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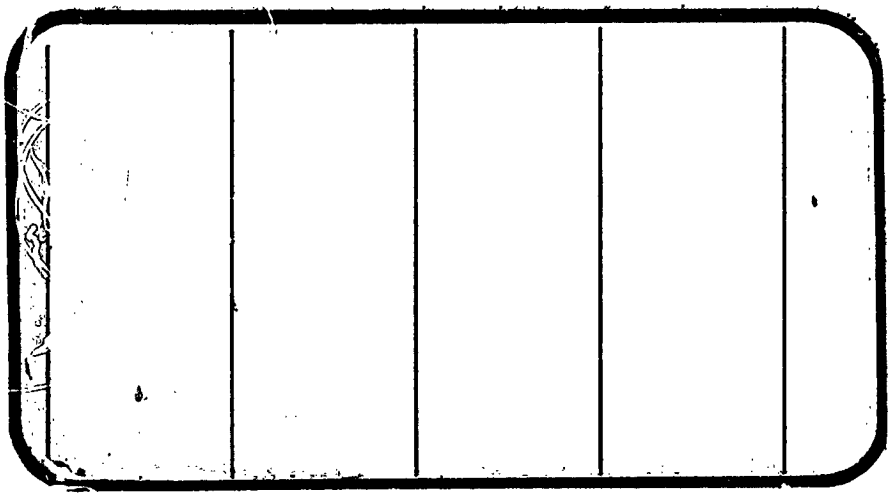

(NASA-CR-147616) HEAT TRANSFER OF AN 0.006-SCALE THIN-SKIN THERMOCOUPLE SPACE SHUTTLE MODEL (50-0, 41-T) IN THE NASA-AMES RESEARCH CENTER 3.5-FOOT HYPERSONIC WIND TUNNEL AT MACH 5.3 (IH28), VOLUME 2

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SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANagement services

SPACE DIVISION CHRYSLER CORPORATION

August, 1976

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NASA CR-147,616

VOLUME 2 OF 2

HEAT TRANSFER TEST OF AN 0.006-SCALE THIN-SKIN THERMOCOUPLE SPACE SHUTTLE MODEL (50-0, 41-T) IN THE NASA-AMES RESEARCH CENTER 3.5-FOOT HYPERSONIC WIND TUNNEL AT MACH 5.3 (IH28)

by

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NASA-Ames Research Center

Prepared Under Contract Number NAS9-13247

by

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

for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	ARC 3.5-195
NASA Series Number:	IH28
Model Number:	50-0, 41-T
Test Dates:	May 17 through May 24, 1974
Occupancy Hours:	88

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HEAT TRANSFER TEST OF AN 0.006-SCALE THIN-SKIN THERMOCOUPLE SPACE SHUTTLE MODEL (50-0, 41-T) IN THE NASA-AMES RESEARCH CENTER 3.5-FOOT HYPERSONIC WIND TUNNEL AT MACH 5.3 (IH28)

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ABSTRACT

This report presents data obtained from a heat transfer test conducted on an 0.006-scale Space Shuttle Orbiter and External Tank in the NASA-Ames Research Center 3.5-foot Hypersonic Wind Tunnel. The purpose of this test was to obtain data under simulated return-to-launch-site abort conditions. Configurations tested were integrated orbiter and external tank, orbiter alone, and external tank alone at angles of attack of 0, ±30, ±60, ±90, and ±120 degrees.

Runs were conducted at Mach numbers of 5.2 and 5.3 for Reynolds numbers of 1.0×10^6 and 4.0×10^6 per foot, respectively. Heat transfer data were obtained from 75 orbiter and 75 external tank iron-constantan thermocouples.

This report consists of 2 volumes. Volume 1 contains Figures 4→15; whereas, Volume 2 contains Figures 16→27 and the Tabulated Source Data.

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12	ORBITER BODY SIDEWALL, RATIO OF INTERFERENCE TO UNDISTURBED	(F)	Z, ALPHA, X/L	657-690
13	OMS PODS, ORBITER ALONE	(E)	HAW/HT, X/L, ALPHA, Z	691-720
14	OMS PODS, ORBITER IN PRESENCE OF THE TANK	(E)	HAW/HT,X/L,ALPHA, RN/L,BETA,Z, MACH	721-768
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18	CHINE, RATIO OF INTERFERENCE TO UNDISTURBED	(D)	ALPHA	812-822
19	LEFT WING LOWER SURFACE, ORBITER ALONE	(G)	HAW/HT, 2Y/B, ALPHA	823-855
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22	RIGHT WING UPPER SURFACE, ORBITER ALONE	(I)	HAW/HT,2Y/B,ALPHA,X/C	919-995
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24	RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED	(J)	2Y/B, ALPHA, X/C	1108-1139
25	VERTICAL TAIL, ORBITER ALONE	(G)	HAW/HT, Z, ALPHA	1140-1161
26	VERTICAL TAIL, ORBITER IN PRESENCE OF TANK	(G)	HAW/HT, Z, ALPHA RN/L, BETA, MACH	1162-1193
27	VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED	(H)	Z, ALPHA	1194-1206

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SCHEDULE OF COEFFICIENTS PLOTTED:

(A)	H/HREF versus X/L H/HREF versus PHI
(B)	HI/HU versus X/L HI/HU versus PHI
(C)	H/HREF versus X/L
(D)	HI/HU versus X/L
(E)	H/HREF versus X/L H/HREF versus Z
(F)	HI/HU versus X/L HI/HU versus Z
(G)	H/HREF versus X/C
(H)	HI/HU versus X/C
(I)	H/HREF versus X/C H/HREF versus 2Y/B
(J)	HI/HU versus X/C HI/HU versus 2Y/B

NOMENCLATURE

SYMBOL	PLOT SYMBOL	DEFINITION
b		thickness of model skin, in.
B	BREF	span length, in.
C		specific heat of model skin material, BTU/lb_m-^oR
c		chord length, in.
C_o, C_1, C_2		constants in curve fit for C over model wall temperature range
c_p		specific heat of air stream (perfect gas value), BTU/lb_m-^oR
CHAN	CHAN	Recording-system channel
H_{aw}	HAW	adiabatic wall enthalpy, BTU/lb_m
H_t	HT	free-stream total enthalpy, BTU/lb_m
	HO	average of free-stream total enthalpy values of all tunnel runs incorporated into an aero data-set, BTU/lb_m
H_{W_i}	HW	enthalpy based on model wall temperature for given T/C location at initial time, BTU/lb_m
h	H	heat-transfer coefficient at model wall for given T/C location
h_s	HS, HREF	stagnation-point heat-transfer coefficient for reference sphere
h/h_s	H/HS, H/HREF	ratio of model heat-transfer coefficient to heat-transfer coefficient of reference sphere for H_{aw}/H_t = X.XXX
IML		inner mold line
L	LREF,LENGTH	model reference length, in. or ft.
M_∞	MACH	free-stream Mach number
H_w		enthalpy based on model wall temperature, BTU/lb_m

NOMENCLATURE (Continued)

SYMBOL	PLOT SYMBOL	DEFINITION
P_t	PT	free-stream total pressure, psia
	PO	average of free-stream total pressure values of all tunnel runs incorporated into an aero dataset, psia
$\dot{q}_i$	QDOT, Q	heat-transfer rate at model wall for given T/C location at initial time, BTU/ft^2-sec
$\dot{q}_s$	QS, QREF	stagnation-point heat-transfer rate for reference sphere at initial time, BTU/ft^2-sec
R_s	RS	reference sphere radius at model scale equivalent to 0.305 m (1 ft) for full-scale vehicle
Re_∞/ft	RE/FT	free-stream Reynolds number per foot
	RN/L	average of free-stream Reynolds number values (per foot) of all tunnel runs incorporated into an aero dataset
$Re_{\infty,L}$	REL	free-stream Reynolds number based on model reference length, L
	S/R	body wetted running length
St	ST	Stanton number based on free-stream flow conditions and the model heat-transfer coefficient for H_{aw}/H_t = X.XXX
T		temperature, ^oR
T_t	TT	free-stream total temperature, ^oR
	TO	average of free-stream total temperature values of all tunnel runs incorporated into an aero dataset, ^oR
T_{w_i}	TW	model wall temperature for given T/C location at initial time, ^oR

NOMENCLATURE (Continued)

SYMBOL	PLOT SYMBOL	DEFINITION
T/C	T/C	thermocouple
t		time, sec
t_i	TIME	initial time (before model insertion into flow) extrapolated from $f(T_w)$ vs. time, sec
u,V		velocity, ft/sec
W		density of model skin material lb_m/ft^3
X		axial distance measured from nose, in.
	X/C	chordwise location, fraction of local chord
	X/L	longitudinal location, fraction of body length
Y		spanwise distance from centerline, in.
2y/B	2Y/B	spanwise location, fraction of semi-span
Z	Z	water plane distance, in.
	Z/BV	spanwise location on vertical tail, fraction of exposed span
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
μ		viscosity of air, $lb\text{-}sec/ft^2$
ρ		density of air, lb_m/ft^3
θ	THETA	external tank angular surface coordinate, measured clockwise looking forward. 0 degrees at bottom centerline, degrees
ϕ	PHI	orbiter angular surface coordinate, measured clockwise looking forward. 0 degrees at bottom centerline, degrees

NOMENCLATURE (Concluded)

SYMBOL	PLOT SYMBOL	DEFINITION
W.P.		water plane, height measured along Z axis, in.
B.L.	BP	butt plane, distance from orbiter centerline in the outboard direction, in.
	HI/HU	ratio of interference to undisturbed heat transfer coefficients
	ZMRP	moment reference point on Z axis
	YMRP	moment reference point on Y axis
	XMRP	moment reference point on X axis
	SREF	reference length or wing mean aerodynamic chord; ft.

SUBSCRIPTS

aw	adiabatic wall
i	initial value before model insertion
O	Orbiter
PG	perfect gas (calorically and thermally perfect gas)
s	reference sphere
t	free-stream total condition
T	tank
V	vertical tail
W	wall
∞	free-stream

CONFIGURATIONS INVESTIGATED

The model (Orbiter and External Tank) tested was a 0.006-scale representation of the Rockwell International Space Shuttle Vehicle. The Orbiter and External Tank are defined by Rockwell lines SS-H-01414 and SS-H-01415.

The Orbiter and Tank were initially built by Grumman Aircraft, Bethpage, New York, but the Orbiter was modified with additional thermocouples added to the upper surface of the left wing, vertical tail, and OMS pod. Modifications of both Orbiter and External Tank stings were accomplished to carry increased loading within the high angle of attack range.

The Orbiter was a full span (cast stainless steel) model with thin-skin inserts. Thin-skin stainless steel (17-4PH) inserts were located on the underside region, left-hand wing (top and bottom), windshield area, left fuselage side, OMS pod, and vertical tail. These inserts were instrumented with 89 iron-constantan thermocouples of which only 75 were used during this test. The model was built with all control surfaces in the 0° deflection condition.

The External Tank was constructed of thin-skin (15-5PH) stainless steel. The Tank was instrumented with 111 iron-constantan thermocouples, of which only 75 were used.

The Orbiter and External Tank were designed so either could be tested alone or in the second stage configuration.

CONFIGURATIONS INVESTIGATED (Concluded)

The following configuration components were tested:

Notation	Description
B_{22}	Fuselage (1-1478 Lines)
C_7	Canopy
F_5	Body Flap
M_4	OMS Pods
V_7	Vertical Tail
W_{111}	Wing
T_8	External Tank (-139 Lines)

MODEL INSTRUMENTATION

The Orbiter and External Tank were instrumented with 200 iron-constantan thermocouples, but only 150 were used for this test. All thermocouples were spotwelded to thin-skin (nominal skin thickness of 0.030 in.) stainless steel inserts and the leads were clamped in bundles within the model. The exact T/C locations for the Orbiter and External Tank are presented in Tables IV and V, respectively, and illustrated in Figures 2a and 2b, respectively. The T/C leads were 50 feet long and fitted with Cannon Plug connectors.

TEST FACILITY DESCRIPTION

The NASA-Ames 3.5-foot Hypersonic Wind Tunnel is a closed-circuit, blowdown-type tunnel capable of operating at nominal Mach numbers of 5, 7, and 10 at pressures to 1800 psia and temperatures of 3400°R for run times to four minutes. The major components of the facility include a gas storage system where the test gas is stored at 3000 psi, a storage heater filled with aluminum-oxide pebbles capable of heating the test gas to 3400°R, axisymmetric contoured nozzles with exit diameters of 42 inches for generating the desired Mach number, and a 900,000 ft^3 vacuum storage system which operates to pressures of 0.3 psia. The test section itself is an open-jet type enclosed within a chamber approximately 12-feet in diameter and 40-feet in length, arranged transversally to the flow direction.

A model support system is provided that can pitch models through an angle-of-attack range of -20 to +20 degrees, in a vertical plane, about a fixed point of rotation on the tunnel centerline. This rotation point is adjustable from 1 to 5 feet from the nozzle exit plane. The model normally is out of the test stream (strut centerline 37 inches from tunnel centerline) until the tunnel test conditions are established after which it is inserted. Insertion time is adjustable to as little as $\frac{1}{2}$ second and models may be inserted at any strut angle.

A high-speed, analog-to-digital data acquisition system is used to record test data on magnetic tape. The present system is equipped to measure and record the outputs from 80 transducers in addition to 20 channels of tunnel parameters.

TEST PROCEDURE

Heat Transfer Data were obtained by measuring the temperature rise over a period of time from a total of 150 iron-constantan thermocouples. The model was injected into the flow in approximately 1 second and held on tunnel centerline for approximately 1 second. Temperature measurements and tunnel conditions were recorded on magnetic tape at 0.07-second intervals by the data acquisition system from the start of model injection to the start of model retraction.

A maximum of 75 thermocouples could be recorded for any given run. Th thermocouple leads were routed from the model through the tunnel model-injection mechanism, and connected to a junction box which was wired directly to a thermocouple reference-temperature (150°F) box. The junction box connectors were wrapped with asbestos for heat protection from the tunnel test-chamber ambient conditions (no free-stream flow on box).. Thermocouple changes were accomplished by changing 5 Cannon Plugs containing 15 thermocouples each. Prior to testing, a thermocouple heat-response check, through the data-acquisition system, was performed on all thermocouples to assure proper hook-up, polarity and response.

Prior to each run with model attitude changes, the model was leveled in pitch and roll by means of leveling blocks which attach to the sting assembly of the Orbiter/External Tank. When leveling the models, an inclinometer was placed on the leveling plate. Proper roll relationships between the models were set using scribed lines on the model stings.

DATA REDUCTION

All test data were reduced at the NASA/Ames Research Center using the data-reduction techniques outlined below. The thermocouple data were reduced using the one-dimensional, thin-wall equation:

$$\dot{q} = WCb \frac{dT_w}{dt} = h\,(H_{aw} - H_w) \equiv hH_t \left(\frac{H_{aw}}{H_t} - \frac{H_w}{H_t} \right) \tag{1}$$

which neglects heat-conduction losses.

Assuming that W and h are constant and

$$C = C_o + C_1 T_w + C_2 T_w^2 \text{ for } T_w \text{ ranges} \tag{2}$$

the integration of equation (1) for $t = t_i$ to t and $T_w = T_{w_i}$ to T_w yields the linear equation:

$$f(T_w) = -\ln \left(\frac{T'_{aw} - T_w}{T'_{aw} - T_{w_i}} \right) - \left[\frac{C_1}{C'_{aw}} + \frac{C_2}{C'_{aw}} \left(T'_{aw} + \frac{T_w + T_{w_i}}{2} \right) \right] (T_w - T_{w_i})$$

$$= \frac{hc_p}{WC'_{aw}b} (t - t_i) \tag{3}$$

where it is defined that:

$$T'_{aw} \equiv \frac{H_{aw}}{c_p} \equiv \frac{H_{aw}}{H_t} \frac{H_t}{c_p} \geq (T_{aw})_{PG} \tag{4}$$

$$C'_{aw} \equiv C_o + C_1 T'_{aw} + C_2 T'^2_{aw} \tag{5}$$

c_p = specific heat at adiabatic wall temperature

The form of Eq (3) is $f(T_w) = mt + a$ where m is the slope and a is the intercept for a straight line if heat-conduction errors are negligible. Thus, deviations from a straight line can indicate heat-conduction effects.

The slope, m, of $f(T_w)$ vs t from Eq (3) is computed by a least-squares, straight-line fit over a finite time interval (approx. 1 sec) beginning when the model reaches uniform tunnel flow. The value of the heat-transfer coefficient, h, is then determined from:

$$h = \frac{WC^*_{aw}b}{c_p} \quad m \tag{6}$$

Using this value of h, the heat-transfer rate is evaluated at the initial time, t_i, when the model is isothermal at the initial wall enthalpy, H_{w_i}

$$\dot{q} = \dot{q}_i = h\,(H_{aw} - H_{w_i}) \equiv hH_t \left(\frac{H_{aw}}{H_t} - \frac{H_{w_i}}{H_t}\right) \tag{7}$$

where H_{aw}/H_t is the same value used to evaluate h. The resultant value of $\dot{q}$ is independent of the value of H_{aw}/H_t used for both the h and $\dot{q}$ evaluations.

The reference sphere heating is also evaluated at the initial wall enthalpy by the method of Fay and Riddell

$$\dot{q}_s = h_s\,(H_t - H_{w_i}) \equiv h_s\ H_t \left(1.0 - \frac{H_{w_i}}{H_t}\right) \tag{8}$$

The model-to-sphere ratio of heat-transfer coefficients is then determined from Eqs. (7) and (8) as

$$\frac{h}{h_s} = \frac{\dot{q}_i}{\dot{q}_s}\left[\frac{1.0 - H_{w_i}/H_t}{H_{aw}/H_t - H_{w_i}/H_t}\right] \tag{9}$$

where $\dot{q}_i$ is constant for all values of H_{aw}/H_t.

