



N7730164

**AN INVESTIGATION TO DETERMINE THE STATIC
PRESSURE DISTRIBUTION OF THE 0.00548 SCALE
SHUTTLE SOLID ROCKET BOOSTER (MSFC MODEL
NUMBER 468) DURING REENTRY IN THE
NASA/MSFC 14 INCH TRISONIC WIND TUNNEL
(SA28F)**

**CHRYSLER CORP.
NEW ORLEANS, LA**

MAY 1977

May 1977

DMS-DR-2244

NASA CR-151,082

AN INVESTIGATION TO DETERMINE THE
STATIC PRESSURE DISTRIBUTION OF THE
0.00548 SCALE SPACE SHUTTLE SOLID
ROCKET BOOSTER (MSFC MODEL NUMBER 468)
DURING REENTRY IN THE NASA/MSFC 14 INCH
TRISONIC WIND TUNNEL (SA28F)

by

W. F. Braddock, NSI
G. D. Streby, NSI

Prepared under NASA Contract Number NAS9-13247

by

Data Management Services
Chrysler Corporation Michoud Defense - 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: MSFC TWT 603
NASA Series Number: SA28F
Model Number: MSFC 468
Test Dates: March 17 - April 10, 1975
Occupancy Hours: 126

FACILITY COORDINATOR:

Dale Andrews
Marshall Space Flight Center
Mail Stop ED32
Huntsville, Alabama 35801

Phone: (205) 453-3166

PROJECT ENGINEERS:

J. D. Johnson
Marshall Space Flight Center
Mail Stop ED32
Huntsville, Alabama 35801

Phone: (205) 453-3166

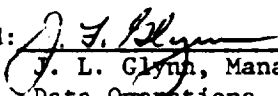
W. F. Braddock
G. D. Streby
Northrop Services, Inc.
6025 Technology Drive
Huntsville, Alabama 35807

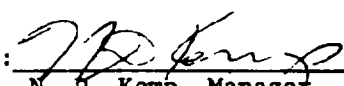
Phone: (205) 837-0580

DATA MANAGEMENT SERVICES:

Prepared by: Liaison--V. W. Sparks
Operations--Maurice Moser, Jr.

Reviewed by: G. G. McDonald

Approved: 
J. L. Glynn, Manager
Data Operations

Concurrence: 
N. D. Kemp, Manager
Data Management Services

Chrysler Corporation Michoud Defense - Space Division assumes no responsibility for the data presented other than display characteristics.

AN INVESTIGATION TO DETERMINE THE
STATIC PRESSURE DISTRIBUTION OF THE
0.00548 SCALE SPACE SHUTTLE SOLID
ROCKET BOOSTER (MSFC MODEL NUMBER 468)
DURING REENTRY IN THE NASA/MSFC 14 INCH
TRISONIC WIND TUNNEL (SA28F)

by

W. F. Braddock, NSI

G. D. Streby, NSI

ABSTRACT

This document presents the results of MSFC TWT 603, a pressure test of a .00548-scale 146 inch Space Shuttle Solid Rocket Booster (SRB) with and without protuberances, conducted in the NASA MSFC 14 x 14 inch Trisonic Wind Tunnel. The objective of this test was to obtain static pressure distributions for the SRB at reentry attitudes and flight conditions. Local longitudinal and ring pressure distributions are presented in tabulated form in the Appendix. Integration of the pressure data has been performed and is available from DATAMAN or NASA/MSFC upon request. Comparisons of the integrated values of the force and moment coefficients can be made with the results from force test TWT 604, Reference 1.

The test was conducted at Mach numbers of 0.40 to 4.45 over an angle of attack range from 60 to 185 degrees. Roll angles of 0, 45, 90 and 315 degrees were investigated. Reynolds numbers per foot varied for selected Mach numbers. The Reynolds number per foot varied from 3.0×10^6 to 5.3×10^6 at Mach 0.40 and from 3.5×10^6 to 8.1×10^6 at

Mach 3.76. The total Reynolds number range tested was from 2.96×10^6 to 8.62×10^6 per foot.

The SRB model configuration was a 0.00548 scale representation of a 146 inch diameter Space Shuttle SRB and included all major protuberances. The model was tested with and without external protuberances. The designation MSFC #468 was assigned to the model and its support hardware.

The test program consisted of 355 runs and required 126 hours to complete. The test was conducted by Northrop Services, Inc., for ED32/Aerodynamics Analysis Branch of NASA-Marshall Space Flight Center. The test was conducted during the months of March and April of 1975. The NASA series number of the test is SA28F.

The photographic coverage of this test consisted of installation photos of the test model and support hardware, along with schlieren photos of selected supersonic test runs.

TABLE OF CONTENTS

	PAGE
ABSTRACT	111
INDEX OF MODEL FIGURES	2
NOMENCLATURE	3
INTRODUCTION	7
MODEL DESCRIPTION AND TEST HARDWARE	8
CONFIGURATIONS INVESTIGATED	10
TEST FACILITY DESCRIPTION	11
INSTRUMENTATION	13
TEST PROCEDURE	14
DATA REDUCTION AND PRESENTATION	15
REFERENCES	17
TABLES	
I. TEST CONDITIONS	18
II. DATA SET/RUN NUMBER COLLATION SUMMARY	19
III. MODEL DIMENSIONAL DATA	25
IV. CORRELATION BETWEEN TUBE/ORIFICE NUMBER AND ORIFICE LOCATION ON MODEL	28
V. 0.00548 SCALE 146-INCH DIAMETER SRB REFERENCE DIMENSIONS	29
FIGURES - MODEL	30
APPENDIX - TABULATED SOURCE DATA	45

INDEX OF MODEL FIGURES

FIGURE	DESCRIPTION	PAGE
1.	Body and Missile Axis Systems	30
2.	General Arrangement of SRB	31
3.	Pressure Orifice Locations	33
4.	SRB Model, With Protuberances, at Lowest Angle of Attack Sting Configuration (Shown at $\alpha = 70^\circ$)	36
5.	SRB Model, Clean Configuration, at Highest Angle of Attack Sting Configuration (Shown at $\alpha = 180^\circ$)	37
6.	SRB Model Sting Arrangement and Positioning	38
7.	Sting Adapter Rotation and Model Positioning	39
8.	Protuberance Dimensions	40
9.	Protuberance Radial Locations	43

NOMENCLATURE

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>	<u>UNITS</u>
b_{ref}	BREF	reference span (diameter of the cylindrical section of the model)	in.
C_{A_m}	CA	total axial force coefficient in the missile axis system	
C_{ℓ_m}	CBL	rolling moment coefficient in the missile axis system	
C_{m_m}	CLMM	pitching moment coefficient in the missile axis system	
C_{N_m}	CNM	normal force coefficient in the missile axis system	
C_{N_m}'	DCN/DX	local normal force coefficient in the missile axis system; $\partial C_{N_m} / \partial (X/\ell_{ref})$	
C_{n_m}	CYNM	yawing moment coefficient in the missile axis system	
C_p	CP	pressure coefficient; $(P-P_{\infty})/q_{\infty}$	
C_{Y_m}	CYM	side force coefficient in the missile axis system	
C_{Y_m}'	DCY/DX	local side force coefficient in the missile axis system; $\partial C_{Y_m} / \partial (X/\ell_{ref})$	
F_N		normal force, positive in the negative direction of Z_m	lb
F_Y		side force, positive in the positive direction of Y_m	lb

NOMENCLATURE (continued)

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>	<u>UNITS</u>
l_B	LBODY	overall length of SRB	in.
l_{ref}	LREF	reference length (diameter of the cylindrical section of the model)	in.
M_y		pitching moment; a moment about the Y_m -axis (a positive pitching moment tends to rotate the positive Z_m -axis toward the positive X_m -axis)	in.-lb
M_z		yawing moment; a moment about the Z_m -axis (a positive yawing moment tends to rotate the positive X_m -axis toward the positive Y_m -axis)	in.-lb
MRP	MRP	Moment Reference Point (see "Data Reduction and Presentation" of text)	in.
P		pressure	psi
P_T	PO	free stream total pressure	psi
P_∞	P	free stream static pressure	psi
q_∞	Q(PST)	free stream dynamic pressure	psi
S_{ref}	SREF	reference area; cross-sectional area of the cylindrical section of the model	in. ²
M	MACH	Mach number	

NOMENCLATURE (continued)

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>	<u>UNITS</u>
SRB		abbreviation for solid rocket booster	
T_T		free stream total temperature	°F
X		distance from nose of SRB, positive in the negative X_m direction	in.
X_m, Y_m, Z_m		missile axes (see text)	
XMRP YMRP ZMRP	XMRP YMRP ZMRP	location of the Moment Reference Point, measured from the centerline of the SRB at the nose, parallel to the missile axis system and positive in the negative X_m , positive Y_m and negative Z_m directions	in.
α_T	ALPHA	total angle of attack	deg
β	BETA	angle of sideslip	deg
θ	THETA	circumferential location see Figure 3	deg
ϕ	PHI	roll angle; i.e., angle between the missile Y_m -axis and the body Y-axis (from a pilot's viewpoint in an airplane, a positive roll angle is a clockwise rotation). The plot symbol describes the specific protuberance angular location in degrees, see Figure 1.	deg
RN/Ft	RN/L	Reynolds number per foot	

NOMENCLATURE (Concluded)

<u>PLOT SYMBOL</u>	<u>MNEMONIC</u>	<u>DEFINITION</u>
X/l _B	X/L	ratio of distance from nose to tap divided by length of body
R-SCH	RN-SCH	Reynolds number schedule
Body-Axis System		
C _N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C _A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C _Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C _m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C _n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qSb}$
C _l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qSb}$

SUBSCRIPTS

m	missile axis system
ref	reference conditions
t	total conditions
∞	free stream conditions

INTRODUCTION

After separation of the Solid Rocket Boosters from the Space Shuttle, the SRB will reenter the earth's atmosphere at high angles of attack and at high supersonic Mach numbers. It is desirable that the local pressure distributions and local aerodynamic loads in such an environment be determined. A pressure test of the SRB at reentry attitudes and Mach numbers was conducted to determine local pressure and airload distributions.

The model configuration was a 0.00548-scale representation of a 146 inch diameter Space Shuttle SRB. The SRB model included all major protuberances and was tested with and without protuberances. A drawing of the general arrangement of protuberances is shown in Figure 2.

There were 143 pressure orifices on the model to allow the determination of longitudinal local pressure distributions and circumferential ring pressure distributions, which can be integrated to determine local airload distributions.

Tests were conducted at Mach numbers of .4, .6, .9, 1.2, 1.96, 2.74, 3.48, 3.76 and 4.45 over an angle of attack range from 60 to 185 degrees. The model with all protuberances was tested at roll angles of 0, 45, 90 and 315 degrees.

MODEL DESCRIPTION AND TEST HARDWARE

The model was a 0.00548-scale representation of a 146 inch diameter Space Shuttle Solid Rocket Booster. The general arrangement of the model is shown in Figure 2. The model was designed and fabricated by NASA according to the configuration specified by MSFC drawing 10A00319 and Reference 3. All parts of the model were machined from stainless steel. The model designation number is MSFC #468.

There were 143 pressure orifices located on the model. The location of the pressure orifices is shown in Figure 3 and Table IV. Annealed stainless steel tubing of 0.032 inch O.D. was routed from the pressure orifices out the side of the model (see Figure 4) and connected to 4.5-foot lengths of 0.050 inch O.D. tubing. These tubes were routed along the sting and sting adapter, down the model support mechanism, through the tunnel floor, and out the side of the tunnel. Tygon tubing was used to connect the pressure orifice tubing to quick disconnects which were tubed to scanivalves.

The model was installed in the test facility in a side mount configuration. The center section of the model body has an integral side mount which attaches to a 20-degree offset sting. Model installation photographs showing a low angle of attack mounting and a high angle of attack mounting are presented in Figures 4 and 5.

To allow optimum vertical positioning of the model in the test section, the sting adapter was designed with four vertical positions for sting mounting (see Figures 6 and 7) which, coupled with a 180 degrees sting rotation capability, provided a total of 7 vertical sting adapter positions. The model support sting is rotated to the 180 degree position in the model support mechanism in Figure 7. Horizontal adjustments of the distance from the sting adapter to the sting were provided to allow positioning of the model at the center of rotation of the model support mechanism.

MODEL DESCRIPTION AND TEST HARDWARE (concluded)

The SRB model was tested with and without protuberances. There were six different types of protuberances used on the SRB protuberance model. These were:

1. Data capsule
2. External Tank (ET) attachment structure
3. Electrical tunnel
4. External Tank (ET) attachment ring
5. Aft ring
6. Hold down struts

The SRB nose, body, and engine nozzle are described in the Model Dimensional Data, Table III, and the SRB protuberances are illustrated in the Protuberance Dimension Sheets, Figure 8. Eight equally spaced attachment positions were provided around the model for each protuberance, allowing model roll angles to be simulated in 45-degree increments. By positioning each protuberance at its proper position, model roll angles of 0, 45, 90 and 315 degrees were simulated. Radial protuberance locations for a model roll angle of 0 degrees are shown in Figure 9.

CONFIGURATIONS INVESTIGATED

Three SRB configurations were tested. They are identified as follows:

SRB - All protuberances	SRB with all protuberances.
SRB - "Clean" attach and aft rings	SRB with the only protuberance being a "Clean" attach ring (no projections past the 0.888 inch diameter) (see Figure 8), and an aft ring.
SRB - "Clean" attach ring, no aft ring	SRB with the only protuberance being a "Clean" attach ring.

Each of the above configurations consists of the following model components.

SRB - All protuberances = NBE+DC+ETAS+ELT+ETAR+AR+TDS+CETAR

SRB - "Clean" attach and aft rings = NBE+CETAR+AR

SRB - "Clean" attach ring, no aft ring = NBE+CETAR

Brief descriptions of each component are presented below:

NBE	Nose, body and engine of SRB
DC	Data capsule
ETAS	External Tank attachment structure
ELT	Electrical Tunnel
CETAR	Clean External Tank attachment ring
ETAR	External Tank attachment ring
AR	Aft ring
TDS	Tie down structure

Refer to the Model Dimension Data, Table III, and Figures 2, 8, and 9, for dimensions and locations of protuberances.

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14 x 14 inch Transonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.00 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50 and the supersonic section permits testing at Mach 2.74 through 5.00. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.46, 1.96 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increment.

Air is supplied to a 6000-cubic foot storage tank at approximately -40 degrees Fahrenheit dew point and 500 pounds per square inch absolute. The compressor is a three-stage reciprocating unit driven by a 1500 horsepower motor.

The tunnel flow is established and controlled with a servo-actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 200 degrees Fahrenheit. The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20 degrees (± 10 degrees). Sting offsets are available for obtaining various maximum angles of attack up to 90 degrees.

TEST FACILITY DESCRIPTION (concluded)

The variable diffuser section has movable floor and ceiling panels, which are the primary means of controlling the subsonic Mach numbers and permit more efficient running at supersonic Mach numbers. The sector assembly and diffuser telescope to allow easy access to the model and test section.

Tunnel flow is exhausted through an acoustically damped tower to atmosphere or into the vacuum field of 42,000 cubic feet. The vacuum tanks are evacuated by vacuum pumps driven by electric motors rated at a total of 500 horsepower.

Data are recorded by a solid-state digital data acquisition system. The digital data are transferred to punched cards during the run to be reduced later by a computer to proper coefficient form.

Additional information concerning the test facility can be obtained from Reference 2.

INSTRUMENTATION

Eight scanivalves equipped with 50 psia pressure transducers were used to monitor the 143 pressure orifices on the model. The location of these orifices is shown in Figure 3. Tubes from the orifices were tagged and numbered from 1 to 143 according to the relationship between orifice number and model location depicted in Table IV. A strip chart recorder was utilized on initial test runs to monitor pressure levels to selected scanivalves. This was used to insure that sufficient scanivalve response time was being provided in the data acquisition system.

No corrections were made to the model angle of attack due to support hardware deflections under model airloads. The model angle of attack accuracy is within the range of typical force model tests.

TEST PROCEDURE

The configuration SRB - "Clean" attach and aft rings consisted of the SRB with the clean ET attach ring and the aft ring. The configuration is axisymmetric and thus was tested at only one roll position. The configuration was tested at angles of attack from 60 to 185 degrees in increments of 5 or 10 degrees. Pressure data were obtained at Mach numbers of 0.4, 0.6, 0.9, 1.2, 1.96, 2.74, 3.48 and 4.45. Reynolds number variation tests of this configuration were conducted at angles of attack of 70, 90, and 110 degrees at Mach numbers 0.4 and 0.6.

The configuration SRB - "Clean" attach ring and no aft ring was tested to obtain Reynolds number effects. The configuration was tested at an angle of attack range of 60 to 180 degrees in increments of 10, 15, and 20, (in one case 9 degrees) at a Mach number of 3.76, at two Reynolds numbers.

The final configuration tested, SRB-all protuberances, consisted of the SRB with all six different types of protuberances. Pressure data were obtained at an angle of attack range from 70 to 180 degrees in increments of 10 and 20 degrees, and at model roll positions of 0, 45, 90 and 315 degrees. Tests were conducted at Mach numbers of 0.6, 0.9, 1.2, 1.96, 2.74 and 3.48.

A list of average test conditions is given in Table I. The run schedule is presented in Table II.

DATA REDUCTION AND PRESENTATION

The parameters that were measured and recorded during this test are:

- o Wind tunnel conditions (P_∞ , P_T , T_T)
- o Nominal model attitude and support mechanism rotation
- o 143 local pressures

Tunnel conditions were used to calculate the Mach number, the dynamic pressure and the Reynolds number. The nominal model attitude and model support mechanism rotation was used to calculate the model angle of attack.

The pressure data were reduced to coefficient form and are tabulated along with wind tunnel parameters, configuration, and run number in the Appendix of this report. The location of each pressure orifice and the numbering system are presented in Table IV. Special identification of blocked or inoperative pressure orifices are noted in Table IV. Figure 3 presents the orifices as located on the model in reference to the previously mentioned table. The pressure coefficients were integrated to obtain the following missile axis force and moment coefficients:

$C_{N_m}' = \partial C_{N_m} / \partial (X/\ell_{ref})$	local normal force coefficient
$C_{Y_m}' = \partial C_{Y_m} / \partial (X/\ell_{ref})$	local side force coefficient
$C_{N_m} = F_N / q_\infty S_{ref}$	normal force coefficient
$C_{Y_m} = F_Y / q_\infty S_{ref}$	side force coefficient
$C_{m_m} = M_Y / q_\infty S_{ref} \ell_{ref}$	pitching moment coefficient
$C_{n_m} = M_z / q_\infty S_{ref} \ell_{ref}$	yawing moment coefficient

DATA REDUCTION AND PRESENTATION (Concluded)

The force and moment coefficients obtained from the integration of the pressure data are available from MSFC and DATAMAN for comparison with the results from the force test, TWT 604 (Reference 1). Model reference dimensions used in the data reduction are presented in Table V.

The integration force and moment coefficients were calculated in the missile axis system. A schematic of this axis system is presented in Figure 1. The missile axis system (X_m , Y_m , Z_m) is a non-rolling body axis system that is frequently used in wind tunnel tests and studies of missile flight dynamics. It is a system of axes that rotates with a missile or wind tunnel model through angles of sideslip and angles of attack but never through angles of roll; i.e., it never rotates about the missile or model longitudinal axis. The missile axis system is identical with the body axis system at zero roll angle.

The Moment Reference Point (MRP) is taken to be the SRB's burn out center of gravity and its location is measured from the nose of the SRB along the centerline. For the full scale SRB, the center of gravity is located at $X = 1044$ inches. Thus, the MRP for the 0.00548 scale SRB model is 5.721 inches from the model nose, on the centerline (refer to Figure 2).

REFERENCES

1. NASA CR 141, 549, DMS-DR-2223 "Reentry Static Stability Characteristics of a 0.005479 Scale Model 146 Inch Solid Rocket Booster tested in the MSFC 14 x 14 Inch TWT (SABF)," Johnson, J. D., Praharaj, S. C., Braddock, W. F.; July 1975.
2. NASA TMX-64624, "The George C. Marshall Space Flight Center's 14 x 14 Inch Trisonic Wind Tunnel Technical Handbook," Simon, Erwin; November 1971.
3. Horton, W. P., "SRB Baseline" MSFC Memo S&E-SRR (74-193), June 6, 1974.

REFERENCE DRAWINGS

1. 10A00319, 6-13-74; SRB External Contour; Marshall Space Flight Center.

Table 1.

M-9230-75-416

TEST: TWT-603		DATE: MARCH AND APRIL 1975		
TEST CONDITIONS				
MACH NUMBER	REYNOLDS NUMBER (per foot)	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)	STAGNATION PRESSURE (pounds/sq. inch)
0.40	2.96x10 ⁶ 1/FT.	1.81	100	18
↓	5.27x10 ⁶	3.21	100	32
0.60	4.09x10 ⁶	3.56	100	18
↓	8.62x10 ⁶	7.51	100	38
0.90	6.27x10 ⁶	7.37	100	22
1.20	6.68x10 ⁶	9.15	100	22
1.96	7.57x10 ⁶	10.97	100	30
2.74	5.20x10 ⁶	6.37	100	30
3.48	7.12x10 ⁶	6.86	100	60
3.76	3.52x10 ⁶	3.07	100	34
↓	8.17x10 ⁶	7.13	100	79
4.45	6.03x10 ⁶	4.08	100	80

BALANCE UTILIZED: N/A

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF	_____	_____	_____
SF	_____	_____	_____
AF	_____	_____	_____
PM	_____	_____	_____
RM	_____	_____	_____
YM	_____	_____	_____

COMMENTS:

Table II.

TEST: MSFC TWT-603(SA28F)				DATA SET / RUN NUMBER COLLATION SUMMARY							DATE: MARCH AND APRIL 1975				
DATA SET IDENTIFIER	CONFIGURATION	SCMD. PARAMETERS/VALUES		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)										
		α	β		0.4	0.6	0.9	1.2	1.96	2.74	3.49	3.76	4.45		
R1001	SRB-"CLEAN"	60	0 2	0	145	142	139	137	66	60	62	64			
	02 ATTACH AND AFT	70			144	141									
	03 RINGS	70	2		146	143	140	138	67	61	63	65			
	04	80	2		123	128	131	134	68	57	54	51			
	05	90	1		126	127									
	06	90	1		127/1										
	07	90	2		124	129	132	135	69	58	55	52			
	08	90	2		124/1	129/1	132/1	135/1							
	09	90	2		129/2										
	10	100	2		125	130	133	136	70	59	56	53			
	11	110	1		120	119									
	12	110	2		121	117	115	113	71	45	47	49			
	13	110	2				115/1								
	14	120	2		122	118	116	114	72	46	48	50			
	15	120	2				116/1								
	16	130	2		101	104	107	110	73	42	39	36			
	17	140	2		102	105	108	111	74	43	40	37			
	18	150	2		103	106	109	112	75	44	41	38			

13 19 25 31 37 43 49 55 61 67 75.76

IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

MSFC - Form 283-1 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER
AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

TEST: MSFC TWT-603(SA28F)		DATA SET / RUN NUMBER COLLATION SUMMARY											DATE: MARCH AND APRIL 1975							
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE 1)														
		α	β			0.4	0.6	0.9	1.2	1.96	2.74	3.48	3.96	4.45						
R11019	SRB - "CLEAN"	160	0	2	0	100	99	99	97	76	33	34								
20	ATTACH AND AFT RINGS	160				93	89	85	81	77	29	25								
22		170							81/1											
23		175				94	90	86	82	78	30	26								
24		175							82/1											
25		180				95	91	87	83	79	31	27								
26		180							83/1											
27		185				96	92	88	84	80	32	28								
28		185		Y					84/1											
29	SRB - "CLEAN"	60		1																
30	ATTACH RING	60		2																
31	NO AFT RING	75		1																
32		75		2																
33		90		1																
34		90		2																
35		105		1																
36		105		2	Y															
1		7																		
		13																		
		19																		
		25																		
		31																		
		37																		
		43																		
		49																		
		55																		
		61																		
		67																		
		75																		
		76																		

MSFC Form 363-3 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

TEST : MSFC TWT-603(SA28F)		DATA SET RUN NUMBER COLLATION SUMMARY										DATE : MARCH AND APRIL 1975			
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES		NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)							TEST RUN NUMBERS			
		α	β		0.4	0.6	0.9	1.2	1.96	2.74	3.48		3.76	4.45	
R1037	SRI3 - "CLEAN"	120	0	1	0									8	
38	ATTACH RING	120	0	2										10	
39	NO AFT RING	140	1	1										13	
40		140	2	2										11	
41		150	1	1										14	
42		150	2	2										12	
43		160	1	1										15	
44		160	2	2										16	
45		170	1	1										19	
46		170	2	2										17	
47		180	1	1										20	
48		180	1	1										20/1	
49		180	1	1										20/2	
50		180	2	2										18	
Y 51	Y	179	Y	1	Y									327	

α OR β
SCHEDULES

MSFC-Form 263-1 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

TEST: MSFC IWT-603(SA28F)		DATA SET: RUN NUMBER COLLATION SUMMARY						DATE: MARCH AND APRIL 1975									
DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES	NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)											
		α	β			0.6	0.9	1.2	1.96	2.77	3.45						
R1Z02	SRD-ALL	70	0	1	0	147											
53	PROTUBERANCES	70	1	2		149	149	150	326	307	306						
54		90	1	1		154											
55		90	2	2		152	152	151	325	308	309						
56		110	1	1		153											
57		110	2	2		156	157	157	324	311	310						
57		130	1	1		163	161	157	322		314						
57		150	1	1		164	162	160	323	313	315						
60		170	1	1		165	167	169	320	318	316						
61		180	1	1	45	166	168	170	321	319	317						
62		70	1	1		183											
63		70	2	2		194	192	191	285	304	305						
64		90	1	1		188											
65		90	2	2		187	189	190	286	303	302						
66		110	1	1		185											
67		110	2	2		186	184	183	287	300	301						
68		130	2	2		177	179	181	288	298	296						
69		150	2	2		173	180	182	289	299	297						

MSFC Form 303-1 (Rev. May 1970) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

Table II. (Continued)

TEST: MSFC TWT-603(SA28F)		DATA SET RUN NUMBER COLLATION SUMMARY								DATE: MARCH AND APRIL 1975									
DATA SET IDENTIFIER	CONFIGURATION	SCHD. PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)												
		α	β	Φ	75		76	77	78	79	80	81	82	83	84	85	86	87	
R1070	SRB - ALL	0	2	45		175	173	171	196	274	294								
71	PROTUBERANCES	2	45			176	174	172	291	293	295								
72		1	90			196													
73		2				195	197	198	284	265	264								
74		1				201													
75		2				202	200	199	223	266	267								
76		1				204													
77		2				203	205	206	282	269	268								
78		2				211	209	207	280	270	272								
79		2				212	210	208	281	271	273								
80		2				213	215	217	278	276	279								
81		2		▼		214	216	218	279	277	275								
82		1	315			241													
83		2				242	240	239	283	262	263								
84		2					240/1												
85		1				236													
86		2				235	237	238	244	261	260								
87		1	▼	▼		233													

MSFC - Form 349-3 (Rev. May 1973) R-SCHEDULE: 1 IS FOR LOWEST REYNOLDS NUMBER, 2 IS FOR HIGHEST REYNOLDS NUMBER AT MACH NUMBERS TESTED AT DIFFERENT REYNOLDS NUMBERS (REFER TO TABLE III).

NORTHROP SERVICES, INC.

Table III.
MODEL DIMENSIONAL DATA

MODEL COMPONENT: NOSE

GENERAL DESCRIPTION: 146-INCH SRB NOSE, CONE ANGLE OF 18° WITH A SPHERICAL
RADIUS NOSE CAP.

DRAWING NUMBER: 80M42712

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>195.00 in.</u>	<u>1.068 in.</u>
Max. Width	<u>146 in.</u>	<u>0.800 in.</u>
Max. Depth	<u>146 in.</u>	<u>0.800 in.</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u>116.26 ft.²</u>	<u>0.503 in.²</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Table III. (Continued)

MODEL COMPONENT: BODY

GENERAL DESCRIPTION: 146-INCH DIAMETER SRB BODY

DRAWING NUMBER: 80M42712
80M42711
80M51373

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length	<u>1438.7 in.</u>	<u>7.884 in.</u>
Max. Width	<u>146 in.</u>	<u>0.800 in.</u>
Max. Depth	<u>146 in.</u>	<u>0.800 in.</u>
Fineness Ratio	<u> </u>	<u> </u>
Area		
Max. Cross-Sectional	<u>116.26 ft.²</u>	<u>0.503 in.²</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

Table III. (Concluded)

MODEL COMPONENT: ENGINE SHROUD/NOZZLE

GENERAL DESCRIPTION: 142-INCH DIAMETER SRB ENGINE SHROUD/NOZZLE COMBINATION

DRAWING NUMBER: 80M51373

<u>DIMENSIONS:</u>	<u>THEORETICAL</u>	
	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Engine Shroud		
Flare Angle	<u>18° 47'</u>	<u>18° 47'</u>
Length	<u>91.5 in.</u>	<u>.501 in.</u>
Max. Dia.	<u>208.2 in.</u>	<u>1.141 in.</u>
Base Area	<u>236.42 ft.²</u>	<u>1.022 in.²</u>
Engine Nozzle		
Length	<u>N/A</u>	<u>.353 in.</u>
Max. Dia.	<u>147.644 in.</u>	<u>0.809 in.</u>
Base Area	<u>118.893 ft.²</u>	<u>0.514 in.²</u>

Table IV. CORRELATION BETWEEN TUBE/ORIFICE NUMBER AND ORIFICE LOCATION ON MODEL

RADIAL LOCATION RADIAL ROW LONGITUDINAL STA. LONG. STA. X X/2 B	PRESSURE PORTS COVERED BY PROTUBERANCES												
	0°	22 1/2°	45°	67 1/2°	90°	112 1/2°	135°	157 1/2°	180°	225°	270°	315°	
	A	B	C	D	E	F	G	H	I	J	K	L	
.027	1		30		52		82		104				
.050	2		31		53		83		105				
.074	3		32		54		84		106				
.098	4		33		55		85		107				
.111	5	21	34	43	56	73	86	95	108	125	128	141	
.139	6	22	35	44	57	74	87	96	109	126	129	142	
.168	7	23	36	45	58	75	88	97	110	127	130	143	
.191	8	24		46	59	76		98	111		131		
.255	9		37		60		89		112				
.344	10	25		47	61	77		99	113		132		
.392	11				62				114		133		
.667	12		38		63		90		115		134		
.702	13	26		48	64	78		100	116		135		
.724	14	27		49	65	79		101	117		136		
.744	15	28		50	66	80		102	118		137		
.755	16	29		51	67	81		103	119		138		
.869	17		39		68		91		120				
.902	18		40		69		92		121				
.923	19		41		70		93		122		139		
.945	20		42		71		94		123		140		
.982	21				72				124				

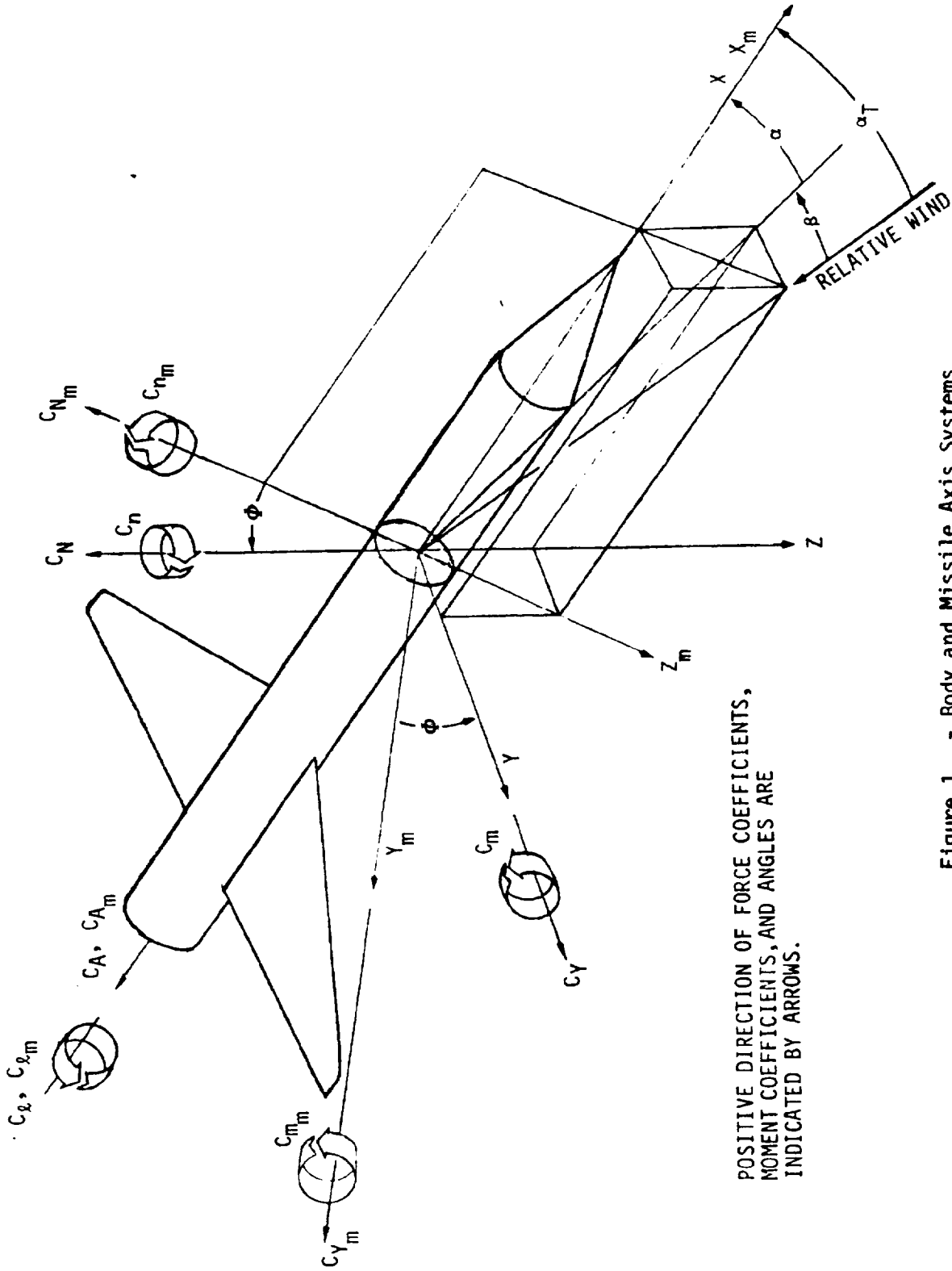
PRESSURE PORTS COVERED BY PROTUBERANCES

MODEL	PRESSURE PORT NUMBERS
0°	58 through 69, 129
45°	88 through 92, 142
90°	110 through 121, 6
315°	36 through 40, 126
BLOCKED OR LEAKING PORTS - 11, 17, 29, 136	

NORTHROP SERVICES, INC.

Table V. 0.00548-SCALE 146-INCH DIAMETER SRB REFERENCE DIMENSIONS

DIMENSION	FULL SCALE	MODEL SCALE
Reference Area, S_{ref} (cross sectional area of cylindrical body)	116.26 ft ²	0.503 in. ²
Reference Length, l_{ref} (diameter of cylindrical body)	146 in.	0.800 in.
Reference Span, b_{ref} (diameter of cylindrical body)	146 in.	0.800 in.
Moment Reference Point, MRP (burn out c.g.)		
XMRP (from nose)	1044 in.	5.721 in.
YMRP (from center line)	0	0
ZMRP (from center line)	0	0



POSITIVE DIRECTION OF FORCE COEFFICIENTS, MOMENT COEFFICIENTS, AND ANGLES ARE INDICATED BY ARROWS.

Figure 1. - Body and Missile Axis Systems

NORTHROP SERVICES, INC.

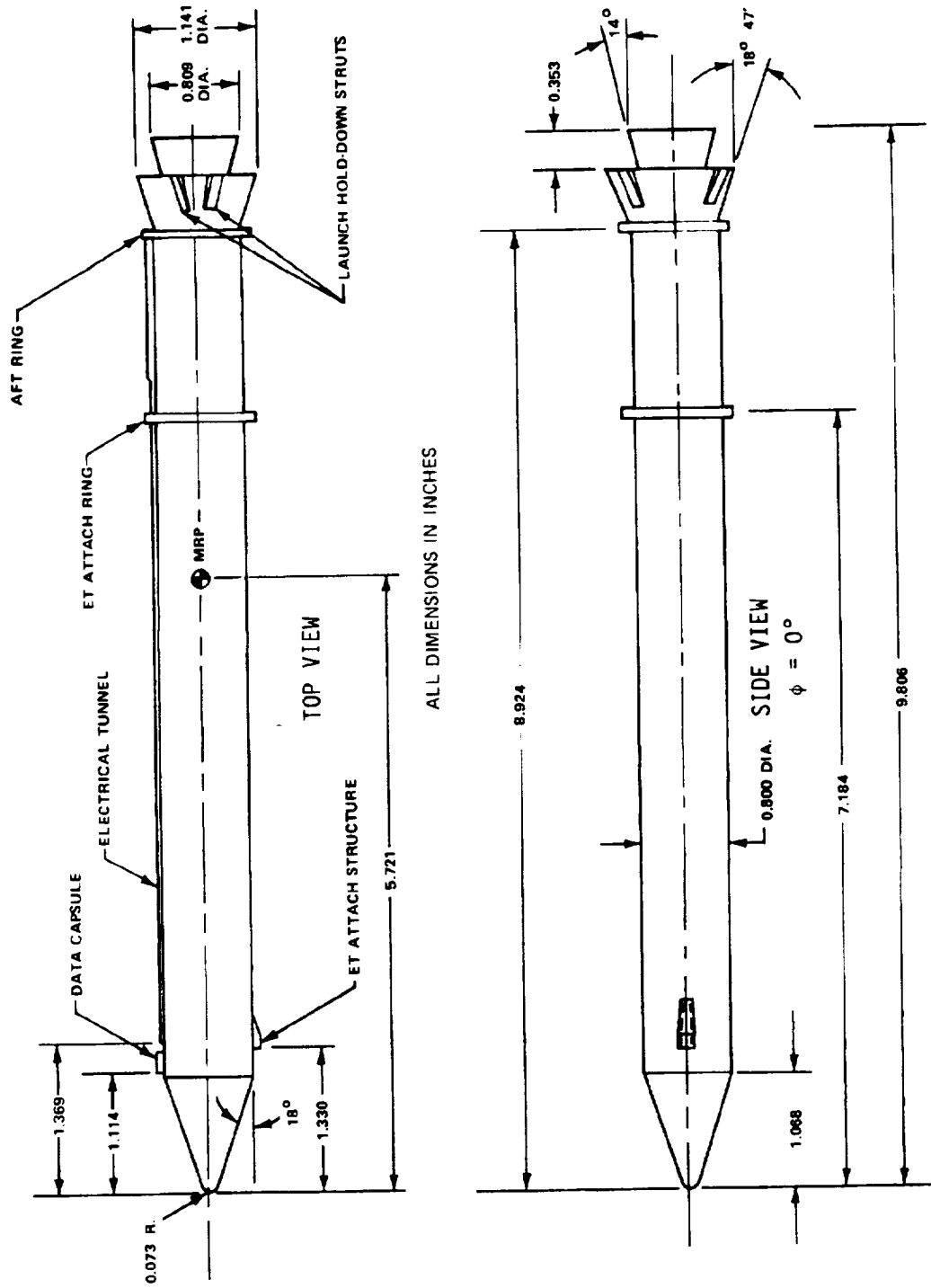


Figure 2. GENERAL ARRANGEMENT OF SRB

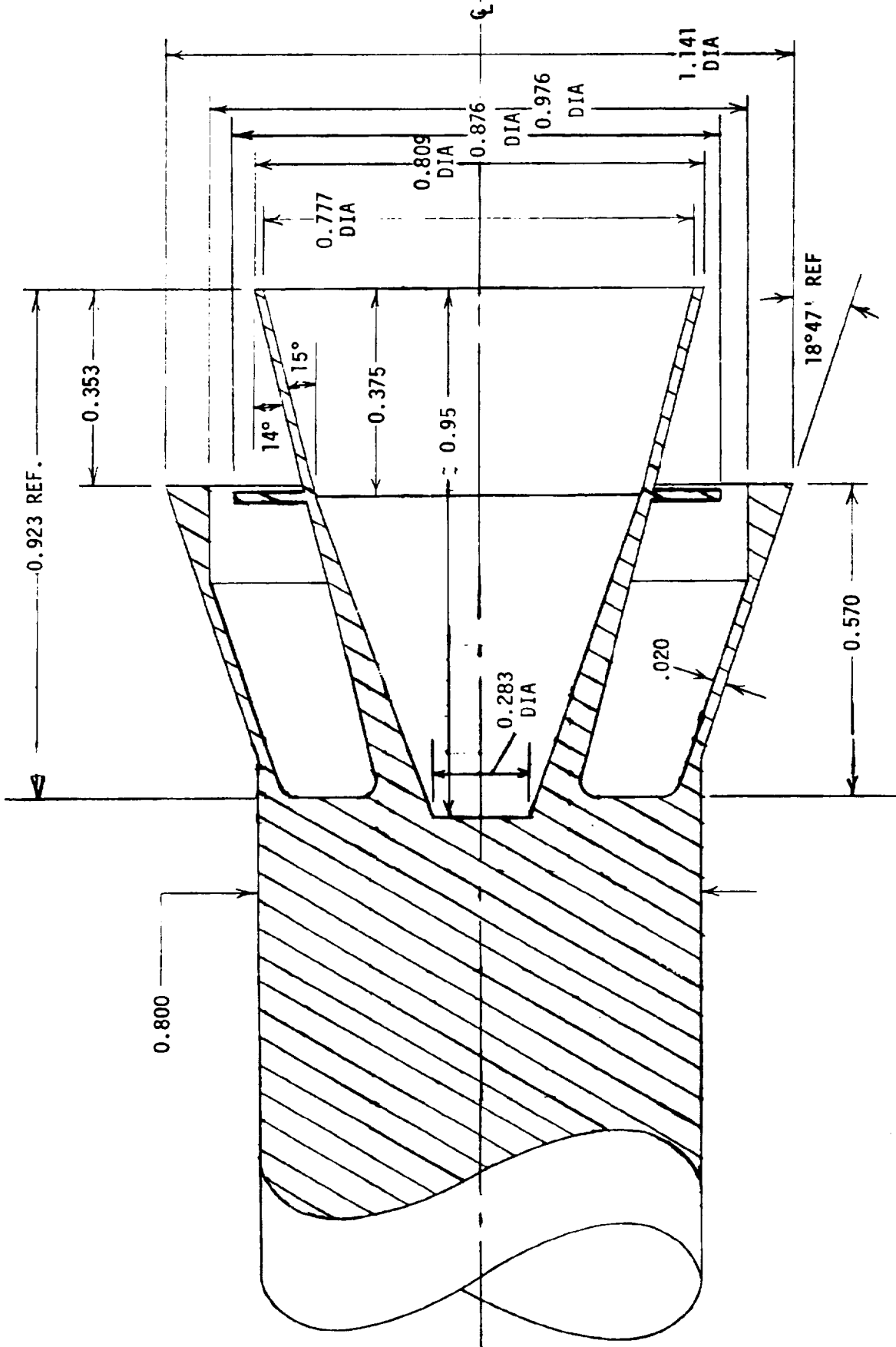
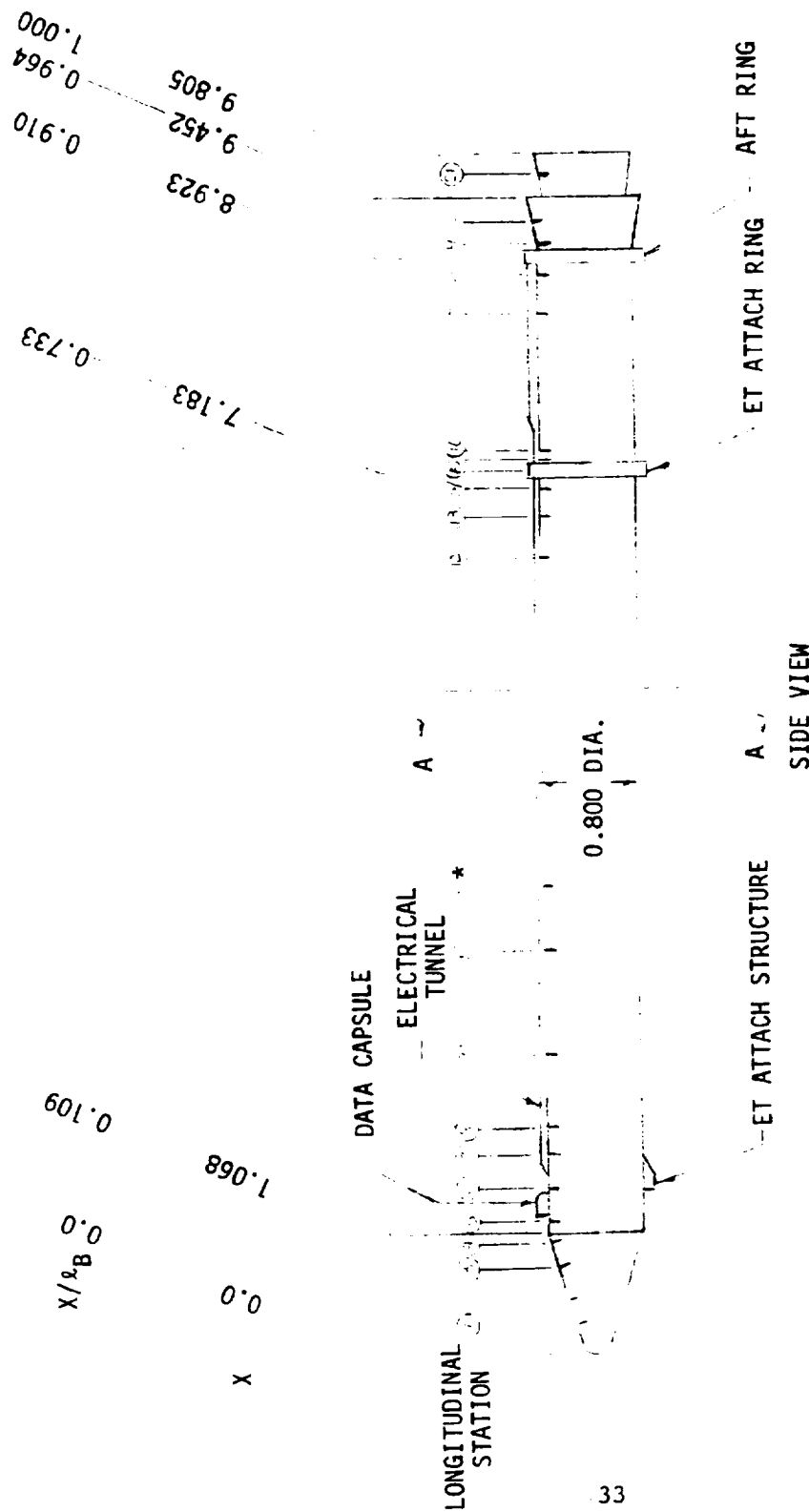


Figure 2. (Concluded)

ALL DIMENSIONS IN INCHES

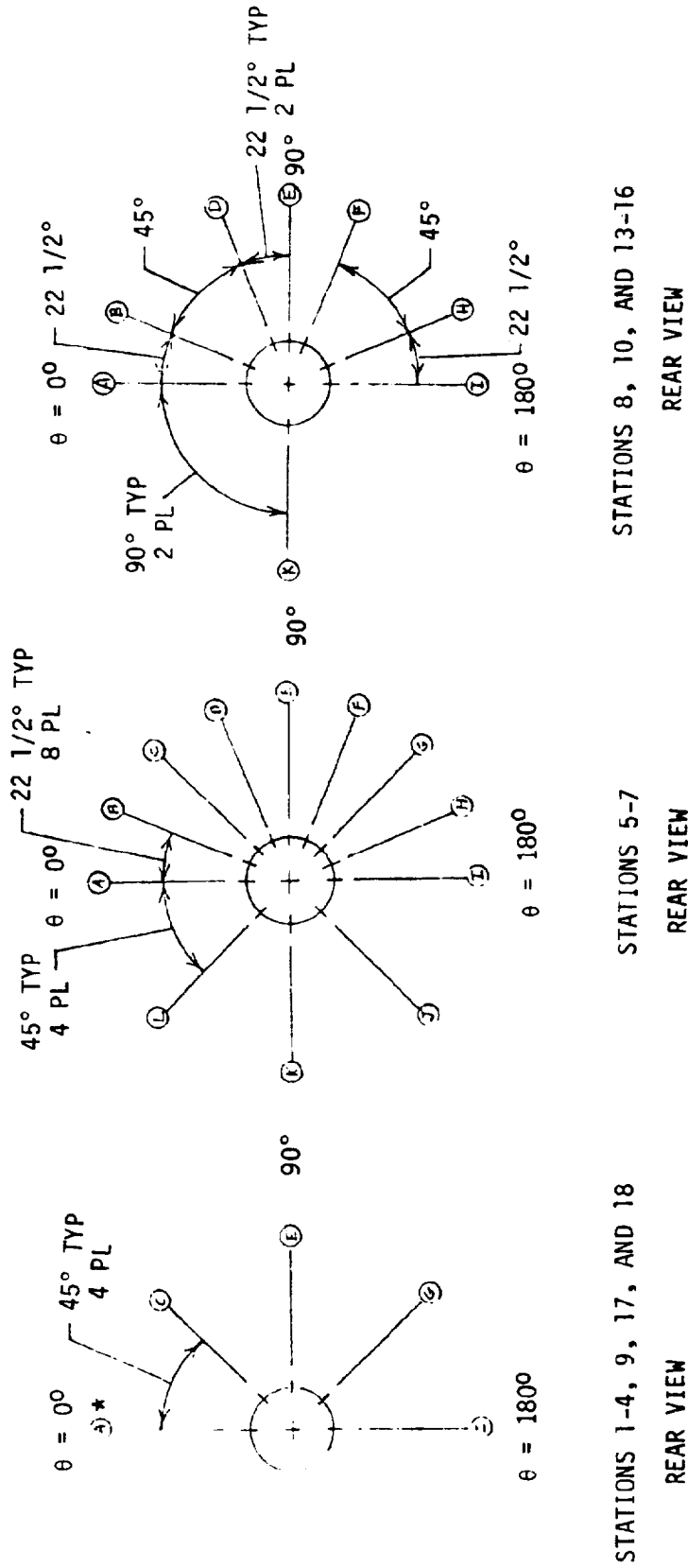


PROTUBERANCE LOCATIONS SHOWN FOR CLARITY

"LONGITUDINAL STATION"

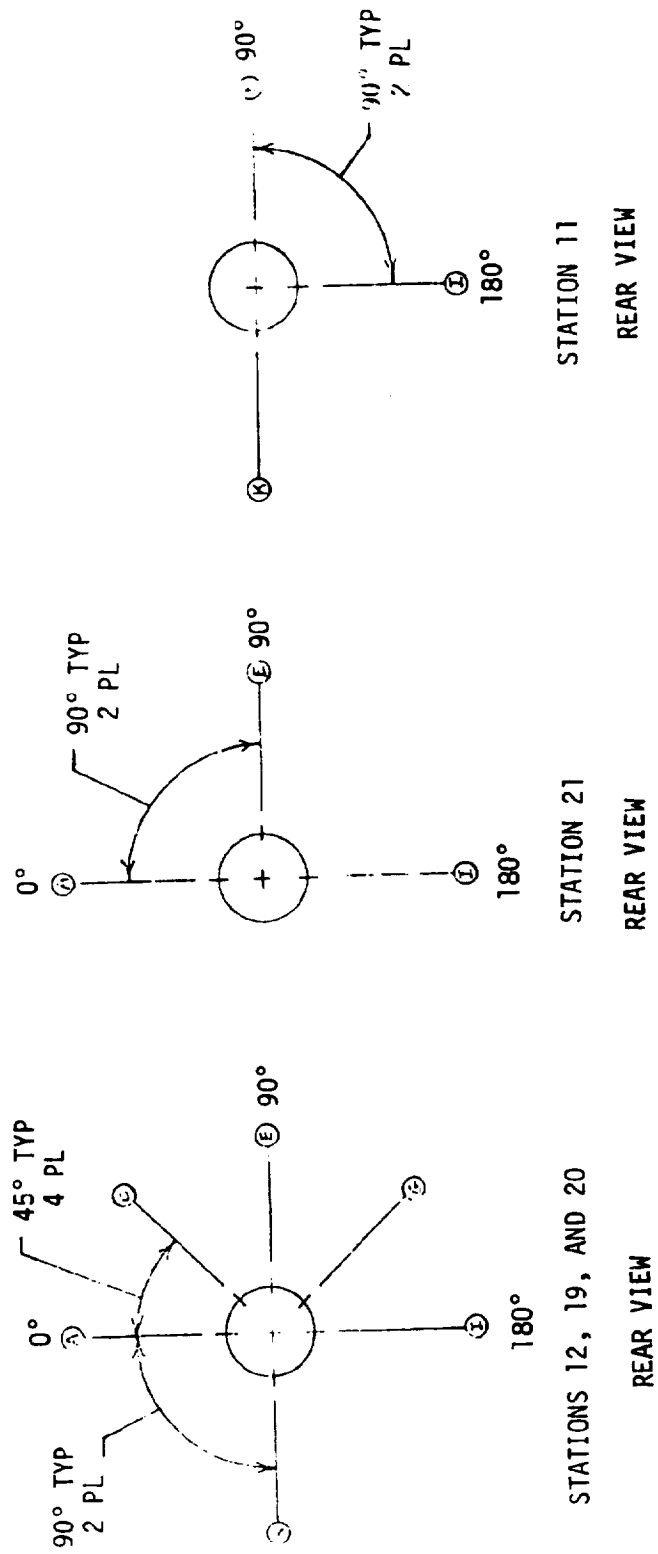
* Numbers refer to listing in Table IV

Figure 3. PRESSURE ORIFICE LOCATIONS



* Letters refer to "Radial Row" in Table IV

Figure 3. (Continued)



STATION 11
REAR VIEW

STATION 21
REAR VIEW

STATIONS 12, 19, AND 20
REAR VIEW

SECTIONS A-A

Figure 3. (Concluded)

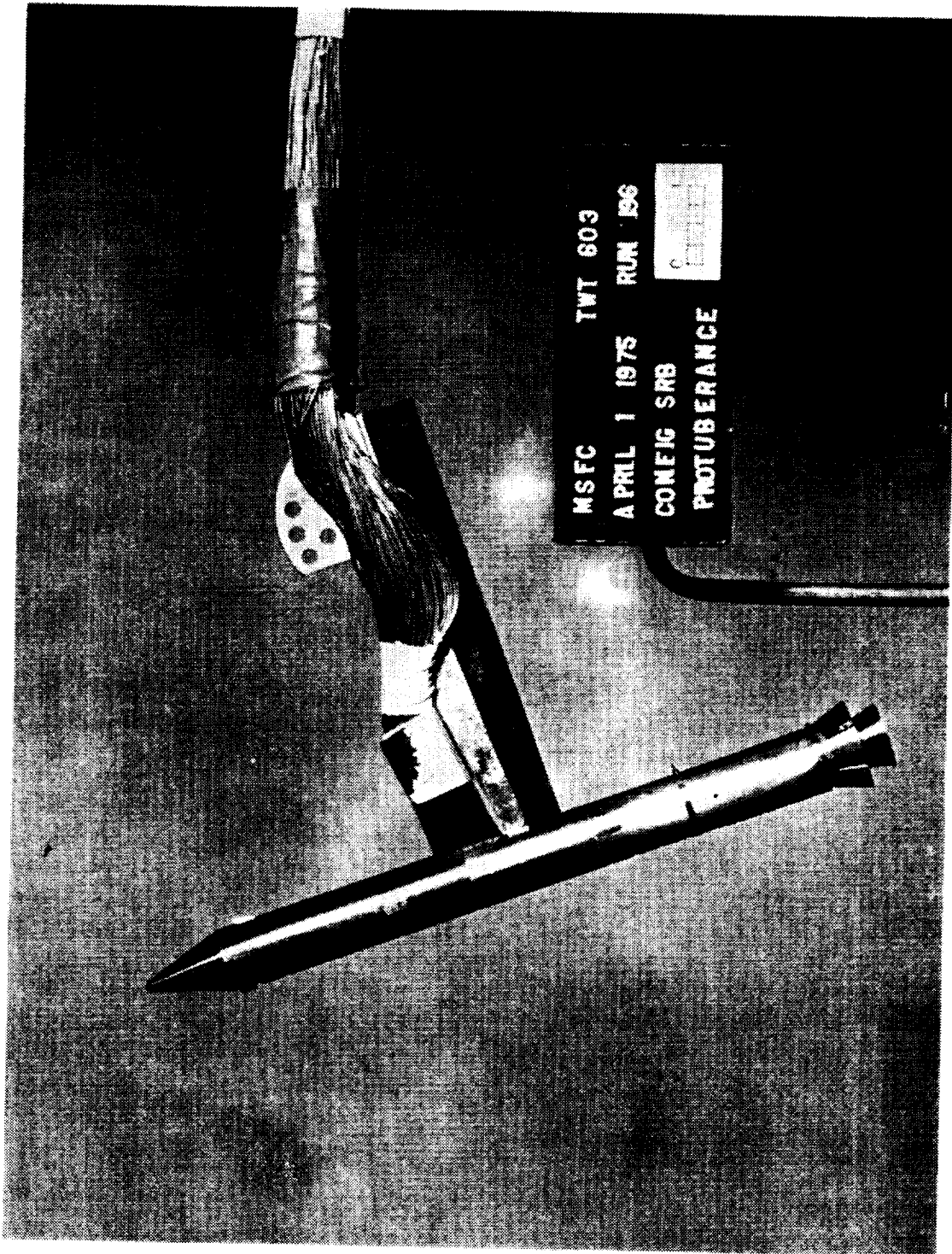


Figure 4. SRB MODEL, WITH PROTUBERANCES, AT LOWEST ANGLE OF ATTACK STING CONFIGURATION (SHOWN AT $\alpha = 70^\circ$)

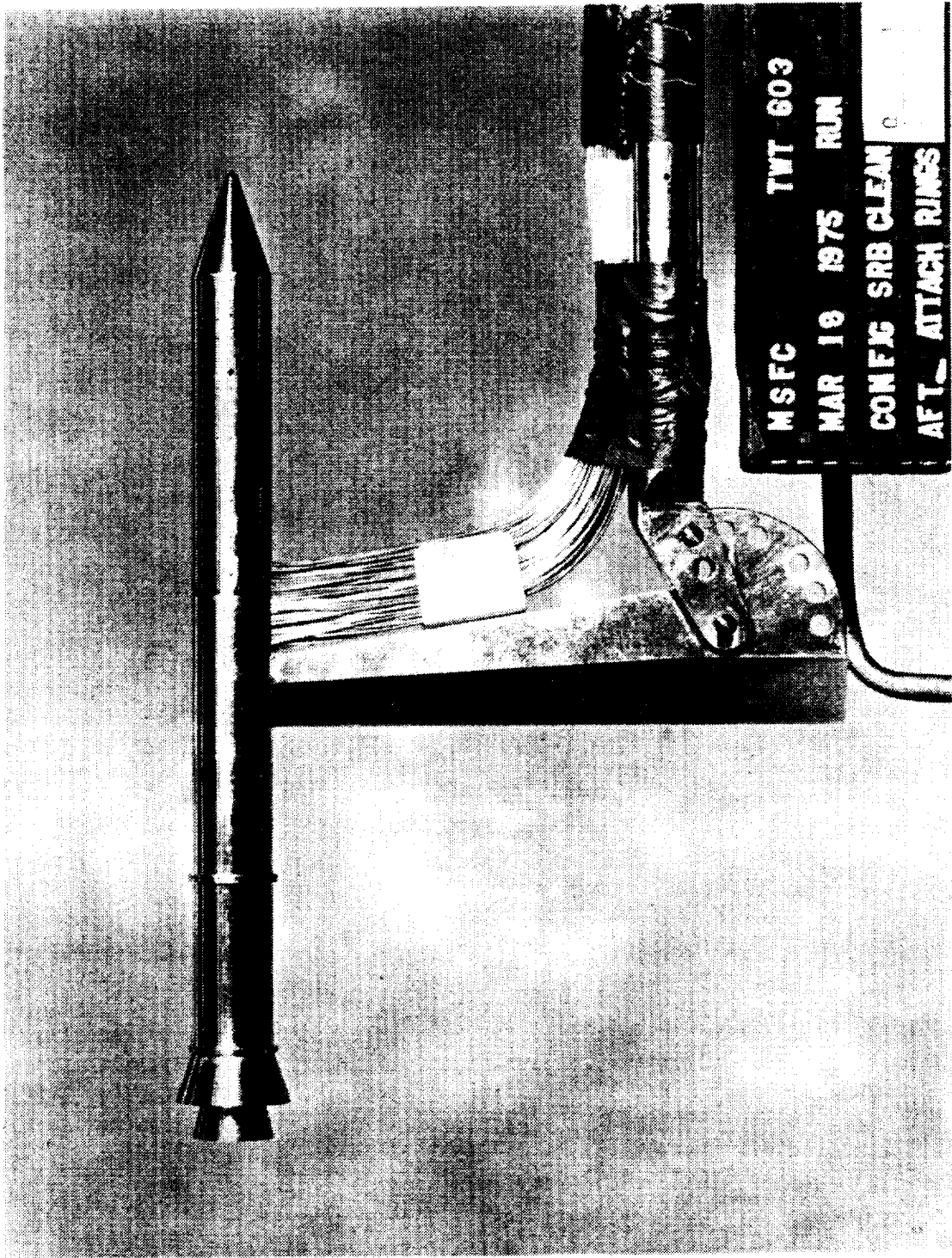


Figure 5. SRB MODEL, CLEAN CONFIGURATION, AT HIGHEST ANGLE OF ATTACK STING CONFIGURATION (SHOWN AT $\alpha = 180^\circ$)

