .0812 | .0766 | .0499 | | | | | |
| .590 | .0852 | | | .0728 | .0687 | .0533 | .0423 | | .0494 | | | |
| .700 | | | | | .0467 | .0407 | | | | | | |
| .736 | .0596 | | | | .0853 | .0892 | | | | | | |
| .800 | | | | .0818 | .0734 | .0626 | .0601 | | .0670 | | | |
| .850 | | | | | | | | | | | | |
| .900 | .0933 | | | | | | | | | | | |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.233 Q1 = .523 HREF = .018

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| 2Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0769 | .0396 | .3985 | .2672 | .2940 | .0759 | | .1365 | .1096 | .0369 | |
| .002 | | | | .3422 | .1651 | | | | | | | |
| .003 | | | | .3636 | .1650 | | | | | | | |
| .004 | | | | .3531 | .1560 | | | | | | | |
| .005 | | | | .3223 | .1496 | | | | | | | |
| .006 | | | | .2936 | .1289 | | | | | | | |
| .007 | | | | .2509 | .1179 | | | | | | | |
| .025 | .0662 | | | .1965 | .3910 | .3064 | | | | | | |

TABULATED DATA LISTING FOR OHB (AEDC VAS32)

AEDC VAS32 OHB 01 ORB. BOTTOM SURFACE WING (RTKL24)

MACH (1) = 0.000 ALPHA (3) = 35.000

SECTION (1) BOTTOM SURF. WING

| Z Y/B | DEPENDENT VARIABLE HU/HO | | | | | | | | | | |
|-------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9930 |
| N/C | | | | | | | | | | | |
| .040 | | | | | | | | | | | |
| .100 | | | | | | | | | | | |
| .153 | | | | .1701 | | .1871 | .1913 | .2109 | | .1397 | .1411 |
| .177 | | | | | | | | | | | |
| .200 | | | | .1181 | | .1298 | | | | | |
| .233 | | | | | | | | | | | |
| .300 | | | | | | | | | | | |
| .332 | | | | .1008 | | .1110 | .0885 | .0926 | .1353 | .1317 | |
| .303 | | | | | | | | | | | |
| .428 | | | | | | | .1029 | | | .1089 | |
| .444 | | | | | | | | | | | |
| .487 | | | | | | | .1087 | | | | |
| .500 | | | | | | | | .1018 | .1024 | .0931 | |
| .553 | | | | | | | | | | | |
| .590 | | | | .0808 | | | | | | | |
| .600 | | | | | | | .0829 | .0882 | .0433 | .0382 | |
| .700 | | | | .0742 | .0748 | .0374 | .0471 | | | | |
| .736 | | | | | | | | | | | |
| .807 | | | | | | | .0401 | .0549 | | | |
| .850 | | | | | | | .0940 | .1003 | | | |
| .900 | | | | .0846 | .0750 | .0906 | .0922 | | | | .0901 |



AEDC VA352 OMB 01 ORG. BOTTOM SURFACE WING (RTKLES) (23 APR 74)

REFERENCE DATA

REF = .0236 SQ.FT. WMP = .0000 IN.
 REF = 22.5803 IN. WMP = .0000 IN.
 REF = 16.3915 IN. WMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
 S.F.LAP = 10.000 ELEVON = 10.000
 HAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 94.650 QI = 1.985 HREF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| 2175 | .2500 | .3010 | .3460 | .4000 | .5000 | .6000 | .7500 | .8500 | .9500 | .9960 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0533 | .0254 | .3756 | .2482 | .2716 | .0744 | .1222 | .0691 | .0770 | | |
| .002 | | | .3327 | .1591 | .1573 | | | | | | |
| .003 | | | .3063 | .1454 | .1454 | | | | | | |
| .004 | | | .2772 | .1187 | .1187 | | | | | | |
| .006 | | | .2629 | .1210 | .1210 | | | | | | |
| .007 | | | .2300 | .2901 | | | | | | | |
| .025 | .0447 | | .1536 | .3484 | | | | | | | |
| .050 | | | .1425 | .1152 | | | | | .1196 | | |
| .100 | .0938 | | .0976 | .0962 | .1152 | | | | .1224 | | |
| .177 | | | .0800 | .0946 | .1006 | .1827 | .1419 | | | | |
| .200 | .0648 | | | .0977 | .1039 | | | | | | |
| .299 | | | | .0818 | .0875 | .2975 | .1627 | | | | |
| .300 | | | | .0618 | | | | | | | |
| .302 | | | | .0730 | .0839 | .1336 | | | | | |
| .303 | | | | .0624 | .0364 | .0414 | | | | | |
| .428 | .0642 | | | .0320 | .0487 | | | | .1671 | | |
| .444 | | | | .0912 | .1082 | | | | | | |
| .487 | | | | .0969 | .1176 | .0861 | .0993 | | | | |
| .500 | | | | .1180 | | | | | .2042 | | |

AEDC VA352 OH4B 01 ORB. BOTTOM SURFACE WING (RTKL25)

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.850 Q1 = .985 HIQF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE H0/H0

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9600 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | |
| .001 | .0653 | .0299 | | .3384 | .3109 | .2387 | .0601 | | .1293 | .1142 | .1017 |
| .002 | | | | .4239 | .4100 | .1439 | .1374 | | | | |
| .003 | | | | .4247 | .1357 | | | | | | |
| .004 | | | | .3708 | .1441 | | | | | | |
| .005 | | | | .3425 | .1239 | | | | | | |
| .007 | | | | .2807 | .1252 | | | | | | |
| .025 | .0453 | | .1483 | .3301 | | .2595 | | | | | |
| .050 | | | .1461 | | .1915 | .1820 | .2353 | | .1445 | | .1573 |
| .100 | .0993 | | | | | | | | | | |
| .177 | | | .1013 | .0982 | | .1351 | | | | | |
| .200 | .0751 | | | | | | | | | | |
| .209 | | | | .0911 | .1050 | | .1484 | .3271 | .2496 | | |
| .300 | | | .0664 | | | | | | | | |
| .302 | | | | | | | | | | | |
| .303 | | | | | | .1019 | | | | | |
| .428 | | | | .1239 | | | | | | | |
| .444 | .0634 | | | | | | | | | | |
| .487 | | | | | | | | | | | |
| .500 | | | | .1168 | | | | | | | |
| .539 | | | .0780 | | .0993 | .1021 | | | .2177 | | |
| .590 | .0643 | | | | | | | | | | |
| .600 | | | .0790 | .0874 | | | | | | | |
| .700 | | | .0788 | .0686 | .0435 | .0480 | | .0686 | | .1673 | |
| .736 | .0646 | | | | | | | | | | |
| .800 | | | | .0352 | .0687 | | | | | | |
| .850 | | | | .1116 | .1206 | | | | | | |
| .900 | .1378 | | .1514 | .1251 | .1339 | .1139 | | | | .1519 | |



AEDC VAS32 OMBB O1 ORG. BOTTOM SURFACE WING (RTKLES) (25 APR 74)

REFERENCE DATA

REF = .0236 33.FT. XMRP = .0000 IN.
 JEP = 22.5603 IN. YMRP = .0000 IN.
 SEP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -5.000 RV/L = 2.000
 S.FLAP = 10.000 ELEVON = 10.000
 HAWAHT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 95.450 QI = 1.963 HREF = .039

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/AD

| Z/Y/B | X/C | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8000 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0758 | .0387 | .4523 | .2812 | .3925 | .0774 | .1573 | .1127 | .0369 | | | | |
| .002 | | | .3615 | .1976 | | | | | | | | | |
| .003 | | | .3702 | .1873 | | | | | | | | | |
| .004 | | | .3380 | .1675 | | | | | | | | | |
| .005 | | | .3065 | .1490 | | | | | | | | | |
| .006 | | | .2615 | .1214 | | | | | | | | | |
| .007 | | | .2172 | .1108 | | | | | | | | | |
| .025 | .0669 | | .2141 | .4118 | .3979 | | | | | | .1908 | | |
| .050 | | | .1637 | .1718 | .1623 | .1979 | | | | | .1537 | | |
| .100 | .1120 | | | | | | | | | | | | |
| .153 | | | .1062 | .1149 | | | | | | | | | |
| .200 | .0753 | | | | | | | | | | | | |
| .299 | | | .1115 | .0823 | .1017 | .1198 | .1263 | | | | | | |
| .300 | | | .0284 | | | | | | | | | | |
| .302 | | | | | | | | | | | | | |
| .303 | | | .0932 | | .2743 | | | | | | | | |
| .428 | .0634 | | | | | | | | | | | | |
| .444 | | | .0978 | | | | | | | | | | |
| .497 | | | | | | | | | | | | | |
| .500 | | | .0737 | .1754 | .2017 | .1006 | | | | | | | |
| .559 | .0611 | | | | | | | | | | | | |
| .596 | | | .0761 | .0734 | .0563 | .0410 | | | | | | | |
| .600 | | | .0706 | .0489 | .0562 | | | | | | | | |
| .700 | .0828 | | | | | | | | | | | | |
| .736 | | | .0413 | .0651 | | | | | | | | | |
| .800 | | | .0959 | .1260 | | | | | | | | | |
| .850 | | | | | | | | | | | | | |
| .900 | .1171 | | .1013 | .0818 | .0959 | .1139 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 AEDC VAS32 OMB 01 ORG. BOTTOM SURFACE PING (RTKL28)

SECTION (1) BOTTOM SURF. PING DEPENDENT VARIABLE HUNG T1 = 91.450 Q1 = 1.983 HREF = .033

21/8 .2500 .3010 .3480 .4000 .5000 .6000 .7500 .8500 .9000 .9500 .9660 .9930

X/C

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0753 | .0412 | .3911 | .2515 | .2853 | .0734 | .1358 | .1049 | .0832 |
| .002 | | | .3342 | | | .1625 | | | |
| .003 | | | .3507 | | | .1634 | | | |
| .004 | | | .3489 | | | .1553 | | | |
| .005 | | | .3175 | | | .1482 | | | |
| .006 | | | .2923 | | | .1305 | | | |
| .007 | | | .2489 | | | .1233 | | | |
| .025 | .0856 | | .1839 | .3741 | | .2989 | | | |
| .050 | | | | | | | | | |
| .100 | | | .1672 | .1818 | .1696 | .2048 | .1357 | | |
| .150 | .1217 | | | | | | .1388 | | |
| .177 | | | .1184 | | | | | | |
| .200 | | | | .1196 | | | | | |
| .250 | .0815 | | | | | | | | |
| .300 | | | .1102 | .0935 | .2854 | .1698 | .1419 | | |
| .350 | | | .0982 | | | | | | |
| .426 | | | | .1029 | .1067 | | | | |
| .444 | .0716 | | | | | | | | |
| .487 | | | .1088 | | | | | | |
| .500 | | | .0751 | | .0965 | .3085 | .1563 | | |
| .559 | | | | | | | | | |
| .590 | .0846 | | | | | | | | |
| .600 | | | .0919 | .0886 | | | | | |
| .700 | | | .0736 | .0754 | .0823 | .0442 | .1273 | .1601 | |
| .756 | .0705 | | | | | | | | |
| .800 | | | .0413 | .0386 | | | | | |
| .850 | | | .1019 | .1087 | | | | | |
| .900 | .1419 | | .0999 | .0905 | .0981 | .1024 | | | .2089 |



AEDC VAS3E OMB 01 ORB. BOTTOM SURFACE WING (RTRUZ7) (25 APR 74)

REFERENCE DATA

WING = .0238 SJ.FT. XMRP = .0000 IN.
 Y-REF = 22.9803 IN. YMRP = .0000 IN.
 Z-REF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .0000 Y/L = 3.780
 S.FLAP = 10.000 ELEVON = 10.000
 HAWKNT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU-MO

| Z/Y | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9600 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | .001 | .0494 | .0293 | .3828 | .2808 | .3216 | .0766 | .1305 | .0938 | .0821 | |
| .002 | | | | .2838 | .3008 | .1730 | | | | | |
| .003 | | | | .3008 | .2565 | .1643 | | | | | |
| .004 | | | | .2565 | .2316 | .1509 | | | | | |
| .005 | | | | .2316 | .2118 | .1375 | | | | | |
| .006 | | | | .2118 | .1741 | .1144 | | | | | |
| .007 | | | | .1741 | .3343 | .1007 | | | | | |
| .008 | .0433 | | .1599 | .0555 | | | | | | .1242 | |
| .010 | | .1367 | | .1275 | .2722 | .1811 | | | | .1229 | |
| .100 | .0810 | | | .0970 | | | | | | | |
| .200 | | .0879 | | .0769 | | | | | | | |
| .300 | .0565 | | | .1232 | .1178 | .2000 | .1057 | .1013 | | | |
| .302 | | .0722 | | | | | | | | | |
| .303 | | | | .3201 | | | | | | | |
| .428 | | | | .2573 | | | | | | | |
| .444 | .0478 | | | | | | | | | | |
| .407 | | | .3401 | | | | | | | | |
| .500 | | | | | | .3376 | .2786 | | .0992 | | |
| .575 | | .0819 | | | | | | | | | |
| .590 | | .0398 | | | | | | | | | |
| .605 | | | .1169 | .0681 | | | | .1131 | | | |
| .700 | | .1111 | .1986 | .1969 | .1412 | | | | | .1933 | |
| .736 | .0631 | | | | | | | | | | |
| .800 | | | .2566 | .2730 | | | | | | | |
| .810 | | | .3334 | .3083 | | | | | | | |
| .900 | .1116 | | .2602 | .2664 | .2953 | .2530 | | | | .1883 | |

AEDC VA352 OMB 01 ORB. BOTTOM SURFACE WING (7TRUZ7)

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.367 QI = 3.936 WREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/AO

| Z/Y | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| K/C | | | | | | | | | | | | |
| .021 | | .0511 | .0302 | .3689 | .2807 | .3619 | .0813 | | | .1258 | .1122 | .0990 |
| .002 | | | | .3446 | .3031 | .1727 | | | | | | |
| .003 | | | | .3385 | .1844 | | | | | | | |
| .004 | | | | .2607 | .1820 | | | | | | | |
| .005 | | | | .2987 | .1925 | | | | | | | |
| .006 | | | | .2410 | .1925 | | | | | | | |
| .007 | | | | | .4223 | | | | | | | |
| .025 | .0465 | | .1486 | .3459 | | | | | | .1304 | | |
| .050 | | | .1456 | | .1676 | .3766 | .2624 | | | .1300 | | |
| .100 | | | | | | | | | | | | |
| .153 | .0908 | | | | | | | | | | | |
| .177 | | | .1073 | .1040 | | | | | | | | |
| .200 | | | | | .1366 | | | | | | | |
| .299 | .0852 | | | | | | | | | | | |
| .300 | | | | .1159 | .1200 | .3746 | .3116 | .2436 | | | | |
| .302 | | | .0966 | | | | | | | | | |
| .303 | | | | | .1241 | | | | | | | |
| .426 | .0633 | | | .1310 | | | | | | | | |
| .467 | | | | .2660 | | .2364 | .3979 | .1973 | | | | |
| .500 | | | .1609 | | | | | | | | | |
| .559 | .0921 | | | | | | | | | | | |
| .600 | | | .2162 | .1142 | | | | .1653 | | | | |
| .700 | | | .1709 | .2312 | .1833 | .1636 | | | .2084 | | | |
| .756 | .2165 | | | .2599 | .3235 | | | | | | | |
| .800 | | | | .3426 | .3773 | | | | | | | |
| .850 | | | | | .3246 | | | | | | | |
| .900 | .1442 | | .2677 | .2960 | .3112 | .3246 | | | | .2461 | | |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 97.367 QI = 3.936 WREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/AO

| Z/Y | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| K/C | | | | | | | | | | | | |
| .001 | | .0848 | .0319 | .3510 | .3228 | .2493 | .0717 | | | .1631 | .1317 | .1273 |
| .002 | | | | .4241 | .1653 | | | | | | | |
| .003 | | | | .4161 | .2083 | | | | | | | |
| .004 | | | | .4356 | .2195 | | | | | | | |
| .005 | | | | .3963 | .2416 | | | | | | | |
| .006 | | | | .3712 | .2251 | | | | | | | |
| .007 | | | | .3175 | .2320 | | | | | | | |
| .025 | .0489 | | .1555 | .3425 | | | | | | .2722 | | |



AEDC VAS32 CH-48 01 ORB. BOTTOM SURFACE WING
 PARAMETRIC DATA
 REFERENCE DATA
 BHP = .8238 33.77. 1MHP = .0000 IN.
 WEP = 22.7603 IN. WMHP = .0000 IN.
 SEP = 18.3915 IN. SHP = .0000 IN.
 SCALE = .0175 SCALE
 BETA = -9.000 DN/L = 3.720
 B.F.LAP = 10.000 ELEVON = 10.000
 HAW/HT = 1.000

MAC = (1) = 9.000 ALPHA (1) = 29.000 TI = 97.300 QI = 3.930 REF = 0-9

| SECTION (1) BOTTOM SURF. WING | DEPENDENT VARIABLE MU/NO | 0.000 | .3610 | .7460 | .4000 | .5000 | .6000 | .7500 | .8000 | .9000 | .9500 | .9680 | .9930 |
|-------------------------------|--------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0465 | .0469 | .4388 | .2593 | .3633 | .0002 | .1602 | .1274 | .0411 | | | | |
| .002 | | .3297 | .2049 | .1675 | | | | | | | | | |
| .003 | | .3148 | .1675 | | | | | | | | | | |
| .004 | | .3129 | .1642 | | | | | | | | | | |
| .005 | | .2743 | .1431 | | | | | | | | | | |
| .006 | | .2947 | .1144 | | | | | | | | | | |
| .007 | | .2119 | .1017 | | | | | | | | | | |
| .008 | | .2246 | .3679 | | | | | | | | | | |
| .009 | | .1600 | .1562 | .1649 | .1661 | | | | | | | | |
| .010 | | .1006 | .1033 | | | | | | | | | | |
| .011 | | .0969 | .1120 | | | | | | | | | | |
| .012 | | .0996 | .0661 | .0915 | .0989 | .0962 | | | | | | | |
| .013 | | .0636 | .2049 | | | | | | | | | | |
| .014 | | .1324 | | | | | | | | | | | |
| .015 | | .1864 | .2923 | .1002 | | | | | | | | | |
| .016 | | .0444 | .1900 | .0616 | .0480 | | | | | | | | |
| .017 | | .2814 | .2000 | .1929 | .1485 | | | | | | | | |
| .018 | | .0710 | .3016 | .3071 | | | | | | | | | |
| .019 | | .3619 | .3241 | | | | | | | | | | |
| .020 | | .1007 | .2975 | .2682 | .3100 | .2703 | | | | | | | |



TABULATED DATA LISTING FOR OMB (MEDC VAS32)

SECTION (1) : 8.000 ALPHA (2) : 30.000 OMB. BOTTOM SURFACE WING (RTUL28) WET = .048
 MEDC VAS32 OMB 01 OMB. BOTTOM SURFACE WING (RTUL28) WET = .048

SECTION (1) : 8.000 ALPHA (2) : 30.000 OMB. BOTTOM SURFACE WING (RTUL28) WET = .048

| WING | 8.000 | 30.000 | 34.800 | 4.000 | 5.000 | 6.000 | 7.000 | 8.000 | 9.000 | 9.000 | 9.000 | 9.930 | WET = .048 |
|------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| 1/C | | | | | | | | | | | | | |
| .001 | | .0718 | .0387 | .4419 | .2883 | .3414 | .0730 | .1978 | .1574 | .1132 | .0826 | | |
| .002 | | | | .3467 | .1678 | | | | | | | | |
| .003 | | | | .3620 | .1713 | | | | | | | | |
| .004 | | | | .3379 | .1502 | | | | | | | | |
| .005 | | | | .3587 | .1227 | | | | | | | | |
| .006 | | | | .2643 | .1136 | | | | | | | | |
| .007 | | | | .2225 | | | | | | | | | |
| .008 | .0848 | | | .2042 | .4090 | .3488 | | | | | | | |
| .009 | | | | | | | | | | | | | |
| .010 | .1136 | | | .1684 | .1776 | .2700 | .2028 | | .1925 | | | | |
| .011 | | | | | | | | | .1526 | | | | |
| .012 | .0733 | | | .1227 | .1202 | | | | | | | | |
| .013 | | | | .1147 | .0921 | .1706 | .1208 | .1268 | | | | | |
| .014 | | | | .0695 | | | | | | | | | |
| .015 | | | | | .1033 | .3629 | | | | | | | |
| .016 | .0871 | | | | | | | | | | | | |
| .017 | | | | .1207 | | .3241 | .2646 | .1032 | | | | | |
| .018 | | | | | | | | | | | | | |
| .019 | | | | .1342 | | | | | | | | | |
| .020 | .0828 | | | .1637 | .0916 | .1303 | .1240 | .1316 | | | | | |
| .021 | | | | .2001 | .2286 | .0779 | | | | | | | |
| .022 | | | | | | | | | | | | | |
| .023 | .1196 | | | .2426 | .3272 | | | | | | | | |
| .024 | | | | .3680 | .3999 | | | | | | | | |
| .025 | .1394 | | | .3340 | .3156 | .3637 | .3374 | .2113 | | | | | |

SECTION (1) : 8.000 ALPHA (2) : 35.000 OMB. BOTTOM SURFACE WING (RTUL28) WET = .048

SECTION (1) : 8.000 ALPHA (2) : 35.000 OMB. BOTTOM SURFACE WING (RTUL28) WET = .048

| WING | 8.000 | 30.000 | 34.800 | 4.000 | 5.000 | 6.000 | 7.000 | 8.000 | 9.000 | 9.000 | 9.000 | 9.930 | WET = .048 |
|------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| 1/C | | | | | | | | | | | | | |
| .001 | | .0882 | .0411 | .3735 | .2708 | .2637 | .0680 | .1393 | .1272 | .1040 | | | |
| .002 | | | | .3299 | .1691 | | | | | | | | |
| .003 | | | | .3431 | .1738 | | | | | | | | |
| .004 | | | | .3365 | .1637 | | | | | | | | |
| .005 | | | | .3184 | .1653 | | | | | | | | |
| .006 | | | | .2960 | .1981 | | | | | | | | |
| .007 | | | | .2524 | .1966 | | | | | | | | |
| .008 | .0866 | | | .1642 | .3198 | .3146 | | | | | | | |

TABULATED DATA LISTING FOR OMB (AEDC V.712)

AEDC VAS32 OMB 01 ORB. BOTTOM SURFACE WING (RTKL28)

MACH (1) = 0.000 ALPHA (3) = 35.000

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| ZY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9600 | .9850 | | | | | | | | | | | | | | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | .080 | .100 | .133 | .177 | .200 | .299 | .300 | .302 | .303 | .428 | .444 | .487 | .559 | .590 | .600 | .700 | .736 | .800 | .850 | .900 | | | | | | | | | | | | | |
| | | | | .1733 | .1875 | .2561 | .2881 | | .1199 | .1206 | .1194 | .1047 | .3968 | .3208 | .2393 | | .1235 | .1180 | .1387 | .1077 | .4070 | .1976 | .1615 | .2028 | .2374 | .1598 | .3939 | .3491 | .3019 | .3421 | .3793 | .3382 | .2556 |



MACH (1) = 8.000 ALPHA (2) = 35.000 T1 = 93.400 Q1 = 1.000 HREF = .024
 AEDC VA352 OMB C2 OMB, BOTTOM SURFACE WING (RT032)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/DO

| 2 Y/S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9650 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | .0487 | .0325 | | .2598 | .1991 | .1978 | .0387 | | .0887 | .0533 | | .0288 |
| .002 | | | | .3270 | | | .1475 | | | | | |
| .003 | | | | .4631 | | | .1928 | | | | | |
| .004 | | | | .4583 | | | .1438 | | | | | |
| .005 | | | | .4134 | | | .1458 | | | | | |
| .006 | | | | .3930 | | | .1187 | | | | | |
| .007 | | | | .3130 | | | .1100 | | | | | |
| .025 | .0332 | | | .1589 | .3499 | | .2659 | | | | | |
| .040 | | | | | | | | | | .1198 | | |
| .100 | | | | .1616 | | .2136 | .2041 | .1909 | | .1292 | | |
| .153 | | | | | | | | | | | | |
| .177 | | | | | .1122 | | | | | | | |
| .200 | | | | | | | | | | | | |
| .259 | .0846 | | | | | | | | | | | |
| .300 | | | | | .0980 | .1086 | | .1287 | .1875 | .1920 | | |
| .302 | | | | | .0961 | | | | | | | |
| .303 | | | | | | .1336 | | .1182 | | | | |
| .428 | | | | | | | | | | | | |
| .444 | .0759 | | | | | | | | | | | |
| .487 | | | | | .0908 | | | .1098 | .1145 | .1565 | | |
| .500 | | | | | .0766 | | | | | | | |
| .553 | | | | | | | | | | | | |
| .590 | .0668 | | | | | | | | .0836 | | | |
| .600 | | | | | .0688 | .1071 | | | | .0600 | | |
| .700 | | | | .0754 | .0715 | .0689 | .0620 | | | | | |
| .736 | .0837 | | | | | | | | | | | |
| .800 | | | | | .0370 | .0489 | | | | | | |
| .850 | | | | | .0505 | .0724 | | | | | | |
| .900 | .0282 | | | .0483 | .0608 | .0546 | .0659 | | | .0743 | | |

MACH (1) = 9.000 ALPHA (3) = 45.000 T1 = 93.400 Q1 = 1.000 HREF = .024

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/DO

| 2 Y/S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9650 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | .0471 | .0310 | | .1328 | .1444 | .1692 | .0293 | | .0887 | .0537 | | .0280 |
| .002 | | | | .2433 | | | .1075 | | | | | |
| .003 | | | | .4167 | | | .1205 | | | | | |
| .004 | | | | | .1566 | | .1287 | | | | | |
| .006 | | | | | .3759 | | .1222 | | | | | |
| .008 | | | | | .3232 | | .1192 | | | | | |
| .009 | | | | | .2822 | | .1141 | | | | | |
| .025 | .0329 | | | .1330 | .2749 | | .2826 | | | | | |



TABULATED DATA LISTING FOR OMB (AEDC VA352)

(RTKL32)

MACH (1) = 8.000 ALPHA (3) = 45.000

AEDC VA352 OMB O2 ORG. BOTTOM SURFACE WING

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| 2 Y/S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9950 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .080 | | | | .1461 | | .2210 | .2115 | .1869 | | | | .1012 |
| .100 | | | | | | | | | | | | .1093 |
| .153 | .1294 | | | | | | | | | | | |
| .177 | | | .1111 | | .1022 | | | | | | | |
| .200 | | | | | | .1490 | | | | | | |
| .299 | .0968 | | | | .0972 | .0979 | .1273 | .1494 | .1371 | | | |
| .300 | | | | .0940 | | | | | | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | | .1291 | | | | | | |
| .428 | | | | | | .1136 | | | | | | |
| .444 | .0862 | | | | | | | | | | | |
| .487 | | | | | .0898 | | .1224 | .1237 | .1156 | | | |
| .500 | | | .0801 | | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0716 | | | | | | | | | | | |
| .600 | | | | | .0673 | .1050 | | | .0875 | | | |
| .700 | | | .0789 | | .0801 | .0697 | .0705 | | | | | .0673 |
| .736 | .0834 | | | | | | | | | | | |
| .800 | | | | | .0458 | .0562 | | | | | | |
| .850 | | | | | .0786 | .0866 | | | | | | |
| .900 | .0311 | | .0579 | .0633 | .0723 | .0791 | | | | | | .0641 |

AEOC VA392 OMB O2 ORG. BOTTOM SURFACE WING (RTKL33) (29 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. XMRP = .0000 IN.
STEP = 22.5603 IN. YMRP = .0000 IN.
STEP = 16.3519 IN. ZMRP = .0500 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

SETA = .000 RN/L = 1.250
B.FLAP = .000 ELEVON = .000
HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.250 QI = 1.253 FEF = .027

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| Z/YZ | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9680 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0461 | .0323 | | .2957 | .1673 | .2180 | .0461 | | .1015 | .0604 | .0116 |
| .002 | | | | | .2663 | .3497 | .1812 | | | | | |
| .003 | | | | | .3553 | .1701 | | | | | | |
| .004 | | | | | .3209 | .1574 | | | | | | |
| .006 | | | | | .3263 | .1338 | | | | | | |
| .007 | | | | | .2634 | .1211 | | | | | | |
| .025 | .0350 | | | .1717 | .3809 | .2669 | | | | | | |
| .250 | | | | | | | | | | .1375 | | |
| .153 | .1094 | | | .1969 | .1834 | .1769 | .2146 | | | .1415 | | |
| .177 | | | | | | | | | | | | |
| .200 | .0772 | | | .1076 | .1113 | | | | | | | |
| .299 | | | | | | | | | | | | |
| .300 | | | | .1086 | .1070 | .2374 | .1942 | .1934 | | | | |
| .302 | | | | .0901 | | | | | | | | |
| .303 | | | | | | | | | | | | |
| .428 | | | | | | | .1147 | | | | | |
| .444 | .0647 | | | | .1177 | | | | | | | |
| .487 | | | | | | | | | | | | |
| .500 | | | | .0910 | | | | | .0969 | .2299 | .1475 | |
| .559 | | | | | | | | | | | | |
| .590 | .0469 | | | .0725 | | | | | | | | |
| .600 | | | | | | | | | | | | |
| .700 | | | | .0893 | .0717 | .0567 | .0599 | .1311 | | | .1066 | |
| .736 | .0534 | | | | | | | | | | | |
| .800 | | | | | .0326 | .0410 | | | | | | |
| .850 | | | | | .0606 | .0805 | | | | | | |
| .900 | .0208 | | | .0426 | .0536 | .0470 | .0542 | | | | | .1139 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

DATE 23 SEP 74

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.250 Q1 = 1.293 HREF = .027
 AEDC VAS32 OMB 02 OMB. BOTTOM SURFACE WING (RTKL33)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/MO

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .9000 | .9000 | .9600 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0452 | .0323 | .2686 | .2002 | .1920 | .0382 | .0660 | .0592 | .0289 | | |
| .002 | | | | .3205 | .4574 | .1460 | | | | | | |
| .003 | | | | .4640 | .4132 | .1416 | | | | | | |
| .004 | | | | .4132 | .3766 | .1341 | | | | | | |
| .006 | | | | .3154 | .1106 | | | | | | | |
| .007 | | | | .1566 | .3439 | .2727 | | | | | | |
| .025 | | | | .1612 | .2145 | .2008 | .1929 | | .1256 | .1344 | | |
| .050 | | | | | | | | | | | | |
| .100 | | | | .1107 | .1102 | | | | | | | |
| .153 | | | | | | | | | | | | |
| .177 | | | | | | | | | | | | |
| .200 | | | | | | | | | | | | |
| .299 | | | | .1015 | .1071 | .1310 | .2533 | .2344 | | | | |
| .300 | | | | .0937 | | | | | | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | .1169 | | | | | | | |
| .428 | | | | | | | | | | | | |
| .444 | | | | | | | | | | | | |
| .487 | | | | | | | | | | | | |
| .506 | | | | .0907 | | .1104 | .1127 | .1909 | | | | |
| .519 | | | | | | | | | | | | |
| .593 | | | | .0701 | | | | | | | | |
| .600 | | | | | .0839 | .1056 | | .0667 | .0935 | | | |
| .700 | | | | .0735 | .0699 | .0651 | .0616 | | | | | |
| .736 | | | | | | | | | | | | |
| .800 | | | | | .0356 | .0470 | | | | | | |
| .850 | | | | | .0580 | .0705 | | | | | | |
| .900 | | | | .0488 | .0689 | .0640 | .0650 | | | .0790 | | |

(RTKL34) (25 APR 74)

AEDC VA352 OMB D2 ORG. BOTTOM SURFACE WING

REFERENCE DATA

STEP = .8238 SQ.FT. XMRP = .0000 IN.
 STEP = 22.5603 IN. YMRP = .0000 IN.
 STEP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.500
 B.FLAP = .000 ELEVON = .000
 HAWK/T = 1.000

MACH (1) = 6.000 ALPHA (:) = 30.000 TI = 94.900 QI = 1.534 REF = .030

DEPENDENT VARIABLE H1/H0

SECTION (1) BOTTOM SURF. WING

| Z/Y/S | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0434 | .0316 | | .2940 | .1832 | .2097 | .0466 | | .0982 | .0602 | .0076 |
| .002 | | | | | .2688 | .2688 | | .1811 | | | | |
| .003 | | | | | .3521 | .3521 | | .1773 | | | | |
| .004 | | | | | | .3912 | | .1672 | | | | |
| .005 | | | | | | .3135 | | .1565 | | | | |
| .006 | | | | | | .3238 | | .1381 | | | | |
| .007 | | | | | | .2678 | | .1252 | | | | |
| .025 | .0361 | | | .1689 | .3809 | | .2970 | | | | | |
| .050 | | | | .1588 | | .1833 | .1863 | .2176 | | .1341 | | |
| .100 | .1088 | | | | | | | | .1404 | | | |
| .177 | | | | | .1074 | | .1325 | | | | | |
| .200 | .0745 | | | | | | | | | | | |
| .293 | | | | .1087 | .1087 | .1087 | .2847 | .1857 | .1444 | | | |
| .300 | | | | .0906 | | | | | | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | | | .1174 | | | | | |
| .428 | | | | | | .1167 | | | | | | |
| .444 | .0624 | | | | .0928 | | | | | | | |
| .487 | | | | | | | .0972 | .2746 | | .1629 | | |
| .500 | | | | | .0718 | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0483 | | | | | | | | | | | |
| .600 | | | | | .0811 | .0885 | | | .1394 | | | |
| .700 | | | | .0705 | .0725 | .0660 | .0551 | | | | | |
| .736 | .0533 | | | | | | | | | .1143 | | |
| .800 | | | | | | .0319 | .0393 | | | | | |
| .850 | | | | .0497 | .0603 | | | | | | | |
| .900 | .0239 | | | .0427 | .0575 | .0463 | .0540 | | | | .1215 | |



TABULATED DATA LISTING FOR OMB (MEDC VAS52)

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.800 QI = 1.534 WEEP = .030
 MEDC VAS52 OMB OR ORB. BOTTOM SURFACE WING (RTL34)

| X/C | SECTION (1) BOTTOM SURF. WING | | | | | | | | | | WING |
|------|-------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | |
| .001 | .0436 | .0322 | .2693 | .1975 | .1898 | .0373 | .0910 | .0872 | .0498 | | |
| .002 | | | .3251 | .1457 | | | | | | | |
| .003 | | | .4586 | .1546 | | | | | | | |
| .004 | | | .4664 | .1455 | | | | | | | |
| .006 | | | .4077 | .1418 | | | | | | | |
| .008 | | | .3840 | .1233 | | | | | | | |
| .007 | | | .3138 | .1190 | | | | | | | |
| .025 | .0347 | | .1575 | .3461 | .2725 | | | | | | |
| .080 | | | .1591 | .2184 | .1989 | .2150 | | .1346 | | | |
| .100 | | | | | | | | .1451 | | | |
| .153 | .1129 | | | .1094 | | | | | | | |
| .177 | | | | .1500 | | | | | | | |
| .200 | | | | | | | | | | | |
| .299 | .0837 | | | .1025 | .1141 | .1479 | .3177 | .2598 | | | |
| .300 | | | .0949 | | | | | | | | |
| .332 | | | | | | .1178 | | | | | |
| .303 | | | | | | | | | | | |
| .428 | | | | .1356 | | | | | | | |
| .444 | .0708 | | | | | | | | | | |
| .487 | | | | .0901 | | .1107 | .1130 | .2231 | | | |
| .500 | | | .0769 | | | | | | | | |
| .559 | | | | | | | | | | | |
| .590 | .0857 | | | .0843 | .1064 | | .0737 | | | | |
| .600 | | | .0772 | .0716 | .0656 | .0825 | | | | | |
| .700 | | | | | | | | | | | |
| .736 | .0734 | | | | | | | | .1227 | | |
| .800 | | | | .0355 | .0459 | | | | | | |
| .850 | | | | .0590 | .0713 | | | | | | |
| .900 | .0317 | | .0520 | .0839 | .0548 | .0875 | | | | .0908 | |

(RTKL33) (25 APR 74)

AEDC VA352 OMB OE ORB. BOTTOM SURFACE WING

REFERENCE DATA

WEP = .8238 SQ.FT. 1MRP = .0000 IN.
 LEP = 22.5803 IN. 4MRP = .0000 IN.
 BRP = 16.3919 IN. 2MRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RW/L = 1.750
 S.F.LAP = .000 ELEVON = .000
 WAW/WT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 56.200 QI = 1.797 WREF = .033