To determine h/h_s for various values of H_{aw}/H_t, the particular value of H_{aw}/H_t is substituted into Eq. (9).

The Stanton number is defined as

$$St \equiv \frac{h}{\rho u} = \frac{\dot{q}_i}{\rho u(H_{aw} - H_{wi})} \tag{10}$$

where for free-stream conditions, $\rho u = \rho_\infty V_\infty$.

The calculations of the model heating, reference sphere heating, and Reynolds number included the corrections of NACA report 1135 (Ref. 3) for calorically imperfect, thermally perfect air. Keyes' equation for viscosity (Ref. 4) was also used for the sphere heating and Reynolds number computations:

$$\mu = \frac{0.0232 \times 10^{-6} T^{0.5}}{1 + \frac{220}{T} \times 10^{-9/T}} \tag{11}$$

where the units for T and μ are $^\circ R$ and lb-sec/ft^2, respectively.

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1. Walstad, D. G.: Pretest Information for Tests of an 0.006-Scale Thin-Skin Space Shuttle Heat Transfer Model (50-0, 41-T) in the Ames Research Center 3.5-foot HWT Wind Tunnel Test IH28. SD-74 SH-0135, March 27, 1974.
2. Fay, J. A.; and Riddell, F. R.: Theory of Stagnation Point Heat Transfer in Dissociated Air. J. Aeron. Sci., Vol. 25, No. 1, February, 1958, pp 73-85.
3. Ames Research Staff: Equations, Tables, and Charts for Compressible Flow. NACA Rept. 1135. 1953.
4. Bertram, Mitchel H.: Comment on "Viscosity of Air." J. Spacecraft and Rockets, Vol. 4, No. 2, February, 1967, pp 287-288.

TABLE I.

TEST : IH28 (ARC 3.5-195)

DATE : 6-8-74

TEST CONDITIONS

MACH NUMBER	REYNOLDS NUMBER (per foot)	TOTAL PRESSURE (pounds/sq. inch) absolute	TOTAL TEMPERATURE (degrees Rankine
5.2	1.0×10^6	100	$1500^\circ R$
5.3	4.0×10^6	410	$1500^\circ R$

BALANCE UTILIZED: _____

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

COMMENTS: 75 iron-constantan T/C's on ORB
75 iron-constantan T/C's on ET

TABLE II.

TEST: IH28 (ARC 3.5-195) | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE: June 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Re^*	PARAMETERS/VALUES M_∞	NO. OF RUNS	MODEL THERMOCOUPLE HOOKUP T_i	MODEL THERMOCOUPLE HOOKUP O_i	TEST RUN NUMBERS
REV001	$O_i T_i$	0	0	1.0	5.2	2	2	1	
02		30					3	7	
03		60					4	5	
04		90					17	18	
05		120					20	19	
06		-120					21	22	
07		-90					24	23	
08		-60					13	14	
09		-30					16	15	
10		60		4.0	5.3		12	6	
11		30		4.0	5.3		10	11	
12		30	-5	1.0	5.2		9	8	
13	T_i	0	0			1	33	—	
14		-30					31	—	
15		-60					32	—	
16		-90					37	—	
17		-120					38	—	

TYPE OF DATA

COEFFICIENT SCHEDULES

O_i – Orbiter Thermocouple Hookup (Const. Set 100)

T_i – Tank Thermocouple Hookup (Const. Set 200)

IDVAR (1) IDVAR (2) NDV

* ~ $X10^{-6}$ PER FT.

TABLE II. (Concluded)

TEST : IH28(ARC 3.5-195) | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE : JUNE, 1974

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES Re*	PARAMETERS/VALUES M_∞	NO. OF RUNS	MODEL THERMOCOUPLE HOOKUP T_1	MODEL THERMOCOUPLE HOOKUP O_1	TEST RUN NUMBERS
REV018	T_1	90	0	4.0	5.3	1	39	—	
19	O_1	0	0	1.0	5.2		—	34	
20		30					—	35	
21		60					—	36	
22		90					—	28	
23		120					—	27	
24		120					—	26	
25		90					—	25	
26		60					—	29	
27		30					—	30	

TYPE OF DATA

COEFFICIENT SCHEDULES

O_1 ~ ORBITER THERMOCOUPLE HOOKUP (CONST. SET 100)

T_1 ~ TANK THERMOCOUPLE HOOKUP (CONST. SET 200)

IDVAR (1) IDVAR (2) NDV

* ~ $X10^{-6}$ PER FT.

The 4th character of the dataset identifier describes the T/C location.

A	- underside fuselage	C	- OMS pods	F	- wing lower surface
T	- external tank	D	- chine	G	- wing upper surface
B	- body sidewall	E	- canopy	H	- vertical tail

TABLE III
MODEL DIMENSIONAL DATA

MODEL COMPONENT: BODY - B22

GENERAL DESCRIPTION: Fuselage, Configuration 3A per Rockwell Lines VL70-000147B.

NOTE: Identical to B19, except underside.

Model Scale = 0.006

DRAWING NUMBER: VL70-000147B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
Length - in	1290.3	7.742
Max. Width - in	267.6	1.606
Max. Depth - in	244.5	1.467
Fineness Ratio	4.84601	4.84601
Area - Ft^2		
Max. Cross-Sectional	386.67	0.0139
Planform		
Wetted		
Base		

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: Canopy - C7

GENERAL DESCRIPTION: Configuration 3 per Rockwell Lines VL70-000139

Model Scale = 0.006

DRAWING NUMBER VL70-000139

DIMENSION:	FULL SCALE	MODEL SCALE
Length (X_o = .433 to X_o = 670) - in. FS	237	1.422
Max Width		
Max Depth (Z_o = to Z_o = 501) - in FS		
Fineness Ratio		
Area		
Max Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: F5 Body Flap

GENERAL DESCRIPTION: 3 Configuration per Rockwell Lines VL70-000139

Scale Model = 0.006

DRAWING NUMBER VL70-000139

DIMENSION:	FULL SCALE	MODEL SCALE
Length - in	84.70	.508
Max Width - in	267.6	1.606
Max Depth		
Fineness Ratio		
Area - Ft^2		
Max Cross-Sectional		
Planform	142.5	.005
Wetted		
Base	38.0958	.0014

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: OMS Pod - M_4

GENERAL DESCRIPTION: Configuration 3 per Rockwell Lines VL70-000139

NOTE: M4 identical to M3, except intersection to fuselage.

Model Scale = 0.006

DRAWING NUMBER VL70-000139

DIMENSION:	FULL SCALE	MODEL SCALE
Length - IN	346.0	2.076
Max Width - IN	108.0	.648
Max Depth - IN	113.0	.678
Fineness Ratio		
Area - FT^2		
Max Cross-Sectional		
Planform		
Wetted		
Base		

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: T8 - EXTERNAL TANK

GENERAL DESCRIPTION: 2A Configuration per Rockwell Lines:
VL78-000018 and VL72-000061"C" Body of Revolution

Scale Model = 0.006

DRAWING NUMBER VL78-000018

DIMENSION:	FULL SCALE	MODEL SCALE
Length - In. (Nose @ X_T = 309)	186.50	1.119
Max Width (Dia) - In.	324.0	1.944
Max Depth		
Fineness Ratio L/D	6.1389	6.1389
Area - $Ft.^2$		
Max Cross-Sectional	572.56	0.02061
Planform		
Wetted		
Base		
WP of tank centerline, (Z_T) In.	400.0	2.400

TABLE III (Continued)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: VERTICAL - V7

GENERAL DESCRIPTION: Centerline Vertical Tail, Doublewedge Airfoil with Rounded Leading Edge

NOTE: Same as V5, but with manipulator housing removed.

Model Scale = 0.006

DRAWING NUMBER: VL70-000139

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo) Ft^2	425.92	0.0153
Planform		
Span (Theo) In	315.72	1.894
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	26.249	26.249
0.25 Element Line	41.130	41.130
Chords:		
Root (Theo) WP	268.50	1.611
Tip (Theo) WP	108.47	0.651
MAC	199.81	1.199
Fus. Sta. of .25 MAC	1463.50	8.781
W. P. of .25 MAC	635.522	3.813
B. L. of .25 MAC	0.00	0.00
Airfoil Section		
Leading Wedge Angle Deg	10.000	10.000
Trailing Wedge Angle Deg	14.920	14.920
Leading Edge Radius	2.0	2.0
Void Area	13.17	0.0005
Blanketed Area	0.00	0.00

TABLE III (Concluded)
MODEL DIMENSIONAL DATA

MODEL COMPONENT: WING-W 111

GENERAL DESCRIPTION: Configuration 3A per Rockwell Lines VL70-000147B.

NOTE: Identical to W107, except lowered 3.5" and increased cuff incidence.

Model Scale = 0.006

TEST NO. DWG. NO. VL70-000147B

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2 Planform	2690.00	0.0968
Span (Theo In.	936.68	5.620
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees (@ T.E. of Elevon)	3.500	3.500
Incidence Angle, degrees	0.500	0.500
Aerodynamic Twist, degrees	+3.000	+3.000
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	-10.24	-10.24
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.0.0.	689.24	4.135
Tip, (Theo) B.P.	137.85	0.827
MAC	474.81	2.849
Fus. Sta. of .25 MAC	1136.89	6.821
W.P. of .25 MAC	295.70	1.774
B.L. of .25 MAC	182.13	1.093
EXPOSED DATA		
Area (Theo) Ft^2	1752.29	0.063
Span, (Theo) In. BP108	720.68	4.324
Aspect Ratio	2.058	2.058
Taper Ratio	0.2451	0.2451
Chords		
Root BP108	562.40	3.374
Tip 1.00 $\frac{b}{2}$	137.85	0.827
MAC	393.03	2.358
Fus. Sta. of .25 MAC	1185.31	7.112
W.P. of .25 MAC	296.70	1.780
B.L. of .25 MAC	251.76	1.511
Airfoil Section (Rockwell Mod HASA) XXXX-64		
Root $\frac{b}{2}$ = @ Y_o 199 to NACA 0010	0.10	0.10
Tip $\frac{b}{2}$ =	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff Planform Area Ft^2	118.333	0.0043
Leading Edge Intersects Fus M. L. @ Sta	500.0	3.000
Leading Edge Intersects Wing @ Sta	1083.5	6.501

TABLE IV ORBITER THERMOCOUPLE LOCATIONS

T/C No.	Skin Thick	LOCATION x/l	x/c	y	b/2	z
1	.035	.025				
2	↓	.050				
3	↓	.075				
4	.034	.10				
5	.033	.125				
6	↓	.150				
7	.034	.175	UNDERSIDE			
8	↓	.20	FUSELAGE ℄			
9	.035	.25	BP = 0.0			
10	↓	.30				
11	.034	.40				
12	.035	.50				
13	↓	.65				
14	↓	.80				
15	.036	.95		↓		
16	.030	.35				
17	.027	.40	UNDERSIDE			
18	↓	.50	FUSELAGE			
19 *	↓	.60	BP = 117.0			
20	↓	.70				
21 *	.028	.80				
22	.031	.90				
23 *	.036	1.00		↓		
24	.034	.30				
25	.033	.30		↓		
26	.034	.30	BODY			
27	.035	.40	SIDEWALL			
28	.034	.40				
29	.035	.40				
30	↓	.50				
31	.034	.50				
32	.035	.50				
33	↓	.60				
34	.033	.60		↓		

T/C No.	Skin Thick	LOCATION x/l	x/c	y	b/2	z
35	.035	.60		↓		
36	.034	.70				
37	.032	.70				
38	.035	.70		↓		
39	↓	.825		↓		
40	↓	.825		OMS PODS		
41	↓	.825		↓		
42	↓	.90				
43	↓	.90				
44	↓	.90		↓		
45	.035	.10				
46	↓	.15		CHINE		
47	↓	.20		↓		
48	↓	.17		CANOPY		
49*	↓	.425		MID FUSE		
50	.031	↑	.05		40%	
51	.030	↑	.10		40%	
52*	.030	↑	.20		40%	
53	.029	↑	.30		40%	
54*	.028	WING	.40		40%	
55	↓	LWR	.50		40%	
56*	↓	↓	.60		40%	
57	↓	↓	.70		40%	
58*	.029	↓	.80		40%	
59	↓	↓	.90		40%	
60	.034	↑	.10		60%	
61	.032	↑	.20		60%	
62*	.031	↓	.30		60%	
63*	.030	WING	.40		60%	
64*	↓	LWR	.50		60%	
65	↓	↓	.60		60%	
66*	↓	↓	.70		60%	
67*	↓	↓	.80		60%	
68	↓	↓	.90		60%	

TABLE IV ORBITER THERMOCOUPLE LOCATIONS (Concluded)

T/C No.	Skin Thick	LOCATION x/l	x/c	y	b/2	z	T/C No.	Skin Thick	LOCATION x/l	x/c	y	b/2	z
69	.034		.20		80%								
70		WING	.40		80%								
71 *		LWR	.60		80%								
72	.035		.80		80%								
73	.035		.20		40%								
74	.034	WING	.40		40%								
75	.035	UP	.60		40%								
76	.037		.80		40%								
77	.034		.20		60%								
78	.030	WING	.40		60%								
79	.030		.60		60%								
80	.031		.80		60%								
81	.027		.20		80%								
82	.028	WING	.40		80%								
83	.028	UP	.60		80%								
84	.028		.80		80%								
85	.039		.25			3.57							
86	.040	VERT	.50			3.57							
87	.037		.75			3.57							
88	.033	VERT	.35			4.42							
89	.034		.6			4.42							

* Data were not obtained at these T/C locations.

TABLE V EXTERNAL TANK THERMOCOUPLE LOCATIONS

T/C NO.	SKIN THICK.	LOCATION X/l	LOCATION φ DEG.	T/C NO.	SKIN THICK.	LOCATION X/l	LOCATION φ DEG.	T/C NO.	SKIN THICK.	LOCATION X/l	LOCATION φ DEG.
1	0.037	0	NOSE	34	0.032	0.40	135	67	0.030	0.60	45
2	0.030	0.005	180	35	0.033	0.40	112.5	68	0.030	0.60	0
3	0.030	0.010		36	0.033	0.40	90	69 *	0.033	0.625	180
4	0.030	0.020		37	0.030	0.40	67.5	70	0.033	0.65	180
5	0.030	0.04		38	0.029	0.40	45	71	0.032	0.65	157.5
6	0.030	0.06		39	0.031	0.40	0	72	0.031	0.65	135
7	0.029	0.08		40	0.032	0.425	180	73	0.030	0.65	112.5
8	0.029	0.10		41	0.032	0.45	180	74 *	0.030	0.65	90
9	0.028	0.125		42	0.033	0.45	157.5	75 *	0.030	0.65	67.5
10	0.028	0.15		43	0.031	0.45	135	76 *	0.033	0.675	180
11	0.028	0.175		44	0.031	0.45	112.5	77	0.033	0.70	180
12	0.028	0.20	180	45 *	0.031	0.45	90	78	0.032	0.70	157.5
13	0.028	0.20	90	46	0.033	0.475	180	79	0.032	0.70	135
14 *	0.032	0.25	180	47	0.033	0.50	180	80 *	0.031	0.70	112.5
15 *	0.029	0.25	90	48	0.033	0.50	157.5	81	0.030	0.70	90
16 *	0.030	0.275	112.5	49	0.032	0.50	135	82 *	0.031	0.70	67.5
17 *	0.030	0.275	90	50	0.033	0.50	112.5	83 *	0.029	0.70	45
18	0.034	0.30	180	51	0.031	0.50	90	84	0.033	0.75	180
19 *	0.031	0.30	112.5	52 *	0.031	0.50	67.5	85	0.033	0.75	157.5
20 *	0.031	0.30	90	53 *	0.030	0.50	45	86	0.032	0.75	135
21 *	0.030	0.30	67.5	54	0.032	0.525	180	87 *	0.031	0.75	112.5
22 *	0.031	0.325	135	55	0.032	0.55	180	88 *	0.031	0.75	90
23 *	0.031	0.325	112.5	56	0.033	0.55	157.5	89 *	0.030	0.75	67.5
24 *	0.031	0.325	90	57	0.031	0.55	135	90	0.033	0.80	180
25	0.032	0.35	180	58	0.031	0.55	112.5	91	0.033	0.80	157.5
26	0.032	0.35	135	59 *	0.031	0.55	90	92	0.032	0.80	135
27	0.031	0.35	112.5	60	0.032	0.575	180	93 *	0.032	0.80	112.5
28	0.031	0.35	90	61	0.032	0.60	180	94	0.031	0.80	90
29 *	0.031	0.35	67.5	62	0.033	0.60	157.5	95 *	0.030	0.80	67.5
30	0.034	0.375	180	63	0.031	0.60	135	96 *	0.029	0.80	45
31	0.032	0.375	135	64	0.031	0.60	112.5	97 *	0.030	0.80	0
32	0.033	0.40	180	65	0.031	0.60	90	98	0.033	0.85	180
33	0.032	0.40	157.5	66	0.031	0.60	67.5	99	0.032	0.85	157.5
								100	0.032	0.85	135
								101 *	0.030	0.85	112.5
								102 *	0.030	0.85	90
								103	0.030	0.90	180
								104	0.033	0.90	157.5
								105	0.032	0.90	135
								106 *	0.032	0.90	112.5
								107	0.031	0.90	90
* Data were not obtained at these T/C locations.								108 *	0.030	0.90	67.5
								109 *	0.029	0.90	45
								110 *	0.032	0.935	180
								111 *	0.033	0.974	180