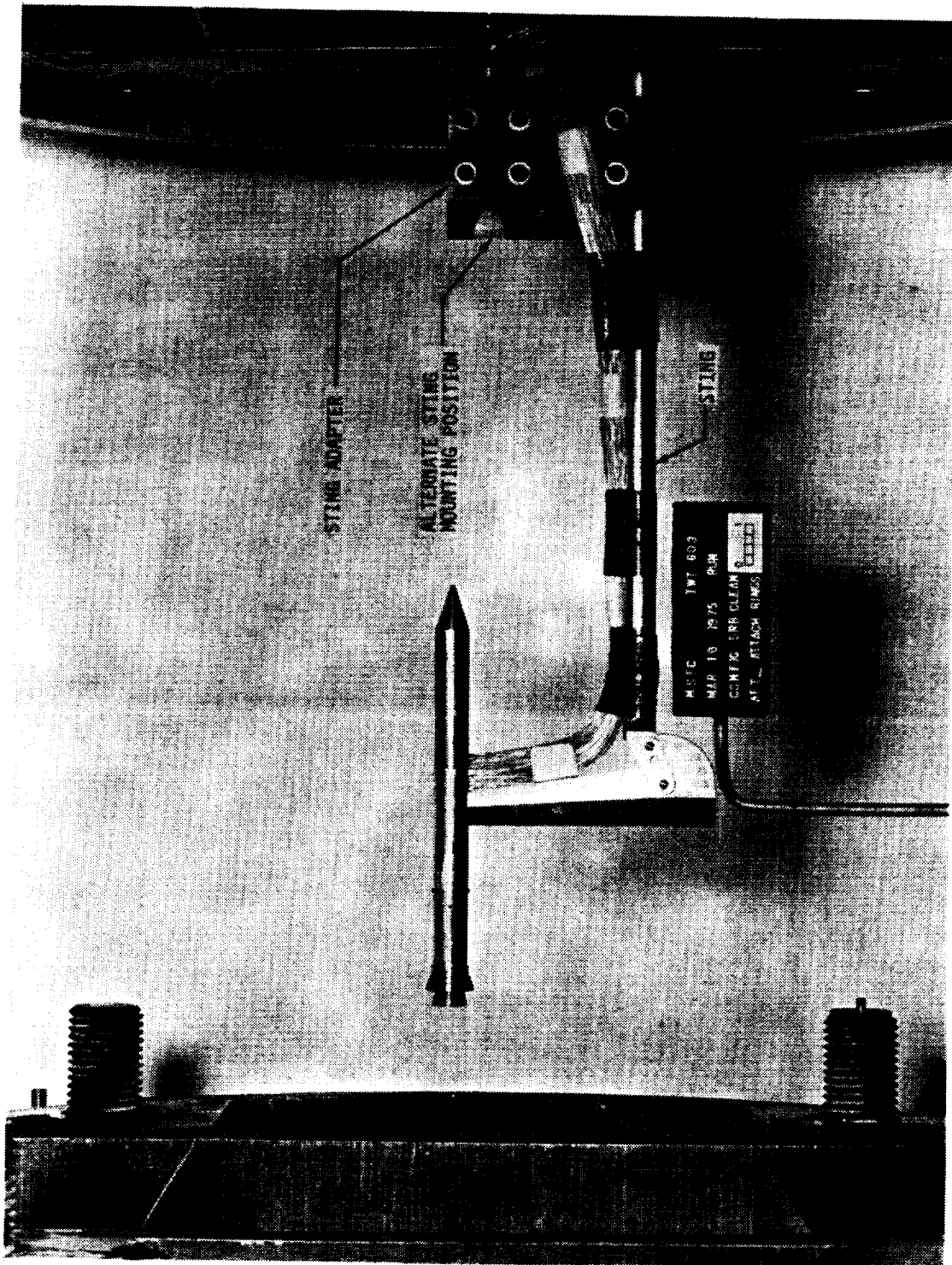


Figure 6. SRB MODEL STING ARRANGEMENT AND POSITIONING

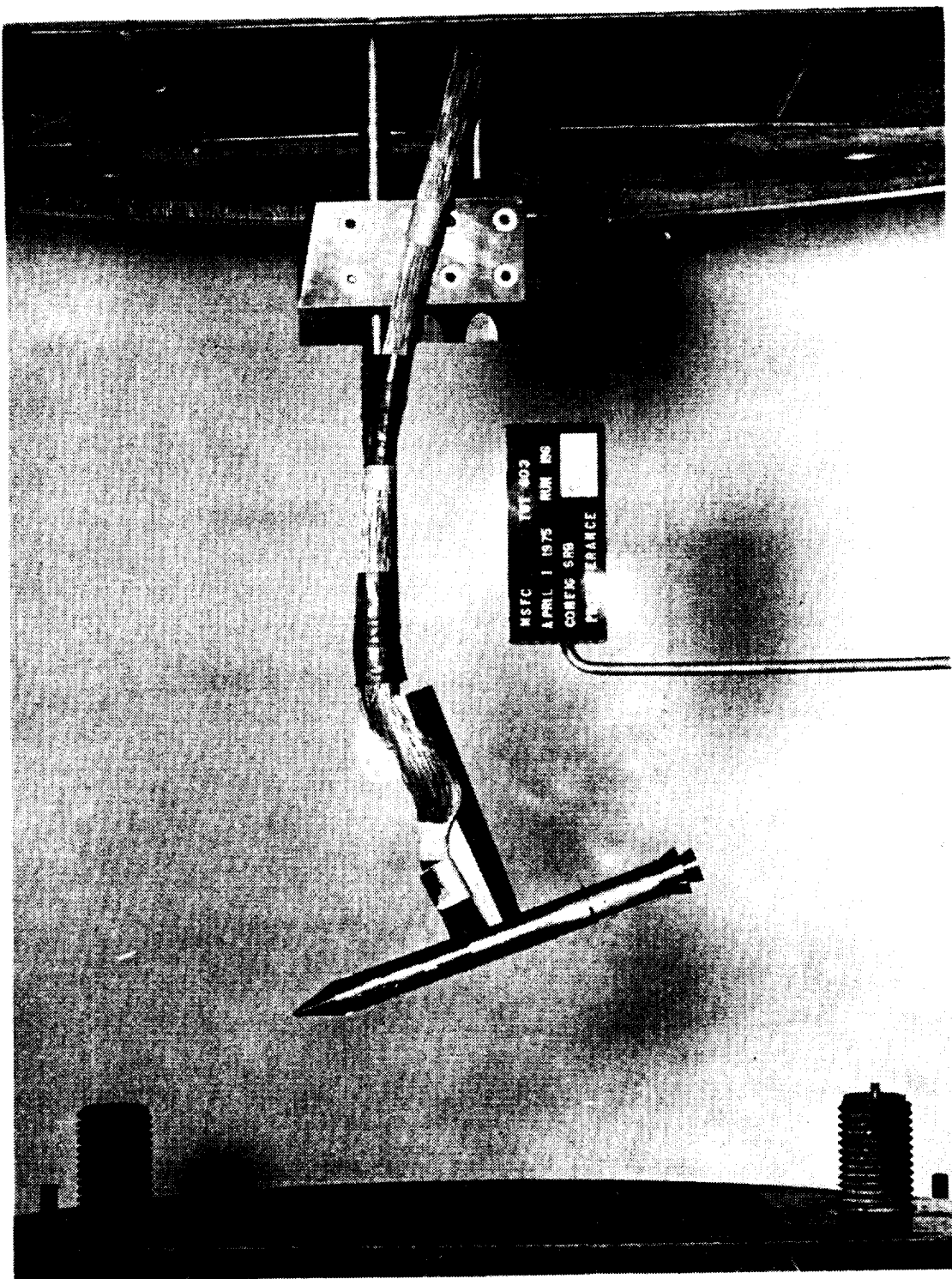
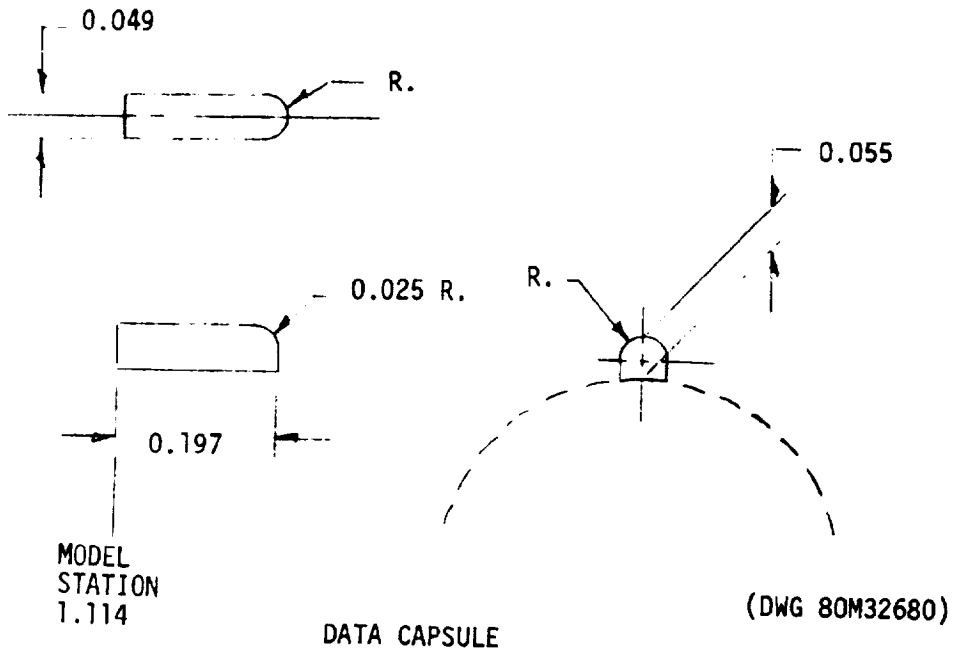


Figure 7. STING ADAPTER ROTATION AND MODEL POSITIONING



ALL DIMENSIONS IN INCHES

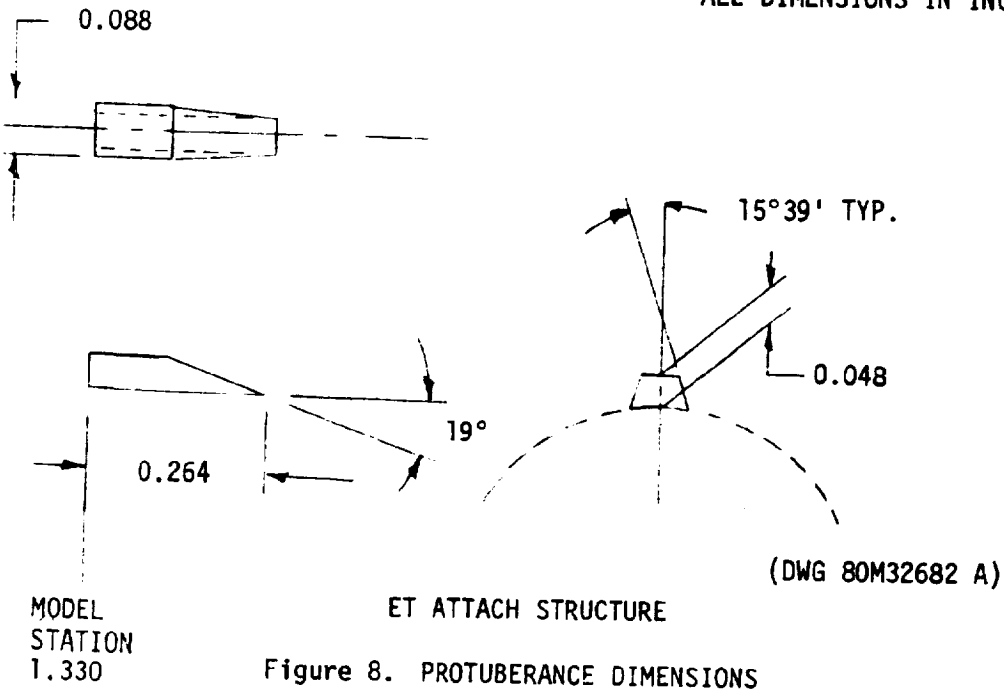
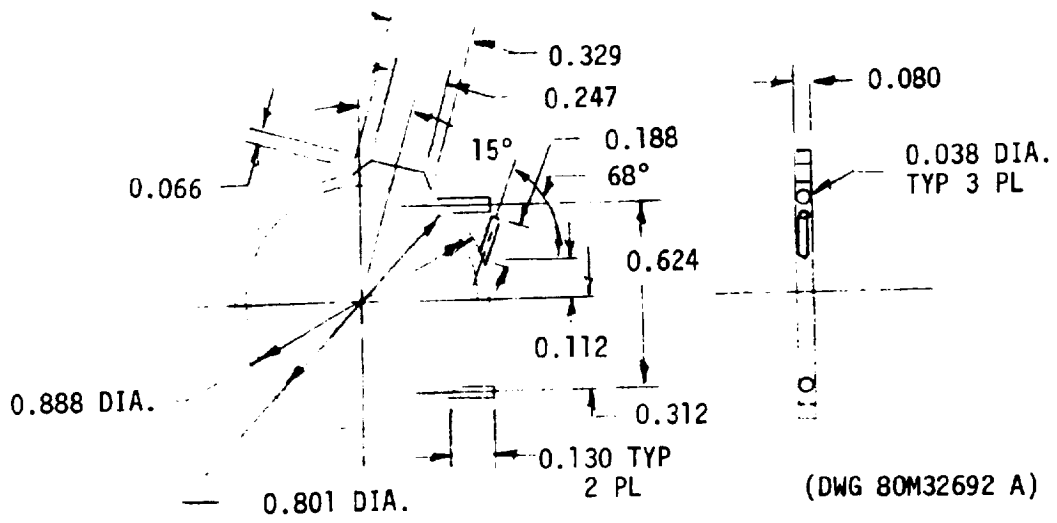
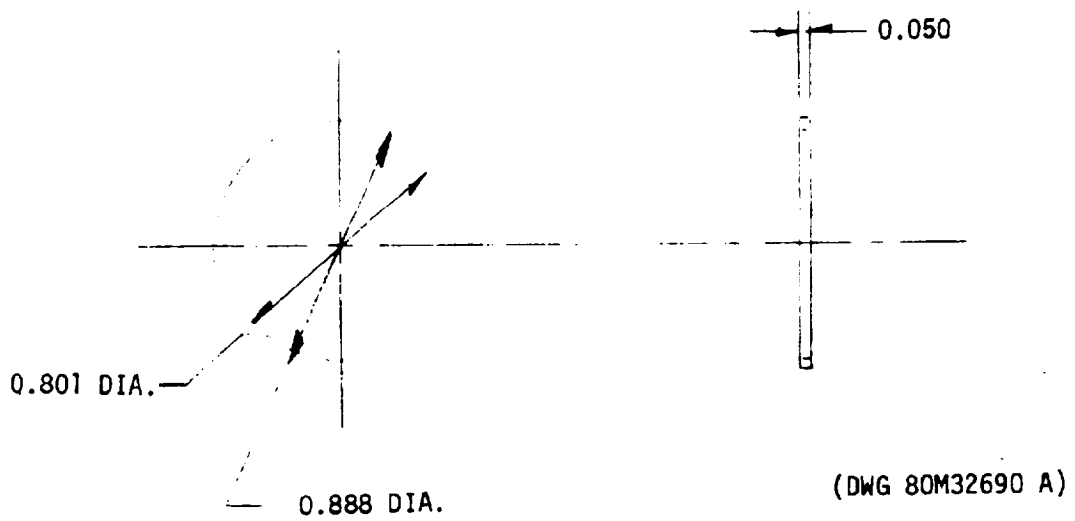


Figure 8. PROTUBERANCE DIMENSIONS



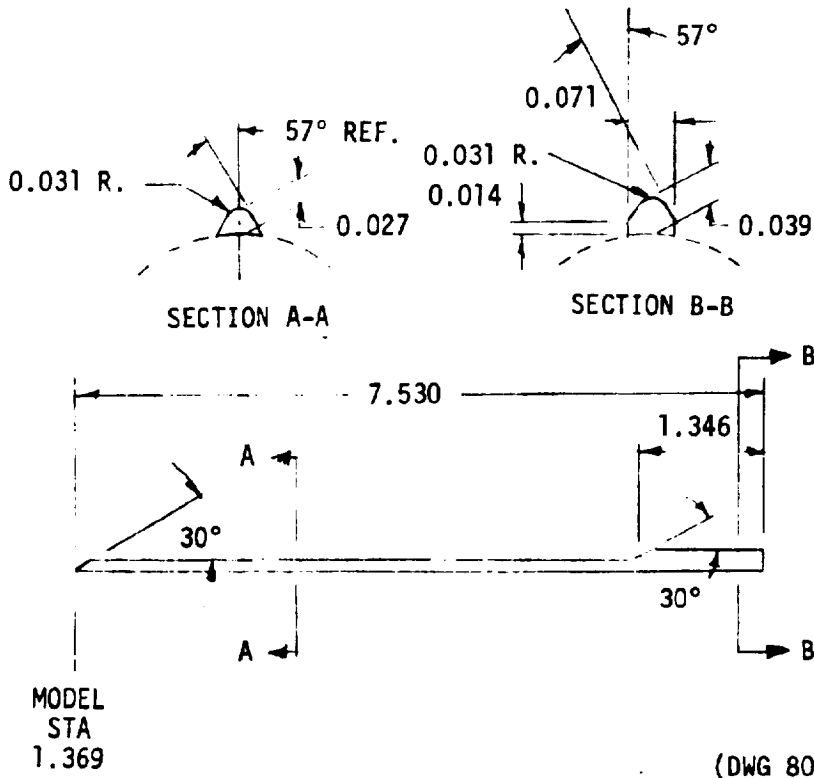
ET ATTACH RING

ALL DIMENSIONS IN INCHES



AFT RING

Figure 8. (Continued)



ELECTRICAL TUNNEL

ALL DIMENSIONS IN INCHES

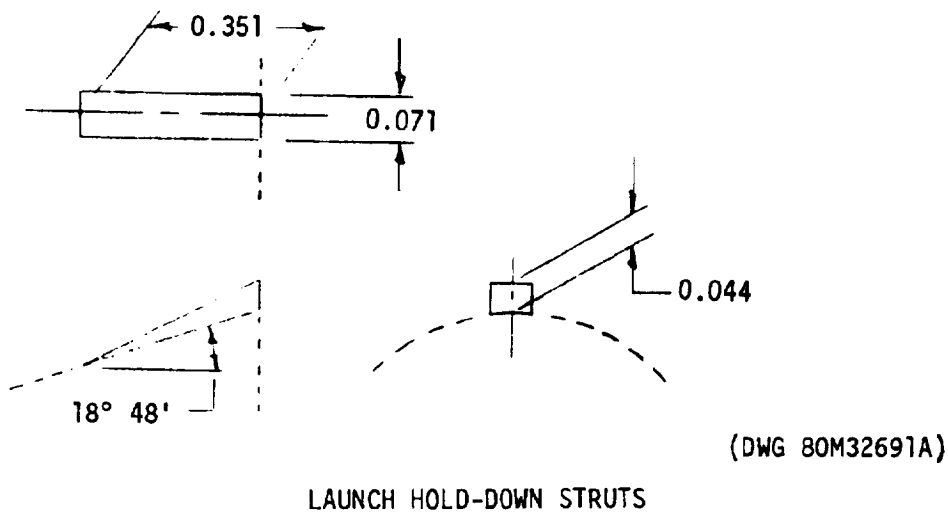


Figure 8.(Concluded)

NORTHROP SERVICES, INC.

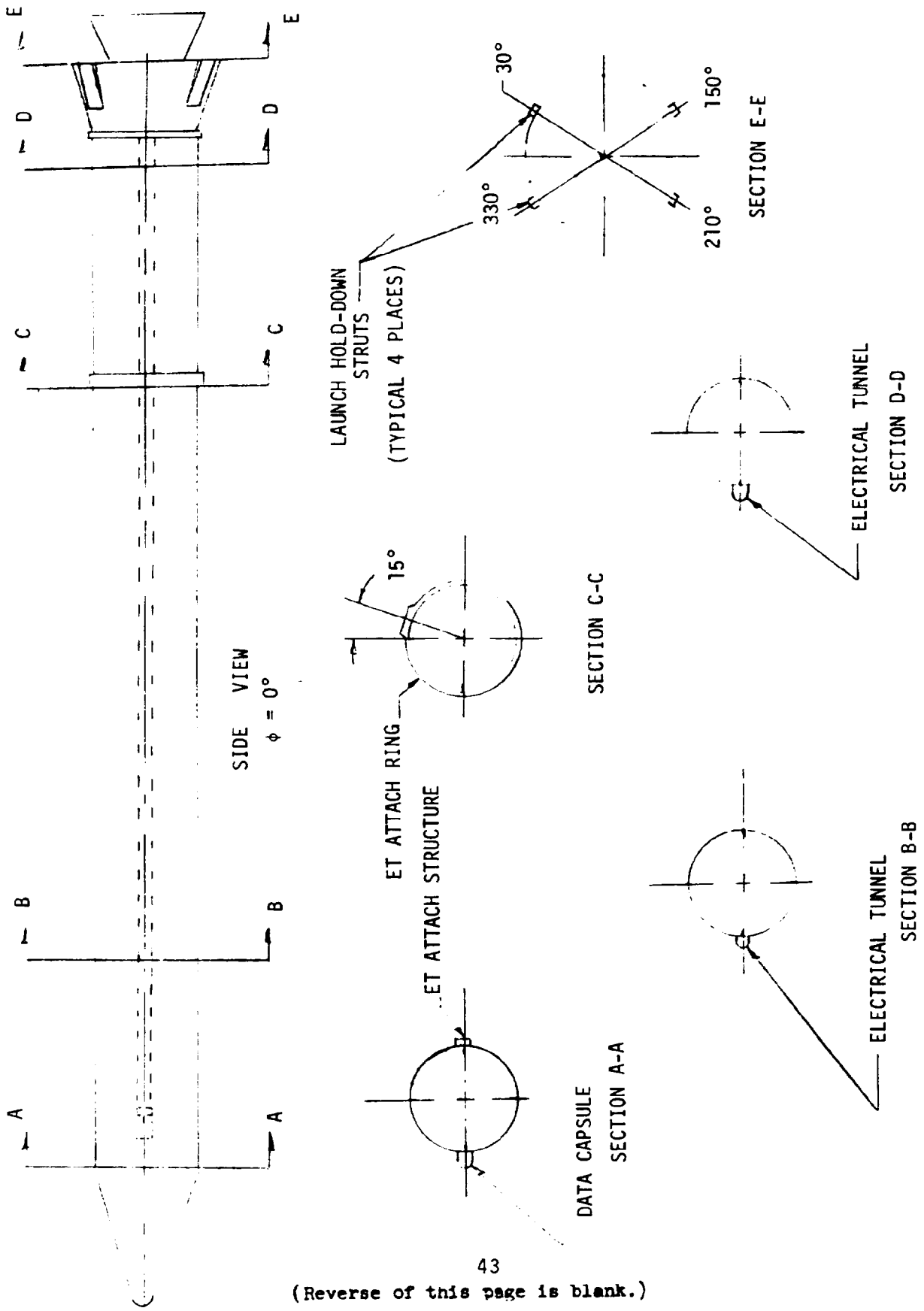


Figure 9. PROTUBERANCE RADIAL LOCATIONS

APPENDIX
TABULATED SOURCE DATA

Note: The value of 999.999 is incorporated into the source data to indicate where data do not exist or where data are questionable.

Tabulations of plotted data are available on request from Data Management Services.

DATE 07 MAR 77

TABLATED SOURCE DATA, MSFC THT 603 (SA28F)

PAGE 1
(R11001) (22 AUG 75)

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

PARAMETRIC DATA

RM-SCH = 2.000 PHI = .000

MACH (1) = .397 ALPHA (1) = 60.120 O(P)SF = 3.1600 PO = 32.010 P = 28.720 RN/L = 5.3000

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	027	.050	.074	.098	.111	.139	.168	.191	.235	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982						
	-1.6681	-1.9372	-1.8714	-1.8654	-1.7509	-1.4304	-1.8126	-1.3135	-1.0909	-1.8792	-1.4768	-1.2391	-1.3534	-1.0688	-1.2251	-1.6153	-1.4626	-1.3947	-1.342	-1.7868	-1.5269	-1.3262	-1.2336	-1.7940		
	-3453	-9237	-5253	-4419	-5568	-9488	-9488	-3156	-2201	-3627	-5862	-2882	-2809	-3559	-3559	-4342	-3772	-5398	-3738	-4025	-4040	-3532	-2867	-2309	-5576	
	1.0722	1.0738	1.0777	1.0393	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	1.0001	
	5527	4941	4613	4427	4276	4067	3875	3627	3427	3257	3104	2949	2800	2654	2511	2372	2236	2102	1970	1840	1712	1588	1468	1352	1240	
	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	-1.3849	-1.5946	-1.4468	-1.3824	-1.5993	-1.1789	-1.0438	-1.0428	-1.3077	-1.1789	-1.0438	-1.0428	-1.3077	-1.1789	-1.0438	-1.0428	-1.3077	-1.1789	-1.0438	-1.0428	-1.3077	-1.1789	-1.0438	-1.0428	-1.3077	

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

MACH (2) = .596 ALPHA (1) = 60.100 O(P)SF = 7.4400 PO = 38.000 P = 79.880 RN/L = 8.7000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.235	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
	-1.7583	-1.4579	-1.4070	-1.4675	-1.9993	-1.6663	-1.1574	-1.6847	-1.9481	-1.3213	-2537	-1.6662	-1.6847	-1.9481	-1.3213	-1.6662	-1.6847	-1.9481	-1.3213	-2537
	-2.2092	-1.4703	-1.0223	-7641	-37302	-7302	-7302	-5610	-5424	-6379	-6549	-3691	-3691	-3691	-3691	-3691	-3691	-3691	-3691	-3691
	1.0960	1.1092	1.0984	1.0671	1.0299	1.1382	1.0660	1.0299	1.1382	1.0660	1.0299	1.1382	1.0660	1.0299	1.1382	1.0660	1.0299	1.1382	1.0660	1.0299
	6281	5565	5404	5187	4910	4602	4468	4257	4044	3825	3610	3400	3200	3000	2800	2600	2400	2200	2000	1800
	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	-1.1382	-1.4602	-1.5970	-1.4468	-1.2999	-1.1382	-1.0660	-1.2999	-1.4602	-1.5970	-1.4468	-1.2999	-1.1382	-1.0660	-1.2999	-1.4602	-1.5970	-1.4468	-1.2999	-1.1382

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (2) = .596 ALPHA (1) = 60.100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.2422	-.2343	-.3284	-1.1061	-1.3157	.4992	.8379	-.6131
	.392			-.7145			.8314		-.7197
	.667	.999	.9999	-.5489	-1.5727		.7988		-1.3474
	.702	-.4404	-.5151	-.4858	-1.4457	-1.4543	.4802	.8276	-1.3711
	.724	-.2321	-.3081	-.5359	-.8165	-1.3277	.6538	.9971	.999
	.744	-.5442	-.5530	-.7034	-.8562	-1.2723	.6977	1.0490	-.9997
	.755	-.4105	.999	-.6223	-1.4153	-1.3343	.4963	.8467	-1.5120
	.869	-.5142		-.4166	-1.5569		-.3822	.8489	
	.902	.999	.9999	-.3393	-1.0381		-.3437	1.0183	
	.923	-.3797		-.5422	-1.0566		-.2406	1.0301	-1.1863
	.945	-.3916		-.4051	-1.1376		-.8939		-1.2229
	.982	-.4066		-.6971			-.4950		

MACH (3) = .904 ALPHA (1) = 60.100 QIPSF = 7.4200 PO = 22.010 P = 12.950 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-1.2111	-1.2104	-1.1235	-1.0981	-1.0781	.3539	1.2285	-.9362
	.050	-1.0636 <td>-1.1794 <td>-1.0981 <td>-1.0781 <td></td> <td>.3586 <td>1.2387 <td>-.8298 </td></td></td></td></td></td>	-1.1794 <td>-1.0981 <td>-1.0781 <td></td> <td>.3586 <td>1.2387 <td>-.8298 </td></td></td></td></td>	-1.0981 <td>-1.0781 <td></td> <td>.3586 <td>1.2387 <td>-.8298 </td></td></td></td>	-1.0781 <td></td> <td>.3586 <td>1.2387 <td>-.8298 </td></td></td>		.3586 <td>1.2387 <td>-.8298 </td></td>	1.2387 <td>-.8298 </td>	-.8298
	.074	-.9212 <td>-1.0890 <td>-1.0781 <td></td> <td></td> <td>.3512 <td>1.2318 <td>-.8452 </td></td></td></td></td>	-1.0890 <td>-1.0781 <td></td> <td></td> <td>.3512 <td>1.2318 <td>-.8452 </td></td></td></td>	-1.0781 <td></td> <td></td> <td>.3512 <td>1.2318 <td>-.8452 </td></td></td>			.3512 <td>1.2318 <td>-.8452 </td></td>	1.2318 <td>-.8452 </td>	-.8452
	.098	-.8289 <td>-.9801 <td>-1.0089 <td></td> <td></td> <td>.3438 <td>1.2009 <td>-.7643 </td></td></td></td></td>	-.9801 <td>-1.0089 <td></td> <td></td> <td>.3438 <td>1.2009 <td>-.7643 </td></td></td></td>	-1.0089 <td></td> <td></td> <td>.3438 <td>1.2009 <td>-.7643 </td></td></td>			.3438 <td>1.2009 <td>-.7643 </td></td>	1.2009 <td>-.7643 </td>	-.7643
	.111	-1.0681 <td>-1.0340 <td>-.9134 <td>-.9535 <td>-.4762</td> <td>.8430</td> <td>1.0675</td> <td></td> </td></td></td>	-1.0340 <td>-.9134 <td>-.9535 <td>-.4762</td> <td>.8430</td> <td>1.0675</td> <td></td> </td></td>	-.9134 <td>-.9535 <td>-.4762</td> <td>.8430</td> <td>1.0675</td> <td></td> </td>	-.9535 <td>-.4762</td> <td>.8430</td> <td>1.0675</td> <td></td>	-.4762	.8430	1.0675	
	.139	-.8285 <td>-.8609 <td>-.8391 <td>-.7986 <td>-.5484</td> <td>.8041</td> <td>1.0427</td> <td></td> </td></td></td>	-.8609 <td>-.8391 <td>-.7986 <td>-.5484</td> <td>.8041</td> <td>1.0427</td> <td></td> </td></td>	-.8391 <td>-.7986 <td>-.5484</td> <td>.8041</td> <td>1.0427</td> <td></td> </td>	-.7986 <td>-.5484</td> <td>.8041</td> <td>1.0427</td> <td></td>	-.5484	.8041	1.0427	
	.168	-.7387 <td>-.7671 <td>-.7677 <td>-.8207 <td>-.6064</td> <td>.7696</td> <td>1.0112</td> <td></td> </td></td></td>	-.7671 <td>-.7677 <td>-.8207 <td>-.6064</td> <td>.7696</td> <td>1.0112</td> <td></td> </td></td>	-.7677 <td>-.8207 <td>-.6064</td> <td>.7696</td> <td>1.0112</td> <td></td> </td>	-.8207 <td>-.6064</td> <td>.7696</td> <td>1.0112</td> <td></td>	-.6064	.7696	1.0112	
	.191	-.6792 <td>-.6981 <td>-.6908 <td>-.6908 <td>-.6224</td> <td>.7478</td> <td>.9932</td> <td></td> </td></td></td>	-.6981 <td>-.6908 <td>-.6908 <td>-.6224</td> <td>.7478</td> <td>.9932</td> <td></td> </td></td>	-.6908 <td>-.6908 <td>-.6224</td> <td>.7478</td> <td>.9932</td> <td></td> </td>	-.6908 <td>-.6224</td> <td>.7478</td> <td>.9932</td> <td></td>	-.6224	.7478	.9932	
	.255	-.5404 <td>-.5593 <td>-.4021 <td>-.4506 <td>-.5639</td> <td>.6923</td> <td>.9640</td> <td></td> </td></td></td>	-.5593 <td>-.4021 <td>-.4506 <td>-.5639</td> <td>.6923</td> <td>.9640</td> <td></td> </td></td>	-.4021 <td>-.4506 <td>-.5639</td> <td>.6923</td> <td>.9640</td> <td></td> </td>	-.4506 <td>-.5639</td> <td>.6923</td> <td>.9640</td> <td></td>	-.5639	.6923	.9640	
	.344	-.3703 <td>-.3830</td> <td></td> <td>-.3485</td> <td></td> <td>.9404</td> <td></td> <td></td>	-.3830		-.3485		.9404		
	.667	.999	.9999	-.6970	-.9167		.9336		
	.702	-.6327 <td>-.7082</td> <td>-.6749 <td>-.7144 <td>-.6934</td> <td>.6710</td> <td>.9225</td> <td></td> </td></td>	-.7082	-.6749 <td>-.7144 <td>-.6934</td> <td>.6710</td> <td>.9225</td> <td></td> </td>	-.7144 <td>-.6934</td> <td>.6710</td> <td>.9225</td> <td></td>	-.6934	.6710	.9225	
	.724	-.4296 <td>-.5039</td> <td>-.5861 <td>-.6381 <td>-.5956</td> <td>.8692</td> <td>1.1105</td> <td></td> </td></td>	-.5039	-.5861 <td>-.6381 <td>-.5956</td> <td>.8692</td> <td>1.1105</td> <td></td> </td>	-.6381 <td>-.5956</td> <td>.8692</td> <td>1.1105</td> <td></td>	-.5956	.8692	1.1105	
	.744	-.6996 <td>-.6993</td> <td>-.7385 <td>-.8946 <td>-.8136</td> <td>.8614</td> <td>1.1072</td> <td></td> </td></td>	-.6993	-.7385 <td>-.8946 <td>-.8136</td> <td>.8614</td> <td>1.1072</td> <td></td> </td>	-.8946 <td>-.8136</td> <td>.8614</td> <td>1.1072</td> <td></td>	-.8136	.8614	1.1072	
	.755	-.5923	.999	-.8474 <td>-.8798 <td>-.7082</td> <td>.6947</td> <td>.9535</td> <td></td> </td>	-.8798 <td>-.7082</td> <td>.6947</td> <td>.9535</td> <td></td>	-.7082	.6947	.9535	
	.869	-.4805		-.4931 <td>-.5450</td> <td></td> <td>.9359</td> <td></td> <td></td>	-.5450		.9359		
	.902	.999	.9999	-.4222	-.4926		1.1392		
	.923	-.4073		-.4357	-.6347		1.1658		
	.945	-.3957		-.4080	-.6030		.9351		
	.982	-.4021		-.4350			-.5478		

TABLATED SOURCE DATA, MSFC TMT S03 (SA28F)

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R110011)

MACH (4) = 1.203 ALPHA (1) = 60.500 O(PSF) = 9.1600 PO = 22.010 P = 9.0400 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.0000	.2500	.5000	.7500	1.0000	1.2500	1.5000	1.7500	2.0000	2.2500	2.5000	2.7500	3.0000	3.2500
.027	-.6473	-.8181	-.5176	.6802	1.4010	1.4081	1.4039	1.3739	.5673	-.5201	-.7342	-.5369	-.5486	-.6959
.050	-.6095	-.7836	-.4950	.6637	1.4081	1.4039	1.3739	.5673	-.5201	-.7342	-.5369	-.5486	-.6959	-.8425
.074	-.6064	-.7674	-.4886	.6533	1.4039	1.3739	1.3439	.5369	-.5486	-.6959	-.8425	-.9897	-.9999	-.9999
.098	-.5768	-.7447	-.4898	.6333	1.4039	1.3739	1.3439	.5369	-.5486	-.6959	-.8425	-.9897	-.9999	-.9999
.111	-.7155	-.7298	-.5141	-.0304	1.0493	1.0203	1.0214	.9875	1.1838	1.1712	.9666	1.1395	1.1210	1.146
.139	-.5718	-.7242	-.6851	-.0866	1.0203	1.0214	.9875	1.1838	1.1712	.9666	1.1395	1.1210	1.146	1.1003
.168	-.5323	-.6065	-.5689	-.5781	1.0203	1.0214	.9875	1.1838	1.1712	.9666	1.1395	1.1210	1.146	1.1003
.191	-.5212	-.5107	-.5156	-.1413	.9666	1.1395	1.1210	1.146	.3891	.9133	1.0950	1.2999	1.237	1.4672
.255	-.4390	-.4407	-.4106	.4272	.9133	1.0950	1.2999	1.237	.3891	.9133	1.0950	1.2999	1.237	1.4672
.344	-.3143	-.3179	-.3235	-.1851	.3891	.9133	1.0950	1.2999	.3891	.9133	1.0950	1.2999	1.237	1.4672
.392	999.9999	-.5734	-.2633	.3891	.3891	.9133	1.0950	1.2999	.3891	.9133	1.0950	1.2999	1.237	1.4672
.667	999.9999	-.5070	-.4509	-.4433	-.1851	-.4509	-.4433	-.1851	-.4509	-.4433	-.1851	-.4509	-.4433	-.1851
.702	-.4849	-.3974	-.3788	-.4870	-.0963	-.3788	-.4870	-.0963	-.3788	-.4870	-.0963	-.3788	-.4870	-.0963
.724	-.3698	-.4974	-.6915	-.6860	-.2875	-.6915	-.6860	-.2875	-.6915	-.6860	-.2875	-.6915	-.6860	-.2875
.745	-.4674	999.9999	-.6470	-.6333	-.1838	-.6470	-.6333	-.1838	-.6470	-.6333	-.1838	-.6470	-.6333	-.1838
.869	-.4173	-.4360	-.4308	.4301	.4301	.4308	.4301	.4301	.4301	.4308	.4301	.4301	.4301	.4308
.902	999.9999	-.3919	-.4577	.5073	.5073	.4577	.5073	.5073	.5073	.4577	.5073	.5073	.5073	.4577
.923	-.3855	-.4020	-.4745	.5413	.5413	.4745	.5413	.5413	.5413	.4745	.5413	.5413	.5413	.4745
.945	-.3704	-.3958	-.3929	.4498	.4498	.3929	.4498	.4498	.4498	.3929	.4498	.4498	.4498	.3929
.982	-.3815	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296	-.5296

MACH (5) = 1.962 ALPHA (1) = 60.100 O(PSF) = 10.970 PO = 30.010 P = 4.0700 RN/L = 7.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.0000	.2500	.5000	.7500	1.0000	1.2500	1.5000	1.7500	2.0000	2.2500	2.5000	2.7500	3.0000	3.2500
.027	-.2596	-.3001	-.0571	.9637	1.6489	1.6188	1.6196	1.5558	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.050	-.2619	-.2919	-.0441	.9428	1.6188	1.6196	1.5558	.6627	-.1411	-.2859	.6995	-.1218	-.2899	-.4361
.074	-.2543	-.2827	-.0534	.9105	1.6196	1.5558	1.5558	.8433	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.098	-.2485	-.2737	-.0738	.8433	1.5558	1.5558	1.5558	.8433	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.111	-.2991	-.2705	-.2852	1.708	1.0879	1.2956	1.2956	.6517	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.139	-.2835	-.2788	-.2716	1.844	1.1207	1.3171	1.3171	.6885	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.168	-.2545	-.2584	-.2411	1.599	1.0977	1.2942	1.2942	.6445	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.191	-.2257	-.2374	-.2235	1.593	1.0826	1.2709	1.2709	.6216	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.255	-.2143	-.2092	-.1615	.6216	1.2589	1.2622	1.2622	.6216	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.344	-.1880	-.1839	-.1827	.1536	1.0691	1.2622	1.2622	.6216	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.392	999.9999	-.2746	-.1572	.6184	1.2416	1.2622	1.2622	.6216	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.667	999.9999	-.2473	-.1474	.2163	1.2368	1.2622	1.2622	.6216	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.702	-.2473	-.2515	-.1182	.2163	1.1447	1.3309	1.3309	.6184	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.724	-.2247	-.2310	-.0585	.3578	1.4768	1.6755	1.6755	.6184	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.745	-.2806	-.2811	-.2854	-.0286	1.4684	1.5198	1.5198	.6184	.6627	-.1411	-.2859	.6995	-.1218	-.2899
.755	-.2737	999.9999	-.2885	-.2083	1.2353	1.3192	1.3192	.6184	.6627	-.1411	-.2859	.6995	-.1218	-.2899

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (5) = 1.962 ALPHA (1) = 60.100

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	869	-2404	-2398	-1228	.7437	1.3725
	.902	999.9999	-.2400	-.0318	.9423	1.7442
	.923	-.2342	-.2639	-.0920	.6821	1.6728
	.945	-.2535	-.2485	-.0586	.8824	1.5671
	.982	-.2423	-.2886	-.2886	-.0856	-.0508

MACH (6) = 2.740 ALPHA (1) = 60.100 OI(P) = 6.3800 PO = 30.040 P = 1.2100 RW/L = 5.0000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.027	-.0756	-.1004	.0754	1.0463	1.7605
	.050	-.0998	-.0998	.0845	1.0224	1.7484
	.074	-.0810	-.1017	.0742	.9886	1.7289
	.098	-.0853	-.0992	.0548	.9249	1.6625
	.111	-.0956	-.1010	-.0155	.6865	1.3285
	.139	-.0919	-.0962	-.0956	.2447	1.1325
	.160	-.0907	-.0962	.2726	.7350	1.4079
	.191	-.0917	-.0951	-.0935	.7162	1.1923
	.255	-.0895	-.0780	-.0853	.2532	1.3958
	.344	-.0913	-.0962	-.0216	.7074	1.1822
	.392	-.0926	-.0786	.2556	1.1525	1.3612
	.667	999.9999	-.1132	-.0125	1.3327	1.3374
	.702	-.1114	-.0913	-.0125	1.3025	1.3025
	.724	-.1120	-.1175	.3359	1.2860	1.4777
	.744	-.1230	-.1253	.5378	1.7686	2.0159
	.755	-.1247999.9999	-.1259	-.0822	.5008	.6992
	.869	-.1144	-.1089	-.0745	1.1240	1.2338
	.902	999.9999	-.1156	.0081	.8175	1.5117
	.923	-.1144	-.0974	-.0663	1.0700	1.9765
	.945	-.1126	-.1109	.0906	1.1925	1.8612
	.982	-.1102	-.1314	.1258	1.0427	1.7180
				-.0021		-.0021
						.0128
						-.0106
						-.0021
						.0384
						999.9999
						-.0671
						-.0599
						.0651
						.1306

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F) MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (7) = 3.480 ALPHA (1) = 60.100 Q(PSF) = 6.8600 PO = 60.010 P = .81000 RN/L = 6.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

Table with columns X/L and values for various angles. Values include: .027, .050, .074, .098, .111, .139, .168, .191, .255, .344, .392, .667, .702, .744, .755, .869, .902, .923, .945, .982.

MACH (8) = 4.450 ALPHA (1) = 62.000 Q(PSF) = 4.0800 PO = 80.000 P = .29000 RN/L = 5.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

Table with columns X/L and values for various angles. Values include: .027, .050, .074, .098, .111, .139, .168, .191, .255, .344, .392, .667, .702, .744, .755.

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11001)

MACH (8) = 4.450 ALPHA (1) = 62.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L										
.869	.0008	.0027	.0662	.7602	1.4466					
.902	.9999	.0027	.2568	1.5415	2.5563					
.923	.0093	.0283	.1582	.9230	1.1087			.1127		
.945	.0084	.0141	.2018	1.0778	1.6890			.1923		
.982	.0084		.0008		.2341					

(R11003)

MACH (2) = .598 ALPHA (1) = 70.070
MSFC TWT 603 (SA2B) SR8 - CLEAN ATTACH AFT RING
SECTION (1) SR8 DEPENDENT VARIABLE CP
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

Table with columns X/L, MACH, ALPHA, DEPENDENT VARIABLE CP, PO, P, RN/L, and 6.3000. Rows include values for X/L from .344 to .982.

MACH (3) = .899 ALPHA (1) = 70.000 O(P)SF = 7.3700 PO = 22.010 P = 13.030 RN/L = 6.3000
SECTION (1) SR8 DEPENDENT VARIABLE CP
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

Table with columns X/L, MACH, ALPHA, DEPENDENT VARIABLE CP, PO, P, RN/L, and 6.3000. Rows include values for X/L from .027 to .982.

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11003)

MACH (5) = 1.959 ALPHA (1) = 70.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.2551	-.2542	-.1162	.8077	1.5099
.902	999.9999	-.2517	-.0686	.8950	1.6876
.923	-.2549	-.2489	-.0783	.9331	1.6998
.945	-.2579	-.2570	-.0898	.8215	1.5381
.982	-.2391	-.2735	-.2735	.7428	1.7428

-.1035
-.0882

MACH (6) = 2.740 ALPHA (1) = 70.000 O(PSF) = 6.3800 PO = 30.040 P = 1.2100 RN/L = 5.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0610	-.1277	.0512	1.0299	1.7714
.050	-.1065	-.1253	.0597	1.0117	1.7704
.074	-.0416	-.1205	.0505	.9838	1.7698
.098	-.1071	-.1095	.0427	.9668	1.7583
.111	-.1180	-.1102	.0536	1.4492	1.6701
.139	-.1108	-.1077	.0044	.9122	1.6355
.168	-.1071	-.1047	-.0088	.8685	1.6355
.191	-.1053	-.1010	-.0100	.8503	1.6143
.255	-.1023	-.1017	-.0021	.8448	1.6033
.344	-.0980	-.0962	.0032	1.3570	1.5639
.382	999.9999	-.1138	.0135	.8382	1.5639
.702	-.1138	-.0713	.0178	1.3764	1.5111
.724	-.1132	-.1151	.0385	1.4675	1.5918
.744	-.1205	-.1217	.0592	1.0192	1.8553
.755	-.1180	-.1174	.0330	1.4321	1.3132
.869	-.1174	-.1144	.0270	1.6479	1.6479
.902	999.9999	-.1151	.0270	1.0615	1.6622
.923	-.1168	-.1023	.0651	1.0754	1.9025
.945	-.1156	-.1144	.0590	.9619	1.9207
.982	-.0950	-.1114	-.1114	1.7459	1.7459

.9098 .0214 -.1089
.8746 .0032 -.1035
.8527 -.0021 -.1065
.0056
.0075
.0214
.0317
999.9999
-.0308
.0176

MSFC THT 003 (SA28F) SRB - CLEAN ATTACH AFT RING (R11003)

MACH (7) = 3.480 ALPHA (1) = 70.020 OIPSF = 6.8600 PO = 60.030 P = .81000 RN/L = 6.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.945	.982					
	-0.108	-0.0554	-0.0565	-0.0542	-0.0537	-0.0514	-0.0531	-0.0508	-0.0486	-0.0469	-0.0486	-0.0441	-0.0548	-0.0576	-0.0576	-0.0549	-0.0509	-0.0200	-0.0661	-0.0717	-0.0582	-0.0576	-0.0481	-0.0576	-0.0430
	.0950	.1000	.0911	.0793	.0821	.0454	.0392	.0381	.0477	.0533	.0561	.0578	.0686	.1299	.0886	.0342	.0741	.1565	.0911	.1034	.0565				
	1.0393	1.0268	.9981	.9744	.9084	.8706	.8539	.8534	.8594	1.3886	.8573	.8573	1.4253	1.7283	.8876	1.5143	.9169	1.1221	1.0724	.9535					
	1.7954	1.8103	1.8103	1.7999	1.6947	1.6619	1.6429	1.6344	1.6202	1.6096	1.5999	1.5978	1.6545	1.9608	1.9437	1.7137	1.6739	1.9779	1.9520	1.7376					
					.9073	.8768	.8607											999.9999	999.9999						
					.0555	.0449	.0381	.0392	.0522	.0538	.0640	.0809	.0809	.0150	.0521			.0595	.1097						

MACH (8) = 4.450 ALPHA (1) = 70.020 OIPSF = 4.0800 PO = 80.020 P = .29600 RN/L = 5.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755
	.1079	.0160	.1402	.0188	.0075	.0065	.0046	.0103	.0046	.0132	.0084	.0169	.0000	.0067	.0057	.0095
	.1269	.1316	.1231	.1089	.1857	.0823	.0701	.0328	.0700	.0393	.0785	.0833	.0880	.0880	.1667	.0311
	.9954	.9925	.9691	.9394	.8512	.8035	.8323	.8323	.8465				.8553			
	1.7330	1.7510	1.7548	1.7368	1.6088	1.6088	1.6012	1.6040	1.6012	1.5908	1.5908	1.5960	1.5983	2.0269	1.9520	1.6770
				.8541	.8437	.8408								999.9999	.0444	.0795
				.0776	.0729	.0681	.0700		.0861	.0890	.0994	.1174				

MSFC TMT 603 (SA28F) SR8 - CLEAN ATTACH AFT RING (R11003)

MACH (8) = 4.450 ALPHA (1) = 70.020

SECTION (1)SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	1051	9043	1.6675
.869	.1051	.9043	1.6675
.902	.1857	1.1328	1.9852
.923	.1326	1.0797	1.9830
.945	.1392	.9394	1.7159
.982	-.0038	.9366	.0928
			.1499

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = .397 ALPHA (1) = 80.080 O(P)SF = 3.1700 PO = 32.000 P = 28.710 RN/L = 5.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	PO	P	RN/L
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000				
X/L				
.027	-.9242	-.5620	.8668	
.050	-.8541	-.5054	-.9282	
.074	-.8345	-.9312	.9833	
.098	-.6349	-.1.6065	1.0392	
.111	-.5642	-.1.8443	1.0722	-.1503
.139	-.6024	-.1.8043	1.0550	-.8766
.168	-.6315	-.1.8769	1.0557	-.3022
.191	-.6025	-.1.8754	1.0519	-.3315
.255	-.5561	-.1.5266	1.0525	-.1.1239
.344	-.5442	-.1.6271	1.0451	-.7343
.392	-.5392	-.1.6707	1.0407	-.5893
.667 999.9999	-.5392	-.5835	1.0375	-.5804
.702	-.5107	-.1.7477	1.0352	-.1.7209
.724	-.4876	-.1.6412	1.0352	-.1.6023
.744	-.5401	-.1.4517	1.0343	999.9999
.755	-.5898999.9999	-.1.2943	1.0621	-.1.6774
.869	-.5603	-.1.9653	1.0461	-.1.7121
.902 999.9999	-.5560	-.1.3609	1.0629	
.923	-.4480	-.6486	1.0544	-.9847
.945	-.5035	-.1.1697	1.0517	-.1.2418
.982	-.5136	-.1.7065	1.0802	

MACH (2) = .501 ALPHA (1) = 80.120 O(P)SF = 7.5300 PO = 38.000 P = 29.760 RN/L = 8.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	PO	P	RN/L
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000				
X/L				
.027	-.9392	-.4116	.8692	
.050	-.8656	-.3444	-.9349	
.074	-.8408	-.8856	.9916	
.098	-.6971	-.1.5191	1.0390	
.111	-.6712	-.1.5012	1.0904	-.0555
.139	-.6688	-.1.4113	1.0974	-.8540
.168	-.6771	-.1.4113	1.0974	-.1686
.191	-.6743	-.1.3982	1.0951	-.1938
.255	-.6826	-.1.6695	1.0857	-.1.0242
.344	-.6710	-.1.1767	1.0839	-.7637

MFSC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11004)

MACH (2) = .601 ALPHA (1) = 80.120

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L															
.344		-.5225	-.5585	-.7293	-.9358	-1.1446		.7024		1.0752					
.392					-.4712					1.0704					
.667	999.9999				-.8817					1.0609					
.702		-.6322			-.6507	-1.0244				1.0584					
.724			-.5609		-.5823	-1.3424				1.0584					
.744			-.5376		-.6466	-1.3636				1.0855					
.755			-.5262		-.6261	-1.2237				1.0563					
.769			-.5531	999.9999						1.0513					
.859			-.4516		-.9492					1.0845					
.902	999.9999		-.5127		-.9348					1.0962					
.923			-.5352		-.8468					1.0677					
.945			-.5545		-.7560					1.0677					
.982			-.6079		-.5627					1.0677					

MACH (3) = .900 ALPHA (1) = 80.100 OIPSF) = 7.3800 PO = 22.010 P = 13.010 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L															
.027		-.6655			-.6732					.0793					
.050		-.6764			-.6637					.1325					
.074		-.6797			-.6623					.1685					
.098		-.6812			-.7330					.2496					
.111		-.6866			-.6526					.3100					
.139		-.6514	-.6899		-.6677	-.4914				.9628					
.168		-.6345	-.6697		-.6852	-.5904				.9605					
.191		-.6113	-.6399		-.6480	-.6100				.9607					
.255		-.5863	-.6256		-.6189	-.6127				.9508					
.344		-.5110	-.5212		-.7104					.9278					
.392					-.5158	-.6045				.2121					
.667	999.9999		-.4876		-.5130					.2063					
.702			-.4605		-.5246					.1856					
.724			-.4626		-.5406	-.5022				.1856					
.744			-.4364		-.5091	-.6298				.9237					
.755			-.4401	999.9999	-.5246	-.6724				.9175					
.869			-.4106		-.5700	-.6052				.8819					
.902	999.9999		-.4439		-.5518					.1638					
.923			-.4340		-.5194					.1078					
.945			-.4430		-.7628					.1508					
.982			-.4936		-.7138					.1797					

(R11004)

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (5) = 1.956 ALPHA (1) = 80.100

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.869	-.2418	.8330	1.5887
X/L	.902	999.9999	.8107	1.6508
X/L	.923	-.2545	.8340	1.6467
X/L	.945	-.2586	.8108	1.6073
X/L	.982	-.1946	.8208	1.3052
X/L				-.1206
X/L				-.1107

MACH (6) = 2.740 ALPHA (1) = 80.100 O1PSF) = 6.3700 PO = 30.030 P = 1.2100 RW/L = 5.0000

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.027	-.0938	-.0980	.0161	.9462	1.6852
X/L	.050	-.0962	-.0979	.0238	.9474	1.7150
X/L	.074	-.0956	-.0998	.0202	.9316	1.7380
X/L	.098	-.0968	-.1010	.0275	.9498	1.7617
X/L	.111	-.0980	-.1041	.0439	.9783	1.7779
X/L	.139	-.0985	-.1023	.0087	.9474	1.7532
X/L	.168	-.1004	-.0967	.3477	.9429	1.7380
X/L	.191	-.1017	-.0950	.3436	.9298	1.5028
X/L	.255	-.0992	-.1017	.3497	.9249	1.4929
X/L	.344	-.0992	-.0932	.3643	.9249	1.7198
X/L	.392			.180	1.4832	1.7138
X/L	.667	999.9999	-.1102	.0075	.9146	1.7065
X/L	.702	-.1114	-.1053	.0154	1.4710	1.7022
X/L	.724	-.1102	-.1089	.3782	1.5348	1.7823
X/L	.744	-.1120	-.1120	.3527	1.5475	1.7975
X/L	.755	-.1114	999.9999	.3424	1.4674	1.7162
X/L	.869	-.1071	-.1083	.0008	.9346	1.7229
X/L	.902	999.9999	-.1089	.0287	.9207	1.7860
X/L	.923	-.1095	-.1023	.0556	.9419	1.8042
X/L	.945	-.1126	-.1102	.0251	.9274	1.7894
X/L	.982	-.1092		-.0695	1.4395	1.4395
X/L						.0402
X/L						.0117
X/L						-.0992
X/L						.0063
X/L						.0087
X/L						.0166
X/L						.0208
X/L						.0311
X/L						.0330
X/L						999.9999
X/L						.0208
X/L						.0293
X/L						.0245
X/L						.0305

MACH (7) = 3.480 ALPHA (1) = 80.080 Q(PSF) = 6.86U0 PO = 60.000 P = .81000 RN/L = 6.6000
 MSFC INT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11004)

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 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

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.657	.702	.724	.744	.755	.869	.902	.945	.982	
	-.0207	-.0311	-.0316	-.0373	-.0384	-.0424	-.0441	-.0430	-.0269	-.0537	-.0382	-.0542	-.0570	-.0576	-.0571	-.0537	-.0537	-.0446	-.0520	-.0182	
	.0601	.0646	.0600	.0629	.0742	.0430	.0455	.0483	.0566	.0623	.0652	.0533	.0634	.0725	.0649	.0443	.0661	.0900	.0652	-.0255	
	.9445	.9484	.9295	.9490	.4065	.3619	.9326	.9422	.3096	.9318	.3836	.3888	.3588	.3645	.3645	.9496	.9445	.9480	.9281		
	1.6987	1.7291	1.7595	1.7917	1.8075	1.5328	1.5263	1.7601	1.5156	1.7507	1.5044	1.8407	1.5966	1.5087	1.7714	1.7509	1.8089	1.8162	1.7964	1.7960	
					.9851	.9479	.9428									999.9999					
					.0725	-.0379	.0494	.0505	.0646	.0645	.0731	.0742	.0618	.0686				.0630	.0725		

MACH (8) = 4.450 ALPHA (1) = 82.000 Q(PSF) = 4.0000 PO = 60.020 P = .29000 RN/L = 5.8000

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 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

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755
	.0805	.0558	.0530	.0425	.0454	.0368	.0330	.0511	.0321	.0520	.0112	.0359	.0483	.0019	.0018	
	.0965	.0985	.0937	.0956	.1308	.1032	.0994	.1004	.1051	.1070	.0947	.0966	.1004	.0785	.0890	
	.8721	.8863	.8778	.8967	.3905	.3555	.9043	.9309	.3936	.9309	.3943	.4056	.3771	.3752		
	1.6063	1.6433	1.6638	1.6950	1.4903	1.4760	1.4765	1.4741	1.5035	1.7453	1.7424	1.4960	1.5405	1.5433	1.4917	1.7605
					.9242	.9116	.9167									999.9999
					.1041	.0928	.0947	.0956	.1023	.1051	.1107	.0928	.1023	.1032		

MSFC THT 603 (SA2BF) SR8 - CLEAN ATTACH AFT. RING (R1100*)

MACH (8) = 4.450 ALPHA (1) = 82.000

SECTION (1)SR8

DEPENDENT VARIABLE CP

THEIA .0000 22.5000 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 472.5000 495.0000 517.5000 540.0000 562.5000 585.0000 607.5000 630.0000 652.5000 675.0000 697.5000 720.0000 742.5000 765.0000 787.5000 810.0000 832.5000 855.0000 877.5000 900.0000 922.5000 945.0000 967.5000 990.0000 1012.5000 1035.0000 1057.5000 1080.0000 1102.5000 1125.0000 1147.5000 1170.0000 1192.5000 1215.0000 1237.5000 1260.0000 1282.5000 1305.0000 1327.5000 1350.0000 1372.5000 1395.0000 1417.5000 1440.0000 1462.5000 1485.0000 1507.5000 1530.0000 1552.5000 1575.0000 1597.5000 1620.0000 1642.5000 1665.0000 1687.5000 1710.0000 1732.5000 1755.0000 1777.5000 1800.0000 1822.5000 1845.0000 1867.5000 1890.0000 1912.5000 1935.0000 1957.5000 1980.0000 2002.5000 2025.0000 2047.5000 2070.0000 2092.5000 2115.0000 2137.5000 2160.0000 2182.5000 2205.0000 2227.5000 2250.0000 2272.5000 2295.0000 2317.5000 2340.0000 2362.5000 2385.0000 2407.5000 2430.0000 2452.5000 2475.0000 2497.5000 2520.0000 2542.5000 2565.0000 2587.5000 2610.0000 2632.5000 2655.0000 2677.5000 2700.0000 2722.5000 2745.0000 2767.5000 2790.0000 2812.5000 2835.0000 2857.5000 2880.0000 2902.5000 2925.0000 2947.5000 2970.0000 2992.5000 3015.0000 3037.5000 3060.0000 3082.5000 3105.0000 3127.5000 3150.0000 3172.5000 3195.0000 3217.5000 3240.0000 3262.5000 3285.0000 3307.5000 3330.0000 3352.5000 3375.0000 3397.5000 3420.0000 3442.5000 3465.0000 3487.5000 3510.0000 3532.5000 3555.0000 3577.5000 3600.0000 3622.5000 3645.0000 3667.5000 3690.0000 3712.5000 3735.0000 3757.5000 3780.0000 3802.5000 3825.0000 3847.5000 3870.0000 3892.5000 3915.0000 3937.5000 3960.0000 3982.5000 4005.0000 4027.5000 4050.0000 4072.5000 4095.0000 4117.5000 4140.0000 4162.5000 4185.0000 4207.5000 4230.0000 4252.5000 4275.0000 4297.5000 4320.0000 4342.5000 4365.0000 4387.5000 4410.0000 4432.5000 4455.0000 4477.5000 4500.0000 4522.5000 4545.0000 4567.5000 4590.0000 4612.5000 4635.0000 4657.5000 4680.0000 4702.5000 4725.0000 4747.5000 4770.0000 4792.5000 4815.0000 4837.5000 4860.0000 4882.5000 4905.0000 4927.5000 4950.0000 4972.5000 4995.0000 5017.5000 5040.0000 5062.5000 5085.0000 5107.5000 5130.0000 5152.5000 5175.0000 5197.5000 5220.0000 5242.5000 5265.0000 5287.5000 5310.0000 5332.5000 5355.0000 5377.5000 5400.0000 5422.5000 5445.0000 5467.5000 5490.0000 5512.5000 5535.0000 5557.5000 5580.0000 5602.5000 5625.0000 5647.5000 5670.0000 5692.5000 5715.0000 5737.5000 5760.0000 5782.5000 5805.0000 5827.5000 5850.0000 5872.5000 5895.0000 5917.5000 5940.0000 5962.5000 5985.0000 6007.5000 6030.0000 6052.5000 6075.0000 6097.5000 6120.0000 6142.5000 6165.0000 6187.5000 6210.0000 6232.5000 6255.0000 6277.5000 6300.0000 6322.5000 6345.0000 6367.5000 6390.0000 6412.5000 6435.0000 6457.5000 6480.0000 6502.5000 6525.0000 6547.5000 6570.0000 6592.5000 6615.0000 6637.5000 6660.0000 6682.5000 6705.0000 6727.5000 6750.0000 6772.5000 6795.0000 6817.5000 6840.0000 6862.5000 6885.0000 6907.5000 6930.0000 6952.5000 6975.0000 6997.5000 7020.0000 7042.5000 7065.0000 7087.5000 7110.0000 7132.5000 7155.0000 7177.5000 7200.0000 7222.5000 7245.0000 7267.5000 7290.0000 7312.5000 7335.0000 7357.5000 7380.0000 7402.5000 7425.0000 7447.5000 7470.0000 7492.5000 7515.0000 7537.5000 7560.0000 7582.5000 7605.0000 7627.5000 7650.0000 7672.5000 7695.0000 7717.5000 7740.0000 7762.5000 7785.0000 7807.5000 7830.0000 7852.5000 7875.0000 7897.5000 7920.0000 7942.5000 7965.0000 7987.5000 8010.0000 8032.5000 8055.0000 8077.5000 8100.0000 8122.5000 8145.0000 8167.5000 8190.0000 8212.5000 8235.0000 8257.5000 8280.0000 8302.5000 8325.0000 8347.5000 8370.0000 8392.5000 8415.0000 8437.5000 8460.0000 8482.5000 8505.0000 8527.5000 8550.0000 8572.5000 8595.0000 8617.5000 8640.0000 8662.5000 8685.0000 8707.5000 8730.0000 8752.5000 8775.0000 8797.5000 8820.0000 8842.5000 8865.0000 8887.5000 8910.0000 8932.5000 8955.0000 8977.5000 9000.0000 9022.5000 9045.0000 9067.5000 9090.0000 9112.5000 9135.0000 9157.5000 9180.0000 9202.5000 9225.0000 9247.5000 9270.0000 9292.5000 9315.0000 9337.5000 9360.0000 9382.5000 9405.0000 9427.5000 9450.0000 9472.5000 9495.0000 9517.5000 9540.0000 9562.5000 9585.0000 9607.5000 9630.0000 9652.5000 9675.0000 9697.5000 9720.0000 9742.5000 9765.0000 9787.5000 9810.0000 9832.5000 9855.0000 9877.5000 9900.0000 9922.5000 9945.0000 9967.5000 9990.0000 10012.5000 10035.0000 10057.5000 10080.0000 10102.5000 10125.0000 10147.5000 10170.0000 10192.5000 10215.0000 10237.5000 10260.0000 10282.5000 10305.0000 10327.5000 10350.0000 10372.5000 10395.0000 10417.5000 10440.0000 10462.5000 10485.0000 10507.5000 10530.0000 10552.5000 10575.0000 10600.0000 10625.0000 10650.0000 10675.0000 10700.0000 10725.0000 10750.0000 10775.0000 10800.0000 10825.0000 10850.0000 10875.0000 10900.0000 10925.0000 10950.0000 10975.0000 11000.0000

X/L

.869	.0384	.0093	.1032	.9309	1.7379
.902	.999	.0103	.1079	.9031	1.7567
.923	.0169	.0255	.1458	.9176	1.7557
.945	.0150	.0207	.0975	.8911	1.7478
.982	.0340		.0340		1.4277

.1070
.1098

TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11005) (22 AUG 75)

RM-SCH = 1.000 PHI = .000

RN/L = 3.0000

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

MACH (1) = .400 ALPHA (1) = 90.000 O(PSF) = 1.8100 PO = 18.020 P = 16.140 RN/L = 3.0000

DEPENDENT VARIABLE CP

SECTION (1) SRB
THETA .0000 22.5000 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

Table with columns X/L and values for various parameters across different theta angles for section 1 SRB.

DEPENDENT VARIABLE CP

MACH (2) = .597 ALPHA (2) = 90.000 O(PSF) = 3.5300 PO = 18.000 P = 14.150 RN/L = 4.1000

DEPENDENT VARIABLE CP

SECTION (1) SRB
THETA .0000 22.5000 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

Table with columns X/L and values for various parameters across different theta angles for section 1 SRB.