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/O

| ZY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .061 | | .0428 | .0313 | .2907 | .1625 | .2114 | .0478 | .0788 | .0667 | .0418 | | |
| .062 | | | | .2842 | .3540 | .1816 | .1805 | | | | | |
| .063 | | | | .3794 | .3169 | .1699 | | | | | | |
| .064 | | | | .3271 | .2655 | .1427 | | | | | | |
| .065 | | | | .3711 | .2097 | | | | | | | |
| .066 | | | | .1673 | .1194 | | | | | | | |
| .100 | | | | .1588 | .1354 | .2024 | .2176 | | | | | |
| .133 | | | | .1063 | .1331 | | | | | | | |
| .177 | | | | .1068 | | | | | | | | |
| .200 | | | | .1035 | .1112 | .3075 | .1624 | .1464 | | | | |
| .299 | | | | .0669 | | | | | | | | |
| .300 | | | | | .1173 | .1176 | | | | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | | | | | | | | |
| .428 | | | | | | | | | | | | |
| .444 | | | | .0924 | | | | | | | | |
| .487 | | | | | | | | | | | | |
| .500 | | | | .0708 | .0964 | .3117 | .1613 | | | | | |
| .599 | | | | | | | | | | | | |
| .590 | | | | | | | | | | | | |
| .600 | | | | .0604 | .0684 | | .1476 | | | | | |
| .700 | | | | .0717 | .0856 | .0893 | | | | | | |
| .736 | | | | | | | | | | | | |
| .800 | | | | .0300 | .0390 | | | | | | | |
| .850 | | | | .0500 | .0603 | | | | | | | |
| .900 | | | | .0456 | .0606 | .0461 | .0638 | | | | | |
| .900 | | | | | | | | | | | | .1272 |



MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 90.207 Q1 = 1.797 HREF = .033
 AEDC V4332 OMB OR ORB. BOTTOM SURFACE WING (RTKL35)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/NO

| RY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9800 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0416 | .0319 | .2802 | .1984 | .1684 | .0363 | | .0958 | .0884 | .6117 | |
| .002 | | | | .3165 | .1679 | | | | | | | |
| .003 | | | | .4986 | .15 | | | | | | | |
| .004 | | | | .4733 | .147 | | | | | | | |
| .005 | | | | .4134 | .149 | | | | | | | |
| .006 | | | | .3917 | .1324 | | | | | | | |
| .007 | | | | .3139 | .1353 | | | | | | | |
| .025 | .0398 | | | .1362 | .3484 | .2713 | | | | | | |
| .050 | | | | | | | | | | .1448 | | |
| .100 | | | | .1621 | .2128 | .1995 | .2435 | | | .1660 | | |
| .177 | | | | | .1088 | | | | | | | |
| .299 | .0646 | | | | .1491 | | | | | | | |
| .300 | | | | | | | | | | | | |
| .302 | | | | .0945 | .1013 | .1115 | .1699 | .3551 | .2685 | | | |
| .303 | | | | | | | .1162 | | | | | |
| .429 | | | | | .1362 | | | | | | | |
| .444 | .0758 | | | | | | | | | | | |
| .467 | | | | | .0911 | | | | | | | |
| .500 | | | | .0771 | | .1100 | .1136 | | .2410 | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0892 | | | | .0852 | .1052 | | | | | | |
| .600 | | | | .0813 | .0741 | .0637 | .0620 | .0604 | | | | |
| .700 | | | | | | | | | | | | |
| .736 | .0812 | | | | | | | | | | | |
| .800 | | | | | .0348 | .0456 | | | | | | |
| .850 | | | | | .0592 | .0715 | | | | | | |
| .900 | .0422 | | | .0578 | .0644 | .0553 | .0573 | | | | | .1044 |

AEDC VA352 OM48 OE ORB. SECTION SURFACE WING (RTKL36) (23 APR 74)

REFERENCE DATA

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.987 Q1 = 1.984 HREF = .035
REF = .0238 SQ.FT. XREF = .0000 IN.
REF = 22.5803 IN. XREF = .0000 IN.
REF = 18.3919 IN. XREF = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
B.FLAP = .000 ELEVON = .000
HAWK/T = 1.000

SECTION (1) SECTION SURF. WING DEPENDENT VARIABLE HU/AC

| Z/A | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | .0430 | .0317 | | .2939 | .1197 | .2204 | .0469 | | .1006 | .0601 | .0298 |
| .002 | | | | | .2856 | .2856 | | .1838 | | | | |
| .003 | | | | | .3148 | .3148 | | .1801 | | | | |
| .004 | | | | | .3920 | .3920 | | .1736 | | | | |
| .005 | | | | | .3162 | .3162 | | .1608 | | | | |
| .006 | | | | | .3279 | .3279 | | .1476 | | | | |
| .007 | | | | | .2861 | .2861 | .3127 | | | | | |
| .008 | .0343 | | | | | | | | | | .1340 | |
| .009 | | | | | | .1637 | .2207 | .2242 | | | .1398 | |
| .100 | .1096 | | | | | | | | | | | |
| .177 | | | | .1071 | .1097 | | | | | | | |
| .200 | .0742 | | | | | | | | | | | |
| .270 | | | | .0915 | .1080 | .1111 | | .3321 | .1940 | .1975 | | |
| .300 | | | | | | | | | | | | |
| .302 | | | | | | | | | | | | |
| .303 | | | | | | | .1167 | | | | | |
| .428 | .0666 | | | | .0340 | | | | | | | |
| .444 | | | | | | | | | | | | |
| .487 | | | | .0734 | | | .0977 | .3406 | | | .1908 | |
| .500 | | | | | | | | | | | | |
| .519 | | | | | | | | | | | | |
| .590 | .0482 | | | | .0836 | .0852 | | | .1527 | .1287 | | |
| .600 | | | | .0770 | .0789 | .0537 | .0533 | | | | | |
| .700 | | | | | | | | | | | | |
| .736 | .0461 | | | | | | | | | | | |
| .800 | | | | | .0316 | .0397 | | | | | | |
| .850 | | | | | .0513 | .0622 | | | | | | |
| .900 | .0372 | | | .0806 | .0661 | .0470 | .0515 | | | | .1362 | |



MACH (1) = 8.000 ALPHA (2) = 35.000 OMB. BOTTOM SURFACE WING (RTL36) MREF = .035
 AEDC VAS32 OMB OE TI = 94.967 Q1 = 1.984 MREF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU-40

| ZY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/C | | | | | | | | | | | | |
| .001 | | .0448 | .0324 | .2585 | .1969 | .1870 | .0393 | | .0993 | .0732 | .0298 | |
| .002 | | | | .3217 | .4582 | | .1515 | | | | | |
| .003 | | | | .4699 | .4183 | | .1558 | | | | | |
| .004 | | | | .4183 | .3850 | | .1628 | | | | | |
| .005 | | | | .3179 | .3179 | | .1430 | | | | | |
| .006 | | | | | | .2868 | | | | | | |
| .025 | .0380 | | | .1529 | .3436 | | | | | .1556 | | |
| .050 | | | | .1612 | | .2129 | .2052 | .2899 | | .1702 | | |
| .1117 | | | | | | | | | | | | |
| .177 | | | | .1094 | | .1510 | | | | | | |
| .207 | | | | | | | | | | | | |
| .299 | .0658 | | | .1082 | | | | | | | | |
| .300 | | | | .1007 | .1094 | | .1845 | .3785 | .2771 | | | |
| .352 | | | | .0946 | | | | | | | | |
| .403 | | | | | | .1392 | | .1129 | | | | |
| .428 | | | | | | | | | | | | |
| .444 | .0739 | | | | | | | | | | | |
| .487 | | | | .0931 | | | .1103 | .1153 | | .2499 | | |
| .500 | | | | .0841 | | | | | | | | |
| .559 | .0812 | | | | | | | | | | | |
| .600 | | | | .0868 | .1080 | | | | .0684 | | | |
| .700 | | | | .0862 | .0773 | .0858 | .0830 | | | .1634 | | |
| .736 | .0932 | | | | | | | | | | | |
| .800 | | | | .0348 | .0460 | | | | | | | |
| .850 | | | | .0507 | .0745 | | | | | | | |
| .900 | .0544 | | | .0654 | .0661 | .0584 | .0588 | | | .1244 | | |

MACH (1) = 8.000 ALPHA (3) = 45.000 TI = 94.967 Q1 = 1.984 MREF = .035

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU-40

| ZY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/C | | | | | | | | | | | | |
| .001 | | .0437 | .0315 | .1804 | .1460 | .1703 | .0284 | | .0895 | .0464 | .0180 | |
| .002 | | | | .2417 | .4128 | | .1078 | | | | | |
| .003 | | | | .3805 | .3652 | | .1232 | | | | | |
| .004 | | | | .3652 | .3204 | | .1182 | | | | | |
| .005 | | | | .2821 | .2821 | | .1152 | | | | | |
| .025 | .0348 | | | .1871 | .2531 | | .2507 | | | | | |
| .050 | | | | | | | | | | | | |
| .1117 | | | | | | | | | | | | |
| .177 | | | | .1094 | | .1510 | | | | | | |
| .207 | | | | | | | | | | | | |
| .299 | .0658 | | | .1082 | | | | | | | | |
| .300 | | | | .1007 | .1094 | | .1845 | .3785 | .2771 | | | |
| .352 | | | | .0946 | | | | | | | | |
| .403 | | | | | | .1392 | | .1129 | | | | |
| .428 | | | | | | | | | | | | |
| .444 | .0739 | | | | | | | | | | | |
| .487 | | | | .0931 | | | .1103 | .1153 | | .2499 | | |
| .500 | | | | .0841 | | | | | | | | |
| .559 | .0812 | | | | | | | | | | | |
| .600 | | | | .0868 | .1080 | | | | .0684 | | | |
| .700 | | | | .0862 | .0773 | .0858 | .0830 | | | .1634 | | |
| .736 | .0932 | | | | | | | | | | | |
| .800 | | | | .0348 | .0460 | | | | | | | |
| .850 | | | | .0507 | .0745 | | | | | | | |
| .900 | .0544 | | | .0654 | .0661 | .0584 | .0588 | | | .1244 | | |

MACH (1) = 6.000 ALPHA (3) = 49.000 AEDC VAS32 OMB OR OMB, BOTTOM SURFACE WING (RTUL36)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/NO

| Z/Y/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/C | | | | | | | | | | | | |
| .080 | | | | .1476 | .2187 | .2014 | .1750 | | | .1092 | | |
| .100 | | | | | | | | | | .1126 | | |
| .133 | .1259 | | | | .0910 | | | | | | | |
| .177 | | | | .1140 | .1488 | | | | | | | |
| .200 | | | | | | | | | | | | |
| .299 | .0933 | | | .0998 | .1047 | .1242 | .1472 | .1335 | | | | |
| .300 | | | | .0966 | | | | | | | | |
| .302 | | | | | | | .1290 | | | | | |
| .303 | | | | | .1134 | | | | | | | |
| .428 | .0769 | | | | .0968 | | | | | | | |
| .487 | | | | | | | .1230 | .1270 | | .1110 | | |
| .500 | | | | .1012 | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0745 | | | | .0999 | .1143 | | | .0881 | | | |
| .600 | | | | .1067 | .1049 | .0763 | .0742 | | | | | .0721 |
| .700 | | | | | | | | | | | | |
| .736 | .1107 | | | | | | | | | | | |
| .800 | | | | | .0528 | .0591 | | | | | | |
| .850 | | | | | .0933 | .0976 | | | | | | |
| .900 | .0877 | | | .1070 | .0887 | .0896 | .0866 | | | | | .0979 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

AEDC VAS32 OMB OE OMB, BOTTOM SURFACE WING (RTKL37) (23 APR 74)

REFERENCE DATA
 WEP = .8238 32.FT. WHP = .0000 IN.
 WEP = 22.5803 IN. WHP = .0000 IN.
 B.WEP = 18.3919 IN. WHP = .0000 IN.
 SCALE = .0175 SCALE

MACH = 1.1 = 0.000 ALPHA (1) = 90.000 TI = 95.200 Q1 = 2.341 WEP = .038

SECTION (1) 190717M SURF. WING DEPENDENT VARIABLE WU/WD

| W/C | 0.00 | .0500 | .1010 | .1480 | .4000 | .5000 | .6000 | .7500 | .9000 | .9500 | .9800 | .9930 | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | | | | | .2931 | .1633 | .2208 | .0804 | | .0983 | .0812 | .0167 |
| .002 | | | .0420 | .0319 | | .2632 | .1628 | | .1628 | | | | |
| .003 | | | | | | .3342 | .1600 | | .1600 | | | | |
| .004 | | | | | | .3839 | .1735 | | .1735 | | | | |
| .005 | | | | | | .3701 | .1638 | | .1638 | | | | |
| .006 | | | | | | .3291 | .1543 | | .1543 | | | | |
| .007 | .0382 | | | | .1651 | .3733 | .2637 | .3235 | | | | | |
| .008 | | | | | .1615 | | .1754 | .2545 | .2274 | | .1343 | | |
| .009 | .1087 | | | | | .1063 | | | | | .1413 | | |
| .010 | | .0740 | | | .1075 | | | .1360 | | | | | |
| .011 | | | | | .0691 | .1091 | .1154 | .3487 | .2237 | .1727 | | | |
| .012 | | | | | | | | .1192 | | | | | |
| .013 | .0829 | | | | | | .1187 | | | | | | |
| .014 | | | | | .0768 | .0980 | | .1007 | .3648 | | .1988 | | |
| .015 | | | | | | | | | | | | | |
| .016 | .0613 | | | | | .0924 | .1481 | | .1400 | | | | |
| .017 | | | | | .0658 | .0972 | .0583 | .0878 | | | .1381 | | |
| .018 | .0808 | | | | | | | .0328 | .0389 | | | | |
| .019 | | | | | .0829 | .0841 | .0519 | .0829 | | | | | |
| .020 | .0841 | | | | | | .0519 | .0863 | | | | .1460 | |

PARAMETRIC DATA

BETA = .000 R/V/L = 2.250
 B.FLAP = .000 ELEVON = .000
 HAWKNT = 1.000

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 99.200 Q1 = 2.341 WEF = .030
 SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/NO (RTKL37)

| ZY/3 | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9850 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| K/C | | | | | | | | | | | | |
| .001 | | .0419 | .0328 | | .2591 | .1980 | .1830 | .0402 | | .1075 | .0749 | .0332 |
| .002 | | | | | .3230 | .4589 | .1740 | | | | | |
| .003 | | | | | .4744 | .1717 | | | | | | |
| .004 | | | | | .4191 | .1847 | | | | | | |
| .005 | | | | | .3845 | .1874 | | | | | | |
| .007 | | | | | .3132 | .1780 | | | | | | |
| .025 | .0346 | | | .1533 | .3421 | .2682 | | | | | | |
| .060 | | | | .1596 | .2134 | .2102 | .3169 | | | .1855 | | |
| .100 | .1104 | | | | | | | | | .1834 | | |
| .177 | | | | | .1082 | | | | | | | |
| .200 | .0649 | | | | | | | | | | | |
| .259 | | | | .1122 | .1531 | | | | | | | |
| .300 | | | | | .1047 | .1172 | .2021 | .4088 | .2890 | | | |
| .352 | | | | .0994 | | | | | | | | |
| .353 | | | | | | | .1134 | | | | | |
| .428 | | | | | .1391 | | | | | | | |
| .444 | .0735 | | | | | | | | | | | |
| .487 | | | | | .0399 | | .1123 | .1196 | | | .3818 | |
| .500 | | | | | | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .0717 | | | .1010 | | | | | | | | |
| .600 | | | | | .0873 | .1140 | | | .1004 | | | |
| .706 | | | | .1081 | .0898 | .0720 | .0862 | | | .1836 | | |
| .736 | .1308 | | | | | | | | | | | |
| .800 | | | | | .0400 | .0486 | | | | | | |
| .850 | | | | | .0688 | .0777 | | | | | | |
| .900 | .0785 | | | .0865 | .0794 | .0651 | .0893 | | | | .1372 | |



AEDC VA352 OHB 02 ORB. BOTTOM SURFACE WING (RTL36)

MACH (1) = 8.000 ALPHA (2) = 35.000 YI = 99.550 QI = 2.536 WREF = .039

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE H1/H0

| Y/C | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9600 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | .0419 | .0326 | | .2607 | .1967 | .1803 | .0417 | | .1119 | .0766 | .0517 |
| .002 | | | | | .3232 | .4657 | | .1654 | | | | |
| .003 | | | | | .4717 | .4179 | | .1836 | | | | |
| .004 | | | | | .3776 | .3170 | | .1871 | | | | |
| .005 | | | | | | | .2690 | | | | | |
| .006 | | | | | | | | | | | | |
| .007 | .0348 | | | .1520 | .3378 | | | | | | | |
| .050 | | | | .1567 | | .2137 | .1976 | .3457 | | .1713 | | .1020 |
| .100 | | | .1103 | | | | | | | | | |
| .153 | | | | | .1086 | .1567 | | | | | | |
| .177 | | | | | | | | | | | | |
| .200 | | | | .1136 | | | | | | | | |
| .299 | .0830 | | | | .1070 | .1196 | | .2208 | .4187 | .6939 | | |
| .300 | | | | | | | | | | | | |
| .302 | | | | .1017 | | | | | | | | |
| .303 | | | | | | | .1189 | | | | | |
| .428 | | | | | | .1481 | | | | | | |
| .444 | .0752 | | | | | | | | | | | |
| .487 | | | | | .1089 | | | | | | | |
| .500 | | | | | | | .1166 | .1248 | | .2740 | | |
| .559 | | | | .1152 | | | | | | | | |
| .590 | .0838 | | | | .1097 | .1221 | | | .1091 | | | |
| .600 | | | | | .1088 | .0808 | .0878 | | | | | .1989 |
| .700 | | | | .1283 | | | | | | | | |
| .736 | .1676 | | | | | | .0485 | .0523 | | | | |
| .800 | | | | | | | .0813 | .0818 | | | | |
| .850 | | | | | | | .0792 | .0738 | | | | |
| .900 | .1022 | | | .1102 | .0832 | | | | | | | .1540 |



AEDC VAS32 OH-10 O2 ORB. BOTTOM SURFACE WING (RTKL39)

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 96.100 Q1 = 2.816 HREF = .041

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HD

| ZY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | .0417 | .0329 | | .2397 | .1997 | .1842 | .0426 | | .1150 | .0764 | .0323 | |
| .002 | | | | .7250 | .4615 | .1965 | | | | | | |
| .003 | | | | .4854 | .4192 | .2165 | | | | | | |
| .004 | | | | .3820 | .1993 | .2135 | | | | | | |
| .005 | | | | .3145 | .2686 | | | | | | | |
| .006 | | | | .1525 | .3443 | | | | | | | |
| .007 | | | | .1619 | .2203 | .2079 | .3714 | | .1765 | .1889 | | |
| .008 | | | | .1147 | | | | | | | | |
| .009 | | | | .1159 | .1609 | | | | | | | |
| .010 | | | | .1196 | .1186 | .2354 | .4434 | .3052 | | | | |
| .011 | | | | .1066 | | .12~4 | | | | | | |
| .012 | | | | | .1551 | | | | | | | |
| .013 | | | | .1200 | | .1226 | .1320 | .2632 | | | | |
| .014 | | | | .1455 | | | | | | | | |
| .015 | | | | .1240 | .1362 | | | .1163 | | | | |
| .016 | | | | .1936 | .1233 | .0930 | .0703 | | .2157 | | | |
| .017 | | | | | .0606 | .0649 | | | | | | |
| .018 | | | | | .0946 | .0858 | | | | | | |
| .019 | | | | .1314 | .1053 | .0927 | .0776 | | .1666 | | | |



AEDC VAS32 OHB 02 ORG. BOTTOM SURFACE WING (RTKLAD) (25 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
 LEF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 TRN/L = 3.000
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 96.900 QI = 3.118 HREF = .044

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HJ/HO

Z/Y/B .2500 .3010 .3480 .4000 .5000 .6000 .7500 .8500 .9000 .9500 .9860 .9930

X/C

| | | | | | | | | | |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | .0414 | .0324 | .2908 | .1631 | .8490 | .0617 | .0994 | .0619 | .0268 |
| .002 | | | .2641 | .1643 | | | | | |
| .003 | | | .3567 | .1849 | | | | | |
| .004 | | | .3635 | .1885 | | | | | |
| .005 | | | .3180 | .1801 | | | | | |
| .006 | | | .3280 | .1816 | | | | | |
| .007 | | | .2634 | .1742 | | | | | |
| .025 | .1600 | .3746 | .3614 | | | | | | |
| .050 | | | | | | | .1394 | | |
| .100 | .1591 | | .1619 | .3550 | .2589 | | .1420 | | |
| .153 | | | | | | | | | |
| .177 | | | .1070 | | | | | | |
| .200 | .1076 | | | .1386 | | | | | |
| .299 | | | | | | | | | |
| .300 | | | .1112 | .1220 | .3993 | .3036 | .2336 | | |
| .302 | .0924 | | | | | | | | |
| .303 | | | .1254 | | | | | | |
| .428 | | | | .1241 | | | | | |
| .444 | .0666 | | | | | | | | |
| .467 | | | .1112 | | .1164 | .4244 | | .2131 | |
| .500 | .0993 | | | | | | | | |
| .500 | | | | | | | | | |
| .600 | | | .1459 | .1096 | | | .1763 | | |
| .700 | .1192 | .1869 | .0945 | .0945 | | | | .1611 | |
| .736 | .1462 | | | | | | | | |
| .800 | | | .0665 | .0939 | | | | | |
| .850 | | | .0950 | .1355 | | | | | |
| .900 | .1017 | .1417 | .0848 | .1199 | | | | | .1631 |

MACH (1) = 8.000 ALPHA (2) = 35.000 ORB. BOTTOM SURFACE WING (RTKL4D) .044
 TI = 96.900 Q1 = 3.116 HREF = .9660 .9930

SECTION (1) BOTTOM SUPP. WING DEPENDENT VARIABLE MU/FO

| RY/B | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8500 | .9000 | .9500 | .9660 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| X/C | | | | | | | | | | | | |
| .001 | | .0417 | .0333 | | .2599 | .2017 | .1829 | .0438 | | .1196 | .0800 | .0334 |
| .002 | | | | | .3245 | | | .1843 | | | | |
| .003 | | | | | .4617 | | | .2095 | | | | |
| .004 | | | | | .4739 | | | .2163 | | | | |
| .005 | | | | | .4181 | | | .2398 | | | | |
| .006 | | | | | .3988 | | | .2244 | | | | |
| .007 | .0347 | | | .1538 | .3465 | .3270 | .2708 | | | | | |
| .010 | | | | .1682 | | .2272 | .2096 | .4005 | | .1823 | | .1969 |
| .153 | .1098 | | | | | | | | | | | |
| .177 | | | | .1257 | .1212 | .1699 | | | | | | |
| .200 | .0931 | | | | | | | | | | | |
| .299 | | | | .1352 | .1336 | | | .2642 | .4503 | .3161 | | |
| .300 | | | | .1232 | | | | | | | | |
| .302 | | | | | | | .1337 | | | | | |
| .428 | | | | | | | | | | | | |
| .444 | .0836 | | | | | .1683 | | | | | | |
| .467 | | | | .1527 | | | | | | | | |
| .500 | | | | | | .1294 | .1472 | | .2928 | | | |
| .559 | | | | .1963 | | | | | | | | |
| .590 | .1307 | | | | | | | | | | | |
| .600 | | | | .1647 | .1721 | | | | .1313 | | | |
| .700 | | | | .2029 | .1877 | .1362 | .0794 | | | .2248 | | |
| .736 | .2676 | | | | | | | | | | | |
| .800 | | | | | | .0972 | .0875 | | | | | |
| .850 | | | | | | .1370 | .1299 | | | | | |
| .900 | .1163 | | | .1639 | .1367 | .1313 | .1009 | | | .1673 | | |



MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 97.600 Q1 = 3.536 HREF = .046
 AEDC VAS32 OMB 02 ORB. BOTTOM SURFACE WING (RTKL41)

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE MU/NO

| X/C | .2500 | .3010 | .3480 | .4000 | .5000 | .6000 | .7500 | .8000 | .9000 | .9500 | .9680 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| .001 | | | | | .2370 | .1988 | .1681 | .0454 | | .1217 | .0816 | .0385 |
| .002 | | .0416 | .0333 | | .3128 | .1938 | | .1938 | | | | |
| .003 | | | | | .4703 | .2229 | | .2229 | | | | |
| .004 | | | | | .4788 | .2351 | | .2351 | | | | |
| .005 | | | | | .4274 | .2549 | | .2549 | | | | |
| .006 | | | | | .3349 | .2433 | | .2433 | | | | |
| .007 | | | | | .3361 | .2561 | | .2561 | | | | |
| .025 | .0398 | | | .1592 | .3490 | | .2737 | | | | | |
| .050 | | | | | | | | | | | | .1631 |
| .100 | | | | .1575 | | .2353 | .2197 | .4227 | | | | .1992 |
| .153 | .1086 | | | | | | | | | | | |
| .177 | | | | | .1284 | | .1773 | | | | | |
| .200 | | | | | | | | | | | | |
| .229 | .0818 | | | | | | | | | | | |
| .300 | | | | | .1507 | .1409 | | .2913 | .4875 | .3237 | | |
| .302 | | | | | .1393 | | | | | | | |
| .303 | | | | | | | | .1424 | | | | |
| .428 | | | | | | .1682 | | | | | | |
| .444 | .0936 | | | | | | | | | | | |
| .467 | | | | | .1811 | | .1427 | .1616 | | .2966 | | |
| .500 | | | | | .2327 | | | | | | | |
| .559 | | | | | | | | | | | | |
| .590 | .1636 | | | | | | | | | | | |
| .600 | | | | | .2016 | .2175 | | | .1436 | | | |
| .700 | | | | | .2366 | .2054 | .1633 | .0697 | | | | .2369 |
| .736 | .3087 | | | | | | | | | | | |
| .800 | | | | | | .1266 | .1010 | | | | | |
| .850 | | | | | | .1779 | .1292 | | | | | |
| .900 | .1229 | | | .1906 | .1564 | .1681 | .1076 | | | | | .2017 |



TABULATED DATA LISTING FOR Q418 (AEDC VAS32)

(RTKL42)

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 97.050 Q1 = 3.937 HREF = .049

SECTION (1) BOTTOM SURF. WING DEPENDENT VARIABLE HU/HO

| Z/Y | .2500 | .3010 | .3480 | .4000 | .5000 | .6500 | .7500 | .8500 | .9500 | .9900 | .9930 |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1/C | | | | | | | | | | | |
| .001 | | .0420 | .0336 | .2623 | .2036 | .1936 | .0465 | .1273 | .0816 | .0354 | |
| .002 | | | | .3164 | .4709 | .2330 | .2516 | | | | |
| .003 | | | | .4900 | .4507 | .2731 | .2663 | | | | |
| .004 | | | | .4236 | .3568 | .2679 | | | | | |
| .005 | .0358 | | | .1630 | .3658 | .2679 | | | | | |
| .006 | | | | .1844 | .2469 | .2327 | .4526 | .1913 | .2103 | | |
| .007 | .1106 | | | | .1484 | | | | | | |
| .008 | | | | .1600 | .1935 | | | | | | |
| .009 | .0636 | | | .1790 | .1597 | .5137 | .4834 | .3384 | | | |
| .010 | | | | .1786 | | .1631 | | | | | |
| .011 | | | | | .2144 | | | | | | |
| .012 | .1128 | | | | .2369 | .1653 | .1921 | .3084 | | | |
| .013 | .487 | | | .3054 | | | | | | | |
| .014 | | | | .2636 | .2602 | | .1555 | | | | |
| .015 | .2098 | | | .2737 | .2435 | .1097 | | | | | |
| .016 | | .3471 | | | .1625 | .1494 | | | | | |
| .017 | | | | | .2199 | .2269 | | | | | |
| .018 | | | | .2011 | .1855 | .2026 | .2272 | | | | |
| .019 | .1292 | | | | | | | | | | |



AEDC VAS32 OMB 01+TD OMB. UPPER SURFACE WING (RTKLO1) (23 APR 74)

REFERENCE DATA

REF # .0236 90.FT. XMP # .0000 IN.
 REF # 22.5003 IN. XMP # .0000 IN.
 REF # 16.3919 IN. ZMP # .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

BETA # .0000 IN/L # 3.720
 S.FLAP # .0000 ELEVON # .0000
 HAWKNT # 1.0000

MACH (1) # 0.000 ALPHA (1) # -10.000 TI # 97.600 QI # 3.935 HREF # .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

Z/Y # .4000 .6000 .8000
 X/C
 .080 .0000 .2088 .0000
 .200 .0000 .0819 .0000
 .600 .0000 .0000 .0000
 .800 .0000 .0006 .0000
 .900 .0000 .0000 .0000
 .950 .0000 .0026 .0000

MACH (1) # 0.000 ALPHA (2) # -6.000 TI # 97.600 QI # 3.935 HREF # .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

Z/Y # .4000 .6000 .8000
 X/C
 .080 .0000 .1754 .0000
 .200 .0000 .0429 .0000
 .600 .0000 .0000 .0000
 .800 .0000 .0246 .0000
 .900 .0000 .0000 .0000
 .950 .0000 .0082 .0000

MACH (1) # 0.000 ALPHA (3) # .000 TI # 97.600 QI # 3.935 HREF # .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

Z/Y # .4000 .6000 .8000
 X/C
 .080 .0000 .1890 .0000
 .200 .0000 .0277 .0000
 .600 .0000 .0000 .0000
 .800 .0000 .0033 .0000
 .900 .0000 .0000 .0000
 .950 .0000 .0033 .0000

AEDC VAS32 OMB 01+110 OMB, UPPER SURFACE WING (RTKLO1)

MACH (1) = 8.000 ALPHA (4) = 5.000 Y1 = 97.600 Q1 = 3.935 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE: H1/C0

| Z1/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .080 | .0000 | .1077 | .0000 |
| .200 | .0000 | .0213 | .0000 |
| .400 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0000 | .0000 |
| .800 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 |
| .950 | .0000 | .0019 | .0000 |



AEDC VAS32 OMB 01+T10 OMB, UPPER SURFACE WING

(RTUL02) (25 APR 74)

REFERENCE DATA

REF = .0238 SQ.FT. XMRP = .0000 IN.
REF = 22.3803 IN. XMRP = .0000 IN.
REF = 18.3919 IN. XMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 IN/L = 3.720
B.F.LAP = .000 ELEVON = .000
MAN/MIT = 1.000

MACH (1) = 0.000 BETA (1) = -2.000 T1 = 97.350 Q1 = 3.942 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HEAD

ZY/B .4000 .6000 .8000

Y/C

.080 .0000 .1190 .0000
.200 .0000 .0294 .0000
.400 .0000 .0000 .0000
.600 .0000 .0019 .0000
.800 .0000 .0000 .0010
.900 .0000 .0018 .0000

MACH (1) = 0.000 BETA (2) = .000 T1 = 97.350 Q1 = 3.942 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HEAD

ZY/B .4000 .6000 .8000

Y/C

.080 .0000 .1280 .0000
.200 .0000 .0277 .0000
.400 .0000 .0000 .0000
.600 .0000 .0033 .0000
.800 .0000 .0000 .0000
.900 .0000 .0033 .0000

AEDC V4352 OH4B 01.110 ORB. UPPER SURFACE WING

(RTKUG3) (25 APR 74)

REFERENCE DATA

BREF = .8238 S.A.P.T. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 16.3819 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM'L = .680
 S.FLAP = .000 ELEVON = .000
 HAWKHT = 1.000

MACH (1) = 6.000 ALPHA (1) = -10.000 TI = 93.425 Q1 = .682 HREF = .020

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

| ZY/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .050 | .0000 | .1657 | .0000 |
| .200 | .0000 | .0387 | .0000 |
| .400 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0060 | .0000 |
| .800 | .0000 | .0073 | .0000 |
| .950 | .0000 | .0073 | .0000 |

MACH (1) = 6.000 ALPHA (2) = -8.000 TI = 93.425 Q1 = .682 HREF = .020

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

| ZY/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .050 | .0000 | .1782 | .0000 |
| .200 | .0000 | .0434 | .0000 |
| .400 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0046 | .0000 |
| .800 | .0000 | .0000 | .0000 |
| .950 | .0000 | .0045 | .0000 |

MACH (1) = 6.000 ALPHA (3) = .000 TI = 93.425 Q1 = .682 HREF = .020

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

| ZY/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .050 | .0000 | .1327 | .0000 |
| .200 | .0000 | .0290 | .0000 |
| .400 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0038 | .0000 |
| .800 | .0000 | .0000 | .0000 |
| .950 | .0000 | .0039 | .0000 |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

MACH (1) = 8.000 ALPHA (4) = 9.000 T1 = 93.425 Q1 = .002 HREF = .020
 (RTN003)

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/HO

| 2Y/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .050 | .0000 | .1147 | .0000 |
| .200 | .0000 | .0229 | .0000 |
| .400 | .0000 | .0000 | .0000 |
| .600 | .0027 | .0000 | .0000 |
| .800 | .0000 | .0000 | .0000 |
| .950 | .0000 | .0027 | .0000 |

AEDC VAS32 OMB 01+TD ORB. UPPER SURFACE WING

(RTK004) (23 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RN/L = .680
 B, FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 BETA (1) = -2.000 TI = 93.950 QI = .681 HREF = .020

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

| ZY/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .080 | .0000 | .1247 | .0000 |
| .200 | .0000 | .0263 | .0000 |
| .400 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0027 | .0000 |
| .800 | .0000 | .0000 | .0000 |
| .950 | .0000 | .0025 | .0000 |

MACH (1) = 8.000 BETA (2) = .000 TI = 93.950 QI = .681 HREF = .020

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HI/40

| ZY/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .080 | .0000 | .1327 | .0000 |
| .200 | .0000 | .0250 | .0000 |
| .400 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0038 | .0000 |
| .800 | .0000 | .0075 | .0000 |
| .950 | .0000 | .0039 | .0000 |



AEDC V4352 OMB Q1 ORB. UPPER SURFACE WING

(RTKJAD) (25 APR 74)

REFERENCE DATA

SEF = .0238 3.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -5.000 TI = 96.800 QI = 3.961 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE MU/MD

| 2 Y/S | 4.000 | 6.000 | 8.000 |
|-------|-------|-------|-------|
| X/C | | | |
| .060 | .1526 | .2082 | .2171 |
| .200 | .0414 | .0677 | .0644 |
| .600 | .0029 | .3149 | .0132 |
| .800 | .0007 | .0076 | .0076 |
| .900 | .0001 | .0001 | .0079 |
| .950 | .0004 | .0004 | .0076 |

MACH (1) = 8.000 ALPHA (2) = .000 TI = 96.800 QI = 3.961 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE MU/MD

| 2 Y/S | 4.000 | 6.000 | 8.000 |
|-------|-------|-------|-------|
| X/C | | | |
| .060 | .0044 | .0031 | .0085 |
| .200 | .1490 | .1908 | .2025 |
| .600 | .0258 | .0434 | .0428 |
| .800 | .2498 | .0085 | .0085 |
| .900 | .0066 | .0066 | .0068 |
| .950 | .0018 | .0034 | .0033 |

AEDC VAS32 OMB 01 ORB. UPPER SURFACE WING

(RTKUL1) (23 APR 74)

REFERENCE DATA

REF = .0236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = -8.000 TI = 93.000 Q1 = .677 HREF = .020

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/HO

| 2 Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .080 | .1373 | .2068 | .2237 |
| .200 | .0369 | .0515 | .0527 |
| .600 | .0043 | .2968 | .0166 |
| .800 | | .0081 | .0101 |
| .900 | | .0070 | .0108 |
| .950 | .0094 | .0071 | .0112 |

MACH (1) = 6.000 ALPHA (2) = .000 TI = 93.000 Q1 = .677 HREF = .020

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/HO

| 2 Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .080 | .1339 | .1880 | .1983 |
| .200 | .0264 | .0338 | .0439 |
| .600 | .0021 | .1928 | .0090 |
| .800 | | .0045 | .0082 |
| .900 | | .0045 | .0068 |
| .950 | .0037 | .0043 | .0065 |

PARAMETRIC DATA

BETA = .000 RN/L = .680
 B.FLAP = .000 ELEVON = .000
 HAWK/HT = 1.000



DATE 23 SEP 74 TABULATED DATA LISTING FOR OHMB (AEDC VAS32)

(RTKUI2) (23 APR 74)

AEDC VAS32 OHMB 01 ORB. UPPER SURFACE WING

PARAMETRIC DATA
 BETA = .000 RV/L = .500
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

REFERENCE DATA

SREP = .0258 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5625 IN. YMRP = .0000 IN.
 BREP = 16.5625 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 29.000 TI = 93.400 QI = .524 HREF = .018

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/RO

| Z/Y/S | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0313 | .0674 | .1164 |
| .200 | .0043 | .0112 | .0126 |
| .400 | .0004 | .0027 | .0043 |
| .600 | .0000 | .0006 | .0035 |
| .800 | .0000 | .0013 | .0048 |
| .950 | .0017 | .0025 | .0072 |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 93.400 QI = .524 HREF = .018

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/RO

| Z/Y/S | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0245 | .0618 | .0961 |
| .200 | .0033 | .0117 | .0107 |
| .400 | .0005 | .0408 | .0058 |
| .600 | .0000 | .0004 | .0045 |
| .800 | .0000 | .0013 | .0056 |
| .950 | .0019 | .0028 | .0075 |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.400 QI = .524 HREF = .018

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/RO

| Z/Y/S | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0180 | .0815 | .0765 |
| .200 | .0028 | .0110 | .0097 |
| .400 | .0007 | .0241 | .0047 |
| .600 | .0000 | .0014 | .0036 |
| .800 | .0000 | .0025 | .0052 |
| .950 | .0028 | .0035 | .0075 |

AEDC VAS32 OMB 01 OMB, UPPER SURFACE WING (RTK03) (25 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. XMRP = .0000 IN.
 LEAF = 22.5803 IN. YMRP = .0000 IN.
 STEP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 1.000
 S.FLAP = .000 ELEVON = .000
 HAWKHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.100 Q1 = 1.003 HREF = .025