TABLE VI

RUN NUMBER/TUNNEL CONDITION SUMMARY

Run No.	Config	α_m, deg.	α_{strut}, deg.	β	Const Set**	Nominal*** M_∞	Re_∞/ft x 10-6	P_t psia	T_t °R
1	$O_1 + T_1$	0	0	0	100	5.22	1.0	100	1500
2		0	0		200				
3		30	-10.0		200				
4		60	20.0		200				
5		60	20.0		100				
6		60	20.0		100	5.3	4.0	410	
7		30	-10.0		100	5.22	1.0	100	
8		*	*	-5	100			100	
9		*	*	-5	200			100	
10		30	-10.0	0	200	5.3	4.0	410	
11		30	-10.0		100		4.0	410	
12		60	20.0		200		4.0	410	
13		-60	-20.0		200	5.22	1.0	100	
14		-60	-20.0		100				
15		-30	10.0		100				
16		-30	10.0		200				
17		90	-10.0		200				
18		90	-10.0		100				
19		120	20.0		100				
20		120	20.0		200				
21		-120	20.0		200				
22		-120	20.0		100				
23		-90	-10.0		100				
24		-90	-10.0		200				
25	O_1	-90	-10.0		100				
26	O_I	-120	20.0		100				

* $\alpha_m = 30^\circ\ 22'\ 32''$, $\alpha_{strut} = -9^\circ\ 37'\ 28''$

** 100 - Orbiter T/Cs; 200 - External Tank T/Cs

*** Actual test values are given in the Appendix

TABLE VI
RUN NUMBER/TUNNEL CONDITION SUMMARY (Concluded)

Run No.	Config	α_m, deg.	α_{strut}, deg.	β	Const Set**	M_∞	Nominal*** Re_∞/ft x 10^{-6}	Nominal*** P_t psia	Nominal*** T_t °R
27	O_1	120	20.0	0	100	5.22	1.0	100	1500
28	↓	90	-10.0	↓	100	↓	↓	↓	↓
29	↓	-60	-20.0	↓	100	↓	↓	↓	↓
30	↓	-30	10.0	↓	100	↓	↓	↓	↓
31	T_1	-30	10.0	↓	200	↓	↓	↓	↓
32	↓	-60	-20.0	↓	200	↓	↓	↓	↓
33	↓	0	0	↓	200	↓	↓	↓	↓
34	C_1	0	0	↓	100	↓	↓	↓	↓
35	↓	30	-10.0	↓	100	↓	↓	↓	↓
36	↓	60	20.0	↓	100	↓	↓	↓	↓
37	T_1	-90	-10.0	↓	200	↓	↓	↓	↓
38	↓	-120	20.0	↓	200	↓	↓	↓	↓
39	↓	-90	-10.0	↓	200	5.3	4.0	410	↓

** 100 - Orbiter T/Cs; 200 - External Tank T/Cs
*** Actual test values are given in the Appendix

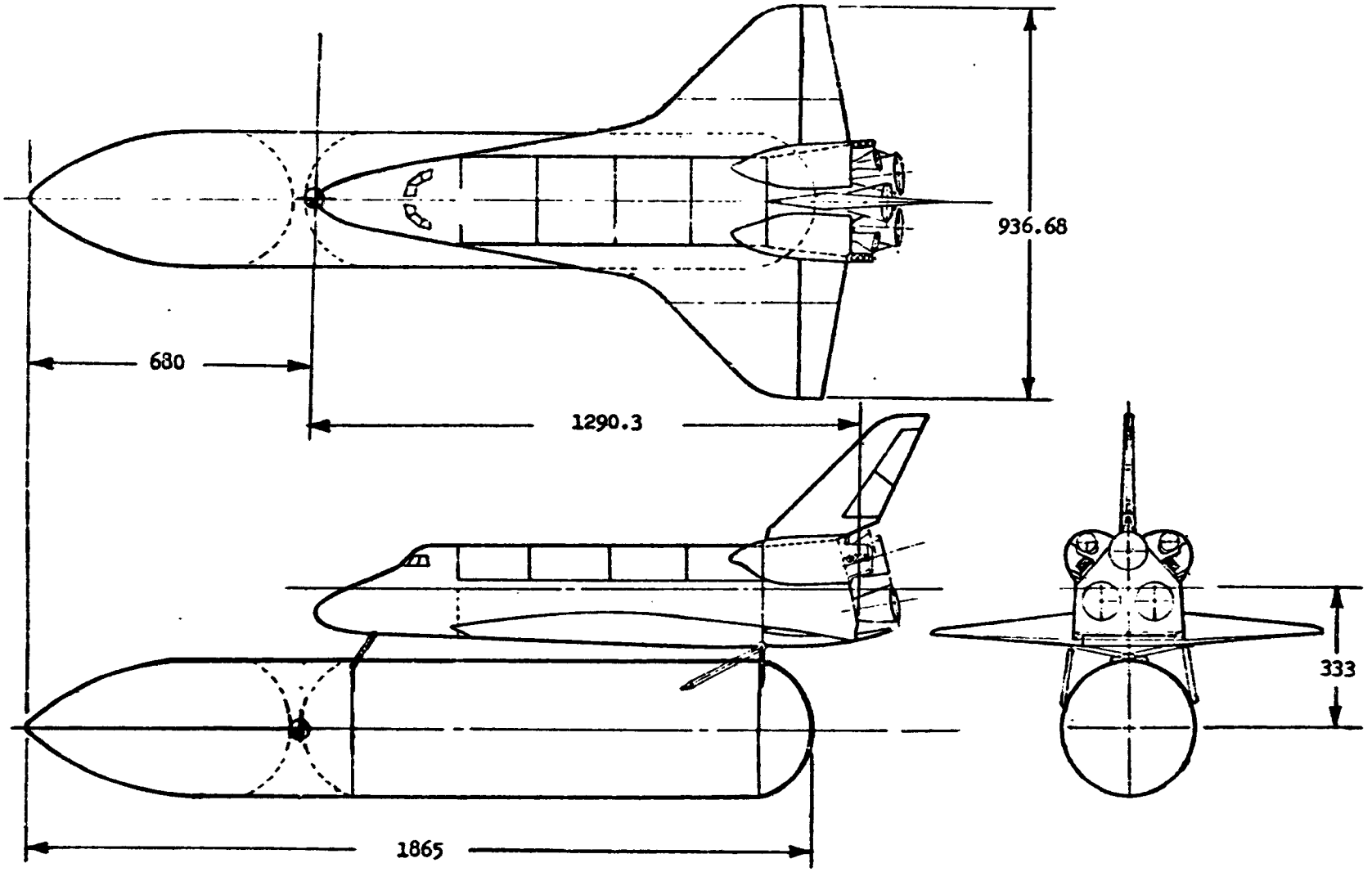
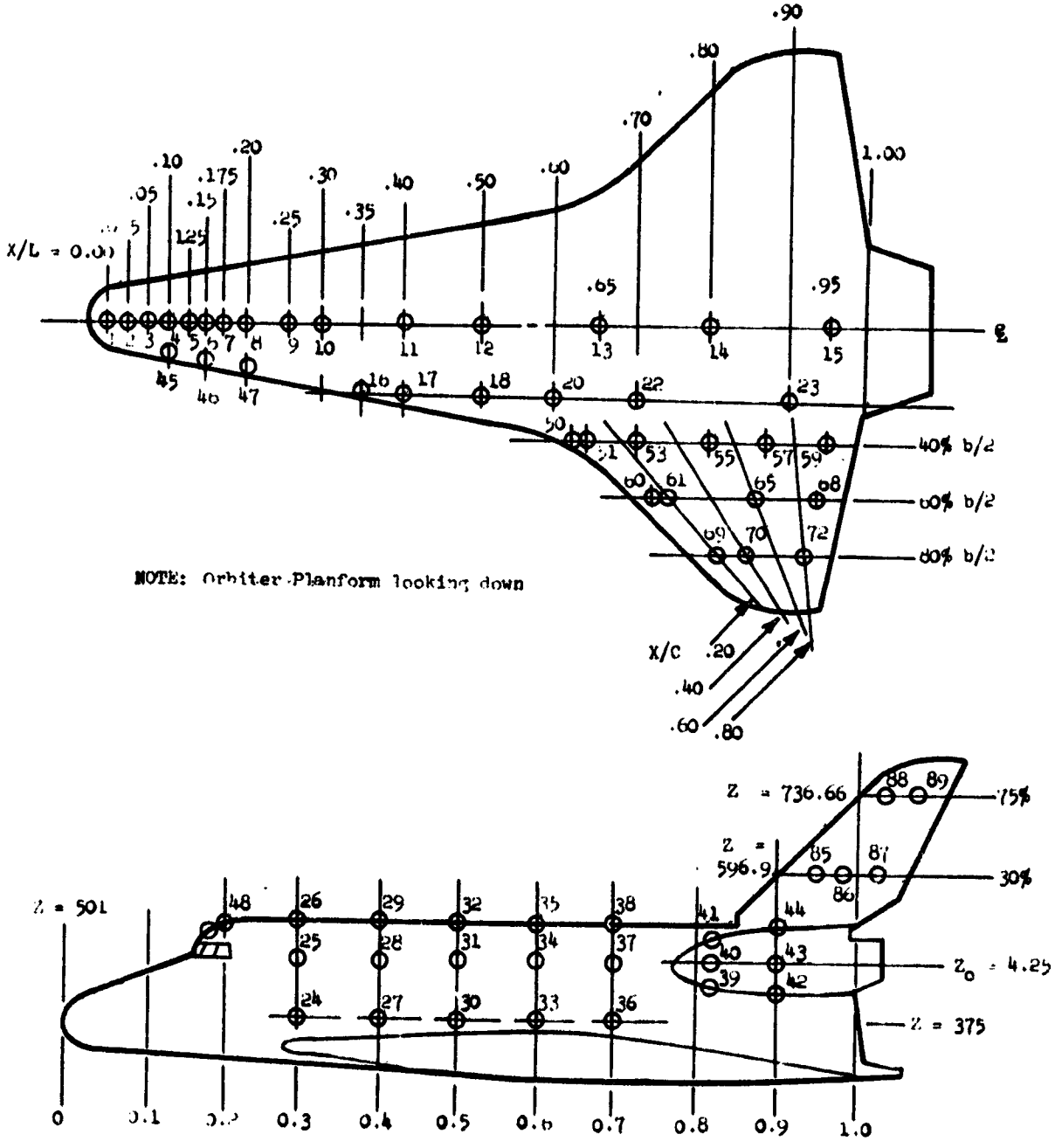


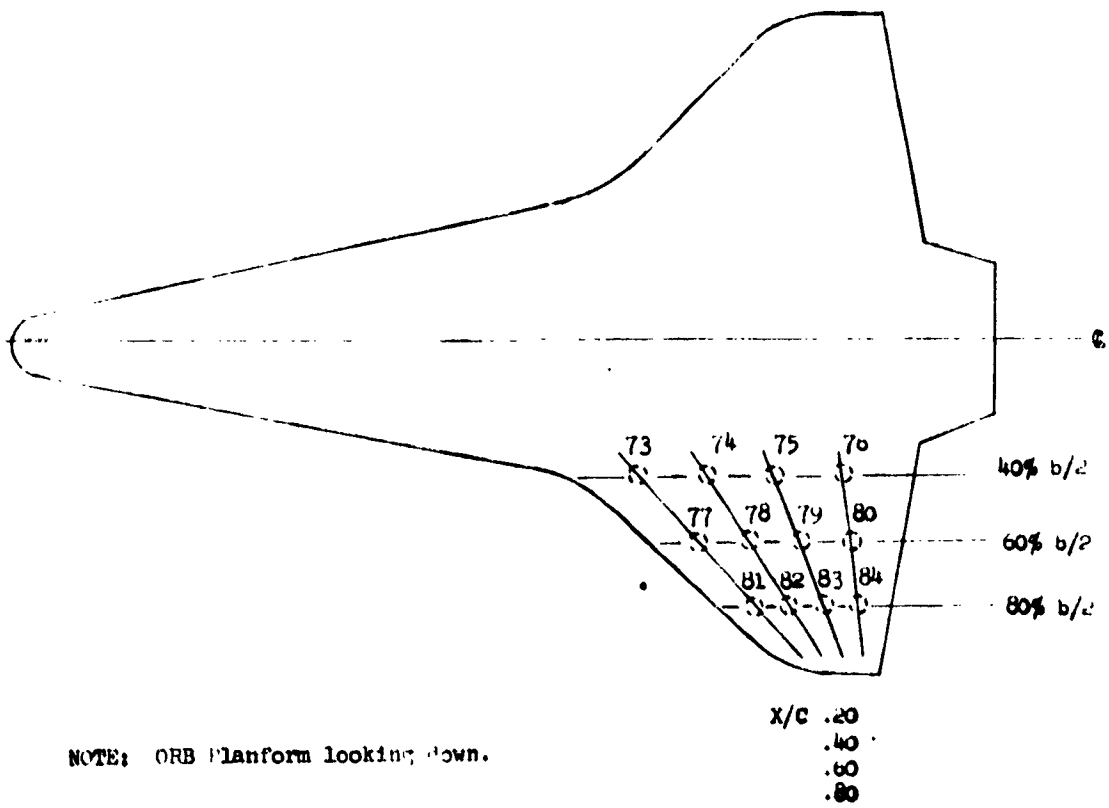
Figure 1. Orbiter/External Tank General Layout



a. 50-0 Orbiter -- 147-B Configuration Thermocouple Locations

Figure 2. Model Instrumentation Sketches

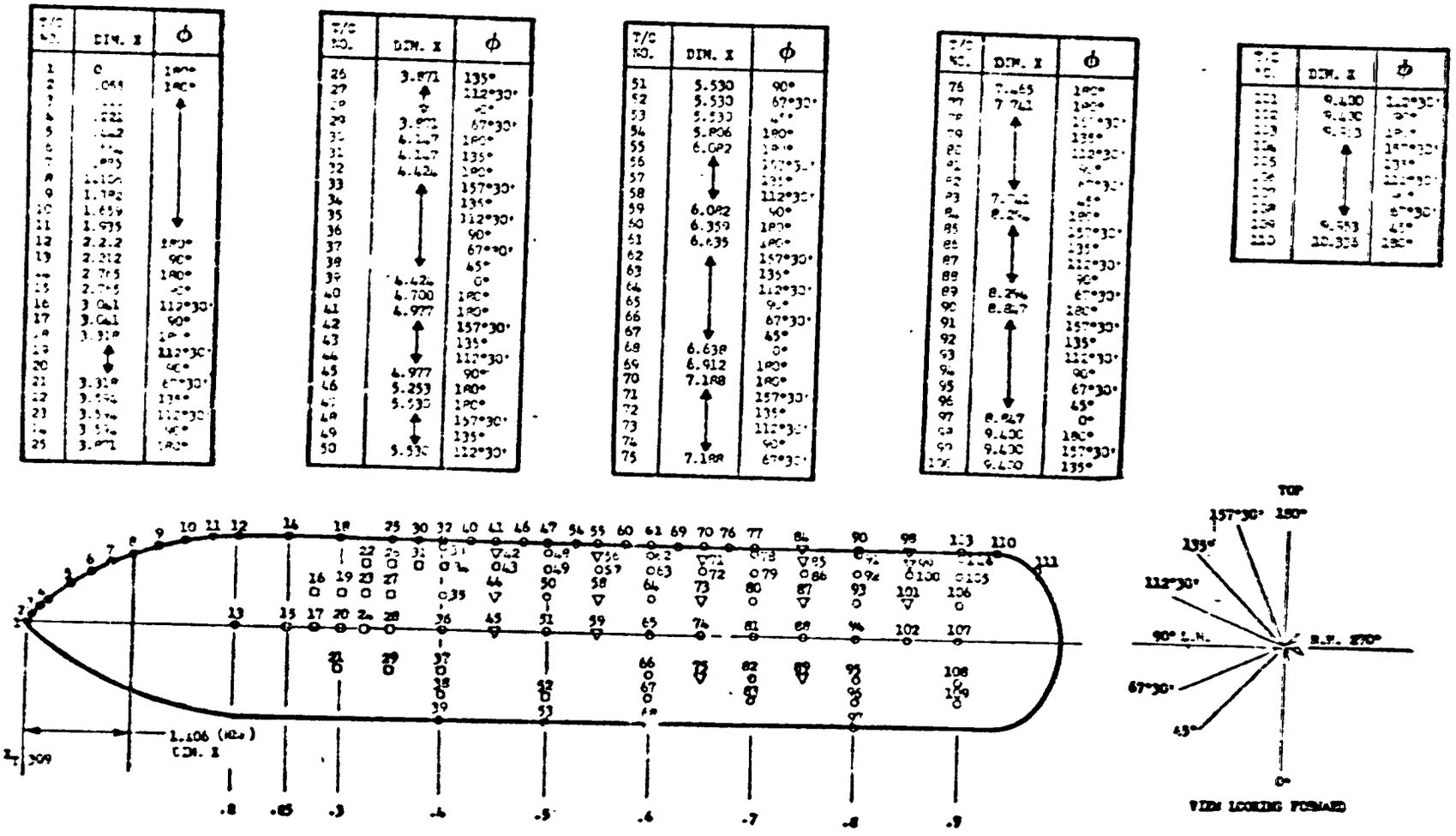
Upper Surface (Left Wing) Instrumentation



NOTE: ORB Planform looking down.