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DATE 07 MAR 77
 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F1)
 MSFC TWT 603 (SA28F1) SRB - CLEAN ATTACH AFT RING (R11007)

MACH (2) = .602 ALPHA (1) = 90.000
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .344 -.5800 -.5873 -.5607 -.9272 -1.1750 .7341 1.1002 -.9701
 .392 -.7322 -.7427 -.7427 -.7322 -.7322 1.1025 -.8587
 .667 999.9999 -.6499 -.6499 -.6499 -.6499 .6958 1.0105 -.9158
 .702 -.6155 -.6499 -.6499 -.6499 -.6499 .6957 1.0105 -.6499
 .724 -.5609 -.5815 -.5815 -.5815 -.5815 .6957 1.0105 999.9999
 .744 -.5204 -.5138 -.5138 -.5138 -.5138 .6981 1.0522 -.8738
 .755 -.5243 999.9999 -.5317 -.5745 -.8951 .6894 1.1004 -.6515
 .869 -.6174 -.7868 -.8461 -.8461 -.8461 .0985 1.0985
 .902 999.9999 -.6900 -.6900 -.6900 -.6900 1.1038 1.1038
 .923 -.6842 -.7101 -.7101 -.7101 -.7101 .6957 1.1018
 .945 -.7222 -.7416 -.7416 -.7416 -.7416 1.006 1.006
 .982 -.6238 -.9903 -.9903 -.9903 -.9903 1.0767 1.0767

MACH (3) = .096 ALPHA (1) = 90.000 O(P5F) = 7.3500 PO = 22.010 P = 13.080 RN/L = 6.3000
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .027 -.5769 -.5755 -.5749 -.5749 -.5749 .7822 .7822
 .050 -.5050 -.5817 -.5694 -.5694 -.5694 .8715 .8715
 .074 -.5937 -.5933 -.5810 -.5810 -.5810 .9441 .9441
 .098 -.5925 -.5898 -.6409 -.6409 -.6409 1.0199 1.0199
 .111 -.6040 -.6184 -.5993 -.5980 -.5844 .8301 1.0815
 .139 -.5837 -.6035 -.6286 -.6641 -.6830 -.2194 .9243 .1988
 .168 -.5619 -.5769 -.5714 -.6641 -.6286 .2257 .9462 .2223
 .191 -.5449 -.5619 -.5844 -.5871 -.6109 .9457 .2213 .2250
 .255 -.5238 -.5238 -.5469 -.5926 .2327 .2284 .2284
 .344 -.5422 -.5565 -.5483 -.5490 -.6054 .9550 .2307
 .382 999.9999 -.5626 -.5626 -.5626 .2197 .2337 .2337
 .667 999.9999 -.5265 -.5265 -.5265 .2197 .2322 .2322
 .702 -.5102 -.5211 -.5415 -.5633 -.6177 .9459 1.2335
 .744 -.5300 -.5470 -.6681 -.6510 -.6674 .9382 1.2343
 .755 -.5401 999.9999 -.7109 -.6659 -.6499 .9339 1.2312
 .869 -.5823 -.5953 -.6389 -.6389 .1874 .9286 1.2302
 .902 999.9999 -.5884 -.6170 -.6170 .1030 .2247 .2247
 .923 -.5953 -.6068 .1583 .1583 .2305 .2305
 .945 -.6000 -.5870 -.10204 .2274 .2290 .2290
 .982 -.5687 -.8022 -.8022 -.8022 .1829 .1829

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

DATE 07 MAR 77

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11007)

MACH (5) = 1.968 ALPHA (1) = 90.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.2499	-.2475	-.1319	.8556	1.6338
	.902	999.9999	-.2521	-.1422	.7749	1.6212
	.923	-.2626	-.2660	-.1139	.7991	1.6461
	.945	-.2647	-.2633	-.1141	.8200	1.6535
	.982	-.1470		-.1795		1.6238

MACH (6) = 2.740 ALPHA (1) = 90.000 Q1P5F = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.0000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0756	-.0871	-.0181	.7884	1.5087
	.050	-.0841	-.0889	-.0106	.8230	1.5536
	.074	-.0774	-.0913	-.0056	.8244	1.5900
	.098	-.0835	-.0932	.0135	.8728	1.6325
	.111	-.0859	-.0974	.0305	.9186	1.6885
	.139	-.0877	-.0962	.0694	.9492	1.7769
	.168	-.0895	-.0877	.0950	.9559	1.7706
	.191	-.0895	-.0841	.0147	.9532	1.7629
	.255	-.0914	-.0955	.0232	.9532	1.7562
	.344	-.0956	-.0859	.0269	.9667	1.7568
	.392			.0291		1.7639
	.667	999.9999	-.1071	.0238	.9508	1.7599
	.702	-.1071	-.0956	-.0173		1.7635
	.724	-.1065	-.1071	-.0974	.3697	1.7617
	.744	-.1089	-.1083	.0111	.3424	1.5093
	.755	-.1083	-.1083	-.1229	.3564	1.5044
	.869	-.1059	-.1077	-.1217	.3582	1.5050
	.902	999.9999	-.1096	.0166	.9328	1.7593
	.923	-.1101	-.0998	-.0046	.8585	1.7672
	.945	-.1089	-.1071	.0352	.8976	1.7659
	.982	-.0034		.0141	.9079	1.7842
				-.0228		1.8169

MSFC TWT 603 (SA2BF) SRB - CLEAN ATTACH AFT RING (R11008) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCM = 2.000 PHI = .000

MACH (1) = .399 ALPHA (1) = 90.000 O(PSF) = 3.2000 PO = 32.020 P = 28.680 RN/L = 5.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.6836	-.8416	-.7710	-.5916	.7106
	.050	-.6271	-.5802	-.4817	-.4811	.7893
	.074	-.5537	-.6219	-.5957	-.4817	.8527
	.098	-.5734	-.6319	-.4397	-.4512	.9236
	.111	-.6116	-.7313	-.8439	-.4074	.5840
	.139	-.6245	-.6518	-.8120	-.8628	.6034
	.168	-.5821	-.6166	-.6549	-.2628	.6074
	.191	-.5868	-.5823	-.6720	-.1543	.5965
	.255	-.5635	-.5348	-.5928	-.5739	.0904
	.344	-.6191	-.5845	-.5175	-.4239	-.6281
	.392	-.999	-.999	-.1672	-.5129	.0880
	.667	-.999	-.999	-.13361	-.5129	.0849
	.702	-.5398	-.5299	-.6824	-.1582	-.6724
	.724	-.5414	-.5651	-.8056	-.9443	.6009
	.744	-.4997	-.5232	-.6350	-.0352	-.5408
	.795	-.5082	-.999	-.6148	-.1100	-.5196
	.869	-.6014	-.7694	-.1658	-.5083	.0817
	.902	-.999	-.999	-.6221	-.7072	.0872
	.923	-.6566	-.7107	-.1032	-.5339	-.0764
	.945	-.6711	-.7067	-.1326	-.2731	-.0856
	.982	-.6558	-.6558	-.17576	-.10732	.0732

MACH (2) = .600 ALPHA (1) = 90.000 O(PSF) = 7.5000 PO = 38.000 P = 29.800 RN/L = 8.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.6495	-.8768	-.7886	-.5074	.7023
	.050	-.5996	-.5847	-.6152	-.3937	.7849
	.074	-.6065	-.5968	-.6191	-.3743	.8487
	.098	-.6729	-.6662	-.5180	-.2790	.9273
	.111	-.6696	-.7061	-.7314	-.15645	-.1914
	.139	-.6365	-.6140	-.7628	-.16757	-.6803
	.168	-.6371	-.6445	-.6259	-.9758	-.2382
	.191	-.6076	-.6464	-.6359	-.7150	-.1758
	.255	-.5824	-.6054	-.11757	-.1124	-.2327
						-.1408
						-.10329
						-.6948
						-.6092
						-.7017

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)
 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11008)

DATE 07 MAR 77

MACH (2) = .600 ALPHA (1) = 90.000
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.5939	-.6076	-.7042	-1.2122	-1.4244	.7241	1.1157	-1.0656
	.392			-.8032	-.8894	-.252		1.1164	-.9000
	.667	999.9999	-.5282	-.5790	-.8950	-1.3358	.7203	1.1158	-.7540
	.702	-.5240	-.5219	-.6548	-.9482	-1.4085	.7137	1.1150	-.9463
	.724	-.5401	-.5510	-.5463	-.9468	-1.4088	.6975	1.1122	999.9999
	.744	-.4966	-.5210	-.6199	-.7938	-1.2783	.7007	1.1148	-1.1062
	.755	-.4966	999.9999	-.6790	-.9942	-.3286		1.1050	-1.3612
	.869	-.6421		-.6933	-1.4823	-.4463		1.1150	
	.902	999.9999		-.8045	-.9922	-.3453		1.0789	-1.6028
	.923	-.7217		-.7844	-1.3536	-.1748		1.1159	-1.5927
	.945	-.7781		-.13988				1.0828	
	.982	-.7843							

MACH (3) = .901 ALPHA (1) = 90.000 OIPSF = 7.3900 PO = 22.010 P = 13.000 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.5646	-.5585	-.5358	-.0755		.8395	1.0960	-.5775	-.5319
	.050	-.5693	-.5673	-.5612	-.0071		.9321	1.2089	-.2415	-.6086
	.074	-.5673	-.5687	-.5788	.0372		.9549	1.2266	-.2301	-.5632
	.098	-.5673	-.5741	-.5788	.1383		.9555	1.2358	-.5606	
	.111	-.5680	-.5727	-.5405	-.5795		.9610	1.2392	-.4820	
	.139	-.5693	-.5809	-.5781	-.6141			1.2409	-.5917	
	.168	-.5687	-.5802	-.5700	-.6234			1.2390	-.5171	
	.191	-.5700	-.5815	-.5829	-.6148			1.2368	-.4948	
	.255	-.5271	-.5544	-.7122	-.2312			1.2357	999.9999	
	.344	-.4746	-.4961	-.5077	-.5869			1.2416	-.8116	
	.392			-.5030				1.2430	-.7578	
	.667	999.9999	-.5232	-.5450	.2683			1.2389	-.10458	
	.702	-.5023	-.5200	-.5185	-.6154			1.2401	-1.1092	
	.724	-.4867	-.4962	-.5186	-.6566			1.2390		
	.744	-.5301	-.5335	-.7388	-.9318			1.2368		
	.755	-.5368	999.9999	-.7940	-.6276			1.2357		
	.869	-.5694		-.5734	.1858			1.2416		
	.902	999.9999		-.5666	-.1151			1.2430		
	.923	-.5727		-.5768	.1732			1.2368		
	.945	-.5789		-.5680	.2414			1.1903		
	.982	-.5544		-.7860						

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11010) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .398 ALPHA (1) = 99.900 OIPSF = 3.1800 PO = 32.000 P = 28.690 RN/L = 5.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.4895	-.4820	-.5277	-.4694	.5374
	.050	-.5305	-.5110	-.5217	-.6282	.6001
	.074	-.5784	-.6368	-.6536	-.7701	.6546
	.098	-.5898	-.5722	-.8273	-.6639	.7196
	.111	-.5555	-.5643	-.8273	-.6002	.3943
	.139	-.5473	-.5422	-.8510	-.8238	.5330
	.168	-.5674	-.5836	-.7961	-.8591	.9865
	.191	-.5706	-.5789	-.9844	-.8634	.0064
	.255	-.4587	-.5878	-.1317	-.4774	.0187
	.344	-.5847	-.6038	-.6336	-.1729	.0270
	.392	.999	-.7348	-.7081	.6119	.0401
	.667	.999	-.6478	-.23166	-.6617	.0377
	.702	-.6165	-.6128	-.14701	-.23741	.0455
	.724	-.6439	-.5512	-.10573	-.19360	.0441
	.744	-.6355	-.6355	-.7020	-.8780	.0692
	.755	-.6699	-.9999	-.7050	-.7995	.0651
	.869	-.6375	-.6375	-.25246	-.7159	.0604
	.902	-.6915	-.7199	-.16171	-.7379	.0513
	.945	-.5379	-.6455	-.10909	-.5722	.0708
	.982	-.4681	-.5480	-.15552	-.2584	.0153
						.0478
						.0714

MACH (2) = .603 ALPHA (1) = 99.900 OIPSF = 7.5700 PO = 38.030 P = 29.740 RN/L = 8.9000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.7152	-.7689	-.8157	-.6579	.4619
	.050	-.7063	-.7091	-.12248	-.6432	.5395
	.074	-.6361	-.7111	-.7705	-.5552	.6122
	.098	-.5985	-.6741	-.10730	-.4410	.6981
	.111	-.5870	-.6107	-.6314	-.14430	.4430
	.139	-.5548	-.5880	-.6741	-.16209	.7536
	.168	-.5893	-.6373	-.6370	-.11149	.9807
	.191	-.6028	-.6402	-.7019	-.7544	.0180
	.255	-.4615	-.5480	-.11411	-.1705	.0180
						.6691
						.0494
						-.2407
						-.6129
						-.6002
						-.6772
						-.9664

DATE 07 MAR 77
 TABULATED SOURCE DATA, MSFC THT 603 (SA28F)
 MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11010)

MACH (2) = .603 ALPHA (1) = 99.900
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.5871	-.6018	-.5443	-1.0432	-1.1958	.7043	1.0564	-1.1414
	.392				-.6314			1.0520	-.7257
	.667	.999	.9999	-1.0332	-1.5463		-.3346	1.0749	-.8447
	.702	-.5403	-.4824	-1.2750	-1.6195	-1.5292	-.6829	1.0732	-.6406
	.724	-.5696	-.5292	-.6915	-1.5295	-1.5090	-.6768	1.0938	.999
	.744	-.5343	-.5501	-.6389	-1.6313	-1.2144	-.6921	1.0877	-1.0388
	.755	-.5638999	.9999	-.6029	-.6054	-.8747	-.6759	1.0904	-1.0751
	.869	-.6911		-.8285	-1.1412		-.3464	1.0870	
	.902	.999	.9999	-.8037	-1.7277		-.4520	1.1011	-1.9054
	.923	-.8076		-.9207	-1.2651		-.3459	1.0952	-1.6321
	.945	-.7719		-.8007	-1.4488		-.1254	1.0769	
	.982	-.4513		-.8822	-1.4899			1.0930	

MACH (3) = .902 ALPHA (1) = 99.900 Q(P5F) = 7.3900 PO = 22.000 P = 12.990 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP
 THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.5038	-.5051	-.5052	-.5185	-.6221	-.6232	1.0962	-.5145	-.5388
	.050	-.5484	-.5294	-.5538	-.5788	-.6146	-.6315	1.0962	-.5958	-.4990
	.074	-.5328	-.5538	-.5538	-.5788	-.6146	-.6315	1.0962	-.5958	-.4990
	.098	-.5132	-.5052	-.5052	-.5254	-.5522	-.5720	1.1341	-.4922	-.4791
	.111	-.5179	-.5301	-.5301	-.5254	-.5522	-.5720	1.1341	-.4922	-.4791
	.139	-.4740	-.5024	-.5199	-.5788	-.6146	-.6315	1.1341	-.4922	-.4791
	.168	-.4544	-.4801	-.4852	-.4970	-.5337	-.5522	1.1476	-.4860	
	.191	-.4417	-.4705	-.4852	-.4970	-.5337	-.5522	1.1707		
	.255	-.4583	-.5022	-.5022	-.5193	-.5457	-.5720	1.1836	-.5103	
	.344	-.4949	-.5166	-.5118	-.5118	-.5261	-.5896	1.1872	-.5944	
	.392	.999	.9999	-.5686	-.5707	-.5930	-.6208	1.2119	-.5565	
	.667	.999	.9999	-.5612	-.5673	-.6302	-.6302	1.2133	-.5504	
	.702	-.5558	-.5646	-.5538	-.6079	-.6733	-.6733	1.2348	.999	
	.724	-.5483	-.5504	-.5538	-.6079	-.6733	-.6733	1.2236	-.8023	
	.744	-.5924	-.5916	-.7784	-.8910	-.6443	-.6443	1.2221	-.7547	
	.755	-.5898999	.9999	-.7949	-.7341	-.6336	-.6336	1.2226		
	.869	-.6735	-.6870	-.6870	-.6960	-.6960	-.6960	1.2338		
	.902	.999	.9999	-.6579	-.6681	-.6681	-.6681	1.2085	-1.2237	
	.923	-.6791	-.6675	-.6675	-.6675	-.6675	-.6675	1.2247	-1.0842	
	.945	-.6891	-.7558	-.7558	-.7558	-.7558	-.7558	1.2263		
	.982	-.6377		-.7423	-.7423	-.7423	-.7423	1.2263		

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DATE 07 MAR 77
 MACH (5) = 1.956 ALPHA (1) = 99.900
 MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11010)

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L
 .869 -.2597 -.2585 -.1473 .8121 1.6196
 .902 999.9999 -.2595 -.1629 .7468 1.6291
 .923 -.2702 -.2555 -.1172 .7744 1.5803
 .945 -.2709 -.2757 -.0756 .8241 1.5935
 .982 .0010 -.1466 1.6554
 P = 1.2100 RN/L = 5.0000

SECTION (6) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L
 .027 -.0574 -.0986 -.0483 .6155 1.2514
 .050 -.0974 -.0986 -.0387 .6501 .9371
 .074 -.0422 -.0986 -.0313 .6652 .9207
 .098 -.0938 -.0992 -.0112 .7162 .8997
 .111 -.0968 -.0962 -.0317 .7229 .8163
 .139 -.0980 -.0968 -.0099 .7491 .8467
 .168 -.0986 -.0974 -.1083 .7643 .9128
 .191 -.0980 -.0974 -.1095 .7746 .9311
 .255 -.0992 -.0986 -.0251 .8292 1.2198
 .344 -.1008 -.1004 .0275 .8782 1.4662
 .382 .999.9999 -.1065 .0215 .9275 1.6980
 .702 -.1055 -.0756 .0215 .9275 1.7016
 .724 -.1059 -.1071 .0166 .9322 1.7119
 .744 -.1071 -.1059 .0105 .9372 1.7223
 .755 -.1071 999.9999 .0190 .9374 999.9999
 .755 -.1071 999.9999 .0160 .9397 999.9999
 .869 -.1132 -.1138 -.0046 .9667 1.7265
 .902 999.9999 -.1150 .0210 .9667 1.7293
 .923 -.1156 .0257 .0257 .9694 1.7793
 .945 -.1156 .0416 .0416 .9694 1.6955
 .982 .0991 -.1217 .0014 .9694 1.6877
 .982 .0991 .0014 .0014 .9694 1.7107
 .982 .0991 .0014 .0014 .9694 1.7993

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L
 .027 -.0574 -.0986 -.0483 .6155 1.2514
 .050 -.0974 -.0986 -.0387 .6501 .9371
 .074 -.0422 -.0986 -.0313 .6652 .9207
 .098 -.0938 -.0992 -.0112 .7162 .8997
 .111 -.0968 -.0962 -.0317 .7229 .8163
 .139 -.0980 -.0968 -.0099 .7491 .8467
 .168 -.0986 -.0974 -.1083 .7643 .9128
 .191 -.0980 -.0974 -.1095 .7746 .9311
 .255 -.0992 -.0986 -.0251 .8292 1.2198
 .344 -.1008 -.1004 .0275 .8782 1.4662
 .382 .999.9999 -.1065 .0215 .9275 1.6980
 .702 -.1055 -.0756 .0215 .9275 1.7016
 .724 -.1059 -.1071 .0166 .9322 1.7119
 .744 -.1071 -.1059 .0105 .9372 1.7223
 .755 -.1071 999.9999 .0190 .9374 999.9999
 .755 -.1071 999.9999 .0160 .9397 999.9999
 .869 -.1132 -.1138 -.0046 .9667 1.7265
 .902 999.9999 -.1150 .0210 .9667 1.7293
 .923 -.1156 .0257 .0257 .9694 1.7793
 .945 -.1156 .0416 .0416 .9694 1.6955
 .982 .0991 -.1217 .0014 .9694 1.6877
 .982 .0991 .0014 .0014 .9694 1.7107
 .982 .0991 .0014 .0014 .9694 1.7993

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R111010)

MACH (7) = 3.480 ALPHA (1) = 99.900 O(PSF) = 6.8600 PO = 59.980 P = .81000 RN/L = 6.9000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.467	.509	.579	.724	.744	.755	.869	.902	.923	.945	.982
CP	-.0146	-.0175	-.0221	-.0262	-.0289	-.0328	-.0345	-.0356	-.0399	-.0433	-.0497	-.0503	-.0503	-.0515	-.0522	-.0542	-.0570	-.0497	-.0508	-.0418	-.0542	-.0815
CP	.6170	.6379	.6497	.6942	.6970	.9084	.9388	.9490	.3710	.3710	.9343	.3752	.3436	.4028	.3780	.9033	.7844	.8508	.8351	.8131	.8131	.8131
CP	-.0001	.0071	.0274	.0425	.0425	.3769	.3761	.0619	.0646	.0646	.0579	.0522	.0657	.0623	.0409	.0257	.0257	.0669	.0669	.0669	.0669	.0669
CP	1.2556	1.2900	1.3064	1.3368	1.4033	1.4632	1.4947	1.7336	1.5084	1.7432	1.7455	1.7500	1.7753	1.7956	1.7967	1.7680	1.7487	1.8097	1.7224	1.6825	1.6825	1.8131
CP					.6791	.9062	.9298											999.9999				
CP					.0173	.0460	.0596	.0623										.0258	.0748			

MACH (8) = 4.450 ALPHA (1) = 99.900 O(PSF) = 4.0800 PO = 80.020 P = .29000 RN/L = 5.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.467	.509	.579	.724	.744	.755	.869	.902	.923	.945	.982
CP	.0539	.0501	.0454	.0406	.0378	.0435	.0264	.0264	.0482	.0482	.0985	.0665	.0292	.0378	.0036	.0046	.0046	.0482	.0482	.0482	.0482	.0482
CP	.5637	.6351	.6427	.6787	.6832	.8822	.9088	.9290	.3973	.3973	.9129	.3819	.3525	.4150	.3835	.9129	.3819	.3525	.4150	.3835	.3835	.3835
CP	.0567	.0605	.0605	.0663	.1023	.1041	.1060	.1070	.1089	.1079	.1098	.0985	.0927	.0872	.1031	.1031	.1031	.0985	.0985	.0985	.0985	.0985
CP	1.1823	1.2784	1.2959	1.3111	1.3765	1.4272	1.6571	1.6980	1.4647	1.4917	1.7235	1.7244	1.7197	1.7442	1.6528	1.5206	1.4755	1.7396	1.7396	1.7396	1.7396	1.7396
CP					.6692	.8854	.9119											999.9999				
CP					.0681	.0889	.0938	.0956										.0258	.0748			

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC THT 603 (SA28F) (R11010)

MACH (8) = 4.450 ALPHA (1) = 99.900 MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

SECTION (1) SRB DEPENDENT VARIABLE CP THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP
.869	.0055	.0074	.0757	.8721	1.6984						
.902	.9999	.0017	.0624	.6991	1.6973						
.923	.0112	.0178	.1127	.8174	1.6619					.0671	
.945	.0103	.0131	.0909	.7754	1.5841					.0967	
.982	.1031		.0681		1.7083						

MSFC TWT 603 (ISA28F) SRB - CLEAN ATTACH AFT RING (R11011) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

MACH (1) = .395 ALPHA (1) = 110.000 O(P)SF = 1.7700 PO = 18.010 P = 18.170 RN/L = 3.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982	
	-4226	-4736	-4865	-4445	-3893	-3564	-3967	-4414	-5462	-7799	-9982	-4726	-5257	-5116	-5229	-5349	-9383	-6227	-6330	-6142		
	-3912	-4180	-7214	-9387	-10340	-8632	-6913	-5249	-5811	-1942	-14604	-484	-2299	-3744	-6414	-6057	-5404	-7104	-2083	-2160		
	-4072	-4244	-5377	-5236	-5179	-3532	-3057	-6092	-2431			-2913	-2402	-3829	-9116	-7086	-5660	-6235	-4759	-2128		
	3832	38922	4898	5395	5826	9009	9510	9763	9977	10116	10087	9946	10356	11022	10810	10569	10405	1272	9951	8560		
					-5038	-5179	-5370	-4720	-4637	-12005	-12119	-4811	-5583	999	-6474	-6340		-18514	-13772			

MACH (2) = .599 ALPHA (1) = 110.000 O(P)SF = 3.5500 PO = 18.010 P = 14.140 RN/L = 4.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255
	-4776	-5668	-5001	-4536	-4211	-4620	-5087	-54070	-5578
	-4565	-6428	-9216	-7651	-10366	-11155	-6802	-4748	-6297
	-4846	-5697	-5973	-5044	-4817	-2773	-2290		
	3248	3757	4264	4829	4785	8725	9281	9492	9827
					-4903	-4050	-2649	-1923	-4591
						-4296	-4944		

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F) (R11011)

MACH (2) = .599 ALPHA (1) = 110.000 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING
SECTION (1) SRB DEPENDENT VARIABLE CP
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.344	-.4776	-.5649	-.6381	-1.0693	-.7845	.6614	.9927	-1.0739			
.392			-.9718	-.9549	-.2509	.9910	.9910	-1.0620			
.657	999.9999	-.9253	-.7027	-1.3177	-1.3511	1.0293	1.0293	-.9648			
.702	-.4634	-.5409	-.7705	-1.3502	-1.4073	.6714	1.0329	-1.3861			
.724	-.4959	-.5075	-.6629	-.6824	-.9606	.5479	1.1107	999.9999			
.744	-.5456	-.5920	-.6357	-.6476	-.7401	.6944	1.0682	-.6540			
.755	-.5469999.9999	-.9517	-.7747	-1.1000	-.3349	.6601	1.0488	-.6234			
.809	-.7304	-.7747	-.7360	-1.4055	-.3804	1.1283	1.1283				
.902	999.9999	-.7360	-.7354	-1.0058	-.2776	1.0164	1.0164	-1.8013			
.923	-.7691	-.7354	-1.3225		-.0737	1.0236	1.0236	-1.3276			
.945	-.6230					1.1077	1.1077				
.982	-.5426										

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11012) (22 AUG 75)

REFERENCE DATA

SREF = 116.2800 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = .398 ALPHA (1) = 110.000 Q(P)SF = 3.1800 PO = 32.010 P = 28.700 RM/L = 5.3000

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 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

X/L	027	050	074	098	111	139	168	191	255	344	392	607	702	724	744	755	669	902	923	945	982	
	-5048	-5406	-5017	-4356	-4023	-4369	-4448	-4591	-5426	-5704	-5517	999	4148	-5300	-5903	-5590	-4336	999	-5877	-5340	-4553	
	-5092	-5893	-5599	-4276	-4100	-4162	-4657	-4573	-6573	-6124	-6124	999	4498	-5098	-5590	-5590	999	999	-5877	-5340	-4553	
	-6153	-7810	-8029	-6955	-5227	-5767	-7087	-6835	-1406	-2065	-2065	999	1734	-7213	-8729	-9103	-6673	999	9292	9255	10402	
	3648	3963	4293	4820	1742	4466	4828	4812	5059	6225	6225	999	9643	10404	9995	9749	9629	10738	9292	9255	10402	
	-6913	-5193	-5473	-5516	-1.5930	-1.7146	-1.8270	-1.6772	-1.2824	-1.5308	-2.0410	999	9999	-1.2858	-1.7233	-1.6629	-1.0738	-1.4562	-1.2658			

MACH (2) = .599 ALPHA (1) = 110.000 Q(P)SF = 7.4800 PO = 37.990 P = 29.820 RM/L = 8.8000

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 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

X/L	027	050	074	098	111	139	168	191	255
	-5174	-5070	-5134	-4850	-4802	-4260	-4635	-4998	-5335
	-5354	-5181	-4977	-4323	-4345	-4439	-5320	-5461	-6359
	-7238	-9252	-2395	-1607	-1397	-1517	-7142	-5508	-11546
	7880	7990	7259	6024	1893	5050	8965	9136	9423
	-1.4881	-1.5825	-1.5101	-1.4696	-1.4696	-1.5101	-1.5825	-1.4881	-1.5825

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC THT 603 (SA28F) MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11012)

MACH (2) = .599 ALPHA (1) = 110.000 DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.5887	-.6620	-.6732	-.6828	-1.0503	.5981	.9572	-.7383
	.392	999.9999		-1.4829				.9565	-1.5345
	.667	999.9999	-.9821	-1.6399	-.3726			.9862	-.9243
	.702	-.5514	-.5348	-1.0825	-1.7307	-1.4939	.6091	.9909	-.7393
	.724	-.6089	-.5417	-.7631	-1.4690	-1.5426	.5069	1.0710	999.9999
	.744	-.5700	-.5427	-.6320	-.6443	-1.2086	.6582	1.0329	-.9294
	.755	-.5952	999.9999	-.6034	-.6348	-1.0217	.6235	1.0088	-1.0349
	.869	-.7416		-.8879	-1.8485		-.3934	1.0074	
	.902	999.9999		-.6742	-1.4264		-.4668	1.0912	
	.923	-.7526		-.7512	-.9389		-.3455	.9750	-2.1210
	.945	-.5460		-.7416	-1.4089		-.1225	.9761	-1.5946
	.982	-.4688		-.14337				1.0783	

MACH (3) = .898 ALPHA (1) = 110.000 OIPSF = 7.3600 PO = 21.990 P = 13.030 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.4009	-.3781	-.3823	-.3994	.3195	.4037	-.3570	-.3476
	.050	-.4164	-.4425	-.4262	-.3567	.4037	.4727	-.5761	-.3495
	.074	-.3404	-.3473	-.6325	-.3048	.5312	.5495	-.5347	-.3588
	.098	-.3314	-.3570	-.3544	-.2025	.3426	.9309	-.0414	-.3495
	.111	-.3252	-.3542	-.3823	-.2020	.6852	.9881	.0834	-.3588
	.139	-.3339	-.3681	-.4316	-.0368	.7389	1.0087		
	.168	-.3611	-.3866	-.4050	-.0845	.7523	1.0403		
	.191	-.3726	-.3808	-.3821	-.4463	.8058	1.0631		
	.255	-.4027	-.4141	-.4751	-.1262		1.0755	-.4355	
	.344	-.4106	-.4130	-.4235	-.5218		1.1134	-.5761	
	.392	999.9999		-.5761	-.1420		1.1189	-.5465	
	.667	999.9999	-.5496	-.5639	-.5768	.8498	1.1874	999.9999	
	.702	-.5571	-.5687	-.5612	-.6127	.7016	1.1650	-.7161	
	.724	-.5714	-.5775	-.5612	-.7725	.8892	1.1409	-.6868	
	.744	-.5870	-.6067	-.7364	-.6386	.8536	1.1501		
	.755	-.6089	999.9999	-.7990	-.6569		1.2239		
	.869	-.7616		-.7722	-.1480		1.1321	-1.1879	
	.902	999.9999		-.7705	-.0962		1.1399	-1.0041	
	.923	-.7757		-.9257	-.1658		1.2167		
	.945	-.8411		-.7555	-.2635				
	.982	-.5843		-.10715					

(R11012)

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (4) = 1.198 ALPHA (1) = 110.000 Q(P5F) = 9.1400 PO = 22.000 P = 9.1000 RN/L = 6.7000

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.139	.168	.191	.255	.344	.392	.667	.702	.724	.755	.809	.902	.923	.945	.982
	-4762	-4761	-4720	-4865	-5025	-5249	-5385	-5420	-5462	-5580	-4587	-4715	-4883	-4838	-4916	-5033	-5136	-5277	-5437
	-4719	-4672	-4664	-4947	-5120	-5227	-5342	-5380	-5479	-6137	-4666	-4751	-4835	-5617	-5295	-5557	-5736	-5937	-6231
	.0370	.0315	.0800	.1603	.3525	.5242	.5506	.5566	.6141	.6163	.4995	.1515	.2231	.5725	.1457	.6157	.5175	.4677	.5293
	.5641	.6422	.7076	.7580	.6079	.9175	.9675	.9830	.4726	1.0300	.4995	1.0740	.9064	1.1104	1.3160	1.3922	1.3155	1.3162	1.3878
				1.555	1.4021	1.722	1.930	1.2209	1.2383	1.2459	1.2898	1.2954	1.3424	1.3380	1.3160	1.3922	1.3155	1.3162	1.3878
					1.5142	1.5162	1.5609	1.5528	1.5811	1.6159	1.6746	1.6894	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999

MACH (5) = 1.967 ALPHA (1) = 110.000 Q(P5F) = 10.930 PO = 30.010 P = 4.0400 RN/L = 7.3000

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.755
	-2525	-2551	-2531	-2549	-2531	-2525	-2530	-2623	-2612	-2691	-2400	-2426	-2419	-2458	-2360
	-2503	-2340	-2176	-1887	-2055	-1400	-1319	-1292	-1247	-1240	-1215	-1360	-1647	-1534	-1162
	.2839	.3371	.3737	.4349	.4550	.7066	.7458	.7681	.2408	.7565	.2160	.1534	.2697	.2697	.2298
	.7727	.8407	.8957	.9503	1.0417	1.1747	1.4159	1.4259	1.4366	1.4425	1.4730	1.4983	1.4937	1.5609	1.5074
					1.572	1.711	1.7594	1.7279	1.7215	1.7226	1.7244	1.7230	999.9999	999.9999	999.9999
					1.2114	1.1432	1.1318	1.1279	1.1215	1.1226	1.1244	1.1230	999.9999	999.9999	999.9999

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DATE 07 MAR 77

TABULATED SOURCE DATA. MSFC INT 603 (SA28F)

PAGE 45

(R11012)

MSFC INT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (5) = 1.967 ALPHA (1) = 110.000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.2684	-.2522	.7325	1.4886							
.902	999.9999	-.2638	.5140	1.4384							
.923	-.2712	-.2564	.7261	1.4732						-.1280	
.945	-.2715	-.1024	.7484	1.4176						-.0727	
.982	.0206	-.0851		1.6291							

MACH (6) = 2.740 ALPHA (1) = 110.000 Q(PSF) = 6.3700 PO = 30.000 P = 1.2100 RN/L = 5.0000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0742	-.0868	.4017	.8825							
.050	-.0826	-.0887	.4394	.9350							
.074	-.0772	-.0911	.4716	.9781							
.098	-.0826	-.0932	.4163	.9280							
.111	-.0868	-.0926	.5067	1.0420					.5882	-.0568	-.0944
.139	-.0899	-.0917	.3194	.8208					.8212	.0014	-.0974
.168	-.0941	-.0911	-.1010	1.3408					.8376	.0082	-.0992
.191	-.0950	-.0862	-.0966	1.3359						.0108	
.255	-.0974	-.1016	.0080	.8378						.0119	
.344	-.1029	-.0887	-.0947	1.3402						.0125	
.392			.0093	.5514						.0107	
.607	999.9999	-.1046	-.0034	1.5027						.0129	
.702	-.1050	-.0906	-.0984	1.3924						999.9999	
.724	-.1064	-.1065	-.0881	.8934						.0574	
.744	-.1022	-.1046	-.1156	1.4979						.0336	
.755	-.1052999.9999	-.1174	-.0161	1.4008							
.869	-.1143	-.1144	-.0245	.8135							
.902	999.9999	-.1156	-.0342	.5706						-.0131	
.923	-.1174	-.1058	-.0135	1.6109						.0295	
.945	-.1174	-.1192	.0135	.7623							
.982	.1495		.0568	1.7524							

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (5A28F) (R11012)

MSFC TWT 603 (5A28F) SRB - CLEAN ATTACH AFT RING

MACH (B) = 4.450 ALPHA (I) = 110.000

SECTION (I) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.0595	.0595	.7839	1.5925
.859	.0018	.0595	.7839	1.5925
.902	.999	.0444	.4502	.8484
.923	.0074	.0122	.7839	1.6746
.945	.0065	.0208	.6239	1.2821
.982	.2009	.1060	.1060	1.6476
				.0615
				.0729

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TMT 603 (SAZBF)

PAGE 48

MSFC TMT 603 (SAZBF) SRB - CLEAN ATTACH AFT RING (R11013) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 EREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .900 ALPHA (1) = 110.000 OIPSF = 7.3700 PO = 22.000 P = 13.010 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.567	.702	.724	.744	.755	.869	.902	.923	.945	.982	
CP	-.3976	-.4067	-.3406	-.3255	-.3251	-.3524	-.3472	-.3727	-.3785	-.4118	-.4232	-.5489	-.5707	-.5653	-.5741	-.5897	-.6060	-.7601	-.7497	-.7583	-.8307	-.5761
CP	-.3752	-.4412	-.3384	-.3531	-.3531	-.3800	-.4270	-.3946	-.3862	-.4113	-.4420	-.5252	-.5781	-.5402	-.5639	-.6236	-.7642	-.7612	-.7743	-.9303	-.9051	-.10522
CP	-.3953	-.3564	-.3011	-.2013	-.2013	-.4359	-.7070	-.0863	-.1257	-.4623	-.4622	-.1442	-.5788	-.6650	-.6236	-.7642	-.6344	-.6534	-.7368	-.7682	-.0982	-.2859
CP	.3217	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.3217	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	
CP	.4010	.4742	.5326	.5502	.3449	.6817	.7401	.7546	.8103	.8103	.8515	.7021	.8897	.8897	.8581	.1530	.0982	.1398	.2859	-.1.1976	-.1.0051	

MISC TR 603 (SA28F) SRB - CLEAN ATTACH AFT RING
 RM-SCH = 2.000 PHI = .000
 RM/L = 5.3000

REFERENCE DATA
 MACH (1) = .398 ALPHA (1) = 119.900 OIPSF1 = 3.1900 PO = 32.010 P = 28.690 RM/L = 5.3000
 SECTION (1) SRB DEPENDENT VARIABLE CP

INETA	.0000	22.5000	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
X/L	.027	.050	.074	.111	.139	.168	.191	.215	.234	.255	.275	.294	.313	.332	.351
Y/L	.3300	.2584	.2842	.2859	.2920	.3115	.3215	.3329	.3439	.3517	.3572	.3615	.3645	.3674	.3693
Z/L	.6955	.6587	.6802	.6869	.6920	.7117	.7215	.7329	.7439	.7517	.7572	.7615	.7645	.7674	.7693
CP	.7167	.7946	.7697	.7402	.7834	.7468	.7199	.6633	.5633	.4589	.3513	.2416	.1286	.0126	-.0949
CP	.1980	.2080	.2200	.2432	.2111	.1753	.1443	.1128	.0833	.0563	.0325	.0126	-.0049	-.0219	-.0381
CP	.7764	.5120	.4994	.4027	.3049	.2082	.1128	.0185	-.0753	-.1633	-.2416	-.3099	-.3674	-.4149	-.4524
CP	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999
CP	.15824	.12634	.11990	.11105	.1005	.0999	.0999	.0999	.0999	.0999	.0999	.0999	.0999	.0999	.0999
CP	.8219	.9756	.7852	.7238	.6535	.5979	.5481	.4981	.4481	.3981	.3481	.2981	.2481	.1981	.1481
CP	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796

MACH (2) = .601 ALPHA (2) = 119.900 OIPSF2 = 7.5200 PO = 37.990 P = 29.760 RM/L = 8.9000
 SECTION (1) SRB DEPENDENT VARIABLE CP

INETA	.0000	22.5000	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
X/L	.027	.050	.074	.111	.139	.168	.191	.215	.234	.255	.275	.294	.313	.332	.351
Y/L	.2521	.2772	.3064	.3245	.3355	.3405	.3417	.3439	.3469	.3499	.3529	.3559	.3589	.3619	.3649
Z/L	.3925	.3306	.3406	.3461	.3509	.3617	.3704	.3781	.3858	.3935	.4012	.4089	.4166	.4243	.4320
CP	.6912	.6872	.7164	.6560	.7141	.6335	.5419	.4216	.2912	.1414	.0014	-.1489	-.2982	-.4479	-.5976
CP	.1457	.1797	.2103	.2263	.1959	.1541	.1024	.0507	.0000	-.0500	-.1000	-.1500	-.2000	-.2500	-.3000
CP	.7100	.4250	.4011	.2196	.0913	-.0398	-.1671	-.2944	-.4217	-.5490	-.6763	-.8036	-.9309	-.1052	-.2325
CP	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999
CP	.15824	.12634	.11990	.11105	.1005	.0999	.0999	.0999	.0999	.0999	.0999	.0999	.0999	.0999	.0999
CP	.8219	.9756	.7852	.7238	.6535	.5979	.5481	.4981	.4481	.3981	.3481	.2981	.2481	.1981	.1481
CP	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796	.9796

CV

MSFC TMT 603 (ISA28F) SRB - CLEAN ATTACH AFT RING (R11014)

MACH (2) = .601 ALPHA (1) = 119.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

T-ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.5108	-.5666	-.5764	-1.8651	-1.4801	.4636	.7930	-1.9299
	.392	.999	.9999	-.4875	-1.4112	-.4348	.7911	.7911	-1.9330
	.702	-.4928	-.5281	-.6210	-1.6094	-1.3998	.8331	.8331	-1.9330
	.724	-.6101	-.5834	-.7279	-.7970	-1.5030	.6477	.6477	-1.8265
	.744	-.5376	-.6098	-.7325	-1.0074	-1.3651	.7927	.7927	.999
	.755	-.6133	.9999	-.7947	-1.2258	-1.4086	.9357	.9357	.999
	.869	-.8000	-.6046	-.7947	-2.0010	-.4159	.8723	.8723	-1.0501
	.902	.999	-.6520	-.6520	-.8035	-.6735	.8481	.8481	-1.2447
	.923	-.6322	-.7364	-.8241	-1.5779	-.3170	.9758	.9758	-1.8175
	.945	-.6109	-.8241	-.8241	-1.5226	-.1581	.8455	.8455	-1.2323
	.982	-.4231	-.8241	-.8241	-1.2086	-.1026	.7641	.7641	-1.2323
							1.0261	1.0261	

MACH (3) = .904 ALPHA (1) = 119.900 O(PSF) = 7.3800 PO = 21.920 P = 12.910 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

T-ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.4147	-.4303	-.4303	-.3221	-.5363	.0671	.0671	-.4530
	.050	-.3498	-.4123	-.4123	-.5322	-.5254	.1381	.1381	-.4530
	.074	-.3412	-.3801	-.3801	-.4890	-.4680	.1973	.1973	-.4530
	.098	-.3694	-.4030	-.4030	-.4230	-.3704	.2300	.2300	-.4530
	.111	-.3831	-.4122	-.4122	-.4478	-.5544	.3939	.3939	-.4530
	.139	-.4076	-.4213	-.4213	-.5320	-.7606	.7350	.7350	-.4530
	.168	-.4463	-.4480	-.4480	-.5491	-.6914	.8013	.8013	-.4530
	.191	-.4672	-.4661	-.4661	-.5572	-.6166	.8220	.8220	-.4530
	.255	-.4076	-.5052	-.5052	-.5753	-.0144	.8549	.8549	-.4530
	.344	-.4992	-.5213	-.5213	-.6854	.6441	.8769	.8769	-.4530
	.392	-.5300	-.5260	-.5260	-.7160	.0451	.8852	.8852	-.4530
	.667	.999	-.5260	-.5260	-.5599	-.6908	.9366	.9366	-.4530
	.702	-.5300	-.5524	-.5524	-.5976	-.6808	.9685	.9685	-.4530
	.724	-.5868	-.5929	-.5929	-.6891	-.6291	.999	.999	-.4530
	.744	-.5848	-.6004	-.6004	-.7930	-.6247	.999	.999	-.4530
	.755	-.6112	.9999	-.6942	-.6577	-.6666	1.0605	1.0605	-.4530
	.869	-.7946	-.7983	-.6942	-.6577	-.6666	.9942	.9942	-.4530
	.902	.999	-.8254	-.8254	-.8050	.0834	.9964	.9964	-.4530
	.923	-.8469	-.8314	-.8314	-.8782	-.1753	1.0446	1.0446	-.4530
	.945	-.8169	-.8561	-.8561	-.9738	.1482	1.0083	1.0083	-.4530
	.982	-.5085	-.8561	-.8561	-.8159	.2237	.9444	.9444	-.4530
							1.1712	1.1712	

MACH (4) * 1.198 ALPHA (1) * 119.900 O(P5F) * 9.1300 PO * 21.980 P * 9.0900 RN/L * 6.7000 (R11014)

SECTION (115RB

DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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						
X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.755	.869	.902	.923	.945	.982	
	-.4409	-.4587	-.4725	-.4876	-.5069	-.4961	-.5030	-.5161	-.5211	-.5662	-.5857	-.4288	-.4439	-.4536	-.5107	-.4959	-.5774	-.6026	-.5610	-.6046	
	-.4472	-.4638	-.4790	-.5524	-.5415	-.5068	-.5109	-.5211	-.5389	-.6243	-.5517	-.4309	-.4451	-.5316	-.5452	-.5079	-.6225	-.6730	-.6315	-.6755	
	-.2171	-.1564	-.1012	-.0214	-.0181	-.2792	-.3158	-.3642	-.3834	-.2028	-.3834	-.1998	-.3033	-.1247	-.1851	-.4220	-.1787	-.4755	-.5251	-.3455	
	.3042	.3759	.4354	.4847	.5596	.9373	.9899	1.0077	1.0353	.8584	1.0561	1.1083	1.1367	.6039	1.2344	1.1660	1.1397	1.1823	1.1195	1.3455	
					-.0069	-.2889	.3371							999.9999							
					-.5409	-.5009	-.5097	-.5167	-.6080	-.6307	-.4392	-.4602	-.5227	-.5041				-.5046	-.3875		

MACH (51) * 1.959 ALPHA (1) * 119.900 O(P5F) * 10.980 PO * 30.010 P * 4.0900 RN/L * 7.4000

SECTION (115RB

DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.755
	-.2535	-.2545	-.2548	-.2570	-.2575	-.2672	-.2784	-.2827	-.2759	-.2930	-.2657	-.2529	-.2625	-.1921	-.1485
	-.2734	-.2657	-.2529	-.2625	-.1921	-.1485	-.1428	-.1447	-.1449	-.1442	-.1754	-.1609	-.1554	-.2360	-.2404
	.1112	.1705	.1973	.0957	.0647	.1678	.1772	.1787	.6368	1.0649	.6249	1.1595	.5601	1.3476	1.5294
	.4868	.5647	.5894	.4294	.8211	1.0383	1.0564	1.2159	1.2215	1.2271	1.2257	1.2500	1.3476	1.5294	1.5294
					-.2073	-.2672	-.2622	-.2709	-.1495	-.1475	-.1490	-.1406	999.9999	-.0567	-.1093

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11014)

MACH (5) = 1.959 ALPHA (1) = 119.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.869	-.2614	-.2548	-.1809	.6364	1.3107								
	.902	.999	.9999	-.1864	.3378	.6844								
	.923	-.2629	-.2544	-.1226	.6620	1.3315								-.1515
	.945	-.2617	-.2757	-.1644	.5673	1.0888								-.1402
	.982	.1137	-.0265		1.5684									

MACH (6) = 2.740 ALPHA (1) = 119.900 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RW/L = 4.9000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	-.0695	-.1065	-.1064	.2196	.5621								
	.050	-.1052	-.1083	-.0973	.2639	.6234								
	.074	-.0622	-.1095	-.0931	.2815	.6416								
	.098	-.1052	-.1125	-.1016	.2248	.5342								
	.111	-.1102	-.1137	-.1149	.2229	.5168								
	.139	-.1113	-.1120	-.1228	.2815	.7188								-.0445
	.168	-.1120	-.1119	-.1229	.2726	.7139								-.0081
	.191	-.1125	-.1114	-.1234	.2718	.7091								-.1131
	.255	-.1137	-.1174	-.0982	.6993	1.3054								-.1143
	.344	-.1168	-.1125	-.0887	.2720	1.3000								-.0081
	.392			-.0093		1.3024								-.0123
	.667	.999	.9999	-.1149	.7006	1.3133								-.0123
	.702	-.1204	-.0901	-.1089	.2906	1.4214								-.0079
	.724	-.1216	-.1234	-.0725	.0817	.4971								-.0263
	.744	-.1107	-.1113	-.1028	.0872	.6370								.999
	.755	-.125999	.9999	-.1204	.3556	1.6326								.1139
	.863	-.1252		-.0427	.7366	1.5842								.0526
	.902	.999	.9999	-.1253	.2979	1.4462								
	.923	-.1295		-.0577	.7387	.5404								-.0251
	.945	-.1289		-.0044	.5226	1.5068								-.0415
	.982	.2190		-.0506		1.0589								
				.0720		1.6631								

MACH (7) = 3.480 ALPHA (1) = 119.900 O(P)SF = 6.8600 PO = 60.000 P = .81000 RN/L = 6.7000
 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11014)

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25.0000	225.0000	270.0000	315.0000
X/L	.027	-.0051	-.0480	-.0474	.2230	.5313							
	.050	-.0469	-.0497	-.0424	.2642	.5944							
	.074	-.0060	-.0525	-.0407	.2835	.6181							
	.098	-.0463	-.0536	-.0435	.2537	.5533							
	.111	-.0520	-.0536	-.0511	.2598	.6494	.0049	-.0525					
	.139	-.0531	-.0536	-.0610	.2993	.7250	.3459	-.0531					
	.168	-.0542	-.0536	-.0598	.2968	.7247	.3515	-.0576					
	.191	-.0542	-.0520	-.0610	.2976	.7191	.3449	.0365	-.0576				
	.255	-.0553	-.0597	-.0393	.7191	.3447	.3447	.0347					
	.344	-.0570	-.0610	-.0404	.3032	.3502	.3502	.0351					
	.392		-.0660	-.0461	.7225	.3562	.3562	.0356					
	.667	.999	.9999	.0359	.7225	.4029	.4029	.0411					
	.702	-.0644	-.0271	-.0581	-.0029	.2760	.4156	.0036					
	.724	-.0661	-.0655	-.0051	-.0300	.1091	.4017	.999	.9999				
	.744	-.0605	-.0593	-.0373	.1497	.5832	.4069	.1768					
	.795	-.0620	.999	-.0576	.0937	.4069	.1467	.1086					
	.869	-.0705	-.0706	-.0096	.7496	.14564							
	.902	.999	.9999	-.0717	.2610	.6083							
	.923	-.0722	-.0649	-.0286	.7013	.14912		.0077					
	.945	-.0734	-.0718	-.0142	.4961	.10470		-.0023					
	.982	.2486		-.1103		.16964							

MACH (8) = 4.450 ALPHA (1) = 118.500 O(P)SF = 4.0800 PO = 80.020 P = .29000 RN/L = 5.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	200.0000	225.0000	270.0000	315.0000
X/L	.027	.1079	.0131	.0160	.2805	.5915							
	.050	.0198	.0141	.0169	.3108	.6379							
	.074	.1335	.0103	.0179	.3288	.6664							
	.098	.0217	.0084	.0179	.3043	.6171							
	.111	.0103	.0103	.0084	.2852	.5844	.1214	.3035	.6721	.0492	.0103		
	.139	.0084	.0093	.0074	.3317	.7555	.1209	.4021	.7574	.0757	.0084		
	.168	.0065	.0112	.0055	.3232	.7526	.1206	.4021	.7488	.0776	.0074		
	.191	.0055	.0084	.0046	.3307	.7422	.1193	.3812	.7488	.0785			
	.255	.0046	.0065	.0055	.3488	.7422	.1193	.3841	.7488	.0748			
	.344	.0018	.0122	.0076	.7232	.3746		.3746	.7232	.0776			
	.392	.999	.9999	.0776	.7232	.4139		.4139	.7232	.0795			
	.667	.999	.9999	.0700	.2690	.4506	.12589	.4021	.4559	.0482			
	.702	-.0124	.0748	.0074	.2690	.4506	.4104	.4559	.999	.9999			
	.724	-.0162	-.0143	.1089	.1430	.5839	.18136	2.0259	.1980				
	.744	-.0133	-.0162	.0065	.1715	.5839	.18136	2.0259	.1980				
	.755	-.0152	.999	-.0048	.4000	.4000	.4334	.16770	.1373				

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH JFT RING (R11014)

MACH (8) = 4.450 ALPHA (1) = 118.500

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869 -.0142
.902 999.9999
.923 -.0105
.945 -.0123
.982 .2502

.0511
.0226
.0691
.0278
.1345

.7036
.2701
.6739
.4654

1.3898
.5649
1.3879
.9953
1.6088

.0358
.0435

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11015) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .905 ALPHA (1) = 119.900 O(P)SF = 7.4100 PO = 22.000 P = 12.940 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.25	3.44	3.92	6.67	7.02	7.24	7.44	7.55	8.69	9.02	9.23	9.45	9.82
-4.310	-4.150	-3.785	-3.914	-4.082	-3.935	-4.196	-4.432	-4.668	-4.999	-6.408	-5.200	-5.200	-5.362	-5.868	-5.855	-6.077	-8.024	-8.244	-8.423	-8.125	-5.071
-4.036	-5.274	-4.898	-4.210	-4.504	-4.130	-5.355	-4.783	-5.646	-5.720	-7.007	-8.388	-5.598	-6.771	-6.737	-7.904	-6.604	-7.891	-9.423	-9.917	-9.490	-8.116
-5.383	-5.254	-4.614	-3.645	-4.527	-5.531	-7.626	-0.812	-0.314	0.158	0.648	0.488	0.488	-8.267	-6.152	-6.700	0.0860	-1.794	1.485	0.2276		
0.637	1.386	1.980	2.292	0.821	5.011	5.712	8.024	8.240	8.564	8.789	8.860	9.401	9.678	4.308	1.0603	0.941	0.986	1.0480	1.0063	0.9444	1.1728
-4.500	-0.775	-0.240	-4.510	-4.083	-4.449	-4.702	-5.592	-7.036	-9.212	-5.463	-5.909	9.99	9.999	-6.643	-6.401						

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

(R11016) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
RREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

RN-SCH = 2.000 PHI = .000

MACH (1) = .399 ALPHA (1) = 130.100 G.PSF = 3.1900 PO = 32.040 P = 28.710 RN/L = 5.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.755	.869	.902	.923	.945	.982	
	-.0918	-.0857	-.1394	-.1722	-.2443	-.2898	-.3935	-.3480	-.3663	-.5043	-.1393	-.3440	-.9557	-.7404	-.6379	-.7647	-.5046	-.5706	-.7217	-.7722	-.3559
	-.1609	-.4986	-.6004	-.6381	-.8620	-.8179	-.4857	-.4719	-.4723	-.2969	-.4797	-.4797	-.2535	-.2535	-.4830	-.3593	-.4717	-.9773	-.3042	-.2835	-.8349
	.0948	.0856	.0749	.0343	-.0792	.2075	.2699	.2765	.5900	.5975	.5965	.6339	.6692	.999.9999	.7997	.6880	.6329	.5905	.6451	.4597	.9163
	-.1561	-.2285	-.1970	-.2594	-.2201	-.13296	-.14282	-.12531	-.13781	-.12293	-.12293	-.1492	-.14067	-.10366	-.6738						

MACH (2) = .606 ALPHA (2) = 130.100 G.PSF = 7.6100 PO = 37.990 P = 29.650 RN/L = 8.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.755	.869	.902	.923	.945	.982	
	-.1393	-.1666	-.1958	-.2414	-.2921	-.2945	-.3297	-.3481	-.3743	-.4030	-.1452	-.1652	-.2042	-.2656	-.2442	-.3146	-.2821	-.3075	-.3481	-.3743	-.4030
	-.4818	-.5056	-.5157	-.5715	-.7325	-.6697	-.3434	-.3158	-.3287	-.3412	-.4818	-.5056	-.5157	-.5715	-.7325	-.6697	-.3434	-.3158	-.3287	-.3412	-.3412
	.0439	.0549	.0557	.0169	-.0901	-.5079	-.5687	-.6913	-.8020	-.8020	.0439	.0549	.0557	.0169	-.0901	-.5079	-.5687	-.6913	-.8020	-.8020	-.8020
	-.2468	-.2062	-.3319	-.3688	-.3059	-.5378	-.2062	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468	-.2468

PARAMETRIC DATA

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TMT 603 (SA28F)

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11016)

MACH (2) = .605 ALPHA (1) = 130.100 DEPENDENT VARIABLE CP

SECTION (1) SRB	THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.344	-.4613	-.4505	-.4490	-.4490	-.9905	-1.1064	.3574	.6134	.6134	-1.0027		
	.392					-.9584			.6154	.6154	-.8761		
	.667	999.9999	-.4690			-1.7001		-.3660	.6496	.6496	-1.4936		
	.702	-.4254	-.4942	-.7626	-.5720	-1.2267		.4031	.6917	.6917	-1.2204		
	.724	-.7036	-.7008	-.7854	-.9324	-1.4998		-.2749	-.1129	-.1129	999.9999		
	.744	-.4004	-.4448	-.5642	-1.0973	-1.1248		.5883	-.2137	-.2137	-.9468		
	.755	-.5489	999.9999	-.6035	-1.3334	-1.2310		.4160	.7121	.7121	-.1914		
	.869	-.5424	-.5259	-.6163	-.6163		-.3638	.6468	.6468				
	.902	999.9999	-.5779	-.6925	-.6925		-.9008	.4330	.4330				
	.923	-.5548	-.7167	-.8181	-1.0922		-.6963	.5038	.5038				
	.945	-.5761	-.7732	-.9099	-.9099		-.1988	.9468	.9468				
	.982	-.3229			-.8250								

MACH (3) = .905 ALPHA (1) = 130.100 Q1PSF = 7.4200 PO = 22.010 P = 12.950 RN/L = 6.4000

SECTION (1) SRB DEPENDENT VARIABLE CP

SECTION (1) SRB	THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.027	-.2665	-.2672	-.2700	-.2700	-.4890	-.5160	-.5160	-.5160	-.5160	-.0899		
	.050	-.2740	-.2832	-.3110	-.3110	-.5160	-.5160	-.5160	-.5160	-.5160	-.0346		
	.074	-.3036	-.3167	-.3313	-.3313	-.4312	-.4312	-.4312	-.4312	-.4312	-.0007		
	.098	-.3239	-.3353	-.3495	-.3495	-.4642	-.4642	-.4642	-.4642	-.4642	-.0562		
	.111	-.3385	-.3500	-.3639	-.3639	-.5066	-.5066	-.5066	-.5066	-.5066	-.1195		
	.139	-.3552	-.3699	-.3784	-.3784	-.4513	-.4513	-.4513	-.4513	-.4513	-.5181	-.3509	
	.168	-.3793	-.3969	-.4123	-.4123	-.5024	-.5024	-.5024	-.5024	-.5024	-.1797	-.4520	-.3798
	.191	-.3993	-.4159	-.4299	-.4299	-.5545	-.5545	-.5545	-.5545	-.5545	-.1336	-.4877	-.4338
	.255	-.4554	-.4770	-.4935	-.4935	-.6688	-.6688	-.6688	-.6688	-.6688	-.5362	-.5362	
	.344	-.4971	-.5066	-.5135	-.5135	-.7939	-.7939	-.7939	-.7939	-.7939	-.6599	-.6599	
	.392					-.7345	-.7345	-.7345	-.7345	-.7345	-.6771	-.6771	
	.667	999.9999	-.5329	-.6462	-.6462	-.0505	-.0505	-.0505	-.0505	-.0505	-.5837	-.5837	
	.702	-.5187	-.5565	-.5653	-.5653	-.7120	-.7120	-.7120	-.7120	-.7120	-.7270	-.7270	
	.724	-.6084	-.6009	-.6504	-.6504	-.8843	-.8843	-.8843	-.8843	-.8843	-.7901	-.7901	
	.744	-.5565	-.6010	-.5976	-.5976	-.5505	-.5505	-.5505	-.5505	-.5505	-.9402	-.9402	
	.755	-.5882	999.9999	-.6381	-.6381	-.6650	-.6650	-.6650	-.6650	-.6650	-.5887	-.5887	
	.869	-.7898	-.8670	-.8967	-.8967	.0178	.0178	.0178	.0178	.0178	-.7824	-.7824	
	.902	999.9999	-.8047	-.8047	-.8047	-.3768	-.3768	-.3768	-.3768	-.3768	-.2490	-.2490	
	.923	-.7775	-.7737	-.7737	-.7737	-.1319	-.1319	-.1319	-.1319	-.1319	-.6505	-.6505	
	.945	-.6792	-.6927	-.6927	-.6927	-.8931	-.8931	-.8931	-.8931	-.8931	-.5695	-.5695	
	.982	-.4199	-.4199	-.4199	-.4199	-.5337	-.5337	-.5337	-.5337	-.5337	-.1061	-.1061	

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

DATE 07 MAR 77

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R110161)

MACH (5) = 1.956 ALPHA (1) = 130.100
SECTION (1) SRB DEPENDENT VARIABLE CP
THETA .000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	089	1945	5170	1.0983
.869	-.2510	.1945	.5170	1.0983
.902	.999.9999	-.2214	.0749	.3681
.923	-.2635	-.0959	.5693	-.1262
.945	-.2549	-.2831	.3379	-.2835
.982	.1505	.1411	1.5213	

MACH (6) = 2.740 ALPHA (1) = 130.100 O(PSF) = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.0000
SECTION (1) SRB DEPENDENT VARIABLE CP
THETA .000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	087	1095	0872	3271
.027	-.0804	-.1095	.0872	.3271
.050	-.0892	-.1113	.1163	.3647
.074	-.0958	-.1125	.1285	.3708
.098	-.0922	-.1095	.1212	.3798
.111	-.0988	-.1077	.4953	.8272
.139	-.0982	-.1059	.1671	.8605
.168	-.1041	-.1023	.1907	.8691
.191	-.1059	-.1035	.1899	1.0127
.255	-.1083	-.0994	.1831	1.0121
.344	-.1143	-.0962	.1780	1.0006
.392	.999.9999	-.0962	.1780	1.0024
.702	-.1222	-.1055	.5141	1.0097
.724	-.1222	-.0997	.8729	1.0236
.744	-.1174	-.1095	.2008	.9908
.755	-.1186	-.1095	1.7700	.9987
.869	-.1234	-.1198	1.0662	999.9999
.902	.999.9999	-.0621	.6253	.9214
.923	-.1265	-.0852	.1643	.1212
.945	-.1265	-.0214	.5560	.0532
.982	-.1210	-.1168	.3400	.2515
	.2748	.1916	1.6073	.4567

TABULATED SOURCE DATA. MSFC TMT 603 (SA28F)

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11018)

MACH (8) = 4.450 ALPHA (1) = 130.100

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.0010	.0255	.6246	1.1148
.902	.999	.0150	.1876	.4494
.923	.0000	.0615	.4549	.8420
.945	-.0029	.0122	.2710	.5725
.982	.3516	.1497	1.4803	-.0340
				.0122

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11017) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PMI * .000

MACH (1) = .399 ALPHA (1) = 140.000 O(PSF) = 3.2000 PO = 32.030 P = 28.690 RN/L = 5.3000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.999	.999	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-.0453	-.0703	-.1299	-.2147	-.3244	-.2856	-.2476	-.2645	-.2600	-.2902	-.3435	-.3107	-.3541	-.5866	-.2971	-.3270	-.3477	-.9999	-.4042	-.5048	-.6832	-.4027	-.3030
	-.0319	-.0740	-.1371	-.2249	-.2186	-.2429	-.2770	-.2681	-.2600	-.2927	-.3478	-.8478	-.8106	-.6895	-.3806	-.4522	-.9429	-.9999	-.4569	-.5757	-.8388	-.8993	-.5578
	-.3101	-.3823	-.4362	-.5601	-.8140	-.9692	-.7533	-.7448	-.3335	-.3250	-.1964	-.3461	-.1115	-.6736	-.3806	-.4522	-.9429	-.9999	-.4569	-.5757	-.8388	-.8993	-.5578
	-.0055	-.0138	-.0546	-.1496	-.3645	-.3685	-.3724	-.3429	-.3429	-.4073	-.4043	-.4116	-.4482	-.1650	-.6763	-.5276	-.4374	-.9999	-.0086	-.5249	-.4669	-.8344	
					-.8276	-.6055	-.2236	-.6658	-.2585					-.8743	-.6776	-.9191				-.8904	-.8869		

MACH (2) = .601 ALPHA (1) = 140.000 O(PSF) = 7.5300 PO = 37.980 P = 29.750 RN/L = 8.8000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.999	.999	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-.0629	-.1056	-.1778	-.2220	-.3083	-.2468	-.2711	-.3014	-.3030	-.3479	-.3442	-.3148	-.3739	-.4089	-.5291	-.8039	-.3430	-.3430	-.4569	-.5757	-.8388	-.8993	-.5578
	-.0629	-.1056	-.1778	-.2220	-.3083	-.2468	-.2711	-.3014	-.3030	-.3479	-.3442	-.3148	-.3739	-.4089	-.5291	-.8039	-.3430	-.3430	-.4569	-.5757	-.8388	-.8993	-.5578
	-.0692	-.1055	-.1933	-.2720	-.3139	-.2552	-.2868	-.3075	-.3075	-.3479	-.3442	-.3148	-.3739	-.4089	-.5291	-.8039	-.3430	-.3430	-.4569	-.5757	-.8388	-.8993	-.5578
	-.0155	-.0325	-.0696	-.1766	-.3714	-.5054	-.3396	-.3134	-.3134	-.3479	-.3442	-.3148	-.3739	-.4089	-.5291	-.8039	-.3430	-.3430	-.4569	-.5757	-.8388	-.8993	-.5578
					-.8034	-.2968	-.2594	-.5162	-.2742						-.8743	-.6776	-.9191			-.8904	-.8869		

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11017)

MACH (4) = 1.201 ALPHA (1) = 140.000 Q(PSF) = 9.1500 PO = 22.000 P = 9.0500 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	PO	P	RN/L
THETA	.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000			
X/L				
.027	-.3274	-.3293	-.4317	-.2052
.050	-.3626	-.3812	-.4571	-.1523
.074	-.4148	-.4180	-.4338	-.1413
.098	-.4352	-.4585	-.5022	-.2746
.111	-.4670	-.4621	-.4579	-.1188
.139	-.4450	-.4948	-.3746	-.4556
.168	-.4363	-.4519	-.3641	-.4940
.191	-.4285	-.4227	-.4206	-.4875
.255	-.4190	-.4399	-.0582	-.4869
.344	-.3637	-.4111	-.4198	-.4467
.332	-.4343	-.4469	-.5491	-.4255
.667 999.9999	-.4138	-.4469	-.1151	-.4225
.702	-.4075	-.2161	-.6431	-.5925
.724	-.5056	-.4817	-.5378	999.9999
.744	-.4330	-.4444	-.9057	-.4767
.755	-.4086 999.9999	-.5022	-.0353	-.5504
.869	-.5300	-.5384	-.8183	
.902 999.9999	-.5976	-.5976	-.7239	
.923	-.5262	-.1331	-.2065	
.945	-.5516	-.4780	-.8190	-.5519
.982	-.5785	-.7165	-.2040	-.7370
	-.1134	-.0482	1.2171	

MACH (5) = 1.978 ALPHA (1) = 140.000 Q(PSF) = 10.870 PO = 30.010 P = 3.9700 RN/L = 7.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	PO	P	RN/L
THETA	.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000			
X/L				
.027	-.2007	-.2085	-.1217	.0703
.050	-.2194	-.2190	-.0968	.1027
.074	-.2181	-.2239	-.0846	.1070
.098	-.2357	-.2335	-.0855	.0796
.111	-.2400	-.2309	-.0178	.5966
.139	-.2430	-.2421	-.0029	.6344
.168	-.2428	-.2425	.2721	.2749
.191	-.2411	-.2409	.3099	.3033
.255	-.2377	-.2032	.0003	-.2226
.344	-.2204	-.2343	.2857	-.2061
.392	-.2293	-.2293	-.2001	-.2043
.667 999.9999	-.2062	-.2035	-.2035	-.2034
.702	-.2043	-.2058	.3036	-.1955
.724	-.2498	-.2346	-.0102	-.2034
.744	-.2503	-.2341	-.1787	999.9999
.755	-.2207	-.2410	-.0107	-.0830
	-.2272 999.9999	-.2310	1.1409	-.1127
		-.2392	.8925	1.0012
		-.1264		

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC THT 603 (SAZ8F)

PAGE 65

(R11017)

MSFC THT 603 (SAZ8F) SRB - CLEAN ATTACH AFT RING

MACH (5) = 1.978 ALPHA (1) = 140.000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.869	-.2354	-.2464	-.1888	.3492	.7093
	.902	.999	.9993	-.2258	-.0327	.1475
	.923	-.2663	-.2762	-.1722	.3928	.7988
	.945	-.2735	-.2837	-.2724	.0917	.4112
	.982	.2083	-.2486	-.2486		1.4750

MACH (6) = 2.740 ALPHA (1) = 140.000 Q1PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 4.9000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	-.0641	-.1192	-.1253	-.0129	.1318
	.050	-.1174	-.1204	-.1259	.0052	.1528
	.074	-.0496	-.1234	-.1265	.0155	.1576
	.098	-.1174	-.1252	-.1271	.0181	.1510
	.111	-.1247	-.1259	-.1277	.0914	.3202
	.139	-.1271	-.1289	-.1325	.3508	.6872
	.169	-.1295	-.1301	-.1356	.3550	.6890
	.191	-.1270	-.1277	-.1338	.0597	.3550
	.255	-.1319	-.1326	-.1351	.3562	.6823
	.344	-.1307	-.1271	-.1326	.6100	.6908
	.392			-.0633	.7054	.7054
	.667	.999	.9999	-.0658	.7103	.7103
	.702	-.1265	-.0823	-.0779	.3726	.7147
	.724	-.1277	-.1283	-.0999	.6506	.7426
	.744	-.1174	-.1143	-.0451	.1030	.1060
	.755	-.1186999	.9999	-.1241	1.3364	1.4937
	.869	-.1228	-.1228	-.0160	.7710	.8700
	.902	.999	.9999	-.0718	.3725	.7652
	.923	-.1332	-.1332	-.0985	.0668	.2186
	.945	-.1338	-.1374	-.0621	.3605	.7109
	.945	-.1343	-.1435	-.1277	.1518	.3975
	.982	.2959	.3016			1.3947

TABULATED SOURCE DATA, MSFC TNT 603 (SA2BF)
MSFC TNT 603 (SA2BF) SRB - CLEAN ATTACH AFT RING (RI1017)

DATE 07 MAR 77

MACH (8) = 4.450 ALPHA (1) = 140.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP	CP
.869	-.0209	.0150	.3431	.7915							
.902	.9999	-.0029	.1070	.2625							
.923	-.0238	-.0237	.2510	.4559	.0065						
.945	-.0256	-.0105	.1790	.3402	-.0143						
.982	.3165	.2226		1.0367							

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R1101R (22 AUG 75)

REFERENCE DATA

SREF * 116.2500 SO.FT. XMRP = 1044.0000 IN.
REF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .399 ALPHA (1) = 149.000 Q(PSF) = 3.2000 PO = 32.020 P = 28.690 RN/L = 5.3000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

Table with columns X/L and values for various parameters (0.027 to 0.982) across different theta values.