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/40

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .090 | .0226 | .0799 | .0832 |
| .200 | .0026 | .0109 | .0096 |
| .600 | .0005 | .0141 | .0068 |
| .800 | .0004 | .0004 | .0053 |
| .900 | .0015 | .0071 | |
| .950 | .0017 | .0032 | .0098 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.100 Q1 = 1.003 HREF = .025

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/40

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .090 | .0182 | .0746 | .0896 |
| .200 | .0027 | .0104 | .0086 |
| .600 | .0007 | .0176 | .0044 |
| .800 | .0007 | .0036 | .0036 |
| .900 | .0019 | .0088 | |
| .950 | .0025 | .0036 | .0059 |

MACH (1) = 8.000 ALPHA (3) = 40.000 TI = 94.100 Q1 = 1.003 HREF = .025

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/40

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .090 | .0133 | .0826 | .0934 |
| .200 | .0020 | .0064 | .0062 |
| .600 | .0016 | .0491 | .0013 |
| .800 | .0010 | .0010 | .0011 |
| .900 | .0019 | .0019 | .0036 |
| .950 | .0025 | .0043 | .0073 |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OHB (AEDC VAS32)

AEDC VAS32 OHB Q1 ORB. UPPER SURFACE WING (RTK014) (23 APR 74)

REFERENCE DATA
 SHEET # .0236 SQ.FT. XMRP # .0000 IN. BETA # .000 TR/L # 1.000
 XREF # 22.5803 IN. YMRP # .0000 IN. B.FLAP # .000 ELEVON # .000
 YREF # 16.3919 IN. ZMRP # .0000 IN. MAW/MT # 1.000
 SCALE # .0175 SCALE

PARAMETRIC DATA

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 98.350 Q1 = 1.994 HREF = .035

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HJW40

| ZY/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .050 | .0236 | .0600 | .0925 |
| .200 | .0026 | .0104 | .0084 |
| .600 | .0003 | .0268 | .0027 |
| .800 | | .0005 | .0070 |
| .900 | | .0015 | .0121 |
| .950 | .0022 | .0035 | .0163 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 98.350 Q1 = 1.994 HREF = .035

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HJW40

| ZY/B | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .050 | .0176 | .0761 | .0846 |
| .200 | .0022 | .0102 | .0047 |
| .600 | .0002 | .0135 | .0037 |
| .800 | | .0007 | .0087 |
| .900 | | .0019 | .0066 |
| .950 | .0029 | .0049 | .0120 |

TABULATED DATA LISTING FOR OMB (AEDC VA352)

AEDC VA352 OMB 01 ORB. UPPER SURFACE WING (RTKUIS) (29 APR 74)

REFERENCE DATA
 SHEP = .0236 80.FT. XMRP = .0000 IN. BETA = .000 RN/L = 3.720
 CREF = 22.5803 IN. XMRP = .0000 IN. B.FLAP = .000 ELEVON = .000
 SREF = 18.3919 IN. ZMRP = .0000 IN. MAX/HIT = 1.000
 SCALE = .0175 SCALE

PARAMETRIC DATA

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 97.867 QI = 3.955 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/4D

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0319 | .0868 | .1083 |
| .200 | .0028 | .0100 | .0095 |
| .600 | .0006 | .0320 | .0086 |
| .800 | | .0023 | .0078 |
| .900 | | .0042 | .0153 |
| .950 | .0049 | .0075 | .0225 |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 97.867 QI = 3.955 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/4D

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0224 | .0619 | .0918 |
| .200 | .0024 | .0092 | .0077 |
| .600 | .0008 | .0246 | .0109 |
| .800 | | .0010 | .0120 |
| .900 | | .0035 | .0202 |
| .950 | .0036 | .0078 | .0252 |

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 97.867 QI = 3.955 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/4D

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0172 | .0782 | .0736 |
| .200 | .0034 | .0101 | .0087 |
| .600 | .0007 | .0161 | .0085 |
| .800 | | .0007 | .0075 |
| .900 | | .0031 | .0094 |
| .950 | .0038 | .0074 | .0172 |



TABULATED DATA LISTING FOR OMB (AEDC 74392)

DATE 23 SEP 74

(RTK018) (23 APR 74)

AEDC V4392 OMB 01 ORG. UPPER SURFACE WING

PARAMETRIC DATA

BETA = .000 RV/L = 3.720
 S.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

REFERENCE DATA

WREF = .0238 SQ.FT. XREF = .0000 IN.
 YREF = 22.5883 IN. YREF = .0000 IN.
 ZREF = 16.3919 IN. ZREF = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 97.500 QI = 3.300 WREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE MU/MD

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| 1/C | .0225 | .0608 | .0982 |
| .200 | .0037 | .0100 | .0276 |
| .400 | .0008 | .0231 | .0106 |
| .600 | .0009 | .0124 | |
| .800 | .0022 | .0199 | |
| .950 | .0042 | .0072 | .0266 |

AEDC VA332 OHB 01 ORB. UPPER SURFACE WING (RTK017) (25 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMP = .0000 IN.
 STEP = 22.5853 IN. XMP = .0000 IN.
 STEP = 16.3919 IN. XMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = 3.720
 B.FLAP = 10.000 ELEVON = 5.000
 MAW/MT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.700 Q1 = 3.949 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/MO

| Z/Y | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .080 | .0024 | .0808 | .1498 |
| .200 | .0464 | .0909 | .1477 |
| .400 | .0879 | .2115 | .1031 |
| .600 | .1174 | .0958 | |
| .800 | .0818 | .1594 | |
| .950 | .0819 | .0301 | .1740 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 97.700 Q1 = 3.949 HREF = .049

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/MO

| Z/Y | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .080 | .0017 | .1077 | .1598 |
| .200 | .0478 | .2084 | .1745 |
| .400 | .1003 | .3048 | .1542 |
| .600 | .1351 | .1718 | |
| .800 | .0854 | .2871 | |
| .950 | .0753 | .0308 | .2359 |



AEDC VAS32 OMB 01 ORG. UPPER SURFACE WING (RITURD) (23 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. XMRP = .0000 IN.
 STEP = 22.5803 IN. XMRP = .0000 IN.
 STEP = 19.3319 IN. XMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
 B.FLAP = 10.000 ELEVON = 5.000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 99.900 QI = 1.980 HREF = .035

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE MU/AD

| Z/Y/B | X/C | Y/C | U/C |
|-------|-------|-------|-------|
| .000 | .0008 | .0242 | .1563 |
| .200 | .0459 | .0418 | .1417 |
| .400 | .0929 | .0392 | .0960 |
| .600 | .1341 | .0408 | |
| .800 | .0528 | .0657 | |
| .950 | .0861 | .0294 | .0426 |

MACH (2) = 6.000 ALPHA (2) = 35.000 TI = 99.900 QI = 1.980 HREF = .035

SECTION (2) UPPER SURFACE WING DEPENDENT VARIABLE MU/AD

| Z/Y/B | X/C | Y/C | U/C |
|-------|-------|-------|-------|
| .000 | .0008 | .0821 | .1474 |
| .200 | .0492 | .0945 | .1474 |
| .400 | .1016 | .0937 | .1030 |
| .600 | .1192 | .0657 | |
| .800 | .0264 | .0744 | |
| .950 | .0735 | .0302 | .0735 |

AEDC VAS32 O-4B Q1 O-4B UPPER SURFACE WING

(RTU022) (25 APR 74)

REFERENCE DATA

WEP = .0230 SQ.FT. WMP = .0000 IN.
LEP = 22.5823 IN. WLP = .0000 IN.
SEP = 16.3919 IN. SWP = .0000 IN.
SCALE = .0195 SCALE

PARAMETRIC DATA

BETA = .000 TM/L = .900
S.F.LAP = 10.000 ELEVON = 9.000
MAX/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 36.000 T1 = 93.400 Q1 = .523 HREF = .016

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE MU/MD

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| K/C | | | |
| .080 | .0010 | .0094 | .1396 |
| .200 | .0000 | .0470 | .1443 |
| .400 | .0246 | .0498 | .0970 |
| .600 | .0331 | .0819 | |
| .800 | .0261 | .0873 | |
| .950 | .0666 | .0302 | .0819 |

MACH (1) = 3.000 ALPHA (2) = 35.000 T1 = 93.400 Q1 = .523 HREF = .016

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE MU/MD

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| K/C | | | |
| .080 | .0021 | .0887 | .1396 |
| .200 | .0000 | .0838 | .1503 |
| .400 | .1063 | .0838 | .1037 |
| .600 | .0464 | .0886 | |
| .800 | .0816 | .0708 | |
| .950 | .0770 | .0305 | .0845 |



REFERENCE DATA
 WING = .4238 SQ.FT. WHP = .0000 IN.
 WEP = 22.5603 IN. WIP = .0000 IN.
 WTP = 10.3919 IN. WOP = .0000 IN.
 SCALE = .0193 SCALE
 BETA = .000 RWAL = .500
 S.P.LAP = 10.000 ELEVON = 10.000
 MAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 25.000 TI = 93.433 QI = .521 HREF = .010

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HUAD

| Z/Y | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .030 | .0008 | .0808 | .1756 |
| .200 | .0447 | .0398 | .1395 |
| .400 | .0810 | .0422 | .0683 |
| .600 | .0817 | .0730 | |
| .800 | .0733 | .0811 | |
| .940 | .0875 | .0296 | .0872 |

MACH (2) = 0.000 ALPHA (2) = 30.000 TI = 93.433 QI = .521 HREF = .010

SECTION (2) UPPER SURFACE WING DEPENDENT VARIABLE HUAD

| Z/Y | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .030 | .0011 | .0898 | .1629 |
| .200 | .0468 | .0477 | .1441 |
| .400 | .0941 | .0488 | .0962 |
| .600 | .0782 | .0911 | |
| .800 | .0268 | .0848 | |
| .940 | .0868 | .0301 | .0829 |

MACH (3) = 0.000 ALPHA (3) = 35.000 TI = 93.433 QI = .521 HREF = .010

SECTION (3) UPPER SURFACE WING DEPENDENT VARIABLE HUAD

| Z/Y | .4000 | .6000 | .8000 |
|------|-------|-------|-------|
| X/C | | | |
| .030 | .0010 | .0874 | .1556 |
| .200 | .0484 | .0647 | .1489 |
| .400 | .1097 | .0591 | .1031 |
| .600 | .0883 | .0968 | |
| .800 | .0817 | .0707 | |
| .940 | .0758 | .0303 | .0847 |

AEDC VA352 OH4B 01 ORG. UPPER SURFACE WING (RTKURS) (25 APR 74)

REFERENCE DATA

STEP = .8238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.9803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 TRN/L = 2.000
 S.FLAP = 10.000 ELEVON = 10.000
 MAX/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.650 QI = 1.965 HREF = .035

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/HO

| Z/Y/B | .4070 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0013 | .0242 | .1556 |
| .200 | .0417 | .0420 | .1425 |
| .600 | .0938 | .0810 | .0976 |
| .800 | .1160 | .0800 | |
| .900 | .0833 | .0458 | |
| .950 | .0648 | .0294 | .0834 |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.350 QI = 1.965 HREF = .035

SECTION (1) UPPER SURFACE WING DEPENDENT VARIABLE HU/HO

| Z/Y/B | .4000 | .6000 | .8000 |
|-------|-------|-------|-------|
| X/C | | | |
| .050 | .0012 | .0634 | .1463 |
| .200 | .0453 | .0843 | .1481 |
| .600 | .0993 | .0846 | .1013 |
| .800 | .1378 | .0864 | |
| .900 | .0859 | .0760 | |
| .950 | .0751 | .0299 | .0768 |



ALSO WAB2 OMB 01 OMB, UPPER SURFACE WING

(RTVALS) (23 APR 74)

REFERENCE DATA

STEP 1 = 0.238 IN. FT. XMP = 0.000 IN.
STEP 2 = 0.476 IN. XMP = 0.000 IN.
STEP 3 = 0.714 IN. XMP = 0.000 IN.
SCALE = 0.175 SCALE

PARAMETRIC DATA

BETA = 0.000 PVAL = 3.720
S.F.LAP = 10.000 ELEVON = 10.000
PVAL/WT = 1.000

MACH (1) = 0.000 ALPHA (1) = 20.000 T1 = 97.367 Z1 = 3.939 HREF = 0.049

SECTION (1) UPPER SURFACE WING

DEPENDENT VARIABLE MU/MC

Z1/A 0.000 0.000 0.000

| | | | | |
|-------|-------|-------|-------|-------|
| Y/C | 0.000 | 0.032 | 0.078 | 0.156 |
| 0.200 | 0.433 | 0.393 | 0.367 | |
| 0.400 | 0.810 | 0.831 | 0.879 | |
| 0.600 | 1.115 | 1.115 | 1.072 | |
| 0.800 | 1.442 | 1.434 | 1.363 | |
| 1.000 | 1.883 | 1.873 | 1.753 | |

MACH (2) = 0.000 ALPHA (2) = 30.000 T1 = 97.367 Z1 = 3.939 HREF = 0.049

SECTION (1) UPPER SURFACE WING

DEPENDENT VARIABLE MU/MC

Z1/A 0.000 0.000 0.000

| | | | | |
|-------|-------|-------|-------|-------|
| Y/C | 0.000 | 0.022 | 0.033 | 0.156 |
| 0.200 | 0.469 | 0.581 | 0.715 | |
| 0.400 | 0.908 | 1.185 | 1.573 | |
| 0.600 | 1.442 | 1.858 | 2.358 | |
| 0.800 | 2.071 | 2.611 | 3.509 | |
| 1.000 | 2.852 | 3.522 | 5.053 | |

MACH (3) = 0.000 ALPHA (3) = 35.000 T1 = 97.367 Z1 = 3.939 HREF = 0.049

SECTION (1) UPPER SURFACE WING

DEPENDENT VARIABLE MU/MC

Z1/A 0.000 0.000 0.000

| | | | | |
|-------|-------|-------|-------|-------|
| Y/C | 0.000 | 0.022 | 0.034 | 0.155 |
| 0.200 | 0.469 | 0.600 | 0.720 | |
| 0.400 | 0.940 | 1.200 | 1.440 | |
| 0.600 | 1.440 | 1.800 | 2.160 | |
| 0.800 | 2.040 | 2.520 | 3.240 | |
| 1.000 | 2.760 | 3.360 | 4.320 | |

PARAMETRIC DATA

BETA = .0000 R/V/L = 3.720
 S.F. LAP = .0000 ELEVON = .0000
 W/RIGHT = 1.0000

REFERENCE DATA

STEP = .0238 SLIFT. XMRP = .0000 IN.
 STEP = 22.3503 IN. XMRP = .0000 IN.
 STEP = 16.3919 IN. Z-PR = .0000 IN.
 SCALE = .0175 SCALE

WACH (1) = 8.000 ALPHA (1) = -10.000 T1 = 97.600 Q1 = 3.935 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE H1/A0

| Z/CH | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| H/C | .0000 | .0000 | .4933 | .4661 | .4491 |
| .010 | .0000 | .0000 | .1298 | .1394 | .0000 |
| .100 | .0000 | .0000 | .0681 | .0619 | .0000 |
| .500 | .0000 | .0000 | .0000 | .0000 | .0160 |
| .700 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0000 | .0139 |

WACH (1) = 8.000 ALPHA (2) = -9.000 T1 = 97.600 Q1 = 3.935 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE H1/A0

| Z/CH | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| H/C | .0000 | .0000 | .3173 | .3571 | .5093 |
| .010 | .0000 | .0000 | .0679 | .1248 | .0000 |
| .100 | .0000 | .0000 | .0298 | .0654 | .0000 |
| .500 | .0000 | .0000 | .0000 | .0000 | .0399 |
| .700 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0092 | .0000 |

WACH (1) = 8.000 ALPHA (3) = .000 T1 = 97.600 Q1 = 3.935 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE H1/A0

| Z/CH | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| H/C | .0000 | .0000 | .2990 | .3535 | .3671 |
| .010 | .0000 | .0000 | .0649 | .0618 | .0000 |
| .100 | .0000 | .0000 | .0329 | .0392 | .0000 |
| .500 | .0000 | .0000 | .0000 | .0000 | .0270 |
| .700 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0094 | .0000 |



TABULATED DATA LISTING FOR OH48 (AEDC VA352)

DATE 20 SEP 74
 AEDC VA352 OH48 Q1+T10 ORG. LEFT VERTICAL TAIL (RTWV01)
 MACH (1) = 0.000 ALPHA (4) = 5.000 T1 = 97.600 Q1 = 3.935 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI/DO

| Z/RY | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .020 | .0000 | .0000 | .2741 | .3910 | .2999 |
| .010 | | | | | .0000 |
| .150 | .0000 | .0000 | .0608 | .0740 | |
| .300 | .0000 | .0000 | .0274 | .0358 | |
| .450 | .0000 | .0000 | .0000 | .0000 | .0238 |
| .600 | .0000 | .0000 | .0000 | .0000 | |
| .750 | .0000 | .0000 | .0000 | .0000 | |
| .900 | .0000 | .0000 | .0000 | .0078 | |

AEDC V4352 O-4B 01*110 ORB. LEFT VERTICAL TAIL (RTKVOE) (25 APR 74)

REFERENCE DATA

BREF = .0239 80.FT. XMRP = .0000 IN.
 LREF = 22.9803 IN. YMRP = .0000 IN.
 BREF = 18.3319 IN. ZMRP = .0000 IN.
 SCALE = .0173 SCALE

PARAMETRIC DATA

ALPHA = .000 TAIL = 3.720
 B.F.LAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 8.000 BETA (1) = -2.000 TI = 97.350 QI = 3.942 HREF = .049
 SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI/LO

Z/YV .1590 .2990 .5320 .7550 .9050

X/C

| | | | | |
|------|-------|-------|-------|-------|
| .000 | .0000 | .3313 | .5756 | .4219 |
| .010 | | | | .0500 |
| .100 | .0000 | .0000 | .0734 | .1087 |
| .300 | .0000 | .0000 | .0425 | .0428 |
| .500 | .0000 | .0000 | .0000 | .0324 |
| .700 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0120 |

MACH (1) = 8.000 BETA (2) = .000 TI = 97.350 QI = 3.942 HREF = .049
 SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI/LO

Z/YV .1590 .2990 .5320 .7650 .9050

X/C

| | | | | |
|------|-------|-------|-------|-------|
| .000 | .0000 | .2560 | .3535 | .3671 |
| .010 | | | | .0000 |
| .100 | .0000 | .0000 | .0849 | .0818 |
| .300 | .0000 | .0000 | .0325 | .0392 |
| .500 | .0000 | .0000 | .0000 | .0270 |
| .700 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0034 |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC VA352)

(RTKV03) (25 APR 74)

AEDC VA352 OMB 01+T10 ORB. LEFT VERTICAL TAIL

REFERENCE DATA
 BETA = .000 RN/L = .680
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

REFERENCE DATA

ORF = .6236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = -10.000 T1 = 93.425 Q1 = .020 HREF = .020

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI/LO

| Z/SV | X/C | Y/C | Z/C | HI/LO |
|-------|-------|-------|-------|-------|
| .1590 | .2990 | .5320 | .7650 | .9050 |
| .000 | .0000 | .4998 | .7753 | .9157 |
| .010 | .0000 | .0000 | .1186 | .1465 |
| .100 | .0000 | .0000 | .0555 | .0810 |
| .300 | .0000 | .0000 | .0000 | .0208 |
| .500 | .0000 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0155 |

MACH (2) = 8.000 ALPHA (2) = -5.000 T1 = 93.425 Q1 = .020 HREF = .020

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI/LO

| Z/SV | X/C | Y/C | Z/C | HI/LO |
|-------|-------|-------|-------|-------|
| .1590 | .2990 | .5320 | .7650 | .9050 |
| .000 | .0000 | .3270 | .5174 | .5769 |
| .010 | .0000 | .0000 | .0882 | .1154 |
| .100 | .0000 | .0000 | .0388 | .0533 |
| .300 | .0000 | .0000 | .0000 | .0000 |
| .500 | .0000 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0115 |

MACH (3) = 8.000 ALPHA (3) = .000 T1 = 93.425 Q1 = .020 HREF = .020

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI/LO

| Z/SV | X/C | Y/C | Z/C | HI/LO |
|-------|-------|-------|-------|-------|
| .1590 | .2990 | .5320 | .7650 | .9050 |
| .000 | .0000 | .2723 | .3978 | .4172 |
| .010 | .0000 | .0000 | .0875 | .0813 |
| .100 | .0000 | .0000 | .0341 | .0422 |
| .300 | .0000 | .0000 | .0000 | .0000 |
| .500 | .0000 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0100 |

TABULATED DATA LISTING FOR OMB (AEDC VAS32)

MACH (1) = 8.000 ALPHA (4) = 5.000 T1 = 93.425 Q1 = .662 HREF = .020
 AEDC VAS32 OMB 01+T10 Q1B. LEFT VERTICAL TAIL (RTXV03)

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE H1/M0

| Z/8V | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0000 | .2769 | .4247 | .3336 | .0000 |
| .010 | .0000 | .0000 | .0614 | .0757 | .0000 |
| .100 | .0000 | .0000 | .3262 | .0358 | .0234 |
| .200 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .300 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .400 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .500 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .600 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .800 | .0000 | .0000 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0000 | .0000 | .0000 |



(RTKVDM) (25 APR 74)

AEDC VAS32 OMB 01+710 ORB, LEFT VERTICAL TAIL

PARAMETRIC DATA

ALPHA = .000
 B.FLAP = .000
 HAWAHT = 1.000

INCH = .0000 IN.
 INCH = .0000 IN.
 INCH = .0000 IN.

SCALE = .0175 SCALE

MACH (1) = 8.000 BETA (1) = -2.000 TI = 93.450 QI = .681 HREF = .020

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI-LAD

| Z/2V | X/C | Y/C | HI-LAD |
|------|-------|-------|--------|
| .000 | .0000 | .3722 | .6862 |
| .010 | .0000 | .0767 | .1041 |
| .100 | .0000 | .0443 | .0441 |
| .300 | .0000 | .0000 | .0000 |
| .500 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0128 |

MACH (1) = 8.000 BETA (2) = .000 TI = 93.450 QI = .681 HREF = .020

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HI-LAD

| Z/2V | X/C | Y/C | HI-LAD |
|------|-------|-------|--------|
| .000 | .0000 | .2723 | .3978 |
| .010 | .0000 | .0675 | .0813 |
| .100 | .0000 | .0341 | .0422 |
| .300 | .0000 | .0000 | .0000 |
| .500 | .0000 | .0000 | .0000 |
| .700 | .0000 | .0000 | .0000 |
| .900 | .0000 | .0000 | .0100 |

AEDC VAS32 OMB 01 ORB. LEFT VERTICAL TAIL (RTNVID) (23 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. XMP = .0000 IN.
 LSTEP = 22.9803 IN. YMP = .0000 IN.
 RSTEP = 16.3919 IN. ZMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 3.720
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = -5.000 TI = 96.800 QI = 3.961 HEF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/DO

Z/AV .1590 .2990 .5320 .7650 .9050

| H/C | .000 | .2502 | .3669 | .6422 | .7112 |
|------|-------|-------|-------|-------|-------|
| .010 | | | | | .2023 |
| .100 | .0561 | .0566 | .0866 | 1.194 | |
| .300 | .0860 | .0162 | .0405 | .0931 | |
| .500 | | .0907 | .0174 | .0376 | 1.125 |
| .700 | .0226 | .0300 | .0046 | .0101 | |
| .900 | | .0246 | .0155 | .0103 | |

MACH (1) = 6.000 ALPHA (2) = .000 TI = 96.800 QI = 3.961 HEF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/DO

Z/AV .1590 .2990 .5320 .7650 .9050

| H/C | .000 | .2694 | .2359 | .4434 | .4670 |
|------|-------|-------|-------|-------|-------|
| .010 | | | | | .1198 |
| .100 | .0599 | .0536 | .0869 | .0683 | |
| .300 | .0444 | .0198 | .0289 | .0406 | |
| .500 | | .0403 | .0171 | .0276 | .0290 |
| .700 | .0237 | .0300 | .0050 | .0060 | |
| .900 | | .0201 | .0087 | .0079 | |



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTKV11) (25 APR 74)

DATE 23 SEP 74

AEDC VAS32 OMB Q1 ORB. LEFT VERTICAL TAIL

PARAMETRIC DATA
 BETA = .000 FN/L = .000
 S.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

REFERENCE DATA
 STEP = .0250 IN. 1M/P = .0000 IN.
 STEP = 22.5003 IN. 4M/P = .0000 IN.
 STEP = 18.3919 IN. 2M/P = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = -0.000 TI = 93.000 Q1 = .077 MREF = .020

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/DO

| Z/O | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| 1/C | .000 | .000 | .000 | .000 | .000 |
| .010 | .0200 | .0399 | .0619 | .0827 | .1119 |
| .100 | .0668 | .0908 | .0885 | .1136 | |
| .300 | .0408 | .0273 | .0429 | .0542 | |
| .500 | .0220 | .0287 | .0381 | .0401 | |
| .700 | .0175 | .0298 | .0092 | .0113 | |
| .900 | .0202 | .0077 | .0111 | | |

MACH (2) = 8.000 ALPHA (2) = .000 TI = 93.000 Q1 = .077 MREF = .020

SECTION (2) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/DO

| Z/O | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| 1/C | .000 | .000 | .000 | .000 | .000 |
| .010 | .0203 | .0354 | .0496 | .0643 | .1185 |
| .100 | .0634 | .0561 | .0609 | .0805 | |
| .300 | .0424 | .0272 | .0298 | .0414 | |
| .500 | .0230 | .0214 | .0279 | .0286 | |
| .700 | .0119 | .0133 | .0075 | .0098 | |
| .900 | .0116 | .0084 | .0032 | | |

AEDC VAS32 C-4B 01 ORB. LEFT VERTICAL TAIL (RTKV12) (23 APR 74)

REFERENCE DATA

REF = .823' 80. FT. HHP = .0600 IN.
 REF = 22.5803 IN. HHP = .0000 IN.
 REF = 14.3919 IN. HHP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

DATA = .000 RN/L = .500
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 93.400 QI = .524 HREF = .018
 Z/8V .1590 .2990 .5320 .7650 .9050

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MC

| X/C | .000 | .0750 | .0802 | .0701 | .0706 |
|------|-------|-------|-------|-------|-------|
| .010 | | | | | .0232 |
| .100 | .0162 | .0159 | .0180 | .0204 | |
| .300 | .0071 | .0096 | .0077 | .0113 | |
| .500 | .0081 | .0081 | .0082 | .0080 | .0070 |
| .700 | .0030 | .0037 | .0033 | .0035 | |
| .900 | .0033 | .0047 | .0044 | | |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 93.400 QI = .524 HREF = .018
 Z/8V .1550 .2990 .5320 .7650 .9050

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MC

| X/C | .000 | .0483 | .0327 | .0376 | .0233 |
|------|-------|-------|-------|-------|-------|
| .010 | | | | | .0147 |
| .100 | .0152 | .0119 | .0147 | .0173 | |
| .300 | .0059 | .0055 | .0067 | .0120 | |
| .500 | .0043 | .0087 | .0086 | .0074 | |
| .700 | .0021 | .0014 | .0028 | .0041 | |
| .900 | .0016 | .0031 | .0047 | | |

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 93.400 QI = .524 HREF = .018
 Z/8V .1590 .2990 .5320 .7650 .9050

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MC

| X/C | .000 | .0409 | .0314 | .0516 | .0456 |
|------|-------|-------|-------|-------|-------|
| .010 | | | | | .0247 |
| .100 | .0132 | .0098 | .0119 | .0212 | |
| .300 | .0041 | .0033 | .0093 | .0146 | |
| .500 | .0013 | .0019 | .0119 | .0121 | |
| .700 | .0006 | .0017 | .0019 | .0056 | |
| .900 | .0026 | .0027 | .0066 | | |



AEDC VA352 OMB 01 OMB LEFT VERTICAL TAIL (RTKV13) (25 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. WTP = .0000 IN.
STEP = 22.9803 IN. WTP = .0000 IN.
STEP = 16.3919 IN. WTP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.000
S.FLAP = .000 ELEVON = .000
HAW/MT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 94.100 QI = 1.003 WREF = .025

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HUARD

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/AV | .1590 | .2990 | .5320 | .7650 | .9080 |
| K/C | | | | | |
| .000 | | .0367 | .0298 | .0315 | .0215 |
| .010 | | | | | .0140 |
| .100 | .0140 | .0126 | .0139 | .0146 | |
| .300 | .0080 | .0083 | .0097 | .0141 | |
| .500 | .0042 | .0042 | .0134 | .0111 | |
| .700 | .0019 | .0014 | .0033 | .0056 | |
| .900 | .0029 | .0034 | .0069 | | |

MACH (2) = 0.000 ALPHA (2) = 35.000 TI = 94.100 QI = 1.003 WREF = .025

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HUARD

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/AV | .1590 | .2990 | .5320 | .7650 | .9080 |
| K/C | | | | | |
| .000 | | .0372 | .0339 | .0626 | .0473 |
| .010 | | | | | .0230 |
| .100 | .0141 | .0124 | .0146 | .0263 | |
| .300 | .0087 | .0079 | .0109 | .0252 | |
| .500 | .0046 | .0019 | .0044 | .0201 | .0163 |
| .700 | .0016 | .0020 | .0027 | .0112 | |
| .900 | .0029 | .0029 | .0038 | .0139 | |

MACH (3) = 0.000 ALPHA (3) = 40.000 TI = 94.100 QI = 1.003 WREF = .025

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HUARD

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/AV | .1590 | .2990 | .5320 | .7650 | .9080 |
| K/C | | | | | |
| .000 | | .0169 | .0191 | .0447 | .0690 |
| .010 | | | | | .0213 |
| .100 | .0122 | .0050 | .0076 | .0173 | |
| .300 | .0067 | .0029 | .0033 | .0109 | |
| .500 | .0024 | .0024 | .0026 | .0076 | .0067 |
| .700 | .0022 | .0015 | .0019 | .0041 | |
| .900 | .0035 | .0049 | .0061 | | |

AEDC W332 0-48 Q1 ORB. LEFT VERTICAL TAIL (RTN14) (23 APR 74)

REFERENCE DATA

STEP = .0236 83.87, 24MP = .0000 IN.
STEP = 22.5003 IN, 24MP = .0000 IN.
STEP = 18.3319 IN, 24MP = .0000 IN.
SCALE = .0173 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = P.000
S.FLAP = .000 ELEVON = .000
HAWAHT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 T1 = 99.550 Q1 = 1.994 MREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/40

| Z/2V | .1590 | .2590 | .3320 | .7850 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0194 | .0174 | .0301 | .0415 | .0415 |
| .010 | | | | .0251 | |
| .100 | .0131 | .0082 | .0064 | .0165 | |
| .300 | .0073 | .0052 | .0039 | .0117 | |
| .500 | .0045 | .0035 | .0107 | .0125 | |
| .700 | .0025 | .0019 | .0036 | .0070 | |
| .900 | .0019 | .0016 | .0046 | .0094 | |

MACH (1) = 0.000 ALPHA (2) = 30.000 T1 = 99.550 Q1 = 1.994 MREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/40

| Z/2V | .1590 | .2590 | .3320 | .7850 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0307 | .0464 | .0767 | .0615 | .0615 |
| .010 | | | | .0712 | |
| .100 | .0139 | .0087 | .0260 | .0243 | |
| .300 | .0089 | .0045 | .0169 | .0244 | |
| .500 | .0023 | .0191 | .0263 | .0136 | |
| .700 | .0016 | .0019 | .0083 | .0107 | |
| .900 | .0030 | .0083 | .0106 | | |



TABULAR DATA LISTING FOR OMB (AEDC VAS2)

(RTN19) (25 APR 74)

OMB, LEFT VERTICAL TAIL

PARAMETRIC DATA
 BETA = .000
 S.F.LAP = .000
 MAX/MT = 1.000
 RVAL = 3.780
 ELEVON = .000

REFERENCE DATA
 XREF = .0238 IN.
 YREF = 22.3653 IN.
 ZREF = 16.3313 IN.
 SCALE = 0.175 SCALE
 XMRP = .0000 IN.
 YMRP = .0000 IN.
 ZMRP = .0000 IN.