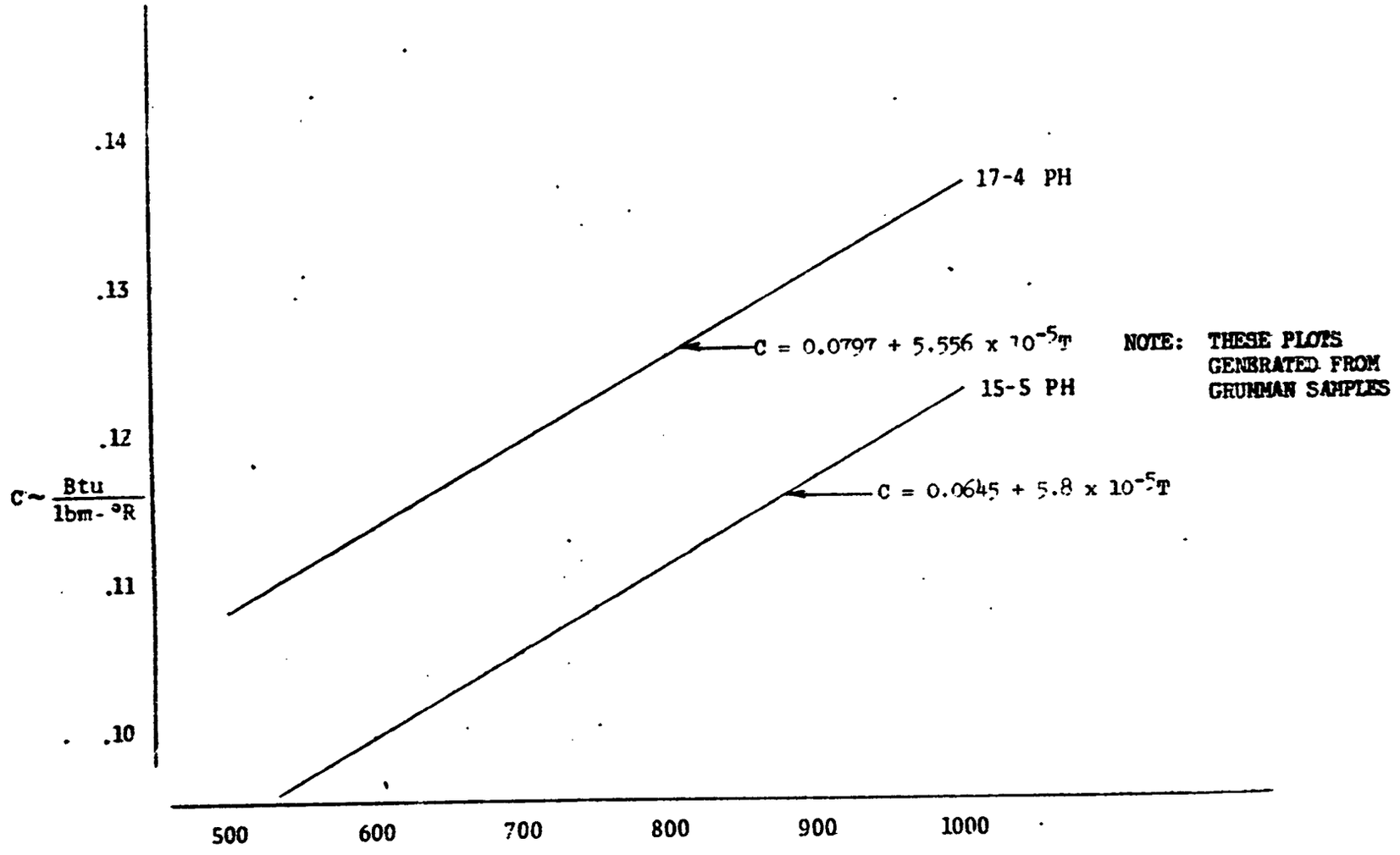
a. 50-0 Orbiter -- 147-B Configuration Thermocouple Locations

Figure 2. Model Instrumentation Sketches (Concluded).



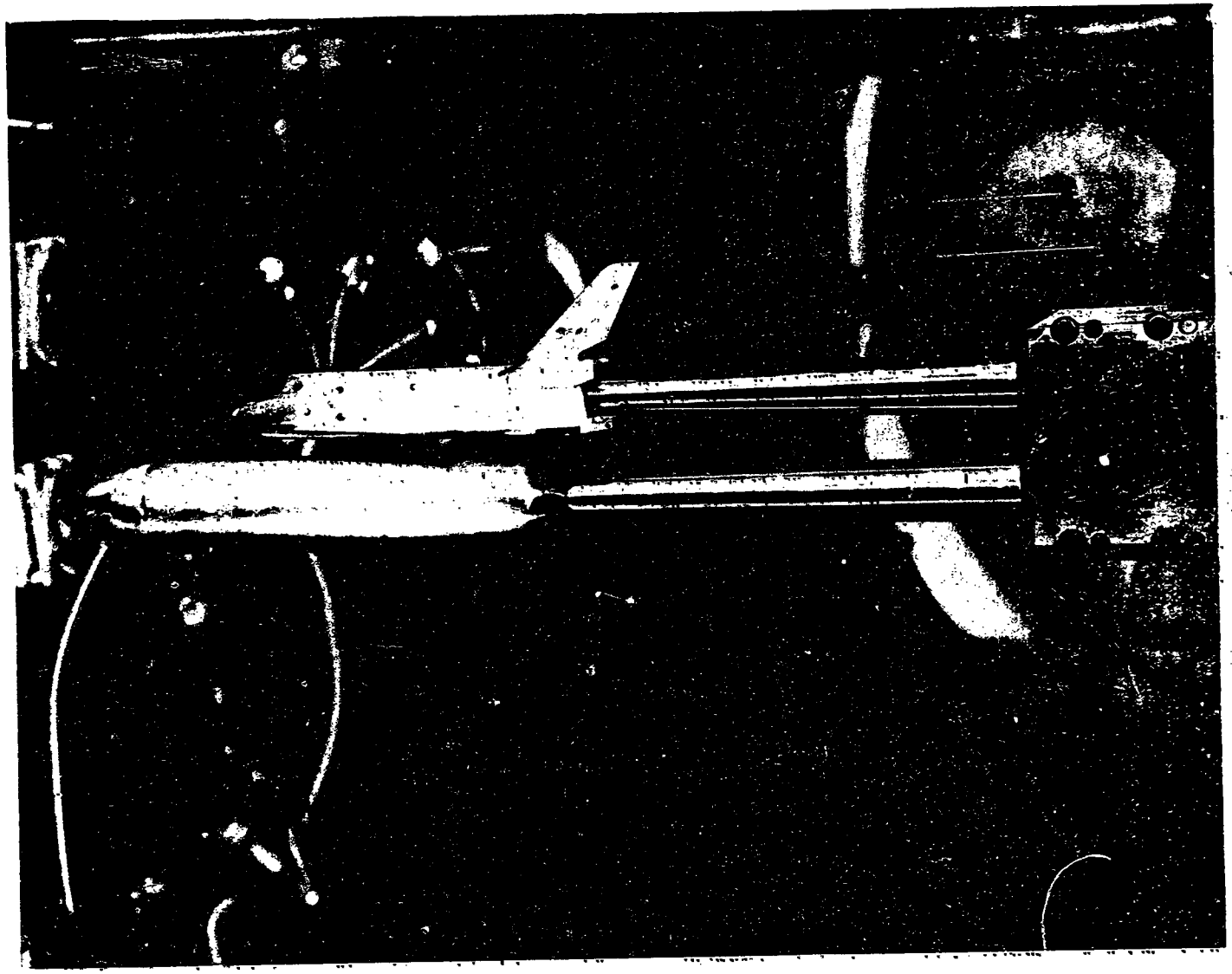
b. A-1-T 0.006-Scale External Tank T/C Locations

Figure 5. Model Instrumentation Sketches



c. Specific Heat vs. Temperature for 17-4PH and 15-5PH stainless steel

Figure 2. Model Instrumentation Sketches



a. Orbiter/Tank at 0.0 degrees

Figure 3. Model Installation Photographs

b. Orbiter/Tank at -60.0 degrees

Figure 3. Model Installation Photographs

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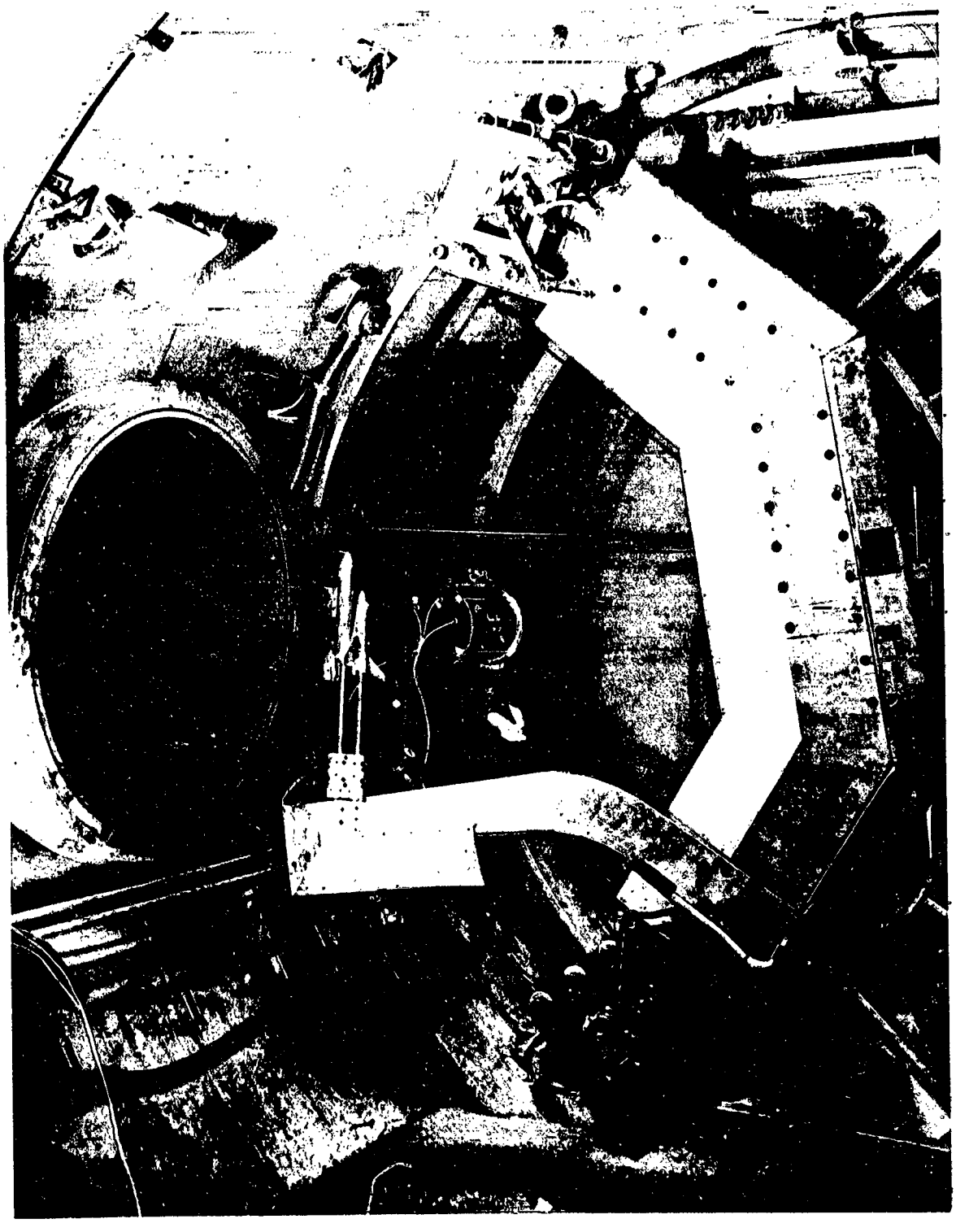
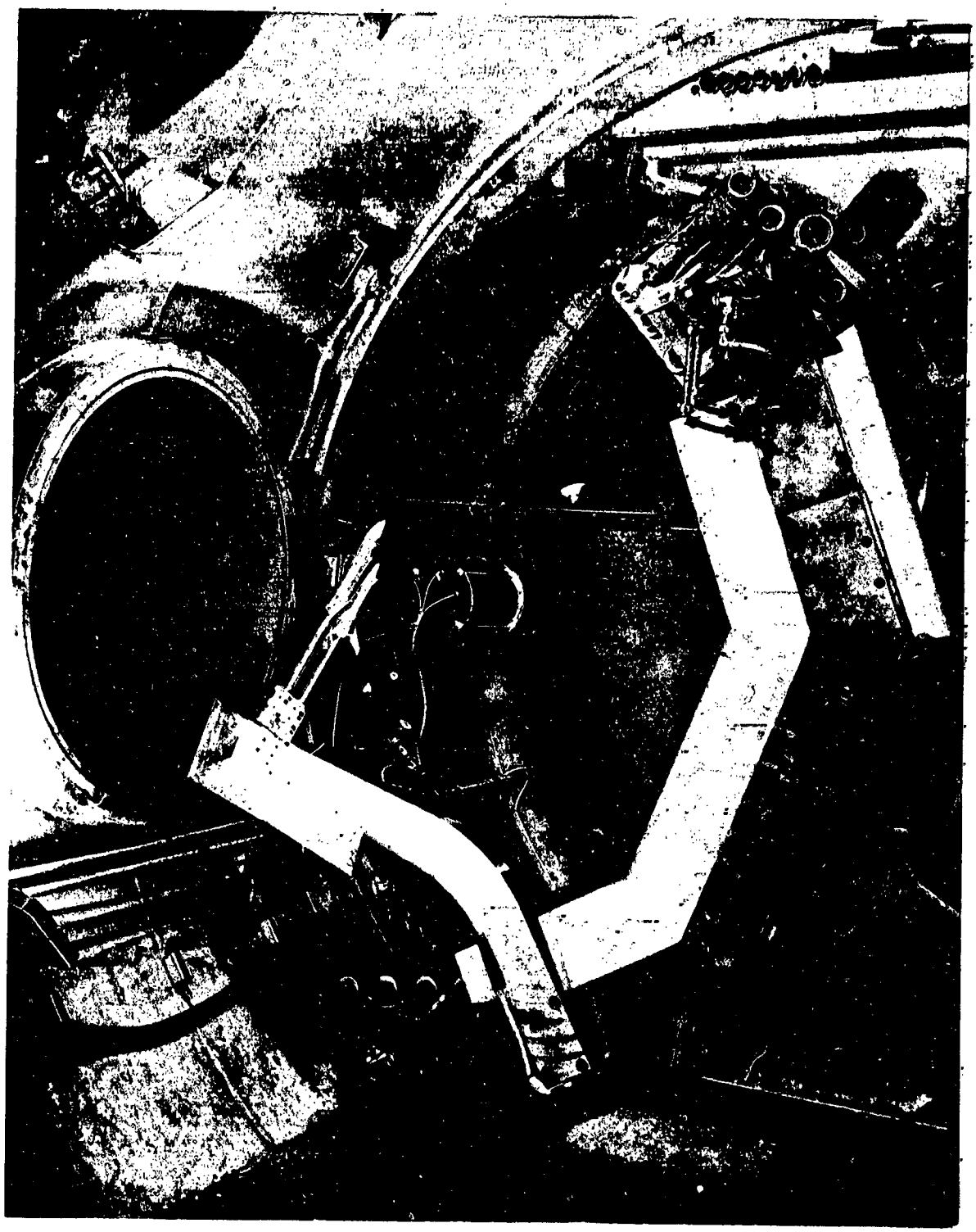


c. Orbiter/Tank at 90.0 degrees

Figure 3. Model Installation Photographs



d. Orbiter/Tank at 120.0 degrees

Figure 3. Model Installation Photographs

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DATA FIGURES

Volume 1 - Figures 4-15

Volume 2 - Figures 16-27

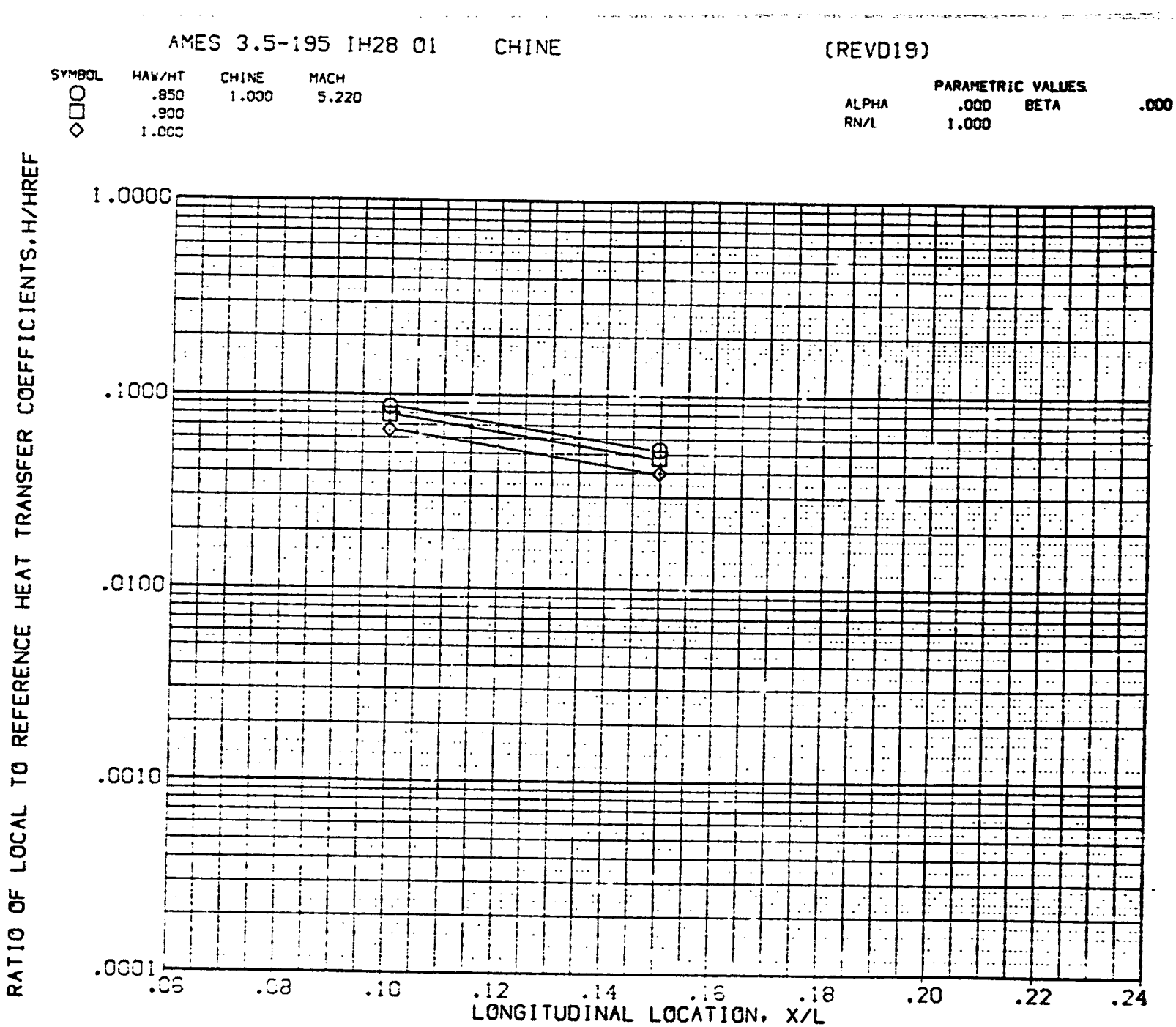

FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-195 IH28 01 CHINE (REVD20)