MACH (2) = .603 ALPHA (1) = 149.000 Q(PSF) = 7.5600 PO = 37.980 P = 29.710 RN/L = 8.9000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

Table with columns X/L and values for various parameters (0.027 to 0.255) across different theta values.

MACH (2) = .603 ALPHA (1) = 149.000

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11018)

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25.0000	225.0000	270.0000	315.0000
X/L	.344	-.2915	-.2837	-.3040	-.6074	-.5765	.1080	.2459	-.6339				
	.392			-.5694				.2471	-.5851				
	.667	999.9999		-.8025		-.2444		.2858	-.6656				
	.702	-.2004	-.3064	-.5334	-.7094	-.4850	.2194	.4129	-.6330				
	.724	-.5089	-.4837	-.6505	-.6562	-.8512	-.6894	-.4618	999.9999				
	.744	-.1011	-.2503	-.3621	-.5241	-.2959	.4977	.6092	-.4115				
	.755	-.2193999.9999		-.4248	-.7416	-.5382	.2309	.3945	-.6137				
	.869	-.3974		-.9616		-.2154	.2946						
	.902	999.9999		-.4380	-.7281	-.5097	-.1839	-.6755	-.7471				
	.923	-.3906		-.4379	-.6915	-.3372		-.9144	-.6185				
	.945	-.3569		-.5473	-.6342	-.8138		.8406					
	.982	-.1544		-.7034									

MACH (3) = .903 ALPHA (1) = 149.000 O1PSF = 7.4000 PO = 22.010 P = 12.980 RN/L = 6.4000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25.0000	225.0000	270.0000	315.0000
X/L	.027	-.0112	.0000	.0036	-.0206	.0157							
	.050	-.1190	-.1182	-.1190	-.1352	-.0756							
	.074	-.2081	-.2294	-.3368	-.3566	-.2461							
	.098	-.3361	-.3076	-.4777	-.4838	-.7634							
	.111	-.4528	-.4581	-.3892	-.5083	-.1835	-.0840	-.4751	-.4062	-.4151			
	.139	-.2732	-.3081	-.3021	-.5070	-.6163	-.0969	-.2261	-.4873	-.2963			
	.168	-.2687	-.3051	-.2932	-.5009	-.5998	-.2006	-.1297	-.2600	-.4757	-.2810		
	.191	-.2682	-.3030	-.2820	-.5055	-.5897	-.1361	-.2635	-.4810				
	.255	-.2764		-.4981		-.2073	.2557						
	.344	-.3104	-.3130	-.3660	-.7477	-.5619	.1467	.2652	-.7189				
	.392			-.5653			.2758	.2552	-.5531				
	.667	999.9999		-.8659		-.1622	.2906	.2758	-.8708				
	.702	-.3303	-.4159	-.5178	-.5935	-.3320	.4165	.4891	-.5929				
	.724	-.5342	-.5322	-.5307	-.6515	-.6669	-.5895	-.6145	999.9999				
	.744	-.0860	-.2522	-.4203	-.5983	-.3022	.6291	.7456	-.6535				
	.755	-.1965999.9999		-.4932	-.6697	-.4959	.3291	.4714	-.7560				
	.869	-.3708		-.7570		-.0451	.3703						
	.902	999.9999		-.4661	-.5673		.0897	.0897	-.4799				
	.923	-.3950		-.4277	-.4769	-.5300	-.2555	-.2555	-.4367				
	.945	-.3627		-.4392	-.4426	-.5463	-.5633	-.5633					
	.982	-.1364		-.5039			.9772						

DATE 07 MAR 77 TABULATED SOURCE DATA. MSFC TMT 603 (SA28F)

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11018)

MACH (5) = 1.978 ALPHA (1) = 149.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25.0000	270.0000	315.0000
X/L												
.869	-.2233	-.2448	-.1849	.2115	.4500							
.902	999.9999	-.2520	-.2471	-.0768	.0241							
.923	-.2548	-.2671	-.1699	-.1929	.5193					-.2060		
.945	-.2634	-.2962	-.2598	-.0852	.0525					-.2628		
.982	.1709		.0131		1.1362							

MACH (6) = 2.740 ALPHA (1) = 149.020 QIPSF) = 5.3700 PO = 30.000 P = 1.2100 RN/L = 4.9000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25.0000	270.0000	315.0000
X/L												
.027	-.0919	-.0973	-.0997	-.0772	.0058							
.050	-.0997	-.1010	-.1028	-.0664	.0180							
.074	-.1016	-.1064	-.1064	-.0596	.0204							
.098	-.1058	-.1082	-.1095	-.0536	.0240							
.111	-.1095	-.1112	-.1119	-.0204	.3360					.1786		-.1118
.139	-.1058	-.1095	-.1094	.0313	.3556					.1980		-.1083
.168	-.1083	-.1070	-.1058	.0331	.3617					.2020		-.1083
.191	-.1070	-.1034	-.1034	.0309	.3556					.4188		-.0912
.255	-.1064	-.1058	-.0876	.2062	.4235					.4291		-.0888
.344	-.1010	-.1070	-.0857	.0337	.3694					.4290		-.0875
.392	999.9999	-.1186	-.0845	.2284	.4777					.4771		-.0876
.702	-.1192	-.1192	-.0985	.0289	.4145					.4771		-.0925
.724	-.1325	-.1350	-.1277	-.0785	.0265					.999.9999		
.744	-.0961	-.1028	-.1277	.2190	.8639					.9581		-.0099
.755	-.1015999.9999	-.1107	-.0439	.1182	.4892					.5584		-.0390
.869	-.1070	-.1180	-.0559	.2350	.4352					.4352		
.902	999.9999	-.1277	-.1137	.0195	.0923					.0923		-.0743
.923	-.1167	-.1276	-.0620	.2548	.4449					.4449		-.1089
.945	-.1271	-.1356	-.1149	-.0176	.1443					.1443		
.982	.2463		.2439		1.0983							

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F) MSFC TWT 603 (SA28F) (R11018)

MACH (8) = 4.450 ALPHA (1) = 147.500 SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.969	.0027	.0027	.0217	.0217	.2103	.2103	.3851	.3851	.1166	.1166	.0226
	.902	.999	.9999	.0065	.0065	.1866	.1866	.3072	.3072	.1847	.1847	.0160
	.923	.0036	.0018	.0397	.0397	.0785	.0785	.1847	.1847	.8162	.8162	
	.945	.0000	.0008	.0141	.0141							
	.982	.2938		.2693	.2693							

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11019) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .400 ALPHA (1) = 160.000 Q(PSF) = 3.2100 PO = 32.040 P = 28.700 RN/L = 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0685	.0773	.0737	.0281	.0219
.050	.0303	.0404	.0398	.0678	-.0447	-.3153
.074	-.0309	-.0099	-.0240	-.1723	-.1319	-.3008
.098	-.1651	-.1245	-.1539	-.3916	-.3351	.0110
.111	-.3459	-.3264	-.2771	-.7746	-.8134	-.1960
.139	-.1394	-.1532	-.1490	-.3192	-.2152	-.8329
.168	-.1252	-.1363	-.1319	-.2826	-.1537	-.2207
.191	-.1308	-.1281	-.1301	-.2789	-.0047	-.2812
.255	-.1267	-.1179	-.2789	-.2768	.0264	-.2702
.344	-.1346	-.1371	-.1760	-.3264	-.1225	.0990
.392	.999	.9999	-.0564	.3178	.0428	-.3257
.667	-.0533	-.1351	-.2125	-.0511	.0964	-.3153
.702	-.3386	-.3517	-.2333	-.2413	.1514	-.2178
.724	-.0522	-.0495	-.3637	-.4730	-.3401	-.3008
.744	-.0806	.9999	-.0240	-.0029	-.5805	.999
.755	-.4413	-.4880	-.1521	-.2132	.4617	.0110
.869	-.4971	-.5015	-.1521	-.0856	.2153	-.1960
.902	-.4056	-.4695	-.5220	-.0456	.1945	-.1960
.945	-.3866	-.4695	-.4807	-.1854	.0707	-.4804
.982			-.5149	-.4834	-.4046	-.5092
			-.5635	-.7509	-.7876	-.7209

MACH (2) = .601 ALPHA (1) = 160.000 Q(PSF) = 7.5300 PO = 38.010 P = 29.780 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0605	.0662	.0745	.0339	.0291
.050	.0104	.0275	.0393	.0522	-.0339	-.0339
.074	-.1865	-.0527	-.0299	-.1529	-.1285	-.1285
.098	-.3632	-.1439	-.2201	-.4094	-.3663	-.3663
.111	-.1681	-.2958	-.3084	-.7524	-.8017	-.7974
.139	-.1481	-.1676	-.1757	-.3296	-.2093	-.3000
.168	-.1397	-.1485	-.1535	-.2943	-.1521	-.2110
.191	-.1300	-.1481	-.1409	-.2879	-.0029	-.2816
.255	-.1270	-.1320	-.1409	-.2861	.0175	-.2758
			-.2965	-.1223	.0937	-.2758

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11018)

MACH (2) = .601 ALPHA (1) = 160.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000	
X/L													
.344		-.1524	-.1598	-.1923	-.3220	-.2811		.0299	.0933			-.3332	
.392					-.3003				.0963				-.3153
.667	999.9999		-.0909		-.2177	-.0491			.1555				-.2222
.702		-.0749	-.1666	-.2794	-.3249	-.3072		.2385	.3534				-.3299
.724		-.3188	-.3597	-.3718	-.4477	-.5207		-.5442	-.5691			999.9999	
.744		-.1061	-.1046	-.0869	-.0507	-.1309		.4956	.5234				-.0337
.755		-.1260	-.0999.9999	-.1921	-.2435	-.1077		.2313	.2867				-.2356
.869		-.4538		-.4822	-.4737			-.0505	.2035				
.902	999.9999		-.4660		-.4700			-.2654	-.0110				-.4441
.923		-.4063		-.4639	-.4468			-.5235	-.5289				-.4821
.945		-.3878		-.4383	-.5125			-.6809	-.7146				
.982		-.3601			-.5265				-.5810				

MACH (3) = .907 ALPHA (1) = 160.000 O(PSF) = 7.4400 PO = 22.020 P = 12.920 RN/L = 6.4000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L												
.027		.0137		.0184	.0314			.0240	.0234			
.050		-.0432		-.0567	-.0787			-.0852	-.0890			
.074		-.1114		-.1264	-.3261			-.2977	-.2754			
.098		-.2401		-.2386	-.4667			-.4346	-.6445			
.111		-.3731		-.3728	-.4771	-.4311		-.3463	-.1711			-.4731
.139		-.1788		-.1954	-.3096	-.2833		-.1194	.0887			-.3080
.168		-.1514		-.1639	-.2848	-.2572		-.1004	.0599			-.1198
.191		-.1401		-.1520	-.2719	-.2550		.0562	.1152			-.2729
.255		-.1372		-.1448	-.2828	-.2550		-.0999	.1069			-.2616
.344		-.1729		-.1740	-.3189	-.2670		.0464	.0978			-.3420
.392					-.2672				.1079			-.3105
.667	999.9999		-.2034		-.2510			-.0490	.1671			-.2510
.702		-.2012		-.3879	-.4202	-.4175		-.1377	-.0972			-.4178
.724		-.3104		-.3902	-.4218	-.4960		-.5135	-.5196			999.9999
.744		-.2555		-.2227	-.1398	-.1124		.5800	.6237			-.1322
.755		-.2796		-.2916	-.2863	-.0791		.3233	.6241			-.2764
.869		-.3709		-.3815	-.3400			-.1035	.1342			
.902	999.9999		-.3684		-.3723			-.3862	-.3352			-.4511
.923		-.3266		-.3566	-.4569			-.4898	-.4992			-.5619
.945		-.3006		-.3373	-.5471			-.5362	-.5444			
.982		-.2173			-.4235				-.0259			

MACH (4) = 1.202 ALPHA (1) = 160.000 O(PSF) = 9.1500 PO = 22.010 P = 9.0600 RN/L = 6.8000 (R11019)

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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	472.5000	495.0000	517.5000	540.0000	562.5000	585.0000	607.5000	630.0000	652.5000	675.0000	697.5000	720.0000	742.5000	765.0000	787.5000	810.0000	832.5000	855.0000	877.5000	900.0000													
X/L	.027	-.0214	-.0189	-.0020	.0053	.0228	.3209	.3763	.4860	.0257	-.1399	-.2455	-.3029	-.1026	-.1195	-.1233	-.1446	.0748	.1827	.2865	.1546	.3984	.4305	.999.9999	.1104	.2057	.2400	.2946	.0934	.4068	.5063	.4771	.3049	.0608	.3638	.3901	.4620	.5483	.2613	.1361	.4086	.4384	.4854	.4991	.6896	.7295	.4945	.2400	.2946	.0934	.4068	.5063	.4771	.3049

MACH (5) = 1.965 ALPHA (1) = 160.000 O(PSF) = 10.940 PO = 30.010 P = 4.0500 RN/L = 7.4000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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	472.5000	495.0000	517.5000	540.0000	562.5000	585.0000	607.5000	630.0000	652.5000	675.0000	697.5000	720.0000	742.5000	765.0000	787.5000	810.0000	832.5000	855.0000	877.5000	900.0000														
X/L	.027	-.1308	-.1348	-.1091	-.0577	-.1566	-.1679	-.1607	-.1664	-.1380	-.0210	-.1785	-.1809	-.1000	-.0040	-.0072	-.1868	-.1651	.1242	.1673	.1577	.1543	.1628	.2142	.2291	.999.9999	.1819	.5428	.5842	.1789	.2187	.0252	.1182	.1543	.1628	.2142	.2291	.999.9999	.1819	.5428	.5842	.1789	.2187	.0252	.1182	.1543	.1628	.2142	.2291	.999.9999	.1819	.5428	.5842	.1789	.2187

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11019)

MACH (5) = 1.965 ALPHA (1) = 160.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1732	-.2078	-.1537	.0907	.2047
.902	999.9999	-.2117	-.2397	-.1488	-.0991
.923	-.2209	-.2397	-.1576	.0786	-.2037
.945	-.2277	-.2521	-.2673	-.1766	-.1719
.982	.0270	.0415	.0415	-.4614	-.2624

MACH (6) = 2.740 ALPHA (1) = 160.000 O(P)SF = 6.3700 PO = 30.010 P = 1.2100 RN/L = 5.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0706	-.0779	-.0785	-.0767	-.0815
.050	-.0924	-.0961	-.0998	-.1060	-.0797
.074	-.0919	-.1058	-.1113	-.1077	-.0773
.098	-.1015	-.1125	-.1149	-.1041	-.0712
.111	-.0858	-.0937	-.0955	-.0457	.1540
.139	-.0791	-.0858	-.0875	-.0384	.1704
.168	-.0791	-.0840	-.0858	-.0402	.0556
.191	-.0773	-.0779	-.0821	-.0383	.0544
.255	-.0688	-.0882	-.0900	-.0876	.1692
.344	-.0542	-.0712	-.0761	-.0876	.1716
.392	999.9999	-.0841	-.0961	.0690	-.0835
.702	-.0724	-.1003	-.1046	-.0354	-.0433
.724	-.1192	-.1046	-.1174	-.1010	-.0944
.744	-.0084	-.0773	-.0105	-.0609	-.1022
.755	-.0402	-.0706	-.0337	.5190	999.9999
.869	-.0750	-.0955	-.0542	.1167	-.0469
.902	999.9999	-.1089	-.1077	-.0506	-.2196
.923	-.1034	-.1119	-.0518	-.0939	-.0152
.945	-.1144	-.1248	-.1101	-.0427	-.1497
.982	.1248	.1510	.1510	-.0052	-.1077
					.4916

DATE 07 MAR 77 TABULATED SOURCE DATA. MSFC TMT 603 (SA28F) (R11019)
MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (8) = 4.450 ALPHA (1) = 160.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	.0103	.0000	.0161	.1146	.1968
.902	.9999	-.0048	.0018	.0207	.0499
.923	.0047	.0046	.0387	.0802	.1098
.945	.0000	-.0001	.0121	.0453	.0755
.982	.1762		.1990		.4766
					.0292
					.0169

(R11020) (22 AUG 75)

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 2.740 ALPHA (1) = 160.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 4.9000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
	-.0646	-.0797	-.1010	-.1125	-.1222	-.1046	-.0992	-.0949	-.0821	-.0919	-.0724	-.0785	-.0717	-.0749	-.0700	-.0937	-.1095	-.1137	-.1174	-.1327
	-.0791	-.1070	-.1198	-.1234	-.0713	-.0858	-.0907	-.0919	-.0846	-.0907	-.0785	-.0402	-.0780	-.0986	-.0749	-.0761	-.1101	-.1095	-.1137	-.1332
	-.0761	-.1095	-.1125	-.1064	-.0471	-.0350	-.0378	-.0354	-.0593	-.0313	-.0708	-.0938	-.1044	-.1046	-.1655	-.0542	-.0487	-.0969	-.0451	-.1510
	-.0682	-.1564	-.1716	-.1394	-.1273	-.1394	-.1418	-.1370	-.1728	-.1437	-.1507	-.1789	-.1740	-.0621	-.5742	-.2205	-.0184	-.1528	-.0076	-.4977
	-.0453	-.1077	-.0586	-.0574	-.0919	-.0919	-.0919	-.0919	-.0821	-.0421	-.0961	-.0418	999.9339	-.0445	-.0445	-.0572	-.1119			

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11021)

MACH (2) = .589 ALPHA (1) = 169.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	270.0000	315.0000
X/L	.344	-.0691	-.0576	-.0956	-.1207	-.1108	-.0058	.0122	.0031	.1270			
	.392				-.1340					-.1427			
	.667	.999	.9999	.0336	.0161	.0452				.0185			
	.702	-.0722	.0429	-.0447	-.0908	-.0902	-.0195	.0096		-.0674			
	.724	-.0532	-.1369	-.2419	-.2793	-.3214	-.3002	-.3097		.999	.9999		
	.744	.0672	.0690	.1451	.2117	.2054	.4085	.4092		.2232			
	.755	.0425	.9999	.0435	.0710	.1190	.2126	.2330		.0717			
	.869	-.3511		-.3390	-.3390	-.0481	-.2317	-.0717					
	.902	.999	.9999	-.4439	-.5242	-.3530	-.5127	-.2317		-.5443			
	.923	-.4447		-.4754	-.5323	-.5436	-.7641	-.5127		-.5262			
	.945	-.4143		-.4502	-.5273	-.6627	-.7641	-.5127					
	.982	-.4749		-.5200	-.5200	-.5779	-.5779	-.5779					

MACH (3) = .904 ALPHA (1) = 169.900 Q(PSF) = 7.4100 PO = 22.010 P = 12.960 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.5000	225.0000	270.0000	315.0000
X/L	.027	.0616	.0511	.0255	.0391	.0391	.0383						
	.050	.0109	-.0015	-.0916	-.0672	-.0672	-.0804						
	.074	-.0657	-.0845	-.2521	-.2363	-.2363	-.2868						
	.098	-.2147	-.2678	-.3880	-.3968	-.3968	-.3912						
	.111	-.3655	-.3802	-.3795	-.3821	-.3407	-.2783			-.3153		-.3859	-.3921
	.139	-.1300	-.1299	-.1331	-.1474	-.1321	-.0855	-.0233		-.0955		-.1565	-.1364
	.168	-.0939	-.0928	-.0934	-.1174	-.1070	-.0646	-.0146		-.0744		-.1262	-.0955
	.191	-.0846	-.0819	-.0835	-.1091	-.1037	-.0125	-.0036		-.0041		-.1194	
	.255	-.0872	-.0773	-.1477	-.1127	-.1451	-.0474	-.0041		-.0313		-.1815	
	.344	-.1124	-.1136	-.1676	-.1623	-.1676	-.0360	-.0360		-.0177		-.2023	
	.392			-.0120	-.0518	-.0518	-.0380	-.0380		-.0841		-.0841	
	.667	.999	.9999	-.0693	-.0866	-.0923	-.2978	-.2978		-.0057		-.0057	
	.702	-.0182	-.0203	-.1769	-.2164	-.2461	-.2978	-.2978		-.0091		-.0091	
	.724	-.0359	-.0506	-.0772	-.1025	-.1044	-.2742	-.2742		-.0091		-.0091	
	.744	-.0307	-.1199	-.1429	-.0891	-.0093	-.1647	-.1647		-.0091		-.0091	
	.755	-.1469	.9999	-.4667	-.4659	-.3211	-.2563	-.2563		-.0091		-.0091	
	.869	-.4370		-.4328	-.4756	-.4756	-.4675	-.4675		-.0091		-.0091	
	.902	.999	.9999	-.4242	-.4824	-.5331	-.4735	-.4735		-.0091		-.0091	
	.923	-.3937		-.4242	-.4824	-.5331	-.4735	-.4735		-.0091		-.0091	
	.945	-.3461		-.3796	-.4682	-.6004	-.4422	-.4422		-.0091		-.0091	
	.982	-.3563		-.4093	-.4093	-.4093	-.4401	-.4401		-.0091		-.0091	

TABULATED SOURCE DATA. MSFC TWT 603 (SA28F)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11021)

MACH (4) = 1.204 ALPHA (1) = 169.900 Q(IPSF) = 9.1600 PO = 22.020 P = 9.0400 RN/L = 6.6000

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.024	0.040	0.074	0.098	0.111	0.139	0.168	0.191	0.255	0.344	0.392	0.667	0.702	0.724	0.744	0.755	0.869	0.902	0.923	0.945	0.982
	-.0124	-.0707	-.2252	-.4898	-.2104	-.0390	-.0288	-.0538	-.0760	-.0116	-.0339	-.0297	-.1834	-.2972	-.0845	-.0310	-.3649	-.3774	-.3775	-.3646	-.2017
	-.0314	-.1433	-.3396	-.5692	-.1593	-.0660	-.0478	-.0846	-.1327	-.1310	-.0339	-.0602	-.2452	-.3725	-.1718	-.1014	-.2935	-.3774	-.4262	-.4356	-.2964
	-.0098	-.1402	-.4899	-.5471	-.0829	-.0162	-.0026	-.0651	-.0246	-.0892	-.0786	-.0786	-.2452	-.3956	-.2798	-.1717	-.0580	-.3885	-.2594	-.6004	-.2964
	.0022	.3196	.4522	.5241	.0343	.0040	.0293	.0475	.0095	.0284	.0519	.0352	.1364	.4326	.5143	.3408	.0284	.3565	.2594	.6004	.2964
	.1729	.2324	.0487	.0319	.0610	.0799	.0998	.1499	.0588	.0445	.2199	999.9999	999.9999	.1709	.1040	.4185	.4265				

MACH (5) = 1.947 ALPHA (1) = 169.900 Q(IPSF) = 11.050 PO = 30.010 P = 4.1700 RN/L = 7.5000

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.027	0.050	0.074	0.098	0.111	0.139	0.168	0.191	0.255	0.344	0.392	0.667	0.702	0.724	0.744	0.755
	-.0716	-.1881	-.2279	-.2369	-.0285	-.0163	-.0275	-.0481	-.0445	-.0526	-.0638	-.0390	-.0106	-.2156	-.3627	-.0100
	-.0904	-.2000	-.2305	-.0491	-.0499	-.0457	-.0163	-.0471	-.0544	-.0236	-.0162	-.1264	-.1335	-.2143	-.0834	-.0061
	-.0716	-.1881	-.2279	-.2369	-.0285	-.0163	-.0275	-.0481	-.0445	-.0526	-.0638	-.0390	-.0106	-.2156	-.3627	-.0100
	.0026	.0214	.0372	.0362	.0165	.0362	.0481	.0445	.0526	.0638	.0390	.0106	.2156	.3627	.0100	.0100
	.0386	.0619	.0316	.0205	.0205	.0386	.0619	.0509	.0285	.0163	.0275	.0481	.0445	.0526	.0638	.0390
	.0619	.0509	.0316	.0205	.0205	.0386	.0619	.0509	.0285	.0163	.0275	.0481	.0445	.0526	.0638	.0390
	.0509	.0285	.0163	.0275	.0481	.0445	.0526	.0638	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100
	.0285	.0163	.0275	.0481	.0445	.0526	.0638	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.0163	.0275	.0481	.0445	.0526	.0638	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100
	.0481	.0445	.0526	.0638	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.0445	.0526	.0638	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100
	.0526	.0638	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100
	.0638	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.0390	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100
	.0106	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100
	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100
	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100
	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100
	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100
	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100
	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100
	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100
	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100
	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100
	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.2156	.3627	.0100	.0100	.0100

MSFC TH1 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11021)

MACH (5) = 1.947 ALPHA (1) = 169.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.1444	-.1614	-.0925	.0050	.0565
	.902	999.9999	-.1852	-.2075	-.2005	-.1885
	.923	-.1968	-.2063	-.1359	-.0579	-.0082
	.945	-.1994	-.2199	-.2743	-.2376	-.2149
	.982	.0753	.0047	.0047	.1436	-.2725

MACH (6) = 2.740 ALPHA (1) = 169.900 O(P)SF = 6.4000 PO = 30.160 P = 1.2200 RN/L = 5.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0496	-.0590	-.0760	-.0779	-.0785
	.050	-.0701	-.0711	-.0972	-.0991	-.1014
	.074	-.0719	-.0857	-.1026	-.1087	-.1129
	.098	-.0834	-.0942	-.1056	-.1171	-.1075
	.111	-.0318	-.0337	-.0333	-.0180	.0266
	.139	-.0209	-.0277	-.0229	-.0457	-.0363
	.168	-.0211	-.0312	-.0253	-.0372	-.0072
	.191	-.0217	-.0324	-.0294	-.0411	-.0065
	.255	-.0072	-.0253	-.0591	-.0001	-.0458
	.344	.0054	-.0321	-.0487	-.0200	.0405
	.392	999.9999	-.0398	-.0712	-.0132	.0427
	.667	999.9999	-.0398	-.0712	-.0132	.0387
	.702	-.0072	-.0411	-.0754	-.0005	.0393
	.724	-.0905	-.0899	-.0900	-.0488	.0350
	.744	.0174	.0405	.0369	-.0378	-.0742
	.755	.0030999.9999	.0000	-.0079	.1154	.0477
	.869	-.0432	-.0591	-.0343	.0103	.0822
	.902	999.9999	-.0893	-.0972	.0350	.0548
	.923	-.0930	-.0833	-.0609	-.0875	-.0665
	.945	-.1141	-.1154	-.1141	-.0072	-.0183
	.982	.1595	.1196	.1196	-.0893	-.0778
						.2465

MACH (7) = 3.480 ALPHA (1) = 169.880 Q1PSF = 6.8600 PO = 59.980 P = .81000 RN/L = 7.1000
 MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11021)

SECTION (1) SRB DEPENDENT VARIABLE CP THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982																							
	-.0241	-.0343	-.0320	-.0393	-.0227	-.0159	-.0147	-.0123	-.0069	-.0024	-.0128	-.0193	-.0405	-.0439	.0320	.0099	-.0221	-.0480	-.0413	-.0621	-.0241	-.0458	-.0548	-.0655	-.0610	-.0308	-.0035	-.0043	-.0060	-.0272	-.0294	-.0244	-.0091	-.0396	-.0446	999.9999	.2016	.0648	.0697	-.0224	-.0453	-.0266	.2782

MACH (8) = 4.450 ALPHA (1) = 169.900 Q1PSF = 4.0800 PO = 80.010 P = .29000 RN/L = 6.0000

SECTION (1) SRB DEPENDENT VARIABLE CP THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755																												
	.0586	.0461	.0520	.0423	.0258	.0364	.0326	.0402	.0288	.0287	.0268	.0470	.0050	.0145	.0031	.0015	.0003	.0516	.0524	.0411	.0420	.0515	.0505	.0477	.0439	.0015	.0003	.0402	.0259	.0278	.0316	.0240	.0288	.0041	.0212	-.0015	.0003	999.9999	.0006	.0034	.0344	.0297	.0837

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11021)

MACH (8) = 4.450 ALPHA (1) = 169.900

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L					
.869	.0174	.0240	.0581	.0862	
.902	.0022	.0079	.0098	.0375	
.923	.0022	.0316	.0431	.0611	.0240
.945	-.0034	.0079	.0175	.0269	.0107
.982	.1984	.1907		.2951	

TABLATED SOURCE DATA. MSFC (HT 603 (SA28F))

DATE 07 MAR 77

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11022) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 1.198 ALPHA (1) = 169.900 O(P)SF = 9.1400 PO = 22.010 P = 9.1000 RN/L = 6.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0370	.0053	-.0078	.0086	.0192
.050	-.0264	-.0529	-.1174	-.1226	-.1174	-.2940
.074	-.1663	-.1980	-.4713	-.2972	-.4713	-.4302
.098	-.5485	-.4801	-.5406	-.5583	-.5406	-.5137
.111	-.1762	-.1743	-.1742	-.1477	-.0310	-.0253
.139	-.0255	-.0225	-.0305	-.0532	.0463	.0660
.168	-.0192	-.0151	-.0146	-.0378	.0542	.0430
.191	-.0255	-.0252	-.0370	-.0644	.0392	.0509
.255	-.0631	-.0613	-.0876	-.0876	.0061	.0376
.344	.0047	-.0258	-.1111	-.1081	.0266	.0482
.392			-.0247	-.0717	.0621	.0498
.667	.999	.9999	-.0094	-.0384	-.0121	-.0225
.702	.0422	-.0777	-.1648	-.2264	-.1439	-.2011
.724	-.1226	-.2395	-.2812	-.3504	-.4130	.999
.744	-.0397	-.0346	-.0997	-.1935	.5350	.99999
.755	-.0717999	.9999	.0485	.1937	.3638	.1908
.869	-.3344	-.3509	-.2712	-.0367	.3755	.1194
.902	.999	.9999	-.3590	-.3640	-.3367	.0518
.923	-.3259	-.3535	-.3982	-.2472	-.1406	-.3935
.945	-.3103	-.3377	-.4137	-.5648	-.6272	-.3980
.982	-.1830	-.2820	-.2820		-.1670	

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11023) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 50.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .393 ALPHA (1) = 174.900 O(P)SF = 3.1100 PO = 32.020 P = 28.790 RN/L = 9.2000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.027	.1710	.1775	.1789	.1834	.1845
.050	.1415	.1508	.1418	.1438	.1336	.1336
.074	.0843	.0908	.0899	.0651	.0457	.0457
.098	-.0352	-.0757	-.0384	-.1390	-.1661	-.1661
.111	-.2303	-.2428	-.2549	-.2697	-.2881	-.2881
.139	-.0120	-.0094	-.0159	-.0271	-.0492	-.0492
.168	.0145	.0187	.0178	.0289	.0137	.0137
.191	.0274	.0314	.0314	.0236	.0210	.0210
.255	.0307	.0344	.0426	.0338	.0388	.0388
.344	.0380	.0451	.0266	.0162	.0531	.0531
.392	.999	.9999	.1216	-.0079	.1068	.1068
.702	.1292	.1277	.0949	.0536	.0421	.0421
.724	-.0658	-.1047	-.1579	-.1903	-.2118	-.2118
.744	.1777	.1929	.2890	.3298	.3849	.3849
.755	.1389999	.9999	.1801	.2083	.2296	.2317
.859	-.0425	.0490	-.0554	.0490	.1457	.1630
.902	.999	.9999	-.1896	-.1841	-.0667	-.0191
.923	-.2451	-.2684	-.2684	-.3139	-.2564	-.1869
.945	.2952	-.2839	-.2839	-.3649	-.4859	-.5365
.982	-.6658	-.7316	-.7316	-.7316	-.7542	-.7542

MACH (2) = .590 ALPHA (1) = 174.900 O(P)SF = 7.2800 PO = 37.830 P = 29.900 RN/L = 8.7000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.027	.1149	.1205	.1204	.1215	.1268
.050	.0781	.0815	.0815	.0839	.0825	.0775
.074	.0171	.0209	.0209	.0212	-.0234	-.0202
.098	.1248	.1298	.1298	.1649	-.2389	-.2653
.111	.3438	.3645	.3754	.4259	.5043	.6198
.139	-.0932	-.0944	-.0944	-.1080	-.1185	-.1238
.168	.0642	.0603	-.0627	-.0614	-.0732	-.0693
.191	.0529	.0465	-.0459	-.0576	-.0593	-.0515
.255	-.0454	-.0385	-.0385	-.0484	-.0359	-.0219

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TMT 603 (SA28F) MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11023)

MACH (2) = .990 ALPHA (1) = 174.900

SECTION (1) SRB DEPENDENT VARIABLE CP

Table with columns X/L, THETA, and values for MACH (2) = .990 ALPHA (1) = 174.900. Includes values like .344, .392, .667, .702, .724, .744, .755, .869, .902, .923, .945, .982.

MACH (3) = .903 ALPHA (1) = 174.900 O(P)SF = 7.4100 PO = 22.010 P = 12.970 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

Table with columns X/L, THETA, and values for MACH (3) = .903 ALPHA (1) = 174.900 O(P)SF = 7.4100 PO = 22.010 P = 12.970 RN/L = 6.3000. Includes values like .027, .050, .074, .098, .111, .139, .168, .191, .255, .344, .392, .667, .702, .724, .744, .755, .869, .902, .923, .945, .982.

TABLATED SOURCE DATA, MSFC THT 603 (SA28F)

DATE 07 MAR 77

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11023)

MACH (5) = 1.950 ALPHA (1) = 174.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.869	-.1313	-.1202	-.0640	-.0261	-.0177
	.902	999.9999	-.1773	-.2104	-.1967	-.1967
	.923	-.1885	-.1857	-.1418	-.0843	-.1457
	.945	-.2003	-.2256	-.2809	-.2515	-.2788
	.982	.0730	.0502	.0502	.0737	.0737

MACH (6) = 2.740 ALPHA (1) = 174.900 QIPSF) = 6.4000 PO = 30.150 P = 1.2200 RN/L = 5.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	-.0065	-.0386	-.0469	-.0452	-.0452
	.050	-.0736	-.0546	-.0815	-.0821	-.0834
	.074	-.0325	-.0839	-.0911	-.1002	-.1038
	.098	-.1050	-.0966	-.1030	-.1111	-.1087
	.111	-.0144	-.0200	-.0209	-.0211	-.0023
	.139	.0012	-.0047	-.0038	-.0108	-.0073
	.168	.0000	-.0072	-.0096	-.0012	-.0085
	.191	-.0005	-.0120	-.0096	-.0156	-.0109
	.255	.0038	-.0035	-.0186	.0036	.0133
	.344	.0157	-.0204	-.0017	.0230	.0187
	.392	.999.9999	-.0217	-.0056	.0047	.0175
	.667	.999.9999	-.0217	-.0192	-.0047	.0018
	.702	.0029	-.0144	-.0265	-.0278	-.0035
	.724	-.0615	-.0840	-.0422	-.0982	-.0875
	.744	.0520	.0641	.1369	.1462	.1556
	.755	.0417999.9999	.0465	.0429	.0423	.0500
	.869	.0277	-.0386	-.0162	.0139	.0514
	.902	.999.9999	-.0852	-.0960	-.0978	-.0827
	.923	-.0815	-.0833	-.0717	-.0422	-.0229
	.945	-.1262	-.1238	-.1244	-.1087	-.1002
	.982	.1595	.1514	.1514	.1843	.1843

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11023)

MACH (7) = 3.480 ALPHA (1) = 174.900 O(P)SF = 6.8600 PO = 60.010 P = .81000 RN/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-.0413	-.0441	-.0412	-.0418
.027	.0082	-.0441	-.0412	-.0418
.050	-.0503	-.0554	-.0537	-.0542
.074	.0167	-.0533	-.0599	-.0616
.098	-.0582	-.0644	-.0683	-.0644
.111	.0114	-.0176	-.0074	.0015
.139	-.0001	-.0131	-.0170	-.0074
.168	-.0001	-.0029	-.0119	-.0093
.191	-.0012	-.0068	-.0097	-.0074
.255	.0043	-.0114	-.0035	-.0128
.344	.0054	-.0102	-.0125	-.0139
.667	999.9999	-.0170	.0037	-.0117
.702	.0082	-.0249	.0308	.0201
.724	-.0446	-.0181	-.0012	.0016
.744	.0595	.0127	.0550	.0088
.755	.0489999.9999	-.0249	-.0508	-.0054
.869	.0009	.0126	-.0565	-.0086
.902	999.9999	.0359	.0421	-.0182
.923	-.0418	.0071	.0302	999.9999
.945	-.0678	-.0497	-.0503	.1125
.982	.1914	-.0317	-.0052	.0381
		-.0655	-.0531	.0466
		.1864	.2213	.0798
				-.0351
				-.0111
				-.0441
				-.0632

MACH (8) = 4.450 ALPHA (1) = 174.900 O(P)SF = 4.0800 PO = 80.040 P = .29000 RN/L = 6.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-.0024	-.0091	-.0062	-.0062
.027	.1027	-.0091	-.0062	-.0062
.050	.0050	-.0081	-.0138	-.0119
.074	.1406	-.0091	-.0147	-.0148
.098	.0069	-.0119	-.0176	-.0195
.111	.0060	.0013	.0022	.0231
.139	.0000	.0050	.0060	.0287
.168	.0060	.0079	.0136	.0287
.191	.0060	.0041	.0136	.0250
.255	.0136	.0013	.0117	.0240
.344	.0088	.0079	.0449	.0221
.392	999.9999	.0098	.0212	.0013
.667	999.9999	.0013	.0202	.0098
.702	.0117	.0013	.0202	.0041
.724	-.0109	-.0034	.1529	.0003
.744	.0553	.1339	-.0110	999.9999
.755	.0439999.9999	.0695	-.0332	.0685
		.0401	.0543	.0467
		.0420	.0572	
		.0790	.0875	
		.0091	.0138	
		-.0091	.0145	
		-.0015	.0202	
		.0951	.0240	
		.0136	.0250	
		.0041	.0287	
		.0079	.0287	
		.0050	.0306	
		.0103	.0363	
		.0136	.0421	
		.0098	.0466	
		.0060	.0508	
		.0022	.0565	
		.0176	.0632	
		.0147	.0685	
		.0138	.0744	
		.0062	.0798	
		.0091	.0875	
		.0081	.0951	
		.0024	.1027	
		.0043	.1111	
		.0081	.1195	
		.0119	.1287	
		.0003	.1387	
		.0079	.1495	
		.0041	.1612	
		.0079	.1739	
		.0041	.1875	
		.0013	.2021	
		.0079	.2178	
		.0136	.2345	
		.0041	.2521	
		.0079	.2707	
		.0126	.2903	
		.0088	.3109	
		.0088	.3335	
		.0088	.3581	
		.0088	.3837	
		.0088	.4104	
		.0088	.4382	
		.0088	.4671	
		.0088	.4971	
		.0088	.5282	
		.0088	.5604	
		.0088	.5937	
		.0088	.6281	
		.0088	.6636	
		.0088	.7002	
		.0088	.7379	
		.0088	.7767	
		.0088	.8166	
		.0088	.8576	
		.0088	.9000	

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC THT 603 (SA28F) (R11023)
MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (8) = 4.450 ALPHA (1) = 174.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000											
X/L	.869	.902	.923	.945	.982	.0212	.0091	.0157	.2012	.0155	-.0081	-.0072	-.0176	.0250	-.0072	.0477	.1652	.0174	.0458	.0050	.2420	.0041	-.0091

MACH (4) = 1.201 ALPHA (1) = 179.900 O(PSF) = 9.1500 PO = 22.010 P = 9.0600 RN/L = 6.6000
MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11025)

SECTION (1) SRB DEPENDENT VARIABLE CP
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0174	-.0293	-.0309	-.0225	-.0136	-.0740	-.0854	-.2122	-.5616	-.2356	-.1750	-.1867
	.050	-.0816	-.0875	-.0922	-.0854	-.0740	-.0854	-.2122	-.5616	-.2356	-.1750	-.1867	-.0448
	.074	-.3293	-.2557	-.2338	-.2306	-.2122	-.2122	-.5616	-.2356	-.1750	-.1867	-.0448	-.0288
	.098	-.5479	-.5469	-.5550	-.5491	-.5616	-.5616	-.2356	-.1750	-.1867	-.0448	-.0288	-.0508
	.111	-.1459	-.1561	-.1582	-.1734	-.2348	-.2348	-.2356	-.1750	-.1867	-.0448	-.0288	-.0508
	.139	-.0356	-.0390	-.0432	-.0567	-.0685	-.0728	-.0752	-.0550	-.0448	-.0288	-.0508	-.0508
	.168	-.0204	-.0271	-.0415	-.0487	-.0576	-.0681	-.0702	-.0664	-.0609	-.0508	-.0508	-.0508
	.191	-.0233	-.0322	-.0525	-.0626	-.0761	-.0808	-.0808	-.0791	-.0850	-.0850	-.0850	-.0850
	.255	-.0976	-.1057	-.0804	-.0804	-.0841	-.0850	-.0850	-.0651	-.1429	-.1429	-.1429	-.1429
	.344	-.0053	-.0466	-.2140	-.1404	-.0943	-.0677	-.0651	-.0343	-.0913	-.0913	-.0913	-.0913
	.392			-.0621	-.0621	-.0679	-.0679	-.0679	-.0679	-.0679	-.0679	-.0679	-.0679
	.667	999.9999	.1584	-.1130	.0798	.0798	.0798	.0798	.0798	.0798	.0798	.0798	.0798
	.702	-.0673	-.0326	-.0533	-.0791	-.0706	-.0821	-.0821	-.0998	-.0998	-.0998	-.0998	-.0998
	.724	-.2774	-.2882	-.3036	-.2887	-.2887	-.2890	-.2890	-.2730	-.2730	-.2730	-.2730	-.2730
	.744	-.3370	-.2895	-.3000	-.3460	-.3460	-.2984	-.2984	-.3220	-.3220	-.3220	-.3220	-.3220
	.755	-.273999.9999	.2193	-.2272	.2214	.2214	.2153	.2153	.2153	.2153	.2153	.2153	.2153
	.869	-.1591	-.1666	-.1725	-.1693	-.1693	-.1856	-.1856	-.1856	-.1856	-.1856	-.1856	-.1856
	.902	999.9999	-.4267	-.4260	-.4260	-.4260	-.4165	-.4165	-.4165	-.4165	-.4165	-.4165	-.4165
	.923	-.4598	-.4549	-.4628	-.4606	-.4606	-.4544	-.4544	-.4544	-.4544	-.4544	-.4544	-.4544
	.945	-.7487	-.7602	-.7584	-.7584	-.7584	-.7555	-.7555	-.7555	-.7555	-.7555	-.7555	-.7555
	.982	-.2669	-.2548	-.2548	-.2548	-.2548	-.2629	-.2629	-.2629	-.2629	-.2629	-.2629	-.2629

MACH (5) = 1.952 ALPHA (1) = 179.920 O(PSF) = 11.020 PO = 30.010 P = 4.1300 RN/L = 7.5000

SECTION (1) SRB DEPENDENT VARIABLE CP
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0260	.0187	.0183	.0214	.0179	-.0720	-.0850	-.1494	-.1932	-.0388	-.0219	-.0195
	.050	-.1061	-.1031	-.0850	-.0616	-.0720	-.0720	-.0850	-.1494	-.1932	-.0388	-.0219	-.0195
	.074	-.1619	-.1588	-.1669	-.1521	-.1521	-.1521	-.1521	-.1494	-.1932	-.0388	-.0219	-.0195
	.098	-.1970	-.1969	-.2000	-.1840	-.1840	-.1840	-.1840	-.1932	-.1932	-.0388	-.0219	-.0195
	.111	-.0664	-.0662	-.0128	-.0104	-.0129	-.0287	-.0304	-.0318	-.0318	-.0388	-.0219	-.0195
	.139	-.0284	-.0207	-.0116	-.0070	-.0070	-.0046	-.0046	-.0025	-.0025	-.0007	-.0056	-.0102
	.168	-.0204	-.0190	-.0119	-.0068	-.0019	-.0063	-.0063	-.0067	-.0060	-.0036	-.0032	-.0165
	.191	-.0169	-.0082	-.0011	-.0041	-.0020	-.0085	-.0085	-.0102	-.0102	-.0010	-.0010	-.0010
	.255	-.0095	.0006	-.0263	-.0263	-.0013	-.0094	-.0094	-.0094	-.0094	-.0045	-.0045	-.0045
	.344	-.0347	-.0139	-.0330	-.0046	.0165	-.0298	-.0298	-.0305	-.0305	-.0031	-.0031	-.0031
	.392			-.0120	-.0120	-.0120	-.0453	-.0453	-.0453	-.0453	-.0067	-.0067	-.0067
	.667	999.9999	-.0193	-.0202	-.0202	-.0231	-.0231	-.0231	-.0242	-.0242	-.0067	-.0067	-.0067
	.702	-.0465	-.0164	-.0241	-.0522	-.0256	-.0277	-.0277	-.0611	-.0611	-.0067	-.0067	-.0067
	.724	-.1838	-.1823	-.1303	-.1772	-.1698	-.1781	-.1781	-.1817	-.1817	-.0067	-.0067	-.0067
	.744	-.2816	-.2011	-.2069	-.2850	-.2049	-.2081	-.2081	-.2798	-.2798	-.0067	-.0067	-.0067
	.755	-.1509999.9999	.1437	.1600	.1419	.1419	.1490	.1490	.1472	.1472	.1472	.1472	.1472

TABULATED SOURCE DATA, MSFC TMT 603 (SA28F)

MACH (7) = 3.480 ALPHA (1) = 179.900 Q(PSF) = 6.8600 PO = 60.000 P = .81000 RN/L = 7.1000
MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11025)

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.943	.982
CP	-.0125	-.0266	-.0362	-.0441	.0020	.0099	.0077	.0055	.0128	.0074	-.0074	-.0007	.0015	.0020	.0020	.0011	.0111	.0055	.0065	.0065	.0066
	-.0176	-.0316	-.0407	-.0497	-.0001	.0089	.0077	.0089	.0111	.0054	.0020	.0117	.0015	.0020	.0020	.0001	.0108	.0055	.0486	.1053	.0584
	-.0193	-.0334	-.0429	-.0475	-.0046	.0069	.0077	.0089	.0111	.0054	.0020	.0117	.0015	.0020	.0020	.0001	.0108	.0055	.0486	.1053	.0584
	-.0187	-.0351	-.0429	-.0519	-.0063	.0071	.0071	.0065	.0066	.0026	.0071	.0122	.0099	.0100	.0100	.0018	.0108	.0055	.0508	.1307	.0506
					-.0046	.0043	.0043	.0049	.0066	.0043	.0020	.0122	.0099	.0100	.0100	.0018	.0108	.0055	.0508	.1307	.0506

MACH (8) = 4.450 ALPHA (1) = 179.920 Q(PSF) = 4.0800 PO = 80.040 P = .29000 RN/L = 6.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	270.0000	315.0000										
X/L	.027	.0562	.0449	.0486	.0392	.0402	.0430	.0392	.0392	.0345	.0259	.392	.0126	.0081	.0043	.0837	.0819	.0543	.999	.999	.999
CP	.0250	.0202	.0136	.0164	.0126	.0648	.0525	.0420	.0468	.0430	.0525	.0231	.0202	.0136	.0164	.0059	.0231	.0316	.0382	.0411	.0297
	.0250	.0202	.0136	.0164	.0126	.0648	.0525	.0420	.0468	.0430	.0525	.0231	.0202	.0136	.0164	.0059	.0231	.0316	.0382	.0411	.0297
	.0250	.0202	.0136	.0164	.0126	.0648	.0525	.0420	.0468	.0430	.0525	.0231	.0202	.0136	.0164	.0059	.0231	.0316	.0382	.0411	.0297
	.0250	.0202	.0136	.0164	.0126	.0648	.0525	.0420	.0468	.0430	.0525	.0231	.0202	.0136	.0164	.0059	.0231	.0316	.0382	.0411	.0297

MACH (8) = 4.450 ALPHA (1) = 179.920 Q(PSF) = 4.0800 PO = 80.040 P = .29000 RN/L = 6.0000

(R11023)

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH AFT RING

MACH (8) = 4.450 ALPHA (1) = 179.920

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 43.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 202.5000 225.0000 247.5000 270.0000 292.5000 315.0000

X/L

.869 .0373
.902 999 .9999
.923 .0098
.945 -.0034
.982 .2117

.0335
-.0005
.0136
.0013

.0344
.0013
.0259
.0051
.2231

.0354
.0003
.0155
.0060

.0534
.0269
.0231
.0088
.2241

.0164
.0088

TABLATED SOURCE DATA. MSFC TMT 603 (SA28F)

MSFC TMT 603 (SA28F) SRB - CLEAN ATTACH AFT RING (R11027)

DATE 07 MAR 77

MACH (5) = 1.958 ALPHA (1) = 184.800

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 57.5000 67.5000 79.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.0011	-.0659	-.1251	-.1388
	.902	.999	.999	-.1806	-.1704
	.923	-.0792	-.1945	-.1854	-.1489
	.945	-.2491	-.2765	-.2304	-.2801
	.982	.0548	.0538	.0717	

MACH (6) = 2.740 ALPHA (1) = 184.800 (IPSF) = 6.3700 PO = 30.020 P = 1.2100 RW/L = 5.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 79.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0252	-.0495	-.0564	-.0481	-.0487
	.050	-.0809	-.0828	-.0852	-.0692	-.0709
	.074	-.0531	-.0985	-.0973	-.0846	-.0870
	.098	-.0967	-.1137	-.1131	-.0955	-.1010
	.111	-.0015	.0064	-.0081	-.0153	-.0196
	.139	.0107	.0125	-.0087	-.0068	-.0028
	.168	.0088	.0119	-.0027	-.0155	-.0053
	.191	.0064	.0111	-.0190	-.0058	.0041
	.255	.0116	.0070	-.0178	-.0038	.0016
	.344	.0028	-.0129	-.0153	-.0081	.0046
	.392	.999	.999	-.0293	-.0052	.0082
	.567	.999	.999	-.0309	-.0238	.0119
	.702	.0028	.0069	-.0232	-.0238	-.0068
	.724	-.1040	-.0907	-.0226	-.0330	-.0275
	.744	.1964	.1965	-.0677	-.0864	-.0751
	.755	.0566	.999	.1431	.1382	.0514
	.869	.0356	.0119	.0429	.0403	.0398
	.902	.999	.999	-.0184	-.0415	-.0179
	.923	-.0263	-.0396	-.0973	-.0852	-.0821
	.945	-.1070	-.1140	-.0741	-.0846	-.0798
	.982	.1704		-.1253	-.1271	-.1283
				.1495		.1710

999.9999

MSFC TMT 603 (SAZ8F) SRB - CLEAN ATTACH AFT RING (R11028) (22 AUG 75)

REFERENCE DATA

SREF • 116.2600 SO.FT. XMRP • 1044.0000 IN.
LREF • 146.0000 IN. YMRP • .0000 IN.
OREF • 146.0000 IN. ZMRP • .0000 IN.
SCALE • .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 1.198 ALPHA (1) = 193.900 O(P)SF = 9.1400 PO = 22.000 P = 9.0900 RN/L = 6.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 2225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.859	.902	.923	.945	.982
	-.0195	-.0960	-.2697	-.5201	-.1254	-.0263	-.0220	-.0274	-.0693	-.0693	-.0714	.999	.1107	.3201	.4570	.3220	-.0439	.999	.2807	-.7003	-.2437
	-.0581	-.1417	-.1994	-.5267	-.1123	-.0335	-.0209	-.0379	-.0903	-.1894	-.0714	.1838	-.0681	-.2855	.3171	.2201	.1265	.999	.3573	-.6210	-.2496
	-.0475	-.1420	-.1851	-.4815	-.1525	-.0468	-.0597	-.0535	-.0757	-.1458	-.0973	.1264	-.0827	-.2372	.3166	.1827	-.3047	.999	.4137	-.4461	-.2496
	-.0543	-.1304	-.1861	-.4742	-.1993	-.0598	-.0723	-.0709	-.0833	-.0621	-.0973	.1141	-.0420	-.1963	.1886	.0912	-.3384	.999	.3971	-.3347	-.2121
	-.1905	-.0664	-.0611	-.1927	-.1483	-.0611	-.0717	-.0816	-.0778	-.0521	-.0269	.0318	-.1006	-.0461	.0045	-.0368	-.3386	.999	.3722	-.3347	-.2121
	-.1738	-.0554	-.0379	-.0466	-.1314	-.0554	-.0379	-.0466	-.0778	-.0521	-.0269	.0318	-.1006	-.0461	.0045	-.0368	-.3386	.999	.3722	-.3347	-.2121

TABULATED SOURCE DATA, MSFC THT 603 (SA28F1)

DATE 07 MAR 77

(R11029) (22 AUG 75)

MSFC THT 603 (SA28F1) SRB - CLEAN ATTACH RING

PARAMETRIC DATA

RM-SCH = 1.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 60.120 OIPSF = 3.070C PO = 34.000 P = .31000 RN/L = 3.6000

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

SECTION (1) SRB

THETA .0000 22.5000 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

X/L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
.027	.0986	.0641	.1511	1.0791	1.8142										
.050	.0806	.0590	.1599	1.0753	1.8167										
.074	.0897	.0517	.1485	1.0463	1.7978										
.098	.0755	.0401	.1322	.9782	1.7284										
.111	.0628	.0288	.1238	.6857	1.3186	.6592	.0566								
.139	.0578	.0504	.1084	.7576	1.2374	.7487	.0779								
.168	.0504	.0225	.0931	.7563	1.2379	.7437	.0566								
.191	.0452	.0691	.0868	.7564	1.2316	1.4321	.0628								
.255	.0426	.0212	.0858	.7538	1.4132										
.344	.0351	.0705	.0842	.7361	1.2049	1.3943	.0552								
.392	.999.9999	-.0090	.0855		1.3867	1.3565	.0653								
.667	.999.9999	-.0014	.0641		1.4321	1.4321	.0615								
.702	-.0014	.0505	.0956		1.2447	1.4321	.0956								
.724	-.0001	-.0115	.0657		2.0701	2.3437	.999.9999								
.744	-.0077	-.0090	.0199		.4247	.5495	.0199								
.755	-.0115	.9999.9999	.0288		1.0892	1.1875	.0174								
.869	-.0001	-.0077	.0578		1.3976	1.3976									
.902	.999.9999	-.0090	.1082		1.0400	1.8635									
.923	-.0035	.0199	.2557		1.2323	1.9566	.2154								
.945	-.0001	.0010	.1813		1.6579	1.6579	.1889								
.982	-.0039	-.0140	-.0140		1.0236	.0288									

DEPENDENT VARIABLE, CP

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

(R11030) (22 AUG 75)

REFERENCE DATA

PARAMETRIC DATA

SREF * 116.2600 SQ.FT. XMRP * 1044.0000 IN.
 LREF * 146.0000 IN. YMRP * .0000 IN.
 BRFF * 146.0000 IN. ZMRP * .0000 IN.
 SCALE * .0055

MACH (1) * 3.760 ALPHA (1) * 60.120 O(PSF) * 7.1200 PO * 78.970 P * .72000 RN/L * 8.1000
 RN-SCH * 2.000 PHI * .000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	027	050	074	098	111	139	168	191	255	344	392	667	702	724	744	755	869	902	923	945	982	
	-.0003	-.0173	-.0119	-.0317	-.0239	-.0315	-.0277	-.0315	-.0321	-.0244	-.0113	-.0456	-.0216	-.0424	-.0473	-.0484	-.0418	-.0478	-.0413	-.0435	-.0419	
	.1239	.1335	.1252	.1063	.0366	.0424	.0217	.0309	.0364	.0401	.0439	.0406	.0758	.1638	.0549	.0163	.0077	.0341	.1025	.2302	.1606	-.0549
	1.0578	1.0455	1.0117	.9471	.6510	.7338	.7272	.2755	.7264	1.1827	1.3820	.7175	1.2164	1.9405	.4415	1.0553	1.3878	1.0249	1.2181	1.9245	1.6430	.0150
	1.7900	1.7841	1.7678	1.6978	1.2753	1.4111	1.4178	1.4134	1.3933	1.3820	1.3694	1.3374	1.4096	2.2698	1.5409	1.1588	1.3878	1.8430	1.9245	1.6430	1.6430	.0150
				.6452	.0249	.7397	.7329	.0292	.0400	.0417	.0573	.0856	999.9999							.2012	.1665	

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH RING (R1103*) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

RN-SCH = 2.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 90.000 O(PSF) = 7.1300 PO = 79.010 P = .72000 RN/L = 8.1000

PARAMETRIC DATA

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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 472.5000 495.0000 517.5000 540.0000 562.5000 585.0000 607.5000 630.0000 652.5000 675.0000 697.5000 720.0000 742.5000 765.0000 787.5000 810.0000 832.5000 855.0000 877.5000 900.0000

X/L

.027	-.0158	-.0256	.0384	.7856	1.5182
.050	-.0229	-.0261	.0432	.8057	1.5340
.074	-.0174	-.0261	.0443	.8040	1.5052
.098	-.0207	-.0283	.0595	.8580	1.6376
.111	-.0239	-.0261	.0602	.8590	1.7038
.139	-.0239	-.0256	.0498	.9522	1.8112
.168	-.0250	-.0256	.0585	.9690	1.8139
.191	-.0256	-.0239	.0628	.9754	1.8128
.255	-.0272	-.0321	.0731	.9777	1.8047
.344	-.0305	-.0304	.0785	.4109	1.8096
.392	.999.9999	.0780	.0780	.9658	1.8150
.667	.999.9999	-.0423	.0780	.9658	1.8100
.702	-.0402	-.0342	.0715	.3938	1.8069
.724	-.0402	-.0419	.0639	.3726	1.8042
.744	-.0435	-.0446	.0527	.3813	1.8036
.755	-.0424	.999.9999	.0666	.3813	1.8014
.869	-.0407	-.0435	.0682	.9504	1.8027
.902	.999.9999	-.0446	.0511	.8644	1.8074
.923	-.0402	-.0315	.0937	.9180	1.7836
.945	-.0428	-.0402	.0649	.9061	1.8042
.982	.0416	.0275	.0275	.9061	1.8807

999.9999
999.9999
999.9999

.0682
.0579
.0677
.0715
.0829
.0829
.0933
.0883
.999.9999
.0856
.0856
.0633
.0709

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TMT 603 (SAZBF)

PAGE 115

MSFC TMT 603 (SAZBF) SRB - CLEAN ATTACH RING

(R11035) (22 AUG 75)