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 97.667 Q1 = 3.995 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/VC | .1590 | .2990 | .5320 | .7650 | .9090 |
|------|-------|-------|-------|-------|-------|
| 1/00 | .1375 | .0741 | .0778 | .1349 | .0401 |
| 1/10 | .0174 | .0139 | .0173 | .0311 | .0208 |
| 1/20 | .0048 | .0076 | .0129 | .0208 | .0207 |
| 1/30 | .0029 | .0044 | .0084 | .0270 | .0274 |
| 1/40 | .0027 | .0047 | .0071 | .0274 | |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 97.667 Q1 = 3.995 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/VC | .1590 | .2990 | .5320 | .7650 | .9090 |
|------|-------|-------|-------|-------|-------|
| 1/00 | .0209 | .0367 | .0667 | .0727 | .0280 |
| 1/10 | .0133 | .0134 | .0231 | .0266 | .0260 |
| 1/20 | .0079 | .0254 | .0183 | .0241 | .0170 |
| 1/30 | .0051 | .0029 | .0046 | .0102 | .0098 |
| 1/40 | .0037 | .0037 | .0036 | .0098 | |

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 97.667 Q1 = 3.995 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/VC | .1590 | .2990 | .5320 | .7650 | .9090 |
|------|-------|-------|-------|-------|-------|
| 1/00 | .0240 | .0455 | .0432 | .0889 | .0291 |
| 1/10 | .0190 | .0081 | .0201 | .0318 | .0241 |
| 1/20 | .0070 | .0043 | .0190 | .0241 | .0173 |
| 1/30 | .0049 | .0024 | .0134 | .0213 | .0177 |
| 1/40 | .0039 | .0039 | .0064 | .0218 | .0018 |

TABULATED DATA LISTING FOR OHMB (AEDC VA352)

AEDC VA352 OHMB 01 ORB. LEFT VERTICAL TAIL

REFERENCE DATA

REF = .9238 SQ.FT. XMRP = .0000 IN.
 LREF = 28.5803 IN. YMRP = .0000 IN.
 BREF = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.700 QI = 3.949 HREF = .049
 BETA = .000 RN/L = 3.720
 S,FLAP = 10.000 ELEVON = 5.000
 HAWAHT = 1.000

SECTION (1) LEFT VERTICAL TAIL

DEPENDENT VARIABLE HJ/HO

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/8V | .1590 | .2990 | .5320 | .7650 | .9050 |
| X/C | .000 | .0203 | .0392 | .0640 | .0725 |
| .010 | | | | | .0261 |
| .107 | .0137 | .0066 | .0224 | .0264 | |
| .300 | .0080 | .0054 | .0174 | .0254 | |
| .500 | .0032 | .0027 | .0083 | .0239 | .0169 |
| .700 | .0032 | .0027 | .0047 | .0101 | |
| .900 | .0034 | .0034 | .0038 | .0103 | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 97.700 QI = 3.949 HREF = .049

SECTION (1) LEFT VERTICAL TAIL

DEPENDENT VARIABLE HJ/HO

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/8V | .1590 | .2990 | .5320 | .7650 | .9050 |
| X/C | .000 | .0231 | .0449 | .0629 | .0689 |
| .010 | | | | | .0253 |
| .100 | .0147 | .0086 | .0204 | .0319 | |
| .300 | .0073 | .0079 | .0166 | .0283 | |
| .500 | .0016 | .0016 | .0196 | .0214 | .0174 |
| .700 | .0016 | .0023 | .0065 | .0088 | |
| .900 | .0040 | .0040 | .0093 | .0096 | |



AEDC VAS32 OMB 01 ORB, LEFT VERTICAL TAIL (RTKV18) (25 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
STEP = 22.5803 IN. YMRP = .0000 IN.
STEP = 18.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -5.000 RVAL = 3.720
B.F.LAP = 10.000 ELEVON = 5.000
HAM/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.200 QI = 3.933 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/HD

Z/SV .1590 .2990 .5320 .7650 .9050

X/C

.000 .0135 .0617 .0630 .0681
.010 .0127 .0411 .0462 .0372
.300 .0082 .0324 .0602 .0352
.500 .0369 .0432 .0307 .0225
.700 .0044 .0143 .0124 .0203
.900 .0126 .0141 .0198

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.200 QI = 3.933 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/HD

Z/SV .1590 .2990 .5320 .7650 .9050

X/C

.000 .0217 .0408 .0980 .1035
.010 .0192 .0132 .0386 .0389
.300 .0070 .0091 .0345 .0249
.500 .0081 .0290 .0213 .0178
.700 .0017 .0037 .0078 .0093
.900 .0048 .0080 .0098

AEDC VA352 OMB 01 OMB, LEFT VERTICAL TAIL (RTKV19) (25 APR 74)

REFERENCE DATA

STEP = .8238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5603 IN. YMRP = .0000 IN.
 EREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -5.000 RV/C = 2.000
 B,FLAP = 10.000 ELEVON = 5.000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 90.000 T1 = 95.850 Q1 = 1.983 HREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/RO

| Z/BV | .1590 | .2990 | .5320 | .7650 | .9080 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0207 | .0354 | .0743 | .1242 | |
| .010 | | | | .0364 | |
| .100 | .0155 | .0066 | .0277 | .0309 | |
| .300 | .0079 | .0079 | .0460 | .0133 | |
| .500 | | .0088 | .0348 | .0288 | .0096 |
| .700 | .0028 | .0035 | .0119 | .0135 | |
| .900 | | .0036 | .0143 | .0128 | |

MACH (1) = 6.000 ALPHA (2) = 35.000 T1 = 95.850 Q1 = 1.983 HREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/RO

| Z/BV | .1590 | .2990 | .5320 | .7650 | .9080 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | | .0141 | .0375 | .0286 | .0194 |
| .010 | | | | | .0229 |
| .100 | .0116 | .0155 | .0375 | .0292 | |
| .300 | .0047 | .0076 | .0454 | .0311 | |
| .500 | | .0116 | .0363 | .0212 | .0204 |
| .700 | .0019 | .0084 | .0113 | .0101 | |
| .900 | | .0080 | .0120 | .0106 | |



AEDC VAS32 OMB 01 ORB. LEFT VERTICAL TAIL (RTKWD) (23 APR 74)

REFERENCE DATA

REF = .0238 SQ.FT. XHP = .0000 IN.
REF = 22.5803 IN. YHP = .0000 IN.
REF = 18.3819 IN. ZHP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
S.FLAP = 10.000 ELEVON = 5.000
HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 95.900 QI = 1.900 HREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/RO

Z/SV .1590 .2990 .5320 .7650 .9080

| | | | | | |
|------|-------|-------|-------|-------|-------|
| X/C | .000 | .0172 | .0181 | .0309 | .0419 |
| .010 | | | | .0246 | |
| .100 | .0142 | .0081 | .0068 | .0158 | |
| .300 | .0076 | .0056 | .0070 | .0121 | |
| .500 | .0042 | .0079 | .0115 | .0118 | |
| .700 | .0024 | .0019 | .0034 | .0081 | |
| .900 | | .0019 | .0046 | .0089 | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.900 QI = 1.900 HREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/RO

Z/SV .1590 .2990 .5320 .7650 .9080

| | | | | | |
|------|-------|-------|-------|-------|-------|
| X/C | .000 | .0307 | .0472 | .0791 | .0640 |
| .010 | | | | .0204 | |
| .100 | .0139 | .0096 | .0259 | .0240 | |
| .300 | .0071 | .0046 | .0193 | .0241 | |
| .500 | .0027 | .0199 | .0255 | .0139 | |
| .700 | .0013 | .0618 | .0059 | .0109 | |
| .900 | | .0029 | .0054 | .0154 | |

AEDC VA352 OHMB 01 ORB. LEFT VERTICAL TAIL (RTAKE1) (25 APR 74)

REFERENCE DATA

STEP = .8236 SQ.FT. XMRP = .0000 IN.
 LSTEP = 22.9803 IN. YMRP = .0000 IN.
 SSTEP = 14.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -6.000 RW/L = .500
 B.F.L.P = 10.000 ELEVON = 9.000
 HAWK/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 91.990 QI = .518 HREF = .C.
 MACH (2) = 8.000 ALPHA (2) = 35.000 TI = 91.990 QI = .518 HREF = .017

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/HD

| Z/RV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0296 | .0131 | .0627 | .0797 | .0408 |
| .010 | | | | | |
| .100 | .0147 | .0096 | .0126 | .0335 | |
| .300 | .0091 | .0069 | .0061 | .0204 | |
| .500 | .0070 | .0070 | .0087 | .0144 | .0139 |
| .700 | .0023 | .0029 | .0057 | .0061 | |
| .900 | | .0040 | .0064 | .0096 | |

SECTION (2) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/HD

| Z/RV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0062 | .0463 | .0465 | .0408 | .0266 |
| .010 | | | | | |
| .100 | .0066 | .0000 | .0421 | .0312 | |
| .300 | .0056 | .0062 | .0255 | .0222 | |
| .500 | .0137 | .0220 | .0224 | .0122 | |
| .700 | .0016 | .0038 | .0099 | .0121 | |
| .900 | | .0048 | .0125 | .0123 | |



AEDC VAS32 OMB 01 ORB. LEFT VERTICAL TAIL (RTN22) (23 APR 74)

REFERENCE DATA

REF = .8238 SQ.FT. XREF = .0000 IN.
 YREF = 22.3903 IN. YXREF = .0000 IN.
 ZREF = 16.3919 IN. ZXREF = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .500
 B.FLAP = 10.000 ELEVON = 5.000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 93.400 QI = .523 XREF = .018

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/40

Z/BV .1590 .2990 .5320 .7650 .9050

X/C

.000 .0821 .0394 .0445 .0310
 .010 .0150 .0000 .0142 .0170
 .300 .0264 .0061 .0089 .0118
 .500 .0050 .0050 .0070 .0088 .0077
 .700 .0021 .0023 .0032 .0045
 .900 .0020 .0040 .0053

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 93.400 QI = .523 XREF = .018

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/40

Z/BV .1590 .2990 .5320 .7650 .9050

X/C

.000 .0443 .0314 .0530 .0408
 .010 .0139 .0000 .0128 .0200
 .300 .0057 .0042 .0061 .0158
 .500 .0022 .0028 .0028 .0128 .0136
 .700 .0015 .0015 .0020 .0065
 .900 .0028 .0029 .0073

AEDC VAS32 OMB 01 ORB. LEFT VERTICAL TAIL (RTKV23) (25 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5603 IN. MRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .500
 S.FLAP = 10.000 ELEVON = 10.000
 MAW/PAT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 93.433 QI = .921 HREF = .018

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/DO

| Z/BV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0763 | .0636 | .0746 | .0741 | .0741 |
| .010 | | | | .0213 | |
| .100 | .0160 | .0144 | .0175 | .0209 | |
| .300 | .0072 | .0061 | .0076 | .0111 | |
| .500 | | .0060 | .0067 | .0072 | .0085 |
| .700 | .0026 | .0031 | .0034 | .0036 | |
| .900 | | .0034 | .0046 | .0044 | |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 93.433 QI = .921 HREF = .018

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/DO

| Z/BV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0534 | .0362 | .0437 | .0307 | .0307 |
| .010 | | | | .0155 | |
| .100 | .0143 | .0130 | .0146 | .0177 | |
| .300 | .0063 | .0064 | .0066 | .0122 | |
| .500 | | .0043 | .0073 | .0067 | .0077 |
| .700 | .0020 | .0021 | .0029 | .0042 | |
| .900 | | .0015 | .0042 | .0049 | |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.433 QI = .921 HREF = .018

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE HU/DO

| Z/BV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0440 | .0330 | .0637 | .0476 | .0476 |
| .010 | | | | .0221 | |
| .100 | .0140 | .0110 | .0116 | .0211 | |
| .300 | .0053 | .0044 | .0073 | .0160 | |
| .500 | | .0027 | .0054 | .0124 | .0128 |
| .700 | .0019 | .0017 | .0017 | .0060 | |
| .900 | | .0033 | .0039 | .0070 | |



AEDC VA352 OMB 01 ORB. LEFT VERTICAL TAIL (RTKV24) (25 APR 74)

REFERENCE DATA

SECT = .0238 SJ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 RREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -5.000 RM/L = .500
 S.FLAP = 10.000 ELEVON = 10.000
 MAW/MT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 93.233 QI = .523 HREF = .016

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/BV | X/C | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|-------|
| .000 | .0676 | .0293 | .0343 | .0704 | .0439 | |
| .010 | .0130 | .0114 | .0092 | .0260 | | |
| .300 | .0072 | .0060 | .0065 | .0163 | | |
| .500 | .0069 | .0074 | .0097 | .0155 | | |
| .750 | .0043 | .0028 | .0038 | .0061 | | |
| .900 | .0038 | .0052 | .0070 | | | |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 93.233 QI = .523 HREF = .016

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/BV | X/C | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|-------|
| .000 | .0312 | .0130 | .0482 | .0741 | .0396 | |
| .010 | .0152 | .0032 | .0110 | .0316 | | |
| .300 | .0087 | .0077 | .0073 | .0191 | | |
| .500 | .0062 | .0061 | .0141 | .0131 | | |
| .750 | .0024 | .0034 | .0056 | .0079 | | |
| .900 | .0037 | .0092 | .0091 | | | |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.233 QI = .523 HREF = .016

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/BV | X/C | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|-------|
| .000 | .0100 | .0463 | .0491 | .0401 | .0290 | |
| .010 | .0090 | .0095 | .0402 | .0327 | | |
| .300 | .0082 | .0085 | .0208 | .0219 | | |
| .500 | .0131 | .0217 | .0236 | .0121 | | |
| .750 | .0012 | .0045 | .0092 | .0121 | | |
| .900 | .0047 | .0122 | .0115 | | | |

TABULATED DATA LISTING FOR CMB (AEDC VAS32)

DATE 23 SEP 74

(RTNUGS) (23 APR 74)

AEDC VAS32 CMB 01 ORB. LEFT VERTICAL TAIL

PARAMETRIC DATA

REFERENCE DATA

BREF = .0238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3319 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

BETA = .000 TN/L = 2.000
 S.FLAP = 10.000 ELEVON = 10.000
 HAN/MT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.850 Q1 = 1.985 YREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/AV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0177 | .0180 | .0315 | .0413 | .0413 |
| .010 | | | | | .0234 |
| .100 | .0139 | .0080 | .0094 | .0155 | |
| .300 | .0077 | .0054 | .0059 | .0121 | |
| .500 | .0046 | .0073 | .0114 | .0117 | |
| .700 | .0026 | .0015 | .0034 | .0072 | |
| .900 | .0016 | .0016 | .0046 | .0089 | |

MACH (1) = 8.000 ALPHA (2) = 39.000 TI = 94.850 Q1 = 1.985 YREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| Z/AV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| X/C | | | | | |
| .000 | .0303 | .0475 | .0789 | .0839 | .0839 |
| .010 | | | | | .0200 |
| .100 | .0140 | .0087 | .0280 | .0229 | |
| .300 | .0089 | .0043 | .0194 | .0234 | |
| .500 | .0026 | .0026 | .0198 | .0262 | .0136 |
| .700 | .0017 | .0014 | .0058 | .0111 | |
| .900 | .0026 | .0050 | .0080 | .0109 | |



AEDC VAS32 OMB 01 ORB LEFT VERTICAL TAIL (RTK28) (25 APR 74)

REFERENCE DATA

STEP = .0238 30.FT. XMRP = .0000 IN.
 -REF = 22.1903 IN. XMRP = .0000 IN.
 STEP = 18.3319 IN. XMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -5,000 RN/L = 2,000
 0.FLAP = 10,000 ELEVON = 10,000
 HAWKNT = 1,000

MACH (1) = 6,000 ALPHA (1) = 30,000 TI = 99,450 QI = 1,963 MREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU40

| Z/AV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| K/C | | | | | |
| .000 | .0213 | .0336 | .0760 | .1246 | |
| .010 | | | | .0372 | |
| .100 | .0194 | .0091 | .0266 | .0311 | |
| .300 | .0081 | .0077 | .0463 | .0208 | |
| .500 | | .0064 | .0354 | .0273 | .0090 |
| .700 | .0021 | .0024 | .1125 | .0134 | |
| .900 | | .0035 | .0142 | .0125 | |

MACH (1) = 6,000 ALPHA (2) = 35,000 TI = 99,450 QI = 1,963 MREF = .035

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU40

| Z/AV | .1590 | .2990 | .5320 | .7650 | .9050 |
|------|-------|-------|-------|-------|-------|
| K/C | | | | | |
| .000 | .0146 | .0377 | .0262 | .0167 | |
| .010 | | | | .0227 | |
| .100 | .0107 | .0147 | .0360 | .0297 | |
| .300 | .0049 | .0094 | .0446 | .0300 | |
| .500 | | .0111 | .0366 | .0214 | .0204 |
| .700 | .0019 | .0085 | .0114 | .0098 | |
| .900 | | .0049 | .0112 | .0103 | |

MEDC VAS32 OMB 01 ORG. LEFT VERTICAL TAIL (RTAV27) (23 APR 74)

REFERENCE DATA

REF = .0238 80.FT. XMRP = .0000 IN.
REF = 22.9033 IN. YMRP = .0000 IN.
REF = 10.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RW/L = 3.720
S.F.LAP = 10.000 ELEVON = 10.000
MUM/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 97.387 QI = 3.936 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/AV | .1590 | .2990 | .5320 | .7650 | .9050 |
| X/C | | | | | |
| .000 | | .1350 | .0897 | .0730 | .1336 |
| .010 | | | | | .0416 |
| .100 | .0177 | .0135 | .0166 | .0311 | |
| .300 | .0049 | .0082 | .0128 | .0208 | |
| .500 | | .0064 | .0120 | .0154 | .0216 |
| .700 | .0030 | .0042 | .0052 | .0072 | |
| .900 | | .0043 | .0066 | .0087 | |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 97.387 QI = 3.936 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/AV | .1590 | .2990 | .5320 | .7650 | .9050 |
| X/C | | | | | |
| .000 | | .0804 | .0363 | .0841 | .0719 |
| .010 | | | | | .0261 |
| .100 | .0140 | .0081 | .0236 | .0289 | |
| .300 | .0072 | .0054 | .0193 | .0261 | |
| .500 | | .0056 | .0135 | .0237 | .0166 |
| .700 | .0029 | .0027 | .0050 | .0058 | |
| .900 | | .0036 | .0067 | .0099 | |

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 97.387 QI = 3.936 HREF = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/MD

| | | | | | |
|------|-------|-------|-------|-------|-------|
| Z/AV | .1590 | .2990 | .5320 | .7650 | .9050 |
| X/C | | | | | |
| .000 | | .0236 | .0444 | .0627 | .0893 |
| .010 | | | | | .0359 |
| .100 | .0147 | .0090 | .0196 | .0324 | |
| .300 | .0087 | .0079 | .0183 | .0265 | |
| .500 | | .0066 | .0169 | .0213 | .0173 |
| .700 | .0018 | .0030 | .0068 | .0089 | |
| .900 | | .0044 | .0099 | .0102 | |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC VAS32)

AEDC VAS32 OMB 01 ORG. LEFT VERTICAL TAIL (RTX28) (25 APR 74)

REFERENCE DATA

WEP = .8236 G.U.F.T. WHP = .0000 IN. BETA = -8.000 RV/L = 3.720
 WEP = 22.5803 IN. WHP = .0000 IN. B.F.LAP = 10.000 ELEVON = 10.000
 WEP = 16.3919 IN. WHP = .0000 IN. MAW/MT = 1.000
 SCALE = .0175 SCALE

PARAMETRIC DATA

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.300 Q1 = 3.930 WEP = .049
 SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/DO

Z/AV .1590 .2990 .5320 .7650 .9050

| K/C | .000 | .010 | .100 | .300 | .500 | .700 | .900 |
|-----|-------|-------|-------|-------|-------|------|------|
| | .0136 | .0896 | .0859 | .0441 | .0301 | | |
| | .0082 | .0084 | .0406 | .0341 | | | |
| | .0080 | .0094 | .0373 | .0210 | | | |
| | .0151 | .0421 | .0299 | .0113 | | | |
| | .0037 | .0065 | .0143 | .0139 | | | |
| | .0096 | .0150 | .0148 | | | | |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.300 Q1 = 3.930 WEP = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/DO

Z/AV .1590 .2990 .5320 .7650 .9050

| K/C | .000 | .010 | .100 | .300 | .500 | .700 | .900 |
|-----|-------|-------|-------|-------|-------|------|------|
| | .0206 | .0586 | .1466 | .0973 | .0383 | | |
| | .0146 | .0182 | .0443 | .0461 | | | |
| | .0073 | .0201 | .0447 | .0326 | | | |
| | .0186 | .0351 | .0307 | .0189 | | | |
| | .0022 | .0051 | .0114 | .0130 | | | |
| | .0043 | .0195 | .0133 | | | | |

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 97.300 Q1 = 3.930 WEP = .049

SECTION (1) LEFT VERTICAL TAIL DEPENDENT VARIABLE MU/DO

Z/AV .1590 .2990 .5320 .7650 .9050

| K/C | .000 | .010 | .100 | .300 | .500 | .700 | .900 |
|-----|-------|-------|-------|-------|-------|------|------|
| | .0203 | .0400 | .0273 | .0203 | .0245 | | |
| | .0139 | .0274 | .0459 | .0302 | | | |
| | .0081 | .0201 | .0391 | .0346 | | | |
| | .0160 | .0317 | .0282 | .0208 | | | |
| | .0020 | .0051 | .0100 | .0106 | | | |
| | .0051 | .0116 | .0109 | | | | |

AEDC VAS32 OMB OR OMB LEFT MAIN NOZZLE

(RTN29) (25 APR 74)

REFERENCE DATA

MEP = .0238 50.PT. HUP = .0000 IN.
 TEF = 22.5803 IN. WHP = .0000 IN.
 SEP = 16.3919 IN. ZHP = .0000 IN.
 SCALE = .0193 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 3.780
 S.FLAP = .000 ELEVON = .000
 MAWHT = 1.000

MACH (1) = 0.000 ALPHA (1) = 27.000 TI = 97.087 QI = 3.940 HREF = .049

SECTION (1) NOZZLE

DEPENDENT VARIABLE MU/MD

| X | .0680 | .1750 | .2830 | .4360 | .7680 |
|---------|-------|-------|-------|-------|-------|
| P=IN | | | | | |
| .000 | .0161 | .0257 | .0161 | .0082 | |
| 25.000 | .0176 | .0392 | | | |
| 45.000 | .0119 | .0121 | .0120 | .0145 | .0142 |
| 65.000 | .0456 | .0390 | | .0360 | |
| 90.000 | .0292 | .0276 | .0297 | .0319 | |
| 135.000 | .0174 | | | | |
| 315.000 | .0116 | | | | |

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 97.087 QI = 3.940 HREF = .049

SECTION (1) NOZZLE

DEPENDENT VARIABLE MU/MD

| X | .0680 | .1750 | .2830 | .4360 | .7680 |
|---------|-------|-------|-------|-------|-------|
| P=IN | | | | | |
| .000 | .0368 | .0594 | .0392 | .0109 | |
| 25.000 | .0469 | .0721 | | | |
| 45.000 | .0143 | .0133 | .0116 | .0121 | .0240 |
| 65.000 | .0291 | .0267 | | .0457 | |
| 90.000 | .0311 | .0277 | .0296 | .0254 | |
| 135.000 | .0245 | | | | |
| 315.000 | .0210 | | | | |

MACH (1) = 0.000 ALPHA (3) = 35.000 TI = 97.087 QI = 3.940 HREF = .049

SECTION (1) NOZZLE

DEPENDENT VARIABLE MU/MD

| X | .0680 | .1750 | .2830 | .4360 | .7680 |
|---------|-------|-------|-------|-------|-------|
| P=IN | | | | | |
| .000 | .0818 | .0796 | .0726 | .0217 | |
| 25.000 | .0838 | .0764 | | | |
| 45.000 | .0262 | .0233 | .0161 | .0138 | .0342 |
| 65.000 | .0377 | .0350 | | .0428 | |
| 90.000 | .0403 | .0416 | .0468 | .0444 | |
| 135.000 | .0287 | | | | |
| 315.000 | .0246 | | | | |



(RTN330) (23 APR 74)

AEDC VAS32 OH4B 02 ORB. LEFT MAIN NOZZLE

REFERENCE DATA

PARAMETRIC DATA

SUP = .8236 30.FT. 1MRP = .0000 IN. BETA = .000 RN/L = 2.000
 LREF = 22.9603 IN. 1MRP = .0000 IN. B.FLAP = .000 ELEVON = .000
 BREF = 16.3919 IN. 2MRP = .0000 IN. MAW/MT = 1.000
 SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = 29.000 TI = 94.933 Q1 = 1.986 HREF = .035

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HD

| X | .0860 | .1750 | .2630 | .4360 | .7660 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .000 | .0762 | .0146 | .0092 | .0039 |
| 25.000 | .0092 | .0178 | | | |
| 45.000 | .0047 | .0049 | .0046 | .0051 | .0056 |
| 65.000 | .0100 | .0097 | | .0110 | |
| 90.000 | .0123 | .0131 | .0132 | .0146 | |
| 135.000 | .0123 | | | | |
| 315.000 | .0060 | | | | |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 94.933 Q1 = 1.986 HREF = .035

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HD

| X | .0860 | .1750 | .2630 | .4360 | .7660 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .000 | .0237 | .0356 | .0230 | .0072 |
| 25.000 | .0293 | .0459 | | | |
| 45.000 | .0085 | .0077 | .0062 | .0048 | .0064 |
| 65.000 | .0118 | .0114 | | .0097 | |
| 90.000 | .0169 | .0149 | .0137 | .0124 | |
| 135.000 | .0024 | | | | |
| 315.000 | .0156 | | | | |

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 94.933 Q1 = 1.986 HREF = .035

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HD

| X | .0860 | .1750 | .2630 | .4360 | .7660 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .000 | .0464 | .0654 | .0463 | .0132 |
| 25.000 | .0573 | .0727 | | | |
| 45.000 | .0179 | .0156 | .0114 | .0079 | .0106 |
| 65.000 | .0256 | .0264 | | .0264 | |
| 90.000 | .0324 | .0304 | .0303 | .0297 | |
| 135.000 | .0022 | | | | |
| 315.000 | .0341 | | | | |

AEDC VAS52 OMB 02 ORB. LEFT MAIN NOZZLE

(RTN31) (25 APR 74)

REFERENCE DATA

SEF = .8238 34.FT. XMP = .0000 IN.
LEF = 22.5803 IN. YMP = .0000 IN.
BEF = 16.3919 IN. ZMP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .500
B.FLAP = .000 ELE.YAN = .000
MAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 25.000 TI = 92.933 QI = .523 HREF = .018

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/40

| | | | | | |
|---------|-------|-------|-------|-------|-------|
| X | .0860 | .1750 | .2630 | .4380 | .7860 |
| P*MIN | .000 | .0043 | .0086 | .0047 | .0019 |
| 25.000 | .0044 | .0086 | | | |
| 45.000 | .0013 | .0014 | .0012 | .0010 | .0010 |
| 65.000 | .0030 | .0016 | .0019 | | |
| 90.000 | .0031 | .0036 | .0036 | .0042 | |
| 135.000 | .0053 | | | | |
| 315.000 | .0024 | | | | |

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 92.933 QI = .523 HREF = .018

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/40

| | | | | | |
|---------|-------|-------|-------|-------|-------|
| X | .0860 | .1750 | .2630 | .4380 | .7860 |
| P*MIN | .000 | .0069 | .0145 | .0100 | .0041 |
| 25.000 | .0104 | .0132 | | | |
| 45.000 | .0031 | .0031 | .0016 | .0016 | .0016 |
| 65.000 | .0034 | .0025 | .0028 | | |
| 90.000 | .0045 | .0044 | .0046 | .0049 | |
| 135.000 | .0016 | | | | |
| 315.000 | .0057 | | | | |

MACH (1) = 0.000 ALPHA (3) = 35.000 TI = 92.933 QI = .523 HREF = .018

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/40

| | | | | | |
|---------|-------|-------|-------|-------|-------|
| X | .0860 | .1750 | .2630 | .4380 | .7860 |
| P*MIN | .000 | .0166 | .0260 | .0178 | .0081 |
| 25.000 | .0229 | .0332 | | | |
| 45.000 | .0059 | .0051 | .0035 | .0030 | .0025 |
| 65.000 | .0032 | .0037 | .0043 | | |
| 90.000 | .0070 | .0073 | .0074 | .0075 | |
| 135.000 | .0024 | | | | |
| 315.000 | .0126 | | | | |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTWASE) (29 APR 74)

AEDC VAS32 OMB CR ORB. LEFT MAIN NOZZLE

PARAMETRIC DATA
 BETA = .000 RN/L = 1.000
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

REFERENCE DATA

SREP = .8233 80.FT. XMRP = .0000 IN.
 YREP = 22.9503 IN. YMRP = .0000 IN.
 ZREP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 93.400 Q1 = 1.000 HREF = .024

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HO

| X | .0880 | .1750 | .2630 | .4380 | .7880 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .000 | .0125 | .0171 | .0120 | .0037 |
| 25.000 | .0159 | .0206 | | | |
| 45.000 | .0037 | .0037 | .0025 | .0015 | .0024 |
| 65.000 | .0024 | .0027 | | | |
| 90.000 | .0064 | .0068 | .0059 | .0051 | |
| 135.000 | .0014 | | | | |
| 315.000 | .0083 | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 93.400 Q1 = 1.000 HREF = .024

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HO

| X | .0880 | .1750 | .2630 | .4380 | .7880 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .000 | .0248 | .0296 | .0238 | .0075 |
| 25.000 | .0291 | .0279 | | | |
| 45.000 | .0068 | .0073 | .0061 | .0035 | .0031 |
| 65.000 | .0060 | .0059 | | | |
| 90.000 | .0143 | .0147 | .0143 | .0122 | |
| 135.000 | .0018 | | | | |
| 315.000 | .0176 | | | | |

MACH (1) = 8.000 ALPHA (3) = 45.000 TI = 93.400 Q1 = 1.000 HREF = .024

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HO

| X | .0880 | .1750 | .2630 | .4380 | .7880 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .000 | .0443 | .0877 | .0394 | .0172 |
| 25.000 | .0708 | .0640 | | | |
| 45.000 | .0165 | .0137 | .0136 | .0078 | .0089 |
| 65.000 | .0182 | .0191 | | | |
| 90.000 | .0426 | .0434 | .0460 | .0466 | |
| 135.000 | .0059 | | | | |
| 315.000 | .0365 | | | | |

AEDC VAS52 OMB OR OMB, LEFT MAIN NOZZLE

(RTN33) (23 APR 74)

REFERENCE DATA

AREA = .8238 SQ.FT. XREF = .0000 IN.
 LREF = 22.5903 IN. XREF = .0000 IN.
 BREF = 16.3919 IN. XREF = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 1.250
 FLAP = .000 ELEVON = .000
 H-4/MT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.250 QI = 1.253 HREF = .027

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/MO

| X | .0880 | .1750 | .2630 | .4360 | .7860 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0155 | .0208 | .0144 | .0051 | |
| 25.000 | .0196 | .0231 | | | |
| 45.000 | .0083 | .0081 | .0037 | .0025 | .0031 |
| 65.000 | .0036 | .0037 | .0038 | | |
| 90.000 | .0060 | .0079 | .0074 | .0064 | |
| 135.000 | .0016 | | | | |
| 315.000 | .0109 | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.250 QI = 1.253 HREF = .027

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/MO

| X | .0880 | .1750 | .2630 | .4360 | .7860 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0272 | .0334 | .0278 | .0066 | |
| 25.000 | .0325 | .0311 | | | |
| 45.000 | .0105 | .0091 | .0085 | .0042 | .0040 |
| 65.000 | .0073 | .0080 | .0091 | | |
| 90.000 | .0189 | .0186 | .0183 | .0162 | |
| 135.000 | .0019 | | | | |
| 315.000 | .0187 | | | | |



AEDC VAS2 OHB 02 ORB. LEFT MAIN NOZZLE

(RTN34) (25 APR 74)

REFERENCE DATA

SEP = .8238 SQ.FT. XMP = .0000 IN.
 LREP = 22.9603 IN. YMP = .0000 IN.
 BREP = 18.3919 IN. ZMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RW/L = 1.500
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 T1 = 94.900 Q1 = 1.934 HREF = .030

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/NO

| X | .0880 | .1750 | .2630 | .4380 | .7680 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0162 | .0234 | .0167 | .0057 | |
| 25.000 | .0213 | .0281 | | | |
| 45.000 | .0097 | .0095 | .0045 | .0028 | .0034 |
| 65.000 | .0055 | .0055 | .0050 | .0050 | |
| 90.000 | .0114 | .0109 | .0096 | .0081 | |
| 135.000 | .0019 | | | | |
| 315.000 | .0124 | | | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 T1 = 94.900 Q1 = 1.934 HREF = .030

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/NO

| X | .0880 | .1750 | .2630 | .4380 | .7680 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0323 | .0410 | .0322 | .0101 | |
| 25.000 | .0376 | .0434 | | | |
| 45.000 | .0125 | .0110 | .0081 | .0052 | .0052 |
| 65.000 | .0130 | .0124 | .0137 | | |
| 90.000 | .0253 | .0243 | .0228 | .0209 | |
| 135.000 | .0022 | | | | |
| 315.000 | .0218 | | | | |

REFERENCE DATA
 STEP = .8236 92.4 FT. XMRP = .0000 IN. BETA = .000 RN/L = 1.750
 STEP = 22.5803 IN. YMRP = .0000 IN. B.FLAP = .000 ELEVON = .000
 STEP = 16.3919 IN. ZMRP = .0000 IN. HAWKING = 1.000
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 95.200 QI = 1.797 FCF = .033

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HG

| X | PHIN | PHIN | PHIN | PHIN |
|---------|-------|-------|-------|-------|
| .0680 | .1750 | .2630 | .4360 | .7860 |
| .000 | .0203 | .0286 | .0200 | .0080 |
| 25.000 | .0257 | .0364 | | |
| 45.000 | .0069 | .0065 | .0093 | .0037 |
| 65.000 | .0085 | .0083 | | .0070 |
| 90.000 | .0146 | .0131 | .0124 | .0111 |
| 135.000 | .0022 | | | |
| 315.000 | .0139 | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.200 QI = 1.797 HCF = .033

SECTION (1) NOZZLE DEPENDENT VARIABLE HU/HG

| X | PHIN | PHIN | PHIN | PHIN |
|---------|-------|-------|-------|-------|
| .0680 | .1750 | .2630 | .4360 | .7860 |
| .000 | .0395 | .0631 | .0369 | .0106 |
| 25.000 | .0477 | .0800 | | |
| 45.000 | .0171 | .0139 | .0096 | .0064 |
| 65.000 | .0194 | .0194 | | .0203 |
| 90.000 | .0265 | .0275 | .0264 | .0255 |
| 135.000 | .0024 | | | |
| 315.000 | .0277 | | | |



REFERENCE DATA
 STEP = .0238 SQ.FT. XMRP = .0000 IN.
 Y-STEP = 22.3803 IN. YMRP = .0000 IN.
 Z-STEP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA
 BETA = .000 RN/L = 2.000
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 94.987 QI = 1.984 HREF = .035

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/NO

| X | PHIN |
|---------|-------------------------|
| .0680 | .1750 .2830 .4380 .7980 |
| .000 | .0228 .0347 .0229 .0071 |
| 25.000 | .0269 .0493 |
| 45.000 | .0090 .0075 .0047 .0081 |
| 65.000 | .0108 .0109 .0091 |
| 90.000 | .0159 .0147 .0129 |
| 135.000 | .0023 |
| 315.000 | .0158 |

MACH (2) = 6.000 ALPHA (2) = 35.000 TI = 94.987 QI = 1.984 HREF = .035

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/NO

| X | PHIN |
|---------|-------------------------|
| .0680 | .1750 .2830 .4380 .7980 |
| .000 | .0466 .0642 .0485 .0135 |
| 25.000 | .0669 .0723 |
| 45.000 | .0175 .0118 .0082 .0108 |
| 65.000 | .0289 .0256 .0259 |
| 90.000 | .0324 .0308 .0302 .0301 |
| 135.000 | .0024 |
| 315.000 | .0341 |

MACH (3) = 6.000 ALPHA (3) = 45.000 TI = 94.987 QI = 1.984 HREF = .035

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/NO

| X | PHIN |
|---------|-------------------------------|
| .0680 | .1750 .2830 .4380 .7980 |
| .000 | .0751 .1047 .1010 .0395 |
| 25.000 | .0687 .0665 |
| 45.000 | .0357 .0320 .0250 .0158 .0211 |
| 65.000 | .0587 .0503 .0155 |
| 90.000 | .0814 .0594 .0875 .0664 |
| 135.000 | .0097 |
| 315.000 | .0559 |

AEDC V4332 OMB OR ORS. LEFT MAIN NOZZLE

(RTN37) (25 APR 74)

REFERENCE DATA

PARAMETRIC DATA

STEP # .8236 30.FT. XMRP = .0000 IN.
 REF # 82.3603 IN. YMRP = .0000 IN.
 REF # 16.3919 IN. ZMRP = .0000 IN.
 SCALE # .0175 SCALE

BETA = .000 RN/L = 2.250
 S.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 99.200 Q1 = 2.341 HREF = .038

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/AD

| X | .0880 | .1750 | .2630 | .4380 | .7860 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0279 | .0441 | .0282 | .0083 | |
| 25.000 | .0343 | .0586 | | | |
| 45.000 | .0095 | .0090 | .0079 | .0085 | .0108 |
| 65.000 | .0192 | .0178 | | .0182 | |
| 90.000 | .0198 | .0183 | .0179 | .0167 | |
| 135.000 | .0229 | | | | |
| 315.000 | .0203 | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 99.200 Q1 = 2.341 HREF = .038

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/AD

| X | .0880 | .1750 | .2630 | .4380 | .7860 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0548 | .0753 | .0552 | .0137 | |
| 25.000 | .0618 | .0781 | | | |
| 45.000 | .0201 | .0174 | .0135 | .0097 | .0174 |
| 65.000 | .0373 | .0336 | | .0352 | |
| 90.000 | .0368 | .0362 | .0368 | .0369 | |
| 135.000 | .0625 | | | | |
| 315.000 | .0423 | | | | |



AEDC VAS32 OMB 02 ORB. LEFT MAIN NOZZLE

(RTN038) (25 APR 74)

REFERENCE DATA

SEP = .8238 SQ.FT. ZMAP = .0000 IN.
 LREF = 22.3803 IN. WREF = .0000 IN.
 SREF = 18.3919 IN. ZREF = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 2.900
 B.FLAP = .000 ELEVON = .000
 HAW/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 95.950 QI = 2.336 WREF = .039

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/RO

X .0660 .1750 .2630 .4360 .7860

PHIN
 .0000 .0294 .0461 .0299 .0062
 25.000 .0372 .0615
 45.000 .0107 .0097 .0078 .0119
 65.000 .0213 .0198 .0217
 90.000 .0216 .0199 .0196 .0188
 135.000 .0029
 315.000 .0219

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 95.950 QI = 2.336 WREF = .039

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/RO

X .0660 .1750 .2630 .4360 .7860

PHIN
 .0000 .0558 .0763 .0812 .0174
 25.000 .0610 .0752
 45.000 .0212 .0167 .0151 .0099 .0222
 65.000 .0339 .0367 .0394
 90.000 .0376 .0377 .0398 .0399
 135.000 .0028
 315.000 .0455

AEDC VAS32 OMB OE ORB, LEFT MAIN NOZZLE

(RTN39) (25 APR 74)

REFERENCE DATA

REF = .8238 SQ.FT. XMRP = .0000 IN.
 REF = 22.5803 IN. XMRP = .0000 IN.
 REF = 18.3919 IN. XMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RVAL = 2.750
 B.FLAP = .000 ELEVON = .000
 MAWHT = 1.000

MACH (1) = 0.000 ALPHA (1) = 90.000 TI = 96.100 QI = 2.016 HREF = .041

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/MD

| R-IN | .0860 | .1750 | .2630 | .4360 | .7860 |
|---------|-------|-------|-------|-------|-------|
| .000 | .0321 | .0309 | .0319 | .0064 | |
| 25.000 | .0394 | .0692 | | | |
| 45.000 | .0112 | .0107 | .0098 | .0065 | .0193 |
| 65.000 | .0246 | .0232 | .0275 | | |
| 90.000 | .0239 | .0214 | .0220 | .0206 | |
| 135.000 | .0028 | | | | |
| 315.000 | .0240 | | | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 96.100 QI = 2.016 HREF = .041

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/MD

| R-IN | .0860 | .1750 | .2630 | .4360 | .7860 |
|---------|-------|-------|-------|-------|-------|
| .000 | .0943 | .0794 | .0636 | .0193 | |
| 25.000 | .0990 | .0743 | | | |
| 45.000 | .0229 | .0207 | .0192 | .0113 | .0247 |
| 65.000 | .0362 | .0367 | .0440 | | |
| 90.000 | .0391 | .0394 | .0425 | .0449 | |
| 135.000 | .0029 | | | | |
| 315.000 | .0437 | | | | |



AEDC VAS32 OMB OE ORB. LEFT MAIN NOZZLE

REFERENCE DATA
 WEP = .8236 SQ.FT. WHP = .0000 IN.
 JWP = 22.9603 IN. WJP = .0000 IN.
 SEP = 18.3919 IN. ZWP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA
 BETA = .000 FN/L = 3.000
 S.FLAP = .000 ELEVON = .000
 MAX/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 98.900 QI = 3.118 MEEP = .044

SECTION (1) NOZZLE DEPENDENT VARIABLE HU40

| X | .0860 | .1750 | .2630 | .4360 | .7860 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .0000 | .0326 | .0823 | .0327 | .0067 |
| 25.000 | .0414 | .0702 | | | |
| 45.000 | .0119 | .0109 | .0096 | .0100 | .0179 |
| 65.000 | .0254 | .0296 | | .0341 | |
| 90.000 | .0259 | .0241 | .0243 | .0220 | |
| 135.000 | .0032 | | | | |
| 315.000 | .0259 | | | | |