SYMBOL	HAW/HT	CHINE	MACH
○	.850	1.000	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-3.000	BETA	.000
RN/L	1.000		

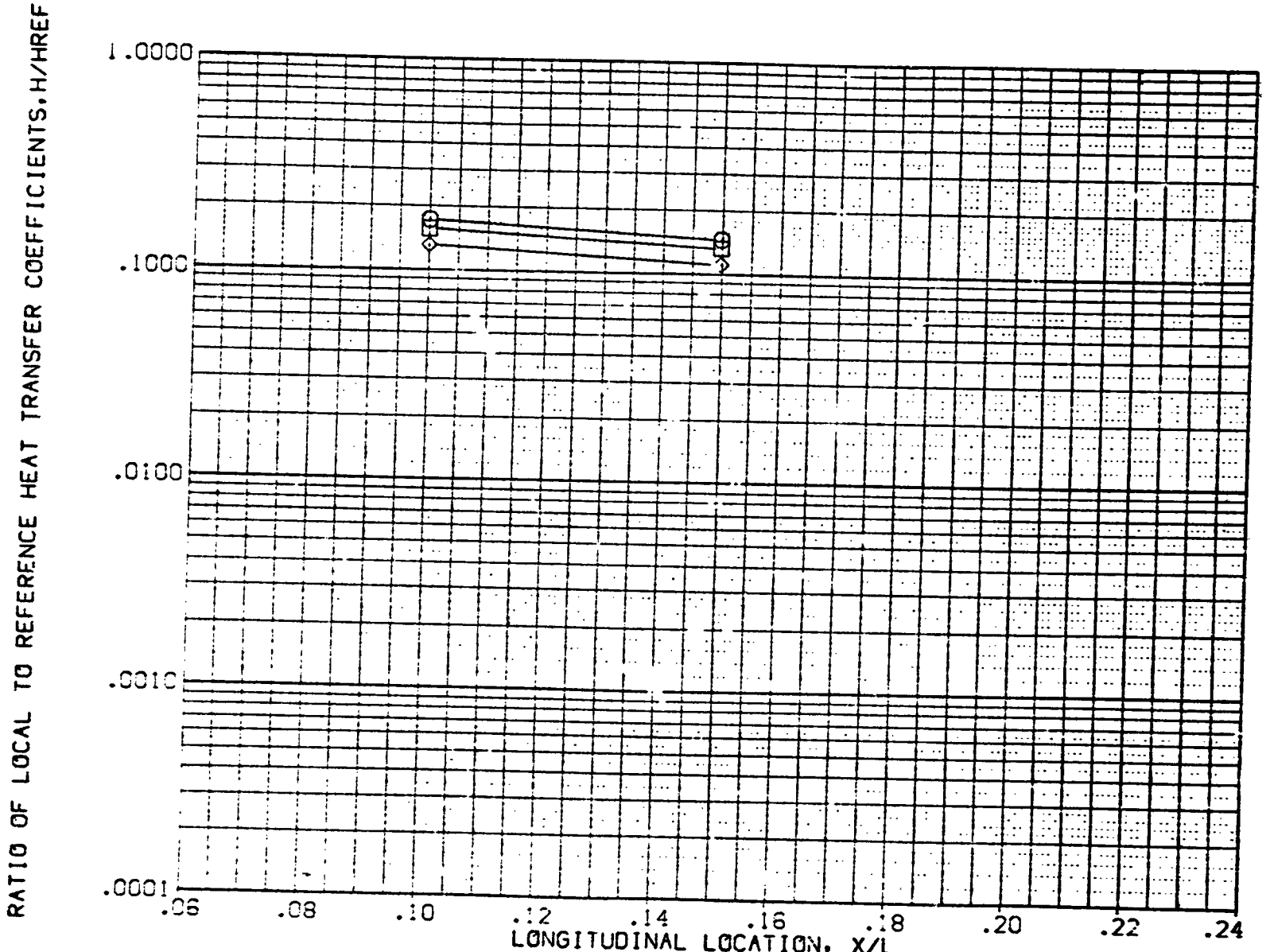

FIG. 16 CHINE, ORBITER ALONE

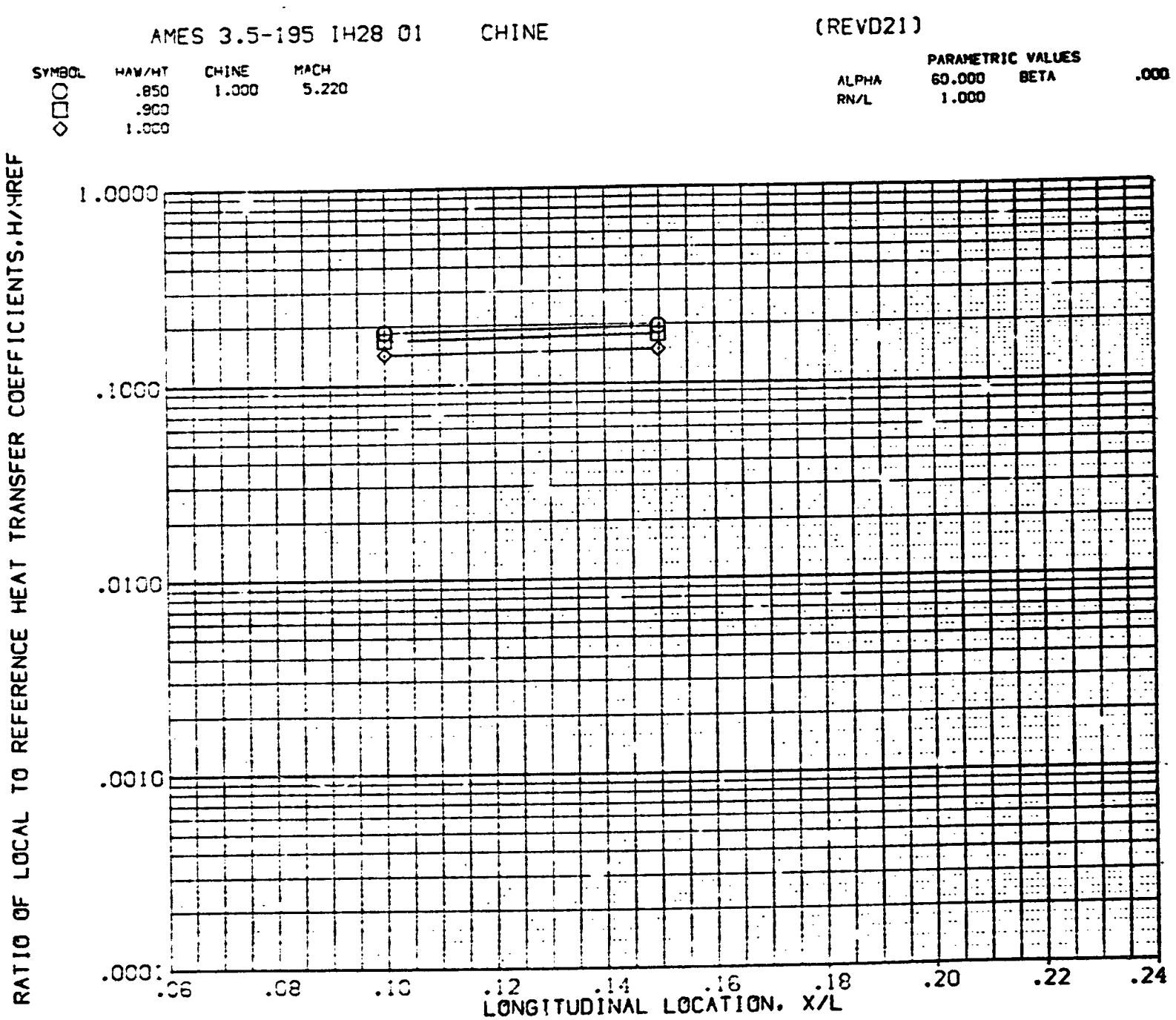

FIG. 16 CHINE, ORBITER ALONE

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

AMES 3.5-195 IH28 01 CHINE (REVD22)

SYMBOL	HAW/HT	CHINE	MACH
□	.650	1.000	5.220
◇	.900		
	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