REFERENCE DATA

SRET = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 105.000 Q(PSF) = 3.0700 PO = 34.030 P = .31000 RN/L = 3.8000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
.027	.0855	.0627	.0578	.5508	.5717	.5868	.6309	.6624	1.1390	1.3262	.6455	.0590	.0439							
.050	.0690	.0590	.0590	.5717	.5868	.6309	.6624	.6901	1.1390	1.6540	.9026	.0929	.0414							
.074	.0817	.0551	.0526	.5868	.6309	.6309	.6309	.6309	1.1390	1.6540	.9026	.0929	.0414							
.098	.0715	.0449	.0426	.6309	.6624	.6624	.6624	.6624	1.1390	1.6540	.9026	.0929	.0414							
.111	.0627	.0274	.0326	.6624	.6901	.6901	.6901	.6901	1.1390	1.6540	.9026	.0929	.0414							
.139	.0590	.0313	.0487	.6901	.7188	.7188	.7188	.7188	1.1390	1.6540	.9026	.0929	.0414							
.168	.0526	.0236	.0476	.7188	.7475	.7475	.7475	.7475	1.1390	1.6540	.9026	.0929	.0414							
.191	.0482	.0639	.0527	.7475	.7762	.7762	.7762	.7762	1.1390	1.6540	.9026	.0929	.0414							
.255	.0452	.0249	.0452	.7762	.8049	.8049	.8049	.8049	1.1390	1.6540	.9026	.0929	.0414							
.344	.0363	.0614	.0551	.8049	.8336	.8336	.8336	.8336	1.1390	1.6540	.9026	.0929	.0414							
.392	.999.9999	.0040	.0792	.8336	.8623	.8623	.8623	.8623	1.1390	1.6540	.9026	.0929	.0414							
.667	.999.9999	.0040	.0792	.8623	.8910	.8910	.8910	.8910	1.1390	1.6540	.9026	.0929	.0414							
.702	.0047	.0363	.0299	.8910	.9197	.9197	.9197	.9197	1.1390	1.6540	.9026	.0929	.0414							
.724	.0073	.0053	.0426	.9197	.9484	.9484	.9484	.9484	1.1390	1.6540	.9026	.0929	.0414							
.744	.0022	.0002	.0128	.9484	.9771	.9771	.9771	.9771	1.1390	1.6540	.9026	.0929	.0414							
.755	.0015	.9999.9999	.0065	.9771	.0017	.0017	.0017	.0017	1.1390	1.6540	.9026	.0929	.0414							
.869	.0035	.0053	.0552	.999.9999	.0017	.0017	.0017	.0017	1.1390	1.6540	.9026	.0929	.0414							
.902	.999.9999	.0052	.0438	.0017	.0017	.0017	.0017	.0017	1.1390	1.6540	.9026	.0929	.0414							
.923	.0072	.0162	.0284	.0017	.0017	.0017	.0017	.0017	1.1390	1.6540	.9026	.0929	.0414							
.945	.0047	.0047	.0880	.0017	.0017	.0017	.0017	.0017	1.1390	1.6540	.9026	.0929	.0414							
.982	.1887	.0047	.0931	.0017	.0017	.0017	.0017	.0017	1.1390	1.6540	.9026	.0929	.0414							

MSFC THT 603 (SA28F) SRB - CLEAN ATTACH RING (R11036) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 105.000 Q(PSF) = 7.1300 PO = 78.990 P = .72000 RM/L = 8.1000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	.0045	.0048	.0018	.0048	.0190	.0125	.0169	.0196	.0213	.0239	.0239	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999
	-.0098	-.0130	-.0142	-.0190	-.0256	-.0250	-.0277	-.0277	-.0283	-.0283	-.0402	-.0402	-.0364	-.0359	-.0370	-.0370	-.0424	-.0440	-.0305	-.0391	.1980
	.0014	.0069	.0134	.0270	.0265	.0565	.0629	.0651	.0699	.0705	.0730	.0617	.0628	.0449	.0915	.0753	.0437	.0221	.0763	.0617	.0672
	.5333	.5544	.5624	.6163	.6423	.6784	.9023	.3770	.9109	.3776	.8927	.3650	.3096	.4254	.3722	.8616	.8461	.8092	.7601		
	1.1192	1.1398	1.1531	1.1958	1.3175	1.4172	1.6685	1.4448	1.6831	1.4577	1.6842	1.6956	1.7402	1.5666	1.7857	1.7244	1.6839	1.7783	1.6050	1.5338	1.7737
					1.1304	1.4172	1.4480	1.4448	1.6831	1.4577	1.6842	1.6956	1.7402	1.5666	1.7857	1.7244	1.6839	1.7783	1.6050	1.5338	1.7737
					.6341	.8835	.9023							999.9999							
					.0129	.0605	.0693							.0753	.1110	.0899					
									.0753	.0752	.0742	.0753						.0470	.0682		

(R11038) (22 AUG 75)

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 FMI = .000

MACH (1) = 3.760 ALPHA (1) = 119.900 OIPSF = 7.1300 PO = 79.010 P = .72000 RN/L = 9.0000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982	
	.0091	-.0321	-.0226	-.0305	-.0348	-.0370	-.0381	-.0381	-.0402	-.0413	-.0391	999.9999	-.0495	-.0489	-.0478	-.0478	-.0499	999.9999	-.0554	-.0554	-.0554	.2555
	-.0337	-.0354	-.0370	-.0380	-.0424	-.0419	-.0446	-.0451	-.0451	-.0457	-.0538	-.0538	-.0451	-.0101	-.0305	-.0440	-.0587	-.0581	-.0495	-.0565	-.0565	
	-.0288	-.0245	-.0212	-.0207	-.0644	-.0541	-.0546	-.0508	-.0508	-.0514	-.0503	-.0460	-.0069	-.0147	-.0146	-.0135	-.0123	-.0006	-.0303	-.0136	-.0136	
	.2336	.2724	.2891	.2653	.2701	.3063	.3037	.3059	.7272	.3135	.7226	.2733	.1105	.5750	.4189	.7050	.6402	.4855	.4775	.4775	.1301	
	.5378	.5978	.6233	.5653	.6665	.7292	.7300	.3478	.13538	.13533	.13603	.14063	.4226	2.0549	1.6973	1.3771	1.9181	.3603	1.0251	1.0251	1.6973	
					.6610	.7348	.7275	.0486	.0493	.0481	.0552	.0145	999.9999	.1724	.1203			.0058				
					.0188	.0465	.0487	.0486														

ORIGINAL PAGE 118

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 DRREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (11) = 3.760 ALPHA (11) = 140.000 QIPSF1 = 3.0700 P3 = 34.090 P = .31000 RM/L = 3.6000

SECTION (11) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	PARAMETRIC DATA											
.027	.1132	.0770	.0499	.0754	.1723							
.050	.0897	.0681	.0436	.0803	.1889							
.074	.1070	.0593	.0362	.0917	.2000							
.098	.0897	.0520	.0338	.0967	.2078							
.111	.0733	.0483	.1646	.3802	.6044	.3684	.0536	.0436				
.139	.0719	.0568	.1023	.1784	.6322	.4047	.0614	.0436				
.168	.0606	.0631	.0900	.4083	.6385	.4047	.0540	.0350				
.191	.0520	.0758	.0832	.1851	.6302							
.255	.0511	.0198	.0769	.4104	.7311							
.344	.0398	.0772	.0721	.1922	.6483							
.392			.0662		.7544							
.667	.999	.9999	.350	.3726								
.702	.023	.0593	.1385									
.724	.061	.0077	.0539		.7061							
.744	.022	.0022	.1032		.1750							
.755	.002999	.9999	.2693		1.5822	1.7624			999.9999	.1143		
.869	.0035		.0690		.6945	.8202				.0742		
.902	.999	.9999	.0299		.8616							
.923	.072		.0261		.7199					.0337		
.945	.002		.0624		.5330					.0262		
.982	.3399		.0047		.3853							
			.2545		1.3214							

MSFC TWT 603 (5A28F) SRB - CLEAN ATTACH RING (R11040) (22 AUG 75)

REFERENCE DATA

SRF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LRF = 146.0000 IN. YMRP = .0000 IN.
ORF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = 3.760 ALPHA (1) = 140.000 O(P)SF = 7.1300 PO = 79.090 P = .72000 RM/L = 8.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.16	.191	.255	.344	.392	.667	.702	.724	.744	.795	.869	.902	.923	.945	.982	
	-.0016	-.0125	-.0049	-.0120	-.0180	-.0234	-.0267	-.0245	-.0196	-.0234	-.0348	-.0206	-.0490	-.0462	-.0452	-.0392	-.0441	-.0463	-.0529	-.0463	-.0485	.3283
	-.0180	-.0202	-.0245	-.0277	-.0381	-.0370	-.0386	-.0267	-.0408	-.0229	-.0347	-.0023	-.0337	-.0250	-.0448	-.0485	-.0512	-.0529	-.0479	-.0485	-.0495	.3283
	-.0294	-.0310	-.0337	-.0343	-.0184	-.0294	-.0112	-.0085	-.0096	-.0229	-.0347	-.0023	-.0131	-.0370	-.0941	-.0562	-.0056	-.0002	-.0104	-.0370	-.2397	.3283
	.0355	.0513	.0621	.0706	.1415	.1511	.1529	.1476	.3951	.1481	.3575	.6922	.1271	.0158	.4566	.2801	.3800	.3164	.1507	.1784	.3828	.3031
	.1572	.1775	.1857	.1898	.7015	.7289	.7346	.7286	.7305	.7449	.7522	.7051	.7598	.1347	1.6970	.8009	.8405	.6879	.3200	.3828	.3031	.3031
	.3667	.3922	.3909	.0055	.0047	.0046	.0041	.0014	.0008	.0035	.0068	.999	.9999	.1121	.0644							

(R11045) (22 AUG 75)

TABLATED SOURCE DATA, MSFC TWT 603 (SA28F)
 MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING

DATE 07 MAR 77

PARAMETRIC DATA

RM-SCH = 1.000 PHI = .000
 RN/L = 3.6000

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = 3.760 ALPHA (1) = 169.900 O(PSF) = 3.0700 PO = 34.070 P = .31000 RN/L = 3.6000

DEPENDENT VARIABLE CP

SECTION (1) SRB
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0661	.0426	.0228	.0180	.0117	.0454	.0253	.0266
.050	.0497	.0391	.0315	.0178	.0092	.0046	.0454	.0253	.0266
.074	.0573	.0227	.0129	.0054	.0071	.0071	.0454	.0253	.0266
.098	.0435	.0230	.0142	.0033	.0058	.0058	.0454	.0253	.0266
.111	.0451	.0291	.0761	.0359	.0592	.0580	.0454	.0253	.0266
.139	.0479	.0441	.0597	.0394	.0692	.0668	.0454	.0253	.0266
.168	.0403	.0516	.0200	.0410	.0730	.0684	.0454	.0253	.0266
.191	.0353	.0577	.0491	.0585	.0790	.0633	.0454	.0253	.0266
.255	.0341	.0206	.0378	.0382	.0634	.0634	.0454	.0253	.0266
.344	.0316	.0547	.0378	.0724	.0785	.0609	.0454	.0253	.0266
.392	.0099	.0004	.0404	.0307	.0584	.0584	.0454	.0253	.0266
.667	.999	.9999	.0014	.0307	.0521	.0521	.0454	.0253	.0266
.702	.0091	.0398	.0042	.0573	.0457	.0457	.0454	.0253	.0266
.724	.0071	.0134	.0046	.0033	.0071	.0071	.0454	.0253	.0266
.744	.0433	.0458	.0332	.0734	.1555	.1580	.0454	.0253	.0266
.755	.0370	.9999	.0269	.0444	.0948	.1076	.0454	.0253	.0266
.869	.0143	.0054	.0281	.0685	.1037	.1037	.0454	.0253	.0266
.902	.999	.9999	.0117	.0696	.0935	.0935	.0454	.0253	.0266
.923	.0071	.0058	.0178	.0164	.0351	.0351	.0454	.0253	.0266
.945	.0159	.0109	.0322	.0089	.0202	.0202	.0454	.0253	.0266
.982	.1969	.1956	.1956	.3131	.3131	.3131	.0454	.0253	.0266

MSFC TWT 603 (SA28F) SRB - CLEAN ATTACH RING (R11047) (22 AUG 75)

REFERENCE DATA
 SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055
 MACH (1) = 3.760 ALPHA (1) = 179.900 O(PSF) = 3.0700 PO = 34.020 P = .31000 RN/L = 3.5000
 RN-SCH = 1.000 PHI = .000
 PARAMETRIC DATA

SECTION (1) SRB DEPENDENT VARIABLE CP

11ETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	027	050	074	098	111	139	168	191	255	344	392	667	702	724	744	755	869	902	923	945	982
	.1013	-.0020	.1277	-.0033	.0042	.0092	.0091	.0067	.0130	.0117	.0130	.999	.99999	-.0273	.0936	.0584	.999	.99999	-.0298	-.0336	.2110
	-.0083	-.0121	-.0160	-.0247	.0016	.0104	.0104	.0117	.0143	.0080	.0130	.0091	.0861	-.0185	.0975	.0584	.999	.99999	.0323	-.0361	
	-.0121	-.0147	-.0159	-.0248	.0029	.0117	.0091	.0105	.0016	.0054	.0130	.0016	-.0058	-.0260	.0973	.0570	.0357	.0054	-.0197	-.0286	.2261
	-.0109	-.0185	-.0197	-.0248	.0003	.0080	.0054	.0155	.0154	.0950	.0130	.0130	.0116	-.0184	.1013	.0571	.0381	.0105	-.0210	-.0247	
	-.0058	-.0146	-.0235	-.0273	.0168	.0255	.0281	.0344	.0230	.0433	.0256	.0129	.0080	-.0235	.1013	.0564	.1404	.0483	-.0045	-.0184	.2198
					.0067	.0180	.0192	.0079	.0230	.0066	.0130	.0079	.0042		.999	.99999	.0508		-.0247	-.0273	

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES (R11052) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 1.000 PMI = .000

MACH (1) = .608 ALPHA (1) = 70.000 O(P)SF = 3.6400 PO = 18.030 P = 14.040 RN/L = 4.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	1.0354	1.0865	1.1172	1.1373	1.1446	1.1029	1.0745	1.0664	1.0253	1.0346	1.0315	1.0078	1.0144	1.1005	1.1368	1.0139	1.0153	1.1045	1.1172	1.0310	.5225		
.027	-1.9429	-1.6176	-1.3459	-1.1236	-1.1018	-1.3892	-1.5316	-1.6947	-1.5322	-1.4210	-1.4113	-1.4422	-1.4015	-1.3561	-1.3618	-1.4018	-1.4072	-1.3892	-1.4478	-1.4395	-1.4044	-1.4225	-1.3726
.050	-1.9020	-1.5560	-1.2155	-1.0944	-1.2618	-1.5497	-1.6839	-1.8050	-1.6979	-1.5599	-1.4155	-1.3999	-1.3749	-1.3769	-1.3999	-1.4113	-1.4129	-1.3999	-1.4084	-1.3531	-1.3335	-1.3288	-1.3138
.074	-1.2625	-1.2027	-1.1313	-0.8169	-0.5360	-0.2888	-0.0951	-0.1413	-0.3481	-0.0795	-0.0295	-0.0788	-0.0144	-0.0105	-0.0136	-0.0139	-0.0153	-0.0484	-0.0706	-0.0710	-0.0725	-0.0735	-0.0745
.098	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.111	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.139	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.168	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.191	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.255	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.344	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.392	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.667	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.703	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.724	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.744	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.755	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.859	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.902	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.923	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.945	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783
.982	-0.8523	-0.8019	-0.7783	-0.7627	-0.7535	-0.7481	-0.7438	-0.7397	-0.7357	-0.7316	-0.7275	-0.7234	-0.7193	-0.7152	-0.7111	-0.7070	-0.7029	-0.6988	-0.6947	-0.6906	-0.6865	-0.6824	-0.6783

PROBATIONAL PAGE 132

DATE 07 MAR 77

MSFC TH1 603 (5A28F) SRB - ALL PROTUBERANCES

MSFC TH1 603 (5A28F) SRB - ALL PROTUBERANCES

IR11053) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 50.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = .000

MACH (1) = .601 ALPHA (1) = 70.000 O(P)SF = 7.5400 PO = 38.050 P = 29.800 RN/L = 8.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
	-.9214	-.7029	-.6420	-.6034	-1.6351	-1.2857	-1.0840	-1.1683	-1.2591	-.9807	-1.0284	-.7845	-.9357	-.8234	-.6545	-.5615	-.4241	-.3372	-.4241	-.4241
	-1.9989	-1.6159	-1.2069	-.8569	-1.1683	-1.2591	-.9807	-1.0284	-.7845	-.9357	-.8234	-.6545	-.5615	-.4241	-.3372	-.4241	-.4241	-.4241	-.4241	-.4241
	-2.0323	-1.5489	-1.3508	-1.3594	-1.6612	-1.2591	-1.0284	-.9807	-.9357	-.8234	-.6545	-.5615	-.4241	-.3372	-.4241	-.4241	-.4241	-.4241	-.4241	-.4241
	-.2602	-.1937	-.1213	-.0006	.6612	.6149	.0086	.0272	.7416	.0203	-.0058	.9906	.9844	.9663	.9754	.8386	.999	.999	.999	.999
	1.0039	1.0466	1.0768	1.1061	.8269	.7795	.7607	.7416	.7494	.7494	.7494	.7261	.8245	.8329	.9809	.9717	1.0601	1.0584	1.0584	1.0584
	-.1118	-.12522	-.9410	-.2053999	.9999	-.1.0195	-.2640	-.9678	-.8815	-.5210	-.1.1030	-.1.2317	-.8386	.999	.999	.999	-.7189	-.8955	-.8955	-.8955

MACH (2) = .904 ALPHA (1) = 70.000 O(P)SF = 7.4100 PO = 22.020 P = 12.970 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
	-.8187	-.8242	-.8147	-.7957	-.7829	-.7426	-.7377	-.7101	-.7207	-.6859	-.6131	-.8134	-.8151	-.8181	-.8388	-.7613	-.7095	-.7130	-.2461	-.2545
	-.8134	-.8131	-.7846	-.8502	-.7314	-.8856	-.7095	-.7130	-.2461	-.2545	-.2501	-.8165	-.8131	-.8181	-.8388	-.7613	-.7095	-.7130	-.2461	-.2545
	-.2534	-.2874	-.3076	-.3559	-.3782	-.3037	-.3037	-.2655	-.2655	-.2501	-.2501	-.2534	-.2874	-.3076	-.3559	-.3782	-.3037	-.3037	-.2655	-.2655
	1.1459	1.1915	1.2199	1.2411	1.0018	.9501	.9275	.9110	.9110	.9110	.9110	1.0018	.9501	.9275	.9110	.9110	.9110	.9110	.9110	.9110
	-.3482	-.8367	-.8948	-.2700999	.9999	-.7456	-.2342	-.9270	-.7070	-.6414	-.2249	-.8134	-.8151	-.8181	-.8388	-.7613	-.7095	-.7130	-.2461	-.2545

(R11053)

MSFC THT 603 (SA28F) SR8 - ALL PROTUBERANCES

MACH (2) = .904 ALPHA (1) = 70.000

SECTION (1) SR8 DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.4997	-.8036	-.4904	999.9999	999.9999	-.2320	.6688	1.1248	-.4980
	.392	999.9999	999.9999	999.9999	999.9999	999.9999	.1957	1.1193	1.1193	-.4864
	.667	999.9999	-.4181	999.9999	999.9999	999.9999	999.9999	1.0882	1.0882	-.4822
	.702	-.4170	-.4092	-.3965	999.9999	999.9999	-.1891	.8375	1.0993	-.4437
	.724	-.4084	-.3978	-.3632	999.9999	999.9999	-.2582	.9426	1.1915	999.9999
	.744	-.3931	-.3959	-.4065	999.9999	999.9999	-.3024	.9600	1.2273	-.5781
	.755	-.4021	999.9999	-.4121	999.9999	999.9999	-.1810	.8442	1.1034	-.4518
	.869	-.3729	999.9999	-.3694	999.9999	999.9999	.2263	1.0876	1.0876	999.9999
	.902	999.9999	-.3632	999.9999	999.9999	999.9999	.2092	1.1962	1.1962	-.3999
	.923	-.3327	-.4145	-.6294	999.9999	999.9999	.1883	1.2036	1.2036	-.5511
	.945	-.3196	-.3797	-.8036	999.9999	999.9999	.4015	1.1133	1.1133	999.9999
	.982	-.2917	-.7761	-.7761	999.9999	999.9999	-.2466	2.4666	2.4666	999.9999

MACH (3) = 1.196 ALPHA (1) = 70.000 Q(PSF) = 9.1300 PO = 22.010 P = 9.1300 RN/L = 6.7000

SECTION (1) SR8 DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.7717	-.7680	-.5810	.6027	1.3338	1.3338	1.3338	1.3338	1.3338	1.3338
	.050	-.7381	-.7492	-.5498	.6233	1.3593	1.3593	1.3593	1.3593	1.3593	1.3593
	.074	-.6457	-.6962	-.5339	.6414	1.3912	1.3912	1.3912	1.3912	1.3912	1.3912
	.098	-.5863	-.6218	-.3946	.6763	1.4078	1.4078	1.4078	1.4078	1.4078	1.4078
	.111	-.6016	-.6103	-.6351	.2147	1.2067	1.2067	1.2067	1.2067	1.2067	1.2067
	.139	-.5462	-.5681	-.5484	.1629	1.1613	1.1613	1.1613	1.1613	1.1613	1.1613
	.168	-.5128	-.5292	-.5692	.1334	1.1424	1.1424	1.1424	1.1424	1.1424	1.1424
	.191	-.4915	-.4987	-.5134	.1559	1.1274	1.1274	1.1274	1.1274	1.1274	1.1274
	.255	-.4530	-.4546	999.9999	.5582	1.3168	1.3168	1.3168	1.3168	1.3168	1.3168
	.344	-.3697	-.3814	-.3794	.1741	1.2986	1.2986	1.2986	1.2986	1.2986	1.2986
	.392	999.9999	999.9999	999.9999	999.9999	1.2709	1.2709	1.2709	1.2709	1.2709	1.2709
	.667	999.9999	-.5140	999.9999	.5314	1.0690	1.0690	1.0690	1.0690	1.0690	1.0690
	.702	-.4608	-.4637	-.4587	.1940	1.1575	1.1575	1.1575	1.1575	1.1575	1.1575
	.724	-.4426	-.4347	-.3985	.1282	1.1695	1.1695	1.1695	1.1695	1.1695	1.1695
	.744	-.4558	-.4581	-.5607	.0617	1.1695	1.1695	1.1695	1.1695	1.1695	1.1695
	.755	-.4519	999.9999	-.5243	.1876	1.0715	1.0715	1.0715	1.0715	1.0715	1.0715
	.869	-.4300	999.9999	999.9999	.5571	1.2723	1.2723	1.2723	1.2723	1.2723	1.2723
	.902	999.9999	-.4294	999.9999	.5540	1.3645	1.3645	1.3645	1.3645	1.3645	1.3645
	.923	-.3977	-.4086	999.9999	5.306	1.3715	1.3715	1.3715	1.3715	1.3715	1.3715
	.945	-.3872	-.3979	-.3742	.6959	1.2923	1.2923	1.2923	1.2923	1.2923	1.2923
	.982	-.3544	-.3544	-.4496	-.5113	.7118	.7118	.7118	.7118	.7118	.7118

TABLATED SOURCE DATA, MSFC TMT 603 (SA26F)

DATE 07 MAR 77

MSFC TMT 603 (SA26F) SRB - ALL PROTUBERANCES (R11053)

MACH (4) = 1.959 ALPHA (1) = 70.000 O(P)SF = 10.970 PO = 29.990 P = 4.0800 RN/L = 7.6000

SECTION (1) SRB DEPENDENT VARIABLE CP

T-META .0000 22.5000 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

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.25	3.44	3.92	6.67	7.02	7.44	7.55	8.69	9.02	9.23	9.45	9.82
	-.2767	-.3016	-.3046	-.2808	-.2855	-.2626	-.2507	-.2418	-.2272	-.1988	-.2039	999.9999	-.2510	-.2489	-.2645	-.2596999.9999	999.9999	999.9999	-.2507	-.2324
	-.3162	-.3116	-.3046	-.2851	-.2802	-.3017	-.2655	-.2435	-.2346	-.2707999.9999	-.2039	999.9999	-.2542	-.2485	-.2666	-.2596999.9999	999.9999	999.9999	-.2507	-.2324
	-.0986	-.0827	-.0882	-.0769	-.0270	-.0559	-.02303	-.02316	.7687	.2387	.8234	.2729	.3348	.1585	.2816	.8117	.9055	.8841	.8758	-.2954
	.9226	.9226	.9202	.9105	.8607	.8024	.7859	.2316	.7687	.2387	.8234	.2729	.3348	.1585	.2816	.8117	.9055	.8841	.8758	-.2954
	1.6203	1.6274	1.6692	1.6513	1.5793	1.5293	1.5011	1.4802	1.4700	1.4676	1.4594	1.4689	1.4848	1.3093	1.5336	1.5116	1.6912	1.7127	1.5495	.6891
	.8568	.8150999.9999	.7811	.8568	.8150999.9999	.7811	.8568	.8150999.9999	.7811	.8568	.8150999.9999	.7811	.8568	.8150999.9999	.7811	.8568	.8150999.9999	.7811	.8568	.8150999.9999
	-.2805	-.2938	-.2522	-.1269	-.1335	-.1296	-.1148	-.0894	999.9999	-.0821	-.1168	-.0952								

MACH (5) = 2.740 ALPHA (1) = 70.000 O(P)SF = 6.3800 PO = 30.040 P = 1.2100 RN/L = 5.1000

SECTION (1) SRB DEPENDENT VARIABLE CP

T-META .0000 22.5000 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

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.25	3.44	3.92	6.67	7.02	7.44	7.55
	-.1001	-.1026	-.0989	-.1050	-.1083	-.1058	-.1083	-.1083	-.1047	-.0986	-.0899	999.9999	-.1133	-.1114	-.1241
	-.1168	-.1167	-.1168	-.1156	-.1194	-.1241	-.1150	-.1045	-.1047	-.0944999.9999	-.0899	999.9999	-.1156	-.1133	-.1180
	.0421	.0512	.0445	.0459	.1054	.1045	.9999	.3221	.8394	.3225	.8005	.3758	.4662	.1610	.3763
	1.0287	1.0044	.9771	.9595	.9098	.8607	.8697	.3221	.8394	.3225	.8005	.3758	.4662	.1610	.3763
	1.7621	1.7611	1.7611	1.7538	1.6652	1.6294	1.6088	1.5949	1.5712	1.5609	1.5596	1.5463	1.5251	1.4673	1.4510
	.9073	.8691999.9999	.8485	.8485	.8485	.8485	.8485	.8485	.8485	.8485	.8485	.8485	.8485	.8485	.8485
	.0214	-.1235	-.1089	-.0034	.0044	.0075	.0226	.0538	999.9999	-.0307	-.0317				

MSFC TH1 603 (SA28F) SRB - ALL PROTUBERANCES (R11053)

MACH (5) = 2.740 ALPHA (1) = 70.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.1102	.999	.9999	.9177	1.6566
	.902	-.1143	.999	.9999	1.0734	1.6986
	.923	-.1144	.999	.9999	1.0172	1.9219
	.945	-.1156	.999	.9999	1.0688	2.208
	.962	-.0961	.999	.9999	1.7419	.0598
			.999	.9999	1.9474	

MACH (6) = 3.480 ALPHA (1) = 70.000 Q11SF = 6.8600 PO = 60.000 P = .81000 RN/L = 7.0000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0356	-.0497	.0861	1.0459	1.7947
	.050	-.0441	-.0542	.0946	1.0211	1.8024
	.074	-.0351	-.0581	.0844	.9951	1.8086
	.098	-.0424	-.0565	.0798	.9714	1.7942
	.111	-.0480	-.0559	.3805	.9066	1.6881
	.139	-.0486	-.0632	1.300	1.4529	1.6554
	.168	-.0491	-.0655	.4186	1.4192	1.6346
	.191	-.0491	-.0627	.3196	1.4061	1.6250
	.255	-.0514	-.0395	.3416	1.4011	1.6250
	.344	-.0519	-.0570	.8530	1.6120	1.6120
	.392	-.0519	-.0356	.3476	1.3803	1.6024
	.667	.999	-.0638	.999	1.5862	1.5862
	.702	-.0604	-.0463	.8491	1.5889	1.607
	.724	-.0598	-.0660	.3996	1.4292	1.6537
	.744	-.0717	-.0711	1.116	1.7457	1.9754
	.755	-.0734999	.9999	.1717	.8571	1.9614
	.859	-.0644	-.0660	.3985	1.5425	1.7891
	.902	.999	-.0644	.9094	1.6705	1.7891
	.923	-.0649	-.0559	1.1316	1.9808	1.9808
	.945	-.0644	-.0649	1.0256	1.9943	1.9943
	.982	-.0491	-.0723	.9698	1.7308	1.7308
					.9315	.9315

(R11055)

TABLATED SOURCE DATA, MSFC THT 603 (SA28F)

DATE 07 MAR 77

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (2) = .901 ALPHA (1) = 90.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THET, .000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.4533	-.4497	-.4480	.9999	.9999	-.2134	.9837	1.2377	-.4530
	.392	.999	.9999	.999	.9999	.9999	.2682	1.2381	1.2381	-.5068
	.667	.999	.9999	-.4722	.999	.9999	.2682	1.2384	1.2384	-.4797
	.702	-.4763	-.4837	-.4632	.999	.9999	-.2145	.9757	1.2381	-.4632
	.724	-.4482	-.4538	-.4459	.999	.9999	-.3496	.9629	1.2370	.999
	.744	-.5510	-.5442	-.7462	.999	.9999	-.1721	.9600	1.2349	-.7818
	.755	-.5408	.9999	-.6274	.999	.9999	-.1249	.9564	1.2413	-.7400
	.869	-.5361	-.5429	-.999	.999	.9999	.2559	1.2456	1.2456	
	.902	.999	.9999	-.5375	.999	.9999	.1439	1.2440	1.2440	-1.0226
	.923	-.5354	-.5476	-.9028	.999	.9999	.1998	1.2409	1.2409	-1.1109
	.945	-.5300	-.5401	-.9221	.999	.9999	.6360	1.1908	1.1908	
	.982	-.5075	-.7307	-.7307	.999	.9999				

MACH (3) = 1.194 ALPHA (1) = 90.000 Q(IPSF) = 9.1300 PO = 22.010 P = 8.1500 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.5460	-.5473	-.5473	-.5610	.3435	1.0253	1.0253	1.0253	
	.050	-.5525	-.5523	-.5523	-.5782	.4011	1.1010	1.1010	1.1010	
	.074	-.5361	-.5429	-.5429	-.5811	.4424	1.1593	1.1593	1.1593	
	.098	-.5235	-.5336	-.5336	-.4114	.5300	1.2261	1.2261	1.2261	
	.111	-.5188	-.5270	-.5324	-.5824	.5819	1.0848	1.2800	.5634	-.4518
	.139	-.5096	-.5144	-.5036	-.5347	.6032	1.1650	1.3789	.5837	.9999
	.168	-.4991	-.4998	-.5021	-.5506	.6058	1.1791	1.3910	.5829	-.5503
	.191	-.4820	-.4860	-.4899	-.4899	.6163	1.1837	1.3958	-.4672	-.5137
	.255	-.4579	-.4728	-.4728	-.999	.6163	1.3984	1.3984	-.4807	
	.344	-.4200	-.4380	-.4378	.999	.6162	1.1958	1.4068	-.4107	
	.392	.999	.9999	-.4475	.999	.6162	1.4015	1.4062	-.4465	
	.667	.999	.9999	-.4475	.999	.6162	1.4062	1.4062	-.4311	
	.724	-.4443	-.4475	-.4627	.999	.2026	1.1870	1.4031	-.4405	
	.744	-.4419	-.4465	-.4480	.999	.0984	1.1834	1.4083	.999	.9999
	.744	-.4452	-.4621	-.4621	.999	.2488	1.1785	1.4048	-.4889	
	.755	-.4492	.9999	-.4807	.999	.2888	1.1777	1.4046	-.4760	
	.869	-.5078	-.5216	-.5216	.999	.6040	1.4048	1.4048	-.4760	
	.902	.999	-.5152	-.5152	.999	.5158	1.4056	1.4056	-.6118	
	.923	-.5161	-.5636	-.5636	.999	.5530	1.4104	1.4058	-.5357	
	.945	-.5023	-.6505	-.6505	.999	.9121	1.4058	1.4058	-.5357	
	.982	-.4229	-.4229	-.5032	.999	-.5032	1.3681	1.3681	1.3681	

MSFC TH1 603 (SA28F) SRB - ALL PROTLBERANCES (R11055)

MACH (5) = 2.740 ALPHA (1) = 90.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.869	-.1150	-.1186	999.9999	999.9999	.9261	1.7587					
	.902	999.9999	-.1228	999.9999	999.9999	.8597	1.7658					
	.923	-.1156	-.1071	.0305	.8527	.0002	1.7593					
	.945	-.1156	-.1174	.0129	1.0675	.0220	1.7775					
	.982	-.0014		-.0105			1.8030					

MACH (6) = 3.480 ALPHA (1) = 90.000 Q(P5F) = 6.8600 P0 = 60.030 P = .81000 RN/L = 7.0000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.027	-.0322	-.0463	.0223	.8088	.7833	1.5058					
	.050	-.0424	-.0492	.0296	.8092	.8088	1.5458					
	.074	-.0339	-.0531	.0318	.8612	.8092	1.5869					
	.098	-.0390	-.0554	.0391	.9012	.8612	1.6320					
	.111	-.0441	-.0542	.0477	.9511	.9012	1.6951					
	.139	-.0475	-.0514	.0446	.9555	.9511	1.7470					
	.168	-.0514	-.0469	.0399	.9750	.9555	1.7948					
	.191	-.0525	-.0424	.3966	.9750	.9750	1.7901					
	.255	-.0531	-.0570	.4073	.9682	.9750	1.7904					
	.344	-.0571	-.0413	.999.9999	.9682	.9682	1.8041					
	.392			.999.9999	.9682	.9682	1.8016					
	.667	999.9999	-.0616	.999.9999	.9682	.9682	1.8044					
	.702	-.0610	-.0458	.4026	.9682	.9682	1.8044					
	.724	-.0594	-.0616	.3727	.9682	.9682	1.8027					
	.744	-.0700	-.0695	.4144	.9682	.9682	1.7993					
	.755	-.0672	999.9999	.4178	.9682	.9682	1.7976					
	.869	-.0650		.9424	.9682	.9682	1.7900					
	.902	999.9999		.8747	.9682	.9682	1.7967					
	.923	-.0627		.8537	.9682	.9682	1.7798					
	.945	-.0638		.8533	.9682	.9682	1.7971					
	.982	-.0285		.0217	.9682	.9682	1.8021					

TABULATED SOURCE DATA, MSFC TMT 603 (SA28F)
MSFC TMT 603 (JA28F) SRB - ALL PROTUBERANCES

PARAMETRIC DATA

RM-SCH = 2.000 PHI = .000

REFERENCE DATA
SREF = 116.2500 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

MACH (1) = .601 ALPHA (1) = 110.000 Q(PSF) = 7.5400 PO = 38.030 P = 29.790 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	PO	P	RN/L	
THETA	.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000				
X/L	.027 .050 .074 .098 .111 .139 .168 .191 .255 .344 .392 .667 .702 .724 .744 .755 .859 .902 .923 .945 .962	-.4639 -.3750 -.3632 -.3760 -.3802 -.3893 -.4087 -.4106 -.4141 -.4479 -.5027 -.7132 -.5424 -.5798 -.5658 -.6183 -.6437 -.8008 -.8069 -.7990 -.7146 -.4841	-.6747 -.5971 -.4572 -.3038 -.2888 -.0612 -.0445 -.4538 -.0092 -.3480 -.0438 -.5784 -.7272 -.3800 -.2703 -.0537 -.2035 -.1635 -.0734 -.14850	.2677 .3251 .3962 .4591 .4776 .2691 .5982 .8964 .9183 .9371 .9578 .9590 .9932 .9997 .9807 1.0430 1.0157 1.0109 1.0808 .9760 .9866 1.0801	.5105 .4200 .4279 .3987 .5132 .9681 .5654 -.6316 .6456 .999 .9999 .999 .7246 -.7162 .167 -.6456 .999 .9999 -1.6079 -1.6034

MACH (2) = .903 ALPHA (2) = 110.000 Q(PSF) = 7.4100 PO = 22.020 P = 12.980 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	PO	P	RN/L	
THETA	.0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000				
X/L	.027 .050 .074 .098 .111 .139 .168 .191 .255 .344 .392 .667 .702 .724 .744 .755 .859 .902 .923 .945 .962	-.3817 -.4979 -.3208 -.3332 -.3407 -.3455 -.3619 -.3689 -.3817 -.4979 -.3208 -.3332 -.3407 -.3455 -.3619 -.3689 -.3817 -.4979 -.3208 -.3332 -.3407 -.3455 -.3619 -.3689	-.3873 -.3152 -.2426 -.1353 -.1525 -.0808 1.283 1.712 -.3873 -.3152 -.2426 -.1353 -.1525 -.0808 1.283 1.712 -.3873 -.3152 -.2426 -.1353 -.1525 -.0808 1.283 1.712	.3297 .4084 .4814 .5394 .5597 .3655 .7029 .9955 .9158 .3297 .4084 .4814 .5394 .5597 .3655 .7029 .9955 1.0158 1.0445 1.0445 1.0445 1.0445 1.0445 1.0445	.3304 -.3419 -.3514 .6868 .9999 .0819 -.3941 .6868 .9999 .0819 -.3941 .6868 .9999 .0819 -.3941 .6868 .9999 .0819 -.3941 .6868 .9999 .0819 -.3941

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11057)

MACH (2) = .903 ALPHA (1) = 110.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	.392	.4026	-.3992	-.4020999	.9999	-.2305	.8320	1.0699	-.4220
	.392	.999	.99999	-.5369	.999	.99999	.2025	1.0766	1.1200	-.5314
	.702	-.5498	-.5714	-.5646999	.9999	-.2225	.8777	1.1265	1.1265	-.5377
	.724	-.5599	-.5720	-.5667999	.9999	-.5274	.7321	1.1098	999.9999	999.9999
	.744	-.5855	-.6119	-.6349999	.9999	-.1220	.9247	1.1794	-.7538	-.7538
	.755	-.6011999	.9999	-.6802999	.9999	-.0700	.8922	1.1520	-.7160	-.7160
	.869	-.7549	-.7531	-.999	.9999	.2169	1.1571	1.1571	-.4118	-.4118
	.902	.999	.9999	-.7504	.999	.99999	1.1365	1.2291	-.5216	-.5216
	.923	-.7533	-.8147	-.9824	-.9824	.2065	1.1342	1.1342	-.4013	-.4013
	.945	-.7529	-.8680	-.10013	-.10013	.4458	1.1483	1.1483	999.9999	999.9999
	.982	-.5027	-.8356	-.8356	-.8356	1.2213	1.2213	1.2213	-.4337	-.4337

MACH (3) = 1.198 ALPHA (1) = 110.000 O(P)SF = 9.1500 PO = 22.020 P = 9.1000 RW/L = 6.6000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.4071	-.3941	-.3802	-.4034	.0020	.5943	.0771	.6693	.1695	-.5592	-.3906
	.074	-.3956	-.4041	-.4918	-.7344	.1321	.7344	.1937	.7950	.4018999	.9999	-.4099
	.098	-.3737	-.3958	-.3753	-.2059	.2059	.7796	.6356	.7950	.4337	-.4093	-.4186
	.111	-.3777	-.3936	-.3951	.0287	.0287	.6356	.9344	1.1298	-.4018999	.9999	-.4099
	.139	-.3899	-.4024	-.2071	.0203	.4270	.9344	.9865	1.1776	.4337	-.4093	-.4186
	.168	-.4052	-.4206	-.4299	-.0225	.4698	.9865	1.0007	1.1982	-.4093	-.4093	-.4186
	.191	-.4198	-.4319	-.4385	.0724	.5077	1.0007	1.2394	1.2394	-.4118	-.4118	-.4186
	.255	-.4322	-.4385	-.4669999	.9999	.1612	1.0446	1.2419	1.2809	-.5216	-.5216	-.4186
	.344	-.4335	-.4529	-.4669999	.9999	.5350	1.0446	1.2419	1.2809	-.4295	-.4295	-.4186
	.667	.999	.9999	-.4188	.999	.99999	1.0841	1.2917	1.2917	999.9999	999.9999	999.9999
	.702	-.4202	-.4405	-.44188	-.4418999	.1688	1.0841	1.2583	1.2583	-.4337	-.4337	-.4186
	.724	-.4515	-.4463	-.4460999	.9999	-.0827	1.2583	1.3394	1.3394	-.4337	-.4337	-.4186
	.744	-.4397	-.4624	-.4966999	.9999	.2558	1.3394	1.3394	1.3394	-.4337	-.4337	-.4186
	.755	-.4522999	.9999	-.4979999	.9999	.3028	1.3394	1.3394	1.3394	-.4337	-.4337	-.4186
	.869	-.5543	-.5476	-.999	.9999	.5382	1.3171	1.3171	1.3171	-.4337	-.4337	-.4186
	.902	.999	.9999	-.5410	.999	.4685	1.3832	1.3832	1.3832	-.5442	-.5442	-.4186
	.923	-.5594	-.5620	-.4437	-.4437	.5403	1.3044	1.3044	1.3044	-.4295	-.4295	-.4186
	.945	-.5297	-.5927	-.4471	-.4471	.7055	1.3132	1.3132	1.3132	-.4295	-.4295	-.4186
	.982	-.2205	-.2205	-.5066	-.5066	1.3814	1.3814	1.3814	1.3814	-.4295	-.4295	-.4186

MSFC TMT 603 (SA2RPF) SRB - ALL PROTUBERANCES (R11057)

MACH (4) = 1.961 ALPHA (1) = 110.000 Q(P5F) = 10.970 PO = 30.020 P = 4.0700 RN/L = 7.5000

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

SECTION (1)SRB

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
CP	-2479	-2498	-2517	-2577	-2545	-2723	-2578	-2559	-2656	-2863	-2740	-2459	-2492	-2507	-2395	-2412	-2603	-2975	-2620	-2976	
P	.2564	.2383	.2147	.1364	.2980	.2746	.2925	.2889	.999	-.2863	.999	.999	-.2821	-.2737	-.2811	-.2895	.999	.999	-.1062	-.1055	-.0920
PO	.2826	.3341	.3746	.4340	.4461	.7025	.7276	.2230	.7643	.2643		.7177	.2650	.1782	.3494	.4169	.7197	.5119	.7268	.8128	
P	.7691	.8347	.8894	.9430	1.0290	1.3654	1.4091	1.4165	1.4215	1.4356	1.4444	1.4663	1.4805	.999	1.5830	1.5075	1.4966	1.4557	1.4570	1.4194	1.6253
P	.4562	.1552	.7135	.0949	.2553	.2581	.2574														

MACH (5) = 2.740 ALPHA (1) = 110.000 Q(P5F) = 6.3700 PO = 30.020 P = 1.2100 RN/L = 5.2000

SECTION (1)SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

DEPENDENT VARIABLE CP

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755
CP	-.0919	-.0938	-.1004	.1095	.1102	-.1180	-.1156	-.1180	-.0973	.3315	.7933	.3030	-.1047	-.0974	-.1284	-.1296
P	-.0880	-.0792	-.0598	-.0489	-.0592	-.1082	-.1329	.999	.999	.999	.999	.999	-.1047	-.0974	-.1284	-.1296
PO	.4013	.4346	.4650	.4089	.5918	.8127	.7969	.8315	.3315	.3333	.7933	.3030	.16130	1.0044	1.5172	1.7496
P	.8800	.9237	.9656	.9122	1.2087	1.5087	1.5275	1.5323	1.5384	1.5378	1.5681	1.6130	.0263	.0005	.999	.0427
P	.5912	.0179	.8233	.0330	.1062	.1089	.8339	.0081	.0081	.0087	.0005	.0263	.999	.0427		.0530

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES (R11057)

MACH (5) = 2.740 ALPHA (1) = 110.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	.902	.923	.945	.982	.869	.902	.923	.945	.982	.869	.902	.923	.945	.982
	-.1307	-.1265	-.1362	-.1168	-.1302	-.1302	-.1265	-.1362	-.1168	-.1302	-.1307	-.1265	-.1362	-.1168	-.1302
	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999
	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022	.0022
	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143	1.6143
	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237	-.0237
	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330	.0330

MACH (6) = 3.480 ALPHA (1) = 110.000 Q(PSF) = 6.8600 PO = 60.030 P = .81000 RN/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-.0266	-.0401	-.0419	-.0469	-.0537	-.0599	-.0610	-.0605	-.0593	-.0593	-.0621	-.0683	-.0678	-.0667	-.0683	-.0683	-.0745	-.0762	-.0627	-.0728	-.0728
	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999
	.0340	.0340	.0255	.0109	.0272	.4084	.3508	.3681	.3538	.3555	.3555	.3485	.2392	.4595	.4612	.4612	.8190	.5434	.7275	.6054	.0916
	.4150	.4150	.4415	.4612	.4924	.6426	.8387	.8032	.8533	.8533	.8533	.8347	.6748	.8950	1.4349	1.4349	.8190	.5434	.7275	.6054	.0916
	.8838	.8838	.9209	.9502	.9573	1.2810	1.5610	1.5756	1.5762	1.5802	1.5802	1.5813	1.6365	1.6748	1.6748	1.6748	1.6603	.8977	1.6177	1.4506	1.7621
	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364	.0364
	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533	.0533
	.0538	.0538	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544	.0544
	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543	.0543
	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582	.0582

C. B

MSFC THT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11058)

MACH (2) = .904 ALPHA (1) = 130.100

DEPENDENT VARIABLE CP

SECTION (1) SR8

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.4528	-.4394	-.4465	.9999	.9999	-.3116	.5080	.6732	-.5274
	.392			.999	.9999			.6787		-.6707
	.667	.999	.9999	-.6367		.0313		.7241		-.5963
	.702	-.5565	-.4993	-.6864	.999	.9999	-.3827	.5954		-.6941
	.724	-.6299	-.5828	-.6097	.999	.9999	-.7180	-.0027		.999
	.744	-.6193	-.5290	-.5437	.999	.9999	-.0408	.7871		.9999
	.755	-.6490	.9999	-.5539	.999	.9999	-.1484	.6266		-.7603
	.869	-.8016		-.7622	.999	.9999		.7906		-.7694
	.902	.999	.9999	-.8116	.999	.9999	-.3434	.2496		
	.923	-.7274		-.9363	-.1	.0033	-.2438	.8331		-.10475
	.945	-.6596		-.8415		-.9109	.3532	.6642		-.9086
	.982	-.3784		-.5315				1.1066		

MACH (3) = 1.202 ALPHA (1) = 130.100 O(R)P(S)F = 9.1600 PO = 22.020 P = 9.0600 RN/L = 6.7000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.2806	-.2952	-.2978	-.3297	.0909					
	.050	-.2695	-.2812	-.4171	-.2796	.1554					
	.074	-.2773	-.2855	-.2948	-.2346	.1970					
	.098	-.2930	-.3094	-.3149	-.3859	-.0186					
	.111	-.3094	-.3138	-.3199	-.1647	.3293					
	.139	-.3139	-.3244	-.3159	-.1780	.6117					
	.168	-.3315	-.3358	-.3233	.9999	.6531					
	.191	-.3438	-.3465	-.3423	.9999	.8146					
	.255	-.3733	-.3693	.999	.9999	.2738					
	.344	-.3811	-.3684	-.4236	.9999	.6818					
	.392			.999	.9999	.8276					
	.667	.999	.9999	-.4077		.8773					
	.702	-.4093	-.4659	-.4575	.9999	.2921					
	.724	-.5304	-.4971	-.4763	.9999	.7914					
	.744	-.4466	-.5170	-.4742	.9999	.2734					
	.755	-.4827	.9999	-.5514	.9999	1.0001					
	.869	-.5911		-.5514	.9999	.8293					
	.902	.999	.9999	-.6410	.999	.9500					
	.923	-.5988		-.6680	.999	.3779					
	.945	-.5682		-.5997	-.4810	1.0036					
	.982	-.1359		-.6213	-.5005	.8267					
				-.1000		1.2806					

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11058)

MACH (4) = 1.969 ALPHA (1) = 130.080 Q(PSF) = 10.920 PO = 30.000 P = 4.0300 RN/L = 7.5000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L	.027	-.2305	-.2287	-.2330	-.0123	.2740									
	.050	-.2285	-.2279	-.2328	.0206	.3138									
	.074	-.2340	-.2362	-.2484	.0355	.3210									
	.098	-.2452	-.2788	-.2757	-.0002	.2437									
	.111	-.2542	-.2643	-.2631	.1673	.7358	.4125	-.1722	-.2599						
	.139	-.2516	-.2557	-.2624	.0958	.8049	.9499	.4770	.9999	-.2576					
	.168	-.2638	-.2655	-.2695	.0996	.8408	.9594	.4706	-.1397	-.2675					
	.191	-.2700	-.2733	-.2733	.1043	.8269	.9628		-.1724						
	.255	-.2758	-.2769	-.2769	.1006	.8338	.9641		-.1741						
	.344	-.2703	-.2757	-.2992	.9999	.9639	.9639		-.1693						
	.667	.9999	-.2492	.9999	.4303	.9763	.9763		-.1646						
	.702	-.2425	-.2482	-.2594	.1323	.9614	1.1262		-.1839						
	.724	-.2532	-.2506	-.2899	.0744	.1291	.2489		.9999						
	.744	-.2260	-.2418	-.2914	.4181	1.4689	1.6576		.0000						
	.755	-.2272	.9999	-.2840	.3520	1.1542	1.3308		-.0435						
	.869	-.2520	-.2682	.9999	.5208	1.0845	1.0845								
	.902	.9999	-.2871	.9999	.0823	.3464	.3464		-.1494						
	.923	-.2538	-.2634	.9999	.5657	1.1007	1.1007		-.2792						
	.945	-.2520	-.2755	-.2919	.4617	.7961	.7961								
	.982	-.1642		.1440		1.5438	1.5438								

MACH (5) = 2.740 ALPHA (1) = 130.100 Q(PSF) = 6.3800 PO = 30.040 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L	.027	-.1028	-.1185	-.1363	-.0666	.0471									
	.050	-.1108	-.1235	-.1397	-.0507	.0557									
	.074	-.1034	-.1308	-.1356	-.0434	.0742									
	.098	-.1108	-.1338	-.1405	-.0410	.0700									
	.111	-.1210	-.1393	-.1345	.0396	.4038	.1549	-.1132	-.1320						
	.139	-.1217	-.1393	-.1332	-.0629	.4359	.3546	.1831	.9999	-.1332					
	.168	-.1296	-.1411	-.1308	-.0055	.4393	.3600	.1822	-.0974	-.1350					
	.191	-.1326	-.1437	-.1247	-.0059	.4346	.3542		-.1114						
	.255	-.1339	-.1417	.9999	.1755	.4359	.4359		-.1150						
	.344	-.1399	-.1114	-.1204	-.0014	.4407	.4407		-.1114						
	.392	.9999	.9999	.9999	.1507	.4262	.4262		-.1126						
	.667	.9999	-.1526	.9999	.1507	.4262	.4262		-.1388						
	.702	-.1538	-.1228	-.1290	-.0246	.3936	.3936		.9999						
	.724	-.1527	-.1593	-.1216	-.0944	.0360	.0360		.9999						
	.744	-.1538	-.1551	-.1575	-.1567	.8582	.8582		-.0501						
	.755	-.1544	.9999	-.1538	.0829	.4613	.4613		-.0737						

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES (R11058)

MACH (5) = 2.740 ALPHA (1) = 130.100

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1531	999.9999	.2029	.5342
.902	-.1957	999.9999	-.0255	.0904
.923	-.1502	-.1029	.1355	.4564
.945	-.1514	-.1423	.0584	.2708
.982	.0465	-.0197		.7745

-.1108
-.1435

MACH (6) = 3.480 ALPHA (1) = 130.080 Q(PSF) = 6.8600 PO = 60.010 P = .81000 RW/L = 7.0000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0283	-.0429	-.0632	.1058	.3222
.050	-.0384	-.0475	-.0615	.1346	.3585
.074	-.0390	-.0531	-.0480	.1475	.3735
.098	-.0480	-.0582	-.0565	.1503	.3617
.111	-.0542	-.0649	-.0204	.1515	.8528
.139	-.0525	-.0678	.0635	.2811	.9960
.168	-.0621	-.0486	-.0554	.5499	1.0487
.191	-.0655	-.0429	-.0508	.9999	1.0510
.255	-.0689	-.0683	-.0508	.9999	1.0454
.344	-.0734	-.0424	-.0480	.9999	1.0447
.392	999.9999	-.0734	999.9999	.2190	.8938
.667	999.9999	-.0734	999.9999	.5037	1.0544
.702	-.0824	-.0475	-.0554	.9999	1.0161
.724	-.0807	-.0835	-.0475	.9999	.9698
.744	-.0779	-.0790	-.0475	.9999	.2637
.755	-.0790	-.0790	-.0740	.9999	1.7342
.869	-.0830	-.0779	-.0492	.9999	1.3188
.902	999.9999	-.0796	999.9999	.6018	1.1998
.923	-.0711	-.0717	999.9999	.1711	.9876
.945	-.0666	-.0734	-.0621	.4693	1.1248
.982	.3194		.1820	.3431	.7528
					1.6564

.5324 .0139 -.0576
.5730999 .9999 -.0593
.5684 .0359 -.0627
.0127
.0139
.0161
.0195
-.0362
999.9999
.1269
.1074

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11059)

MACH (2) = .899 ALPHA (1) = 149.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.3529	-.3523	-.4136	999.9999	999.9999	-.2405	.1847	.2610	-.6019
	.392				999.9999	999.9999			.2668	-.4758
	.667	999.9999	-.2422		999.9999	999.9999	-.0132		.2996	-.8106
	.702	-.3667	-.3251		-.3408	999.9999	-.2525	.4901	.5618	-.6046
	.724	-.4154	-.4133		-.4036	999.9999	-.4602	-.4438	-.3365	999.9999
	.744	-.2632	-.2947		-.2620	999.9999	.2481	.7219	-.7924	-.8176
	.755	-.3666	999.9999		-.2818	999.9999	.0731	.4375	.5122	-.8476
	.869	-.4569			-.4426	999.9999	.0565	.3967	.0728	
	.902	999.9999			-.4403	999.9999	-.0258	.0728	-.3194	-.6203
	.923	-.4507			-.4398	-.5036	-.4771	-.5741	-.5741	-.5680
	.945	-.4664			-.4373	-.4669	-.6215	.9701		
	.982	-.2074			-.4628					

MACH (3) = 1.206 ALPHA (1) = 149.000 OIPSF = 9.1700 PO = 22.020 P = 9.0100 RW/L = 6.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.2006	-.1677	-.1774	-.1770	-.2397	-.3037	-.3217	-.4112	-.2082	-.4248	-.4176
	.050	-.2618	-.2339	-.2602	-.3189	-.3037	-.3217	-.4112	-.2082	-.4248	-.4176	-.4025
	.074	-.3440	-.3207	-.3138	-.4842	-.4842	-.4842	-.4842	-.4842	-.4842	-.4842	-.3764
	.098	-.4433	-.4514	-.4121	-.5705	-.5705	-.5705	-.5705	-.5705	-.5705	-.5705	
	.111	-.4262	-.4317	-.4274	-.5369	-.5369	-.5369	-.5369	-.5369	-.5369	-.5369	
	.139	-.3418	-.3207	-.3150	-.2738	-.2421	-.0472	.0852	.1787	-.1153	999.9999	
	.168	-.3213	-.3004	-.2951	999.9999	-.2152	-.0113	.2308	.2724	-.3135	-.3211	
	.191	-.3331	-.3035	-.2829	999.9999	-.1953	.0064	.2384	.3296	-.3945		
	.255	-.2863	-.3032	-.3013	999.9999	-.1265		.2686	.3310	-.4878		
	.344	-.2329	-.2471	999.9999	999.9999			.3454	.3454	-.2934		
	.392			999.9999	999.9999			.3456	.3456	-.4027		
	.667	999.9999	-.3338	-.3861	999.9999	-.2105	.0227	.3840	.4552	999.9999		
	.702	-.2917	-.3805	-.4115	999.9999	-.4290		-.3975	-.2945	999.9999		
	.724	-.4844	-.4650	-.3834	999.9999	.3840		.6923	.9811	-.3876		
	.744	-.1859	-.4372	-.4078	999.9999	.2519		.6300	.7184	-.3572		
	.755	-.2901	999.9999	999.9999	999.9999			.5148	.7184			
	.869	-.4511	-.5662	999.9999	999.9999	.1716		-.0813	-.0813	-.7097		
	.902	999.9999	-.5051	999.9999	999.9999	-.1454		.2051	.2051	-.6305		
	.923	-.4286	-.5166	-.6611	-.6611	-.0088		-.2235	-.2235			
	.945	-.4424	-.4900	-.6402	-.6402	-.5150		1.1554	1.1554			
	.982	-.0314		-.1982	-.1982							

MACH (4) = 1.974 ALPHA (1) = 149.000 O(PSF) = 10.890 PO = 30.000 P = 3.9900 RN/L = 7.5000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.943	.945	.982	
	-.1352	-.1524	-.1756	-.1906	-.1931	-.1710	-.1722	-.1734	-.1916	-.1764	-.1479	-.2122	-.2357	-.2709	-.2182	-.2064	-.2210	-.2561	-.2673	-.3012	-.1783
	-.1344	-.1793	-.1788	-.2714	-.1743	-.1889	-.1889	-.1824	-.1837	-.1837	-.1837	-.1886	-.2469	-.2609	-.2161	-.2161	-.2431	-.2634	-.2673	-.3012	-.1783
	-.1650	-.1706	-.1622	-.1652	.0936	.1646	.1460	.1487	.0273	.0273	.1886	.0206	.1496	.3808	.6086	.2073	-.0507	.2314	.1354	.0100	
	-.0691	-.0507	-.0390	-.0649	.2663	.3426	.3307	.3218	.3261	.3856	.4586	.4357	-.1080	-.7986	.6788	.4335	-.0021	.4826	.0953	1.1531	
					.0992	.1322	.1281														
					-.2160	-.1825	-.1785	-.1918	-.2008	-.1827	-.2267	-.2749	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999

MACH (5) = 2.740 ALPHA (1) = 149.000 O(PSF) = 5.3700 PO = 30.000 P = 1.2100 RN/L = 5.1000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755
	-.0815	-.0900	-.1064	-.1192	-.1143	-.0967	-.1004	-.1064	-.1064	-.1192	-.1192	-.1192	-.1234	-.1453	-.0962
	-.0870	-.0949	-.1143	-.1326	-.1247	-.0938	-.0796	-.1079	-.1119	-.1079	-.1079	-.1079	-.1240	-.1175	-.1392
	-.0834	-.0712	-.0639	-.0560	.1169	.0538	.0491	.0516	.0588	.0588	.0588	.0522	.0348	.3014	.2533
	.0035	.0157	.0198	.0224	.3350	.3580	.3541	.3573	.3688	.4261	.4261	.4261	.4782	.0546	.9581
					.1777	.1959	.1959								
					-.0937	-.0992	-.0852	-.0961	-.0967	-.0949	-.0949	-.0949	-.1100	999.9999	999.9999
					-.1064	-.0992	-.0965	-.0961	-.0967	-.0949	-.0949	-.0949	-.1100	999.9999	999.9999

(R11060)

MACH (2) = .900 ALPHA (1) = 159.880

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.0821	-.0899	-.1270	999.9999	-.1061	-.0191	-.0031	-.1382
	.392			999.9999				-.0132	-.1594
	.667	999.9999	.0404	999.9999	.0764			.1260	.0390
	.702	-.0037	-.0126	-.0525	999.9999	-.0692	-.0514	-.0398	-.0546
	.724	-.0133	-.0329	-.1695	999.9999	-.2615	-.3032	-.3077	999.9999
	.744	-.0927	-.0702	-.0820	999.9999	.1317	.3563	.4085	.0192
	.755	-.1446	999.9999	-.1326	999.9999	.0309	.2038	.2378	-.0787
	.869	-.4074		999.9999	-.3184		-.1957	-.4652	
	.902	999.9999	-.3981	999.9999	-.4460		-.4652	-.4377	
	.923	-.3522	-.3862	-.4418	-.4851		-.4550	-.4085	
	.945	-.3123	-.3473	-.4282	-.5063		-.6532		
	.982	-.3221	-.3940				-.3517		

MACH (3) = 1.198 ALPHA (1) = 169.900 O(P5F) = 9.1400 PO = 22.010 P = 9.1000 RN/L = 6.7000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0102	-.0099	-.0080	.0168	.0211	-.0959	-.1988	-.2383
	.050	-.0417	-.0712	-.0718	-.0707	-.1065	.0637	999.9999	-.0800
	.074	-.1762	-.2068	-.2649	-.4181	-.3881	-.0198	-.0637	-.0209
	.098	-.5565	-.5703	-.5027	-.5295	-.5160	-.0748	-.0165	-.0772
	.111	-.2100	-.1993	-.2454	-.0963	-.0411	-.0570	-.0959	
	.139	-.0542	-.0411	-.0647	-.0422	.0086	.0786	.0637	
	.168	-.0313	-.0291	-.0542	999.9999	-.0039	.0480	-.0165	
	.191	-.0384	-.0318	-.0544	999.9999	-.0176	.0295	-.0165	
	.255	-.0646	-.0614	-.0980	999.9999	.0102	.0397	-.0772	
	.344	-.0373	-.0400	999.9999	-.0546	.0233	.0359	-.0980	
	.392			999.9999			.0485	-.0690	
	.667	999.9999	.0105	999.9999	-.0455		-.0140	-.0064	
	.702	-.0206	-.0279	-.1894	999.9999	-.2399	-.0947	-.1707	
	.724	-.1445	-.1819	-.3366	999.9999	-.4215	-.4347	999.9999	
	.744	-.0247	-.0053	.0017	999.9999	.3108	.5466	.1879	
	.755	-.0696	999.9999	-.0518	999.9999	.2191	.4146	.1258	
	.869	-.3364		999.9999	-.0764	.0194	-.3294		
	.902	999.9999	-.3521	999.9999	-.3255	-.3294	-.1581	-.3831	
	.923	-.3240	-.3441	-.3815	-.3391	-.1581	-.5821	-.3906	
	.945	-.3002	-.3338	-.4091	-.5500	-.5821			
	.982	-.1746		-.2935		-.1176			

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA26F) (R11060)

MACH (4) = 1.959 ALPHA (1) = 169.900 Q(PSF) = 10.980 PO = 30.020 P = 4.0900 RN/L = 7.5000

MSFC TWT 603 (SA26F) SRB - ALL PROTUBERANCES (R11060)

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L												
.027	-.0305	-.0333	-.0405	-.0310	-.0159							
.050	-.1313	-.1143	-.0990	-.1299	-.1930							
.074	-.1906	-.1804	-.1490	-.2036	-.2116							
.098	-.2055	-.2157	-.1809	-.2299	-.2193							
.111	-.0252	-.0437	-.0726	-.0272	-.0007	-.0208	-.0673	-.0599				
.139	-.0035	-.0124	-.0152	-.0176	-.0138	-.0242	-.0177	-.0134				
.168	-.0110	-.0172	-.0225	-.0340	-.0141	-.0200	-.0312	-.0184	-.0148			
.191	-.0194	-.0301	-.0552	-.0407	-.0235	-.0464	-.0298	-.0595				
.255	-.0229	-.0303	-.0814	-.0166	-.0298	-.0506	-.0444					
.344	-.0175	-.0087	-.0814	-.0308	-.0506	-.0106	-.0106					
.392	999.9999	-.0980	999.9999	-.0388	0.337	0.337	-.1093					
.667	999.9999	-.1249	999.9999	-.1061	0.179	0.235	-.1077					
.702	-.0674	-.2182	-.2247	-.2140	-.2059	-.1909	999.9999					
.724	-.2240	-.1314	-.0178	-.1854	-.3582	-.3454	1.183					
.744	0.928	0.9999	-.0483	0.8991	1.321	1.599	0.418					
.755	0.979999	9999	-.1425	-.0165	0.298	0.298						
.869	-.1425	-.1529	999.9999	-.1797	-.1717	-.1717	-.1350					
.902	999.9999	-.1898	999.9999	-.1977	-.0171	-.0171	-.2686					
.923	-.1979	-.1863	-.2812	-.1138	-.2001	-.2001						
.945	-.2005	-.2239	-.2812	-.2647	-.1733	-.1733						
.982	0.792	-.0061	-.0061									

MACH (5) = 2.740 ALPHA (1) = 169.900 Q(PSF) = 5.3800 PO = 30.060 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L												
.027	-.0505	-.0587	-.0544	-.0611	-.0458							
.050	-.0769	-.0792	-.0684	-.0927	-.0926							
.074	-.0838	-.0932	-.0878	-.1078	-.1169							
.098	-.0932	-.1066	-.0938	-.1223	-.1110							
.111	-.0247	-.0211	-.0435	-.0047	0.146	0.261	-.0168	-.0490	-.0369			
.139	-.0125	-.0108	-.0168	-.0252	-.0237	0.364	-.0059	-.0059	-.0132			
.168	-.0181	-.0222	-.0326	-.0302	-.0059	0.400	-.0065	-.0320	-.0168			
.191	-.0241	-.0241	-.0404	-.0302	-.0206	0.376	-.0520					
.255	-.0241	-.0235	-.0460	-.0025	0.406	0.411	-.0321					
.344	-.0144	-.0235	-.0460	-.0203	0.411	0.411	-.0108					
.392	999.9999	-.0550	999.9999	0.006	0.467	0.467	-.0581					
.667	999.9999	-.0645	999.9999	-.0457	0.414	0.414	-.0695					
.702	-.0278	-.1120	-.0995	-.0993	-.0935	-.0884	999.9999					
.724	-.1120	-.1116	-.0509	-.1492	-.2668	-.2771	0.673					
.744	0.283	0.485	0.0509	0.1492	0.2668	0.2771	0.673					
.755	0.0047	0.9999	0.0047	0.069	0.069	0.069	0.069					

(R11060)

MFSC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 169.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

T-META .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.869	-.0532	-.0561	999.9999	.0340	.0479			
	.902	999.9999	-.0951	999.9999	-.0780	-.0732			
	.823	-.0957	-.0811	-.0623	-.0538	.0188			-.0575
	.945	-.1145	-.1176	-.1223	-.1066	-.0701			-.1181
	.982	.1895	.1146			.2692			

MACH (6) = 3.480 ALPHA (1) = 159.900 O(PSF) = 6.8600 PO = 60.000 P = .81000 RW/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

T-META .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.027	-.0221	-.0328	-.0373	-.0390	-.0328				
	.050	-.0350	-.0407	-.0418	-.0542	-.0542				
	.074	-.0373	-.0475	-.0486	-.0598	-.0669				
	.098	-.0446	-.0548	-.0514	-.0677	-.0638				
	.111	-.0142	-.0108	-.0209	-.0215	.0009	.0230			.0021
	.139	-.0074	-.0058	-.0068	-.0119	-.0063	.0077	.0302		.0314
	.168	-.0091	-.0103	-.0125	-.0142	-.0097	.0088	.0319	.0415	.0398
	.191	-.0119	-.0080	-.0193	-.0199	-.0035	.0303	.0404	.0415	.0398
	.255	-.0125	-.0119	-.0119	-.0119	.0105	.0303	.0381	.0404	.0415
	.344	-.0148	-.0068	-.0164	-.0164	.0060	.0303	.0376	.0381	.0404
	.392			999.9999	999.9999			.0495	.0495	.0495
	.607	999.9999	-.0249	999.9999	.0156			.0427	.0427	.0427
	.702	-.0091	-.0204	-.0333	999.9999	-.0198	.0337	.0427	.0427	.0427
	.724	-.0953	-.0616	-.0424	999.9999	-.0531	-.0452	.0435	.0435	.0435
	.744	-.0437	.0432	.0084	999.9999	.1170	.2123	.2207	.2207	.2207
	.755	.0376	999.9999	-.0081	999.9999	.0466	.0759	.0843	.0843	.0843
	.869	-.0170	-.0238	999.9999	.0506			.0624	.0624	.0624
	.902	999.9999	-.0508	999.9999	-.0311			-.0271	-.0271	-.0271
	.923	-.0452	-.0368	-.0204	-.0114			.0528	.0528	.0528
	.945	-.0683	-.0587	-.0610	-.0457			-.0182	-.0182	-.0182
	.982	.2006	.1554					.3002	.3002	.3002

(R11061)

MSFC THT 603 (SA28F) SRB - ALL PROTEBERANCES

MACH (2) = .904 ALPHA (1) = 179.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.0515	-.0357	-.0784	.999	.9999	-.0793	-.0666	-.0733	-.0848
	.392				.998	.9999			-.1129	-.1717
	.667	.999	.9999	.1910	.999	.9999	.1182		.1135	.1324
	.702	.1819	.1649	.1473	.999	.9999	.1159	.1020	.1061	.1061
	.724	.0387	.0498	.0529	.999	.9999	.0339	.0316	.0299	.999
	.744	.1604	.1209	.0970	.999	.9999	.0826	.0845	.0980	.0676
	.755	.1182	.9999	.0656	.999	.9999	.0501	.0549	.0633	.0377
	.869	-.3179		-.3475	.999	.9999	-.0501	-.3428	-.3169	
	.902	.999	.9999	-.3783	.999	.9999	-.3671	-.3970	-.3970	-.3740
	.923	-.4246		-.4073	-.3771		-.4009	-.4198	-.4198	-.3579
	.945	-.4837		-.4004	-.3709		-.3980	-.4830	-.4830	
	.982	-.6024			-.5835			-.6212	-.6212	

MACH (3) = 1.199 ALPHA (1) = 179.900 OIPSF = 9.1500 PO = 22.010 P = 9.1000 RN/L = 6.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0312	.0239	.0220	.0231	.0231	.0220	.0239	.0239	.0239
	.050	-.0498	-.0677	-.0537	-.0537	-.0537	-.0580	-.0455	-.0455	-.0455
	.074	-.2741	-.2115	-.2175	-.2175	-.2175	-.2013	-.1780	-.1780	-.1780
	.098	-.5362	-.5487	-.4471	-.4471	-.4471	-.5674	-.5391	-.5391	-.5391
	.111	-.1252	-.1318	-.1847	-.4014	-.1973	-.1940	-.2290	-.2290	-.2290
	.139	-.0110	-.0143	-.0217	-.0312	-.0317	-.0496	-.0613	-.0690	-.1688
	.168	-.0077	-.0143	-.0187	-.0219	-.0351	-.0447	-.0541	-.0512	-.0780
	.191	-.0083	-.0176	-.0377	.999	.9999	-.0509	-.0597	-.0611	-.0909
	.255	-.0748	-.0870	-.0870	.999	.9999	-.0668	-.0758	-.0758	-.0239
	.344	.0135	-.0312	-.1777	.999	.9999	-.0471	-.0471	-.0471	-.1226
	.392			.999	.9999		-.0170	-.0170	-.0170	-.0695
	.667	.999	.9999	.1541	.999	.9999	.1020	.0928	.1202	-.0695
	.702	-.0649	-.0151	-.0094	.999	.9999	-.0397	-.0351	-.0351	-.0354
	.724	-.1535	-.1718	-.1741	.999	.9999	-.1783	-.1758	-.1758	.999
	.744	.3902	.2915	.2732	.999	.9999	.2603	.3310	.3310	.999
	.755	.2732	.9999	.1881	.999	.9999	.1815	.1928	.1928	.1421
	.869	-.1899		-.2059	.999	.9999	-.2047	-.1694	-.1694	.1081
	.902	.999	.9999	-.4161	.999	.9999	-.4062	-.4148	-.4148	-.4657
	.923	-.4314		-.5085	-.4461		-.4971	-.4318	-.4318	-.4657
	.945	-.5598		-.5971	-.6076		-.6088	-.5794	-.5794	-.4627
	.982	-.2179			-.1944			-.2218	-.2218	

MACH (4) = 1.981 ALPHA (1) = 179.900 Q(PSF) = 10.970 PO = 30.010 P = 4.0800 RV/L = 7.6000

SECTION (1) SRB DEPENDENT VARIABLE CP THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

Table with columns X/L and values for various angles and Mach numbers. Values range from .027 to .982.