MACH (2) = 0.000 ALPHA (2) = 30.000 TI = 98.900 QI = 3.118 MEEP = .044

SECTION (1) NOZZLE DEPENDENT VARIABLE HU40

| X | .0860 | .1750 | .2630 | .4360 | .7860 |
|---------|-------|-------|-------|-------|-------|
| PHIN | .0000 | .0665 | .0762 | .0861 | .0202 |
| 25.000 | .0810 | .0761 | | | |
| 45.000 | .0234 | .0213 | .0163 | .0123 | .0267 |
| 65.000 | .0419 | .0375 | | .0477 | |
| 90.000 | .0395 | .0408 | .0447 | .0407 | |
| 135.000 | .0024 | | | | |
| 315.000 | .0454 | | | | |

AEDC VAS2 OMB 02 ORB. LEFT MAIN NOZZLE

(RTOM1) (25 APR 74)

REFERENCE DATA

WEP = .0238 30.P.T. XMP = .0000 IN.
 LWF = 22.5803 IN. WWP = .0000 IN.
 BWP = 18.3319 IN. ZWP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 3.350
 S.FLAP = .000 ELEVON = .000
 HAWK/T = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.600 Q1 = 3.536 XEF = .046

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/AO

| X | PHIN | PHIN | PHIN | PHIN |
|---------|-------|-------|-------|-------|
| .000 | .0336 | .0836 | .0540 | .0091 |
| 25.000 | .0427 | .0706 | | |
| 45.000 | .0124 | .0117 | .0096 | .0114 |
| 65.000 | .0271 | .0274 | | .0408 |
| 90.000 | .0208 | .0266 | .0219 | .0228 |
| 135.000 | .0033 | | | |
| 315.000 | .0276 | | | |

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 97.600 Q1 = 3.536 XEF = .046

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/AO

| X | PHIN | PHIN | PHIN | PHIN |
|---------|-------|-------|-------|-------|
| .000 | .0397 | .0812 | .0864 | .0204 |
| 25.000 | .0832 | .0777 | | |
| 45.000 | .0244 | .0219 | .0165 | .0125 |
| 65.000 | .0368 | .0365 | | .0911 |
| 90.000 | .0416 | .0420 | .0452 | .0525 |
| 135.000 | .0024 | | | |
| 315.000 | .0447 | | | |



AEDC VAS22 OMB OR OMB, LEFT MAIN NOZZLE

(RTUNE)

23 APR 74

REFERENCE DATA

REF # .0236 80.FT. 1MWP = .0000 IN.
 REF # 22.1603 IN. 1MWP = .0000 IN.
 REF # 18.3919 IN. 2MWP = .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

BETA = .000 RW/L = 3.720
 B.P.LAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.050 Q1 = 3.937 WEPF = .049

SECTION (1) NOZZLE DEPENDENT VARIABLE MU/MD

| X | .0680 | .1750 | .2830 | .4380 | .7680 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0359 | .0662 | .0398 | .0094 | |
| 25.000 | .0434 | .0663 | | | |
| 45.000 | .0127 | .0119 | .0108 | .0121 | .0223 |
| 65.000 | .0293 | .0292 | | .0448 | |
| 90.000 | .0313 | .0290 | .0284 | .0240 | |
| 135.000 | .0539 | | | | |
| 175.000 | .0302 | | | | |

MACH (2) = 6.000 ALPHA (2) = 35.000 TI = 97.050 Q1 = 3.937 WEPF = .049

SECTION (2) NOZZLE DEPENDENT VARIABLE MU/MD

| X | .0680 | .1750 | .2830 | .4380 | .7680 |
|---------|-------|-------|-------|-------|-------|
| PHIN | | | | | |
| .000 | .0829 | .0619 | .0714 | .0221 | |
| 25.000 | .0668 | .0604 | | | |
| 45.000 | .0297 | .0239 | .0186 | .0138 | .0341 |
| 65.000 | .0391 | .0307 | | .0551 | |
| 90.000 | .0414 | .0431 | .0471 | .0534 | |
| 135.000 | .0029 | | | | |
| 175.000 | .0444 | | | | |

AEDC VAS32 Q48 01 ORB. RCS CENTER

(RTRRID) (23 APR 74)

REFERENCE DATA

STEP 1 = .0236 SQ.FT. 2MRP = .0000 IN.
 STEP 2 = 22.5603 IN. 2MRP = .0000 IN.
 STEP 3 = 16.3315 IN. 2MRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 FN = 3.720
 S.F.LAP = .000 EYFON = .000
 MAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = -0.000 TI = 90.000 Q1 = 3.961 HFEY = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/NO

X/C .0760 .3000 .6000 .9000 .9750

Z 0.125 .0475 .0087 .0175 .0321 .0321

MACH (1) = 0.000 ALPHA (2) = .000 TI = 90.000 Q1 = 3.961 HFEY = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/NO

X/C .0760 .3000 .6000 .9000 .9750

Z 0.125 .0448 .0048 .0089 .0180 .0191



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTKR11) (25 APR 74)

AEDC VAS32 OMB Q1 ORB. RCS CENTER

PARAMETRIC DATA

BETA = .000 RV/L = .680
B.FLAP = .000 ELEVON = .000
HAW/HT = 1.000

REFERENCE DATA

REF = .8238 SQ.FT. XMRP = .0000 IN.
YREF = 22.9803 IN. YMRP = .0000 IN.
ZREF = 16.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = -6.000 TI = 93.000 QI = .677 HREF = .020

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/HD

X/L .0760 .3000 .6000 .9000 .9750
Z 6.129 .0486 .0066 .0270 .0206 .0174

MACH (1) = 6.000 ALPHA (2) = .000 TI = 93.000 QI = .677 HREF = .020

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/HD

X/L .0760 .3000 .6000 .9000 .9750
Z 6.129 .0484 .0069 .0073 .0207 .0146

REFERENCE DATA
 SEPT = .0236 93.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 18.3913 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 25.000 T1 = 93.400 Q1 = .524 HREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/40
 X/L .0760 .3000 .6000 .9000 .9750
 Z
 6.125 .0476 .0207 .0004 .0011 .0012
 MACH (1) = 8.000 ALPHA (2) = 30.000 T1 = 93.400 Q1 = .524 HREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/40
 X/L .0760 .3000 .6000 .9000 .9750
 Z
 6.125 .0440 .0189 .0002 .0003 .0017
 MACH (1) = 8.000 ALPHA (3) = 35.000 T1 = 93.400 Q1 = .524 HREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/40
 X/L .0760 .3000 .6000 .9000 .9750
 Z
 6.125 .0443 .0176 .0003 .0209 .0008

PARAMETRIC DATA
 BETA = .000 RM/L = .500
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000



AEDC VAS32 CH4B 01 ORB. RCS CENTER

(RTNR13) (25 APR 74)

REFERENCE DATA

SREP = .8238 94.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.000
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 9.000 ALPHA (1) = 30.000 TI = 94.100 QI = 1.003 HREF = .025

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/HO

X/L .0760 .3000 .6000 .9000 .9750

Z
 6.125 .0439 .0188 .0003 .0007 .0025

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 94.100 QI = 1.003 HREF = .025

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/HO

X/L .0760 .3000 .6000 .9000 .9750

Z
 6.125 .0411 .0173 .0001 .0006 .0026

MACH (1) = 6.000 ALPHA (3) = 40.000 TI = 94.100 QI = 1.003 HREF = .025

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/HO

X/L .0760 .3000 .6000 .9000 .9750

Z
 6.125 .0402 .0167 .0004 .0017 .0026

AEDC VAS32 OMB 01 ORB. RCS CENTER

(RTRR14) (25 APR 74)

REFERENCE DATA

STEP = .6236 90.PT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 2.000
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 99.950 QI = 1.994 HREF = .039

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/AD

X/L .0760 .3000 .6000 .9000 .9750
 Z 6.125 .0437 .0193 .0004 .0016 .0014

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 99.950 QI = 1.994 HREF = .039

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/AD

X/L .0760 .3000 .6000 .9000 .9750
 Z 6.125 .0410 .0183 .0002 .0007 .0036



TABULATED DATA LISTING FOR CH4B (AEDC VAS32)

(RTKR15) (25 APR 74)

AEDC VAS32 CH4B Q1 ORG. RCS CENTER

REFERENCE DATA

SREF = .8238 30.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 16.3819 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 T1 = 97.867 Q1 = 3.955 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/HO

X/L .0760 .3000 .6700 .9000 .9750
 Z
 6.125 .0449 .0219 .0011 .0041 .0063

MACH (1) = 6.000 ALPHA (2) = 30.000 T1 = 97.867 Q1 = 3.955 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/HO

X/L .0760 .3000 .6000 .9000 .9750
 Z
 6.125 .0441 .0216 .0006 .0026 .0025

MACH (1) = 6.000 ALPHA (3) = 35.000 T1 = 97.867 Q1 = 3.955 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/HO

X/L .0760 .3000 .6000 .9000 .9750
 Z
 6.125 .0426 .0198 .0004 .0012 .0049



AEDC VA352 OMB 01 ORB. RCS CENTER

(RTKR17) (83 APR 74)

REFERENCE DATA

WREP = .8238 SQ.FT. XMRP = .0000 IN.
 LREP = 22.5803 IN. YMRP = .0000 IN.
 BREP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 B.FLAP = 10.000 ELEVON = 5.000
 HAWK/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.700 QI = 3.949 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/HD

X/L .0760 .3000 .6000 .9000 .9750
 Z 6.125 .0444 .0211 .0005 .0027 .0029

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 97.700 QI = 3.949 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/HD

X/L .0760 .3000 .6000 .9000 .9750
 Z 6.125 .0421 .0198 .0005 .0015 .0041



AEDC VAS32 OMB 01 OMB RCS CENTER

(RTRR18) (23 APR 74)

REFERENCE DATA

BREF = .8236 80.FT. XREF = .0000 IN.
 LREF = 22.3803 IN. YREF = .0000 IN.
 SREF = 16.3819 IN. ZREF = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -6.000 RN/L = 3.720
 S.FLAP = 10.000 ELEVON = 5.000
 HAWAHT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.200 QI = 3.933 WREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/AD

X/L .0760 .3000 .6000 .9000
 Z 6.125 .0630 .0321 .0019 .0064 .0073

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 97.200 QI = 3.933 WREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/AD

X/L .0760 .3000 .6000 .9000 .9750
 Z 6.125 .0650 .0371 .0017 .0062 .0072

AEDC VA352 OMB Q1 ORB. RCS CENTER

(RTKR19) (25 APR 74)

REFERENCE DATA

XREF = .0238 80.FT. XREF = .0000 IN.
 YREF = 22.9803 IN. YREF = .0000 IN.
 ZREF = 16.3919 IN. ZREF = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -0.000 RN/L = 2.000
 S.FLAP = 10.000 ELEVON = 5.000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 95.850 QI = 1.983 HREF = .035

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/AD

X/L .0760 .3000 .6000 .9000 .9750

Z 6.125 .0576 .0390 .0009 .0041 .0114

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 95.850 QI = 1.983 HREF = .035

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/AD

X/L .0760 .3000 .6000 .9000 .9750

Z 6.125 .0566 .0363 .0016 .0033 .0076



MEDC VAS32 OHB 01 ORB. RCS CENTER

(RTK220) (25 APR 74)

REFERENCE DATA

BREF = .0238 32.FT. 1M/P = .0000 IN.
 LREF = 22.9603 IN. 1M/P = .0000 IN.
 BREF = 18.3919 IN. 2M/P = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
 S.F.LAP = 10.000 ELEVON = 5.000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 95.900 QI = 1.980 HREF = .035

SECTION (1) RCS CENTER DEPENDENT VARIABLE HJ/AD

X/L .0760 .3500 .6000 .9000 .9750
 Z
 0.125 .0451 .0196 .0004 .0012 .0012

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 95.900 QI = 1.980 HREF = .035

SECTION (1) RCS CENTER DEPENDENT VARIABLE HJ/AD

X/L .0760 .3000 .6000 .9000 .9750
 Z
 0.125 .0415 .0165 .0002 .0005 .0015

AEDC VAS32 OMB 01 ORB. RCS CENTER

(RTNR21) (25 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
 UREP = 22.5903 IN. YMRP = .0000 IN.
 SREP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 91.960 QI = .518 MREF = .017

SECTION (1) RCS CENTER

DEPENDENT VARIABLE MU/AD

X/L .0760 .3000 .6000 .9000 .9750

Z

0.125 .0607 .0370 .0006 .0009 .0014

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 91.960 QI = .518 MREF = .017

SECTION (1) RCS CENTER

DEPENDENT VARIABLE MU/AD

X/L .0760 .3000 .6000 .9000 .9750

Z

0.125 .0679 .0339 .0003 .0014 .0041

PARAMETRIC DATA

BETA = -9.000 RN/L = .500
 S.F.LAP = 10.000 ELEVON = 9.000
 HAW/HT = 1.000



TABULATED DATA LISTING FOR CHB (AEDC VAS82)

(RTK1622) (85 APR 74)

AEDC VAS82 CHB 01 ORB. RCS CENTER

PARAMETRIC DATA

BETA = .000 FN/L = .500
B.FLAP = 10.000 ELEVON = 5.000
MAW/MT = 1.000

REFERENCE DATA

STEP = .0038 33.PT. XMRP = .0000 IN.
STEP = 22.5803 IN. YMRP = .0000 IN.
STEP = 18.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 T1 = 93.400 Q1 = .923 MEF = .016

SECTION (1) RCS CENTER DEPENDENT VARIABLE MUJAO

Y/L .0760 .3000 .6000 .9000 .9750
Z
6.128 .0458 .0183 .0001 .0008 .0026

MACH (1) = 8.000 ALPHA (2) = 35.000 T1 = 93.400 Q1 = .523 MEF = .016

SECTION (1) RCS CENTER DEPENDENT VARIABLE MUJAO

Y/L .0760 .3000 .6000 .9000 .9750
Z
6.128 .0436 .0174 .0004 .0016 .0024

AEDC VAS32 OHS 01 ORG. RCS CENTER

(RTK083) (23 APR 74)

REFERENCE DATA

REF # .0238 80. FT. 1MRP # .0000 IN.
 REF # 82.5003 IN. 2MRP # .0000 IN.
 REF # 18.3519 IN. 3MRP # .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

BETA # .0000 RVAL # .500
 S.F. CAP # 10.0000 ELEVON # 10.0000
 MAW/HT # 1.0000

MACH (1) = 8.0000 ALPHA (1) = 25.0000 TI = 93.433 QI = .521 WREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

R/L .0760 .5000 .6000 .9000 .9750

Z
 8.125 .0455 .0509 .0002 .0006 .0020

MACH (1) = 8.0000 ALPHA (2) = 30.0000 TI = 93.433 QI = .521 WREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

R/L .0760 .5000 .6000 .9000 .9750

Z
 8.125 .0441 .0195 .0002 .0014 .0019

MACH (1) = 8.0000 ALPHA (3) = 35.0000 TI = 93.433 QI = .521 WREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

R/L .0760 .5000 .6000 .9000 .9750

Z
 8.125 .0436 .0189 .0003 .0009 .0015



AEDC VAS32 OMB Q1 ORB. RCS CENTER

(RTMR24) (25 APR 74)

REFERENCE DATA

XREF = .0238 S.A.F.T. XMRP = .0000 IN.
 YREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 16.3515 IN. ZMRP = .0000 IN.
 SCALE = .0195 SCALE

PARAMETRIC DATA

BETA = -6.000 RN/L = .500
 B.FLAP = 10.000 ELEVON = 10.000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 93.233 Q1 = .23 MREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

R/L .0740 .3000 .6000 .9000 .9750

Z 6.129 .0810 .0325 .0022 .0036 .0037

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 93.233 Q1 = .523 MREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

R/L .0740 .3000 .6000 .9000 .9750

Z 6.129 .0807 .0317 .0009 .0010 .0016

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 93.233 Q1 = .523 MREF = .018

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

R/L .0740 .3000 .6000 .9000 .9750

Z 6.129 .0841 .0327 .0008 .0000 .0024



AEDC VAS32 Q-48 Q1 Q08. RCS CENTER

(RTNR23) (25 APR 74)

REFERENCE DATA

STEP 1 = 4238 SQ.FT. HWP = .0000 IN.
 STEP 2 = 22,583 IN. HWP = .0000 IN.
 STEP 3 = 18,345 IN. HWP = .0000 IN.
 SCALE = .0374 IN/IN

PARAMETRIC DATA

BETA = .000 RY/L = 2.000
 B.F.LAP = .0,000 ELEVN = 10,000
 HAW/HT = 1.000

PARAM (1) = 0.000 ALPHA (1) = 30.000 T1 = 24.850 Q1 = 1.585 REF = .035

SECTION (1) RCS CENTER DEPENDENT VARIABLE HU/VO

R1 = .0760 .3000 .6000 .9000 .9750

2 0.125 .6444 .0191 .0004 .0014 .0017

PARAM (1) = 0.000 ALPHA (2) = 35.000 T1 = 24.850 Q1 = 1.585 REF = .035

SECTION (2) RCS CENTER DEPENDENT VARIABLE HU/VO

R1 = .0760 .3000 .6000 .9000 .9750

2 0.125 .6417 .0161 .0005 .0012 .0024



AEDC VAS32 C-48 01 OFB, RCS CENTER

(RTK026) (29 APR 74)

REFERENCE DATA

SREF = .8238 SQ.FT. XREF = .0000 IN.
 YREF = 22.9407 IN. YREF = .0000 IN.
 ZREF = 19.3919 IN. ZREF = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -9,000 RVAL = 2,000
 B.FLAP = 10,000 ELEVON = 10,000
 HAWAHT = 1,000

MACH (1) = 8,000 ALPHA (1) = 30,000 T1 = 95,450 Q1 = 1,983 HREF = .035

SECTION (1) RCS CENTER DEPENDENT VARIABLE HJ/HO

X/L .0760 .3000 .8000 .9000 .9750
 Z 6.129 .0576 .0386 .0009 .0041 .0109

MACH (1) = 8,000 ALPHA (2) = 35,000 T1 = 95,450 Q1 = 1,983 HREF = .035

SECTION (1) RCS CENTER DEPENDENT VARIABLE HJ/HO

X/L .0760 .3000 .8000 .9000 .9750
 Z 6.129 .0585 .0369 .0017 .0032 .0079

AEDC VA352 QMB 01 ORB. RCS CENTER

(RTKPR27) (25 APR 74)

REFERENCE DATA

PARAMETRIC DATA

STEP # .0238 83.87. XIMP # .0000 IN. BETA # .000 R # 3.720
 STEP # 22.5803 IN. YMP # .0000 IN. B.P.LAB # 10.000 S.L.CAN # 10.000
 STEP # 19.3515 IN. ZMP # .0000 IN. W4/HRT # 1.000

WACH (1) = 8.000 ALPHA (1) = 25.000 T1 = 97.387 Q1 = 3.936 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MC

X/Y .0740 .3000 .8000 .9000 .9750

Z
6.125 .0419 .0219 .0012 .0037 .0065

SECTION (2) RCS CENTER DEPENDENT VARIABLE MU/MC

WACH (1) = 8.000 ALPHA (2) = 30.000 T1 = 97.387 Q1 = 3.936 HREF = .049

SECTION (3) RCS CENTER DEPENDENT VARIABLE MU/MC

X/Y .0740 .3000 .8000 .9000 .9750

Z
6.125 .0441 .0208 .0007 .0084 .0030

SECTION (4) RCS CENTER DEPENDENT VARIABLE MU/MC

WACH (1) = 8.000 ALPHA (3) = 35.000 T1 = 97.387 Q1 = 3.936 HREF = .049

X/Y .0740 .3000 .8000 .9000 .9750

Z
6.125 .0419 .0194 .0007 .0021 .0022



AEDC VA352 OHB C: ORB. RCS CENTER

(RTK026) (25 APR 74)

REFERENCE DATA

REF = .8235 SQ.FT. XMRP = .0000 IN.
 (REF = 22.9803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -8,000 RN/L = 3,720
 B.FLAP = 10,000 ELEVON = 10,000
 HAN/HT = 1,000

MACH (1) = 8,000 ALPHA (1) = 25,000 TI = 97,300 QI = 3,930 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

X/L .0760 .3000 .8000 .9000 .9750
 Z
 6.125 .0594 .0317 .0027 .0045 .0152

MACH (1) = 8,000 ALPHA (2) = 30,000 TI = 97,300 QI = 3,930 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

X/L .0760 .3000 .8000 .9000 .9750
 Z
 6.125 .0571 .0366 .0017 .0106 .0101

MACH (1) = 8,000 ALPHA (3) = 35,000 TI = 97,300 QI = 3,930 HREF = .049

SECTION (1) RCS CENTER DEPENDENT VARIABLE MU/MD

X/L .0760 .3000 .8000 .9000 .9750
 Z
 6.125 .0553 .0366 .0017 .0082 .0089

AEDC VAS32 OMB O2 ORB. BASE PLATE (RTMP29) (23 APR 74)

REFERENCE DATA

REF = .9236 90.1 T. XMRP = .0000 IN.
LREF = 22.5803 IN. YMRP = .0000 IN.
SREF = 16.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

ETA = .000 RM = 3.720
FLAP = .000 ELEVON = .000
HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.087 QI = 3.940 HREF = .049

SECTION (1) BASE PLATE

DEPENDENT VARIABLE HU/HO

Y .0000 1.2250 1.9250
Z 5.600 .0020 .0020
7.520 .0056 .0017

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.087 QI = 3.940 HREF = .049

SECTION (1) BASE PLATE

DEPENDENT VARIABLE HU/HO

Y .0000 1.2250 1.9250
Z 5.600 .0014 .0016
7.520 .0014 .0008

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 97.087 QI = 3.940 HREF = .049

SECTION (1) BASE PLATE

DEPENDENT VARIABLE HU/HO

Y .0000 1.2250 1.9250
Z 5.600 .0026 .0045
7.520 .0013 .0009



TABULATED DATA LISTING FOR OMB (AEDC VAS52)

(RTM930) (23 APR 74)

AEDC VAS52 OMB 02 ORB. BASE PLATE

REFERENCE DATA

XREF = .0238 SQ.FT. XMRP = .0000 IN.
 YREF = 22.9803 IN. YMRP = .0000 IN.
 ZREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 2.000
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 94.933 QI = 1.966 HREF = .035

SECTION (1) BASE PLATE

DEPENDENT VARIABLE HU/MO

Y .0000 1.2250 1.9250

Z
 5.600 .0006 .0011
 7.520 .0004 .0010

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 94.933 QI = 1.966 HREF = .035

SECTION (1) BASE PLATE

DEPENDENT VARIABLE HU/MO

Y .0000 1.2250 1.9250

Z
 5.600 .0004 .0008
 7.520 .0011 .0007

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 94.933 QI = 1.966 HREF = .035

SECTION (1) BASE PLATE

DEPENDENT VARIABLE HU/MO

Y .0000 1.2250 1.9250

Z
 5.600 .0008 .0022
 7.520 .0013 .0007



AEDC VAS32 OMB 02 ORS. BASE PLATE

(RTKP31) (25 APR 74)

REFERENCE DATA

XREF = .8238 SQ.FT. XMP = .0000 IN.
 YREF = 25.9803 IN. YMP = .0000 IN.
 ZREF = 16.3919 IN. ZMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 T1/L = .906
 S.FLAP = .000 ELEYON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 T1 = 92.933 Q1 = .523 HREF = .018

SECTION (1) BASE PLATE

DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 5.600 .0007 .0011
 7.520 .0008 .0012

MACH (1) = 8.000 ALPHA (2) = 30.000 T1 = 92.933 Q1 = .523 HREF = .018

SECTION (1) BASE PLATE

DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 5.600 .0011 .0008
 7.520 .0007 .0011

MACH (1) = 8.000 ALPHA (3) = 35.000 T1 = 92.933 Q1 = .523 HREF = .018

SECTION (1) BASE PLATE

DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 5.600 .0010 .0014
 7.520 .0016 .0008



AEDC VAS32 OMB 02 OMB, BASE PLATE

(RTN32) (25 APR 74)

REFERENCE DATA

XREF = .0238 94. FT. XREF = .0000 IN.
 YREF = 22.5803 IN. XREF = .0000 IN.
 ZREF = 16.3818 IN. XREF = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 IN/L 2 1.000
 B.P.LAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 93.400 QI = 1.000 HREF = .024

DEPENDENT VARIABLE HU/HO

SECTION (1) BASE PLATE

Y .0000 1.2250 1.9250
 Z 5.600 .0004 .0008
 7.520 .0000 .0007

MACH (2) = 8.000 ALPHA (2) = 35.000 TI = 93.400 QI = 1.000 HREF = .024

DEPENDENT VARIABLE HU/HO

SECTION (1) BASE PLATE

Y .0000 1.2250 1.9250
 Z 5.600 .0009 .0012
 7.520 .0015 .0009

MACH (3) = 8.000 ALPHA (3) = 45.000 TI = 93.400 QI = 1.000 HREF = .024

DEPENDENT VARIABLE HU/HO

SECTION (1) BASE PLATE

Y .0000 1.2250 1.9250
 Z 5.600 .0013 .0022
 7.520 .0014 .0014

AEDC VAS32 OHB 02 ORB. BASE PLATE

(RTSP33) (23 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
 JEP = 22.5803 IN. XMRP = .0000 IN.
 SEP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.250
 S.FLAP = .000 ELEVON = .000
 HAWK/T = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 94.250 QI = 1.253 HREF = .027

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z 5.600 .0004 .0008
 7.520 .0004 .0003

MACH (2) = 6.000 ALPHA (2) = 35.000 TI = 94.250 QI = 1.253 HREF = .027

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z 5.600 .0008 .0011
 7.520 .0016 .0009



AEDC VAS2 OMB 02 ORB. BASE PLATE

(RTOP34) (23 APR 74)

REFERENCE DATA

REF = .8236 SQ.FT. XMRP = .0000 IN.
 REF = 22.9803 IN. XMRP = .0000 IN.
 REF = 16.3919 IN. XMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 IN/L = 1.500
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 94.900 QI = 1.934 HREF = .030

SECTION (1) BASE PLATE DEPENDENT VARIABLE HU/HD

Y .0000 1.2250 1.9250

Z
 5.600 .0004 .0006
 7.920 .0010 .0003

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.900 QI = 1.934 HREF = .030

SECTION (1) BASE PLATE DEPENDENT VARIABLE HU/HD

Y .0000 1.2250 1.9250

Z
 5.600 .0005 .0010
 7.920 .0014 .0010



AEDC VAS92 O-8 ORG. BASE PLATE

(RTOP55) (23 APR 74)

REFERENCE DATA

STEP = .0236 SQ.FT. XMRP = .0000 IN.
REF = 22.5803 IN. XMRP = .0000 IN.
STEP = 16.3919 IN. XMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = 1.750
S.F.LAP = .000 ELEVON = .000
MAN/MNT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 95.200 QI = 1.797 HREF = .033

SECTION (1) BASE PLATE

DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250

Z
5.600 .0004 .0008
7.920 .0011 .0008

MACH (2) = 6.000 ALPHA (2) = 35.000 TI = 95.200 QI = 1.797 HREF = .033

SECTION (1) BASE PLATE

DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250

Z
5.600 .0007 .0017
7.920 .0012 .0007



AEDC VA352 QWB Q2 ORB. BASE PLATE

(RTM36) (25 APR 74)

REFERENCE DATA

REF 1 .0236 SQ.FT. RMRP = .0000 IN.
 REF 2 22.5903 IN. RMRP = .0000 IN.
 REF 3 16.3919 IN. RMRP = .0000 IN.
 SCALE 1 .0179 SCALE

PARAMETRIC DATA

BETA = .0000 RN/L = 2.0000
 B.FLAP = .0000 ELEVON = .0000
 HAWAHT = 1.0000

MACH (1) = 6.0000 ALPHA (1) = 30.0000 TI = 94.987 QI = 1.984 HREF = .035

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 5.600 .0009 .0007
 7.520 .0011 .0008

MACH (1) = 6.0000 ALPHA (2) = 35.0000 TI = 94.987 QI = 1.984 HREF = .035

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 5.600 .0008 .0015
 7.520 .0013 .0009

MACH (1) = 6.0000 ALPHA (3) = 40.0000 TI = 94.987 QI = 1.984 HREF = .035

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 5.600 .0045 .0086
 7.520 .0026 .0019



AEDC VAS32 OMB OR OMB. BASE PLATE

(RTR037) (25 APR 74)

REFERENCE DATA

SEP = .0238 90.FT. 1HIP = .0000 IN.
 LIEP = 22.5605 IN. 1HIP = .0000 IN.
 SEP = 18.3919 IN. 2HIP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = 2.250
 B, PLAP = .000 ELEVON = .000
 MAW/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 99.200 QI = 2.341 MREF = .038

SECTION (1) BASE PLATE

DEPENDENT VARIABLE MU/AD

Y .0000 1.2250 1.9250

Z
 5.600 .0074 .0008
 7.920 .0010 .0008

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 99.200 QI = 2.341 MREF = .038

SECTION (1) BASE PLATE

DEPENDENT VARIABLE MU/AD

Y .0000 1.2250 1.9250

Z
 5.600 .0019 .0019
 7.920 .0014 .0009



AEDC VAS32 OMB OR OMB BASE PLATE

(RTP38) (25 APR 74)

REFERENCE DATA

SEP 1 .0238 SQ.FT. XHP = .0000 IN.
 SEP 2 22.5803 IN. XHP = .0000 IN.
 SEP 3 19.3919 IN. XHP = .0000 IN.
 SCALE 1 .0175 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 2.500
 S.F.LAP = .000 ELEVON = .000
 MAU/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 95.950 QI = 2.536 HREF = .039

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 3.800 .0008 .0009
 7.620 .0011 .0007

MACH (1) = 6.000 ALPHA (2) = 39.000 TI = 95.950 QI = 2.536 HREF = .039

SECTION (1.5) BASE PLATE DEPENDENT VARIABLE MU/MD

Y .0000 1.2250 1.9250
 Z
 3.800 .0020 .0024
 7.620 .0014 .0009

AEDC VAS32 CMB8 02 ORB. BASE PLATE

(RTP39) (25 APR 74)

REFERENCE DATA

SHEP = .0238 83.PT. XMP = .0000 IN.
 SHEP = 22.5825 IN. XMP = .0000 IN.
 SHEP = 18.3919 IN. XMP = .0000 IN.
 SCALE = .0195 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 2.750
 B.F.LAP = .000 ELEVON = .000
 HAWKNT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 90.100 Q1 = 2.816 HEFF = .041

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MO

Y = .0000 1.2250 1.8250

Z
 9.600 .0007 .0010
 7.920 .0009 .0004

MACH (2) = 6.000 ALPHA (2) = 30.000 TI = 90.100 Q1 = 2.816 HEFF = .041

SECTION (1) BASE PLATE DEPENDENT VARIABLE MU/MO

Y = .0000 1.2250 1.8250

Z
 9.600 .0023 .0030
 7.920 .0012 .0008



AEDC VA332 OHB 02 ORB, BASE PLATE

IRTP40 (23 APR 74)

REFERENCE DATA

SREF = .8238 SQ.FT. YMRP = .0000 IN.
 UREF = 22.3803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.000
 B.FLAP = .000 ELEVON = .000
 HAWK/T = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 96.900 QI = 3.118 HREF = .044

DEPENDENT VARIABLE MU/40

SECTION (1) BASE PLATE

Y .0000 1.2250 1.9250
 Z 5.600 .0010 .0013
 7.520 .0010 .0008

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 96.900 QI = 3.118 HREF = .044

DEPENDENT VARIABLE MU/40

SECTION (1) BASE PLATE

Y .0000 1.2250 1.9250
 Z 5.600 .0024 .0033
 7.520 .0012 .0009



REC VARS2 CMB3 22 CMB. BASE PLATE

107941) (29 APR 74)

REFERENCE DATA

STEP 1 18235 34.871 AMP = 1000 IN.
 STEP 2 22 2903 24. AMP = 1000 IN.
 STEP 3 18 1553 24. AMP = 1000 IN.
 SCALE 2 100% SCALE

PARAM 11 = 5.000 ALPHA 11 = 30.000 T1 = 97.800 Q1 = 3.134 REF = .048

SECTION 1: BASE PLATE DEPENDENT VARIABLE MUAC

Y 1.000 1.220 1.320

Z
 1.000 1.011 1.012
 1.000 1.007 1.008

PARAM 11 = 5.000 ALPHA 12 = 30.000 T1 = 97.800 Q1 = 3.134 REF = .048

SECTION 1: BASE PLATE DEPENDENT VARIABLE MUAC

Y 1.000 1.220 1.320

Z
 1.000 1.008 1.009
 1.000 1.011 1.011

PARAMETRIC DATA

BETA = .000 QVC = 3.350
 S.F. CAP = .000 E.F. CAP = .000
 WAVELENGTH = 1.000



TABULATED DATA LISTING FOR OMB (AEDC VA332)

DATE 23 SEP 74

(RTW42) (23 APR 74)

AEDC VA332 OMB OR ORB. BASE PLATE

PARAMETRIC DATA

REFERENCE DATA

REF = .9236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 PREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.050 QI = 3.937 HREF = .049
 BETA = .000 RN/L = 3.720
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

DEPENDENT VARIABLE HU/HO

SECTION (1) BASE PLATE

Y .0000 1.2250 1.9250

Z
 5.600 .0013
 7.520 .0011 .0004

DEPENDENT VARIABLE HU/HO

SECTION (1) BASE PLATE

Y .0000 1.2250 1.9250

Z
 5.600 .0028 .0042
 7.520 .0014 .0013

MACH (2) = 35.000

TI = 97.050

QI = 3.937

HREF = .049

AEDC VA352 OMB Q1+T10 ORB. OMB POD

(RTNMB1) (25 APR 74)

REFERENCE DATA

SIZEP = .8238 80.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 3.780
 B.FLAP = .000 ELEVON = .000
 HAV/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -10.000 TI = 97.800 Q1 = 3.935 HREF = .049

SECTION (1) OMB POD

DEPENDENT VARIABLE HI/LO

| X/L | .7800 | .8050 | .8290 | .8820 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .2727 | .1887 | .1042 | .0501 | .0000 | .0000 | .0000 |
| 8.340 | | .0070 | | | | | |
| 8.650 | | .0000 | | | | | |
| 8.727 | | | .0000 | | | | |
| 8.750 | | | | .0000 | .0000 | .0000 | |
| 8.855 | | | .0000 | | | | |
| 8.942 | | | | | | | |
| 8.979 | | | | .0000 | | | |
| 9.056 | | | .0000 | | | | |
| 9.118 | | | .0000 | | | | |
| 9.222 | | | | .0000 | .0000 | .0000 | |
| 9.275 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = -5.000 TI = 97.800 Q1 = 3.935 HREF = .049

SECTION (1) OMB POD

DEPENDENT VARIABLE HI/LO

| X/L | .7800 | .8050 | .8290 | .8820 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .1611 | .0822 | .0456 | .0273 | .0000 | .0000 | .0000 |
| 8.340 | | .0000 | | | | | |
| 8.650 | | .0000 | | | | | |
| 8.727 | | | .0000 | | | | |
| 8.750 | | | | .0000 | .0000 | .0000 | |
| 8.855 | | | .0000 | | | | |
| 8.942 | | | | | | | |
| 8.978 | | | | .0000 | | | |
| 9.056 | | | .0000 | | | | |
| 9.118 | | | .0000 | | | | |
| 9.222 | | | | .0000 | .0000 | .0000 | |
| 9.275 | | | | | | | |

AEDC VA352 OMB 01+T10 OMB. OMS P00

(RTK002) (25 APR 74)

REFERENCE DATA

STEP = .9238 89.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RN/L = 3.720
 B.F.LAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 BETA (1) = -2.000 T1 = 97.350 Q1 = 3.942 WREF = .049
 SECTION (1) OMS P00 DEPENDENT VARIABLE HI/40

| X/L | .7800 | .8050 | .8290 | .8620 | .8630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|-------------|
| Z | 6.295 | .2090 | .2873 | .1572 | .0928 | .5000 | .0000 .0000 |
| 6.540 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.650 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.727 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.750 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.855 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.942 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.978 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.056 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.118 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.222 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.275 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 8.000 BETA (2) = .000 T1 = 97.350 Q1 = 3.942 WREF = .049
 SECTION (1) OMS P00 DEPENDENT VARIABLE HI/40

| X/L | .7800 | .8050 | .8290 | .8620 | .8630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|-------------|
| Z | 0.295 | .0382 | .1864 | .0991 | .0601 | .0000 | .0000 .0000 |
| 6.540 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.650 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.727 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.750 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.855 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.942 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.978 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.056 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.118 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.222 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.275 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



DATE 23 SEP 74 TABULATED DATA LISTING FOR OMB (AEDC VAS32)

MACH (1) = 6.000 ALPHA (3) = .000 TI = 93.425 QI = .682 HREF = .020 (RTKH03)

AEDC VAS32 OMB 01*110 ORB. OMS P00
SECTION (1) OMS P00 DEPENDENT VARIABLE HI/40

| X/A | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 9.296 | .0107 | .0296 | .0921 | .0399 | .0000 | .0000 | .0000 |
| 8.340 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.950 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.727 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.750 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.655 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.942 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.379 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.069 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.118 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.220 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.274 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |