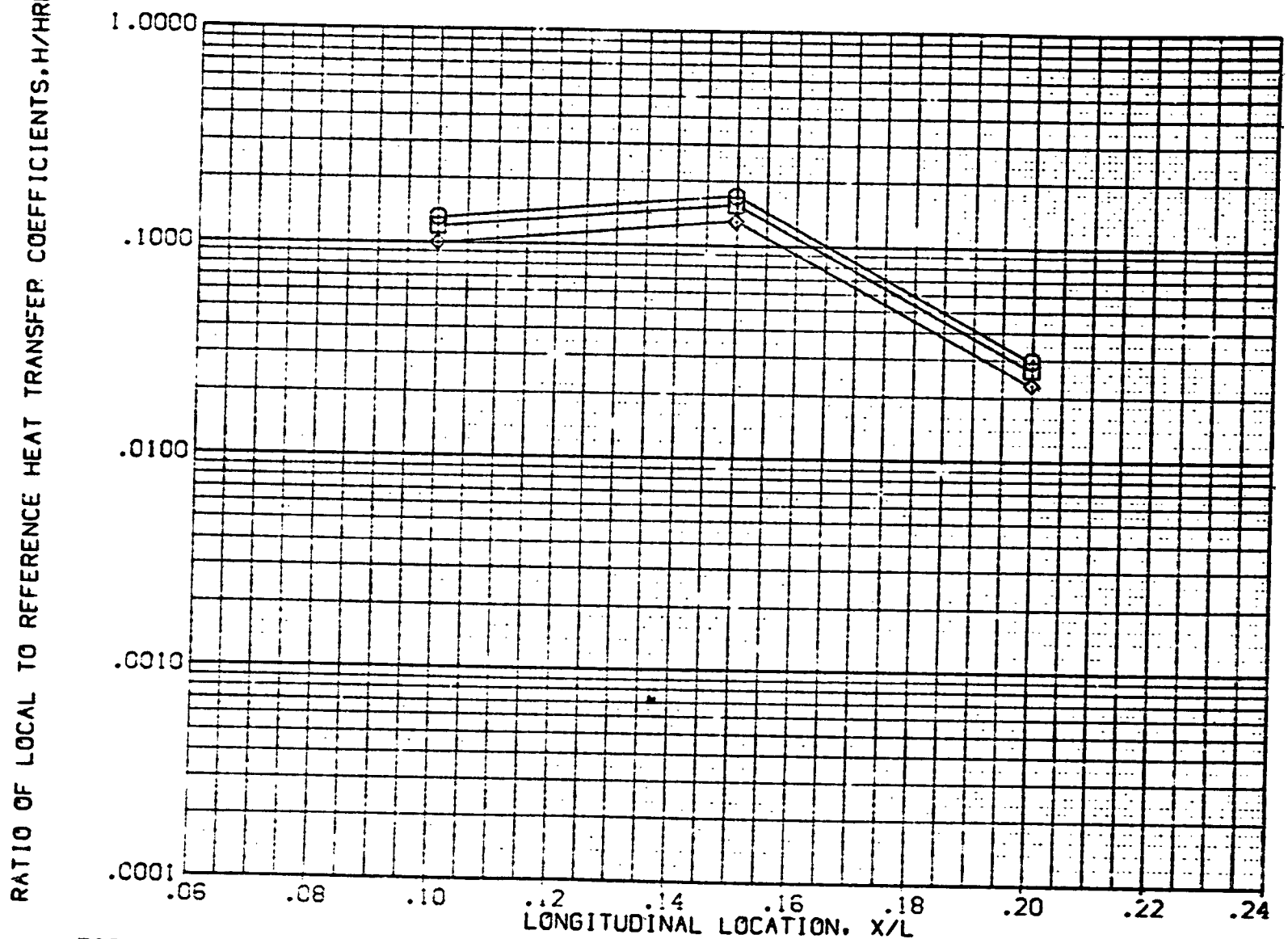

FIG. 16 CHINE, ORBITER ALONE

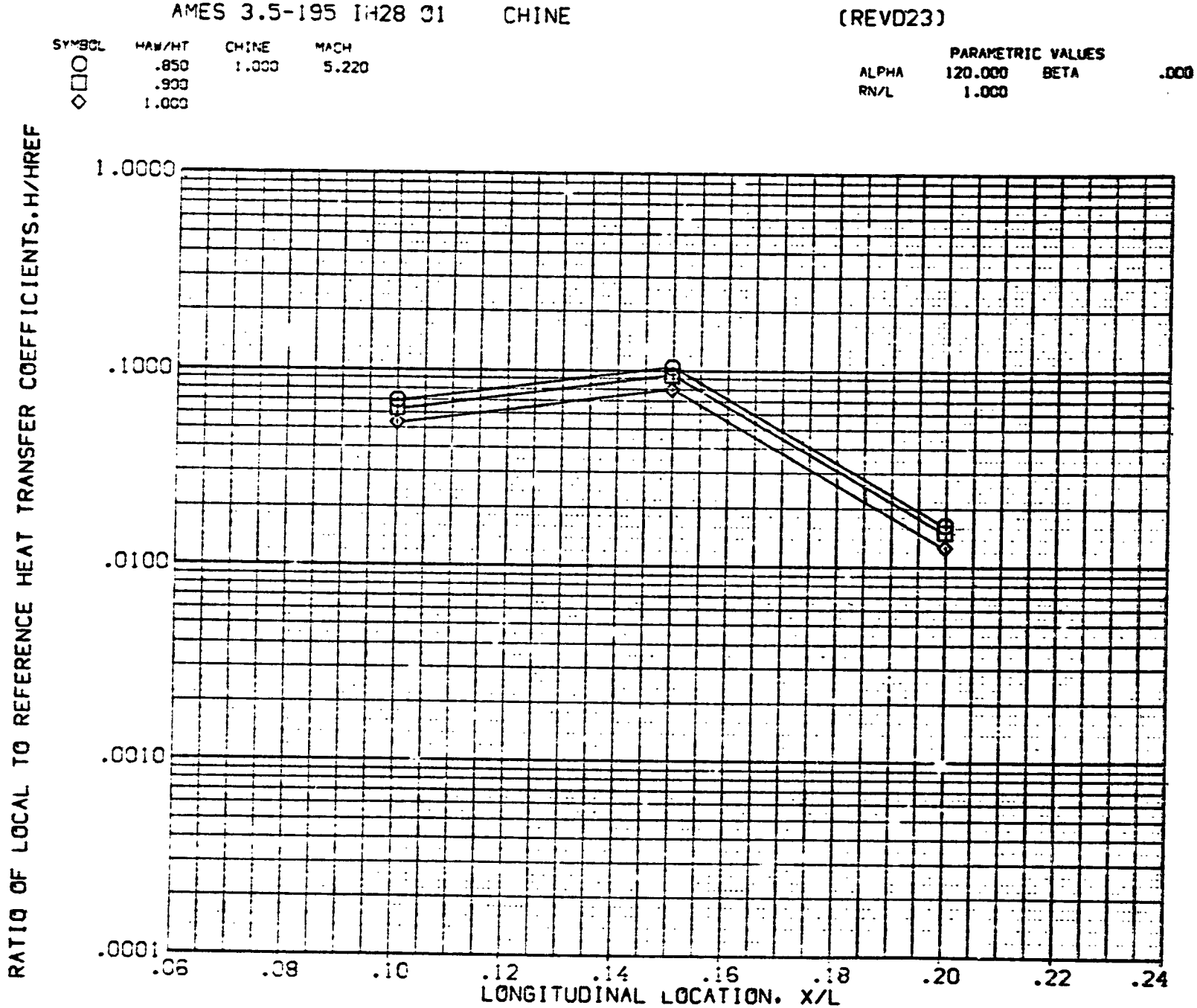

FIG. 16 CHINE, ORBITER ALONE

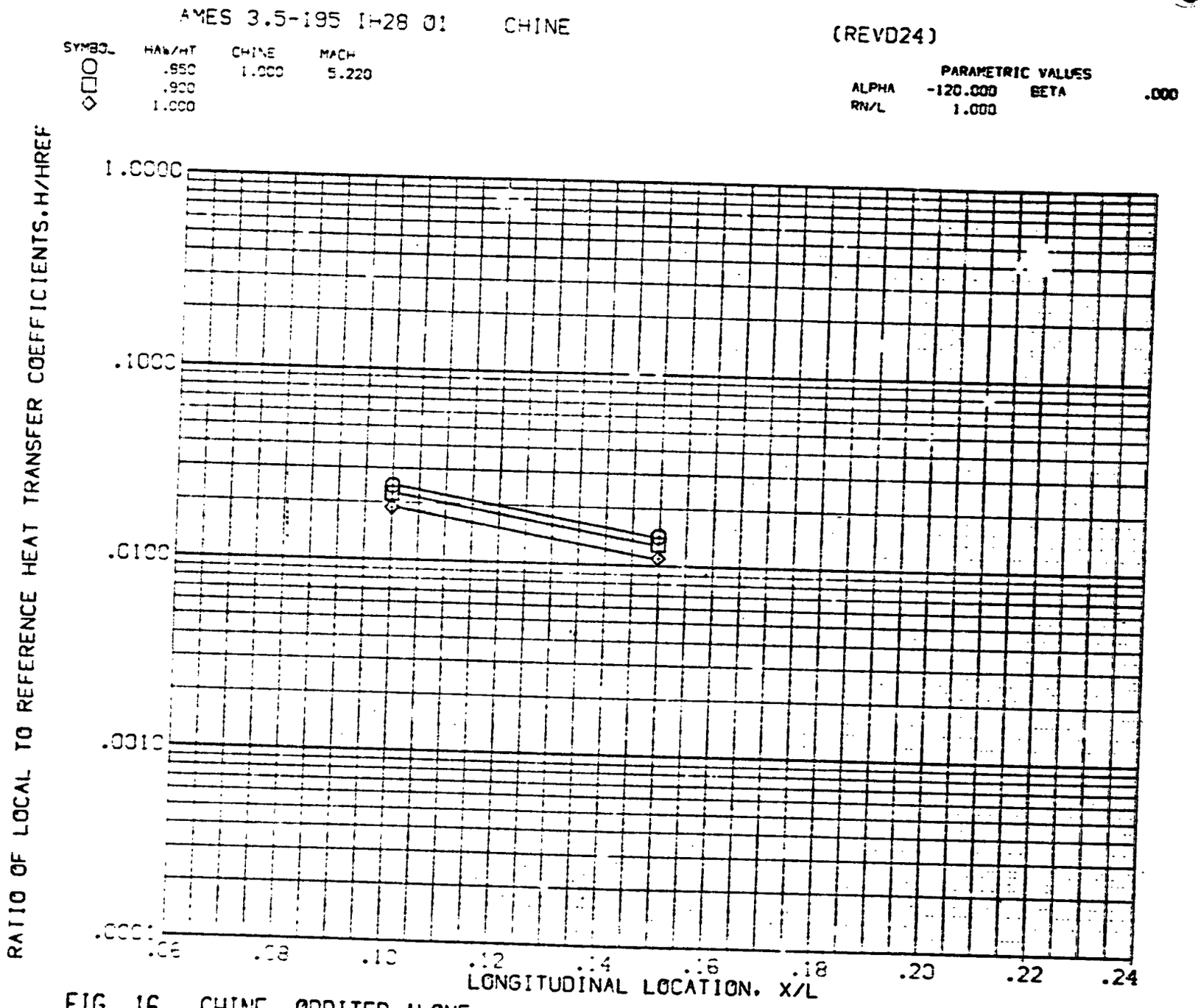

FIG. 16 CHINE, ORBITER ALONE

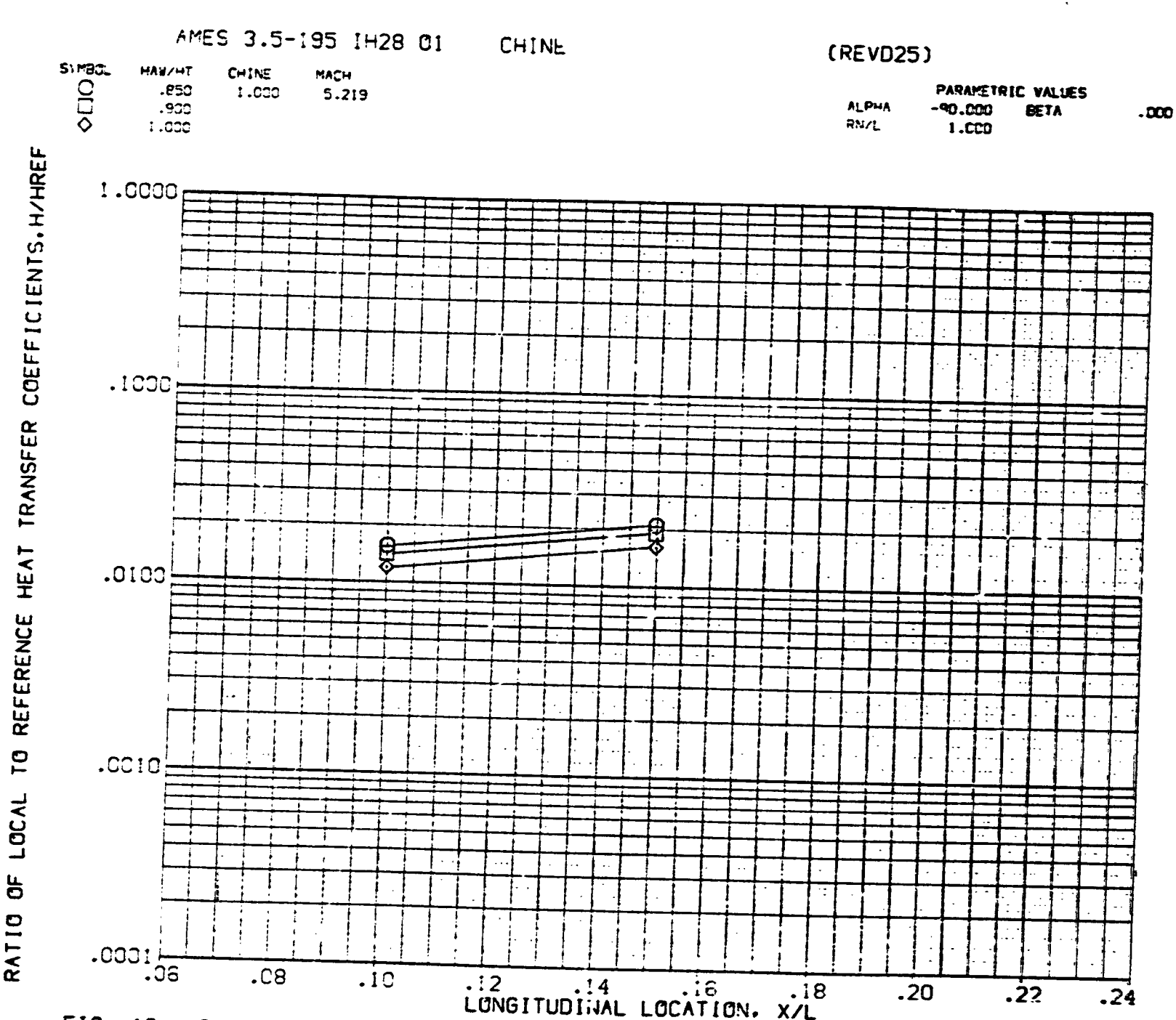

FIG. 16 CHINE, ORBITER ALONE

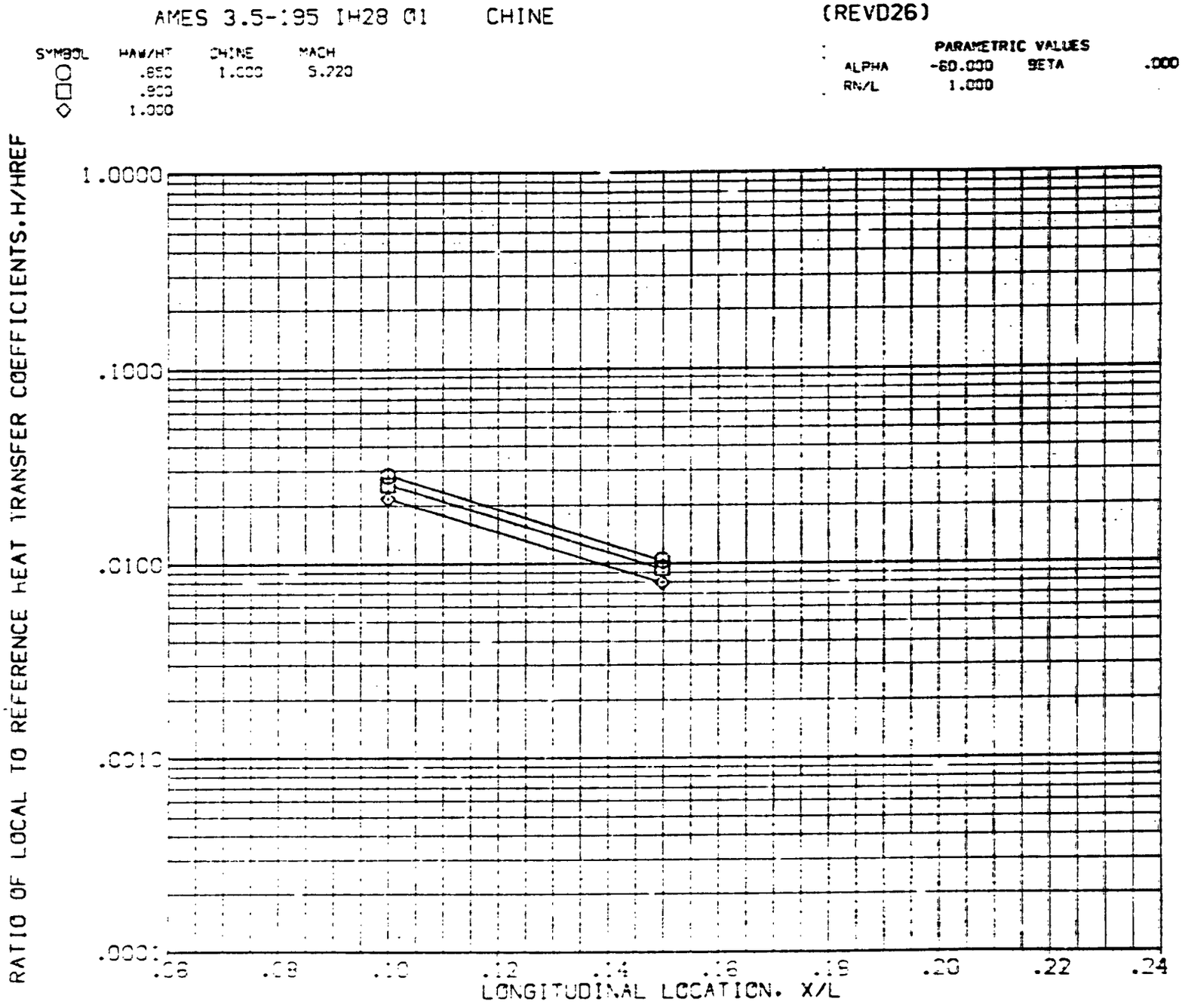

FIG. 16 CHINE, ORBITER ALONE

AMES 3.5-195 IH28 01 CHINE (REVD27)

SYMBOL	HAW/HT	CHINE	MACH
○	.850	1.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

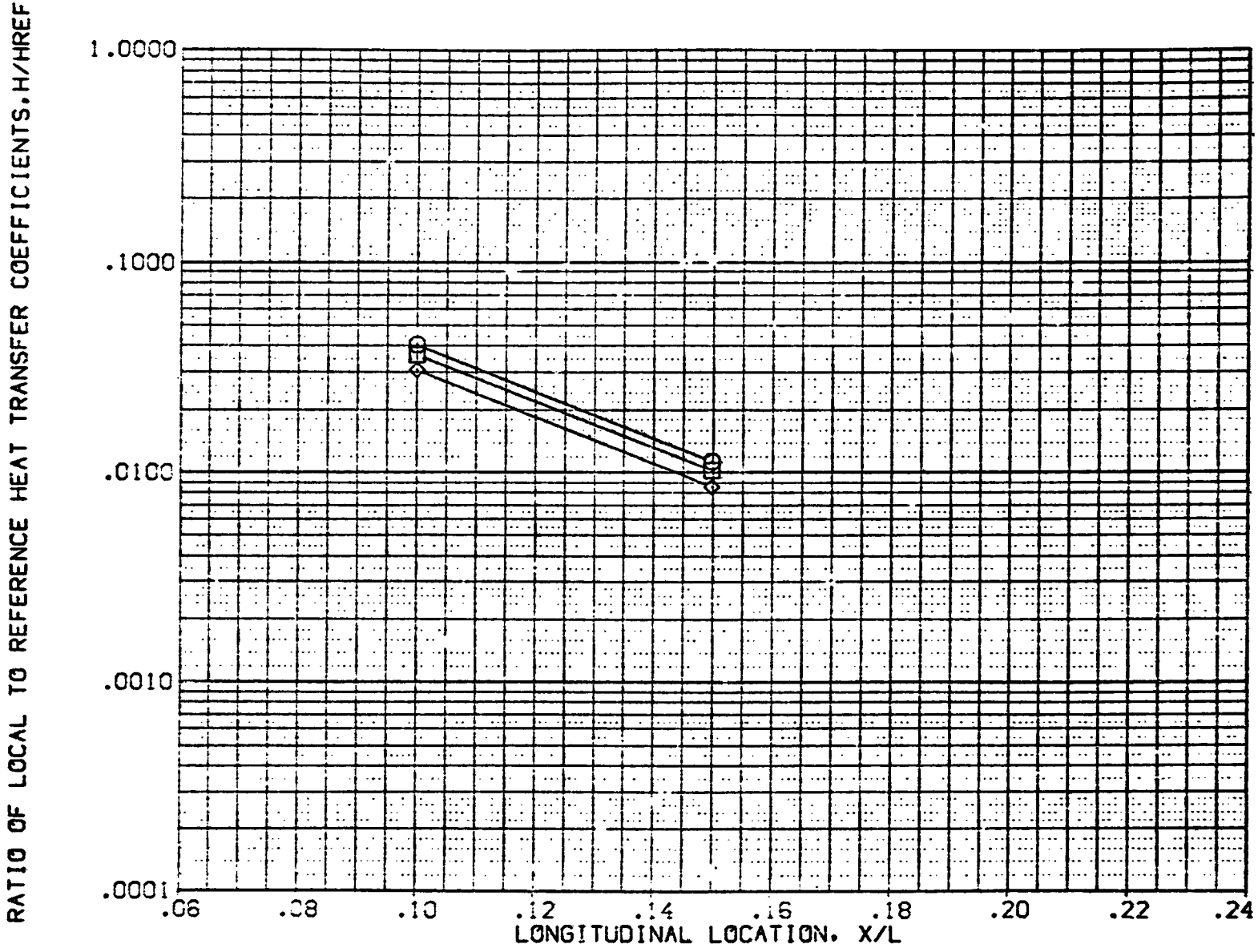

FIG. 16 CHINE, ORBITER ALONE

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REV019)	◇	AMES 3.5-195 IH28 01	CHINE	.000	.000	1.000
(REV020)	□	AMES 3.5-195 IH28 01	CHINE	30.000	.000	1.000
(REV021)	△	AMES 3.5-195 IH28 01	CHINE	60.000	.000	1.000
(REV022)	○	AMES 3.5-195 IH28 01	CHINE	90.000	.000	1.000
(REV023)	▽	AMES 3.5-195 IH28 01	CHINE	120.000	.000	1.000

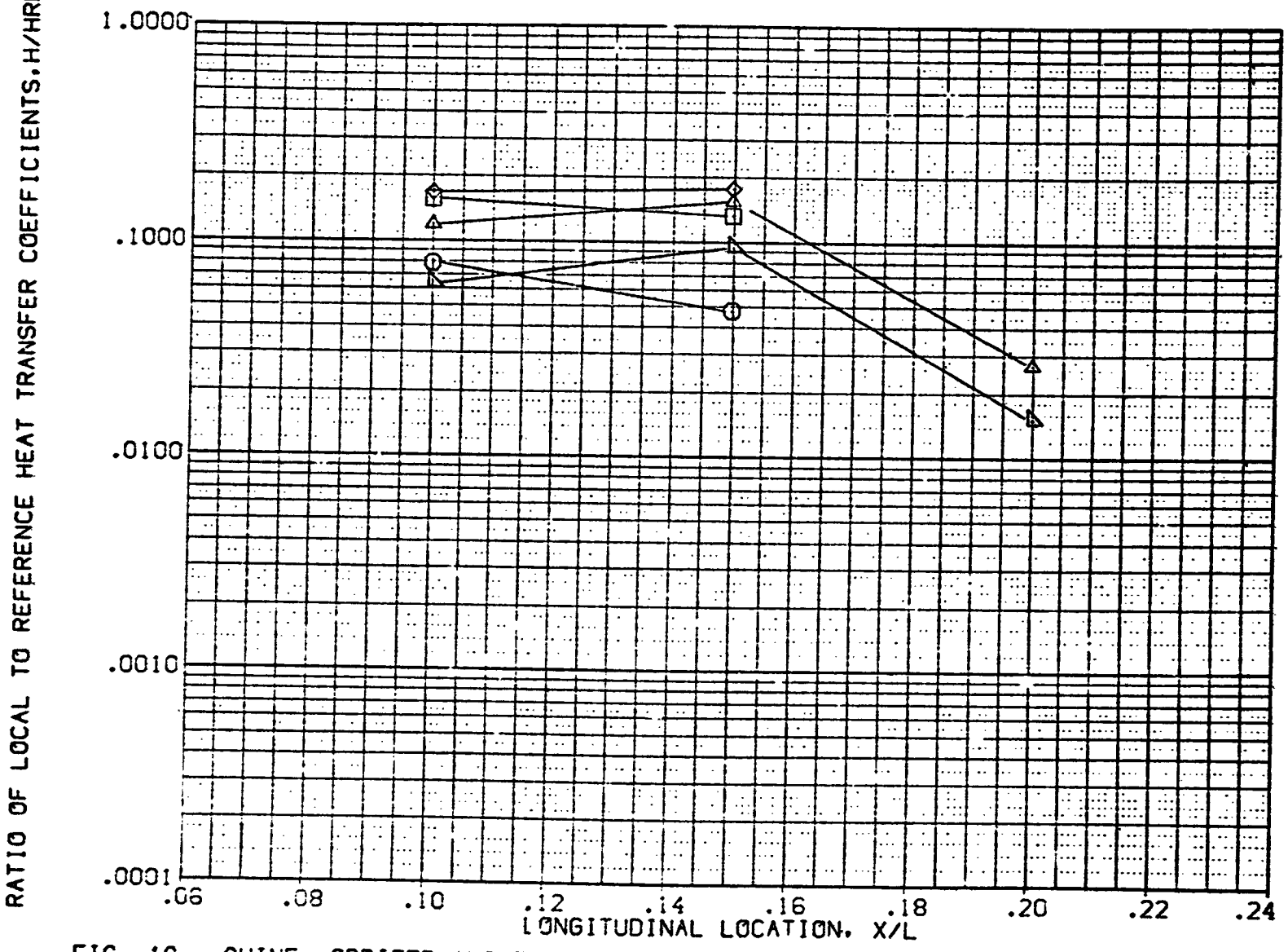

FIG. 16 CHINE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 CHINE = 1.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(RE.019)		AMES 3.5-195 IH28 CI	CHINE	.000	.000	1.000
(RE.027)		AMES 3.5-195 IH28 CI	CHINE	-30.000	.000	1.000
(RE.026)		AMES 3.5-195 IH28 CI	CHINE	-60.000	.000	1.000
(RE.025)		AMES 3.5-195 IH28 CI	CHINE	-90.000	.000	1.000
(RE.024)		AMES 3.5-195 IH28 CI	CHINE	-120.000	.000	1.000