MACH (5) = 2.740 ALPHA (1) = 179.900 Q(PSF) = 6.3800 PO = 30.050 P = 1.2100 RV/L = 5.2000

SECTION (1) SRB DEPENDENT VARIABLE CP THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

Table with columns X/L and values for various angles and Mach numbers. Values range from .027 to .982.

MSFC TWT 503 (SA28F) SRB - ALL PROTUBERANCES (R11063) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 45.000

MACH (1) = .596 ALPHA (1) = 70.000 Q(PSF) = 7.4400 PO = 38.020 P = 29.900 RN/L = 8.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.25	3.44	3.32	6.67	7.02	7.24	7.44	7.55	8.69	9.02	9.45	9.82
	-1.4549	-1.8458	-1.5432	-1.2088	-1.0342	-0.8593	-0.7462	-0.7841	-0.6885	-0.5320	-0.4620	-0.5537	-0.5383	-0.5070	-0.5517	-0.5165	-0.4686	-0.4654	-0.4599	-0.4181
	-1.8957	-1.5840	-1.4148	-1.2803	-1.1781	-1.0363	-0.8611	-0.7030	-0.5108	-0.3940	-0.2658	-0.1687	-0.0821	-0.0150	-0.0877	-0.2166	-0.5085	-0.7477	-0.6069	-0.3241
	-0.3446	-0.2902	-0.2446	-0.2100	-0.1846	-0.1661	-0.1530	-0.1430	-0.1301	-0.1199	-0.1116	-0.1033	-0.0959	-0.0889	-0.0834	-0.0784	-0.0734	-0.0686	-0.0639	-0.0591
	1.0004	1.0468	1.0770	1.0964	1.0896	1.0415	0.9171	0.7337	0.5000	0.2492	0.0413	0.0465	0.0596	0.0623	0.0677	0.0734	0.0786	0.0842	0.0899	0.0957
	1.0004	1.0468	1.0770	1.0964	1.0896	1.0415	0.9171	0.7337	0.5000	0.2492	0.0413	0.0465	0.0596	0.0623	0.0677	0.0734	0.0786	0.0842	0.0899	0.0957

MACH (2) = .900 ALPHA (1) = 70.000 Q(PSF) = 7.3800 PO = 22.000 P = 13.010 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.25
	-0.7507	-0.7542	-0.7515	-0.7610	-0.7651	-0.7319	-0.6906	-0.6669	-0.6767
	-0.7481	-0.7536	-0.7347	-0.7365	-0.7338	-0.6210	-0.0524	-0.9736	-0.7739
	-0.2661	-0.2821	-0.2627	-0.2749	-0.2623	-0.1456	-0.7012	-0.9999	-0.5825
	1.1362	1.1860	1.2159	1.2344	1.2241	1.0190	0.9790	0.9538	0.9382
	1.1362	1.1860	1.2159	1.2344	1.2241	1.0190	0.9790	0.9538	0.9382

(R11084) (22 AUG 75)

MSFC TMT 603 (SAZBF) SRB - ALL PROTUBERANCES

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

RN-SCH = 1.000 PHI = 45.000

MACH (1) = .598 ALPHA (1) = 90.000 O(PSF) = 3.5400 PO = 18.000 P = 14.140 RN/L = 4.1000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982	
	-.5470	-.5637	-.6050	-.6301	-.6447	-.6649	-.5920	-.5877	-.5941	-.5623	-.5169	-.4790	-.4947	-.4762	-.4218	-.5245	-.5892	-.6245	-.6267	-.6343	-.8395
	-.5541	-.5895	-.6329	-.7350	-.6707	-.6192	-.5654	-.5714	-.5244	-.5018	-.5739	-.6946	-.5072	-.5272	-.6190	-.6634	-.6160	-.6245	-.6589	-.6706	-.8395
	-.5609	-.5761	-.3897	-.9531	-.10606	-.8335	-.12176	-.7871	-.1065999	-.9999	-.10620	-.6946	-.7473	-.6679	-.7439	-.6380	-.8637	-.7883	-.9249	-.7073	-.1204
	-.3671	-.3914	-.3897	-.3999	-.12355	-.6823	-.8160	-.8210	-.8199	-.8386	-.8386	-.999	-.999	-.8394	-.8183	-.8375	-.8556	-.999	-.999	-.999	-.999
	.7173	.7908	.8488	.9198	.9499	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210	.8210
	-.1198	-.1504	-.1461	-.6551	-.7147	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999	-.9999
	-.7740	-.9857	-.5278	-.4916	-.9493	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965	-.8965
	-.10253	-.10354																			
	1.0769	1.1322	1.1357	1.1365	1.1308	1.1244	1.1276	1.1324	1.1331	1.1310	1.1328	1.1328	1.1310	1.1324	1.1276	1.1244	1.1308	1.1365	1.1357	1.1322	1.0769

PARAMETRIC DATA

(R11065) (22 AUG 75)

MSFC TMT 603 (SAZBF) SRB - ALL PROTUBERANCES

REFERENCE DATA

PARAMETRIC DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = .598 ALPHA (1) = 90.000 Q(PSF) = 7.4800 PO = 39.000 P = 29.830 RM/L = 8.8000

RM-SCH = 2.000 PHI = 45.000

SECTION (1) SRB DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	SECTION (2) SRB	DEPENDENT VARIABLE CP
THETA .0000 22.5000 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 472.5000 495.0000 517.5000 540.0000 562.5000 585.0000 607.5000 630.0000 652.5000 675.0000 697.5000 720.0000 742.5000 765.0000 787.5000 810.0000 832.5000 855.0000 877.5000 900.0000		THETA .0000 22.5010 45.0010 67.5010 90.0010 112.5010 135.0010 157.5010 180.0010 202.5010 225.0010 247.5010 270.0010 292.5010 315.0010 337.5010 360.0010 382.5010 405.0010 427.5010 450.0010 472.5010 495.0010 517.5010 540.0010 562.5010 585.0010 607.5010 630.0010 652.5010 675.0010 697.5010 720.0010 742.5010 765.0010 787.5010 810.0010 832.5010 855.0010 877.5010 900.0010	
X/L		X/L	
.027	-.9383	.027	-.7660
.050	-.6341	.050	-.5053
.074	-.6245	.074	-.4305
.098	-.6824	.098	-.4165
.111	-.6812	.111	-.4265
.139	-.6428	.139	-.9362
.168	-.6275	.168	-1.1910
.191	-.6201	.191	-.7913
.255	-.6003	.255	-.6581
.344	-.5745	.344	-.8759
.392	-.5254	.392	-1.1584
.667	-.5490	.667	-1.1937
.702	-.5539	.702	-.9999
.724	-.5234	.724	-.7137
.744	-.4926	.744	-.9412
.755	-.4920	.755	-.8948
.869	-.6116	.869	-.7548
.902	-.6450	.902	-.7325
.923	-.6462	.923	-.6968
.945	-.6462	.945	-.3275
.982	-.8633	.982	-.6386
			-2.0711

MACH (2) = .903 ALPHA (1) = 90.000 Q(PSF) = 7.4100 PO = 22.010 P = 12.970 RM/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP	SECTION (2) SRB	DEPENDENT VARIABLE CP
THETA .0000 22.5010 45.0010 67.5010 90.0010 112.5010 135.0010 157.5010 180.0010 202.5010 225.0010 247.5010 270.0010 292.5010 315.0010 337.5010 360.0010 382.5010 405.0010 427.5010 450.0010 472.5010 495.0010 517.5010 540.0010 562.5010 585.0010 607.5010 630.0010 652.5010 675.0010 697.5010 720.0010 742.5010 765.0010 787.5010 810.0010 832.5010 855.0010 877.5010 900.0010		THETA .0000 22.5012 45.0012 67.5012 90.0012 112.5012 135.0012 157.5012 180.0012 202.5012 225.0012 247.5012 270.0012 292.5012 315.0012 337.5012 360.0012 382.5012 405.0012 427.5012 450.0012 472.5012 495.0012 517.5012 540.0012 562.5012 585.0012 607.5012 630.0012 652.5012 675.0012 697.5012 720.0012 742.5012 765.0012 787.5012 810.0012 832.5012 855.0012 877.5012 900.0012	
X/L		X/L	
.027	-.5612	.027	-.5605
.050	-.5740	.050	-.5794
.074	-.5990	.074	-.6302
.098	-.6253	.098	-.6930
.111	-.6468	.111	-.9470
.139	-.5835	.139	-.4227
.168	-.5578	.168	-.7652
.191	-.5375	.191	-1.1968
.255	-.5018	.255	-.7567
.344	-.5477	.344	-.9999
.392	-.5018	.392	-.6497
.667	-.5166	.667	-.6859
.702	-.5166	.702	-.9999
.724	-.5166	.724	-.5781
.744	-.5166	.744	-.0946
.755	-.5166	.755	-.0459
.869	-.5166	.869	-.0162
.902	-.5166	.902	-.0462
.923	-.5166	.923	-.7809
.945	-.5166	.945	-.8374
.982	-.5166	.982	-.9868
			-.2033
			-.2371
			-.2369
			-.5389
			-.5234

(R11065)

MACH (2) = .903 ALPHA (1) = 90.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-5214	-5242	-5039	-5126	-4911	-5335	-5734	-5519	-5443	-5696	-5916	-5350
	-6200	-7063	-6017	-6031	-6281	-7064	-6692	-5821	-6625	-7421	-7868	-7931
	-6799	999.9999	999.9999	-6537	-6983	-5910	-6892	999.9999	999.9999	999.9999	999.9999	999.9999
	1.0202	1.2351	1.2384	1.2354	1.2328	1.2365	1.2344	1.2295	1.2359	1.2366	1.2324	1.1763
	-5241	-6341	-5167	-4832	999.9999	-6942	-6436	-9466	-8756			

MACH (3) = 1.198 ALPHA (1) = 90.000 O(P)SF = 9.1400

PO = 22.000

P = 9.0900

RW/L = 8.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982		
	-5223	-5264	-5222	-5227	-5271	-5113	-4965	-4711	-4390	-5577	-5550	-5706	-5588	-4639	-4493	-4749	-4822	-5139	-5211	-5370	-5305	-4766	
	-5279	-5326	-5124	-5528	-4859	-5302	-5907	-5767	-5577	-1511	-1511	-5706	-5588	-5468	-5988	-5836	-6115	-5903	-5830	-5421	-4576	-5457	
	-3112	-3490	-3725	-3589	-2567	-2479	-2320	-1737	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	1.0285	1.0995	1.1509	1.2171	1.2669	1.3746	1.2160	1.3987	1.4021	1.4038	1.3987	1.4073	1.4032	1.2220	1.2105	1.4044	1.4077	1.4009	1.4039	1.4077	1.3976	1.3463	
	5673	5911	5946	5673	5320	5186	5911	5946	5600	4248	4504	4230	4608	999.9999	5281	5535				6977	6934		

TABLATED SOURCE DATA, MSFC TWT 603 (5A28F) (R11065)

DATE 07 MAR 77

MSFC TWT 603 (5A28F) SRB - ALL PROTUBERANCES (R11065)

MACH (4) = 1.957 ALPHA (1) = 90.000 Q(PSF) = 10.990 PO = 30.010 P = 4.1000 RN/L = 7.4000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 360.0000

X/L	.0000	.2500	.5000	.7500	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000	360.0000
.027	-.2438	-.2459	-.1882	.6445	1.2980								
.050	-.2481	-.2476	-.1599	.6852	1.3493								
.074	-.2463	-.2509	-.1779	.6883	1.4032								
.098	-.2481	-.2475	-.1298	.6444	1.4725								
.111	-.2466	-.2479	-.0658	.0855	1.5303	.8266							
.139	-.2485	-.2471	-.1443	.6481	1.4874	-.1045	-.2498						
.168	-.2439	-.2432	-.1300	.1531999	1.4828	.8596	-.1286990	.9999					
.191	-.2324	-.2321	-.1250	.2206	1.4730	.8692	-.1273	-.2371					
.255	-.2319	-.2329	-.1029	.999	1.6383	-.1239							
.344	-.2425	-.2438	-.1033	.2092	1.4914	-.1038							
.392	999	999	-.1084	.999	1.6354	-.1082							
.657	999	999	-.1104	.999	1.6597	-.0998							
.702	-.2377	-.2422	-.0905	.2227	1.6446	-.1044							
.744	-.2309	-.2389	-.1575	.1682	1.4758	.998	999	.9999					
.744	-.2480	-.2402	-.1655	.2880	1.4799	-.0998							
.755	-.2463999	-.2500	-.1252	.2239	1.4884	-.1127							
.869	-.2397	-.2436	-.1441	.999	1.4888	-.0877							
.902	999	999	-.1360	.999	1.6331								
.923	-.2502	-.2469	-.1770	.7581	1.6413	-.1758							
.945	-.2559	-.2601	-.0959	.8048	1.6494	-.2047							
.982	-.1490	-.2578	-.1923		1.6124								

MACH (5) = 2.740 ALPHA (1) = 90.000 Q(PSF) = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000 360.0000

X/L	.0000	.2500	.5000	.7500	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000	360.0000
.027	-.0765	-.0915	-.0240	.7848	1.5050								
.050	-.0880	-.0951	-.0143	.8127	1.5445								
.074	-.0777	-.1010	-.0270	.8050	1.5706								
.098	-.0874	-.1010	-.0009	.7429	1.6076								
.111	-.0921	-.1065	-.0445	.3556	1.6658	.9049	.0238	-.1023					
.139	-.0951	-.1059	-.1047	.7817	1.6060	1.7641	.9389	.0063999	.9999				
.168	-.0985	-.1077	-.1040	.0016	1.6043	.7599	.9413	.0117	-.1029				
.191	-.0980	-.1091	-.1011	.0109	1.6133	1.7587		.0147					
.255	-.0992	-.1052	-.0362	.999	1.7562	1.7562							
.344	-.1029	-.0911	-.0988	.2455	1.6046	.7617	.0257						
.392	999	999	-.0184	.999	1.7585	1.7611	.0271						
.667	999	999	-.0190	.999	1.7611	1.7575	.0354						
.702	-.1114	-.1086	-.0512	.3012	1.5976	.7575	.0317						
.744	-.1108	-.0958	-.0149	.2951	1.5833	1.7575	.999	99999					
.744	-.1144	-.1150	-.0149	.4169	1.5942	1.7562	.0184						
.755	-.1149999	-.1314	-.0117	.2872	1.6015	1.7544	.0354						

(R11085)

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 90.000
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .869 -.1114 -.1138 -.1174 -.1196 -.1211 -.1205 -.1185 -.1165 -.1058
 .902 999.9999 .0056 999.9999 1.7587
 .923 -.1186 .8943 -.0112
 .945 -.1185 .9158 -.0404
 .982 -.0058 -.0282 1.7558

MACH (6) = 3.480 ALPHA (1) = 90.000 Q1PSF1 = 6.8700 PO = 60.040 P = .81000 RN/L = 7.1000
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .027 -.0272 -.0379 -.0408 -.0447 -.0458 -.0453 -.0442 -.0425 -.0408 -.0363 -.0390
 .050 -.0345 -.0318 -.0408 .081
 .074 -.0300 .0195 .8007
 .098 -.0334 .0330 .7446
 .111 -.0379 .0300 .2827 1.5040
 .139 -.0403 .0229 .1318 .8330 1.6390 1.7948
 .168 -.0425 .0470 .3094 999.9999 1.6416 1.7879
 .191 -.0441 .0570 .3245 999.9999 1.6420 1.7971
 .255 -.0458 .0813 .3013 999.9999 1.6536 1.8058
 .344 -.0492 -.0390 .0633 .8091
 .392 .667 999.9999 .0633 .8055
 .702 -.0593 -.0486 .3315 999.9999 1.6491 .8089
 .724 -.0593 -.0605 .3282 .8063
 .744 -.0638 -.0633 .4423 1.6421 .8055
 .755 -.0638 999.9999 .3175 1.6185
 .869 -.0616 .0595 999.9999 1.7928
 .902 999.9999 .0533 999.9999 1.8024
 .923 -.0627 .0374 .9218
 .945 -.0644 .1158 .9256
 .982 .0313 .0173

9935 .0589 -.0470
 9447 .0483 999.9999
 9559 .0544 -.0486
 .0595
 .0714
 .0731
 .0820
 .0781
 999.9999
 .0611
 .0775
 .0398
 .0183

MSFC THT 603 (SAZBF) SRB - ALL PROTURBANCES

(R11067) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RM-SCH = 2.000 PHI = 45.000
MACH (1) = .595 ALPHA (1) = 110.000 Q(PSF) = 7.4000 PO = 37.970 P = 29.880 RM/L = 8.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.755	.869	.902	.923	.945	.982	
	-.5344	-.5504	-.4944	-.5115	-.4534	-.4628	-.5019	-.5237	-.5356	-.5718	-.5795	-.8740	-.7649	-.6546	-.5915	-.6051	-.6741	-.7232	-.7718	-.8270	-.5823
	-.7564	-.8427	-.9759	-.7401	-.7941	-.7637	-.5768	-.6363	-.7226	-.8613	-.9917	-.8740	-.4688	-.7981	-.7063	-.6451	-.8885	-.10850	-.2475	-.6903	-.15078
	-.8427	-.8342	-.7500	-.7790	-.7263	-.13033	-.10094	-.10211	-.1067	-.12594	-.9999999	-.9999999	-.8792	-.12015	-.9315	-.8280	-.9999999	-.9999999	-.4071	-.1401	-.9999999
	.2469	.3019	.3595	.4151	.4392	.8331	.6909	.9061	.5332	.9459	.9450	.9790	1.0021	.5942	.7553	.7279	1.0013	1.0061	1.0833	.9704	1.0686
	-.6130	-.3987	-.3691	-.7644	-.4635	-.9139	-.9999	-.5461	-.6781	-.18274	-.7676	-.12349	.9999999	-.8258	-.8511	-.8158	-.7901				

MACH (2) = .907 ALPHA (1) = 110.000 Q(PSF) = 7.4300 PO = 22.010 P = 12.920 RM/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255
	-.3906	-.3845	-.4100	-.3631	-.3495	-.3532	-.3710	-.3814	-.4033
	-.3872	-.3798	-.5181	-.4946	-.3535	-.4672	-.3929	-.4114	-.4275
	-.4226	-.4208	-.4157	-.4616	-.7165	-.7165	-.3929	-.6600	-.9999999
	.3126	.3683	.4497	.5011	.5275	.3288	.7372	.9876	.0082
	-.1983	-.3845	-.3771	-.4756	-.9999	-.9999	-.9999	-.4071	-.0396

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11067)

MACH (4) = 1.999 ALPHA (1) = 110.000 Q(PSF) = 10.980 PO = 30.000 P = 4.0900 RM/L = 7.5000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
	-.2457	-.2491	-.2496	-.2416	-.2451	-.2382	-.2474	-.2409	-.2509	-.2677	-.2683	999.9999	-.2422	-.2435	-.2407	-.232999.9999	999.9999	-.2668	-.2602	-.0419
	-.2377	-.2538	-.2596	-.1693	-.2503	-.2438	-.2418	-.2533	-.1221	-.2704	-.1018	-.1392	-.1515	-.1823	-.1267	-.1121	999.9999	999.9999	-.1562	-.2686
	.2538	.2775	.2644	.1014	.1437	.3443	.1182.9999.9999	.1555	.999.9999	.1459	.1018	.999.9999	.2073	.0639	.1516	.1121	999.9999	999.9999	-.1562	-.2686
	.7705	.8190	.8498	.9334	.9299	1.2481	1.2710	1.4256	1.4469	1.3066	1.4675	1.4765	1.5042	1.0193	1.5859	1.5221	1.5021	1.4501	1.4325	1.6288
				.4645	.7207	.7586	-.2165	-.2486	-.1302	-.1269	-.1174	-.1290	-.1130	999.9999	-.0999	-.1163		-.1750	-.2405	

MACH (5) = 2.740 ALPHA (1) = 110.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RM/L = 9.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755
	-.0925	-.0944	-.0992	-.1010	-.1058	-.1071	-.1095	-.1053	-.1114	-.1034	-.0955	999.9999	-.2702	-.2624	-.2686
	-.0943	-.0955	-.0995	-.0621	-.0416	-.0226	-.0020	-.0032	-.0040	-.0081	-.0155	999.9999	-.2009	-.1562	-.0083
	.3721	.3866	.3594	.1115	.0087	.5348	.2360.9999.9999	.2050	.999.9999	1.4014	1.5405	1.5414	1.5957	1.6261	1.0595
	.8530	.8694	.9307	.8925	1.2034	1.5192	1.5357	1.5326	1.5348	1.5405	1.5414	1.5957	1.6261	1.0595	1.7530
				.5839	.8120	.8287	-.0560	-.1034	-.0107	-.0111	-.0173	999.9999	999.9999	1.0471	.0265

TABLATED SOURCE DATA. MSFC THT 603 (SA28F)
MSFC THT 603 (SA28F) SRB - ALL PROTOBERANCES

DATE 07 MAR 77

MACH (5) = 2.740 ALPHA (1) = 110.000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.1204	-.1216	.0099	999.9999	1.6112
	.902	999.9999	-.1222	-.0560	999.9999	1.1360
	.923	-.1265	-.1168	.0003	.8400	1.6109
	.943	-.1216	-.1265	.0568	.7726	1.4425
	.962	.1625	.0593	.0593	1.7524	1.6112

-.0125
-.0621

RN/L = 7.1000

P = .81000

PO = 59.990

O(PSF) = 6.8600

ALPHA (1) = 110.000

MACH (6) = 3.480

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0269	-.0401	-.0379	.3853	.8440
	.050	-.0360	-.0418	-.0407	.3932	.8746
	.074	-.0291	-.0452	-.0429	.3639	.9183
	.098	-.0371	-.0486	-.0260	.1215	.8347
	.111	-.0423	-.0514	.0115	.0613	1.1801
	.139	-.0435	-.0469	.0323	.3267	1.4288
	.168	-.0486	-.0446	-.0497	.5071	1.4321
	.191	-.0486	-.0406	-.0475	.2894	.5741
	.255	-.0514	-.0576	.0421	.999.9999	.5809
	.344	-.0559	-.0428	.0522	.2869	1.4469
	.392	999.9999	-.0644	.0595	999.9999	1.5848
	.667	999.9999	-.0644	.0432	999.9999	1.6485
	.702	-.0610	-.0484	.0292	.3299	1.5345
	.724	-.0604	-.0633	.0015	.1616	1.0229
	.744	-.0616	-.0610	-.0576	.2687	1.6823
	.755	-.0616999.9999	-.0655	.0437	.2558	1.5420
	.869	-.0689	-.0717	.0471	.999.9999	1.6352
	.902	999.9999	-.0711	-.0114	.999.9999	1.850
	.923	-.0711	-.0694	.0449	.8355	1.6635
	.945	-.0723	-.0751	.0748	.7156	1.3746
	.982	.1938	.0934	.0934	1.7601	1.7601

.6300 .0009 -.0497
.8408 .0506999.9999
.8470 .0539 -.0519

999.9999
1.012
.0759

.0561
.0550
.0528
.0630
999.9999
1.012
.0759

.0162
.0003

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11068) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0095

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 45.000

MACH (1) = .602 ALPHA (1) = 130.100 Q(PSF) = 7.5400 PO = 38.000 P = 29.750 RN/L = 8.6000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.1345	-.1425	-.1453	-.4551	.0408
	.050	-.1652	-.1699	-.1559	-.4782	.0540
	.074	-.1888	-.2031	-.3239	-.4973	.0534
	.098	-.2273	-.2333	-.2257	-.6700	.0023
	.111	-.2543	-.2579	-.2499	-.7370	-.1159
	.139	-.2660	-.2797	-.2778	-.7111	-.3242
	.168	-.3013	-.3098	-.3118	-.7219	-.5649
	.191	-.3222	-.3282	-.3326	-.6821	-.5906
	.255	-.3786	-.3771	-.4712	-.9999	-.6130
	.344	-.4357	-.4236	-.4178	-.7551	-.6168
	.392	-.4357	-.4236	-.6406	-.6181	-.8204
	.667	-.9999	-.3578	-.8417	-.6607	-.1357
	.702	-.4670	-.5082	-.5632	-.2167	-.7911
	.724	-.5869	-.5559	-.5764	-.8586	-.1015
	.744	-.3930	-.4659	-.5133	-.7375	-.8402
	.755	-.4873	-.9999	-.5720	-.8353	-.9193
	.869	-.5222	-.4046	-.1368	-.9999	-.6597
	.902	-.9999	-.4838	-.7832	-.9999	-.3209
	.923	-.5574	-.7094	-.8012	-.1907	-.6865
	.945	-.5435	-.7174	-.6086	-.1677	-.5033
	.982	-.3421	-.8142	-.8142	-.1677	-.5944

MACH (2) = .908 ALPHA (1) = 130.100 Q(PSF) = 7.4500 PO = 22.010 P = 12.900 RN/L = 8.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.2687	-.2685	-.2778	-.4995	-.1148
	.050	-.2774	-.2927	-.3112	-.4507	-.0526
	.074	-.3010	-.3346	-.3484	-.3574	-.0117
	.098	-.3254	-.3673	-.3907	-.3693	.0250
	.111	-.3425	-.3800	-.4249	-.4099	.1272
	.139	-.3492	-.3696	-.3606	-.4095	.4266
	.168	-.3749	-.3937	-.3884	-.4152	.4588
	.191	-.3915	-.4111	-.3997	-.5652	.4021
	.255	-.4356	-.4560	-.4293	-.6376	.4649
	.344	-.4356	-.4560	-.4844	-.9999	.6370
	.392	-.4356	-.4560	-.4844	-.9999	.6630

(R11068)

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (2) = .908 ALPHA (1) = 130.100

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-.344	-.4611	-.4491	-.5000	-.6612	-.6611	.5145	.6737	-.5331
	.392			-.4732				.6792	-.7027
	.667	999.9999		-.5209		999.9999		.7275	-.6914
	.702	-.5458	-.5653	-.5559	-.6915	-.6470	.6030	.7833	-.6929
	.724	-.5948	-.5820	-.6368	-.7586	-.9282	.0063	.0444	999.9999
	.744	-.5505	-.5987	-.6055	-.6444	-.7835	.7966	.0444	-.6786
	.755	-.5834	999.9999	-.6129	-.6818	-.8459	.6261	.8095	-.6630
	.859	-.6847		-.8660	-1.1118			.7843	
	.902	999.9999		-.6905	-1.1731	999.9999		.2983	
	.923	-.7517		-.6222	-.8326	1536		.8410	-1.0043
	.943	-.6914		-.6463	-.5908	.1163		.5654	-1.0432
	.982	-.3726			-.5171			1.1093	

RM/L = 6.6000

P = 9.0800

PO = 22.010

Q(P5F) = 9.1500

ALPHA (1) = 130.100

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	-.2880	-.3120	-.3202	-.3469	-.3434	-.3417	-.3580	-.4515	-.4629	.3645	.0615
	.050	.074	.312	.3394	.3434	.3417	.3580	.4515	.4629	.3645	.1215
	.111	.3401	.3451	.3417	.3437	.3473	.3473	.4068	.3505	.6419	.1362
	.139	.3498	.3551	.3437	.3437	.3473	.3473	.4068	.3505	.6419	.0205
	.168	.3622	.3646	.3592	.3622	.3622	.3622	.3811	999.9999	.5617	-.0576
	.191	.3697	.3707	.3674	.3674	.3674	.3674	.3459		.8054	.1977
	.255	.3886		.3909	.3909	.3909	.3909	.3459	999.9999	.6886	.2194
	.344	-.4152	-.4050	-.4222	-.4222	-.4222	-.4222	-.3132		.8243	-.3573
	.392			-.4015	-.4015	-.4015	-.4015	-.3132	999.9999	.8237	-.39438
	.667	999.9999		-.4411	-.4411	-.4411	-.4411	-.2356		.8237	-.39438
	.702	-.4210	-.4506	-.4522	-.4522	-.4522	-.4522	-.2356	999.9999	.8237	-.39438
	.724	-.4730	-.4665	-.4747	-.4747	-.4747	-.4747	-.3036		.2738	-.4234
	.744	-.4401	-.4742	-.4667	-.4667	-.4667	-.4667	-.3036		.9558	-.4947
	.755	-.4691	999.9999	-.4667	-.4667	-.4667	-.4667	-.3462	999.9999	.9782	-.5146
	.859	-.5266		-.5695	-.5695	-.5695	-.5695	-.3462	999.9999	.9604	-.5042
	.902	999.9999		-.5934	-.5934	-.5934	-.5934	-.3462	999.9999	.9604	-.5042
	.923	-.5817		-.6122	-.6122	-.6122	-.6122	-.3462	999.9999	.9604	-.5042
	.943	-.5812		-.6289	-.6289	-.6289	-.6289	-.3462	999.9999	.9604	-.5042
	.982	-.1568								.9604	-.5042

RM/L = 9.0800

P = 22.010

PO = 9.1500

MSFC TNT 603 (SA23F) SRB - ALL PROTUBERANCES (R11068)

MACH (5) = 2.740 ALPHA (1) = 130.100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1296	-.1319	-.0469	999.9999	1.2829
.902	999.9999	-.1307	-.1126	999.9999	.5900
.923	-.1301	-.1301	-.0307	.5281	1.0485
.945	-.1271	-.1368	-.1095	.3339	.7086
.982	.2882		.1862		1.6140

MACH (6) = 3.480 ALPHA (1) = 130.100 O(P)SF = 6.8600 PO = 60.010 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0305	-.0441	-.0581	.0714	.2873
.050	-.0407	-.0475	-.0593	.0742	.3414
.074	-.0339	-.0531	-.0514	.0483	.4028
.098	-.0407	-.0554	-.0559	-.0153	.3780
.111	-.0463	-.0554	-.0001	.1672	.9365
.139	-.0480	-.0542	.0235	.1824	1.0471
.168	-.0531	-.0672	.0128	.1515	1.0499
.191	-.0565	-.0503	.0060	.1818	1.0453
.255	-.0581	-.0678	.0173	.1724	1.0436
.344	-.0627	-.0441	.0089	.1724	1.0476
.392	999.9999	-.0700	-.0035	999.9999	1.0482
.667	-.0677	-.0480	-.0548	.1148	.9372
.702	-.0694	-.0706	-.0463	-.0114	.2501
.724	-.0661	-.0632	-.0368	.0771	1.9095
.744	-.0661	-.0632	-.0441	.1773	1.4676
.755	-.0661	999.9999	-.0748	.1773	1.1863
.869	-.0745	-.0762	-.0108	999.9999	1.2833
.902	999.9999	-.0751	-.0531	999.9999	.5770
.923	-.0740	-.0745	-.0055	.4981	1.0227
.945	-.0711	-.0773	-.0497	.3126	.6846
.982	.3199		.1807		1.6547

TABLULATED SOURCE DATA. MSFC THT 603 (SA28F)

DATE 07 MAR 77

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (2) = .899 ALPHA (1) = 149.000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.344	-.3100	-.3107	-.3573	-.5958	-.3608	.1822	.2608	-.6496
	.392			-.4654	-.6631	999.9999	.2705	-.5227	-.8139
	.667	999.9999	-.2645	-.4370	-.4785	999.9999	.2936	-.6089	999.9999
	.702	-.3609	-.4014	-.4603	-.5381	-.5898	.4771	-.4970	999.9999
	.724	-.5137	-.4712	-.2410	-.3422	-.2818	-.5179	-.7792	-.9599
	.744	-.0945	-.1930	-.3166	-.5449	-.4247	.6678	-.6594	
	.755	-.1984	999.9999	-.3166	-.5449	-.4247	.3750	-.4826	
	.869	-.3695	-.4886	-.4928	-.6829	999.9999	.3878	-.2304	
	.902	999.9999	-.4212	-.4928	-.6829	999.9999	.2304	-.4853	
	.923	-.3741	-.4086	-.4613	-.5122	-.5122	-.2219	-.4458	
	.945	-.3472	-.4077	-.4322	-.4322	-.5463	-.5297	-.9294	
	.982	-.1264	-.4733	-.4733	-.4733		.9294		

MACH (3) = 1.207 ALPHA (1) = 149.000 QIPSF) = 9.1700 PO = 22.010 P = 9.0000 RN/L = 6.6000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THEIA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.027	-.1955	-.1932	-.1977	-.1874	-.1874	-.1808	-.4295	-.4533
	.050	-.2560	-.2552	-.2622	-.2862	-.2862	-.3593	-.3248	999.9999
	.074	-.3437	-.3502	-.3526	-.4987	-.4987	-.3425	-.4548	999.9999
	.098	-.4636	-.4326	-.5485	-.7023	-.7023	-.3934	-.4533	999.9999
	.111	-.4115	-.4304	-.4691	-.3719	-.7161	.1611	-.1760	999.9999
	.139	-.3141	-.3289	-.3198	-.3435	-.4155	-.2229	-.1083	999.9999
	.168	-.2919	-.3277	-.3044	-.4322	-.3326	999.9999	-.0791	999.9999
	.191	-.2812	-.2808	-.3075	-.2696	-.2696	.3297	-.3399	999.9999
	.255	-.2511	-.2528	-.4744	999.9999	999.9999	.3347	-.4667	999.9999
	.344	-.2208	-.2249	-.2226	-.3177	-.1818	.2524	-.2844	999.9999
	.392			-.2102	-.2102		.3360	-.5277	999.9999
	.667	999.9999	-.2396	-.5216	999.9999	999.9999	.3528	-.4548	999.9999
	.702	-.2712	-.3126	-.3644	-.4032	-.4032	.3331	-.3785	999.9999
	.724	-.4690	-.4294	-.4178	-.4548	-.4771	-.4416	-.4135	999.9999
	.744	-.2240	-.2552	-.2543	-.2936	-.0426	.9779	-.4135	999.9999
	.755	-.2375	999.9999	-.3098	-.3647	-.1704	.6043	-.4135	999.9999
	.869	-.4879	-.5465	-.4540	-.4540	999.9999	.5424	-.4834	999.9999
	.902	999.9999	-.5304	-.5876	994.9999	994.9999	.1260	-.5038	999.9999
	.923	-.4491	-.5365	-.6338	-.2119	-.0821	.2119	-.4834	999.9999
	.945	-.4791	-.5426	-.5679	-.2621	-.2621	-.1974	-.5038	999.9999
	.982	-.0459	-.1262	-.2088	-.2088	-.2088	1.1262		999.9999

TABULATED SOURCE DATA, MSFC THT 603 (SAZBF)

MSFC THT 603 (SAZBF) SR8 - ALL PROTURBANCES (R11069)

MACH (4) = 1.958 ALPHA (1) = 149.000 DIRPSF = 10.980 PO = 30.000 P = 4.0900 RN/L = 7.5000

SECTION (1)SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.027	-.1550	-.1793	-.1920	-.2146	-.2091	-.0710	.3396	.3883	-.2254
	.050	-.1735	-.1717	-.1920	-.2091	-.2025	-.2885	.3942	.3842	-.1821
	.074	-.1984	-.2005	-.2161	-.2556	-.2727	-.2689	.4145	.3942	-.2265
	.098	-.2516	-.2727	-.2727	-.2885	-.2885	.3945	.4145	.4145	-.2350
	.111	-.2103	-.2112	-.2297	-.2280	-.2689	.3945	.4145	.4145	-.2350
	.139	-.1837	-.1825	-.1876	-.2093	-.2505	.3945	.4145	.4145	-.2350
	.168	-.1776	-.1869	-.1903	-.2156	-.2505	.3945	.4145	.4145	-.2350
	.191	-.1806	-.1860	-.1826	-.2231	-.2505	.3945	.4145	.4145	-.2350
	.255	-.1806	-.1860	-.1826	-.2231	-.2505	.3945	.4145	.4145	-.2350
	.344	-.1567	-.1574	-.1920	-.2146	-.2091	.3945	.4145	.4145	-.2350
	.392	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	.667	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	.702	-.2049	-.2531	-.2632	-.2168	-.1008	.3192	.4236	.4236	-.2350
	.724	-.2807	-.2836	-.2718	-.2942	-.2505	.3192	.4236	.4236	-.2350
	.744	-.1528	-.1632	-.1906	-.0385	.0411	.8248	.9034	.9034	-.1120
	.755	-.1846999.9999	-.1846	-.2141	-.1243	.0186	.6443	.7146	.7146	-.1370
	.859	-.2219	-.2367	-.2141	-.1864	.0999.9999	.4963	.4963	.4963	-.1370
	.902	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	.923	-.2593	-.2690	-.2690	-.1760	.1746	.4789	.4789	.4789	-.2263
	.945	-.2666	-.2982	-.2982	-.1760	.1746	.4789	.4789	.4789	-.2263
	.982	-.1742	-.2982	-.2982	-.1760	.1746	.4789	.4789	.4789	-.2263

MACH (5) = 2.740 ALPHA (1) = 149.000 DIRPSF = 6.3700 PO = 30.010 P = 1.2100 RN/L = 5.2000

SECTION (1)SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000112.5000135.0000157.5000180.0000225.0000270.0000315.0000

X/L	.027	-.0689	-.0862	-.0955	-.1034	-.1071	-.1047	.0087	.0222	-.0087
	.050	-.0852	-.0931	-.1034	-.1034	-.1071	.0222	.0222	.0222	-.0087
	.074	-.0798	-.1052	-.1131	-.1131	-.1144	.0380	.0380	.0380	-.0087
	.098	-.0919	-.1107	-.1156	-.1156	-.1277	.0277	.0277	.0277	-.0087
	.111	-.0979	-.1119	-.1083	-.0659	-.0081	.4230	.3927	.3927	-.1016
	.139	-.0931	-.1023	-.0955	-.0664	.0252	.3659	.4224	.4224	-.1016
	.168	-.0937	-.1017	-.0943	-.0767	.0046999.9999	.3799	.4261	.4261	-.1016
	.191	-.0949	-.0882	-.0913	-.0736	.0143	.3726	.4218	.4218	-.1016
	.255	-.0961	-.0966	-.0913	-.0767	.0143	.4231	.4231	.4231	-.0907
	.344	-.0907	-.0840	-.0888	-.0736	.0154	.4304	.4304	.4304	-.0919
	.392	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	.667	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	.702	-.1149	-.1052	-.1137	-.0888	-.0014	.3855	.4831	.4831	-.0985
	.724	-.1338	-.1362	-.1059	-.1271	-.0919	.0422	.0538	.0538	-.0985
	.744	-.0871	-.0840	-.0846	-.0396	.1030	.6864	.9556	.9556	-.0099
	.755	-.0938999.9999	-.0938	-.0985	-.0034	.0957	.5997	.6866	.6866	-.0099

TABLATED SOURCE DATA, MSFC TWT 603 (SA28F)
 MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11069)

DATE 07 MAR 77

MACH (5) = 2.740 ALPHA (1) = 149.000
 SECTION (1)SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000
 X/L .869 -.1047 -.1131 -.0586 999.9999 .4510
 .902 999.9999 -.1265 -.1253 999.9999 .1297
 .923 -.1166 -.1284 -.0305 .2566 .4418
 .945 -.1271 -.1356 -.0791 -.0190 .1382
 .982 .2615 .2487 .1390

MACH (6) = 3.480 ALPHA (1) = 149.000 Q(PSF) = 6.8600 PO = 60.000 P = .81000 RN/L = 7.1000

SECTION (1)SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000
 X/L .027 -.0304 -.0451 -.0554 -.0514 .0274
 .050 -.0406 -.0497 -.0559 -.0531 .0533
 .074 -.0367 -.0570 -.0644 -.0587 .0540
 .098 -.0434 -.0599 -.0678 -.0655 .0561
 .111 -.0485 -.0576 -.0604 -.0430 .4355
 .139 -.0485 -.0514 -.0525 -.0169 .3940
 .168 -.0497 -.0480 -.0503 -.0248 .4468
 .191 -.0525 -.0435 -.0480 -.0243 .4479
 .255 -.0525 -.0565 -.0271 .999.9999 .4456
 .344 -.0514 -.0406 -.0249 .0468 .4498
 .392 999.9999 -.0666 -.0451 -.0266 .4541
 .667 .700 -.0530 -.0401 .999.9999 .4569
 .702 -.0762 -.0768 -.0536 -.0683 .4947
 .724 -.0356 -.0351 .0407 .0489 .5150
 .755 -.0441999.9999 -.0520 .0313 .1074 .999.9999
 .869 -.0542 .0639 .0215 .999.9999 .872
 .902 999.9999 -.0723 -.0683 .999.9999 .1241
 .923 -.0627 -.0706 -.0024 .2237 .3688
 .945 -.0694 -.0762 -.0283 .0488 .1686
 .982 .2951 .2901 .2901 .2901 .1.0059

SECTION (1)SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000
 X/L .027 -.0304 -.0451 -.0554 -.0514 .0274
 .050 -.0406 -.0497 -.0559 -.0531 .0533
 .074 -.0367 -.0570 -.0644 -.0587 .0540
 .098 -.0434 -.0599 -.0678 -.0655 .0561
 .111 -.0485 -.0576 -.0604 -.0430 .4355
 .139 -.0485 -.0514 -.0525 -.0169 .3940
 .168 -.0497 -.0480 -.0503 -.0248 .4468
 .191 -.0525 -.0435 -.0480 -.0243 .4479
 .255 -.0525 -.0565 -.0271 .999.9999 .4456
 .344 -.0514 -.0406 -.0249 .0468 .4498
 .392 999.9999 -.0666 -.0451 -.0266 .4541
 .667 .700 -.0530 -.0401 .999.9999 .4569
 .702 -.0762 -.0768 -.0536 -.0683 .5150
 .724 -.0356 -.0351 .0407 .0489 .999.9999
 .755 -.0441999.9999 -.0520 .0313 .1074 .0246
 .869 -.0542 .0639 .0215 .999.9999 .0077
 .902 999.9999 -.0723 -.0683 .999.9999 .3972
 .923 -.0627 -.0706 -.0024 .2237 .1241
 .945 -.0694 -.0762 -.0283 .0488 .3688
 .982 .2951 .2901 .2901 .2901 .1.0059

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES (R11070) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
MREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RM-SCH = 2.000 PHI = 45.000

MACH (1) = .603 ALPHA (1) = 169.900 O(PSF) = 7.5600 PO = 37.990 P = 29.710 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1090	.1068	.0798	.1141	.1122	.1238
.050	.0735	.0798	.0826	.0472	.0557	.0557	.0557
.074	.0114	.0210	.0305	.0560	.0506	.0506	.0506
.098	.1161	.1165	.1588	.3342	.3190	.3190	.3190
.111	.3247	.3356	.5408	.6352	.7246	.7246	.7246
.139	.0456	.1005	.1212	.1635	.0886	.0886	.0886
.168	.0722	.0713	.1148	.1055999 9999	.0325	.0166	.0166
.191	.0625	.0626	.0949	.0827	.0250	.0013	.0013
.255	.0562	.0462	.0893	.999.9999	.0155	.0155	.0155
.344	.0580	.0571	.1132	.0900	.0097	.0097	.0097
.392	.999.9999	.0407	.1220	.999.9999	.0039	.0039	.0039
.667	.0544	.0167	.0195	.0264	.0983	.0983	.0983
.702	.0824	.1482	.2093	.2529	.0248	.0248	.0248
.744	.0747	.0890	.1913	.2529	.3627	.3627	.3627
.755	.0509999.9999	.0691	.0847	.1238	.4013	.4013	.4013
.809	.3341	.3952	.3470	.999.9999	.2177	.2177	.2177
.902	.999.9999	.4275	.4912	.999.9999	.0658	.0658	.0658
.923	.4316	.4625	.5490	.5406	.2540	.2540	.2540
.945	.3918	.4344	.5013	.6435	.4809	.4809	.4809
.982	.4595	.4973	.4973	.5614	.7245	.7245	.7245
					.5614	.5614	.5614

MACH (2) = .904 ALPHA (1) = 169.900 O(PSF) = 7.4200 PO = 22.010 P = 12.950 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0875	.0845	.0444	.2051	.0780	.0713
.050	.0400 <td>.0715 <td>.0444 <td>.0181 <td>.0105 <td>.0105 <td>.0105 </td></td></td></td></td></td>	.0715 <td>.0444 <td>.0181 <td>.0105 <td>.0105 <td>.0105 </td></td></td></td></td>	.0444 <td>.0181 <td>.0105 <td>.0105 <td>.0105 </td></td></td></td>	.0181 <td>.0105 <td>.0105 <td>.0105 </td></td></td>	.0105 <td>.0105 <td>.0105 </td></td>	.0105 <td>.0105 </td>	.0105
.074	.0303 <td>.0471 <td>.0471 <td>.1860 <td>.1952 <td>.1952 <td>.1952 </td></td></td></td></td></td>	.0471 <td>.0471 <td>.1860 <td>.1952 <td>.1952 <td>.1952 </td></td></td></td></td>	.0471 <td>.1860 <td>.1952 <td>.1952 <td>.1952 </td></td></td></td>	.1860 <td>.1952 <td>.1952 <td>.1952 </td></td></td>	.1952 <td>.1952 <td>.1952 </td></td>	.1952 <td>.1952 </td>	.1952
.098	.1837 <td>.2504 <td>.2504 <td>.3790 <td>.4346 <td>.4346 <td>.4346 </td></td></td></td></td></td>	.2504 <td>.2504 <td>.3790 <td>.4346 <td>.4346 <td>.4346 </td></td></td></td></td>	.2504 <td>.3790 <td>.4346 <td>.4346 <td>.4346 </td></td></td></td>	.3790 <td>.4346 <td>.4346 <td>.4346 </td></td></td>	.4346 <td>.4346 <td>.4346 </td></td>	.4346 <td>.4346 </td>	.4346
.111	.3401 <td>.3536 <td>.3769 <td>.3712 <td>.3957 <td>.3957 <td>.3957 </td></td></td></td></td></td>	.3536 <td>.3769 <td>.3712 <td>.3957 <td>.3957 <td>.3957 </td></td></td></td></td>	.3769 <td>.3712 <td>.3957 <td>.3957 <td>.3957 </td></td></td></td>	.3712 <td>.3957 <td>.3957 <td>.3957 </td></td></td>	.3957 <td>.3957 <td>.3957 </td></td>	.3957 <td>.3957 </td>	.3957
.139	.1172 <td>.1211 <td>.1206 <td>.1230 <td>.1038 <td>.1038 <td>.1038 </td></td></td></td></td></td>	.1211 <td>.1206 <td>.1230 <td>.1038 <td>.1038 <td>.1038 </td></td></td></td></td>	.1206 <td>.1230 <td>.1038 <td>.1038 <td>.1038 </td></td></td></td>	.1230 <td>.1038 <td>.1038 <td>.1038 </td></td></td>	.1038 <td>.1038 <td>.1038 </td></td>	.1038 <td>.1038 </td>	.1038
.168	.0794 <td>.0809 <td>.0779 <td>.0947 <td>.0577 <td>.0577 <td>.0577 </td></td></td></td></td></td>	.0809 <td>.0779 <td>.0947 <td>.0577 <td>.0577 <td>.0577 </td></td></td></td></td>	.0779 <td>.0947 <td>.0577 <td>.0577 <td>.0577 </td></td></td></td>	.0947 <td>.0577 <td>.0577 <td>.0577 </td></td></td>	.0577 <td>.0577 <td>.0577 </td></td>	.0577 <td>.0577 </td>	.0577
.191	.0664 <td>.0664 <td>.0627 <td>.0829 <td>.0080 <td>.0080 <td>.0080 </td></td></td></td></td></td>	.0664 <td>.0627 <td>.0829 <td>.0080 <td>.0080 <td>.0080 </td></td></td></td></td>	.0627 <td>.0829 <td>.0080 <td>.0080 <td>.0080 </td></td></td></td>	.0829 <td>.0080 <td>.0080 <td>.0080 </td></td></td>	.0080 <td>.0080 <td>.0080 </td></td>	.0080 <td>.0080 </td>	.0080
.255	.0666 <td>.0615 <td>.0627 <td>.0829 <td>.0049 <td>.0049 <td>.0049 </td></td></td></td></td></td>	.0615 <td>.0627 <td>.0829 <td>.0049 <td>.0049 <td>.0049 </td></td></td></td></td>	.0627 <td>.0829 <td>.0049 <td>.0049 <td>.0049 </td></td></td></td>	.0829 <td>.0049 <td>.0049 <td>.0049 </td></td></td>	.0049 <td>.0049 <td>.0049 </td></td>	.0049 <td>.0049 </td>	.0049
				.999.9999	.0140	.0140	.0140

TABULATED SOURCE DATA, MSFC TWT 603 (SA28F)

DATE 07 MAR 77

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (2) = .904 ALPHA (1) = 169.900

SECTION (1) SRB DEPENDENT VARIABLE CP

MACH	0.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L												
.344	-.0864	-.0920		-.1251	-.1352	-.1065		-.0233	-.0138		-.1500	
.392				-.1400	-.1400				-.0169		-.1695	
.667	999.9999		.0518		.0390	999.9999			.1225		-.0363	
.702	-.0057	-.0081		-.0287	-.0307	-.0375		-.0014	.0107		-.0512	
.724	-.0108	-.0267		-.1233	-.1758	-.2148		-.2683	-.2771		999.9999	
.744	-.0725	-.1202		-.0348	-.0228	.0974		-.2937	.3051		-.0296	
.755	-.1290	999.9999		-.1162	-.0678	.0127		.1575	.1750		-.0705	
.869	-.4123		-.4366		-.4336		999.9999		-.2190			
.902	999.9999		-.4067		-.4393		999.9999		-.4129		-.4188	
.923	-.4613		-.3921		-.4428		-.4953		-.5019		-.3790	
.945	-.3187		-.3428		-.4358		-.5646		-.6279			
.982	-.3254				-.3763				-.4241			

MACH (3) = 1.197 ALPHA (1) = 169.900 (PSE) = 9.1400 PO = 22.010 P = 9.1100 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

MACH	0.000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L												
.027	.0348		.0228		.0061		.0299		.0381		-.1926	-.2370
.050	-.0250		-.0423		-.0832		-.1226		-.2054		-.0056	-.0316
.074	-.1457		-.1729		-.2783		-.4508		-.4746		-.0427	.0291
.098	-.5437		-.5095		-.5842		-.4986		-.5119		-.0953	
.111	-.2080	-.2009	-.1826		-.1756	-.5112	-.0433		-.0162			
.139	-.0610	-.0502	-.0439		-.0590	-.0352	-.0379	.0621	.0621		-.0056	-.0316
.168	-.0269	-.0297	-.0274		-.0428	-.0176	-.0442	-.0280	-.0280		-.0451	
.191	-.0307	-.0307	-.0374		-.0626	-.0415	-.0233	-.0382	-.0382		-.0752	
.255	-.0611	-.0425	-.0564		-.0850	-.0707	-.0409	-.0409	-.0409		-.1089	
.344	-.0296		-.1019		-.1013		-.0583		-.0583		-.0514	
.392	999.9999		.0310		-.0409		999.9999		-.0023		-.0515	
.667	999.9999	-.1188		-.1389	-.1538	-.1681		-.1192	-.1192		999.9999	
.702	-.0138	-.1897	-.2057		-.3684	-.4287		-.4287	-.4287		999.9999	
.724	-.0072	-.0523	-.1897		-.2633	-.2280		-.5524	-.5524		.2219	
.744	-.0651	999.9999	-.0935		-.1348	-.3686		-.3443	-.3443		.1214	
.755	-.3373		-.3514		-.2514	-.0266		-.0266	-.0266			
.869	902.9029		-.3511		-.3718	-.3093		-.3093	-.3093		-.3901	
.902	909.9999		-.3241		-.3041	-.2945		-.2945	-.2945		-.4076	
.923	-.3241		-.3369		-.4512	-.6617		-.6294	-.6294			
.945	-.3095				-.2638							
.982	-.1689											

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

MSFC TNT 603 (SA28F) SRB - ALL PROTUBERANCES (R11070)

MACH (4) = 1.968 ALPHA (1) = 169.900 O(P)SF = 10.920 PO = 30.000 P = 4.0300 RN/L = 7.5000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0088	-.0184	-.0685	-.0489	-.0298	-.0209	-.2027	-.2131	-.0418	-.0482	-.0359
	.050	-.0938	-.0960	-.1080	-.1517	-.2009	-.2027	-.2027	-.2131	-.0286	-.010999	.9999
	.074	-.1886	-.1481	-.1615	-.2160	-.2092	-.2092	-.2092	-.2131	-.0220	-.0163	.0438
	.098	-.2167	-.1825	-.2096	-.2092	-.2092	-.2092	-.2092	-.2131	-.0418	-.0482	-.0359
	.111	-.0209	-.0110	-.0256	-.0290	-.0277	-.0290	-.0290	-.0290	-.0286	-.010999	.9999
	.139	-.0208	-.0043	-.0077	-.0028	-.0113	-.0694	-.0190	-.0381	-.0220	-.0163	.0438
	.168	-.0133	-.0202	-.0013	-.0159	-.0403	.9999	.9999	.9999	-.0425	-.0425	
	.191	-.0119	-.0021	-.0057	-.0273	-.0492	-.0492	-.0492	-.0492	-.0425	-.0425	
	.255	-.0020	-.0163	-.0930	-.0592	-.0258	-.0258	-.0258	-.0258	-.0552	-.0552	
	.344	-.0197	-.0266	-.0181	-.0181	-.0181	-.0181	-.0181	-.0181	-.0283	-.0283	
	.392	999.9999	-.0744	-.1073	-.1073	999.9999	999.9999	999.9999	999.9999	-.1682	-.1682	
	.667	-.0906	-.1075	-.1260	-.1222	-.1035	-.1035	-.1035	-.1035	999.9999	999.9999	
	.702	-.1930	-.1968	-.2123	-.2199	-.2137	-.2137	-.2137	-.2137	999.9999	999.9999	
	.724	-.0718	-.0328	-.1066	-.1357	-.1292	-.1292	-.1292	-.1292	999.9999	999.9999	
	.744	-.0453	.9999	-.0583	-.0400	-.0165	-.0165	-.0165	-.0165	999.9999	999.9999	
	.755	-.1459	-.1524	-.1112	-.1112	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	
	.869	999.9999	-.1818	-.2174	-.2174	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	
	.902	-.1905	-.2018	-.1185	-.1185	-.2342	-.2342	-.2342	-.2342	-.1629	-.1629	
	.945	-.1937	-.2142	-.2485	-.2485	-.2342	-.2342	-.2342	-.2342	-.2549	-.2549	
	.982	-.0877	-.0201	-.0201	-.0201	-.0201	-.0201	-.0201	-.0201	-.1391	-.1391	

MACH (5) = 2.740 ALPHA (1) = 169.900 O(P)SF = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0515	-.0568	-.0736	-.0707	-.0707	-.0707	-.0707	-.0707	-.0190	-.0440	-.0305
	.050	-.0788	-.0756	-.0901	-.1058	-.1058	-.1058	-.1058	-.1058	-.0087	-.0281999	.9999
	.074	-.0836	-.0860	-.1083	-.1199	-.1199	-.1199	-.1199	-.1199	-.0070	-.0410	-.0044
	.098	-.0927	-.0973	-.1150	-.1271	-.1271	-.1271	-.1271	-.1271	-.0385	-.0385	
	.111	-.0173	-.0293	-.0299	-.0315	-.0587	-.1113	-.0435	-.0277	-.0190	-.0440	-.0305
	.139	-.0100	-.0217	-.0172	-.0285	-.0276	-.0404	-.0279	-.0378	-.0087	-.0281999	.9999
	.168	-.0138	-.0288	-.0205	-.0325	-.0361	-.0358	-.0281	-.0385	-.0070	-.0410	-.0044
	.191	-.0172	-.0313	-.0234	-.0361	-.0361	-.0361	-.0263	-.0384	-.0384	-.0384	
	.255	-.0087	-.0179	-.0507	-.0507	-.0507	-.0507	-.0283	-.0384	-.0384	-.0384	
	.344	-.0002	-.0327	-.0311	-.0311	-.0176	-.0176	-.0283	-.0384	-.0384	-.0384	
	.392	999.9999	-.0410	-.0129	-.0129	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	
	.667	-.0392	-.0491	-.0652	-.0652	-.0495	-.0495	-.0193	-.0372	-.0203	-.0203	
	.702	-.1053	-.1041	-.0988	-.1108	-.1058	-.1058	-.0907	-.0396	-.0774	-.0774	
	.724	-.0459	-.0501	-.0493	-.0700	-.1042	-.1042	-.0913	-.0396	999.9999	999.9999	
	.744	-.0196	-.0196	-.0143	-.0111	-.0184	-.0184	-.0532	-.0532	999.9999	999.9999	
	.755	-.0196	-.0196	-.0143	-.0111	-.0184	-.0184	-.0532	-.0532	999.9999	999.9999	

TABLATED SOURCE DATA, MSFC THT 603 (SA28F)

(R11070)

DATE 07 MAR 77

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 169.900

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.0470	-.0561	-.0519	999.9999	.0653
	.902	999.9999	-.0919	-.1065	999.9999	-.0600
	.923	-.0950	-.0889	-.0524	-.0011	.0081
	.945	-.1114	-.1198	-.1071	-.0937	-.0634
	.962	.1689		.1267		.2499