MACH (1) = 6.000 ALPHA (4) = 5.000 TI = 93.425 QI = .682 HREF = .020

AEDC VAS32 OMB 01*110 ORB. OMS P00
SECTION (1) OMS P00 DEPENDENT VARIABLE HI/40

| X/A | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 6.296 | .0039 | .0119 | .0236 | .0249 | .0000 | .0000 | .0000 |
| 6.340 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.650 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.727 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.750 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.955 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.942 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 6.079 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.069 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.118 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.222 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |
| 9.275 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 | .0000 |



AEDC VAS32 OMS 01 OMS OMS MOD

(RTM10) (23 APR 74)

REFERENCE DATA

STEP 1 = .0238 30.PT. 14MP = .0000 IN.
 STEP 2 = 22.5003 IN. 14MP = .0000 IN.
 STEP 3 = 16.3919 IN. 2MP = .0000 IN.
 SCALE = .0375 SCALE

PARAMETRIC DATA

BETA = .000 ON/L = 3.720
 S.F.LAP = .000 ELEVON = .000
 MAW/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = -4.000 TI = 96.800 Q1 = 3.961 MEF = .049
 MACH (2) = 6.000 ALPHA (2) = .000 TI = 96.800 Q1 = 3.961 MEF = .049

SECTION (1) OMS MOD

DEPENDENT VARIABLE HU/AD

| X/L | .7800 | .8000 | .8250 | .8620 | .9630 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|--------|
| Z | 0.296 | .7832 | .1315 | .0736 | .0422 | .0134 | .0132 |
| | 0.340 | .2011 | | | | | |
| | 0.450 | .2375 | | | | | |
| | 0.727 | | .1109 | | | | |
| | 0.750 | | | .0000 | .0193 | | |
| | 0.853 | | .1001 | | | | |
| | 0.976 | | | .0172 | | | |
| | 0.956 | | .0465 | | | | |
| | 0.118 | | .0256 | | .0420 | | |
| | 0.222 | | | | .0177 | | |
| | 0.275 | | | | | | |

SECTION (1) OMS MOD

DEPENDENT VARIABLE HU/AD

| X/L | .7800 | .8000 | .8250 | .8620 | .9630 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|--------|
| Z | 0.295 | .0371 | .1084 | .0592 | .0266 | .0312 | .0258 |
| | 0.340 | .1939 | | | | | |
| | 0.450 | .1520 | | | | | |
| | 0.727 | | .1547 | | | | |
| | 0.750 | | | .0517 | | .0000 | .0241 |
| | 0.853 | | .1042 | | | | |
| | 0.976 | | | .0255 | | | |
| | 0.956 | | .0499 | | | | |
| | 0.118 | | .0518 | | | | |
| | 0.222 | | | .0439 | | | |
| | 0.275 | | | .0257 | | | |



AEDC VAS32 OMB 01 OMB, OMS POD

(RTN113) (23 APR 74)

REFERENCE DATA

STEP = .0236 30.FT. 1MRP = .0000 IN.
 LIEP = 22.5603 IN. 2MRP = .0000 IN.
 BIEP = 16.5919 IN. 3MRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 R1/L = .880
 B.FLAP = .000 ELEVON = .000
 HAW/MT = 1.000

MACH (1) = 8.000 ALPHA (1) = -0.000 TI = 93.000 Q1 = .677 HREF = .020

SECTION (1) OMS POD

DEPENDENT VARIABLE MU/MD

| X/L | .7600 | .8000 | .8250 | .8420 | .8630 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|-------------|
| Z | 8.286 | .0283 | .0869 | .0412 | .0374 | .0262 | .0249 .0217 |
| | 8.540 | .1311 | | | | | |
| | 8.650 | .2108 | | | | | |
| | 8.727 | | .1236 | | | | |
| | 8.750 | | | .0558 | | .0000 | .0125 |
| | 8.855 | | | .0667 | | | |
| | 8.942 | | | | .0160 | | |
| | 8.976 | | | .0567 | | | |
| | 9.056 | | | .0249 | | | |
| | 9.118 | | | | .0310 | | |
| | 9.222 | | | | .0110 | | |
| | 9.275 | | | | | | |

MACH (1) = 8.000 ALPHA (2) = .000 TI = 93.000 Q1 = .677 HREF = .020

SECTION (1) OMS POD

DEPENDENT VARIABLE MU/MD

| X/L | .7600 | .8000 | .8250 | .8420 | .8630 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|-------------|
| Z | 8.299 | .0086 | .0278 | .0514 | .0420 | .0211 | .0231 .0176 |
| | 8.540 | .0369 | | | | | |
| | 8.650 | .0270 | | | | | |
| | 8.727 | | .0927 | | | | |
| | 8.750 | | | .0513 | | .0000 | .0166 |
| | 8.855 | | .0336 | | | | |
| | 8.942 | | | .0192 | | | |
| | 8.976 | | | .0166 | | | |
| | 9.056 | | | .0262 | | | |
| | 9.118 | | | | .0239 | | |
| | 9.222 | | | | .0140 | | |
| | 9.275 | | | | | | |

(RTIME) (23 APR 74)

AEDC WAB32 OHS 01 OHS OHS POD

REFERENCE DATA

STEP 1 = .0236 33.FT. 1MRP = .0000 IN.
 STEP 2 = 22.5603 IN. 1MRP = .0000 IN.
 STEP 3 = 16.3919 IN. 2MRP = .0000 IN.
 SCALE = 1.5775 SCALE

PARAMETRIC DATA

BETA = .000 R/V = .500
 B.FLAP = .000 ELEVAT = .000
 HAW/T = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 93.400 QI = .524 HREF = .018

SECTION (1) OHS POD DEPENDENT VARIABLE HU/HD

| X% | Y% | Z |
|-------|-------|-------------------------------------|
| .7605 | .6080 | .6290 .6820 .9630 1.0000 1.0140 |
| 6.295 | .0049 | .0223 .0392 .0328 .0109 .0115 .0090 |
| 6.540 | .0263 | |
| 6.650 | .0211 | |
| 6.729 | .0631 | |
| 6.750 | | .0000 .0100 |
| 6.652 | .0261 | |
| 6.542 | .0182 | |
| 6.974 | | .0143 |
| 9.056 | .0026 | |
| 9.116 | .0074 | |
| 9.222 | .0087 | |
| 9.275 | .0027 | |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 93.400 QI = .524 HREF = .018

SECTION (1) OHS POD DEPENDENT VARIABLE HU/HD

| X% | Y% | Z |
|-------|-------|-------------------------------------|
| .7600 | .6080 | .6290 .6820 .9630 1.0000 1.0140 |
| 6.295 | .0036 | .0115 .0146 .0125 .0047 .0081 .0035 |
| 6.540 | .0133 | |
| 6.650 | .0049 | |
| 6.729 | .0228 | |
| 6.750 | | .0000 .0048 |
| 6.652 | .0171 | |
| 6.542 | .0074 | |
| 6.978 | | .0072 |
| 9.056 | .0030 | |
| 9.116 | .0039 | |
| 9.222 | .0086 | |
| 9.275 | .0036 | |



TABLE 23 SEP 74 TABULATED DATA LISTING FOR OMB (MEDC VAS32)

MEDC VAS32 OMB 01 OMB, OMB PCD (RTM12)

MACH (1) = 0.000 ALPHA (3) = 33.000 T1 = 93.400 Q1 = .524 MEEP = .016

SECTION (1) OMB PCD DEPENDENT VARIABLE MU/MD

| 1/L | .7400 | .6050 | .6290 | .8820 | .9830 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| 2 | | | | | | | |
| 8.294 | .0018 | .0031 | .0050 | .0059 | .0018 | .0022 | .0044 |
| 8.340 | | .0040 | | | | | |
| 8.830 | | .0035 | | | | | |
| 8.727 | | | .0071 | | | | |
| 8.750 | | | | .0060 | | .0000 | .0031 |
| 8.855 | | | | | | | |
| 8.942 | | | .0033 | | | | |
| 8.978 | | | | | .0036 | | |
| 9.026 | | | | .0045 | | | |
| 9.116 | | | | .0026 | | | |
| 9.222 | | | | | .0042 | | |
| 9.275 | | | | | .0026 | | |



(RTU13) (25 APR 74)

MDC VAS32 OMS 01 OMS OMS MOD

REFERENCE DATA

MEP = .0236 33.PT. MIP = .0000 IN.
MEP = 22.5603 IN. MIP = .0000 IN.
MEP = 16.3919 IN. MIP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 PA. = 1.000
B.FLAP = .000 ELEVATION = .000
MAY/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 94.100 QI = 1.000 MREF = .025

SECTION (1) OMS MOD

DEPENDENT VARIABLE MU/MO

| X/C | .7600 | .6050 | .6250 | .6820 | .9830 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|--------|
| 2 | 0.298 | .0043 | .0149 | .0164 | .0146 | .0044 | .0041 |
| | 0.340 | .0177 | | | | | |
| | 0.650 | .0121 | | | | | |
| | 0.727 | .0268 | | | | | |
| | 0.750 | | | .0207 | | .0000 | .0043 |
| | 0.495 | .0089 | | | | | |
| | 0.978 | | | .0076 | | | |
| | 0.508 | | | .0027 | | | |
| | 0.116 | | | .0041 | | .0006 | |
| | 0.222 | | | | | .0035 | |
| | 0.275 | | | | | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 94.100 QI = 1.000 MREF = .025

SECTION (1) OMS MOD

DEPENDENT VARIABLE MU/MO

| X/C | .7600 | .6780 | .6250 | .6820 | .9830 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|--------|
| 2 | 0.298 | .0016 | .0020 | .0032 | .0039 | .0016 | .0019 |
| | 0.340 | .0027 | | | | | |
| | 0.650 | .0034 | | | | | |
| | 0.727 | .0060 | | | | | |
| | 0.750 | | | .0077 | | .0000 | .0028 |
| | 0.495 | .0041 | | | | | |
| | 0.978 | | | .0036 | | | |
| | 0.508 | | | .0037 | | | |
| | 0.116 | | | .0027 | | .0030 | |
| | 0.222 | | | | | .0028 | |
| | 0.275 | | | | | | |



TABULATED DATA LISTING FOR OH4B (AEDC VA352)

DATE 23 SEP 74

MACH (1) = 8.000 ALPHA (3) = 40.000 AEDC VA352 OH4B 01 OR8, OH8 POD (RTTM13)
 TI = 94.100 Q1 = 1.003 WREF = .025

SECTION (1) OH8 POD DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8290 | .8620 | .8830 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 6.295 | .0016 | .0024 | .0034 | .0075 | .0014 | .7045 | .0071 |
| 6.340 | .0035 | | | | | | |
| 6.830 | .5065 | | | | | | |
| 6.727 | | .0049 | | | | | |
| 6.750 | | | | .0046 | | .0000 | .0082 |
| 6.853 | | | .0073 | | | | |
| 6.942 | | | | | | | |
| 6.978 | | | | | .0063 | | |
| 9.056 | | | | .0117 | | | |
| 9.118 | | | | .0047 | | | |
| 9.222 | | | | | .0095 | | |
| 9.275 | | | | | .0067 | | |



AEDC VAS32 OMB 01 ORB, OMB P00

(RTK14) (23 APR 74)

REFERENCE DATA

REF = .0238 SQ.FT. XMRP = .0000 IN.
 ZEP = 22.5503 IN. AMR = .0000 IN.
 REF = 16.3513 IN. ZMR = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .500 RW/ = 2.000
 B.F.LAP = .000 ELLIPSON = .000
 HM/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 99.950 Q1 = 1.994 HREF = .035

SECTION (1) OMB P00 DEPENDENT VARIABLE HU/AC

| X/Z | .7800 | .8000 | .8200 | .8400 | .8600 | .8800 | .9000 | .9200 | .9400 | .9600 | .9800 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | | | | | | | |
| 5.295 | .0251 | .0241 | .0313 | .0282 | .0280 | .0283 | .0283 | .0283 | .0283 | .0283 | .0283 | .0283 | .0283 |
| 5.740 | | .0315 | | | | | | | | | | | |
| 5.850 | | .0231 | | | | | | | | | | | |
| 5.727 | | .0422 | | | | | | | | | | | |
| 5.750 | | | .0247 | | | | | | | .0000 | .0041 | | |
| 5.855 | | | .0189 | | | | | | | | | | |
| 5.942 | | | | | | | | | .0110 | | | | |
| 5.975 | | | | | | | | | .0067 | | | | |
| 5.055 | | | | | | | | | .0049 | | | | |
| 5.110 | | | | | | | | | | .0042 | | | |
| 5.222 | | | | | | | | | | .0032 | | | |
| 5.275 | | | | | | | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 99.950 Q1 = 1.994 HREF = .035

SECTION (1) OMB P00 DEPENDENT VARIABLE HU/AC

| X/Z | .7800 | .8000 | .8200 | .8400 | .8600 | .8800 | .9000 | .9200 | .9400 | .9600 | .9800 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | | | | | | | |
| 5.295 | .0064 | .0040 | .0034 | .0073 | .0032 | .0029 | .0042 | | | | | | |
| 5.740 | | .0065 | | | | | | | | | | | |
| 5.850 | | .0100 | | | | | | | | | | | |
| 5.727 | | | .0067 | | | | | | | | | | |
| 5.750 | | | | | | | | | | .0000 | .0032 | | |
| 5.855 | | | .0068 | | | | | | | | | | |
| 5.942 | | | | | | | | | .0071 | | | | |
| 5.975 | | | | | | | | | .0111 | | | | |
| 5.055 | | | | | | | | | .0042 | | | | |
| 5.110 | | | | | | | | | .0030 | | | | |
| 5.222 | | | | | | | | | .0033 | | | | |
| 5.275 | | | | | | | | | | | | | |



(RTN115) (29 APR 74)

AEDC VA332 OMB Q1 ORB. OMS POD

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 B.P.LAP = .000 ELEVON = .000
 HAWAHT = 1.000

REFERENCE DATA

REF = .0238 SQ.FT. XMP = .0000 IN.
 LREF = 22.5803 IN. YMP = .0000 IN.
 BREF = 16.3919 IN. ZMP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = 29.000 TI = 97.667 Q1 = 3.995 HREF = .049

SECTION (1) OMS POD DEPENDENT VARIABLE HU/DO

| X/L | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|--------|
| Z | 8.295 | .0250 | .0541 | .0661 | .0267 | .0310 | .0232 |
| | 8.340 | | .0680 | | | | |
| | 8.650 | | .0482 | | | | |
| | 8.727 | | .0530 | | | | |
| | 8.755 | | | .0243 | .0000 | .0134 | |
| | 8.895 | | .0158 | | | | |
| | 8.942 | | | .0087 | | | |
| | 8.978 | | | .0042 | | | |
| | 9.055 | | | .0048 | | | |
| | 9.119 | | | .0067 | | | |
| | 9.222 | | | .0039 | | | |
| | 9.275 | | | | | | |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 97.667 Q1 = 3.995 HREF = .049

SECTION (1) OMS POD DEPENDENT VARIABLE HU/DO

| X/L | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|--------|--------|
| Z | 8.295 | .0326 | .0875 | .0555 | .0568 | .0090 | .0091 |
| | 8.340 | | .0858 | | | | |
| | 8.650 | | .0356 | .0609 | | | |
| | 8.727 | | | | | | |
| | 8.755 | | | .0201 | .0000 | .0077 | |
| | 8.942 | | .0137 | | | | |
| | 8.978 | | | .0174 | | | |
| | 9.055 | | | .0109 | | | |
| | 9.119 | | | .0040 | | | |
| | 9.222 | | | .0069 | | | |
| | 9.275 | | | .0039 | | | |



MACH (1) = 8.000 ALPHA (3) = 35.000 AEDC VA352 OMB C1 ORB. OMS PCD (RTN13)
 TI = 97.887 Q1 = 3.355 HREF = .049

SECTION (1) OMS PCD DEPENDENT VARIABLE HU/HO

| K/L | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| 2 | | | | | | | |
| 6.296 | .0667 | .0043 | .0082 | .0256 | .0047 | .0041 | .0036 |
| 8.540 | | .066 | | | | | |
| 8.850 | | .0084 | | | | | |
| 9.727 | | | .0123 | | | | |
| 8.750 | | | | | .0000 | .0044 | |
| 8.955 | | | .0079 | .0178 | | | |
| 8.978 | | | | | .0104 | | |
| 9.056 | | | | .0078 | | | |
| 9.118 | | | | .0036 | | | |
| 9.222 | | | | | .0023 | | |
| 9.275 | | | | | .0025 | | |



TABULATED DATA LISTING FOR OH8 (AEDC VA352)

(RTM17) (25 APR 74)

AEDC VA352 OH8 01 ORB. OH8 POD

PARAMETRIC DATA

BETA = .000 FN/L = 3.720
 S.FLAP = 10.000 ELEVON = 5.000
 HAWAHT = 1.000

REFERENCE DATA

STEP = .8236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.700 Q1 = 3.949 HREF = .049

SECTION (1) OH8 POD DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .0322 | .1036 | .0811 | .0646 | .0077 | .0098 | .0083 |
| 8.540 | | .0806 | | | | | |
| 8.650 | | .0365 | | | | | |
| 8.727 | | | .0839 | | | .0000 | .0124 |
| 8.750 | | | | .0168 | | | |
| 8.855 | | | | .0139 | | | |
| 8.979 | | | | | .0159 | | |
| 9.036 | | | | .0112 | | | |
| 9.119 | | | | .0042 | | .0089 | |
| 9.222 | | | | | | .0040 | |
| 9.275 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 97.700 Q1 = 3.949 HREF = .049

SECTION (1) OH8 POD DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .0068 | .0049 | .0087 | .0251 | .0052 | .0071 | .0086 |
| 8.540 | | .0076 | | | | | |
| 8.650 | | .0099 | | | | | |
| 8.727 | | | .0133 | | | .0000 | .0072 |
| 8.750 | | | | .0181 | | | |
| 8.855 | | | .0082 | | | | |
| 8.942 | | | | | .0110 | | |
| 8.976 | | | | .0076 | | | |
| 9.056 | | | | .0036 | | .0026 | |
| 9.118 | | | | | | .0026 | |
| 9.222 | | | | | | | |
| 9.275 | | | | | | | |



(RTNMI8) (25 APR 74)

AEDC VAS32 OMB 01 OMB, OMS POD

REFERENCE DATA

REF = .8239 SQ.FT. XMRP = .0000 IN.
 REF = 22.9803 IN. MRP = .0000 IN.
 REF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = 5.000 RN/L = 3.720
 B.FLAP = 10.000 ELEVON = 5.000
 HAW/HT = 1.000

MACH (1) = 5.000 ALPHA (1) = 30.000 TI = 97.200 Q1 = 3.933 HREF = .049

SECTION (1) OMS POD DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8290 | .841 | .0154 | .0142 | .0102 |
|-------|-------|-------|-------|-------|-------|-------|-------|
| Z | 8.299 | .0960 | .1628 | .5937 | .0541 | .0154 | .0102 |
| 8.340 | | .1177 | | | | | |
| 8.450 | | .0637 | | | | | |
| 8.727 | | .0817 | | | | | |
| 8.750 | | | .0320 | | .0000 | .0081 | |
| 8.855 | | .0249 | | | | | |
| 8.942 | | | | .0102 | | | |
| 8.978 | | .0037 | | | | | |
| 9.056 | | .0086 | | | | | |
| 9.118 | | | .0037 | | | | |
| 9.222 | | | .0040 | | | | |
| 9.275 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 97.200 Q1 = 3.933 HREF = .049

SECTION (1) OMS POD DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8290 | .8420 | .8630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | 8.299 | .0293 | .1272 | .0862 | .0713 | .0209 | .0166 |
| 8.340 | | .0865 | | | | | |
| 8.450 | | .0377 | | | | | |
| 8.727 | | .0566 | | | | | |
| 8.750 | | | .0229 | | .0000 | .0177 | |
| 8.855 | | .0136 | | | | | |
| 8.942 | | | | | | | |
| 8.978 | | | | .0160 | | | |
| 9.056 | | .0077 | | | | | |
| 9.118 | | .0040 | | | | | |
| 9.222 | | | .0030 | | | | |
| 9.275 | | | .0024 | | | | |



AFDC VA332 OMB Q1 OMB, OMS P00

(RTKM19) (25 APR 74)

REFERENCE DATA

REF 1 = .8238 SQ.FT. XHP = .0000 IN.
REF 2 = 22.5603 IN. YHP = .0000 IN.
REF 3 = 16.3919 IN. ZHP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -5.000 RN/L = 2.000
B.FLAP = 10.000 ELEVON = 5.000
HAWAHT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 95.650 QI = 1.963 HREF = .035

SECTION (1) OMS P00 DEPENDENT VARIABLE MU/AO

| Y/L | .7600 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 0.295 | .0482 | .1219 | .0736 | .0317 | .0166 | .0191 | .0193 |
| 0.340 | | .0693 | | | | | |
| 0.650 | | .0629 | | | | | |
| 0.727 | | | .0672 | | | | |
| 0.750 | | | | | .0000 | .0076 | |
| 0.855 | | | | .0312 | | | |
| 0.942 | | | | .0203 | | | |
| 0.976 | | | | | .0060 | .0092 | |
| 0.056 | | | | | .0064 | | |
| 0.116 | | | | | | .0061 | |
| 0.222 | | | | | | .0044 | |
| 0.275 | | | | | | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 95.650 QI = 1.963 HREF = .035

SECTION (1) OMS P00 DEPENDENT VARIABLE MU/AO

| Y/L | .7600 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 0.295 | .0642 | .1335 | .0680 | .0410 | .0389 | .0337 | .0253 |
| 0.340 | | .0923 | | | | | |
| 0.650 | | .0469 | | | | | |
| 0.727 | | | .0569 | | | | |
| 0.750 | | | | | .0000 | .0155 | |
| 0.855 | | | | .0165 | | | |
| 0.942 | | | | .0182 | | | |
| 0.976 | | | | | .0070 | .0101 | |
| 0.056 | | | | | .0065 | | |
| 0.116 | | | | | | .0036 | |
| 0.222 | | | | | | .0033 | |
| 0.275 | | | | | | | |



AEDC VA352 OMB 01 ORB. OMS POD (RTNMR) (25 APR 74)

REFERENCE DATA

REF = .8238 SQ.FT. XMRP = .0000 IN.
REF = 22.9803 IN. YMRP = .0000 IN.
REF = 16.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .0000 FN/L = 2.0000
B.F.LAP = 10.0000 ELEVON = 5.0000
HAW/HT = 1.0000

MACH (1) = 0.000 ALPHA (1) = 30.000 T1 = 95.900 Q1 = 1.980 HREF = .035

SECTION (1) OMS POD DEPENDENT VARIABLE HU/HD

| X/L | Z | .7800 | .8080 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 8.239 | .0066 | .0239 | .0301 | .0247 | .0032 | .0046 | .0035 | |
| 8.540 | .0322 | | | | | | | |
| 8.650 | .0236 | | | | | | | |
| 8.727 | .0429 | | | | | | | |
| 8.750 | | | | | | .0000 | .0043 | |
| 8.855 | .0254 | | | | | | | |
| 8.942 | .0177 | | | | | | | |
| 8.978 | | | | | .0108 | | | |
| 9.098 | .0084 | | | | | | | |
| 9.118 | .0053 | | | | | | | |
| 9.222 | .0044 | | | | | | | |
| 9.275 | .0034 | | | | | | | |

MACH (1) = 0.000 ALPHA (2) = 39.000 T1 = 95.900 Q1 = 1.980 HREF = .035

SECTION (1) OMS POD DEPENDENT VARIABLE HU/HD

| X/L | Z | .7800 | .8080 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| 8.239 | .0062 | .0041 | .0038 | .0061 | .0036 | .0039 | .0060 | |
| 8.540 | .0065 | | | | | | | |
| 8.650 | .0100 | | | | | | | |
| 8.727 | .0081 | | | | | | | |
| 8.750 | | | | | | .0000 | .0039 | |
| 8.855 | .0069 | | | | .0067 | | | |
| 8.942 | | | | | | | | |
| 8.978 | .0099 | | | | | .0070 | | |
| 9.098 | .0045 | | | | | | | |
| 9.118 | | | | | | | | |
| 9.222 | .0034 | | | | | | | |
| 9.275 | .0036 | | | | | | | |



(RTIME21) (25 APR 74)

AEDC VA332 QMB 01 QMB. QMS P00

PARAMETRIC DATA

BETA = 4.000 (N/L) = .500
S.FLAP = 10.000 ELEVON = 5.000
HAW/HT = 1.000

REFERENCE DATA

STEP 3 .8236 SQ.FT. XMRP = .0000 IN.
STEP 4 22.5803 IN. XMRP = .0000 IN.
STEP 5 16.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 91.990 QI = .516 HREF = .017

SECTION (1) QMS P00 DEPENDENT VARIABLE MU/MD

X/L .7800 .8090 .8290 .8620 .8630 1.0000 1.0140

Z
6.295 .0290 .0907 .0845 .0629 .0517 .0465 .0356
6.940 .0791
6.650 .0504
6.727 .0666
6.750 .0000 .0171
6.695 .0316
6.942 .0252
6.978 .0119
6.056 .0040
9.116 .0083
9.222 .0086
9.275 .0034

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 91.990 QI = .516 HREF = .017

SECTION (1) QMS P00 DEPENDENT VARIABLE MU/MD

X/L .7800 .8090 .8290 .8620 .8630 1.0000 1.0140

Z
6.295 .0145 .0671 .0704 .0612 .0242 .0161 .0130
6.940 .0838
6.690 .0335
6.727 .0666
6.750 .0000 .0172
6.695 .0253
6.942 .0213
6.978 .0174
9.056 .0039
9.116 .0076
9.222 .0036
9.275 .0029

(RTM22) (25 APR 74)

AEDC VAS32 OMB 01 ORG. OMS MOD

REFERENCE DATA

STEP = .0238 34.FT. INCP = .0000 IN.
 LREF = 22.5803 IN. W/P = .0000 IN.
 HREF = 16.3919 IN. Z/P = .0000 IN.
 SCALE = .0195 SCALE

PARAMETRIC DATA

BETA = .0000 RW/L = .500
 S.F.LAP = 10.0000 ELEVON = 9.000
 MAX/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 93.400 QI = .923 HREF = .018

SECTION (1) OMS MOD DEPENDENT VARIABLE MU/AC

| X/Y | .7800 | .8000 | .8200 | .8400 | .8600 | .8800 | .9000 | .9200 | .9400 | .9600 | .9800 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|-------|-------|--------|-------|-------|-------|--------|--------|
| Z | 0.254 | 0.043 | 0.112 | 0.123 | 0.114 | 0.047 | 0.049 | 0.0049 | | | | | |
| | 0.340 | | 0.126 | | | | | | | | | | |
| | 0.650 | | 0.074 | | | | | | | | | | |
| | 0.727 | | 0.191 | | | | | | | | | | |
| | 0.750 | | | | | | | | | | | | |
| | 0.804 | | | | | | | | | | | | |
| | 0.842 | | | | | | | | | | | | |
| | 0.874 | | | | | | | | | | | | |
| | 0.875 | | | | | | | | | | | | |
| | 0.118 | | | | | | | | | | | | |
| | 0.222 | | | | | | | | | | | | |
| | 0.275 | | | | | | | | | | | | |

MACH (2) = 6.000 ALPHA (2) = 30.000 TI = 93.400 QI = .923 HREF = .018

SECTION (1) OMS MOD DEPENDENT VARIABLE MU/AC

| X/Y | .7800 | .8000 | .8200 | .8400 | .8600 | .8800 | .9000 | .9200 | .9400 | .9600 | .9800 | 1.0000 | 1.0140 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | 0.276 | 0.021 | 0.029 | 0.046 | 0.060 | 0.021 | 0.024 | 0.016 | | | | | |
| | 0.140 | | 0.034 | | | | | | | | | | |
| | 0.650 | | 0.031 | | | | | | | | | | |
| | 0.727 | | | | | | | | | | | | |
| | 0.750 | | | | | | | | | | | | |
| | 0.804 | | | | | | | | | | | | |
| | 0.842 | | | | | | | | | | | | |
| | 0.874 | | | | | | | | | | | | |
| | 0.875 | | | | | | | | | | | | |
| | 0.118 | | | | | | | | | | | | |
| | 0.222 | | | | | | | | | | | | |
| | 0.275 | | | | | | | | | | | | |



(RTN#23) (25 APR 74)

AEDC VAS32 OHB 01 ORB, OHB P00

REFERENCE DATA

REF = .0236 SQ.FT. MIP = .0000 IN.
 REF = 22.5623 IN. MIP = .0000 IN.
 REF = 16.3913 IN. MIP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RY/L = .500
 B.FLAP = 10.000 ELEVON = 10.000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 29.000 TI = 93.433 QI = .521 HREF = .016

SECTION (1) OHB P00 DEPENDENT VARIABLE MU/MD

| X/C | .7600 | .8000 | .8250 | .8820 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 0.296 | .0046 | .0222 | .0356 | .0321 | .0116 | .0107 | .0079 |
| 0.540 | | .0276 | | | | | |
| 0.650 | | .0209 | | | | | |
| 0.727 | | | .0521 | | | | |
| 0.750 | | | | .0279 | | .0000 | .0066 |
| 0.842 | | | | .0163 | | | |
| 0.976 | | | | | .0139 | | |
| 0.986 | | | | .0026 | | | |
| 0.116 | | | | .0074 | | | |
| 0.222 | | | | | .0057 | | |
| 0.275 | | | | | .0026 | | |

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 93.433 QI = .521 HREF = .016

SECTION (1) OHB P00 DEPENDENT VARIABLE MU/MD

| X/C | .7600 | .8000 | .8250 | .8820 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 0.296 | .0042 | .0116 | .0135 | .0131 | .0049 | .0046 | .0039 |
| 0.540 | | .0136 | | | | | |
| 0.650 | | .0099 | | | | | |
| 0.727 | | | .0215 | | | | |
| 0.750 | | | | .0172 | | .0000 | .0049 |
| 0.842 | | | .0076 | | | | |
| 0.976 | | | | | .0076 | | |
| 0.986 | | | | .0034 | | | |
| 0.116 | | | | .0041 | | | |
| 0.222 | | | | | .0068 | | |
| 0.275 | | | | | .0036 | | |



(RTM#23)

WACH (1) = 0.000 ALPHA (3) = 35.000 Y1 = 93.433 Q1 = .5

SECTION (1) OMB POC DEPENDENT VARIABLE H4U7G

| Y2 | .780C | .602D | .829C | .882C | .963C | 1.000C | 1.014C |
|--------|-------|-------|-------|-------|-------|--------|--------|
| 0.299 | .002C | .003D | .004B | .005B | .0011 | .0060 | .0123 |
| 0.340 | | .0037 | | | | | |
| 0.490 | | .0033 | | | | | |
| 0.727 | | .0068 | | | | | |
| 0.750 | | | | | .0000 | .0082 | |
| 0.822 | | | .0074 | | | | |
| 0.876 | | | | | .0030 | | |
| 0.906 | | | .0049 | | | | |
| 0.916 | | | .0029 | | | | |
| 0.9222 | | | | | .0044 | | |
| 0.9275 | | | | | .0029 | | |



AEDC VAS52 QMB Q1 QMB QMS MOD

(RTK24) (23 APR 74)

REFERENCE DATA

REF # 0236 S4.F1 PWP = 0.000 IN.
 REF # 243863 IN. MFB = 0.000 IN.
 REF # 383519 IN. MFB = 0.000 IN.
 SCALE = 0.195 SCALE

PARAMETRIC DATA

BETA = 0.000 R-V/L = 0.000
 S.F.M.P = 10.000 ELEVON = 10.000
 HAWAHT = 1.000

HAWAHT (1) = 0.000 ALPHA (1) = 29.000 T1 = 93.233 Q1 = .923 REF = .018
 SECTION (1) QMS MOD DEPENDENT VARIABLE HJ/AO

| REF # | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0299 | .7600 | .8000 | .8400 | .8800 | .9200 | .9600 | 1.0000 | 1.0400 | 1.0800 | 1.1200 |
| 0300 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 |
| 0301 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 |
| 0302 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 |
| 0303 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 |
| 0304 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 |
| 0305 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 |
| 0306 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 |
| 0307 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 |
| 0308 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 |
| 0309 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 |
| 0310 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 |

HAWAHT (2) = 0.000 ALPHA (2) = 30.000 T1 = 93.233 Q1 = .923 REF = .018
 SECTION (2) QMS MOD DEPENDENT VARIABLE HJ/AO

| REF # | Y1 | Y2 | Y3 | Y4 | Y5 | Y6 | Y7 | Y8 | Y9 | Y10 |
|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0299 | .7600 | .8000 | .8400 | .8800 | .9200 | .9600 | 1.0000 | 1.0400 | 1.0800 | 1.1200 |
| 0300 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 | .0217 |
| 0301 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 | .0622 |
| 0302 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 | .0914 |
| 0303 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 | .0460 |
| 0304 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 | .0685 |
| 0305 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 | .0230 |
| 0306 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 | .0120 |
| 0307 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 | .0037 |
| 0308 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 | .0065 |
| 0309 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 | .0044 |
| 0310 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 | .0035 |



(RTN#24)

MACH (1) = 0.000 ALPHA (3) = 30.000 Y1 = 93.233 O1 = .323 MEF = .010

SECTION (1) OMS POD

DEPENDENT VARIABLE MU/NO

| 1/2 | .7800 | .6050 | .0250 | .0420 | .9830 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| 2 | | | | | | | |
| 0.290 | .0157 | .0836 | .0732 | .0837 | .0187 | .0179 | .0154 |
| 0.340 | | .0832 | | | | | |
| 0.650 | | .0334 | | | | | |
| 0.727 | | .0856 | | | | | |
| 0.750 | | | | .0235 | .0000 | .0187 | |
| 0.893 | | | .0207 | | | | |
| 0.942 | | | | | | | |
| 0.970 | | | | | .0179 | | |
| 0.976 | | | .0037 | | | | |
| 0.110 | | | .0077 | | | | |
| 0.222 | | | | | .0036 | | |
| 0.275 | | | | | .0084 | | |



AEDC VAS32 OHMB Q1 ORS. OMS POD

(RTN25) (25 APR 74)

REFERENCE DATA

REF = .8238 SQ.FT. XMRP = .0000 IN.
 YREF = 22.3803 IN. YMRP = .0000 IN.
 ZREF = 15.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = 2.000
 S.FLAP = 10.000 ELEVON = 10.000
 HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.650 QI = 1.985 HREF = .035

SECTION (1) OMS POD

DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8250 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .0052 | .0231 | .0302 | .0240 | .0058 | .0044 | .0040 |
| 8.540 | | .0312 | | | | | |
| 8.650 | | .0231 | | | | | |
| 8.727 | | | .0430 | | | | |
| 8.750 | | | | .0256 | | .0000 | .0040 |
| 8.855 | | | | .0173 | | | |
| 8.942 | | | | | .0112 | | |
| 8.978 | | | | | .0069 | | |
| 9.056 | | | | | .0049 | | |
| 9.118 | | | | | .0045 | | |
| 9.222 | | | | | .0033 | | |
| 9.275 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.650 QI = 1.985 HREF = .035

SECTION (1) OMS POD

DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8250 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .0082 | .0036 | .0036 | .0082 | .0036 | .0028 | .0146 |
| 8.540 | | .0062 | | | | | |
| 8.650 | | .0097 | | | | | |
| 8.727 | | | .0061 | | | | |
| 8.750 | | | | .0054 | | .0000 | .0066 |
| 8.855 | | | | .0071 | | | |
| 8.942 | | | | | .0071 | | |
| 8.978 | | | | | .0099 | | |
| 9.056 | | | | | .0045 | | |
| 9.118 | | | | | .0034 | | |
| 9.222 | | | | | .0034 | | |
| 9.275 | | | | | | | |



TABULATED DATA LISTING FOR OMB (AEDC VAB92)

AEDC VAB92 OMB 01 ORB, OMS POD

(RTNRS) (23 APR 74)

REFERENCE DATA

SREF = .8238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = 7175 SCALE

PARAMETRIC DATA

BETA = -5.000 RN/L = 2.000
 S.FLAP = 10.000 ELEVON = 10.000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 95.450 QI = 1.983 HREF = .035

SECTION (1) OMS POD DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.296 | .0476 | .1223 | .0738 | .0316 | .0134 | .0166 | .0136 |
| 8.340 | | .0899 | | | | | |
| 8.650 | | .0516 | | | | | |
| 8.727 | | .0665 | | | | | |
| 8.750 | | | | | .0000 | .0079 | |
| 8.855 | | | | .0305 | | | |
| 8.942 | | | .0200 | | | | |
| 8.978 | | | | | .0099 | | |
| 9.056 | | | | .0067 | | | |
| 9.118 | | | | .0067 | | | |
| 9.222 | | | | | .0062 | | |
| 9.275 | | | | | .0042 | | |

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 96.450 QI = 1.983 HREF = .035

SECTION (1) OMS POD DEPENDENT VARIABLE HU/HO

| X/L | .7800 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.296 | .0871 | .1357 | .0565 | .0329 | .0393 | .0342 | .0263 |
| 8.340 | | .0887 | | | | | |
| 8.650 | | .0499 | | | | | |
| 8.727 | | .0686 | | | | | |
| 8.750 | | | | | .0000 | .0145 | |
| 8.855 | | | | .0166 | | | |
| 8.942 | | .0193 | | | | | |
| 8.978 | | | | .0065 | | .0094 | |
| 9.056 | | | | .0067 | | | |
| 9.118 | | | | .0067 | | | |
| 9.222 | | | | | .0039 | | |
| 9.275 | | | | | .0035 | | |