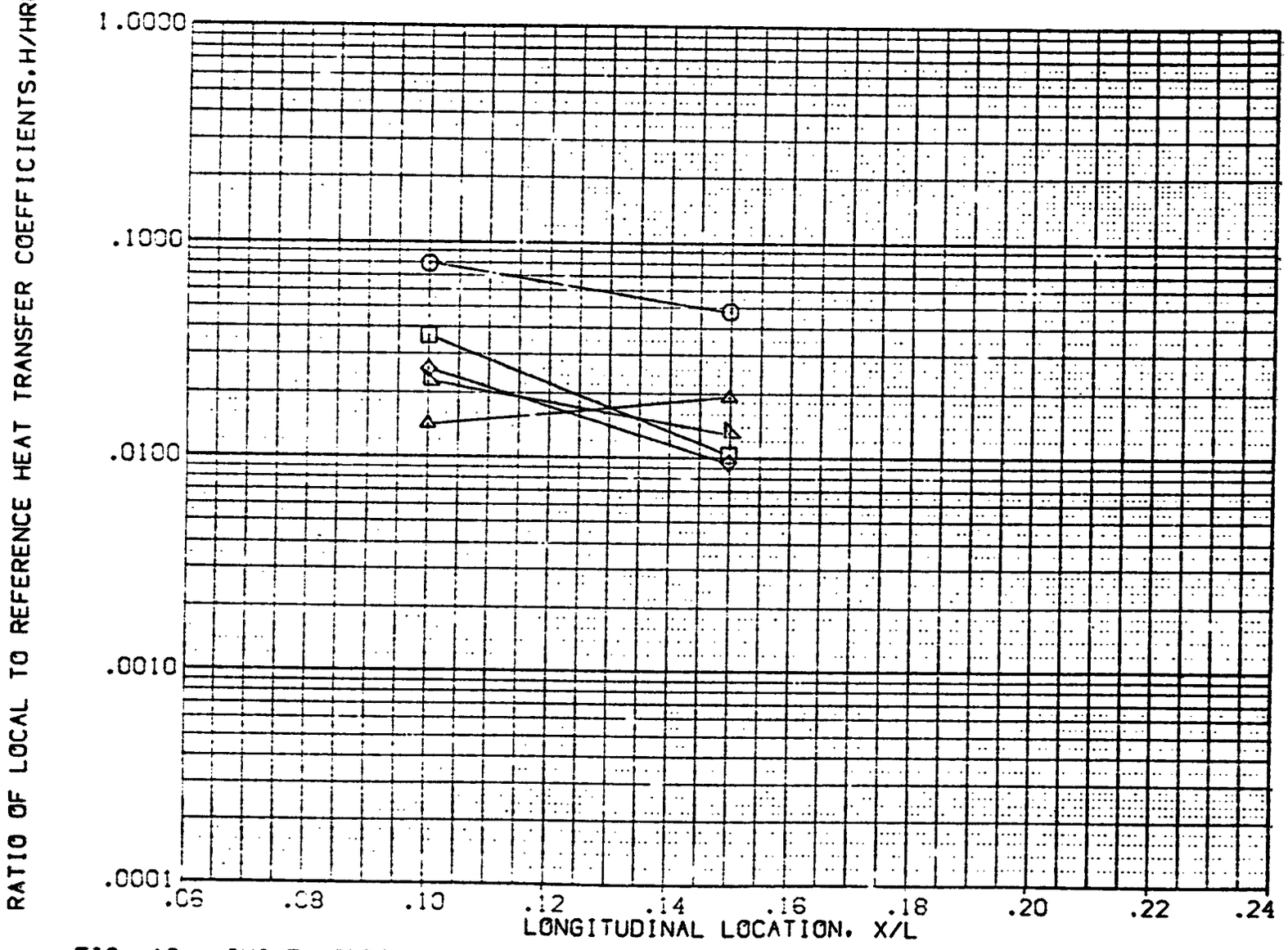

FIG. 16 CHINE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 CHINE = 1.000

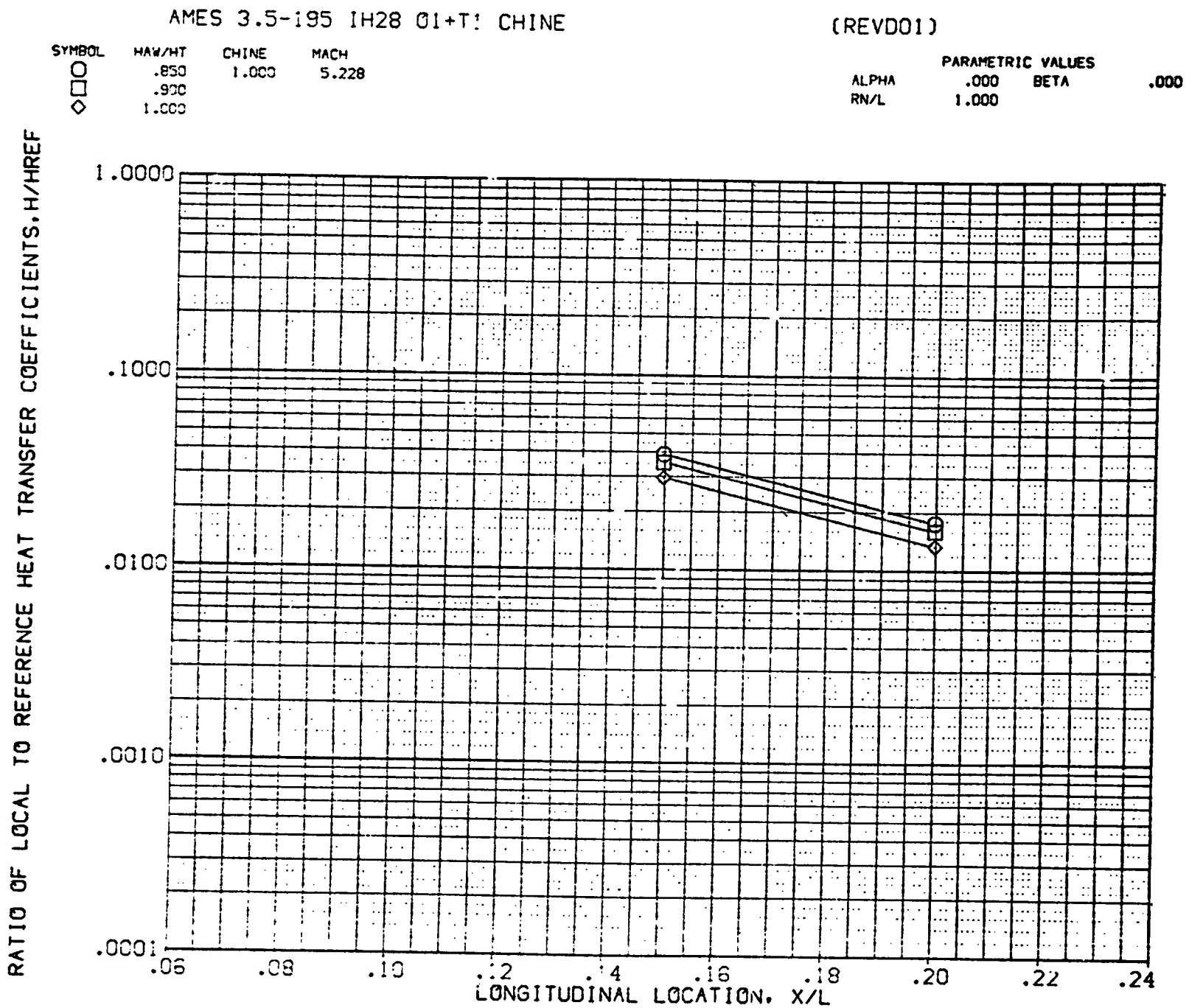

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

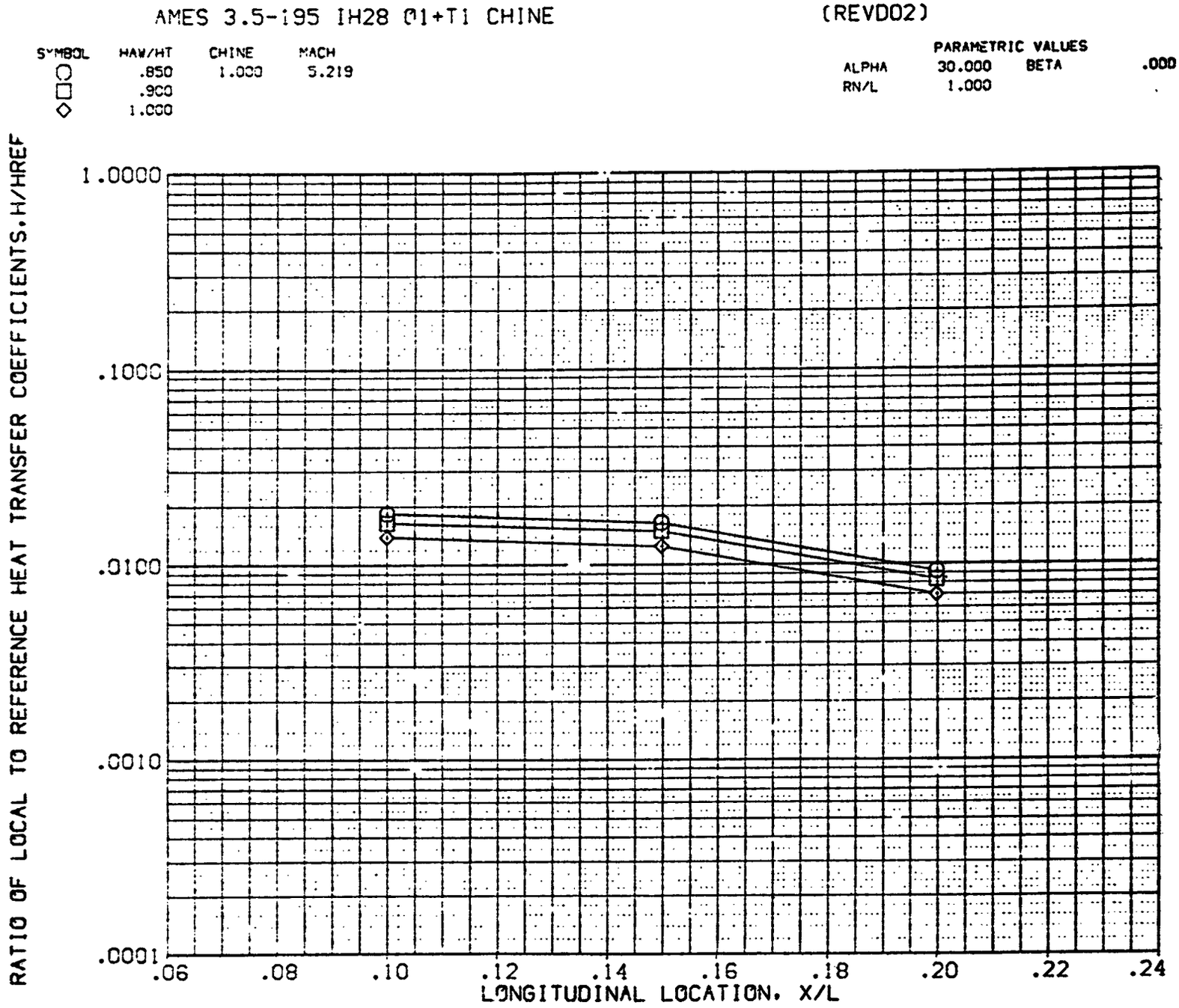

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

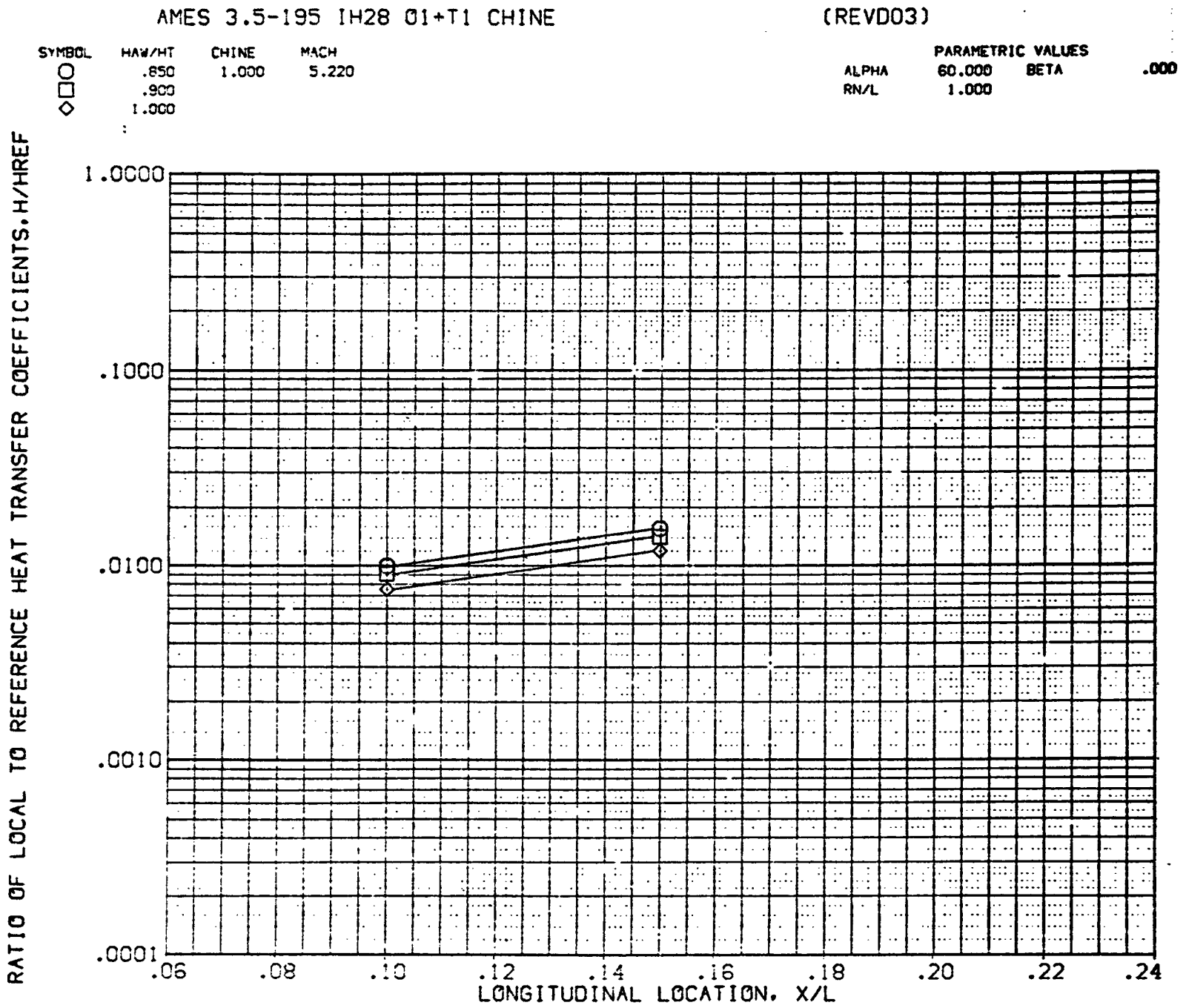

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

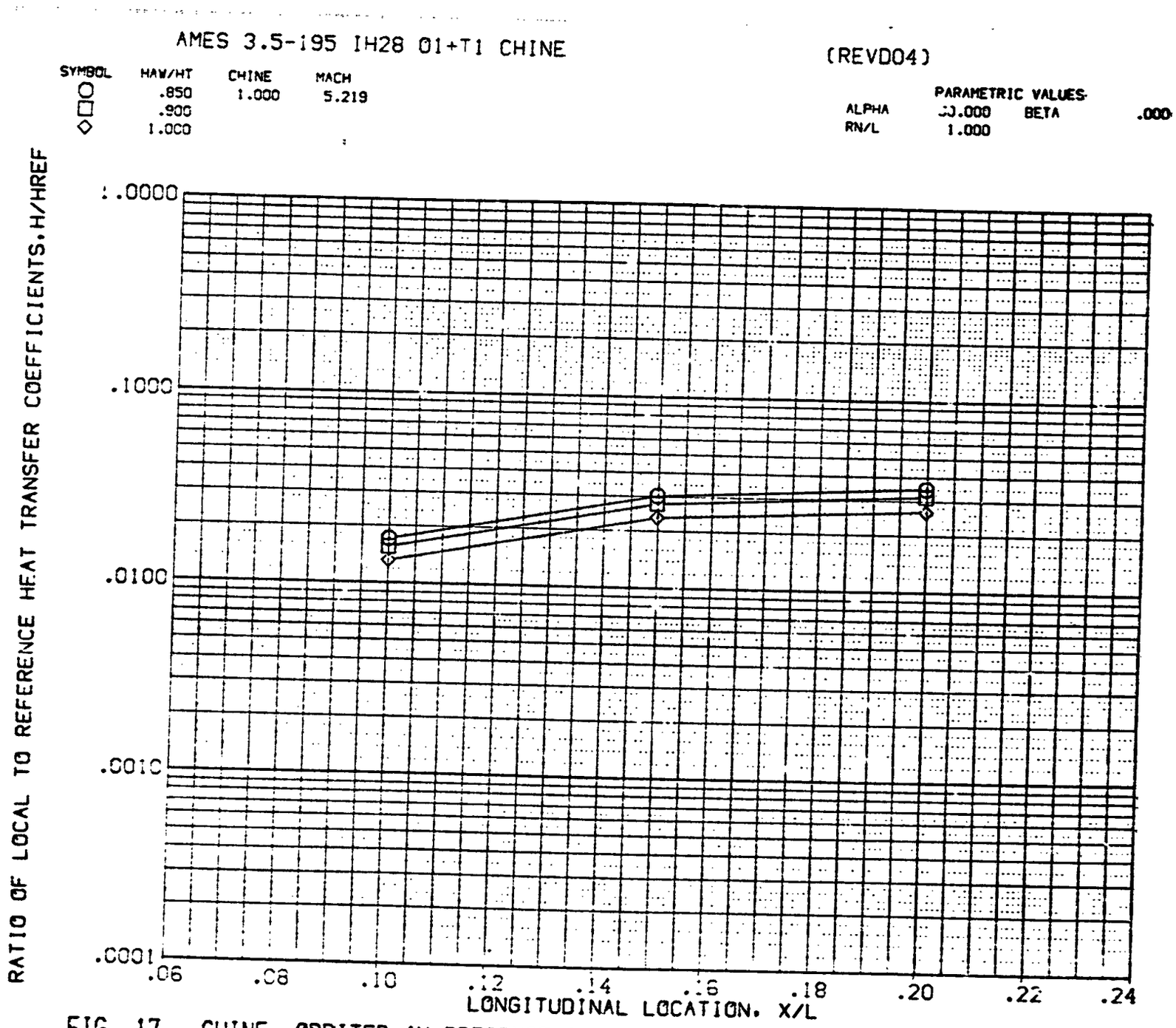

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