MACH (6) = 3.480 ALPHA (1) = 169.900 OIPSF) = 6.8600 PO = 60.010 P = .81000 RN/L = 7.1000

DEPENDENT VARIABLE CP

THE TA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0198	-.0345	-.0452	-.0497	-.0486
	.050	-.0333	-.0418	-.0537	-.0627	-.0604
	.074	-.0277	-.0463	-.0610	-.0672	-.0678
	.098	-.0367	-.0520	-.0655	-.0711	-.0627
	.111	-.0119	-.0238	-.0266	-.0289	-.0320
	.139	-.0086	-.0182	-.0148	-.0103	-.0302
	.168	-.0125	-.0193	-.0170	-.0167	-.0409
	.191	-.0131	-.0164	-.0165	-.0227	-.0398
	.255	-.0097	-.0159	-.0311	-.0096	-.0322
	.344	-.0069	-.0152	-.0204	-.0153	-.0398
	.392	999.9999	-.0182	-.0396	-.0046	-.0404
	.667	999.9999	-.0215	-.0383	999.9999	-.0387
	.702	-.0131	-.0548	-.0406	-.0226	-.0413
	.724	-.0559	-.0477	-.0587	-.0559	-.0322
	.744	.0392	.0477	.0370	.0454	999.9999
	.755	.0364	.0499	.0178	.0866	.0437
	.869	-.0103	-.0244	-.0082	.0212	.0134
	.902	999.9999	-.0508	-.0187	999.9999	.0676
	.923	-.0441	-.0452	-.0565	999.9999	-.0180
	.945	-.0694	-.0522	-.0125	.0268	.0342
	.962	-.2037	-.0525	-.0497	-.0396	-.0114
			.1649			.2839

TABULATED SOURCE DATA, MSFC THT 603 (SA28F)

(R11071) (22 AUG 75)

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES

REFERENCE DATA

SRHF = 116.2600 50.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
RREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

MACH (1) = .596 ALPHA (1) = 179.920 Q(PSF) = 7.4200 PO = 39.000 P = 29.890 RN/L = 8.7000
RN-SCH = 2.000 PHI = .45.000

DEPENDENT VARIABLE CP

SECTION (1) SRB .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1203	.1173	.1130	.1109	.1135
.050	.0863	.0855	.0797	.0740	.0734	.0734
.074	.0277	.0209	.0145	.0133	.0097	.0097
.098	-.1408	-.1506	-.1459	-.1140	-.1547	-.1547
.111	-.4437	-.4585	-.4241	-.4248	-.4369	-.4398
.139	-.0929	-.0898	-.0938	-.0963	-.0966	-.1042
.168	-.0439	-.0404	-.0493	-.0539	-.0579	-.0595
.191	-.0222	-.0229	-.0303	-.0377	-.0451	-.0506
.255	-.0037	-.0229	-.0263	-.0399	-.0399	-.0784
.344	.0400	.0090	-.0431	-.0466	-.0393	-.0552
.392	.999.9999	.0757	-.0756	-.0529	-.0529	-.0857
.667	.999.9999	.0547	.0507	.999.9999	.0234	.0415
.702	-.0189	-.0547	.0030	.0208	.0216	.0147
.744	-.2610	-.2153	-.2237	-.2181	-.1897	.999.9999
.744	-.2774	-.3448	.2321	.2082	.1658	.1947
.755	.1895999.9999	.1591	.1346	.1230	.0948	.1191
.869	-.0791	.0140	-.0730	.999.9999	-.0973	-.0973
.902	.999.9999	-.2444	-.2488	.999.9999	-.2476	-.2476
.923	-.3703	-.3726	-.3736	-.3573	-.3486	-.3455
.945	-.4097	-.5151	-.4234	-.3734	-.4074	-.3830
.982	-.9053	-.8748	-.8748	-.8476	-.8476	-.8476

MACH (2) = .909 ALPHA (2) = 179.920 Q(PSF) = 7.4500 PO = 22.020 P = 12.900 RN/L = 6.4000

DEPENDENT VARIABLE CP

SECTION (1) SRB .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.1284	.1288	.1917	.1188	.1186
.027	.0958	.0833	.0779	.0815	.0760
.074	.0019	-.0280	-.0135	.0022	-.0137
.098	-.2474	-.2621	-.2396	-.1622	-.2107
.111	-.3242	-.2981	-.3069	-.3152	-.3127
.139	-.0754	-.0633	-.0549	-.0747	-.0948
.168	-.0219	-.0229	-.0320	-.0606	-.0796
.191	-.0108	-.0143	-.0219	-.0471	-.0478
.255	-.0097	-.0057	-.0209	-.0347	-.0227
.344	-.0097	-.0003	-.0192	.999.9999	-.0370
.392	-.0097	-.0003	-.0192	.999.9999	-.0396
.667	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.702	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.744	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.755	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.869	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.902	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.923	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.945	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
.982	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999

TABLULATED SOURCE DATA, MSFC TMT 603 (SA28F)

(R11071)

DATE 07 MAR 77

MACH (2) = .909 ALPHA (1) = 179.920

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.344	-.0550	-.0448	-.0811	-.0883	-.0855	-.0764	-.0856	-.1211	-.1644	-.1009	
	.392			-.1569						-.1644		
	.657	999.9999		.1379		999.9999			.0662	.1348		
	.702	.1584	.1661	.1436	.1244	.1159	.1002	.0952	.0952	.1086		
	.724	.0294	.0426	.0369	.0329	.0323	.0292	.0268	.0268	.0637	999.9999	
	.744	.1148	.1492	.1059	.1086	.0906	.0757	.0697	.0697	.0637		
	.755	.0836	.0999	.0730	.0622	.0606	.0461	.0406	.0406	.0339		
	.869	-.3561	-.3140	-.3418	-.3418	-.3254	-.3254	-.3254	-.3254	-.3254		
	.902	999.9999	-.4191	-.2868	-.2868	999.9999	-.3821	-.3821	-.3821	-.3821	-.3897	
	.923	-.4139	-.4535	-.4276	-.4276	-.4095	-.4095	-.4095	-.4095	-.4095	-.3883	
	.945	-.3981	-.5180	-.4425	-.4425	-.4083	-.4083	-.4083	-.4083	-.4083		
	.982	-.6426		-.6212	-.6212		-.6087	-.6087	-.6087	-.6087		

MACH (3) = 1.202 ALPHA (1) = 179.920 O1PSF = 9.1600 PO = 22.010 P = 9.0500 RN/L = 6.6000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.027	.0195	.0085	.0028	.0028	.0080	.0118	.0118	.0629	.0118		
	.050	-.0509	-.0706	-.0773	-.0773	-.0635	-.0629	-.0629	-.0629	-.0629		
	.074	-.2955	-.2232	-.2030	-.2030	-.1868	-.1851	-.1851	-.1851	-.1851		
	.098	-.5372	-.5311	-.5557	-.5557	-.4506	-.5467	-.5467	-.5467	-.5467		
	.111	-.1359	-.1427	-.1293	-.1293	-.1894	-.2470	-.2470	-.2470	-.2470	-.1441	
	.139	-.0192	-.0094	-.0148	-.0203	-.0307	-.0422	-.0525	-.0664	-.0550	-.0441	999.9999
	.168	-.0102	-.0088	-.0219	-.0394	-.0405	-.0553	-.0553	-.0553	-.0553	-.0435	.0929
	.191	-.0066	-.0187	-.0345	-.0443	-.0487	-.0613	-.0613	-.0613	-.0613	-.0312	
	.255	-.0692	-.0899	-.0699	-.0699	999.9999	-.0738	-.0738	-.0738	-.0738	-.1203	
	.344	.0159	-.0345	-.1901	-.1236	-.0787	-.0509	-.0509	-.0509	-.0509	-.0681	
	.392			-.0479	-.0479		-.0162	-.0162	-.0162	-.0162	-.1193	
	.667	999.9999	.1220	.1142	.1142	999.9999	.0887	.0887	.0887	.0887	-.0034	
	.702	-.0345	-.0312	-.0334	-.0164	-.0151	-.0088	-.0088	-.0088	-.0088	999.9999	
	.724	-.1955	-.2007	-.1978	-.1930	-.1769	-.1734	-.1734	-.1734	-.1734	-.2411	
	.744	.3271	.3284	.3090	.3001	.2887	.2465	.2465	.2465	.2465	.1616	
	.755	.2485	.2485	.2274	.2183	.1965	.1593	.1593	.1593	.1593	-.2032	
	.869	-.2166	-.1760	-.2150	-.2150	999.9999	-.4046	-.4046	-.4046	-.4046	-.4663	
	.902	999.9999	-.4474	-.4337	-.4337	999.9999	-.4763	-.4763	-.4763	-.4763	-.6000	
	.923	-.5049	-.4292	-.5271	-.5271	-.4615	-.6246	-.6246	-.6246	-.6246	-.2217	
	.945	-.5717	-.6027	-.5942	-.5942	-.5972	-.2217	-.2217	-.2217	-.2217		
	.982	-.2454		-.2404	-.2404							

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R110711)

MACH (4) = 1.952 ALPHA (1) = 179.920 Q(PSF) = 11.020 PO = 30.010 P = 4.1300 RN/L = 7.6000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L	.027	.0251	.0213	.0139	.0065	.0072									
.050	-.1121	-.1176	-.1121	-.0811	-.0644	-.0555									
.074	-.1706	-.1711	-.1711	-.1594	-.1320	-.1264									
.098	-.2095	-.1941	-.1941	-.1909	-.1445	-.1906									
.111	-.0081	.0033	-.0004	-.0008	-.0275	-.1394	-.0332	-.0240	-.0233	-.0123	.0170				
.139	-.0475	.0321	.0290	.0272	.0254	.0219	.0213	.0128	.0121	.0121	.0480	.9539			
.168	.0539	.0321	.0423	.0300	.0227	.0174	.9999	.9999	.0139	.0138	.0104	.1056			
.191	.0521	.0409		.0205	.0132	.0128	.0118	.0107	.0111						
.255	.0318		.0160	.0227	.9999	.9999	.0111								
.344	.0658	.0163		.0305	.0112	.0163	.0325	.0349	.0058						
.392				.0055	.0208		.0364	.0198	.0198						
.667	.9999		-.0163	.0208	.9999	.9999	.0040	.0170	.0170						
.702	-.0825	-.0806		.0460	.0497	-.0261	-.0597	-.0597	-.0597						
.724	-.1976	-.1874		-.1966	-.1898	-.1734	-.1699	-.0597	999.9999						
.744	-.2472	-.3026		.2188	.2626	.2167	.2595	.2949	.2949						
.755	-.1865	.9999		.1742	.1780	.1573	.1377	.1833	.1833						
.809	-.0690		-.0734	-.0631	.9999	.9999	-.0588	-.0588							
.902	.9999		-.1864	-.1684	.9999	.9999	-.1948	-.1948							
.923	-.1728		-.1537	-.1731	-.1588	-.1778	-.1778	-.1633	-.1633						
.945	-.2695		-.2612	-.2804	-.2852	-.2768	-.2768	-.2853	-.2853						
.982	-.0689			.0728			.0658								

MACH (5) = 2.740 ALPHA (1) = 179.920 Q(PSF) = 6.3700 PO = 30.020 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L	.027	.0178	-.0111	-.0027	-.0020	-.0003									
.050	-.0574	-.0554	-.0554	-.0501	-.0483	-.0446									
.074	-.0670	-.0767	-.0767	-.0779	-.0737	-.0743									
.098	-.0774	-.0882	-.0882	-.0974	-.0743	-.0950									
.111	.0160	.0143	-.0032	-.0075	-.0184	-.0730	-.0172	-.0131	-.0178	-.0119	.0214				
.139	.0271	.0192	.0143	.0020	.0052	.0050	.0070	.0020	.0020	.0076	.9999				
.168	.0180	.0064	.0056	.0046	.0034	.9999	.0028	.0022	.0008	.0026	.0289				
.191	.0137	.0070		.0040	.0022	.0008	.0010	.0003	.0003	.0016					
.255	.0141		.0123	.0026	.9999	.9999	.0052								
.344	.0111	-.0246		-.0141	.0020	.0016	.0099	.0141	.0034	.0034					
.392	.9999		-.0099	.0002	.9999	.9999	.0106	.0184	.0099	.0099					
.667	.9999		-.0398	-.0106	.9999	.9999	-.0106	-.0038	-.0038	-.0038					
.702	-.0398	-.0354		-.0252	-.0196	-.0052	-.0044	-.0143	-.0093	-.0093					
.724	-.1022	-.0944		-.0913	-.0944	-.0852	-.0913	-.0907	999.9999						
.744	.1659	.1916		.1531	.1632	.1319	.1145	.1428	.1428						
.755	.1197	.9999		.1042	.0845	.0791	.0765	.0754	.0997						

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (SA28F) (R11071)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (5) = 2.740 ALPHA (1) = 179.920
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .869 -.0044 -.0149 -.0100 999.9999 -.0166
 .902 999.9999 -.0968 -.0925 999.9999 -.0847
 .923 -.0828 -.0670 -.0682 -.0773 -.0797
 .945 -.1156 -.1120 -.1193 -.1119 -.1162
 .982 .1683 .1725 .1710 .1710

MACH (6) = 3.480 ALPHA (1) = 179.900 O(P5F) = 5.8600 PO = 60.010 P = .81000 RN/L = 7.1000

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .027 -.0057 -.0119 -.0300 -.0159 -.0182 -.0176
 .050 -.0243 -.0300 -.0368 -.0368 -.0362 -.0368
 .074 -.0248 -.0418 -.0457 -.0446 -.0480 -.0480
 .098 -.0316 -.0486 -.0542 -.0542 -.0576 -.0576
 .111 .0032 .0026 -.0007 .0083 -.0069 .0074
 .139 .0139 .0105 .0071 .0066 .0054 .0026
 .168 .0111 .0088 .0065 .0043 .0032 999.9999
 .191 .0088 .0089 .0054 .0049 .0060 .0049
 .255 .0105 .0060 .0054 .0007 .0007 999.9999
 .344 .0003 -.0097 .0060 .0018 .0078 .0111
 .392 .0001 .0001 .0001 .0001 .0111 .0111
 .667 999.9999 -.0058 -.0035 999.9999 -.0001
 .702 -.0198 -.0175 -.0080 .0032 999.9999 -.0058
 .724 -.0559 -.0508 -.0389 .0027 .0508 .0075
 .744 .1260 .1514 .1198 .0825 .0860 .1080
 .755 .0905 999.9999 .0793 .0584 .0546 .1215
 .869 .0156 .0076 .0116 .0546 .0590 .0674
 .902 999.9999 -.0525 .0486 999.9999 .0089
 .923 -.0384 -.0289 .0317 .0266 999.9999 -.0373
 .945 -.0565 -.0548 .0593 .0582 .0582 -.0316
 .982 .2037 .2050 .2050 .2050 .2050 .2050

TABULATED SOURCE DATA. MSFC TH1 603 (SA28F)
 MSFC TH1 603 (SA28F) SRB - ALL PROTUBERANCES

(R110731) (22 AUG 75)

PARAMETRIC DATA

REF = 116.2600 SQ. FT. XMRP = 1044.0000 IN.
 YOFF = 146.0000 IN. YMRP = .0000 IN.
 ZOFF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055
 MACH (1) = .597 ALPHA (1) = 70.000 O(PSF) = 7.4500 PO = 38.020 P = 29.880 RN/L = 8.7000
 RN-SCH = 2.000 PHI = 90.000

REFERENCE DATA

DEPENDENT VARIABLE CP

SECTION (1) SRB	SECTION (2)	ALPHA (1)	O(PSF)	PO	P	RN/L
.0000	22.5000	45.0000	67.5000	90.0000	12.5000	15.0000

DEPENDENT VARIABLE CP

X/L	CP	CP	CP	CP	CP	CP
.027	-1.3010	-1.8734	-1.8771	-3310	1.0058	
.050	-7943	-1.4883	-1.5736	-2634	1.0518	
.074	-7223	-1.1938	-1.3378	-2193	1.0817	
.098	-6772	-9020	-1.7258	-1377	1.1012	
.111	-1.0704	-8279	-1.1303	-1.8650	-1.2111	7583
.139	999.9999	-7738	-1.0263	-1.8298	-1.4347	6935
.168	-6413	-7774	-8614	-1.2901	-1.4823	6623999.9999
.191	-6206	-7008	-7185	-1.0335	-1.4671	6417999.9999
.255	-4396	-4893	-4807	-3399	999.9999	999.9999
.344	-4724	-5070	-5180	-7656	-1.3373	6159999.9999
.392	999.9999	-5756	-1.1530	-3933	999.9999	999.9999
.667	999.9999	-5491	-1.0873	-1.5249	5894999.9999	999.9999
.702	-5462	-4704	-5229	-9634	-1.4911	5863999.9999
.724	-4704	-4892	-6547	-8805	-1.3974	6756999.9999
.744	-5192	-5418	-7314	-1.5073	-1.4393	5780999.9999
.755	-4799999.9999	-5844	-1.2047	-3704	999.9999	999.9999
.809	-5541	-5065	-1.0637	-3777	999.9999	999.9999
.902	999.9999	-5229	-6747	-1210	1.0677	7630
.923	-4645	-5071	-6581	2683	9920	7031
.945	-4462	-3959	-8939	6366	6366	
.982	-3959					

MACH (2) = .905 ALPHA (1) = 70.000 O(PSF) = 7.4200 PO = 22.020 P = 12.950 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

SECTION (1) SRB	SECTION (2)	ALPHA (1)	O(PSF)	PO	P	RN/L
.0000	22.5000	45.0000	67.5000	90.0000	12.5000	15.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

X/L	CP	CP	CP	CP	CP	CP
.027	-7648	-7650	-7484	2328	1.1382	
.050	-7712	-7672	-7629	2697	1.1858	
.074	-7735	-7719	-7598	2867	1.2159	
.098	-7752	-7946	-7983	3312	1.2362	
.111	-7731	-7919	-7762	3450	9773	1.2370
.139	999.9999	-7430	-7264	2592	9388	1.1899
.168	-7001	-7269	-7429	2261	9140999.9999	999.9999
.191	-6759	-6953	-7471	1791	8963999.9999	999.9999
.255	-6026	-6241	-6216	1791	999.9999	999.9999

MSFC TH1 603 (SA28F) SRB - ALL PROTUBERANCES

(R11073)

MACH (2) = .905 ALPHA (1) = 70.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.344	-.5451	-.5237	-.5217	-.5517	-.6095	.0522	999.9999	9999	-.5247		
.392			-.4508	-.6184	.1354	999.9999	999.9999	-.4957			
.667	999.9999	-.5356	-.5398	-.6267	-.6471	8196	999.9999	-.5579			
.702	-.4863	-.5071	-.5272	-.5747	-.6619	.9132	999.9999	-.5410			
.724	-.4859	-.4916	-.4943	-.7999	-.6348	.8997	999.9999	999.9999			
.744	-.4564	-.4578	-.4470	-.4632	-.6403	.8063	999.9999	-.5754			
.755	-.4578	999.9999	-.4497	-.4997	.1384	999.9999	999.9999	-.4774			
.869	-.3954	-.4572	-.3931	-.4552	.1516	999.9999	999.9999				
.902	999.9999	-.3820	-.4228	-.4228	.3015	1.1925	-.4491				
.923	-.3592	-.3942	-.4351	-.4351	.5249	1.1093	-.4937				
.945	-.3556		-.7179			.4706					
.982	-.3159										

MACH (3) = 1.203 ALPHA (1) = 70.000 O(PSF) = 9.1600 PO = 22.010 P = 9.0400 RN/L = 6.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.027	-.7226	-.7159	-.5836	-.5953	1.3328						
.050	-.6964	-.7017	-.5902	.6179	1.3701						
.074	-.6308	-.6666	-.5353	.6318	1.3924						
.098	-.5067	-.6428	-.5039	.6295	1.4071						
.111	-.5975	-.6242	-.5781	-.4845	.0315	1.1923	1.3995	.6714	-.4814		
.139	999.9999	-.5536	-.5373	-.5412	-.0571	1.1537	1.3570	.6040	-.5478		
.168	-.4995	-.5123	-.4935	-.5102	-.0882	1.1321	999.9999	.5739	-.5050		
.191	-.4794	-.4835	-.5265	-.5391	-.0867	1.1152	999.9999	-.5257			
.255	-.4488	-.4481	-.4542	.5345	999.9999	999.9999	999.9999	-.3760			
.344	-.3744	-.3679	-.3715	-.3824	-.1224	1.0814	999.9999	-.3334			
.362			-.3201	.5007	999.9999	999.9999	999.9999	-.4817			
.667	999.9999	-.5347	-.5240			1.0527	999.9999	-.4785			
.702	-.4766	-.4703	-.4191	-.1375	1.1417	999.9999	999.9999	999.9999			
.724	-.4601	-.4379	-.3933	-.4067	-.1261	1.1417	999.9999	-.5275			
.744	-.4758	-.4790	-.5012	-.4951	-.1299	1.1333	999.9999	-.5198			
.755	-.4704	999.9999	-.4965	-.5031	-.1470	1.0427	999.9999				
.869	-.4363	-.4555	-.4328			999.9999	999.9999				
.902	999.9999	-.4157	-.5500	.5016	999.9999	999.9999	999.9999	-.4179			
.923	-.4071	-.4093	-.4014	.5219	1.3625	1.2877	1.2877	-.5623			
.945	-.4019	-.4196	-.5294	.8037							
.982	-.3496		-.4807								

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11073)

MACH (5) = 2.740 ALPHA (1) = 70.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500
.869	-.1217	.0337	.9170	999.9999							
.902	999.9999	.0985	1.0542	999.9999							
.923	-.1174	.0647	1.1245	1.8910					.0232		
.945	-.1174	.0433	1.2605	1.7368					.0518		
.982	-.0992	-.1326		.9225							

MACH (6) = 3.480 ALPHA (1) = 70.000 O (P5F) = 6.0600 PO = 60.020 P = .81000 RN/L = 6.9000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.000	.250	.500	.750	1.000	1.250	1.500	1.750	2.000	2.250	2.500
.027	-.0289	.0900	1.0437	1.7822							
.050	-.0379	.0956	1.0206	1.8046							
.074	-.0294	.0865	.9947	1.8059							
.098	-.0351	.0775	.9697	1.7954							
.111	-.0401	.0618	.8984	1.4405	1.7601	.8988	.0578	-.0644			
.139	999.9999	-.0503	.3425	1.4275	1.6643	.8712	.0442	-.0632			
.168	-.0435	.0354	.3286	1.4118	1.8999	.8599	.0364	-.0638			
.191	-.0452	.0370	.3344	1.3994	1.9999	.8999	.0370				
.255	-.0441	.0449	.8560	999.9999							
.344	-.0475	.0499	.3498	1.3824	1.9999	.9999	.0505				
.392	999.9999	.0522	.8566	999.9999			.0528				
.667	999.9999	.0545		999.9999			.0841				
.702	-.0571	.0662	.3834	1.4202	1.9999	.9999	.0815				
.724	-.0582	.1363	.5128	1.7306	1.9999	.9999	999.9999				
.744	-.0655	.1869	.1869	.8259	1.9999	.9999	.0109				
.755	-.0661	.0268	.3921	1.4439	1.9999	.9999	.0420				
.869	-.0610	.0702	.9150	999.9999							
.902	999.9999	.1532	1.1096	999.9999			.0634				
.923	-.0627	.1063	1.1237	1.9458			.0972				
.945	-.0598	.0917	1.2641	1.7240							
.982	-.0446	-.0694		.9154							

TABLATED SOURCE DATA, MSFC TH1 603 (SA28F)

MSFC TH1 603 (SA28F) SRB - ALL PROTUBERANCES (R11075)

DATE 07 MAR 77

MACH (2) = .906 ALPHA (1) = 90.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.5255	-.5397	-.5244	-.5223	-.5780	.9679999	999.9999	-.5317
	.392	.999.9999		-.5868	-.5511		999.9999	999.9999	-.6237
	.667	-.5458	-.5297	-.5277	-.5518	-.6101	.2409	999.9999	-.5283
	.702	-.5100	-.5070	-.5276	-.5693	-.7035	.9619999	999.9999	-.5140
	.724	-.5271	-.5335	-.6541	-.8163	-.5404	.9448999	999.9999	999.9999
	.744	-.5317999	999.9999	-.6541	-.6297	-.6103	.9451999	999.9999	-.6791
	.755	-.5700		-.5800	-.6029	.2152	.999.9999	999.9999	-.6900
	.869	999.9999		-.5619	-.5801	.1578	999.9999	999.9999	-.7952
	.902	-.5780		-.5773	-.6018	.3190	1.2365	999.9999	-.7303
	.923	-.5841		-.5807	-.7159	.6369	1.2372	999.9999	
	.945	-.5531			-.7888		1.1884		
	.982								

MACH (3) = 1.194 ALPHA (1) = 90.000 OIPSF = 9.1300 PO = 22.000 P = 9.1400 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.5409	-.5410	-.5420	-.5510	.3226	1.0339	-.5636	-.5418	-.5334
	.050	-.5442	-.5420	-.5403	-.5604	.3763	1.0993	-.5825	-.5499	-.5187
	.074	-.5398	-.5403	-.5419	-.5603	.4246	1.1607	-.5903	-.4890	-.5023
	.098	-.5283	-.5419	-.5495	-.5793	.5037	1.2219	-.5584	-.4514	
	.111	-.5267	-.5289	-.5252	-.5485	.5562	1.0761	-.5636	-.4632	
	.139	999.9999	-.5156	-.5118	-.5458	.5785	1.1514	-.5825	999.9999	
	.168	-.4948	-.5031	-.4943	-.5005	.5816	1.1697999	-.5903	999.9999	
	.191	-.4882	-.4972	-.5513	-.5617	.5849	1.1662999	-.5584	999.9999	
	.255	-.4704	-.4692	-.4331	-.4784	.5849	999.9999	-.4193	999.9999	
	.344	-.4271	-.4424	-.4331	-.4367	.5818	1.1779999	-.4413	999.9999	
	.392	999.9999		-.4563	-.4474		999.9999	-.4514	999.9999	
	.667	999.9999		-.4616	-.4479		1.1670999	-.4632	999.9999	
	.702	-.4609	-.4621	-.4479	-.4517		1.1621999	-.5000	999.9999	
	.724	-.4664	-.4720	-.4857	-.4866		1.1569999	-.5071	999.9999	
	.744	-.4632999	999.9999	-.4923	-.4949		1.1585999	-.5071	999.9999	
	.755	-.5232		-.5267	-.5678		999.9999	-.6583	999.9999	
	.869	999.9999		-.5216	-.5249		999.9999	-.4210	999.9999	
	.902	-.5278		-.5184	-.6096		999.9999		999.9999	
	.923	-.5315		-.5644	-.6490		999.9999		999.9999	
	.945	-.4697			-.9007		999.9999		999.9999	
	.982				-.5474		999.9999		999.9999	

TABLULATED SOURCE DATA, MSFC INT 603 (SABDF)

MSFC INT 603 (SABDF) SRB - ALL PROTUBERANCES (R11075)

DATE 07 MAR 77

MACH (5) = 2.740 ALPHA (1) = 90.000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.1180	-.1223	.0134	.9292	999.9999					
	.902	999.9999	-.1241	-.0009	.8982	999.9999					
	.923	-.1151	-.1143	.0002	1.0145	1.7611				-.0392	
	.945	-.1132	-.1205	.0554	1.3000	1.7787				.0930	
	.982	-.0173	-.0580	-.0580	1.8157	1.8157					

MACH (6) = 3.480 ALPHA (1) = 90.000 Q(PSF) = 6.8600 PO = 60.030 P = .81000 RN/L = 7.0000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0322	-.0396	.0223	.7768	1.5036					
	.050	-.0374	-.0419	.0297	.7996	1.5459					
	.074	-.0384	-.0441	.0319	.8075	1.5925					
	.098	-.0419	-.0464	.0482	.8594	1.6310					
	.111	-.0464	-.0531	.0576	.9016	1.6658			.9029	.0578	-.0537
	.139	999.9999	-.0531	-.0475	.8671	1.5407			.9519	.0483	-.0542
	.168	-.0497	-.0509	-.0492	.9608	1.5537999.9999			.9625	.0550	-.0554
	.191	-.0403	-.0481	.0455	.9749	1.5503999.9999					
	.255	-.0514	-.0582	.0634	.999.9999	1.5607399.9999				.0714	
	.344	-.0537	-.0498	.0668	.999.9999	1.5607399.9999				.0725	
	.392		-.0672	.0707	.9642	999.9999				.0798	
	.667	999.9999	-.0560	.0776		999.9999				.0770	
	.702	-.0650	-.0593	.0629		1.5516999.9999			999.9999		
	.724	-.0632	-.0655	.1012		1.5448099.9999					
	.744	-.0666	-.0667	.0518		1.5368999.9999					
	.755	-.0661999.9999	-.0790	.0742		1.5391999.9999				.0731	
	.869	-.0638	-.0700	.0618		999.9999					
	.902	999.9999	-.0711	.0522		999.9999				.0144	
	.923	-.0604	-.0593	.0544		1.7847				.1124	
	.945	-.0610	-.0638	.0868		1.8010					
	.982	-.0229	-.0638	.0094		1.8213					

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11077)

MACH (5) = 2.740 ALPHA (1) = 110.000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.069	-.1277	-.1338	-.0245	.8208	999.9999					
	.902	999.9999	-.1338	-.0634	.6908	999.9999					
	.923	-.1113	-.1131	-.0167	1.0044	1.6028				-.0670	
	.945	-.1156	-.1308	-.0161	1.2095	1.4782				.0354	
	.982	.1649		.0477		1.7490					

MACH (6) = 3.480 ALPHA (1) = 110.000 O1PSF = 6.8600 PO = 60.020 P = .81000 RN/L = 7.0000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0209	-.0345	-.0334	.4163	.8932					
	.050	-.0294	-.0373	-.0267	.4445	.9259					
	.074	-.0283	-.0429	-.0193	.4631	.9547					
	.098	-.0362	-.0469	-.0334	.4518	1.0055					
	.111	-.0418	-.0565	-.0139	.6283	1.0713	.6379			-.0008	-.0565
	.139	999.9999	-.0547	-.0508	.3442	1.3346	1.4982			.8396	-.0588
	.168	-.0497	-.0632	-.0491	.3504	1.3684	999.9999			.8542	-.0599
	.191	-.0531	-.0441	-.0458	.3523	1.3667	999.9999				.0547
	.255	-.0554	-.0655	-.0323	.8554	999.9999					.0567
	.344	-.0599	-.0445	-.0407	.3483	1.3701	999.9999				.0573
	.392			.0533		999.9999					.0545
	.667	999.9999	-.0745	.0424	.8543	999.9999					.0601
	.702	-.0700	-.0565	.0505	.3502	1.4147	999.9999				
	.724	-.0690	-.0712	-.0206	.2319	.7739	999.9999			999.9999	
	.744	-.0717	-.0734	.0431	.4817	1.5971	999.9999				.1152
	.755	-.0734	999.9999	.0725	.3791	1.4461	999.9999				.0893
	.869	-.0751	-.0802	.0325	.8385	999.9999					
	.902	999.9999	-.0790	-.0035	.6683	999.9999					-.0165
	.923	-.0661	-.0634	.0268	1.0655	1.6925					.0415
	.945	-.0610	-.0706	.0312	1.1373	1.4343					
	.982	.2055		.0843		1.7571					

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TMT 603 (SA28F)

PAGE 209

(R11078) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 90.000

MACH (1) = .599 ALPHA (1) = 130.100 O(PSF) = 7.4800 PO = 38.020 P = 29.840 RN/L = 8.8000

SECTION (1)SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	-1424	-1644	-1944	-2352	-2724	-2948	-3009	-3353	-4081	-4681	-4741	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	1408	1643	1961	2259	2442	2809	3190	3507	4195	4774	4839	9630	4681	5752	6154	6413	6589	7906	5579	5881	3113
	-1600	-1748	-2088	-2582	-2909	-3085	-3608	-3720	-10499	-1326	-9630	-12229	-4681	-5752	-6154	-6413	-6589	-7906	-5579	-5881	-3113
	.4967	.5256	.5169	.5699	.7369	.3865	.3508	.3720	.3446	.5000	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999
	.0450	.0503	.0556	.0798	.0426	.2613	.2404	.3079	.3196	.3446	.3354	.4114	.3676	.5907	.4355	.9999	.9999	.9999	.9999	.9999	.9999
	.3020	.2494	.2639	.3245	.7239	.3020	.7883	.3020	.8760	.6733	.5024	.9999	.1678	.14819	.7576	.7735	.7576	.7735	.7576	.7735	.7576

MACH (2) = .906 ALPHA (1) = 130.100 O(PSF) = 7.4300 PO = 22.010 P = 12.930 RN/L = 6.4000

SECTION (1)SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.724	.744	.755	.869	.902	.923	.945	.982
	2747	2771	3010	3248	3433	3629	3942	4146	4676	4774	4839	9630	4681	5752	6154	6413	6589	7906	5579	5881	3113
	2882	2892	3103	3316	3470	3688	3922	4171	4676	4774	4839	9630	4681	5752	6154	6413	6589	7906	5579	5881	3113
	-2826	-3408	-3303	-3854	-3904	-5693	-7637	-5309	-5625	-1326	-9630	-12229	-4681	-5752	-6154	-6413	-6589	-7906	-5579	-5881	-3113
	.5168	.5403	.4554	.4642	.5202	.3338	.3359	.3720	.3446	.5000	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999	.9999
	.1021	.0441	.0125	.0192	.0707	.3433	.4089	.4212	.4676	.3020	.7883	.3020	.8760	.6733	.5024	.9999	.1678	.14819	.7576	.7735	.7576
	.3439	.4602	.4817	.3852	.4993	.4602	.1163	.5027	.8760	.6733	.5024	.9999	.1678	.14819	.7576	.7735	.7576	.7735	.7576	.7735	.7576

MSFC TMT 603 (SA26F) SRB - ALL PROTUBERANCES (R11078)

MACH (5) = 2.740 ALPHA (1) = 130.100

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.1307	-.1271	-.0791	.6410	999.9999						
.902	999.9999	-.1308	-.1234	.2117	999.9999						
.923	-.1222	-.1253	-.0378	.6848	1.1410					-.0396	
.945	-.1186	-.1313	-.1113	.5263	.7120					-.1162	
.982	.2967		.2059	1.6124							

MACH (6) = 3.480 ALPHA (1) = 130.100 C(PSF) = 6.8600 PO = 60.000 P = .81000 RN/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0179	-.0372	-.0576	.1086	.3245						
.050	-.0316	-.0423	-.0587	.1379	.3622						
.074	-.0202	-.0491	-.0587	.1587	.4005						
.098	-.0327	-.0531	-.0559	.1446	.5640						
.111	-.0400	-.0593	-.0576	.2000	.8182	.5127	-.0058	-.0531			
.139	999.9999	-.0486	-.0542	.2210	.9196	.5725	-.0122	-.0548			
.168	-.0491	-.0423	-.0525	.2195	.9098999.9999	.5657	.0144	-.0582			
.191	-.0525	-.0372	-.0468	.2133	.8933999.9999						
.255	-.0554	-.0616	-.0128	.5533	.9012999.9999					.0161	
.344	-.0604	-.0350	-.0434	.2062	.999.9999					.0173	
.392	999.9999	-.0689	-.0156	.5240	.999.9999					.0167	
.702	-.0689	-.0394	-.0502	.2038	.8264999.9999					.0054	
.724	-.0678	-.0694	-.0388	.0545	.1931999.9999					999.9999	
.744	-.0666	-.0672	-.0052	.5815	1.6818999.9999					.1554	
.755	-.0678999.9999	-.0565	-.0860	.3594	1.0899999.9999					.1058	
.869	-.0728	-.0694	-.0249	.6813	.999.9999						
.902	999.9999	-.0711	-.0610	.2314	.999.9999					1.1157	-.0103
.923	-.0666	-.0700	-.0049	.6387							-.0638
.945	-.0700	-.0756	-.0576	.5060							
.982	.3233		.1942	1.6530							

TABULATED SOURCE DATA, MSFC TMT 803 (SAZBF)

(R11078) (22 AUG 75)

MSFC TMT 603 (SAZBF) SRB - ALL PROTUBERANCES

PARAMETRIC DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055
 MACH (1) = .598 ALPHA (1) = 149.020 O(PSF) = 7.4700 PO = 38.020 P = 29.860 RN/L = 8.7000
 RN-SCH = 2.000 PHI = 90.000

REFERENCE DATA

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0100	.0170	.0200	.1331	.0200	.0140
	.050	-.0334	-.0220	-.0200	-.2216	-.0200	-.0558
	.074	-.1063	-.0934	-.0918	-.3027	-.1141	-.1141
	.098	-.2281	-.1806	-.2762	-.4900	-.1870	-.1870
	.111	-.3628	-.3501	-.2599	-.8243	-.6559	-.5054
	.139	-.5999	-.2607	-.2404	-.4690	-.0097	-.4054
	.168	-.1811	-.2608	-.2487	-.5130	.0815	-.4447
	.191	-.2286	-.2673	-.2294	-.5190	.0924	-.4696
	.255	-.2425	-.2725	-.3181	-.5660	.999	-.4704
	.344	-.2832	-.2790	-.3181	-.5660	.1117	-.5482
	.392			-.5714	-.5881	.999	-.5007
	.667	.999	.999	-.1919	-.2120	.999	-.7331
	.702	-.2843	-.4342	-.5714	-.4541	.2368	-.6579
	.724	-.5408	-.5324	-.5279	-.5211	-.652	.999
	.744	-.0781	-.1884	-.4046	-.1314	.5371	.999
	.755	-.2087	.999	-.3537	-.4131	.2720	-.4073
	.869	-.3861	-.5533	-.8953	-.2026	.999	-.5960
	.902	.999	-.4118	-.6367	-.4178	.999	-.6625
	.923	-.3684	-.4141	-.5538	-.4495	.4890	-.5979
	.945	-.3352	-.4590	-.6145	-.7487	-.8433	
	.982	-.1019	-.6394	-.6394		.8624	

MACH (2) = .906 ALPHA (1) = 149.020 O(PSF) = 7.4300 PO = 22.000 P = 12.930 RN/L = 6.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0202	-.0172	-.0128	-.0421	.0090	
	.050	-.1293	-.1298	-.1337	-.1453	-.0774	
	.074	-.2183	-.2323	-.3282	-.3516	-.2608	
	.098	-.3385	-.3077	-.4411	-.4693	-.4684	
	.111	-.4451	-.3864	-.3791	-.4791	-.2848	-.4745
	.139	-.999	-.3207	-.3164	-.2249	.0953	-.4003
	.168	-.2363	-.3225	-.3064	-.5214	.2137	-.4925
	.191	-.2794	-.2981	-.3054	-.2127	.1331	-.4636
	.255	-.2609	-.3250	-.2941	-.5848	.1352	-.4810
	.344	-.2809	-.3219	-.4534	-.2133	.999	-.4810

TABLATED SOURCE DATA, MSFC TMT 603 (SA28F)

DATE 07 MAR 77

MSFC TMT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11079)

MACH (2) = .906 ALPHA (1) = 149.020

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.3141	-.3176	-.3871	-.7676	-.5504	.1453999	.9999	-.6217
	.392				-.5545		.999	.9999	-.4729
	.667	.999	.9999	-.3010	-.8407	-.1608	.999	.9999	-.9018
	.702	-.3771	-.4675	-.5518	-.5747	-.3635	.3994999	.9999	-.6110
	.724	-.5288	-.5141	-.4965	-.4872	-.4997	-.5397999	.9999	.999
	.744	-.0505	-.1488	-.4462	-.2889	-.2052	.6346599	.9999	-.6286
	.755	-.1669999	.9999	-.44052	-.5666	-.4652	.3438999	.9999	-.7307
	.869	-.3605	-.4894	-.7466	-.7466	-.0517	.999	.9999	
	.902	.999	.9999	-.4468	-.5815	-.1347	.999	.9999	
	.923	-.3893	-.4331	-.4873	-.4873	-.5525	-.2453		-.5013
	.945	-.3443	-.4158	-.4818	-.4818	-.5168	-.5774		-.4611
	.982	-.1293		-.4832			.9868		

MACH (3) = 1.196 ALPHA (1) = 149.020 O(PSF) = 9.1300 PO = 22.010 P = 9.1200 RN/L = 6.8000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.1747		-.1781	-.1668	-.1712	-.2518		
	.050	-.2635		-.2409	-.2293	-.3180	-.3206		
	.074	-.3447		-.3308	-.3694	-.4807	-.3191		
	.098	-.5592		-.4535	-.4986	-.5873	-.2436		
	.111	-.4157	-.4611	-.4624	-.4466	-.2144	-.0135	-.1964	-.2012
	.139	.999	.9999	-.3644	-.3641	-.1038	.1927	.2394	-.1017
	.168	-.2537	-.3657	-.3503	-.3620	-.0951	.1803999	.9999	-.3152
	.191	-.3030	-.3790	-.3274	-.3679	-.4018	.1894999	.9999	-.3436
	.255	-.2615		-.3734	-.3980	-.0357	.999	.9999	-.3699
	.344	-.2123	-.2204	-.2824	-.4962	-.3120	.2397999	.9999	-.4461
	.392			-.3420	-.3420		.999	.9999	-.3027
	.667	.999	.9999	-.2402	-.5186	-.0130	.999	.9999	-.5824
	.702	-.2686	-.3551	-.4302	-.4745	-.2886	.3156999	.9999	-.4944
	.724	-.4947	-.4745	-.4629	-.4690	-.4806	-.5090999	.9999	.999
	.744	-.2234	-.2512	-.3549	-.3529	-.0781	.7957999	.9999	-.3695
	.755	-.3159999	.9999	-.3267	-.4138	-.1307	.5608999	.9999	-.4158
	.869	-.4530		-.5213	-.5016	.1232	.999	.9999	
	.902	.999	.9999	-.4674	-.5785	-.2742	.999	.9999	-.5495
	.923	-.4227		-.4778	-.5878	-.1537	.2190		-.6021
	.945	-.4568		-.5052	-.6269	-.4436	-.2611		
	.982	-.0327			-.1946		1.1413		

TABLATED SOURCE DATA, MSFC TWT 603 (SA20F)

MSFC TWT 603 (SA20F) SRB - ALL PROTUBERANCES (R11079)

MACH (4) = 1.967 ALPHA (1) = 149.000 Q(PSF) = 10.940 PO = 30.010 P = 4.0400 RN/L = 7.4000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
	-.1455	-.1651	-.1859	-.2357	-.2105	-.1828	-.1763	-.1841	-.1853	-.1990	-.2113	-.2234	-.2579	-.2749	-.2272	-.2182	-.2369	-.2726	-.2873	-.1706
	-.1796	-.1855	-.1661	-.1791	-.0900	-.0819	-.1451	-.0836	.1253	.0656	-.1872	-.2234	-.1972	-.2955	-.1095	-.1494	-.2014	-.1918	-.2712	.0121
	-.0745	-.0492	-.0249	.0720	.2594	.3174	.3472	.3131	.999	.3310	.999	.999	.3600	-.1518	.7424	.5569	.999	.5197	.0415	1.1320
					.1037	.1281	.1391		-.2191	-.1784	-.2191	.999	-.2259	.999	-.1341		-.1629	-.2595		

MACH (5) = 2.740 ALPHA (1) = 149.000 Q(PSF) = 6.3700 PO = 30.010 P = 1.2100 RN/L = 5.1000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	
	-.0750	-.0792	-.0876	-.0944	-.0992	-.0980	-.0961	-.0835	-.0955	-.0804	-.0809	-.0925	-.1065	-.0979	-.1052	
	-.0834	-.0808	-.0937	-.0967	-.0554	-.0683	-.0737	-.0774	.0208	.0167	-.0804	-.0925	-.0931	-.0767	-.1065	
	-.0780	-.0664	-.0627	-.0524	.1886	.2032	.2010	.3546	.999	.3546	.999	.999	.4036	-.0135	-.8263	
	.0101	.0246	.0410	.1346	.3315	.3647	.3649	.3546	.999	.999	.999	.999	.999	.999	.999	
					.1883	.2032	.2038	-.0913	-.0919	-.0907	-.0907	.999	-.0967	.999	-.0123	
					-.0949	-.0937	-.0931	-.0913	-.0919	-.0888	-.0907	-.0967	.999	-.0967	.999	-.0463

MSFC TNT 603 (SA28F) SRB - ALL PROTUBERANCES (R11079)

MACH (5) = 2.740 ALPHA (1) = 149.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.1052	-.1149	-.0670	.2159	999.9999					
	.902	999.9999	-.1259	-.0882	.0070	999.9999					
	.923	-.1180	-.1290	-.0773	.4686					-.0773	
	.945	-.1283	-.1362	-.1160	.1434					-.1125	
	.982	.2578		.2530	1.1129						

MACH (6) = 3.480 ALPHA (1) = 149.000 Q(P5F) = 6.8600 PO = 60.010 P = .81000 RN/L = 7.0000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0238	-.0384	-.0503	-.0351	.0404					
	.050	-.0339	-.0424	-.0531	-.0260	.0541					
	.074	-.0266	-.0497	-.0582	-.0204	.0702					
	.098	-.0345	-.0531	-.0593	-.0058	.1480					
	.111	-.0424	-.0587	-.0537	-.0102	.3724				.2196	-.0401
	.139	999.9999	-.0520	-.0503	.0646	.3659				.2309	-.0334
	.168	-.0497	-.0486	-.0570	-.0181	.4051				.2303	-.0351
	.191	-.0503	-.0378	-.0441	-.0226	.3876999.9999				-.0351	-.0537
	.255	-.0520	-.0559	-.0277	.0658	.3776999.9999				-.0356	
	.344	-.0503	-.0339	-.0407	-.0283	.3901999.9999				-.0351	
	.392	999.9999	-.0566	-.0283	-.0384	.399.9999				-.0401	
	.667	999.9999	-.0717	-.0548	-.0463	.4363999.9999				-.0463	
	.702	-.0768	-.0785	-.0486	-.0723	.0347999.9999				999.9999	
	.724	-.0384	-.0441	-.0525	.0054	.8768999.9999				-.0167	
	.744	-.0384	-.0441	-.0514	.2595	.5733999.9999				-.0041	
	.795	-.0463999.9999	-.0514	-.0052	.1480						
	.869	-.0531	-.0616	-.0334	.2174	999.9999					
	.902	999.9999	-.0688	-.0503	.0375	999.9999				-.0294	
	.923	-.0616	-.0694	-.0255	.2799	.3901				-.0559	
	.945	-.0672	-.0745	-.0587	.0967	.1610					
	.982	.2974		.2923		.9806					

(R11080) (22 AUG 75)

MSFC TH1 603 (SAZ6F) SRB - ALL PROTUBERANCES

PARAMETRIC DATA

RM-SCH = 2.000 PHI = 90.000

RM/L = 8.8000

P = 29.880

PO = 38.010

O(PSF) = 7.4400

ALPHA (1) = 169.900

MACH (1) = .596

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

DEPENDENT VARIABLE CP

SECTION (1) SRB
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

Table with columns X/L and values for various angles from 027 to 392. Values include .1098, .0745, .0077, etc.

DEPENDENT VARIABLE CP

SECTION (1) SRB
THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

Table with columns X/L and values for various angles from 027 to 392. Values include .0915, .0407, .0367, etc.

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11060)

MACH (2) = .899 ALPHA (1) = 169.900

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.0802	-.0843	-.1218	-.1387	-.1161	-.0231	999.9999	999.9999	-.1366
	.392			-.1504	-.0250	.0645		999.9999		-.1585
	.667	999.9999	.0368					999.9999		.0293
	.702	.0030	-.0020	-.0931	-.0805	-.0796	.0318	999.9999		-.0729
	.724	-.0133	-.0491	-.1513	-.1687	-.2330	-.2584	999.9999		999.9999
	.744	-.0595	-.0960	-.0356	.1129	.2010	.2925	999.9999		.0430
	.755	-.1170	999.9999	-.1021	-.0115	.0661	.1597	999.9999		-.0633
	.869	-.4049		-.4415	-.4415	-.2750		999.9999		
	.902	999.9999	-.4008	-.4469	-.4309			999.9999		-.4403
	.923	-.3653	-.4062	-.4451	-.4464	-.5185				-.4297
	.945	-.3710	-.3401	-.4430	-.4684					
	.982	-.3269		-.3906						-.4140

MACH (3) = 1.197 ALPHA (1) = 169.880 O(P)SF = 9.1400 PO = 22.010 P = 9.1100 RN/L = 6.8000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0384	.0184	-.0064	-.0054	.0151	.0324					
	.050	-.0209	-.0389	-.1076	-.1076	-.1123	-.2679					
	.074	-.1414	-.1732	-.2717	-.2717	-.4237	-.3838					
	.098	-.5205	-.5055	-.5688	-.5688	-.5564	-.3736					
	.111	-.1861	-.2114	-.1914	-.1567	-.1157	-.0901	-.3539	-.0918	-.1651	-.2198	
	.139	999.9999	-.0654	-.0294	-.0286	.0031	.0518	.1029	.0926	.0417	-.0431	
	.168	.0537	.0031	-.0058	-.0181	-.0072	.0200	.0345	999.9999	.0559	-.0039	-.0026
	.191	-.0151	-.0110	-.0105	-.0214	-.0105	.0326	999.9999				
	.255	-.0414	-.0326	-.0511	-.0511	.0009		999.9999				
	.344	-.0047	-.0220	-.0931	-.0972	-.0654	.0233	999.9999				
	.392			-.0436	-.0250			999.9999				
	.667	999.9999	-.0496		-.0250	-.0135		999.9999				
	.702	.0168	-.1031	-.1834	-.1658	-.1912	-.1168	999.9999				
	.724	-.1949	-.2323	-.2136	-.2327	-.3630	-.3955	999.9999				
	.744	-.0149	-.0565	.1088	.3171	.3606	-.5461	999.9999				
	.755	-.0616	999.9999	.1120	.2149	.2514	.3447	999.9999				
	.869	-.3331	-.3480	-.2476	-.2476	-.0441		999.9999				
	.902	999.9999	-.3516	-.3484	-.3612	-.3612		999.9999				
	.923	-.3281	-.3459	-.3780	-.3780	-.2218						
	.945	-.3134	-.3334	-.4442	-.4442	-.6479						
	.982	-.1723		-.2870	-.2870	-.6406						

MSFC THT 603 (SA28F) SR8 - ALL PROTUBERANCES (R11080)

MACH (5) = 2.740 ALPHA (1) = 169.900

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.869	-.0458	-.0568	-.0325	.0232	999.9999						
.902	999.9999	-.0919	-.1004	-.0938	999.9999						
.923	-.0962	-.0822	-.0828	-.0229	.0312					-.0774	
.945	-.1174	-.1284	-.1132	-.0725	-.0781					-.1114	
.982	.1713	.1294	.1294	.1294	.2563						

MACH (6) = 3.480 ALPHA (1) = 169.900 Q(P5F) = 6.8600 PO = 60.000 P = .81000 RN/L = 7.0000

SECTION (1) SR8

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.0187	-.0333	-.0446	-.0497	-.0446						
.050	-.0305	-.0378	-.0536	-.0599	-.0538						
.074	-.0260	-.0446	-.0593	-.0649	-.0661						
.098	-.0322	-.0508	-.0610	-.0683	-.0514						
.111	-.0108	-.0266	-.0215	-.0249	-.0018						
.139	999.9999	-.0108	-.0136	-.0198	.0252					-.0012	-.0345
.168	.0026	-.0085	-.0148	-.0108	.0325					.0054	-.0306
.191	-.0097	-.0091	-.0187	-.0254	.0032					.0072	-.0350
.255	-.0120	-.0091	-.0164	-.0119	.0303					-.0384	
.344	-.0068	-.0085	-.0204	-.0244	.0049						
.392			-.0192	-.0006	.0314					-.0238	
.657	999.9999	-.0193	-.0041		999.9999					-.0063	
.702	-.0147	-.0238	-.0457	.0094	999.9999					-.0401	
.724	-.0554	-.0520	-.0525	-.0187	999.9999					-.0452	
.744	-.0319	-.0443	-.0672	-.0554	-.0308					999.9999	
.755	.0308	.0443	.0330	.0975	.1971					.0443	
.859	-.0108	999.9999	.0364	.0308	.0710					.0094	
.902	999.9999	-.0221	-.0018	-.0375	.0018						
.923	-.0458	-.0491	-.0508	-.0441	999.9999					-.0317	
.945	-.0683	-.0407	-.0294	.0144	.0545					-.0536	
.982	.2017	-.0706	-.0548	-.0232	-.0254						
			.1601		.2878						

DATE 07 MAR 77

TABLATED SOURCE DATA, MSFC THT 603 (SA28F)

PAGE 221

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11081) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = .600 ALPHA (1) = 179.900 O(P)SF = 7.5000 PO = 38.000 P = 29.800 RN/L = 8.8000
 RN-SCH = 2.000 PHI = 90.000

PARAMETRIC DATA

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1213	.1226	.1145	.1121	.1168	.4211	.4172	.4285	.4419	.4485	.4248	.4398
.050	.0921	.0843	.0843	.0808	.0758	.0793	.0978	.0935	.1009	.0951	.1031	.0989	.1000
.074	.0236	.0239	.0160	.0116	.0143	.0149	.1437	.1444	.1544	.1049	.1049	.1031	.1000
.098	.1381	.1437	.1437	.1444	.1544	.1049	.4208	.4266	.4285	.4419	.4485	.4248	.4398
.111	.3645	.4208	.4211	.4172	.4285	.4419	.0999	.0999	.1164	.1031	.1031	.0989	.1000
.139	.999	.999	.999	.999	.999	.999	.0286	.0378	.0465	.0512	.0548	.0607	.0590
.168	.0286	.0378	.0465	.0512	.0548	.0607	.0235	.0235	.0235	.0411	.0395	.0395	.0395
.191	.0259	.0235	.0235	.0235	.0332	.0332	.0096	.0096	.0096	.0428	.0505	.0482	.0459
.255	.0053	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096
.344	.0404	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096
.392	.0404	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096	.0096
.657	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999	.999
.702	.0395	.0116	.0650	.0516	.0290	.0290	.0402	.0548	.0176	.0169	.0169	.0169	.0169
.724	.2003	.2261	.2018	.1922	.2078	.2078	.2018	.1922	.2078	.1981	.1981	.1981	.1981
.744	.2248	.2318	.2840	.2971	.2473	.2473	.2840	.2971	.2473	.1759	.1759	.1759	.1759
.755	.1671	.999	.1932	.2016	.1615	.1615	.1932	.2016	.1615	.1019	.1019	.1019	.1019
.869	.1056	.0827	.0827	.0190	.1015	.1015	.0827	.0190	.1015	.999	.999	.999	.999
.902	.999	.2466	.2466	.2559	.2643	.2643	.2466	.2559	.2643	.999	.999	.999	.999
.923	.3546	.3712	.3712	.3656	.3766	.3766	.3712	.3656	.3766	.3439	.3439	.3489	.3489
.945	.3867	.44045	.44045	.5156	.4059	.4059	.44045	.5156	.4059	.3710	.3710	.5103	.5103
.982	.7977	.8025	.8025	.8025	.8031	.8031	.7977	.8025	.8031	.8031	.8031	.8031	.8031

MACH (2) = .901 ALPHA (1) = 179.900 O(P)SF = 7.3800 PO = 22.010 P = 13.000 RN/L = 6.4000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.1323	.1320	.1201	.1185	.1185	.3143	.3110	.3133	.3305	.3197	.3262	.3208
.050	.0915	.0836	.0836	.0761	.0738	.0738	.0915	.0836	.0836	.0891	.0877	.0812	.0898
.074	.0006	.0247	.0247	.0233	.0166	.0166	.0006	.0247	.0233	.0166	.0166	.0166	.0166
.098	.2144	.2534	.2534	.2452	.2275	.2275	.2144	.2534	.2452	.1622	.1622	.1622	.1622
.111	.3206	.3110	.3153	.3110	.3133	.3133	.3206	.3110	.3153	.3305	.3197	.3262	.3208
.139	.999	.999	.999	.999	.999	.999	.999	.999	.999	.0891	.0708	.0812	.0898
.168	.0321	.0252	.0339	.0444	.0475	.0475	.0321	.0252	.0339	.0531	.0498	.0505	.0320
.191	.0261	.0166	.0166	.0279	.0339	.0339	.0261	.0166	.0166	.0348	.0348	.0348	.0348
.255	.0214	.0071	.0071	.0274	.0305	.0305	.0214	.0071	.0071	.999	.999	.999	.999

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11081)

MACH (2) = .901 ALPHA (1) = 179.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.0112	-.0190	-.0672	-.0788	-.0689	-.0692999	.9999999	-.0780
	.392	.999	.9999	.1847	.1506	.1480	.999	.99999	-.1397
	.702	.1555	.1532	.1322	.1317	.1194	.999	.99999	-.1406
	.724	.0656	.0646	.0411	.0416	.0297	.0958999	.99999	.1241
	.744	.0927	.1008	.1147	.1375	.1041	.0334999	.99999	.999.99999
	.755	.0516999	.99999	.0771	.0941	.0684	.0615999	.99999	.0960
	.869	-.3462	-.3509	-.3237	-.3237	-.3469	.0378999	.99999	.0693
	.902	.999	.9999	-.3662	-.4025	-.3726	.999	.99999	-.3974
	.923	-.3691	-.4006	-.4230	-.4230	-.4136	-.999	-.3740	-.4724
	.945	-.3550	-.3856	-.4860	-.4860	-.3934	-.999	-.3843	-.4724
	.982	-.5925	-.5099	-.5099	-.5099	-.5964	-.999	-.5964	-.5964

MACH (3) = 1.199 ALPHA (1) = 179.900 O(PSF) = 9.1400 PO = 22.000 P = 9.0900 RN/L = 6.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0157	.0001	-.0009	-.0102	.0201	.999	.99999	-.1212
	.050	-.0564	-.0799	-.0840	-.0654	-.0502	.999	.99999	-.0666
	.074	-.3186	-.1991	-.1978	-.1831	-.1676	.999	.99999	-.1301
	.098	-.4979	-.5382	-.5585	-.5503	-.4301	.999	.99999	-.0143
	.111	-.1023	-.1395	-.1446	-.2071	-.2627	.999	.99999	.3109
	.139	.999	.99999	-.0176	-.0274	-.0537	.999	.99999	.2165
	.168	.1223	.0315	-.0165	-.0245	-.0283	.999	.99999	-.0337
	.191	-.0045	-.0124	-.0258	-.0295	-.0312	.999	.99999	-.0318
	.255	-.0129	-.0392	-.0592	-.0592	-.0611	.999	.99999	-.0402
	.344	.0214	-.0312	-.1144	-.0783	-.0611	.999	.99999	-.0305
	.392	.999	.99999	-.0490	-.0490	-.0520999	.999	.99999	-.0318
	.667	.0017	.1170	.1104	.1068	.1068	.999	.99999	-.1212
	.702	-.2094	-.2167	-.0736	-.0318	-.0318	.999	.99999	-.0666
	.724	.3347	.3013	-.2130	-.1810	-.1971	.999	.99999	-.1301
	.744	.2457999	.99999	.3784	.3621	.3078	.999	.99999	.999.99999
	.755	-.1786	-.1725	.3013	.2893	.2368	.999	.99999	.3109
	.869	.999	.99999	-.1733	-.1733	-.1775	.999	.99999	.2165
	.902	-.4572	-.4171	-.4244	-.4244	-.4177	.999	.99999	-.4627
	.923	-.6779	-.7477	-.4691	-.5059	-.5059	.999	.99999	-.4627
	.945	-.5925	-.5986	-.5986	-.5986	-.6760	.999	.99999	-.6429
	.982	-.2010	-.2222	-.2222	-.2222	-.2020	.999	.99999	-.5793

TABULATED SOURCE DATA. MSFC TMT 603 (SAZBF) (R11082) (22 AUG 75)
 MSFC TMT 603 (SAZBF) SRB - ALL PROTUBERANCES PARAMETRIC DATA

REFERENCE DATA RN-SCM * 1.000 PHI * 315.000
 SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN. RN/L = 4.1000
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

MACH (1) = .597 ALPHA (1) = 70.000 Q(PSF) = 3.5300 PO = 18.000 P = 14.150

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	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
X/L	.027	-1.0780	-1.9271	-1.8534	-.2920	1.0247									
	.050	-7.7390	-1.6009	-1.4713	-.2223	1.0765									
	.074	-6.891	-1.2920	-1.1595	-.1660	1.1072									
	.098	-6.539	-1.0402	-.9606	-.0708	1.1316									
	.111	-1.3348	-1.2278	-.8969	-.0399	1.1257	-.0641	-.9229	-.9332						
	.139	-7.546	-8.137	-7.340	-.9294	-1.1077	-1.1436	-.1532	-.7655						
	.168	-6.308	-7.133999	9999.9999	-7.739	-1.0734	-1.1714	-.1872	-.7032						
	.191	-5.984	-6.373	999.9999	-7.660	-1.0430	-1.0240	-.1208	-.9365						
	.255	-4.550	999.9999	999.9999	-.4058	-5.321	-.5017	-.6905	-.10907						
	.344	-3.673	-.3646	-.4962	-.2667	.7030	1.0155	1.0088	-.7471						
	.392	999.9999	999.9999	999.9999	-.8109	-.6794	-.8662	-1.0233	-.7639						
	.507	-5.484	-.5851	-.6794	-.6794	-.6794	-.8662	-1.0233	-.7639						
	.702	-3.983	-4.973	-.5879	-.5879	-.7453	-1.0169	1.0077	1.0035	999.9999					
	.744	-5.183	-5.331	-.7645	-.7645	-1.2822	-1.2425	1.0077	1.0035	999.9999					
	.755	-4.906999	9999.9999	-.7856	-.7856	-1.1006	-1.2459	1.0077	1.0035	999.9999					
	.869	-5.157	999.9999	-.7925	-.7925	-.2248	1.0006	1.0006	1.0006	1.0006					
	.902	999.9999	999.9999	-.7134	-.7134	-.2202	1.0859	1.0859	1.0859	1.0859					
	.923	-4.041	999.9999	-.7700	-.7700	-.0969	1.1112	1.1112	1.1112	1.1112					
	.945	-3.646	999.9999	-.7528	-.7528	.0324	1.0276	1.0276	1.0276	1.0276					
	.982	-3.419	999.9999	-.8352	-.8352		.5112	.5112	.5112	.5112					

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11083) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 315.000

MACH (1) = .602 ALPHA (1) = 70.000 O(PSF) = 7.9500 PO = 38.030 P = 29.760 RN/L = 8.8000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	0.027	0.050	0.074	0.098	0.111	0.139	0.168	0.191	0.255	0.344	0.392	0.667	0.702	0.724	0.744	0.755	0.869	0.902	0.945	0.982
	-1.8018	-1.4725	-1.1286	-0.8216	-0.6612	-0.5387	-0.4375	-0.3529	-0.2805	-0.2187	-0.1643	-0.1143	-0.0689	-0.0275	0.0109	0.0284	0.0459	0.0634	0.0809	0.0984
	-1.7846	-1.4700	-1.2568	-1.1596	-1.1907	-1.8137	-1.3987	-1.1310	-1.4480	-1.3438	-1.2693	-1.5408	-1.1689	-0.9763	-1.1983	-1.0917	-1.4867	-1.3884	-1.2362	-1.0794
	-0.2967	-0.2416	-0.1936	-0.1158	-0.0970	-0.2217	-0.2709	-0.6432	-0.3147	-0.6260	-0.3915	-0.5813	-0.6635	-0.7193	-0.5989	-0.3409	-0.3313	-0.1480	-0.3355	-0.4866
	1.0125	1.0596	1.0887	1.1116	1.0892	1.0481	1.0217	1.0091	1.0052	0.9883	0.9659	0.9710	0.9797	1.0662	1.0920	1.0025	0.9798	1.0679	1.0794	1.0053
	-0.0657	-0.1147	-0.1062	-0.7774	-0.6414	-0.6426	-1.2503	-1.2885	-0.6356	-0.8154	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999	0.9999