AEDC VAS32 OH4B 01 ORS OH2 POD

(RTNME7) (25 APR 74)

REFERENCE DATA

STEP # .0236 3d.FT. XMRP # .0300 IN.
 REF # 22.5903 IN. YMRP # .0300 IN.
 STEP # 16.3919 IN. ZMRP # .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

BETA # .000 RN/L # 3.720
 S.FLAP # 10.000 ELEVON # 10.000
 MAW/MT # 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION (1) OH4B POD DEPENDENT VARIABLE MU/MD

| X/L | .7800 | .8000 | .8290 | .8820 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|-------------|
| Z | 8.295 | .0255 | .0958 | .0574 | .0256 | .0222 | .0312 .0254 |
| 8.540 | .0877 | | | | | | |
| 8.650 | .0487 | | | | | | |
| 8.727 | .0544 | | | | | | |
| 8.750 | | | | .0246 | | .0000 | .0115 |
| 8.855 | | | | .0163 | | | |
| 8.942 | | | | .0042 | | .0092 | |
| 8.978 | | | | .0051 | | | |
| 9.096 | | | | | | .0061 | |
| 9.118 | | | | | | .0031 | |
| 9.222 | | | | | | | |
| 9.275 | | | | | | | |

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION (1) OH4B POD DEPENDENT VARIABLE MU/MD

| X/L | .7800 | .8000 | .8290 | .8820 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|-------------|
| Z | 8.295 | .0324 | .0834 | .0527 | .0619 | .0088 | .0034 .0088 |
| 8.540 | .0850 | | | | | | |
| 8.650 | .0367 | | | | | | |
| 8.727 | .0871 | | | | | | |
| 8.750 | | | | .0181 | | .0000 | .0093 |
| 8.855 | | | | .0144 | | | |
| 8.942 | | | | | | | |
| 8.978 | | | | .0109 | | .0171 | |
| 9.096 | | | | .0044 | | | |
| 9.118 | | | | | | | |
| 9.222 | | | | | | .0062 | |
| 9.275 | | | | | | .0039 | |



MACH (1) = 0.000 ALPHA (3) = 35.000 ORB. OMB POD (RTW27)
 AEDC VA392 OMB 01 ORB. OMB POD = 3.936 HREF = .049
 TI = 97.367 Q1

SECTION (1) OMB POD DEPENDENT VARIABLE MU/HD

| X/ | .7800 | .8090 | .8290 | .8620 | .8630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .0017 | .0073 | .0080 | .0235 | .0051 | .0111 | .0173 |
| 8.540 | | .0088 | | | | | |
| 8.650 | | .0082 | | | | | |
| 8.727 | | .0111 | | | | | |
| 8.750 | | | | | .0000 | .0063 | |
| 8.855 | | | | .0184 | | | |
| 8.942 | | .0077 | | | | | |
| 8.978 | | | | | .0097 | | |
| 9.095 | | | .0078 | | | | |
| 9.118 | | | .0036 | | | | |
| 9.222 | | | | | .0025 | | |
| 9.275 | | | | | .0078 | | |



AEDC VA352 OHMB 01 ORB. OHMB P00

(RTM28) (25 APR 74)

REFERENCE DATA

REF = .6236 30.FT. XHIP = .0000 IN.
 LFT = 22.1803 IN. YHIP = .0000 IN.
 BPF = 16.3919 IN. ZHIP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -6.000 RN/L = 3.720
 B.FLAP = 10.000 ELEVON = 10.000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 97.300 QI = 3.930 WREF = .049

SECTION (1) OHMB P00 DEPENDENT VARIABLE HU/AD

| X/L | .7600 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.296 | .0564 | .1397 | .0840 | .0516 | .0174 | .0165 | .0180 |
| 8.540 | .1131 | | | | | | |
| 8.650 | .0636 | | | | | | |
| 8.727 | | .0751 | | | | | |
| 8.855 | | | .0392 | | .0000 | .0111 | |
| 8.942 | | | .0232 | | | | |
| 8.978 | | | | .0118 | | | |
| 9.036 | | | .0036 | | | | |
| 9.118 | | | .0063 | | | | |
| 9.222 | | | | .0050 | | | |
| 9.275 | | | | .0029 | | | |

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 97.300 QI = 3.930 WREF = .049

SECTION (1) OHMB P00 DEPENDENT VARIABLE HU/AD

| X/L | .7600 | .8050 | .8290 | .8620 | .9630 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.296 | .0393 | .1188 | .0747 | .0396 | .0178 | .0180 | .0153 |
| 8.540 | .0967 | | | | | | |
| 8.650 | .0496 | | | | | | |
| 8.727 | | .0656 | | | | | |
| 8.750 | | | .0297 | | .0000 | .0103 | |
| 8.855 | | .0199 | | | | | |
| 8.942 | | | | .0067 | | | |
| 8.978 | | .0081 | | | | | |
| 9.016 | | .0081 | | | | | |
| 9.118 | | | .0049 | | | | |
| 9.222 | | | .0046 | | | | |
| 9.275 | | | | | | | |



MACH (1) = 8.000 ALPHA (3) = 35.000 AEDC VA352 OHMB 01 ORB. OHMB POD (RTWMB)
 = 97.300 Q1 = 3.930 HREF = .049

SECTION (1) OHMB POD DEPENDENT VARIABLE HU/HD

| K/L | .7800 | .8050 | .8250 | .8620 | .9830 | 1.0000 | 1.0140 |
|-------|-------|-------|-------|-------|-------|--------|--------|
| Z | | | | | | | |
| 8.295 | .0514 | .1044 | .0665 | .0374 | .0317 | .0363 | .0298 |
| 8.340 | .0767 | | | | | | |
| 8.650 | .0457 | | | | | | |
| 8.727 | | .0843 | | | | | |
| 8.750 | | | | | | | |
| 8.955 | | | | .0207 | .0000 | .0118 | |
| 8.942 | | | .0182 | | | | |
| 8.979 | | | | | .0093 | | |
| 9.025 | | | | .0060 | | | |
| 9.116 | | | | .0084 | | | |
| 9.222 | | | | | .0031 | | |
| 9.275 | | | | | .0027 | | |



AEDC VAS32 OMB CIVIC OPS. FUSELAGE Y=0.875

(RTKY01) (25 APR 74)

REFERENCE DATA

STEP = .0239 SQ.FT. KMCP = .0000 IN.
STEP = 22.5803 IN. MCF = .0000 IN.
STEP = 16.3919 IN. ZMCP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
S.FLAP = .000 ELEVON = .000
MAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -10.000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
Y .875 .1240 .0259 .0368 .0331 .0353 .0244 .0884 .0101

MACH (1) = 8.000 ALPHA (2) = -6.000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
Y .875 .1188 .0232 .0364 .0308 .0236 .0225 .0633 .0099

MACH (1) = 8.000 ALPHA (3) = .000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
Y .875 .0152 .0276 .0248 .0234 .0213 .0137 .0560 .0112

MACH (1) = 8.000 ALPHA (4) = 9.000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
Y .875 .0163 .0261 .0212 .0190 .0181 .0147 .0608 .0081

AEDC V4332 Q4B Q1+TID ORB. FUSELAGE YFO.073

(RTK02) (23 APR 74)

REFERENCE DATA

STEP = .0236 93.71. XMRP = .0000 IN.
 STEP = 82.5803 IN. XMRP = .0000 IN.
 STEP = 16.3919 IN. XMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RN/L = 3.720
 B.F.LAP = .000 ELEVON = .000
 HAWK/T = 1.000

MACH (1) = 6.000 BETA (1) = .0000 T1 = 97.350 Q1 = 3.942 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .873 .0229 .0302 .0306 .0281 .0266 .0226 .1063 .0083

MACH (1) = 6.000 BETA (2) = .000 T1 = 97.350 Q1 = 3.942 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .873 .0152 .0276 .0248 .0234 .0213 .0137 .0560 .0112



REFERENCE DATA

STEP # .0238 3/4 FT. X MP = .0000 IN.
 STEP # .025003 IN. Y MP = .0000 IN.
 STEP # .033915 IN. Z MP = .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = .680
 B.P.LAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = -10.000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.875 .0942 .0298 .0285 .210 .0124 .0119 .0136 .0151

MACH (1) = 6.000 ALPHA (2) = -5.000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.875 .0499 .0208 .0294 .0218 .0116 .0142 .0120 .0115

MACH (1) = 6.000 ALPHA (3) = .000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.875 .0097 .0277 .0265 .0231 .0169 .0147 .0173 .0080

MACH (1) = 6.000 ALPHA (4) = 5.000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.875 .0143 .0178 .0179 .0175 .0124 .0125 .0264 .0047

AEDC VA352 OHB 01+110 ORB. FUSELAGE W=0.873

(RTK/M) (25 APR 74)

REFERENCE DATA

SWP = .8238 SQ.FT. XMRP = .0000 IN.
ZWP = 22.2903 IN. MRP = .0000 IN.
SITE = 16.3415 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 TN = .680
B.FLAP = .000 ELEVON = .000
HAWKHT = 1.000

MACH (1) = 6.000 BETA (1) = -2.000 TI = 93.950 QI = .681 MREF = .020

SECTION (1) 110GEMER FUSELAGE DEPENDENT VARIABLE HI/40

X/Z .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .873 .0206 .0196 .0179 .0140 .0108 .0336 .0062

MACH (1) = 6.000 BETA (2) = .000 TI = 93.950 QI = .681 MREF = .020

SECTION (1) 110GEMER FUSELAGE DEPENDENT VARIABLE HI/40

X/Z .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .873 .0097 .0277 .0285 .0231 .0169 .0147 .0173 .0060



(RTKXG) (25 APR 74)

SECTION 1: 064, 1ER FUELSAGE (AECG VAS52)

SECTION 2: 064, 1ER FUELSAGE (AECG VAS52)

REFERENCE DATA

PARAMETRIC DATA

X 1 8,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000
 Y 1 8,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000
 X 2 8,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000
 Y 2 8,000 3,000 4,000 5,000 6,000 7,000 8,000 9,000

DETA = 1,000

RM/0 = 3,720

ELFAP = 1,000

ELEVON = 1,000

MAWRT = 1,000

HREF = 4,007

TI = 98,087

RI = 98,087

RI = 98,087

RI = 98,087

RI = 98,087



AEDC VAS32 OHMB 01 ORB. FUSELAGE YEC,874

ORIENTATION (25 APR 74)

REFERENCE DATA

REF # 1236 34.1 FT. 1MP # .0000 IN.
REF # 22 22.000 IN. 1MP # .0000 IN.
REF # 18 18.919 IN. 2MP # .0000 IN.
SCALE # 0.075 SCALE

RADIOMETRIC DATA

BETA # 10.0 RVAL = 3.720
B.F.U.P # .0000 EUTYON = .0000
MAYDAY # 1.0000

PARAM # 1) # 0.000 ALPHA (1) # -0.000 T1 # 98,800 Q1 # 3.981 HREF # .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJAJC

X # 1) # 0.000 3.000 4.000 5.000 6.000 7.000 8.000 9.000

Y # 1) # 0.000 0.000 0.004 0.008 0.012 0.016 0.021 0.024

PARAM # 1) # 0.000 ALPHA (2) # .000 T1 # 98,800 Q1 # 3.981 HREF # .049

SECTION (2) ORBITER FUSELAGE DEPENDENT VARIABLE HJAJC

X # 1) # 0.000 3.000 4.000 5.000 6.000 7.000 8.000 9.000

Y # 1) # 0.000 0.0127 0.027 0.042 0.057 0.073 0.088 0.098



ALPHA 21

PARAMETER DATA

BETA 1 .007 1000 .080
BETA 2 .007 1000 .080
MAXIMUM 1.000

.077 1000 .080

DEPENDENT VARIABLE MU/MD

ALPHA 21 11 97.000 31 .077 1000 .080

ALPHA 21 11 93.000 31 .077 1000 .080

DEPENDENT VARIABLE MU/MD

ALPHA 21 11 93.000 31 .077 1000 .080

ALPHA 21 11 93.000 31 .077 1000 .080



AEDC VAS32 0949 01 ORB. FUELSAGE 150.873

(STATS) (25 APR 68)

REFERENCE DATA

REF # .0236 SQ.FT. XMP # .0000 IN.
REF # 22.8553 IN. XMP # .0000 IN.
REF # 4.3515 IN. ZMP # .0000 IN.
SCALE # 0.0175 SCALE

MACH (1) = 6.000 ALPHA (1) = 25.000 Y1 = 93.400 a1 = .524 REF = .018

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HUARD

X/C .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .075 .0761 .0812 .0815 .0811 .0392 .0376 .0300 .0244

MACH (1) = 6.000 ALPHA (2) = 30.000 Y1 = 93.400 a1 = .524 REF = .018

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HUARD

X/C .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .075 .0901 .0746 .0836 .0866 .0461 .0479 .0366 .0361

MACH (1) = 6.000 ALPHA (3) = 35.000 Y1 = 93.400 a1 = .524 REF = .018

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HUARD

X/C .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .075 .1083 .0896 .0736 .0867 .0866 .0866 .0498 .0393

PARAMETRIC DATA

SEYA = .000 REF = .500
B.P.UAF = .000 ELEVON = .000
MAN/OT = 1.000



REFERENCE DATA

SREF = .8238 SQ.FT. XW/FP = .0000 IN.
 LREF = 22.5803 IN. YW/FP = .0000 IN.
 BREF = 16.3919 IN. ZW/FP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = 1.000
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.100 QI = 1.000 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .0983 .0755 .0616 .0460 .0474 .0344 .0297

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.100 QI = 1.000 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .1046 .0890 .0750 .0667 .0646 .0435 .0381

MACH (1) = 8.000 ALPHA (3) = 40.000 TI = 94.100 QI = 1.000 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .1198 .0953 .0877 .0787 .0644 .0580 .0488

AEDC V4332 OMS OF STD. FUSELAGE YFO,67C

(RTK14, (25 APR 74)

REFERENCE DATA

SREF = .8238 SQ.FT. XMSF = .0000 IN.
LREF = 22.5003 IN. WHP = .0000 IN.
BREF = 16.3319 IN. ZHP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 2.000
B.FLAP = .000 ELEVON = .000
MAN/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 95.550 QI = 1.994 HREF = .033

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/QO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y

.875 .0893 .0743 .0631 .0545 .0451 .0519 .0484 .0565

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 95.550 QI = 1.994 HREF = .033

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/QO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y

.875 .1049 .0886 .0759 .0656 .0543 .0672 .0726 .0906



REFERENCE DATA

SEP = .8238 SQ.FT. XMRP = .0000 IN.
 YEP = 22.9803 IN. YMRP = .0000 IN.
 BEP = 15.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 S.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 T1 = 97.887 Q1 = 3.955 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | Y | Z/L | U | V | W | T1 | Q1 | HREF |
|-------|-------|-------|-------|-------|-------|-------|-------|------|
| .2000 | .3000 | .4000 | .5000 | .6000 | .7000 | .8000 | .9000 | |
| .0745 | .0809 | .0511 | .0485 | .0388 | .0483 | .0830 | .0914 | |

MACH (2) = 8.000 ALPHA (2) = 30.000 T1 = 97.887 Q1 = 3.955 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | Y | Z/L | U | V | W | T1 | Q1 | HREF |
|-------|-------|-------|-------|-------|-------|-------|-------|------|
| .2000 | .3000 | .4000 | .5000 | .6000 | .7000 | .8000 | .9000 | |
| .0908 | .0749 | .0848 | .0803 | .0597 | .1138 | .1797 | .1716 | |

MACH (3) = 8.000 ALPHA (3) = 35.000 T1 = 97.887 Q1 = 3.955 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

| X/L | Y | Z/L | U | V | W | T1 | Q1 | HREF |
|-------|-------|-------|-------|-------|-------|-------|-------|------|
| .2000 | .3000 | .4000 | .5000 | .6000 | .7000 | .8000 | .9000 | |
| .1072 | .0822 | .0778 | .0828 | .1227 | .2235 | .2439 | .2027 | |

AEDC VAS32 OMB 01 ORB. FUSELAGE YFD.073

(RTK16) (23 APR 74)

REFERENCE DATA

STEP = .0238 39.F.T. XMRP = .0000 IN.
 LREF = 22.5363 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0173 SCALE

PARAMETRIC DATA

BETA = .0000 RN/L = 3.720
 S.FLAP = .0000 ELEVON = .0000
 HAWAHT = 1.0000

MACH (1) = 8.0000 ALPHA (1) = 30.0000 TI = 37.0000 JI = 3.958 WREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE: YFD

| X/L | .2000 | .3070 | .4000 | .5000 | .6330 | .7000 | .8000 | .9000 |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|
| Y | .0975 | .0910 | .0747 | .0640 | .0591 | .0510 | .1117 | .1766 |



AEDC VAS32 OMB Q1 ORB, FUSELAGE Y40.873

(RTK117) (25 APR 74)

REFERENCE DATA

XREF = .8238 SQ.FT. XMRP = .0000 IN.
 YREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 16.3319 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 IN/L = 3.720
 S.FLAP = 10.000 ELEVON = 5.000
 HAH/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.700 QI = 3.949 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .0912 .0752 .0651 .0602 .0606 .1155 .1791 .1728

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 97.700 QI = 3.949 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .1095 .0917 .0772 .0816 .1238 .2221 .2437 .2001



AEDC VA352 OH-1B 01 ORG. FUSELAGE YPO.075

(RTN/20) (25 APR 74)

REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
LREF = 22.3903 IN. YMRP = .0000 IN.
BREF = 16.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 59.900 Q1 = 1.980 HREF = .035

SECTION (1) 1/4 INCH FUSELAGE DEPENDENT VARIABLE MU/AD

X/C .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.075 .0901 .0763 .0824 .0845 .0457 .0518 .0504 .0623

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 59.900 Q1 = 1.980 HREF = .035

SECTION (1) 1/4 INCH FUSELAGE DEPENDENT VARIABLE MU/AD

X/C .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.075 .0773 .0681 .0742 .0636 .0655 .0678 .0729 .0868

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
B.FLAP = 10.000 ELEVON = 5.000
MAN/HT = 1.000



(RTK122) (23 APR 74)

AEDC VA352 OH4B Q1 ORB. FUSELAGE Y=0.875

REFERENCE DATA

SREF = .9238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 15.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

BETA = .000 RN/L = .900
 B.FLAP = 10,000 ELEVON = 9,000
 MAW/HT = 1,000

MACH (1) = 8.000 ALPHA (1) = 30.000 T1 = 93,400 Q1 = .523 MREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .0905 .0747 .0640 .0565 .0490 .0488 .0371 .0317

MACH (1) = 8.000 ALPHA (2) = 35.000 T1 = 93,400 Q1 = .523 MREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .1048 .0894 .0755 .0697 .0569 .0564 .0454 .0361



MEDC VA352 OH-8 Q1 ORB. FUSELAGE YR. 873

(RTK123) (25 APR 74)

REFERENCE DATA

STEP # .9238 SQ.FT. 2MRP = .0000 IN.
STEP # 22.5803 IN. 1MRP = .0000 IN.
STEP # 16.3919 IN. 2MRP = .0000 IN.
SCALE # .0179 SCALE

PARAMETRIC DATA

BETA # .000 RN/L = .500
S.FLAP # 10.000 ELEVON # 10.000
HAWAHT # 1.000

MACH (1) = 8.000 ALPHA (1) = 29.000 TI = 93.433 QI = .521 MREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MC

X/L .2500 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y

.875 .0756 .0806 .0808 .0476 .0392 .0391 .0298 .0233

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 93.433 QI = .521 MREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MC

X/L .2500 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y

.875 .0925 .0794 .0645 .0576 .0488 .0481 .0372 .0300

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.433 QI = .521 MREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MC

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y

.875 .1080 .0903 .0777 .0706 .0576 .0496 .0439 .0377



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTN 125) (25 APR 74)

AEDC VAS32 OMB 01 OMB FUSELAGE F0.875

PARAMETRIC DATA

BETA = .000 FN/C = 2.000
B.FLAP = 10.000 ELEVON = 10.000
MAN/HT = 1.000

REFERENCE DATA

STEP = 0236 SQ.FT. 1MPS = .0000 IN.
REF = 22.5603 IN. 1MPS = .0000 IN.
REF = 10.2519 IN. 2MPS = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = 30.000 T1 = 94.650 Q1 = 1.985 HREF = .035

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE MU/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.675 .0900 .0780 .0627 .0445 .0205 .0021 .0055

MACH (1) = 6.000 ALPHA (2) = 35.000 T1 = 94.650 Q1 = 1.985 HREF = .035

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE MU/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.875 .1074 .0886 .0738 .0664 .0558 .0472 .0465

MEDC VASSE OH-8 01 ORB. FUELSAGE (50.875

(RTRY2) (25 APR 74)

REFERENCE DATA

SECT 1 = 6236 30.FT. 1MRP = .0000 IN.
SECT 2 = 22.5603 IN. 1MRP = .0000 IN.
SECT 3 = 16.3915 IN. 2MRP = .0000 IN.
SCALE = 10195 SCALE

PARAMETRIC DATA

BETA = .000 TR/L = 3.720
S.F.U.S. = 10.000 ELEVON = 10.000
MAN/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = 29.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION 1 (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/AD

Y .075 .0744 .0820 .0827 .0484 .0392 .0491 .0817 .0915

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION 1 (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/AD

Y .075 .0700 .0700 .0700 .0700 .0700 .0700 .0700 .0700

.075 .0620 .0791 .0844 .0809 .0801 .1141 .1797 .1730

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION 1 (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/AD

Y .075 .1076 .0901 .0773 .0827 .1222 .2187 .2428 .2043



DATE 23 SEP 74

TABULATED DATA LISTING FOR OMB (AEDC VA332)

(RTRV29) (23 APR 74)

AEDC VA332 OMB 02 ORG. FUSELAGE 140.873

PARAMETRIC DATA

BETA = .000 RV/L = 3.720
 B.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

REFERENCE DATA

WET = .8236 SQ.FT. XMP = .0000 IN.
 LCP = 22.5803 IN. XMP = .0000 IN.
 SCP = 16.3919 IN. ZMP = .0000 IN.
 SCALE = .0173 SCALE

MACH (1) = 6.000 ALPHA (1) = 25.000 T1 = 97.087 Q1 = 3.940 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .873 .0732 .0824 .0814 .0489 .0382 .0474 .0816 .0949

MACH (1) = 6.000 ALPHA (2) = 30.000 T1 = 97.087 Q1 = 3.940 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .808 .0776 .0858 .0869 .0893 .1098 .1710 .1747

MACH (1) = 6.000 ALPHA (3) = 35.000 T1 = 97.087 Q1 = 3.940 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .1047 .0677 .0770 .0408 .1123 .2087 .2412 .2028

AEDC VAS92 Q448 OF 088, FUELSAGE Y=0.873

(RTKYSO) (25 APR 74)

REFERENCE DATA

UET = .6256 SQ.FT. 1MP = .0000 IN.
 REF = 22.5803 IN. 1MP = .0000 IN.
 REF = 18.3529 IN. 2MP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 2.000
 B.FLAP = .000 ELEVON = .000
 MAW/MT = 1.000

MAW (1) = 0.000 ALPHA (1) = 25.000 TI = 94.933 QI = 1.986 HREF = .033

SECTION (1) : 08117ER FUELSAGE DEPENDENT VARIABLE HU44D

Y/L = .2500 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.873 .743 .613 .484 .352 .222 .092 .0263

MAW (1) = 0.000 ALPHA (2) = 30.000 TI = 94.933 QI = 1.986 HREF = .033

SECTION (1) : 08117ER FUELSAGE DEPENDENT VARIABLE HU44D

Y/L = .2500 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.873 .681 .474 .267 .063 .0454 .0443 .0847

MAW (1) = 0.000 ALPHA (3) = 35.000 TI = 94.933 QI = 1.986 HREF = .033

SECTION (1) : 08117ER FUELSAGE DEPENDENT VARIABLE HU44D

Y/L = .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

.873 .1035 .0672 .0730 .0868 .0536 .0580 .0786 .0972



AEDC VA352 OMB 02 ORB. F. USAGE 190.873

(RTN131) (25 APR 74)

REFERENCE DATA

SREP = .0236 SQ.FT. KHP = .0000 IN.
 LREP = 22.5003 IN. WHP = .0000 IN.
 SREP = 10.3319 IN. ZHP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 R/V/L = .500
 B.P.LAP = .000 ELEVON = .000
 MAW/MT = 1.000

MACH (1) = 0.000 ALPHA (1) = 25.000 TI = 92.933 QI = .523 HREF = .010

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

Y
 X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 .0741 .0619 .0512 .0470 .0374 .0290 .0234 .0233

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 92.933 QI = .523 HREF = .010

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

Y
 X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 .0699 .0757 .0853 .0890 .0477 .0460 .0367 .0322

MACH (1) = 0.000 ALPHA (3) = 35.000 TI = 92.933 QI = .523 HREF = .010

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

Y
 X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 .1087 .0900 .0740 .0687 .0591 .0563 .0498 .0398

AEDC VAS32 OH8 OE ORB. FUSELAGE YFO.875

(RTK Y32) (23 APR 74)

REFERENCE DATA

REF = .8236 SQ.FT. YMRP = .0000 IN.
 REF = 22.5803 IN. YMRP = .0000 IN.
 REF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.000
 S.FLAP = .000 ELEVON = .000
 MAW/HT = .000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 93.400 QI = 1.000 HREF = .024

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/MO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .0875 .0722 .0696 .0664 .0456 .0472 .0337 .0292

MACH (1) = 6.000 ALPHA (2) = 39.000 TI = 93.400 QI = 1.000 HREF = .024

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/MO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .1072 .0900 .0733 .0668 .0546 .0556 .0428 .0367

MACH (1) = 6.000 ALPHA (3) = 45.000 TI = 93.400 QI = 1.000 HREF = .024

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/MO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .1322 .1137 .0973 .0699 .0721 .0736 .0551 .0431



AEDC VA332 OMB ORB. FUELSAGE YPO.875 (RTK Y33) (29 APR 74)

REFERENCE DATA

REF = .8238 SQ.FT. XMRP = .0000 IN.
 YREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.250
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 94.250 QI = 1.253 HREF = .027

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .0666 .0731 .0817 .0953 .0440 .0463 .0340 .0308

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 94.250 QI = 1.253 HREF = .027

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MU/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .1039 .0664 .0724 .0656 .0531 .0562 .0433 .0399

AEDC VAS32 OH4B OE ORB. FUSELAGE YRD.875

IRTKY34. (25 APR 74)

REFERENCE DATA

REF = .8238 SQ.FT. WHP = .0000 IN.
 REF = 22.5803 IN. WHP = .0000 IN.
 REF = 16.3919 IN. ZHP = .0000 IN.
 SCALE = .5175 SCALE

PARAMETRIC DATA

BETA = .000 W/L = 1.500
 S.F.LAP = .000 ELEVON = .000
 MAX/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.900 QI = 1.534 HREF = .030

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .0694 .0743 .0615 .0646 .0441 .0466 .0351 .0346

MACH (1) = 8.000 ALPHA (2) = 39.000 TI = 94.900 QI = 1.534 HREF = .030

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ/HO

X/L .2500 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .1063 .0677 .0730 .0647 .0627 .0680 .0469 .0611



AEDC VAS32 OMB 02 CRB. FUSELAGE YEO.875 (RTKY53) (25 APR 74)

REFERENCE DATA

REF = .6236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = 1.750
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 95.200 QI = 1.797 HREF = .033

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .0865 .0746 .0607 .0543 .0453 .0474 .0400 .0441

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 95.200 QI = 1.797 HREF = .033

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .1030 .0875 .0732 .0648 .0530 .0618 .0590 .0700

TABULATED DATA LISTING FOR OMB (AEDC VAS52)

AEDC VAS52 OMB, FUSELAGE YFO.079

(RTN130) (23 APR 74)

REFERENCE DATA

STEP 1 = 1.239 30 FT. XPROP = .0000 IN.
 STEP 2 = 22.5603 IN. XPROP = .0000 IN.
 STEP 3 = 16.3919 IN. XPROP = .0000 IN.
 S I E = .0175 SCALE

PARAMETRIC DATA

DELTA = .000 IN/AL = 2.000
 SWPLAF = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 6.000 ALPHA (1) = 35.000 TI = 94.967 QI = 1.984 MREF = .039

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE HU/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .675 .0495 .0735 .0525 .0454 .0452 .0489 .0455 .0849

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 94.967 QI = 1.984 MREF = .039

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE HU/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .675 .1072 .0673 .0740 .0859 .0848 .0857 .0737 .0942

MACH (1) = 6.000 ALPHA (3) = 45.000 TI = 94.967 QI = 1.984 MREF = .039

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE HU/40

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .675 .1319 .1139 .0962 .0678 .0711 .0755 .0736 .0984



AEDC VAS32 OMB 02 008, FUSELAGE Y=0.873

(RTK197) (25 APR 74)

REFERENCE DATA

WREF = .8236 80.FT. XMAP = .0000 IN.
 LREF = 22.5803 IN. YMAP = .0000 IN.
 SREF = 16.3919 IN. ZMAP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 2.250
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 99.200 QI = 2.341 HREF = .038

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .0866 .0756 .0624 .0554 .0456 .0343 .0223 .0045

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 99.200 QI = 2.341 HREF = .038

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .1064 .0883 .0730 .0661 .0579 .0628 .1146 .1367

AEDC VAS32 OMB OE ORB. FUSELAGE Y=0.875

(RTK V38) (23 APR 74)

REFERENCE DATA

WREF = .0236 SQ.FT. WHP = .0000 IN.
 LREF = 22.5803 IN. LHP = .0000 IN.
 BREF = 18.3919 IN. BHP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 98.550 QI = 2.536 HREF = .039

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .0868 .0765 .0834 .0867 .0484 .0897 .0731 .0962

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 98.550 QI = 2.536 HREF = .039

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .875 .1038 .0874 .0752 .0867 .0803 .0967 .1348 .1338

PARAMETRIC DATA

BETA = .000 RN/L = 2.500
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000



AEDC VAS32 OMB OE O/S. FUSELAGE FPO.873

(RTK139) (23 APR 74)

REFERENCE DATA

REF = .8236 83.P.T. XMRP = .0000 IN.
 REF = 82.3603 IN. XMRP = .0000 IN.
 REF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.750
 B.FLAP = .000 ELEVON = .000
 HAWKHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 96.100 QI = 2.816 HREF = .041

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE MU/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .873 .0564 .0763 .0596 .0664 .0496 .0680 .0922 .1165

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 96.100 QI = 2.816 HREF = .041

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE MU/HD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .873 .1021 .0873 .0733 .0700 .0664 .1150 .1663 .1756

AEDC VAS32 OMB OR ORB. FUSELAGE Y=0.875

(RTNWD) (25 APR 74)

REFERENCE DATA

STEP 1 = .6236 SQ.FT. XMRP = .0000 IN.
STEP 2 = 22.5803 IN. YMRP = .0000 IN.
STEP 3 = 18.3319 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = 30.000 T1 = 98.900 Q1 = 3.118 HREF = .044

SECTION (1) ORB/NER FUSELAGE DEPENDENT VARIABLE MU/RO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .683 .683 .0775 .0647 .0580 .0503 .0720 .1030 .1333

MACH (1) = 0.000 ALPHA (2) = 35.000 T1 = 98.900 Q1 = 3.118 HREF = .044

SECTION (1) ORB/NER FUSELAGE DEPENDENT VARIABLE MU/RO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .675 .1064 .0681 .0753 .0741 .0782 .1420 .1971 .1683

PARAMETRIC DATA

BETA = .000 TR/L = 3.000
B.FLAP = .000 ELEVON = .000
HAW/HT = 1.000



AEDC VAS32 OMB 02 OMB. FUSELAGE Y=0.875 (RTKMS) (29 APR 74)

REFERENCE DATA

XREF = .8238 34.P.T. XMP = .0000 IN.
 YREF = 22.5803 IN. YMP = .0000 IN.
 ZREF = 18.3919 IN. ZMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.350
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 0.050 ALPHA (1) = 30.000 TI = 97.800 QI = 3.536 MREF = .048

SECTION (1) OMB LATER FUSELAGE DEPENDENT VARIABLE MU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .0483 .0769 .0837 .0890 .0926 .0980 .1296 .1532

MACH (2) = 0.050 ALPHA (2) = 35.000 TI = 97.800 QI = 3.536 MREF = .048

SECTION (2) OMB LATER FUSELAGE DEPENDENT VARIABLE MU/HO

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000
 Y .875 .1039 .0682 .0798 .0766 .0908 .1710 .2248 .1983

TABULATED DATA LISTING FOR OMB (AEDC VAS92)

AEDC VAS92 OMB OE ORB. FUSELAGE Y=0.873

(RTN 482) (23 APR 74)

REFERENCE DATA

STEP = .8238 30.FT. 2HP = .0000 IN.
 STEP = 22.3903 IN. 2HP = .0000 IN.
 STEP = 16.3919 IN. 2HP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RW/L = 3.720
 S.F.LAP = .000 ELEVON = .000
 MAX/INT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 97.080 QI = 3.937 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .0873 .0873 .0764 .0877 .0890 .0889 .1032 .1879 .1733

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 97.050 QI = 3.937 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .2000 .3000 .4000 .5000 .6000 .7000 .8000 .9000

Y .1066 .1066 .0662 .0762 .0814 .1093 .2091 .2423 .2013



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTKCD) (29 APR 74)

AEDC VAS32 OMB Q1+TID ORB. WING UPPER CREASE

PARAMETRIC DATA

BETA = .000 RM/L = 3.720
B.FLAP = .000 ELEVON = .000
HAWKHT = 1.000

REFERENCE DATA

WEP = .0236 SQ.FT. XMP = .0000 IN.
WTP = 22.3903 IN. WHP = .0000 IN.
WUP = 18.3910 IN. ZMP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 0.000 ALPHA (1) = -10.000 TI = 97.600 Q1 = 3.935 MREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI-MO

R/L .4000 .5000 .6000 .7000 .8000
Phi
02.000 .0458 .0000 .0000 .0000 .0000

MACH (1) = 0.000 ALPHA (2) = -6.000 TI = 97.600 Q1 = 3.935 MREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI-MO

R/L .4000 .5000 .6000 .7000 .8000
Phi
02.000 .0807 .0000 .0000 .0000 .0000

MACH (1) = 0.000 ALPHA (3) = .000 TI = 97.600 Q1 = 3.935 MREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI-MO

R/L .4000 .5000 .6000 .7000 .8000
Phi
02.000 .0246 .0000 .0000 .0000 .0000

MACH (1) = 0.000 ALPHA (4) = 3.000 TI = 97.600 Q1 = 3.935 MREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI-MO

R/L .4000 .5000 .6000 .7000 .8000
Phi
02.000 .0114 .0000 .0000 .0000 .0000

AEDC VARS OMB 01-110 OMB. WING UPPER CREASE

(RTTCOS) 29 APR 74

REFERENCE DATA

WEP = .0236 64.97. WMP = .0000 IN.
 WEP = 22.3603 IN. WMP = .0000 IN.
 WEP = 16.3919 IN. WMP = .0000 IN.
 SCALE = .0178 SCALE

PARAMETRIC DATA

ALPHA = .000 RW/L = 3.780
 S.FLAP = .000 ELEVON = .000
 HAWK/T = 1.000

MACH (1) = 0.000 BETA (1) = -2.000 TI = 97.350 Q1 = 3.942 WREF = .049

SECTION (1) OMB WING FUSELAGE DEPENDENT VARIABLE HEAD

R/L = .4000 .5000 .6000 .7000 .8000

PHI
02.000 .0310 .0000 .0000 .0000 .0000

MACH (2) = 0.000 BETA (2) = .000 TI = 97.350 Q1 = 3.942 WREF = .049

SECTION (1) OMB WING FUSELAGE DEPENDENT VARIABLE HEAD

R/L = .4000 .5000 .6000 .7000 .8000

PHI
02.000 .0246 .0000 .0000 .0000 .0000



AEDC VAS32 OMB 01-110 OMB, WING UPPER CREASE

(RTTCOS) (23 APR 74)

REFERENCE DATA

REF # .0238 33.71. XMRP # .0000 IN.
 REF # 22.803 14. XMRP # .0000 IN.
 REF # 18.3315 14. XMRP # .0000 IN.
 SCALE # .0175 SCALE

PARAMETRIC DATA

BETA # .000 RN/L # .000
 S.P.LAP # .000 ELEVON # .000
 MAW/MT # 1.000

MACH (1) # 6.000 ALPHA (1) # -10.000 TI # 93.423 QI # .002 MREF # .020

SECTION (1) OMB WING FUSELAGE DEPENDENT VARIABLE HI/LO

VAL .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0004 .0000 .0000 .0000 .0000

MACH (1) # 6.000 ALPHA (2) # -8.000 TI # 93.473 QI # .002 MREF # .020

SECTION (1) OMB WING FUSELAGE DEPENDENT VARIABLE HI/LO

VAL .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0194 .0000 .0000 .0000 .0000

MACH (1) # 6.000 ALPHA (3) # 0.000 TI # 93.423 QI # .002 MREF # .020

SECTION (1) OMB WING FUSELAGE DEPENDENT VARIABLE HI/LO

VAL .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0101 .0000 .0000 .0000 .0000

MACH (1) # 6.000 ALPHA (4) # 5.000 TI # 93.423 QI # .002 MREF # .020

SECTION (1) OMB WING FUSELAGE DEPENDENT VARIABLE HI/LO

VAL .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0004 .0000 .0000 .0000 .0000

AEDC VAS32 OMB 01+10 ORB. WING UPPER CREASE

(RTRCD4) (25 APR 74)

REFERENCE DATA

STEP 1 = .8238 50.FT. XMRP = .0000 IN.
 STEP 2 = 22.5603 IN. YMRP = .0000 IN.
 STEP 3 = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RV/_ = .680
 P.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 BETA (1) = -2.000 T1 = 93.950 Q1 = .681 HREF = .020
 SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0150 .0000 .0000 .0000 .0000

MACH (1) = 8.000 BETA (2) = .000 T1 = 93.950 Q1 = .681 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0101 .0000 .0000 .0000 .0000



REFERENCE DATA

STEP = .0238 SQ.FT. XMRP = .0000 IN.
 STEP = 22.9603 IN. XMRP = .0000 IN.
 STEP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -10.000 TI = 98.087 QI = 4.007 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .4000 .5000 .6000 .7000 .9000

PHI

62.000 .0000 .0000 .0000 .0000 .0000

MACH (1) = 8.000 ALPHA (2) = -9.000 TI = 98.087 QI = 4.007 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .4000 .5000 .6000 .7000 .9000

PHI

62.000 .0000 .0000 .0000 .0000 .0000

MACH (1) = 8.000 ALPHA (3) = .000 TI = 98.087 QI = 4.007 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .4000 .5000 .6000 .7000 .9000

PHI

62.000 .0000 .0000 .0000 .0000 .0000

AEDC VAS3E OMB Q1 ORB. WING UPPER CREASE (RTKCID) (25 APR 74)

REFERENCE DATA

WREF = .6238 SQ.FT. YMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RW/L = 3.720
 S.F.LAP = .000 ELEVON = .000
 HAN/HIT = 1.000

MACH (1) = 8.000 ALPHA (1) = -8.000 TI = 96.800 QI = 3.961 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .9000

PHI

62.000 .0312 .0147 .0388 .0252 .0288

MACH (1) = 8.000 ALPHA (2) = .000 TI = 96.800 QI = 3.961 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .9000

PHI

62.000 .0212 .0061 .0157 .0064 .0137



AEDC VAS32 OH4B Q1 ORB. WING UPPER CREASE

(RTKCL1) (25 APR 74)

REFERENCE DATA

BREF = .8238 80.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .680
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = -8.000 TI = 93.000 Q1 = .677 MREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L = .4000 .5000 .6000 .7000 .8000 .9000

PHI

82.000 0132 .0088 .0124 .0164 .0471

MACH (1) = 8.000 ALPHA (2) = .000 TI = 93.000 Q1 = .677 MREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L = .4000 .5000 .6000 .7000 .8000 .9000

PHI

62.000 .0101 .0048 .0071 .0045 .0208

AEDC VAS32 OMB Q1 ORB. WING UPPER CREASE (RTKC12) (23 APR 74)

REFERENCE DATA

3REP = .0238 30.FT. 1MRP = .0000 IN.
 2REP = 22.5803 IN. 2MRP = .0000 IN.
 1REP = 18.3919 IN. 3MRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RW/L = .500
 B,FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 25.000 TI = 93.400 Q1 = .524 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

X/L .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0033 .0009 .0012 .0011 .0009

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 93.400 Q1 = .524 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

X/L .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0022 .0008 .0008 .0000 .0009

MACH (1) = 0.000 ALPHA (3) = 35.000 TI = 93.400 Q1 = .524 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

X/L .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0019 .0006 .0006 .0008 .0011



TABULATED DATA LISTING FOR OMB (AEDC VAS92)

AEDC VAS92 OMB Q1 ORB. WING UPPER CREASE (RTK13) (25 APR 74)

REFERENCE DATA
 SREF = .8238 SQ.FT. XREF = .0000 IN.
 YREF = 82.3903 IN. YREF = .0000 IN.
 ZREF = 16.3919 IN. ZREF = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.100 Q1 = 1.003 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO
 X/L .4000 .5000 .6000 .7000 .9000
 PHI
 62.000 .0023 .0006 .0010 .0001 .0006
 MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.100 Q1 = 1.003 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO
 X/L .4000 .5000 .6000 .7000 .9000
 PHI
 62.000 .0018 .0005 .0008 .0011 .0007
 MACH (1) = 8.000 ALPHA (3) = 40.000 TI = 94.100 Q1 = 1.003 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO
 X/L .4000 .5000 .6000 .7000 .9000
 PHI
 62.000 .0016 .0004 .0004 .0007 .0016

PARAMETRIC DATA
 BETA = .000 RM/L = 1.000
 S.FLAP = .000 ELEVON = .000
 HAWK/T = 1.000

AEDC VAS32 OMB Q1 ORB. WING UPPER CREASE

(RTKC14) (23 APR 74)

REFERENCE DATA

REF = .6236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 95.550 Q1 = 1.994 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0021 .0006 .0006 .0007 .0012

MACH (1) = 8.000 ALPHA (2) = 39.000 TI = 95.550 Q1 = 1.994 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0017 .0004 .0005 .0004 .0007



AEDC VA352 OH4B 01 ORB. WING UPPER CREASE

(RTN15) (25 APR 74)

REFERENCE DATA

STEP = .0236 SJ.FT. XMAP = .0000 IN.
STEP = 22.5803 IN. XMAP = .0000 IN.
STEP = 16.3919 IN. ZMAP = .0000 IN.
SCALE = .0175 SCALE

BETA = .000 RN/L = 3.720
B.FLAP = .000 ELEVON = .000
HAWAHT = 1.000

MACH (1) = 6.000 ALPHA (1) = 25.000 TI = 97.867 QI = 3.955 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .9000

PHI
62.000 .0034 .0014 .0018 .0009 .0029

MACH (1) = 6.000 ALPHA (2) = 30.000 TI = 97.867 QI = 3.955 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .9000

PHI
62.000 .0022 .0008 .0009 .0008 .0023

MACH (1) = 6.000 ALPHA (3) = 35.000 TI = 97.867 QI = 3.955 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .9000

PHI
62.000 .0015 .0004 .0006 .0016 .0014

PARAMETRIC DATA

AEDC V4382 OH48 Q1 CRB. WING UPPER CREASE

(RTRC17) (25 APR 74)

REFERENCE DATA

GREY = .6236 SQ.FT. XMRP = .0000 IN.
 L.WEP = 22.5803 IN. YMRP = .0000 IN.
 GREY = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 S.P.LAP = 10.000 ELEVON = 5.000
 MAX/MT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 T1 = 97.700 Q1 = 3.949 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU40

X/L .4000 .5000 .6000 .7000 .9000

PHI

62.000 .0022 .0008 .0010 .0003 .0024

MACH (1) = 6.000 ALPHA (2) = 35.000 T1 = 97.700 Q1 = 3.949 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU40

X/L .4000 .5000 .6000 .7000 .9000

PHI

62.000 .0015 .0004 .0008 .0016 .0017



TABULATED DATA LISTING FOR OMB (AEDC VAS32)

(RTAC18) (23 APR 74)

AEDC VAS32 OMB 01 ORB. WING UPPER CREASE

PARAMETRIC DATA
 BETA = -5.000 RN = 3.720
 B.FLAP = 10.000 ELEVON = 5.000
 HAW/HT = 1.000

REFERENCE DATA
 STEP = .8238 BA.P1. XMRP = .0000 IN.
 LREP = 22.5803 IN. YMRP = .0000 IN.
 BREP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.200 Q1 = 3.933 MREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HUARD

X/L .4000 .5000 .6000 .7000 .8000
 PHI
 62.000 .0046 .0016 .0026 .0007 .0047

MACH (1) = 8.000 ALPHA (2) = 39.000 TI = 97.200 Q1 = 3.933 MREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HUARD

X/L .4000 .5000 .6000 .7000 .8070
 PHI
 62.000 .0038 .0016 .0026 .0030 .0060

AEDC VAS32 OMB 01 ORB. WING UPPER CREASE

(RTNCL9) (25 APR 74)

REFERENCE DATA

SREF = .8238 30.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. XMRP = .0000 IN.
 BREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -8.000 RN/L = 2.000
 B.FLAP = 10.300 ELEVON = 5.000
 MAUNT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 96.650 QI = 1.983 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AD

X/L .4000 .5000 .6000 .7000 .8000 .9000

PHI

52.000 .0085 .0084 .0026 .0028 .0020

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 96.650 QI = 1.983 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AD

X/L .4000 .5000 .6000 .7000 .8000 .9000

PHI

62.000 .0042 .0013 .0019 .0010 .0028



AEDC VAS32 OMB 01 ORB. WING UPPER CREASE

(RTKCED) (25 APR 74)

REFERENCE DATA

STEP 1 = .8236 IN. FT. XMP = .0000 IN.
 STEP 2 = 22.9833 IN. WMP = .0000 IN.
 STEP 3 = 18.3919 IN. ZMP = .0000 IN.
 SCALE = .0193 SCALE

PARAMETRIC DATA

BETA = .000 FN/L = 2.000
 B.FLAP = 10.000 ELEVON = 9.000
 MAW/MT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 98.900 QI = 1.980 HREF = .039

SECTION (1) ORB WING FUSELAGE DEPENDENT VARIABLE H/LAO

X/L .4000 .9000 .8000 .7000 .9000

Phi

82.000 .0023 .0008 .0004 .0004 .0008

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 98.900 QI = 1.980 HREF = .039

SECTION (1) ORB WING FUSELAGE DEPENDENT VARIABLE H/LAO

X/L .4000 .9000 .8000 .7000 .9000

Phi

82.000 .0017 .0004 .0008 .0004 .0008

TABULATED DATA LISTING FOR OMB (AEDC VAS32)

AEDC VAS32 OMB 01 OMB. WING UPPER CREASE (RTRC21) (25 APR 74)

REFERENCE DATA

WEP = .8230 30.17. 1MAP = .0000 IN.
LEW = 22.5623 IN. 2MAP = .0000 IN.
SEW = 16.2919 IN. 3MAP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -0.000 RM/L = .500
B.FLAP = 10.000 ELEVON = 5.000
MAP/PT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 91.960 QI = .516 HREF = .017

SECTION (1) OMB1 ER FUSELAGE DEPENDENT VARIABLE MU/MO

W/L = .4000 .5000 .6000 .7000 .9000
PHI
02.000 .0081 .0016 .0022 .0016 .0011

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 91.960 QI = .516 HREF = .017

SECTION (1) OMB1 ER FUSELAGE DEPENDENT VARIABLE MU/MO

W/L = .4000 .5000 .6000 .7000 .9000
PHI
02.000 .0037 .0010 .0015 .0006 .0016



TABLATED DATA LISTING FOR OMB (AEDC VAS32)

(NTRCEE) (23 APR 74)

AEDC VAS32 OMB 01 OMB VING UPPER CREASE

PARAMETRIC DATA

BETA = .000 IN/L = .500
S.FLAP = 10.000 ELEVON = 9.000
HAWK/MT = 1.000

REFERENCE DATA

WEP = .0236 33.PT. WHP = .0000 IN.
LEP = 22.5603 IN. WHP = .0000 IN.
TEP = 16.3919 IN. WHP = .0000 IN.
SCALE = .0195 SCALE

MACH (1) = 0.600 ALPHA (1) = 30.000 TI = 93.400 OI = .323 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AD

R/L .4000 .5000 .6000 .7000 .9000

PHI
02.000

.0022 .0079 .0012 .0004 .0010

MACH (1) = 0.600 ALPHA (2) = 35.000 TI = 93.400 OI = .323 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AD

R/L .4000 .5000 .6000 .7000 .9000

PHI
02.000

.0016 .0008 .0008 .0008 .0021

AEDC VAS32 OHB 01 ORB. WING UPPER CREASE

(RTKCS) (25 APR 74)

REFERENCE DATA

SRCP = .8238 80.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BRCP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 TRN/L = .500
 S.F.LAP = 10.000 ELEVON = 10.000
 HAN/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 93.433 QI = .521 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/D

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0032 .0011 .0017 .0006 .0008

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 93.433 QI = .521 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/D

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0025 .0006 .0007 .0006 .0011

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 93.433 QI = .521 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/D

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0020 .0008 .0008 .0009 .0010



AEDC VAS32 OMB C1 OMB WING UPPER CREASE (RTUCBA) (23 APR 74)

REFERENCE DATA

REF = .0236 SQ.FT. WREF = .0000 IN.
REF = 22.9803 IN. WREF = .0000 IN.
REF = 18.3319 IN. WREF = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -1.000 RN/L = .900
B.FLAP = 10.000 ELEVON = 10.000
HAWK/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 25.000 TI = 93.233 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0095 .0028 .0033 .0020 .0024

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 93.233 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0087 .0016 .0021 .0013 .0011

MACH (1) = 0.000 ALPHA (3) = 35.000 TI = 93.233 QI = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .4000 .5000 .6000 .7000 .9000

PHI

02.000 .0040 .0012 .0014 .0009 .0025

AEDC VAS32 OH-6B 01 ORB. WING UPPER CREASE

(RTK25) (25 APR 74)

REFERENCE DATA

STEP = .8238 SQ.FT. XMRP = .0000 IN.
 LREP = 22.5803 IN. YMRP = .0000 IN.
 STEP = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
 S.FLAP = 10.000 ELEVON = 10.000
 HAWK/T = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.850 QI = 1.985 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H1/A0

X/L .4000 .5000 .6000 .7000 .9000

PHI
 82.000 .0021 .0008 .0008 .0008 .0013

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.850 QI = 1.985 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H1/A0

X/L .4000 .5000 .6000 .7000 .9000

PHI
 82.000 .0017 .0004 .0008 .0007 .0012



AEDC VA352 OMB 01 ORB. WING UPPER CREASE

(RTK26) (25 APR 74)

REFERENCE DATA

SREF = .8236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 BREF = 16.3319 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -6.000 TM/L = 8.000
 B.FLAP = 10.000 ELEVON = 10.000
 MAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 96.450 QI = 1.983 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0065 .0021 .0027 .0016 .0016

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 96.450 QI = 1.983 HREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD

X/L .4000 .5000 .6000 .7000 .8000

PHI

62.000 .0040 .0013 .0020 .0012 .0029

AEDC VAS32 OMB 01 ORB. WING UPPER CREASE

(RTKCP) (23 APR 74)

REFERENCE DATA

WREF = .8236 80.FT. XMRP = .0000 IN.
LREF = 22.3603 IN. YMRP = .0000 IN.
BREF = 16.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 3.780
B.FLAP = 10.000 ELEVON = 10.000
HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .8000

PHI
82.000 .0034 .0016 .0011 .0011 .0032

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .8000

PHI
82.000 .0023 .0006 .0009 .0011 .0022

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 97.367 QI = 3.936 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .4000 .5000 .6000 .7000 .8000

PHI
82.000 .0016 .0004 .0007 .0011 .0022



REFERENCE DATA PARAMETRIC DATA

BSEP = .8238 80.PT. XMRP = .0000 IN. BETA = -6.000 RN/L = 3.720
 LSEP = 22.5803 IN. YMRP = .0000 IN. S.F.LAP = 10.000 ELEVON = 10.000
 BREF = 16.3919 IN. ZMRP = .0000 IN. MAH/MT = 1.000
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.300 QI = 3.930 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .4000 .5000 .6000 .7000 .9000

PHI
 62.000 .0144 .0047 .0085 .0061 .0035

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.300 QI = 3.930 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .4000 .5000 .6000 .7000 .9000

PHI
 62.000 .0084 .0026 .0043 .0027 .0018

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 97.300 QI = 3.930 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .4000 .5000 .6000 .7000 .9000

PHI
 62.000 .0035 .0015 .0027 .0019 .0004

AEDC VAS32 OMB 01+110 ORB. FUSELAGE Z=7.325

(RTYFOI) (25 APR 74)

REFERENCE DATA

SREF = .6236 SQ.FT. XMRP = .0000 IN.
 YREF = 22.9603 IN. YMRP = .0000 IN.
 ZREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0173 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 B.FLAP = .000 ELEVON = .000
 HAWK/IT = 1.000

MACH (1) = 6.000 ALPHA (1) = -10.000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.325 .0372 .0396 .0000 .0000 .0000 .0000

MACH (1) = 6.000 ALPHA (2) = -5.000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.325 .0247 .0296 .0000 .0000 .0000 .0000

MACH (1) = 6.000 ALPHA (3) = .000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.325 .0241 .0194 .0000 .0000 .0000 .0000

MACH (1) = 6.000 ALPHA (4) = 5.000 TI = 97.600 QI = 3.935 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.325 .0163 .0152 .0000 .0000 .0000 .0000



AEDC VA352 OMB Q1+T10 ORB. FUSELAGE Z=7.525

(RTHFD2) (25 APR 74)

REFERENCE DATA

REF = .8236 SQ.FT. XMRP = .0000 IN.
 LREF = 22.9803 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 6.000 BETA (1) = -2.000 T1 = 97.350 Q1 = 3.942 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H1+0

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.525 .0301 .0266 .0000 .0000 .0000 .0000

MACH (1) = 6.000 BETA (2) = .000 T1 = 97.350 Q1 = 3.942 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE H1+0

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.525 .0261 .0194 .0000 .0000 .0000 .0000

PARAMETRIC DATA

ALPHA = .000 FN/L = 3.780
 B.FLAP = .000 ELEVON = .000
 HAWAHT = 1.000

AEDC VAS32 OMB 01+110 OMB. FUSELAGE 257.525

(RTWFD3) (25 APR 74)

REFERENCE DATA

REF = .8238 93.FT. HWRP = .0000 IN.
 UREF = 22.9803 IN. WWRP = .0000 IN.
 DREF = 18.3919 IN. ZWRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .680
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = -10.000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.925 .0232 .0420 .1000 .1700 .0000 .0000

MACH (1) = 8.000 ALPHA (2) = -8.000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.925 .0145 .0104 .0000 .0700 .0000 .0000

MACH (1) = 8.000 ALPHA (3) = .000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.925 .0162 .0129 .0000 .0000 .0000 .0000

MACH (1) = 8.000 ALPHA (4) = .000 TI = 93.425 QI = .682 HREF = .020

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/40

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.925 .0108 .0077 .0000 .0000 .0000 .0000



AEDC VAS22 OMB C1+T10 ORB. FUELSAGE 247.923

(RTWFO4) (23 APR 74)

REFERENCE DATA

REF = .8236 SQ.FT. 1MRP = .0000 IN.
 LREF = 22.5003 IN. 2MRP = .0000 IN.
 BREF = 16.3919 IN. 3MRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

ALPHA = .000 RN/L = .000
 B.FLAP = .000 ELEVON = .000
 HAW/HT = 1.000

MACH (1) = 8.000 BETA (1) = -2.000 T1 = 93.91 Q1 = .001 HREF = .020

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HI/AD

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.925 .0183 .0182 .0000 .0000 .0000 .0000

MACH (1) = 8.000 BETA (2) = .000 T1 = 93.930 Q1 = .001 HREF = .020

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HI/AD

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.925 .0182 .0129 .0000 .0000 .0000 .0000

AEDC VAS32 OMB 01-T10 ORB. FUSELAGE Z47.925

(RTKFD3) (E3 APR 74)

REFERENCE DATA

XREF = .8238 94.PT. XMRP = .0000 IN.
 YREF = 22.5803 IN. YMRP = .0000 IN.
 ZREF = 18.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RM/L = 3.770
 B.FLAP = .000 ELEVON = .000
 MAWNT = 1.000

MACH (1) = 8.000 ALPHA (1) = -10.000 TI = 98.087 QI = 4.007 WREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L = .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.925 .0000 .0000 .0000 .0000 .0000 .0000

MACH (1) = 8.000 ALPHA (2) = -4.000 TI = 96.087 QI = 4.007 WREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L = .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.925 .0000 .0000 .0000 .0000 .0000 .0000

MACH (1) = 8.000 ALPHA (3) = .000 TI = 96.087 QI = 4.007 WREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HI/LO

X/L = .3000 .4000 .5000 .6000 .7000 .8000

Z
 7.925 .0000 .0000 .0000 .0000 .0000 .0000



DATE 23 SEP 74

TABULATED DATA LISTING FOR QMB (AEDC VASBE)

PAGE 519

AEDC VASBE QMB Q1 QRB FUSELAGE 707.585

(RTPFD) (25 APR 74)

REFERENCE DATA

QMB = .0236 IN
 QRB = 22.5803 IN
 Q1 = 18.3519 IN
 Q1 = .0175 SCALE

PARAMETRIC DATA

BETA = .000
 B.F.U.P = .000
 H.A.U.P = 1.000
 R.V.L = 3.720
 ELEVON = .000

Q1 = 98,800 Q1 = 3,961 HREF = .049

SECTION 1: QRB FUSELAGE DEPENDENT VARIABLE HUANG

Q1 = 98,800 Q1 = 3,961 HREF = .049
 Q1 = 98,800 Q1 = 3,961 HREF = .049

Q1 = 98,800 Q1 = 3,961 HREF = .049

SECTION 2: Q1 FUSELAGE DEPENDENT VARIABLE HUANG

Q1 = 98,800 Q1 = 3,961 HREF = .049
 Q1 = 98,800 Q1 = 3,961 HREF = .049

Q1 = 98,800 Q1 = 3,961 HREF = .049

AEDC VAS82 OMB 01 OMB. FUSELAGE 277.925

(RTW11) (25 APR 74)

REFERENCE DATA

WEP = .8238 SQ.FT. XMP = .0000 IN.
 LREP = 22.9803 IN. WMP = .0000 IN.
 SREP = 16.3919 IN. ZMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .000
 S.FLAP = .000 ELEVON = .000
 MAW/HT = 1.000

MACH (1) = 6.000 ALPHA (1) = -6.000 T1 = 93.000 Q1 = .677 HREF = .020

SECTION (1) OMB1 ER FUSELAGE DEPENDENT VARIABLE MU/AC

R/L .3000 .4000 .5000 .6000 .7000 .8000

2

7.925 .0170 .0136 .0073 .0031 .0032 .0049

MACH (1) = 6.000 ALPHA (2) = .000 T1 = 93.000 Q1 = .677 HREF = .020

SECTION (1) OMB1 ER FUSELAGE DEPENDENT VARIABLE MU/AC

R/L .3000 .4000 .5000 .6000 .7000 .8000

2

7.925 .0133 .0104 .0056 .0034 .0036 .0033

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PARAMETRIC DATA

DATA = .000 REVL = .900
BUNLAP = .000 ELEVON = .000
MAXAFT = 1.000

.324 HREF = .018

93.400 QI = .524 HREF = .018

93.400 QI = .524 HREF = .018

DEPENDENT VARIABLE PUNO

.6000

.0000

.0000

DEPENDENT VARIABLE PUNO

.0000

.0000

.0000

DEPENDENT VARIABLE PUNO

.0000

.0000

.0000

ORIGINAL FILE
OF POOR QUALITY

AEDC VA352 OMB Q1 ORB. FUSELAGE Z77.525

(PTNF13) (23 APR 74)

REFERENCE DATA

REF Z = .4238 84. FT. XMRP = .0000 IN.
LREF = 22.5803 IN. XMRP = .0000 IN.
BREF = 18.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = 1.000
B.FLAP = .000 ELEVON = .000
HAW/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 94.100 QI = 1.003 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

X/L .3000 .4000 .5000 .6000 .7000 .8000
Z
7.525 .0126 .0104 .0308 .0114 .0045 .0010

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 94.100 QI = 1.003 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

X/L .3000 .4000 .5000 .6000 .7000 .8000
Z
7.525 .0134 .0140 .0228 .0076 .0033 .0008

MACH (1) = 8.000 ALPHA (3) = 40.000 TI = 94.100 QI = 1.003 HREF = .025

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/HD

X/L .3000 .4000 .5000 .6000 .7000 .8000
Z
7.525 .0134 .0196 .0180 .0067 .0013 .0006



TABULATED DATA LISTING FOR OMB (AEDC VAS2)

(RTOP14) (29 APR 74)

AEDC VAS2 OMB 01 OMB FUSELAGE 277.525

PARAMETRIC DATA
BETA = .000 RVAL = 2.000
B.FLAP = .000 ELEVON = .000
HAWAHT = 1.000

REFERENCE DATA

REF = .0036 SQ.FT. XMRP = .0000 IN.
REF = 22.5023 IN. XMRP = .0000 IN.
REF = 16.2519 IN. XMRP = .0000 IN.
SCALE = .0175 SCALE

MACH (1) = 0.1000 ALPHA (1) = 30.000 TI = 98.550 Q1 = 1.994 WREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AG

X/L .3000 .4000 .5000 .6000 .7000 .8000
Z
7.525 .0128 .0062 .0270 .0170 .0081 .0016

MACH (1) = 0.1000 ALPHA (2) = 59.000 TI = 98.550 Q1 = 1.994 WREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/AG

X/L .3000 .4000 .5000 .6000 .7000 .8000
Z
7.525 .0128 .0149 .0275 .0104 .0040 .0009

AEDC VA352 OHMB 01 ORB. FUSELAGE Z=7.525

(RTNF15) (25 APR 74)

REFERENCE DATA

BREP = .258 SQ.FT. XMRP = .0000 IN.
 LREP = 22.5803 IN. YMRP = .0000 IN.
 SREP = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RV/L = 3.780
 B.P.LAP = .000 ELEVON = .000
 HAWAHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 T1 = 97.867 Q1 = 3.945 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.525 .0115 .0117 .0161 .0364 .0280 .0087

MACH (1) = 8.000 ALPHA (2) = 30.000 T1 = 97.867 Q1 = 3.945 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.525 .0126 .0083 .0196 .0394 .0083 .0035

MACH (1) = 8.000 ALPHA (3) = 35.000 T1 = 97.867 Q1 = 3.945 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.525 .0131 .0147 .0233 .0179 .0093 .0014

ORBITER PAGE



AEDC VAS32 OH48 Q1 ORG. FUSELAGE ZPT.925 (RTNF17) (25 APR 74)

REFERENCE DATA

WREZ = .6236 64.77. XMRP = .0000 14.
 WREP = 22.5803 14. YMRP = .0000 14.
 WRET = 18.3919 14. ZMRP = .0000 14.
 SCALE = .0175 SCALE

MACH (1) = 6.000 ALPHA (1) = 30.000 T1 = 97.700 Q1 = 3.949 HREF = .04.

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L = .3000 .4000 .5000 .6000 .7000 .8000
 Z = 7.325 .0127 .0087 .0193 .0382 .0076 .0035

MACH (1) = 6.000 ALPHA (2) = 35.000 T1 = 97.700 Q1 = 3.949 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L = .3000 .4000 .5000 .6000 .7000 .8000
 Z = 7.325 .0132 .0132 .0243 .0181 .0023 .0013

PARAMETRIC DATA

BETA = .000 RN/L = 3.720
 B.P.LAP = 10.000 ELEVON = 5.000
 MAW/HIT = 1.000

(RTMP18) (25 APR 74)

AEDC VAS32 OMB Q1 ORB. FUSELAGE ZPT.323

REFERENCE DATA

WREF = .0236 SQ.FT. YMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 97.200 Q1 = 3.933 MREF = .049
 BETA = -5.000 RV/L = 3.720
 S.F.LAP = 10.000 ELEVATION = 5.000
 MAX/HT = 1.000

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z
 7.925 .0155 .0124 .0223 .0391 .0631 .0124

MACH (1) = 8.000 ALPHA (2) = 39.000 TI = 97.200 Q1 = 3.933 MREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MO

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z
 7.925 .0176 .0172 .0272 .0666 .0666 .0154



TABULATED DATA LISTING FOR OMB (AEDC VAS2)

DATE 23 SEP 74

(RTWP19) (25 APR 74)

AEDC VAS22 OMB Q1 OMB. FUEELAGE ZRP,SES

REFERENCE DATA

SREF = .8238 82.FT. INRP = .0000 IN.
 LREF = 22.5803 IN. WRP = .0000 IN.
 SREF = 16.3919 IN. ZRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -6.000 RN/L = 2.000
 B.FLAP = 10.000 ELEVON = 5.000
 HAWKHT = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 96.650 Q1 = 1.983 HREF = .035

SECTION (1) ORBITER FUEELAGE DEPENDENT VARIABLE MU/NO

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z
 7.525 .0177 .0180 .0253 .0334 .0409 .0100

MACH (1) = 6.000 ALPHA (2) = 36.000 TI = 96.650 Q1 = 1.983 HREF = .035

SECTION (1) ORBITER FUEELAGE DEPENDENT VARIABLE MU/NO

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z
 7.525 .0184 .0163 .0310 .0277 .0176 .0066

AEDC VAS32 OMB 01 ORB. FUSELAGE Z-7.525

(RTW20) (25 APR 74)

REFERENCE DATA

REF = .0230 32.71. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 30.000 TI = 88.800 QI = 1.980 HREF = .039

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.525 .0131 .0068 .0289 .0171 .0087 .0016

MACH (1) = 8.000 ALPHA (2) = 35.000 TI = 93.900 QI = 1.980 HREF = .039

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/MD

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.525 .0127 .0194 .0276 .0096 .0040 .0008

PARAMETRIC DATA

BETA = .000 RN/L = 2.000
 B.FLAP = 10.000 ELEVON = 9.000
 HAWK/HT = 1.000



REFERENCE DATA
 XMP = .0258 30. FT. XMP = .0000 IN.
 YMP = 22.5003 IN. YMP = .0000 IN.
 ZMP = 16.3919 IN. ZMP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA
 BETA = -6.000 RN/L = .500
 B.FLAP = 10.000 ELEVON = 5.000
 HAWAHT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 91.950 Q1 = .518 MEF = .017

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD
 X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.925 .0177 .0164 .0334 .0486 .0144 .0059

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 91.950 Q1 = .518 MEF = .017

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HD
 X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z 7.925 .0164 .0196 .0472 .0217 .0266 .0040

AEDC VAS32 OMB 01 CRB. FUELSAGE Z47.925

(RTYF22) (25 APR 74)

REFERENCE DATA

REF = .8238 82.FT. XMRP = .0000 IN.
LREF = 22.3803 IN. YMRP = .0000 IN.
BREF = 18.3919 IN. ZMRP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 IN/L = .900
B-FLAP = -.0000 ELEVON = 5.000
HAWK/T = 1.000

MACH (1) = 6.000 ALPHA (1) = 30.000 TI = 93.400 Q1 = .523 HREF = .018

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HU/HO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z 7.925 .0132 .0109 .0255 .0115 .0046 .0013

MACH (1) = 6.000 ALPHA (2) = 35.000 TI = 93.400 Q1 = .523 HREF = .018

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE HU/HO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z 7.925 .0137 .0155 .0162 .0071 .0031 .0007



AEDC VAS32 OH48 01 ORB. FUSELAGE Z47.925 (RTHF23) (23 APR 74)

REFERENCE DATA

BREF = .0236 84. FT. XMRP = .0000 IN.
 LREF = 22.5803 IN. YMRP = .0000 IN.
 SREF = 14.3525 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RN/L = .900
 B.FLAP = 10.000 ELEVON = 10.000
 HAWK/HT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 T1 = 93.433 Q1 = .521 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ4-D

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z
 7.925 .0125 .0107 .0250 .0198 .0074 .0031

MACH (1) = 8.000 ALPHA (2) = 30.000 T1 = 93.433 Q1 = .521 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ4-D

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z
 7.925 .0132 .0126 .0266 .0106 .0043 .0010

MACH (1) = 8.000 ALPHA (3) = 35.000 T1 = 93.433 Q1 = .521 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HJ4-D

X/L .3000 .4000 .5000 .6000 .7000 .8000
 Z
 7.925 .0133 .0134 .0176 .0090 .0030 .0005

AEDC VAS32 OMB 01 ORB. FUSELAGE ZF7.525

(RTM724) (25 APR 74)

REFERENCE DATA

REF = .0238 90.FT. KWP = .0000 IN.
LEP = 22.5803 IN. WHP = .0000 IN.
REP = 16.3919 IN. ZHP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -0.000 RN/L = .500
B.FLAP = 10.000 ELEVON = 10.000
MAN/HT = 1.000

MACH (1) = 0.000 ALPHA (1) = 25.000 TI = 93.233 Q1 = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/AD

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.525 .0174 .0153 .0238 .0396 .0371 .0132

MACH (1) = 0.000 ALPHA (2) = 30.000 TI = 93.233 Q1 = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/AD

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.525 .0178 .0170 .0336 .0436 .0145 .0083

MACH (1) = 0.000 ALPHA (3) = 35.000 TI = 93.233 Q1 = .523 HREF = .018

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/AD

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.525 .0191 .0156 .0466 .0156 .0063 .0042



DATE 23 SEP 74

TABULATED DATA LISTING FOR OMB (AEDC VAS2)

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(RTWP2) (25 APR 74)

AEDC VAS2 OMB 01 OMB FUSELAGE 247.925

REFERENCE DATA

REF = .0236 SQ.FT. IWRP = .0000 IN.
 REF = 22.9875 IN. IWRP = .0000 IN.
 REF = 16.3915 IN. IWRP = .0000 IN.
 SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = .000 RVAL = 2.000
 S.FLAP = 10.000 ELEVON = 10.000
 MAUNT = 1.000

MACH (1) = 0.000 ALPHA (1) = 30.000 TI = 84.650 Q1 = 1.985 HREF = .035

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE MU/MD

R/L .3000 .4000 .5000 .6000 .7000 .8000
 7.925 .0131 .0093 .0271 .0180 .0094 .0015

MACH (1) = 0.000 ALPHA (2) = 35.000 TI = 84.650 Q1 = 1.985 HREF = .035

SECTION (1) OMB FUSELAGE DEPENDENT VARIABLE MU/MD

R/L .3000 .4000 .5000 .6000 .7000 .8000
 7.925 .0132 .0148 .0289 .0098 .0039 .0008

AEDC VAS82 CH48 01 ONE FUSELAGE 247.825

(RTW708) (25 APR 74)

REFERENCE DATA

SWP = .0238 30.FT. XSWP = .0000 IN.
LREF = 22.5003 IN. YSWP = .0000 IN.
SREF = 18.3819 IN. ZSWP = .0000 IN.
SCALE = .0175 SCALE

PARAMETRIC DATA

BETA = -8.0000 RW/L = 2.0000
D.P.LAP = 10.0000 ELEVON = 10.0000
MAN/MIT = 1.0000

MACH (1) = 0.000 ALPHA (1) = 30.000 T1 = 99.450 Q1 = 1.983 MREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

X/L .3000 .4000 .5000 .6000 .7000 .8000
Z 7.925 .0175 .0137 .0247 .0226 .0383 .0087

MACH (1) = 0.000 ALPHA (2) = 30.000 T1 = 99.450 Q1 = 1.983 MREF = .035

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE MU/NO

X/L .3000 .4000 .5000 .6000 .7000 .8000
Z 7.925 .0184 .0184 .0308 .0234 .0170 .0071

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AEDC VAS32 OHS 01 ORB. FUELSAGE 247.829 (RTW27) (29 APR 74)

REFERENCE DATA

REF = .0236 90.FT. WHP = .0000 IN.
LREF = 22.3603 IN. WHP = .0000 IN.
REF = 18.3919 IN. WHP = .0000 IN.
SCALE = .0179 SCALE

PARAMETRIC DATA

BETA = .000 IN/L = 3.720
B.FLAP = 10.000 ELEVON = 10.000
MAWHT = 1.000

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.387 Q1 = 3.936 MREF = .049

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MUAD

R/L .3000 .4000 .5000 .6000 .7000 .8000

Z 7.325 .0117 .0114 .0183 .0410 .0960 .0082

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.387 Q1 = 3.936 MREF = .049

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MUAD

R/L .3000 .4000 .5000 .6000 .7000 .8000

Z 7.325 .0126 .0102 .0196 .0394 .0062 .0036

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 97.387 Q1 = 3.936 MREF = .049

SECTION (1) ORBITER FUELSAGE DEPENDENT VARIABLE MUAD

R/L .3000 .4000 .5000 .6000 .7000 .8000

Z 7.325 .0132 .0196 .0235 .0167 .0054 .0015

PARAMETRIC DATA

REFERENCE DATA

BETA = -9.000 RM/L = 3.720
 B.FLAP = 10.000 ELEVON = 10.000
 HAW/HT = 1.000

XREF = .0238 SQ.FT. XMRP = .0000 IN.
 LREF = 22.5603 IN. YMRP = .0000 IN.
 SREF = 16.3919 IN. ZMRP = .0000 IN.
 SCALE = .0175 SCALE

MACH (1) = 8.000 ALPHA (1) = 25.000 TI = 97.300 QI = 3.930 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.529 .0171 .0164 .0216 .0307 .0302 .0270

MACH (1) = 8.000 ALPHA (2) = 30.000 TI = 97.300 QI = 3.930 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.529 .0173 .0147 .0234 .0376 .0618 .0238

MACH (1) = 8.000 ALPHA (3) = 35.000 TI = 97.300 QI = 3.930 HREF = .049

SECTION (1) ORBITER FUSELAGE DEPENDENT VARIABLE HU/HO

X/L .3000 .4000 .5000 .6000 .7000 .8000

Z
7.529 .0174 .0175 .0269 .0554 .0822 .0136