MACH (2) = .902 ALPHA (1) = 70.000 O(PSF) = 7.4000 PO = 22.010 P = 12.980 RN/L = 6.3000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	0.027	0.050	0.074	0.098	0.111	0.139	0.168	0.191	0.255	0.344	0.392	0.667	0.702	0.724	0.744	0.755	0.869	0.902	0.945	0.982
	-0.7583	-0.7674	-0.7602	-0.7646	-0.7619	-0.7226	-0.6931	-0.6801	-0.6801	-0.7417	-0.6348	-0.7624	-0.7641	-0.7533	-0.7680	-0.7661	-0.7205	-0.5613	-0.5997	-0.6085
	-0.2392	-0.2702	-0.2081	-0.3298	-0.3439	-0.2590	-0.2223	-0.0952	-0.1818	-0.2392	-0.2702	-0.2081	-0.3298	-0.3439	-0.2590	-0.2223	-0.0952	-0.1818	-0.2392	-0.2702
	1.1395	1.1868	1.2159	1.2356	1.2292	1.1888	1.1546	1.1544	1.1328	1.1395	1.1868	1.2159	1.2356	1.2292	1.1888	1.1546	1.1544	1.1328	1.1395	1.1868
	-0.7458	-0.9380	-0.7885	-0.6870	-0.7719	-0.7885	-0.6870	-0.6666	-0.6666	-0.7458	-0.9380	-0.7885	-0.6870	-0.7719	-0.7885	-0.6870	-0.6666	-0.6666	-0.6666	-0.6666

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC TWT 603 (5A28F) MSFC TWT 603 (5A28F) SRB - ALL PROTUBERANCES (R11083)

MACH (5) = 2.740 ALPHA (1) = 70.000
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .869 -.1210 999.9999 .0291 .9168 1.6531
 .902 999.9999 1.090 1.0698 1.8909
 .923 -.1187 -.1027 .0459 1.9212 .0271
 .945 -.1192 -.1186 .0447 .9541 1.7437 .1935
 .982 -.0998 -.0876 .7801

MACH (6) = 3.480 ALPHA (1) = 70.000 Q(PSF) = 6.8600 PO = 59.990 P = .81000 RN/L = 7.0000

SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L .027 -.0268 -.0440 .0872 1.0454 1.7928
 .050 -.0365 -.0469 .0950 1.0229 1.8052
 .074 -.0308 -.0503 .0868 1.9969 1.8075
 .098 -.0337 -.0514 .0759 .9710 1.7945
 .111 -.0410 -.0531 .0574 .9050 1.6953
 .139 -.0424 -.0481 .0380 .8622 1.4111 .9542 .0810 -.0486
 .168 -.0447 -.0390999 .0326 .8425 1.3870 .6248 .0849 -.0469
 .191 -.0447 -.0333 .0319 .8257 1.3803 1.6181 .0212
 .255 -.0452 999.9999 .0403 .8522 1.6130 .0499
 .344 -.0475 -.0314 .0482 .8454 1.6021 .0522
 .392 999.9999 .0522 .8560 1.5938 .0652
 .667 999.9999 999.9999 .0550 .8560 1.5955 .0815
 .702 -.0565 -.0415 .0669 .3825 1.4277 1.6632 999.9999
 .724 -.0582 -.0644 .1266 .5420 1.7116 1.9873
 .744 -.0706 -.0706 .1841 .7872 .9749 .1373
 .755 -.0706999 .0245 .3470 1.4709 1.4253 .0499
 .869 -.0638 999.9999 .0708 .9157 .6676
 .902 999.9999 999.9999 .1649 1.1389 1.9748
 .923 -.0621 999.9999 .0731 1.0432 1.9879 .0499
 .945 -.0610 -.0616 .0939 1.7319 .2331
 .982 -.0469 -.0368 .0368 .7252

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

(R11084) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SO.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 315.000

MACH (1) = .898 ALPHA (1) = 70.000 O(PSF) = 7.3600 PO = 22.000 P = 13.040 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L

.027	-.7685	-.7611	.2337	1.1386
.050	-.7690	-.7680	.2627	1.1695
.074	-.7746	-.7688	.2827	1.2153
.098	-.7670	-.7645	.3243	1.2352
.111	-.7611	-.7637	.3382	1.2243
.139	-.7313	-.7198	.2520	1.1872
.168	-.6953	-.6877	.2173	1.1614
.191	-.5761	-.6809	.1502	1.1502
.255	-.6339	999.9999	.1716	1.1321
.344	-.5251	-.5348	.0443	1.1118
.392	999.9999	999.9999	1.071	1.071
.667	999.9999	999.9999	.1289	1.0773
.702	-.4987	-.5160	.8150	1.0890
.724	-.4972	-.5115	.8952	1.1889
.744	-.4606	-.4593	.9205	1.0407
.755	-.4569	999.9999	.8161	1.1184
.869	-.3973	999.9999	.0818	1.0818
.902	999.9999	999.9999	1.182	1.1851
.923	-.3526	-.3795	.1310	1.1654
.945	-.3564	-.4110	.1786	1.1954
.982	-.3153	-.6483	.2191	1.1066
				.2248

-.7484 -.7712
 -.9366 -.7878
 -.6917 -.6859
 -.6674
 -.5273
 -.4908
 -.5428
 -.5449
 999.9399
 -.5646
 -.5224
 -.4440
 -.5246

TABLATED SOURCE DATA, MSFC TMT 803 (SA28F) (R11086)

DATE 07 MAR 77

MSFC TMT 803 (SA28F) SRB - ALL PROTUBERANCES

MACH (2) = .903 ALPHA (1) = 90.000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.5403	-.5471	-.5484	-.5558	-.6044	.9643	1.2392	-.9477
	.392				-.6443			1.2402	-.6430
	.667	999.9999	999.9999		-.5552	.2334		1.2398	-.5140
	.702	-.5173	-.5228	-.5430	-.5505	-.6139	-.9521	1.2381	-.4985
	.724	-.5004	-.5091	-.5282	-.5835	-.6166	-.9465	1.2381	999.9999
	.744	-.5342	-.5430	-.6944	-.7902	-.6631	-.9384	1.2375	-.7516
	.755	-.5430	999.9999	-.7077	-.6674	-.6355	-.9326	1.2379	-.7025
	.869	-.5693	999.9999		-.5903	.2023		1.2326	
	.902	999.9999	999.9999		-.E098	.1393		1.2393	-.9510
	.923	-.5727		-.5747	-.8908	.2251		1.2385	-.8592
	.945	-.5747		-.6214	-.8393	.3420		1.2351	
	.982	-.5329		-.7231	-.7231			1.1760	

MACH (3) = 1.201 ALPHA (1) = 90.000 Q1PSF = 9.1600 PO = 22.030 P = 9.0700 RN/L = 6.7000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.5144	-.5136	-.5239	-.5239	-.0934	.3330	1.0358	-.5344	-.5102
	.050	-.5180	-.5216	-.5201	-.5201	-.0934	.3764	1.1026	-.4620	-.5339
	.074	-.5155	-.5148	-.5264	-.5264	-.0934	.4174	1.1583	-.4779	-.4833
	.098	-.5071	-.5114	-.5658	-.5658	-.0944	.5045	1.2233	-.5047	
	.111	-.5027	-.5005	-.5444	-.5444	-.0670	.5567	1.2763	.5231	
	.139	-.4942	-.4875	-.4916	-.5109	-.1025	.5749	1.3769	999.9999	
	.168	-.4847	-.4882	-.4951	-.4951	-.1026	.5819	1.3992	.5680	
	.191	-.4814	-.4836	-.5702	-.5685	-.0944	.5872	1.4021	-.5047	
	.255	-.4665	999.9999	-.4776	-.4776			1.4072	-.4215	
	.344	-.4231	-.4346	-.4384	-.4394	-.0934	1.1806	1.4070	-.4434	
	.392			-.4447	-.4447			1.4017	-.4441	
	.667	999.9999	999.9999	-.4438	-.4438		.5785	1.4061	-.4600	
	.702	-.4511	-.4505	-.4509	-.4555	-.1079	1.1703	1.4073	999.9999	
	.724	-.4463	-.4503	-.4478	-.4670	-.1045	1.1649	1.4080	-.4651	
	.744	-.4504	-.4564	-.4689	-.4665	-.1375	1.1810	1.4069	-.4678	
	.755	-.4516	999.9999	-.4722	-.4805	-.1136	1.1610	1.4090		
	.869	-.5075	999.9999	-.5657	-.5657		.5635	1.4013		
	.902	999.9999	999.9999	-.5490	-.5490		.5115	1.4095	-.5171	
	.923	-.5263	-.5189	-.6353	-.6353		.5735	1.4080	-.2906	
	.945	-.5190	-.5291	-.6774	-.6774		.6677	1.4047		
	.982	-.4835	-.4835	-.5407	-.5407			1.3517		

MSFC TWT 603 (SA28F) SRB - ALL PROUSERANCES (R11086)

MACH (4) = 1.954 ALPHA (1) = 90.000 O(PSF) = 11.010 PO = 30.010 P = 4.1200 RW/L = 7.6000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
CP	-.2544	-.2556	-.2569	-.2580	-.2533	-.2519	-.2502	-.2477	-.2387	-.2496	-.2507	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
CP	-.1838	-.1624	-.1512	-.1247	-.1010	-.1322	-.2464	-.2554	-.2651	-.2882	-.2550	-.1119	-.1016	-.1153	-.1249	-.2507	-.2530	-.2574	-.2585	-.1387
CP	.6549	.6966	.7160	.7828	.8281	.8489	.8554	.8744	.8744	.8706	.8706	.8355	.7757	.8045	.8588	.8355	.7757	.8045	.8588	.8355
CP	1.3022	1.3683	1.4247	1.4871	1.5546	1.6394	1.7052	1.7498	1.7850	1.8110	1.8302	1.6318	1.6345	1.6475	1.6546	1.6713	1.6554	1.6406	1.6369	1.6440
CP	-.1332	-.0158	-.2552	-.1535	-.1506	-.1110	-.1050	-.0956	-.0875	999.9999	999.9999	-.0657	-.1063	-.1020	.0748	-.1020	.0748	-.1020	.0748	-.1020

MACH (5) = 2.740 ALPHA (1) = 90.000 O(PSF) = 6.3700 PO = 30.030 P = 1.2100 RW/L = 5.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.050	.074	.098	.111	.139	.168	.191	.255	.344	.392	.667	.702	.744	.755	.869	.902	.923	.945	.982
CP	-.0725	-.0825	-.0731	-.0831	-.0950	-.0919	-.0953	-.0956	-.0979	-.1009	-.0849	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
CP	-.0238	-.0128	-.0093	-.0101	-.1077	-.0932	-.0983	-.0950	-.0950	-.0976	-.0238	-.0265	-.0218	-.1067	-.0962	-.1247	-.0003	-.3672	-.1271	-.0125
CP	.7910	.8093	.8141	.8670	.9070	.9344	.9435	.9574	.9574	.9574	.9574	.7910	.8093	.8141	.8670	.9070	.9344	.9435	.9574	.9574
CP	1.5046	1.5502	1.5834	1.6230	1.6777	1.7431	1.8232	1.8759	1.9198	1.9250	1.9250	1.5046	1.5502	1.5834	1.6230	1.6777	1.7431	1.8232	1.8759	1.9198
CP	.0009	.0951	-.0973	.0026	-.0955	-.0955	-.0955	-.0955	-.0955	-.0955	-.0955	.0009	.0951	-.0973	.0026	-.0955	-.0955	-.0955	-.0955	-.0955

DATE 07 MAR 77 TABULATED SOURCE DATA, MSFC THT 603 (SA28F) (R11086)

MACH (5) = 2.740 ALPHA (1) = 90.000 MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11086)

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L												
.869			999.9999		.0064		.9247		1.7575			
.902			999.9999		-.0036		.8657		1.7593			
.923			-.1046		.0307		.8856		1.7560			.0210
.945			-.1162		-.0395		.9346		1.7757			.1588
.982			-.0081		.0252				1.7700			

MACH (6) = 3.480 ALPHA (1) = 90.000 Q(P5F) = 6.8700 PO = 60.050 P = .81000 RN/L = 6.9000

SECTION (1)SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L												
.027			-.0182		.0222		.7790		1.5018			
.050			-.0289		.0290		.7919		1.5441			
.074			-.0198		.0319		.8002		1.5851			
.098			-.0278		.0476		.8516		1.6280			
.111			-.0328		.0567		.8966		1.6921			.0273
.139			-.0368		.0419		.9390		1.7949			.1300
.168			-.0397		.0447		.9564		1.8007			.0217
.191			-.0413		.0521		.9877		1.7982			.0521
.255			-.0436		.0649		.9750		1.7820			.0713
.344			-.0470		.0706		.9750		1.8005			.0736
.392			-.0470		.0712		.9682		1.8063			.0820
.667			999.9999		.0684				1.8044			.0972
.702			-.0407		.0646		.9682		1.8123			.999.9999
.724			-.0588		.0566		.9682		1.8100			.0926
.744			-.0616		.0503		.9682		1.8042			.0893
.755			-.0610		.0583		.9682		1.8055			
.869			-.0576		.0567		.9457		1.7945			
.902			999.9999		.0448		.8888		1.8036			.0578
.923			-.0616		.0757		.9049		1.8659			.1783
.945			-.0610		.0155		.9487		1.8019			
.982			-.0296		.0420				1.7799			

MSFC TMT 603 (5A28F) SRB - ALL PROTUBERANCES (R11088)

MACH (2) = .903 ALPHA (1) = 110.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.344	-.4303	-.4266	-.4498	-.4843	-.5450	.8103	1.0624	1.0672	1.0599	1.0599	1.0599
	.392	999.9999	999.9999	999.9999	999.9999	999.9999	.1401	.8486	.8486	.8486	.8486	.8486
	.702	-.5943	-.5815	-.5659	-.5486	-.5273	.6766	.6766	.6766	.6766	.6766	.6766
	.744	-.5970	-.5809	-.5608	-.5351	-.5173	.8800	.8800	.8800	.8800	.8800	.8800
	.755	-.6260	-.6112	-.5875	-.5622	-.5322	.8525	.8525	.8525	.8525	.8525	.8525
	.869	-.7392	-.7199	-.6932	-.6603	-.6225	.1533	.1533	.1533	.1533	.1533	.1533
	.902	999.9999	999.9999	999.9999	999.9999	999.9999	.1388	.1388	.1388	.1388	.1388	.1388
	.923	-.7423	-.7251	-.7008	-.6681	-.6316	.4080	.4080	.4080	.4080	.4080	.4080
	.945	-.7453	-.7204	-.6879	-.6480	-.6033	1.2662	1.2662	1.2662	1.2662	1.2662	1.2662
	.982	-.5321	-.4974	-.4579	-.4148	-.3683	1.1378	1.1378	1.1378	1.1378	1.1378	1.1378
							1.2165	1.2165	1.2165	1.2165	1.2165	1.2165

MACH (3) = 1.195 ALPHA (1) = 110.000 QIPSF = 9.1300 PO = 22.010 P = 9.1300 RN/L = 6.7000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	225.0000	270.0000	315.0000
X/L	.027	-.4263	-.4216	-.4135	-.4030	-.3935	-.3877	-.3877	-.3877	-.3877	-.3877	-.3877
	.070	-.4356	-.4338	-.4338	-.4338	-.4338	-.4338	-.4338	-.4338	-.4338	-.4338	-.4338
	.074	-.4209	-.4163	-.4091	-.4039	-.3999	-.3999	-.3999	-.3999	-.3999	-.3999	-.3999
	.098	-.4069	-.3982	-.3859	-.3744	-.3644	-.3644	-.3644	-.3644	-.3644	-.3644	-.3644
	.111	-.4073	-.4075	-.4085	-.4105	-.4135	-.4175	-.4225	-.4285	-.4355	-.4435	-.4535
	.134	-.4394	-.4278	-.4128	-.3951	-.3748	-.3528	-.3298	-.3068	-.2838	-.2608	-.2378
	.169	-.4462	-.4278	-.4042	-.3762	-.3442	-.3092	-.2742	-.2392	-.2042	-.1692	-.1342
	.191	-.4590	-.4353	-.4067	-.3737	-.3367	-.2957	-.2507	-.2057	-.1607	-.1157	-.0707
	.255	-.4606	-.4399	-.4158	-.3888	-.3588	-.3258	-.2898	-.2508	-.2098	-.1688	-.1278
	.344	-.4632	-.4424	-.4189	-.3925	-.3625	-.3295	-.2935	-.2545	-.2135	-.1725	-.1315
	.392	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	.667	-.4179	-.4280	-.4407	-.4555	-.4725	-.4915	-.5125	-.5355	-.5605	-.5875	-.6165
	.702	-.4382	-.4509	-.4663	-.4833	-.5011	-.5201	-.5401	-.5611	-.5831	-.6061	-.6301
	.744	-.4335	-.4451	-.4599	-.4763	-.4933	-.5103	-.5283	-.5473	-.5673	-.5883	-.6093
	.755	-.4459	-.4599	-.4763	-.4933	-.5103	-.5283	-.5473	-.5673	-.5883	-.6093	-.6303
	.869	-.5410	-.5621	-.5841	-.6071	-.6311	-.6561	-.6811	-.7071	-.7331	-.7591	-.7851
	.902	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
	.923	-.5571	-.5841	-.6121	-.6411	-.6711	-.7021	-.7341	-.7671	-.8011	-.8361	-.8721
	.945	-.5728	-.6011	-.6301	-.6601	-.6911	-.7231	-.7561	-.7901	-.8251	-.8611	-.8981
	.982	-.2374	-.2654	-.2944	-.3244	-.3554	-.3874	-.4204	-.4544	-.4894	-.5254	-.5624

TABULATED SOURCE DATA, MSFC TMT 603 (ISA28F)

MSFC TMT 603 (ISA28F) SRB - ALL PROTUBERANCES (R11088)

DATE 07 MAR 77

MACH (5) = 2.740 ALPHA (1) = 110.000
 SECTION (1) SRB DEPENDENT VARIABLE CP
 THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .859 -.1212 999.9999 -.0188 .8082 1.6045
 .902 999.9999 .0040 .5751 1.0428
 .923 -.1256 -.1062 -.0012 -.5957 -.0011
 .945 -.1212 -.1347 -.0710 .7875 1.4343
 .982 .1613 .0502 1.7541

MACH (6) = 3.480 ALPHA (1) = 110.000 OIPSF = 6.8600 PO = 60.010 P = .81000 RM/L = 7.1000
 SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000
 X/L .027 -.0229 -.0352 -.0308 .4098 .8783
 .050 -.0313 -.0375 -.0235 .4299 .9081
 .074 -.0268 -.0399 -.0156 .4561 .9349
 .098 -.0336 -.0444 -.0331 .3896 .6439
 .111 -.0386 -.0545 -.0500 .6376 1.0779 1.2706 .5054 .0373 -.0489
 .139 -.0404 -.0545 -.0528 .8377 1.3376 1.5704 999.9999 .0463 -.0494
 .168 -.0449 -.0432 999.9399 -.0511 .0538 .3546 .8585 1.3789 1.5947 1.1009 .0564 -.0523
 .191 -.0472 -.0386 .0538 .3567 1.3694 1.5845 .0581
 .255 -.0494 .0542 .0542 .8553 1.5851 .0558
 .344 -.0539 -.0392 -.0448 1.3727 1.5883 1.5873 .0559
 .392 999.9999 .0553 .0440 .8670 1.6860 .0570
 .667 999.9999 .0454 .0474 1.4635 1.7237 .0418
 .702 -.0630 -.0454 .0550 .9087 1.0558 999.9999
 .724 -.0624 -.0647 -.0437 .0091 .2495
 .744 -.0624 -.0613 -.0601 .0003 .4651
 .755 -.0625 999.9999 .0693 .3726 1.5566 1.8546 1.368
 .869 -.0669 .0192 .0636 1.4414 1.7018 .0818
 .902 999.9999 .0378 .0378 .8202 1.6316 .9727
 .923 -.0692 .0311 .0311 .5711 .9727 .0204
 .945 -.0703 -.0771 -.0184 .8258 1.6465 .1151
 .982 .1973 .0931 .0931 .7466 1.7605

DATE 07 MAR 77

TABULATED SOURCE DATA, MSFC TWT 603 (SA2BF)

PAGE 241

MSFC TWT 603 (SA2BF) SRB - ALL FROTUBERANCES

(R11089) (22 AUG 75)

REFERENCE DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN.
LREF = 146.0000 IN. YMRP = .0000 IN.
BREF = 146.0000 IN. ZMRP = .0000 IN.
SCALE = .0055

PARAMETRIC DATA

RN-SCH = 2.000 PHI = 315.000

MACH (1) = .599 ALPHA (1) = 130.100 O(PSF) = 7.5000 PO = 38.020 P = 29.820 RN/L = 8.8000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.1406	-.11400	-.1511	-.5031	.0429
.050	-.1738	-.1737	-.1758	-.5311	.0522
.074	-.2054	-.2059	-.2259	-.5337	.0549
.098	-.2359	-.2488	-.2695	-.5754	.0116
.111	-.2647	-.2608	-.2553	-.2909	-.1084
.139	-.2836	-.2851	-.2902	-.9648	-.7731
.168	-.3131	-.3209	-.3205	-.2881	-.4934
.191	-.3384	-.3447	-.3568	-.1019	-.9999
.255	-.0000	999.9999	-.7244	-.10433	-.1624
.344	.0000	-.4434	-.8546	-.5633	-.5974
.592	.0000	.9804	-.11287	.3460	.6156
.667	.0000	999.9999	-.9228	.6179	-.9859
.702	.0000	-.3878	-.15218	.6249	-.9226
.724	.0000	-.5858	-.12445	-.3959	-.13533
.744	.0000	-.3646	-.6129	.4432	.7720
.755	.0000	999.9999	-.6920	-.1147	-.12391
.869	.0000	999.9999	-.8036	-.5391	.8868
.902	.0000	999.9999	-.1063	.4172	-.10407
.923	-.5189	-.5497	-.15951	-.3697	.6530
.945	-.5402	-.7273	-.6556	-.6741	-.7539
.982	-.3542	-.8561	-.10169	-.1352	.5013
			-.8561	-.0809	-.9568

MACH (2) = .903 ALPHA (1) = 130.100 O(PSF) = 7.4000 PO = 22.010 P = 12.980 RN/L = 6.3000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L

.027	-.2515	-.2553	-.2617	-.4748	-.0760
.050	-.2690	-.2774	-.2936	-.5341	-.0399
.074	-.2907	-.3074	-.3306	-.4293	.0223
.098	-.3189	-.3302	-.3932	-.4787	-.1723
.111	-.3370	-.3423	-.3888	-.5511	-.1087
.139	-.3450	-.3594	-.3870	-.8126	-.5449
.168	-.3702	-.3882	-.4127	-.5153	-.9999
.191	-.3915	-.4140	-.4328	-.7704	-.6348
.255	-.4483	999.9999	-.5889	.4234	-.6439
			-.1074	.9651	-.5112

TABLATED SOURCE DATA, MSFC TWT 603 (SA28F)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (RI 389)

DATE 07 MAR 77

MACH (2) = .903 ALPHA (1) = 130.100

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.4796	-.4856	-.5369	-.8126	-.7329	.4652	.6749	-.5693
	.392			-.7600	-.8886		.6822	.6822	-.7026
	.667	999.9999	999.9999		-.0748		.7301	.7301	-.6376
	.702	-.4931	-.4949	-.5720	-1.0257	-.7352	.6030	.6030	-.6889
	.724	-.5619	-.5323	-.5436	-.6011	-.8606	.0103	.0103	999.9999
	.744	-.5341	-.5606	-.6631	-.7584	-.5741	.7098	1.0010	-.7896
	.755	-.5599	999.9999	-.6883	-.7475	-.6882	.5753	.5753	-.7254
	.859	-.6903	999.9999	-.8846		-.0061	.7801	.7801	
	.902	999.9999	999.9999	-1.1001	-.3450	-.2297	.8252	.8252	-.7302
	.923	-.7040	-.6552	-.8208	.1912		.6543	.6543	-.6388
	.945	-.6910	-.6269	-.7441	.1960		1.1031	1.1031	
	.982	-.4004		-.5186					

MACH (3) = 1.196 ALPHA (1) = 130.100 QIPSF = 9.1300 PO = 22.010 P = 9.1300 RN/L = 6.7000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.2901	-.2955	-.3052	-.3542	.0694	.0694	.0694	
	.050	-.3091	-.3091	-.3276	-.3054	.1317	.1317	.1317	
	.074	-.3279	-.3359	-.3442	-.2424	.1569	.1569	.1569	
	.098	-.3420	-.3491	-.3346	-.3751	-.0620	-.0620	-.0620	
	.111	-.3507	-.3579	-.3723	-.0841	.4390	-.1663	-.3911	-.3540
	.139	-.3594	-.3685	-.3677	.1556	.7665	999.9999	999.9999	-.3741
	.168	-.3780	-.3802	999.9999	-.3086	.8213	.4516	.4728	-.3896
	.191	-.3907	-.3944	-.4125	.1956	.6408			
	.255	-.4202	999.9999	-.4202	-.3042	.6436	.8189	.8189	-.4238
	.344	-.4294	-.4198	-.4475	.2110	.6545	.8226	.8226	-.4514
	.392			-.4470		.8246	.8246	.8246	-.4803
	.667	999.9999	999.9999	-.4656	.2487	.8842	.8842	.8842	-.4451
	.702	-.4236	-.4358	-.5622	-.2423	.8151	.9871	.9871	-.4981
	.724	-.5076	-.5108	-.6021	-.4264	.2256	.3582	.3582	999.9999
	.744	-.4602	-.4368	-.4752	-.0986	.9328	1.1730	1.1730	-.4466
	.755	-.4809	999.9999	-.4844	-.2138	.7911	1.0005	1.0005	-.5936
	.859	-.5480	999.9999	-.6039	.3157	.9405	.9405	.9405	
	.902	999.9999	999.9999	-.6716	.3844	.3844	.3844	.3844	-.3573
	.923	-.5941	-.5826	-.6495	.4828	.9975	.9975	.9975	-.3338
	.945	-.5847	-.6812	-.6665	.4594	.8252	.8252	.8252	
	.982	-.1716		-.0838		1.2754	1.2754	1.2754	

TABULATED SOURCE DATA, MSFC TWT 603 (SAZBF)

DATE 07 MAR 77

(R11089)

MSFC TWT 603 (SAZBF) SRB - ALL PROTUBERANCES

MACH (4) = 1.961 ALPHA (1) = 130.100 O(PSF) = 10.960 PO = 30.010 P = 4.0700 RN/L = 7.6000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.2238	-.2266	-.2311	-.0262	.2512
	.050	-.2301	-.2297	-.2345	.0069	.2948
	.074	-.2302	-.2300	-.2406	.0217	.2690
	.098	-.2414	-.2435	-.2432	-.0089	.2281
	.111	-.2446	-.2495	-.1998	.3878	.6560
	.139	-.2516	-.2572	-.1755	.1001	.4840
	.168	-.2608	-.2651	-.1786	.0856	.4640
	.191	-.2626	-.2626	-.1774	.0915	.8224
	.255	-.2731	999.9999	-.1792	.4716	.9574
	.344	-.2638	-.2616	-.1746	.0924	.9649
	.392	999.9999	999.9999	-.1742	.4713	.9600
	.667	999.9999	999.9999	-.1816	.1079	.8617
	.702	-.2524	-.2482	-.2060	-.1507	.2459
	.744	-.2744	-.2670	-.2715	-.4085	1.4187
	.795	-.2356	-.2364	-.2596	.4085	1.6772
	.863	-.2354999.9999	999.9999	-.2494	-.0965	1.3528
	.902	-.2525	999.9999	-.1843	.5252	1.1104
	.923	999.9999	999.9999	-.2208	.1305	.3864
	.945	-.2654	-.2586	-.2240	.5230	1.0768
	.982	-.2483	-.2678	-.2384	.3350	.7257
		.1442		.1389		1.5224

MACH (5) = 2.740 ALPHA (1) = 130.120 O(PSF) = 6.3700 PO = 30.030 P = 1.2100 RN/L = 5.2000

DEPENDENT VARIABLE CP

SECTION (1) SRB

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0816	-.0982	-.1202	.0842	.3178
	.050	-.0948	-.1020	-.1196	.1091	.3415
	.074	-.0858	-.1092	-.1171	.1297	.3549
	.098	-.0967	-.1129	-.1140	.1297	.3500
	.111	-.1036	-.1153	-.1208	.5071	1.0017
	.139	-.1062	-.1117	-.1214	.1667	.8524
	.168	-.1117	-.1238	-.1214	.5351	.8652
	.191	-.1117	-.1068999.9999	-.1189	.1892	.8761
	.255	-.1153	-.1012	-.0358	.1843	.8596
	.344	-.1171	999.9999	-.0358	.5290	1.0039
	.392	-.1220	-.1015	-.0334	.1804	1.0035
	.667	999.9999	999.9999	-.0413	.8689	1.0090
	.702	-.1286	-.1058	-.0697	.1014	.0334
	.744	-.1329	-.1323	-.0627	1.0114	-.0407
	.795	-.1183	-.1202	-.1165	.7881	-.0520
	.863	-.117999.9999	999.9999	-.1023	.2208	.999.9999
	.902	-.1183	-.1202	-.0237	1.2208	1.989
	.945	-.117999.9999	999.9999	-.0237	1.7826	2.0957
	.982	-.117999.9999	999.9999	-.0417	1.2760	1.5102

(R11089)

MACH (5) = 2.740 ALPHA (1) = 130.120

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.1293	999.9999	-.0516	.6346	1.2542					
X/L	.902	999.9999	999.9999	-.0747	.2262	4.272					
X/L	.923	-.1299	-.1238	-.0674	.4993	1.0517				-.0448	
X/L	.945	-.1177	-.1341	-.0977	.3197	.7141				-.1013	
X/L	.982	.2893		.1898		1.6139					

MACH (6) = 3.480 ALPHA (1) = 130.120 Q1PSF1 = 6.8600 PO = 60.010 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0316	-.0418	-.0576	.1058	.3070					
X/L	.050	-.0395	-.0458	-.0576	.1351	.3442					
X/L	.074	-.0356	-.0508	-.0571	.1582	.3752					
X/L	.098	-.0424	-.0542	-.0542	.1616	.3865					
X/L	.111	-.0469	-.0554	-.0610	.2033	.8774	1.0679	.2929	.0257	-.0565	
X/L	.139	-.0480	-.0537	-.0593	.2241	.8954	1.0493	999.9999	-.0032	-.0582	
X/L	.168	-.0525	-.0492	-.0576	.2219	.9090	1.0550	.5815	.0173	-.0610	
X/L	.191	-.0554	-.0458	-.0542	.2209	.8971	1.0476		.0133		
X/L	.255	-.0576	-.0457	-.0520	.5556	.8936	1.0471		.0150		
X/L	.392	-.0610	-.0457	-.0520	.2220	.8936	1.0448		.0156		
X/L	.667	999.9999	999.9999	.0077	.5268	1.0155	.0116		.0116		
X/L	.702	-.0603	-.0542	-.0604	.1599	.6432	.9605		.0104		
X/L	.724	-.0689	-.0711	-.0536	.0319	.2337	.1926		999.9993		
X/L	.744	-.0683	-.0694	-.0554	.5572	1.7905	2.0966		.1711		
X/L	.755	-.0694	999.9999	-.0621	.3966	1.1705	1.5301		.1041		
X/L	.869	-.0728	999.9999	-.0131	.6576	1.2675	1.2675				
X/L	.902	999.9999	999.9999	-.0221	.2438	4.555					
X/L	.923	-.0723	-.0689	-.0187	.4806	1.0358			-.0035		
X/L	.945	-.0672	-.0751	-.0407	.2951	.6886			-.0497		
X/L	.982	.3194		.1852		1.6586					

REFERENCE DATA
 SREF = 116.2600 50.FT. XMRP = 1044.0000 IN.
 LREF = 146.0000 IN. YMRP = .0000 IN.
 BREF = 146.0000 IN. ZMRP = .0000 IN.
 SCALE = .0055

PARAMETRIC DATA
 RN-SCH = 2.000 PHI = 315.000
 MACH (1) = .601 ALPHA (1) = 149.000 O(P)SF = 7.5300 PO = 38.020 P = 29.780 RN/L = 8.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0006	.0046	.0009	.1404	.0202	.027	.0006	.0046	.0009	.1404	.0202
	.050	-.0383	-.0451	-.0474	-.2195	-.0684		.050	-.0383	-.0451	-.0474	-.0684
	.074	-.1005	-.1068	-.1109	-.2878	-.1311		.074	-.1005	-.1068	-.1109	-.1311
	.098	-.2059	-.1809	-.2595	-.4770	-.2853		.098	-.2059	-.1809	-.2595	-.2853
	.111	-.3599	-.3045	-.3632	-.7985	-.5773		.111	-.3599	-.3045	-.3632	-.5773
	.139	-.2047	-.1858	-.4422	-.8241	-.6466		.139	-.2047	-.1858	-.4422	-.6466
	.168	-.2193	-.2170	-.4837	-.2371	-.0929		.168	-.2193	-.2170	-.4837	-.0929
	.191	-.2301	-.2282	-.4978	-.5237	-.1091		.191	-.2301	-.2282	-.4978	-.5237
	.255	-.2447	999.9999	-.5562	-.2268	.2518		.255	-.2447	999.9999	-.5562	.2518
	.344	-.2779	-.2741	-.6426	-.5716	.2540		.344	-.2779	-.2741	-.6426	.2540
	.392	999.9999	999.9999	-.6205	-.1619	.2545		.392	999.9999	999.9999	-.6205	.2545
	.667	999.9999	999.9999	-.6205	-.1619	.3010		.667	999.9999	999.9999	-.6205	.3010
	.702	-.3729	-.1945	-.5632	-.4238	.3702		.702	-.3729	-.1945	-.5632	.3702
	.724	-.4907	-.4225	-.5058	-.7546	-.5001		.724	-.4907	-.4225	-.5058	-.5001
	.744	-.2195	-.1411	-.1430	-.1419	.7116		.744	-.2195	-.1411	-.1430	.7116
	.755	-.2651	999.9999	-.5336	-.3921	.4554		.755	-.2651	999.9999	-.5336	.4554
	.869	-.3090	999.9999	-.3261	-.1707	.3202		.869	-.3090	999.9999	-.3261	.3202
	.902	999.9999	999.9999	-.8072	-.4140	.0245		.902	999.9999	999.9999	-.8072	.0245
	.923	-.3897	-.4973	-.6909	-.3198	.2016		.923	-.3897	-.4973	-.6909	.2016
	.945	-.3513	-.5848	-.6125	-.9142	-.8085		.945	-.3513	-.5848	-.6125	-.8085
	.982	-.1198		-.6307		.8467		.982	-.1198		-.6307	.8467

MACH (2) = .902 ALPHA (1) = 149.000 O(P)SF = 7.3900 PO = 22.010 P = 12.990 RN/L = 6.3000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0322	-.0172	-.0071	-.0278	.0077	.027	-.0322	-.0172	-.0071	-.0278	.0077
	.050	-.1370	-.1357	-.1252	-.1434	-.0969		.050	-.1370	-.1357	-.1252	-.0969
	.074	-.2223	-.2346	-.3317	-.3519	-.2947		.074	-.2223	-.2346	-.3317	-.2947
	.098	-.3454	-.3149	-.5010	-.5084	-.7055		.098	-.3454	-.3149	-.5010	-.7055
	.111	-.4578	-.4377	-.4273	-.5301	-.1893		.111	-.4578	-.4377	-.4273	-.1893
	.139	-.2750	-.2579	-.4624	-.6248	-.0962		.139	-.2750	-.2579	-.4624	-.0962
	.168	-.2720	-.2872	-.5092	-.1997	-.2089		.168	-.2720	-.2872	-.5092	-.2089
	.191	-.2717	-.2930	-.5206	-.5795	-.1462		.191	-.2717	-.2930	-.5206	-.1462
	.255	-.2757	999.9999	-.4936	-.2069	.2598		.255	-.2757	999.9999	-.4936	.2598

MSFC THT 603 (SA2BF) SR8 - ALL PROTUBERANCES (R11090)

MACH (2) = .902 ALPHA (1) = 149.000

SECTION (1) SR8 DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25	225.0000	270.0000	315.0000
X/L	.344	-.3253	-.3325	-.3808	-.7725	-.5707	.1450	.2676	-.6687				
.392	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.667	-.4158	-.3705	-.4212	-.4875	-.6011	-.4290	.2052	.0839	-.7454				
.724	-.4251	-.4473	-.4875	-.6011	-.6011	-.5802	-.5659	-.4560	-.4431				
.744	-.2157	-.2331	-.2182	-.3805	-.2764	-.2764	.6139	.8243	-.4117				
.755	-.2821	-.2999	-.2750	-.3705	-.4958	-.4958	.3626	.5299	-.6683				
.869	-.4015	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.902	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.923	-.3736	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.945	-.3751	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.982	-.1455	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999

MACH (3) = 1.203 ALPHA (1) = 149.000 OIPSF = 9.1600 PO = 22.010 P = 9.0400 RN/L = 6.7000

SECTION (1) SR8 DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25	225.0000	270.0000	315.0000
X/L	.027	-.1988	-.2097	-.2545	-.4725	-.3423	-.0499	.2227	-.4858				
.050	-.2765	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.074	-.3691	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.098	-.5105	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.111	-.4160	-.4615	-.4648	-.4750	-.4521	-.4814	.0774	.1653	-.4448				
.139	-.3258	-.3548	-.3156	-.3698	-.3976	-.4186	.2001	.3359	-.4513				
.168	-.3144	-.3547	-.3156	-.3412	-.4155	-.4111	.2021	.3020	-.4513				
.191	-.3070	-.3418	-.3269	-.3269	-.4049	-.3861	.2176	.3133	-.4513				
.255	-.2594	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.344	-.2095	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.392	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.667	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999
.702	-.2600	-.3620	-.4543	-.4543	-.4868	-.3570	.1581	.1273	-.4752				
.724	-.5074	-.4816	-.4793	-.4793	-.4758	-.4758	.3997	.3939	-.4752				
.744	-.2281	-.2924	-.3444	-.3444	-.4243	-.0432	.8325	1.0088	-.3284				
.755	-.3005	999.9999	999.9999	999.9999	999.9999	999.9999	.5945	.7394	-.4538				
.869	-.4707	999.9999	999.9999	999.9999	999.9999	999.9999	.1279	.5113	-.4538				
.902	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	-.2449	-.0129	-.6643				
.923	-.4481	999.9999	999.9999	999.9999	999.9999	999.9999	-.0918	.1745	-.6643				
.945	-.4767	999.9999	999.9999	999.9999	999.9999	999.9999	-.5316	-.1975	-.6643				
.982	-.0402	999.9999	999.9999	999.9999	999.9999	999.9999	-.3927	1.1430	-.6643				

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES (R11090)

MACH (5) = 2.740 ALPHA (1) = 149.000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	999.9999	.0831	.2541	.4330
.869	-1.068			
.902	999.9999	-1.139	.0254	.0824
.923	-1.189	-0.838	.2826	.4368
.945	-1.305	-1.196	-0.115	-1.140
.982	.2559	.2402		1.1322

-0.3995
-0.0722

MACH (6) = 3.480 ALPHA (1) = 149.020 OIPSF = 6.6000 PC = 60.020 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 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

X/L	999.9999	-0.444	-0.539	-0.325	-0.294
.027	-0.303				
.050	-0.399	-0.477	-0.568	-0.246	.0474
.074	-0.365	-0.539	-0.624	-0.190	.0587
.098	-0.427	-0.579	-0.652	-0.100	.0604
.111	-0.494	-0.663	-0.630	.2171	.4234
.139	-0.494	-0.624	-0.590	.0643	.3636
.168	-0.539	-0.500999.9999	-0.551	.0733	.3805
.191	-0.556	-0.455	-0.562	.0728	.3879
.255	-0.556	999.9999	-0.258	.0700	.3817
.344	-0.545	-0.427	-0.280	.2329	.4493
.392			-0.308	.3924	.4640
.667	999.9999	999.9999	-0.421	.2430	.4566
.702	-0.725	-0.534	-0.613	.3991	.4651
.724	-0.787	-0.804	-0.545	.1201	.4955
.744	-0.415	-0.449	-0.686	.0224	.0452
.755	-0.477999.9999	999.9999	-0.601	.2464	.9349
.869	-0.556		-0.585	.1742	.7706
.902	999.9999	999.9999	-0.382	.2312	.3901
.923	-0.630	-0.692	-0.731	.0485	.0348
.945	-0.703	-0.748	-0.297	.2267	.3574
.982	.2932		-0.652	.0519	.1477
			.2909		.9870

-0.461
-0.387
-0.370
-0.0613
-0.359
-0.331
-0.308
999.9999
0.0576
0.0074
-0.055
-0.0218

TABULATED SOURCE DATA, MSFC THT 603 (SA28F) (R11091) (22 AUG 75)

MSFC THT 603 (SA28F) SRB - ALL PRODUANCES PARAMETRIC DATA

SREF = 116.2600 SQ.FT. XMRP = 1044.0000 IN. RN-SCH = 2.000 PHI = 315.000
 LREF = 146.0000 IN. YMRP = .0000 IN. MACH (1) = .600 ALPHA (1) = 169.900 Q1PSF = 7.5100 PO = 38.030 P = 29.810 RN/L = 8.8000
 BREF = 146.0000 IN. ZMRP = .0000 IN. MACH (2) = .905 ALPHA (2) = 169.900 Q1PSF = 7.4200 PO = 22.010 P = 12.940 RN/L = 6.4000
 SCALE = .0055

REFERENCE DATA

DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP			
THETA	.0000	22.5000	45.0000	67.5000
X/L	.027	.1055	.1050	.1175
.050	.0737	.0685	.0821	.0885
.074	.0660	.0093	.0159	.0249
.098	.1122	.1535	.2964	.3202
.111	.3038	.3069	.4948	.7337
.139	.1036	.0958	.1112	.1058
.168	.0718	.0764	.0792	.0844
.191	.0644	.0651	.0657	.0626
.255	.0942	.0999	.0978	.0179
.344	.0594	.0557	.0970	.0139
.392	.999.9999	.999.9999	.1225	.0066
.416	.999.9999	.999.9999	.1415	.0103
.441	.0611	.0434	.0267	.0913
.466	.0664	.0734	.0305	.0138
.491	.0392	.0296	.0637	.0367
.516	.0239	.0296	.2277	.3754
.541	.0239	.0296	.1586	.3972
.566	.0239	.0296	.0690	.4404
.591	.0239	.0296	.0771	.2657
.616	.0239	.0296	.3413	.0621
.641	.0239	.0296	.999.9999	.2510
.666	.0239	.0296	.999.9999	.4760
.691	.0239	.0296	.4827	.7277
.716	.0239	.0296	.4223	.4933
.741	.0239	.0296	.5007	.5504
.766	.0239	.0296	.5007	.5504
.791	.0239	.0296	.5007	.5504
.816	.0239	.0296	.5007	.5504
.841	.0239	.0296	.5007	.5504
.866	.0239	.0296	.5007	.5504
.891	.0239	.0296	.5007	.5504
.916	.0239	.0296	.5007	.5504
.941	.0239	.0296	.5007	.5504
.966	.0239	.0296	.5007	.5504
.991	.0239	.0296	.5007	.5504

DEPENDENT VARIABLE CP

SECTION (1) SRB	DEPENDENT VARIABLE CP			
THETA	.0000	22.5000	45.0000	67.5000
X/L	.027	.0709	.0506	.0541
.050	.0331	.0060	.0779	.0455
.074	.0461	.0789	.2198	.2263
.098	.0882	.2238	.3491	.3792
.111	.3436	.3495	.3700	.2924
.139	.1216	.0791	.1123	.0437
.168	.0870	.0839	.0850	.0006
.191	.0726	.0722	.0718	.0029
.255	.0695	.999.9999	.1013	.0434
.344	.0695	.999.9999	.1013	.0434
.392	.0695	.999.9999	.1013	.0434
.416	.0695	.999.9999	.1013	.0434
.441	.0695	.999.9999	.1013	.0434
.466	.0695	.999.9999	.1013	.0434
.491	.0695	.999.9999	.1013	.0434
.516	.0695	.999.9999	.1013	.0434
.541	.0695	.999.9999	.1013	.0434
.566	.0695	.999.9999	.1013	.0434
.591	.0695	.999.9999	.1013	.0434
.616	.0695	.999.9999	.1013	.0434
.641	.0695	.999.9999	.1013	.0434
.666	.0695	.999.9999	.1013	.0434
.691	.0695	.999.9999	.1013	.0434
.716	.0695	.999.9999	.1013	.0434
.741	.0695	.999.9999	.1013	.0434
.766	.0695	.999.9999	.1013	.0434
.791	.0695	.999.9999	.1013	.0434
.816	.0695	.999.9999	.1013	.0434
.841	.0695	.999.9999	.1013	.0434
.866	.0695	.999.9999	.1013	.0434
.891	.0695	.999.9999	.1013	.0434
.916	.0695	.999.9999	.1013	.0434
.941	.0695	.999.9999	.1013	.0434
.966	.0695	.999.9999	.1013	.0434
.991	.0695	.999.9999	.1013	.0434

(R11091)

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES

MACH (2) = .905 ALPHA (1) = 169.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.344	-.0873	-.0869	-.1206	-.1412	-.1276	-.0285	-.0010	-.1276	-.1533
	.392	999.9999	999.9999	999.9999	.0584	-.0077	-.0676	-.0295	-.0669	999.9999
	.702	-.0125	-.0293	-.0554	-.0713	-.0725	-.3010	-.3278	-.0499	-.0448
	.724	-.0239	-.0314	-.1667	-.1916	-.2370	.2511	.3261	-.2394	-.4190
	.744	-.0980	-.0939	-.0273	.0123	.0957	.1537	.2025	-.5048	-.6275
	.755	-.1533	999.9999	-.0979	-.0636	-.0017	-.2301	-.2394	-.4356	-.4117
	.869	-.3990	999.9999	-.4570	-.4482	-.4247	-.4321	-.4833	-.6275	-.4282
	.902	999.9999	999.9999	-.4482	-.4321	-.4833	-.6439	-.3797		
	.923	-.3603	-.4111							
	.945	-.3035	-.3323							
	.982	-.3198								

MACH (3) = 1.202 ALPHA (1) = 169.900 OIPSF = 9.1600 PO = 22.010 P = 9.0500 RN/L = 6.6000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	.0268	-.0113	-.0050	-.0176	.0271	.0271	.0290	-.0933	-.0425
	.050	-.0312	-.0722	-.1067	-.1026	-.1743	-.1743	.0591	-.0425	-.0558
	.074	.1560	-.1898	-.2478	-.4644	-.4148	-.4644	.0053	-.2364	999.9999
	.098	.5367	-.4570	-.5642	-.5440	-.5255	-.5255	.4834	.2736	.2136
	.111	-.2142	-.2373	-.4288	-.2119	-.1151	-.0526	-.0771	-.1542	-.2272
	.139	-.0422	-.0344	-.0053	-.0198	-.0367	.0881	.1119	-.0603	-.0389
	.168	-.0192	-.0148	999.9999	-.0099	-.0173	.0484	.0686	-.0279	-.0017
	.191	-.0225	-.0145	999.9999	-.0045	-.0170	.0541	.0437	-.0446	
	.255	-.0532	-.0312	999.9999	-.0780	-.0244	.0244	.0290		
	.344	-.0285	-.0312	999.9999	-.0838	-.0692	.0238	.0465	-.0933	-.0425
	.392	999.9999	999.9999	-.0510	-.0056	-.0255	-.0255	.0591	-.0425	-.0558
	.702	-.0358	-.0326	-.0056	-.0255	-.0255	-.0255	.0053	-.2364	999.9999
	.724	-.2003	-.2168	-.1333	-.1333	-.1701	-.1745	.4834	.2736	.2136
	.744	-.0801	-.0779	-.2406	-.3088	-.3569	-.4238	.5100	.5766	.4432
	.755	-.1075	999.9999	.1627	.2158	.2729	.5100	.5766	.4432	.2136
	.869	-.3283	999.9999	.0896	.1263	.1804	.3832	.4432	.2136	
	.902	999.9999	999.9999	-.2906	-.3616	-.3892	-.0329	.3201	-.2915	-.4534
	.923	-.3311	-.3549	-.3616	-.4078	-.2290	-.3892	-.2442	-.6354	-.1642
	.945	-.3021	-.3337	-.4078	-.4035	-.6138	-.6138	-.6354		
	.982	-.1714		-.2775	-.2775			-.1642		

DATE 07 MAR 77

TABLATED SOURCE DATA, MSFC TWT 603 (SA28F)

PAGE 251

MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11081)

MACH (4) = 1.954 ALPHA (1) = 169.880 O(P)SF = 11.010 PO = 30.000 P = 4.1200 RN/L = 7.6000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.55	3.44	3.92	6.67	7.02	7.24	7.44	7.55	8.69	9.02	9.45	9.62	
	-.0189	-.0863	-.1707	-.2008	-.0154	-.0182	.0091	-.0013	-.0136	.0014	-.0224	999.9999	-.1370	-.1980	-.0260	-.028999.9999	-.1447	999.9999	-.1894	-.1908	.0871
	-.0224	-.0886	-.1292	-.1493	-.0344	-.0196	.0108999.9999	-.0017	999.9999	-.0224	-.0758	999.9999	-.1099	-.2091	.1258	.0889	999.9999	999.9999	-.2019	-.2156	.0115
	-.0505	-.1190	-.1663	-.2199	-.0548	-.0105	-.0010	-.0130	-.0477	-.0572	-.0013	-.1165	-.1100	-.2024	1.261	.0650	-.0899	-.1866	-.1707	-.3009	.0115
	-.0294	-.1305	-.2136	-.2337	-.0463	-.0330	-.0442	-.0389	-.0266	-.0256	-.0256	-.0822	-.2024	1.920	.0632	-.0899	-.1666	-.0446	-.2235	.0115	
	-.0298	-.2040	-.2178	-.2080	-.0390	-.0323999.9999	-.0376	-.0376	-.0442	-.0474	-.0567	-.0551	-.0404	-.1901	-.3346	-.1634	-.0400	-.1646	-.0488	-.2222	.1448
	-.0379	-.0157	-.1265	-.1412	-.0810	-.0397	-.0551	-.0705	-.0379	-.0365	-.0365	-.0256	-.0404	-.1901	-.3346	-.1634	-.0400	-.1646	-.0488	-.2222	.1448
					-.0379	-.0397	-.0551	-.0705	-.0379	-.0365	-.0365	-.0256	-.0404	-.1901	-.3346	-.1634	-.0400	-.1646	-.0488	-.2222	.1448
													999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999	999.9999

MACH (5) = 2.740 ALPHA (1) = 169.900 O(P)SF = 6.3700 PO = 30.020 P = 1.2100 RN/L = 5.2000

SECTION (1)SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	0.27	0.50	0.74	0.98	1.11	1.39	1.68	1.91	2.55	3.44	3.92	6.67	7.02	7.24	7.44	7.55
	-.0530	-.0745	-.0784	-.0897	-.0264	-.0161	-.0187	-.0216	-.0185	-.0012	-.0255	999.9999	-.0518	-.0954	-.0040	.0034999.9999
	-.0616	-.0695	-.0817	-.0835	-.0428	-.0203	-.0247	-.0270	-.0514	-.0464	-.0298	999.9999	-.0691	-.0971	-.0805	.0489
	-.0725	-.0965	-.1099	-.1113	-.0526	-.0331	-.0337	-.0379	-.0514	-.0298	-.0191	-.0608	-.0645	-.0922	-.1206	.0265
	-.0699	-.0967	-.1119	-.1228	-.0166	-.0075	-.0055	-.0263	-.0020	-.0253	-.0392	-.0099	-.0463	-.0992	-.1206	.0265
	-.0736	-.1004	-.1149	-.1083	-.0366	-.0440	-.0435	-.0437	-.0429	-.0429	-.0392	-.0392	-.0240	-.1034	-.2931	.1036
	-.0736	-.1004	-.1149	-.1083	-.0366	-.0440	-.0435	-.0437	-.0429	-.0429	-.0392	-.0392	-.0240	-.1034	-.2931	.1036
					-.0736	-.1004	-.1149	-.1083	-.0366	-.0440	-.0435	-.0437	-.0429	-.1034	-.2931	.1036
													999.9999	999.9999	999.9999	999.9999

MSFC THT 603 (SA28F) SRB - ALL PROTUBERANCES (R11091)

MACH (5) = 2.740 ALPHA (1) = 169.900

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.869	-.0469	999.9999	-.0342	.0192	.0582
	.902	999.9999	-.0931	-.0894	-.0697	
	.923	-.0973	-.0808	.0097	.0038	-.0463
	.945	-.1131	-.1186	-.1307	-.0701	-.0998
	.982	.1698	.1242	-.0810	.2481	

MACH (6) = 3.480 ALPHA (1) = 169.880 O(PSF) = 5.8600 PO = 60.020 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L	.027	-.0345	-.0441	-.0486	-.0464	-.0446
	.050	-.0463	-.0480	-.0599	-.0604	-.0599
	.074	-.0458	-.0520	-.0632	-.0649	-.0700
	.098	-.0514	-.0531	-.0661	-.0711	-.0627
	.111	-.0182	-.0210	-.0322	-.0311	-.0029
	.139	-.0125	-.0120	-.0215	-.0272	.0291
	.168	-.0142	-.0148	-.0244	-.0289	.0325
	.191	-.0165	-.0154	-.0238	-.0232	.0319
	.235	-.0165	999.9999	-.0334	.0037	.0318
	.344	-.0069	-.0170	-.0278	-.0187	.0426
	.392	999.9999	999.9999	-.0024	.0280	.0415
	.667	999.9999	999.9999	-.0362	.0043	.0409
	.702	-.0182	-.0063	-.0446	-.0325	.0432
	.724	-.0520	-.0446	-.0559	-.0249	.0297
	.744	.0263	.0251	-.0652	-.0542	.0520
	.755	.0240	999.9999	.0426	.0934	.2314
	.869	-.0125	999.9999	.0257	.0235	.0912
	.902	999.9999	999.9999	-.0035	.0375	.0697
	.923	-.0446	-.0368	-.0458	-.0407	-.0277
	.945	-.0689	-.0544	-.0705	-.0375	.0318
	.982	.2016	.1610	-.0306	-.0306	-.0170
						.2805

MSFC TMT 603 (SA28F) SRB - ALL PROTOBERANCES (R11092)

MACH (2) = .904 ALPHA (1) = 179.900

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.344	-.0185	-.0341	-.0780	-.0802	-.0748	-.0746	-.0736	-.0837
.392	.392	.392	.392	.392	.392	.392	.392	.392	.392
.667	.999	.999	.999	.999	.999	.999	.999	.999	.999
.702	.1643	.1643	.1643	.1643	.1643	.1643	.1643	.1643	.1643
.724	.0604	.0661	.0661	.0497	.0430	.0363	.0330	.0218	.0255
.744	.1120	.1125	.1125	.1094	.0996	.1008	.1058	.0775	.0781
.755	.0747	.0799	.0799	.0734	.0688	.0701	.0691	.0479	.0492
.869	.3390	.3390	.3390	.3423	.3423	.3423	.3032	.3510	.3510
.902	.999	.999	.999	.999	.999	.999	.999	.999	.999
.923	.4056	.4056	.4056	.4149	.4149	.4149	.4397	.4154	.4000
.945	.4039	.4039	.4039	.4133	.4133	.4133	.5114	.4015	.3914
.982	.6334	.6334	.6334	.6368	.6368	.6368	.6705	.6705	.6705

MACH (3) = 1.204 ALPHA (1) = 179.900 O(P)SF = 9.1600 PO = 22.010 P = 9.0300 RN/L = 6.8000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 270.0000 315.0000

X/L	.027	.0296	.0320	.0320	.0257	.0276	.0269	.0269	.0269
.050	.050	.050	.050	.050	.050	.050	.050	.050	.050
.074	.3514	.3514	.3514	.3514	.3514	.3514	.3514	.3514	.3514
.098	.5410	.5410	.5410	.5410	.5410	.5410	.5410	.5410	.5410
.111	.1124	.1124	.1124	.1124	.1124	.1124	.1124	.1124	.1124
.139	.0072	.0083	.0083	.0045	.0282	.0497	.0620	.0711	.0999
.168	.0039	.0039	.0039	.0107	.0143	.0159	.0331	.0287	.0429
.191	.0017	.0034	.0034	.0178	.0216	.0244	.0306	.0306	.0214
.255	.0216	.0216	.0216	.0588	.0588	.0577	.0624	.0624	.1199
.344	.0184	.0184	.0184	.1653	.1653	.1653	.0495	.0429	.0563
.392	.392	.392	.392	.392	.392	.392	.392	.392	.392
.667	.999	.999	.999	.999	.999	.999	.999	.999	.999
.702	.0323	.0323	.0323	.0233	.0205	.0416	.0320	.0332	.0255
.724	.1883	.1883	.1883	.2138	.2166	.2144	.1944	.2006	.999
.744	.3250	.2737	.2737	.2804	.2644	.2730	.2666	.2201	.1918
.755	.1939	.1939	.1939	.1901	.1879	.1904	.1806	.1385	.1450
.869	.1732	.1732	.1732	.2016	.2016	.2016	.2843	.2843	.1450
.902	.999	.999	.999	.999	.999	.999	.999	.999	.999
.923	.4932	.4932	.4932	.4204	.4204	.4204	.4640	.4640	.4704
.945	.6412	.6412	.6412	.5112	.5112	.5112	.4946	.4946	.4861
.982	.2410	.2410	.2410	.2361	.2361	.2361	.2548	.2548	.2548

MACH (4) = 1.942 ALPHA (1) = 179.900 O (PSF) = 11.070 PO = 30.000 P = 4.1900 RN/L = 7.7000
 MSFC TWT 603 (SA28F) SRB - ALL PROTUBERANCES (R11092)

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25.0000	2270.0000	315.0000
X/L	.027	.0267	.0204	.0183	.0166	.0145	.0145	.0204	.0204	.0204	.0204	.0204
	.050	-.1207	-.1217	-.0746	-.0507	-.0451	-.0451	.0651	.0651	.0651	.0651	.0651
	.074	-.1718	-.1611	-.1586	-.1275	-.1127	-.1127	.0571	.0571	.0571	.0571	.0571
	.098	-.1913	-.1464	-.1927	-.1801	-.1854	-.1854	.0805	.0805	.0805	.0805	.0805
	.111	.0211	.0138	.0075	-.0029	-.0301	-.0301	.0043	.0043	.0043	.0043	.0043
	.139	.0559	.0602	.0375	.0258	.0201	.0201	.0651	.0651	.0651	.0651	.0651
	.168	.0665	.0618	.0351	.0180	.0201	.0201	.0254	.0254	.0254	.0254	.0254
	.191	.0721	.0360	.0296	.0194	.0128	.0128	.0173	.0173	.0173	.0173	.0173
	.255	.0319	.999.9999	.0232	.0093	.0162	.0162	.0204	.0204	.0204	.0204	.0204
	.344	.0355	-.0054	-.0363	.0201	.0351	.0351	.0225	.0225	.0225	.0225	.0225
	.392	.999.9999	.999.9999	.0061	.0235	.0477	.0477	.0232	.0232	.0232	.0232	.0232
	.702	-.0468	-.0112	-.0134	-.0388	-.0081	-.0081	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
	.724	-.1809	-.1791	-.1942	-.1740	-.0297	-.0297	.0947	.0947	.0947	.0947	.0947
	.744	.3028	.2228	.1999	.2550	.2817	.2817	.3127	.3127	.3127	.3127	.3127
	.755	.2009	.9999	.1462	.1553	.1842	.1842	.2261	.2261	.2261	.2261	.2261
	.669	-.0540	.999.9999	-.0608	-.0672	-.0643	-.0643	.1820	.1820	.1820	.1820	.1820
	.923	-.1592	.999.9999	-.1842	-.1901	-.1878	-.1878	.2702	.2702	.2702	.2702	.2702
	.945	-.2688	-.1459	.1694	-.1495	-.1705	-.1705	.0765	.0765	.0765	.0765	.0765
	.982	.0676	-.2845	-.2770	-.2665	.0700	.0700					

MACH (5) = 2.740 ALPHA (1) = 179.900 O (PSF) = 6.3700 PO = 30.020 P = 1.2100 RN/L = 5.2000

SECTION (1) SRB DEPENDENT VARIABLE CP

THETA	.0000	22.5000	45.0000	67.5000	90.0000	112.5000	135.0000	157.5000	180.0000	202.25.0000	2270.0000	315.0000
X/L	.027	-.0153	-.0128	-.0026	.0010	.0022	.0022	.0046	.0046	.0046	.0046	.0046
	.050	-.0554	-.0541	-.0500	-.0492	-.0480	-.0480	.0137	.0137	.0137	.0137	.0137
	.074	-.0651	-.0749	-.0795	-.0749	-.0743	-.0743	.0064	.0064	.0064	.0064	.0064
	.098	-.0736	-.0755	-.0961	-.0913	-.0961	-.0961	.0032	.0032	.0032	.0032	.0032
	.111	.0114	.0107	.0087	-.0123	-.0135	-.0135	.0141	.0141	.0141	.0141	.0141
	.139	.0218	.0210	.0034	.0041	.0052	.0052	.0064	.0064	.0064	.0064	.0064
	.168	.0161	.0121	.0072	.0064	.0064	.0064	.0070	.0070	.0070	.0070	.0070
	.191	.0119	.0054	-.0006	.0041	.0003	.0003	.0064	.0064	.0064	.0064	.0064
	.255	.0064	.999.9999	-.0008	.0029	.0095	.0095	.0032	.0032	.0032	.0032	.0032
	.344	.0149	-.0293	-.0152	.0022	.0137	.0137	.0006	.0006	.0006	.0006	.0006
	.392	.999.9999	.999.9999	.0058	-.0117	.0222	.0222	.0178	.0178	.0178	.0178	.0178
	.702	-.0147	-.0099	-.0123	-.0238	-.0123	-.0123	.0487	.0487	.0487	.0487	.0487
	.724	-.0955	-.0864	-.0907	-.0846	-.0907	-.0907	.999.9999	.999.9999	.999.9999	.999.9999	.999.9999
	.744	.1151	.1352	.1121	.1418	.1473	.1473	.1716	.1716	.1716	.1716	.1716
	.755	.0866	.9999	.0750	.0611	.0821	.0821	.0959	.0959	.0959	.0959	.0959

(R11092)

MACH (5) = 2.740 ALPHA (1) = 179.900

MSFC TMT 603 (SA28F) SRB - ALL PROTUBERANCES

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.869	-.0050	999.9999		-.0093		-.0141		-.0208			
.902	999.9999	999.9999		-.0919		-.0949		-.0852			
.923	-.0779	-.0658		-.0785		-.0688		-.0766		-.0828	
.945	-.1149	-.1222		-.1137		-.1070		-.1149		-.1156	
.982	.1637			.1665				.1740			

MACH (6) = 3.480 ALPHA (1) = 179.920 O(P5F) = 6.8650 PO = 60.020 P = .81000 RN/L = 7.1000

SECTION (1) SRB

DEPENDENT VARIABLE CP

THETA .0000 22.5000 45.0000 67.5000 90.0000 112.5000 135.0000 157.5000 180.0000 225.0000 270.0000 315.0000

X/L											
.027	-.0058			-.0114		-.0120		-.0103			
.050	-.0238	-.0125		-.0339		-.0322		-.0328			
.074	-.0272	-.0424		-.0463		-.0441		-.0463			
.098	-.0328	-.0413		-.0543		-.0537		-.0571			
.111	.0088	.0133	-.0441	-.0065	-.0029	-.0074	-.0063	-.0091	-.0063	-.0074	.0060
.139	.0184	.0178	.0111	.0054	.0077	.0049	.0031	.0077	.0065	.0032	.0116
.168	.0161	.0144	.0099	.0043	.0049	.0020	.0026	.0065	.0060	-.0019	.0094
.191	.0139	.0116	.0020	.0015	.0049			.0071	.0048	-.0035	
.255	.0054			.0003		.0015		.0065			
.344	-.0001	-.0080	-.0058	.0003	-.0077	.0015	.0117	.0105	-.0052		
.392	999.9999			.0026				.0122		-.0041	
.667	999.9999	999.9999		-.0024		-.0046		-.0001		-.0120	
.702	-.0053	.0032	-.0051	-.0035	-.0149	.0020	-.0633	-.0069	-.0295		
.724	-.0559	-.0487	-.0446	-.0532	-.0469	-.0633	-.0559	-.0295	999.9999		
.744	.1204	.1041	.0914	.1136	.1346	.1108	.1170	.1170	.1300		
.755	.0601	.0601	.0533	.0545	.0426	.0585	.0661	.0661	.0824		
.863	.0144			.0127		.0071		.0071			
.902	999.9999	999.9999		-.0492		-.0520		-.0384		-.0379	
.923	-.0356	-.0277	-.0277	-.0334		-.0266		-.0334		-.0565	
.945	-.0576	-.0694	-.0694	-.0565		-.0525		-.0565		-.0577	
.982	.1985			.2040				.2089			