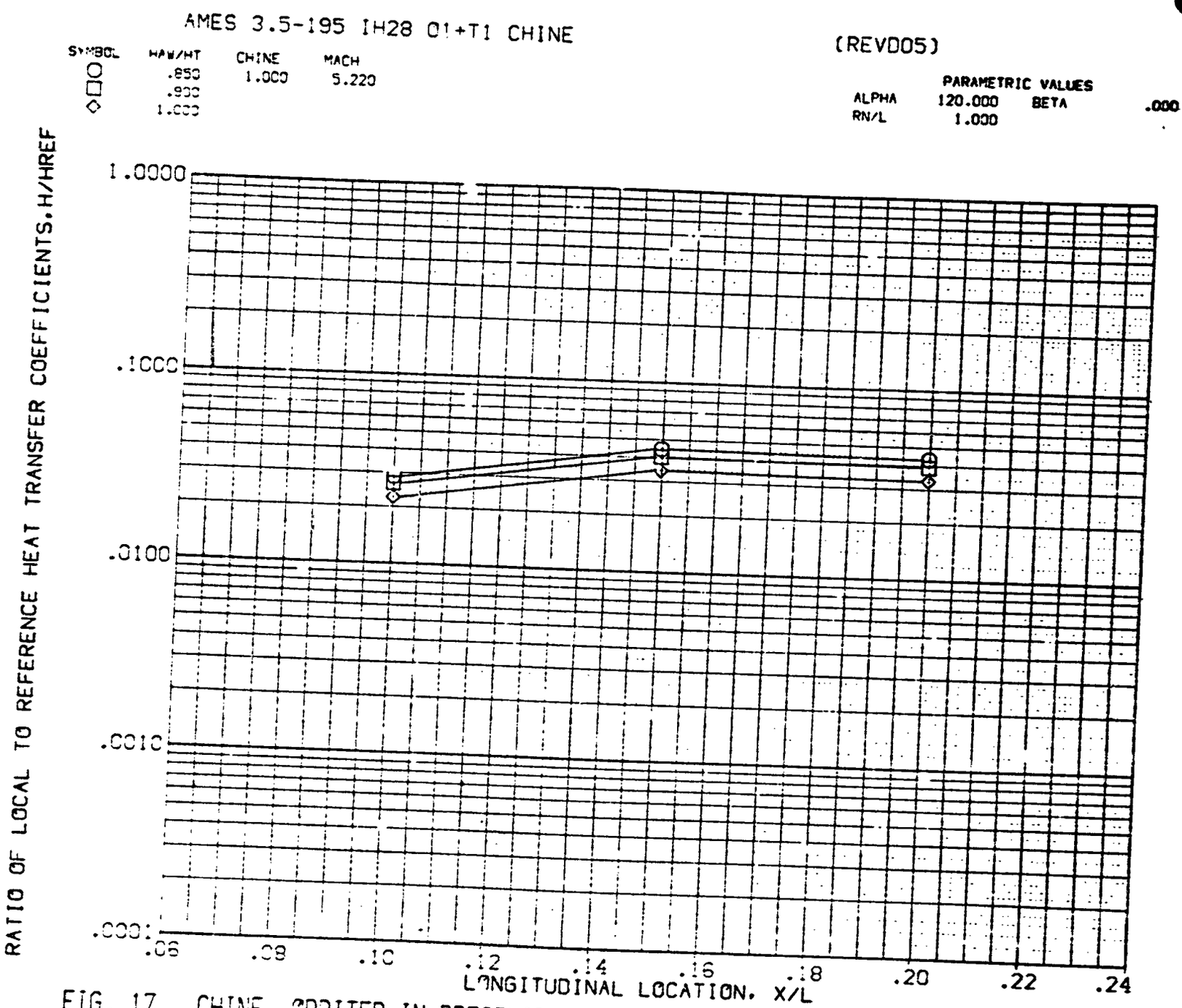

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

AMES 3.5-:95 IH28 01+T' CHINE (REVD06)

SYMBOL	HAW/HT	CHINE	MACH
○	.850	1.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -..0.000 BETA .000

RN/L 1.000

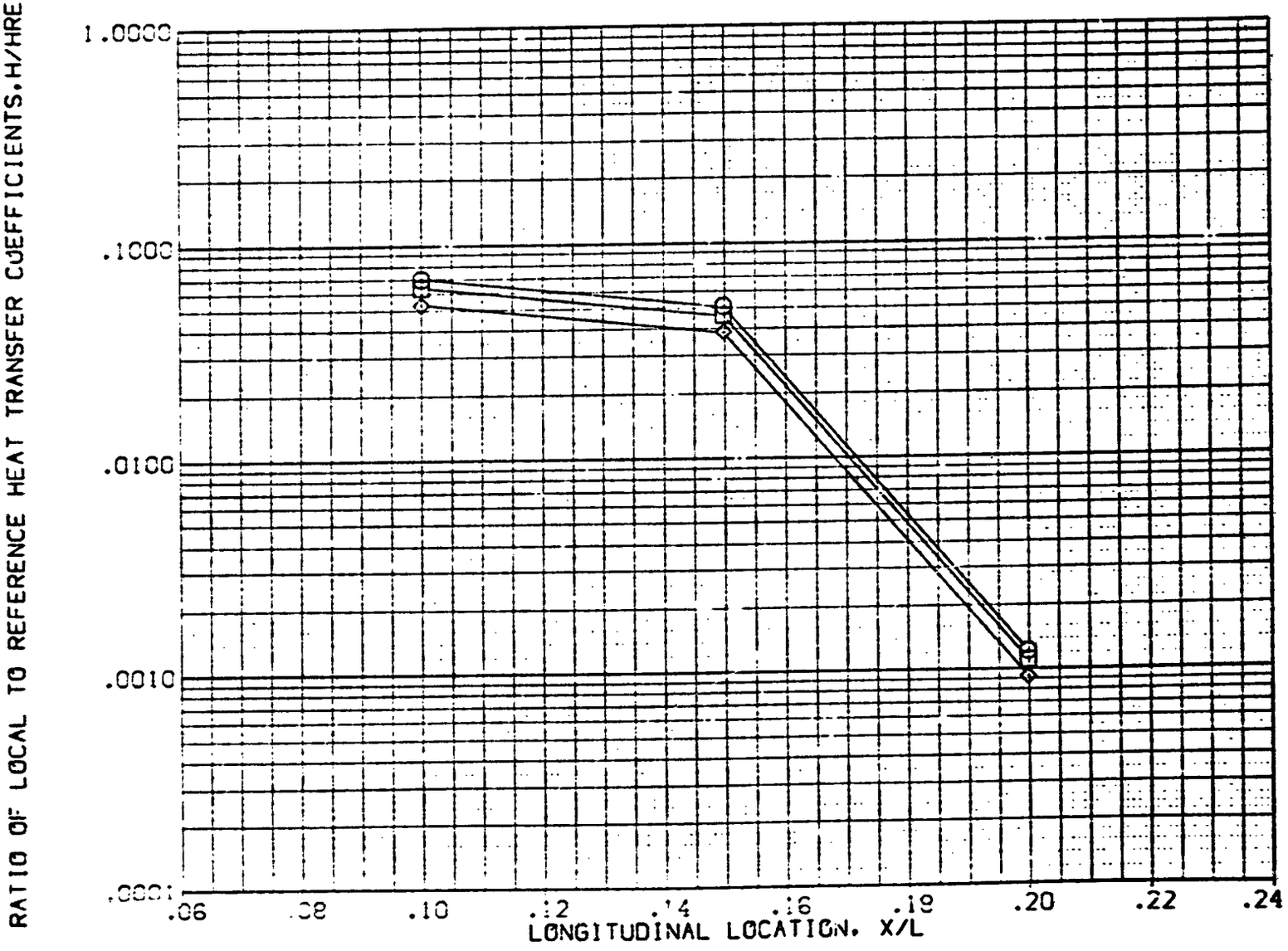

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

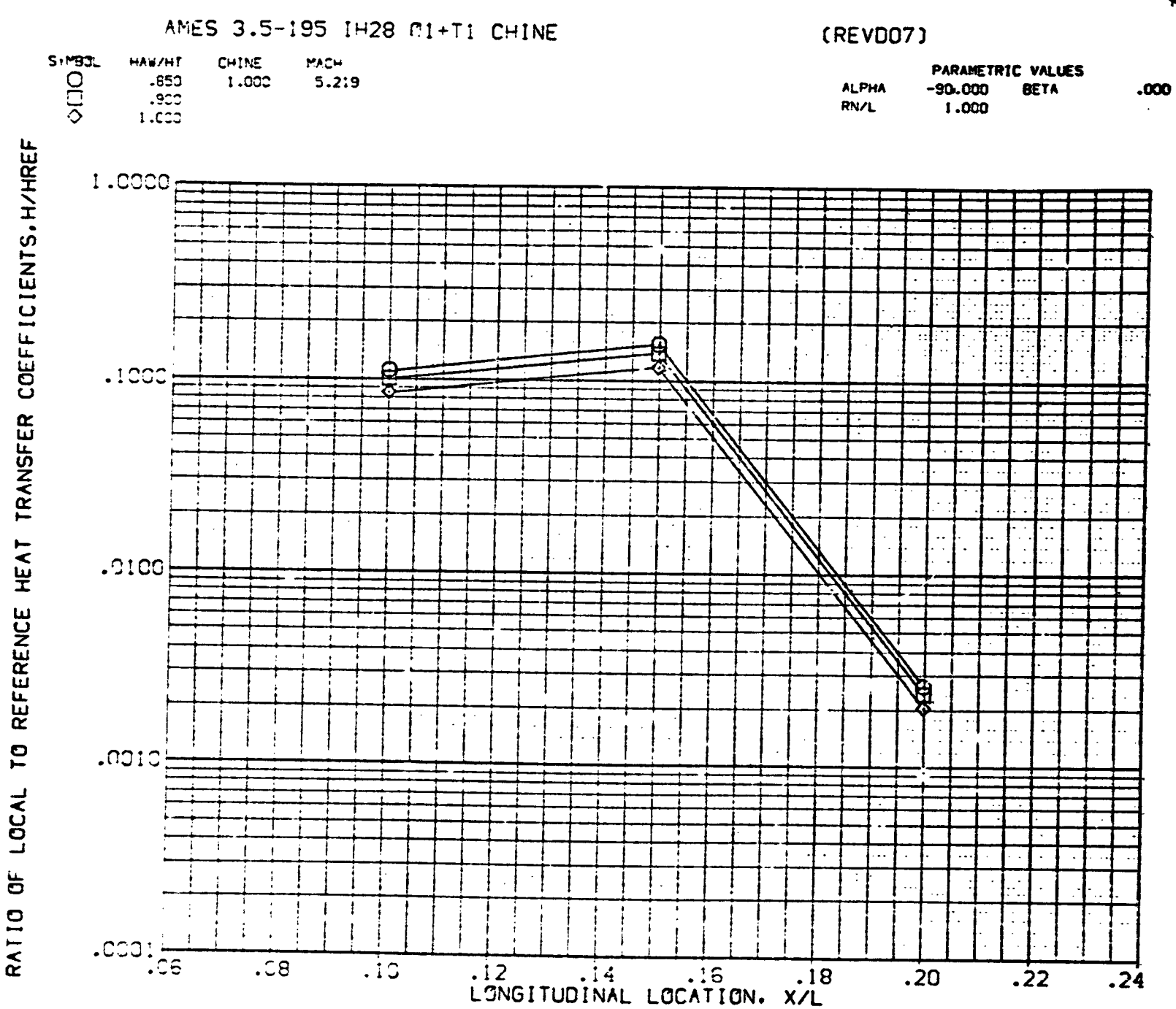

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

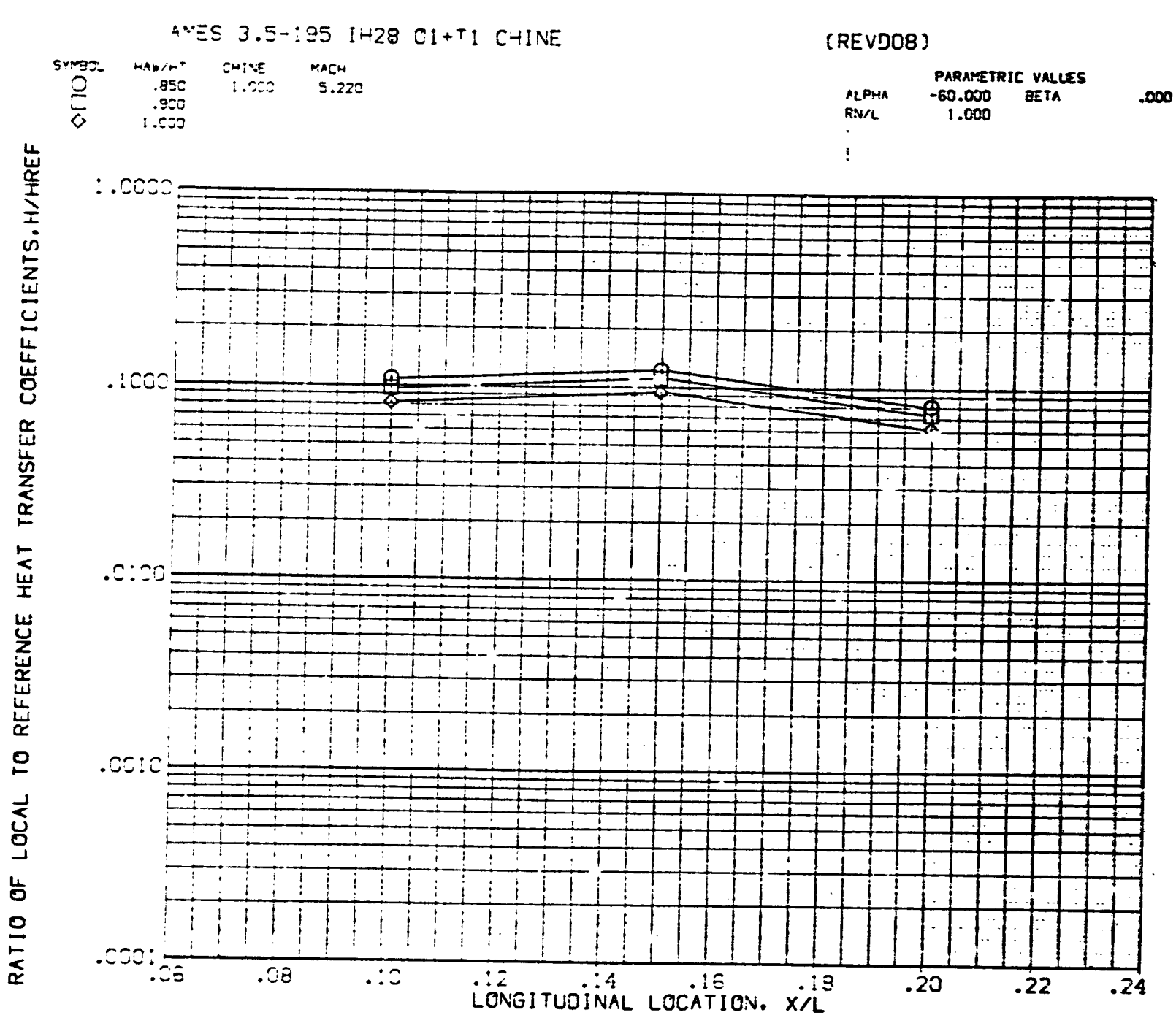

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

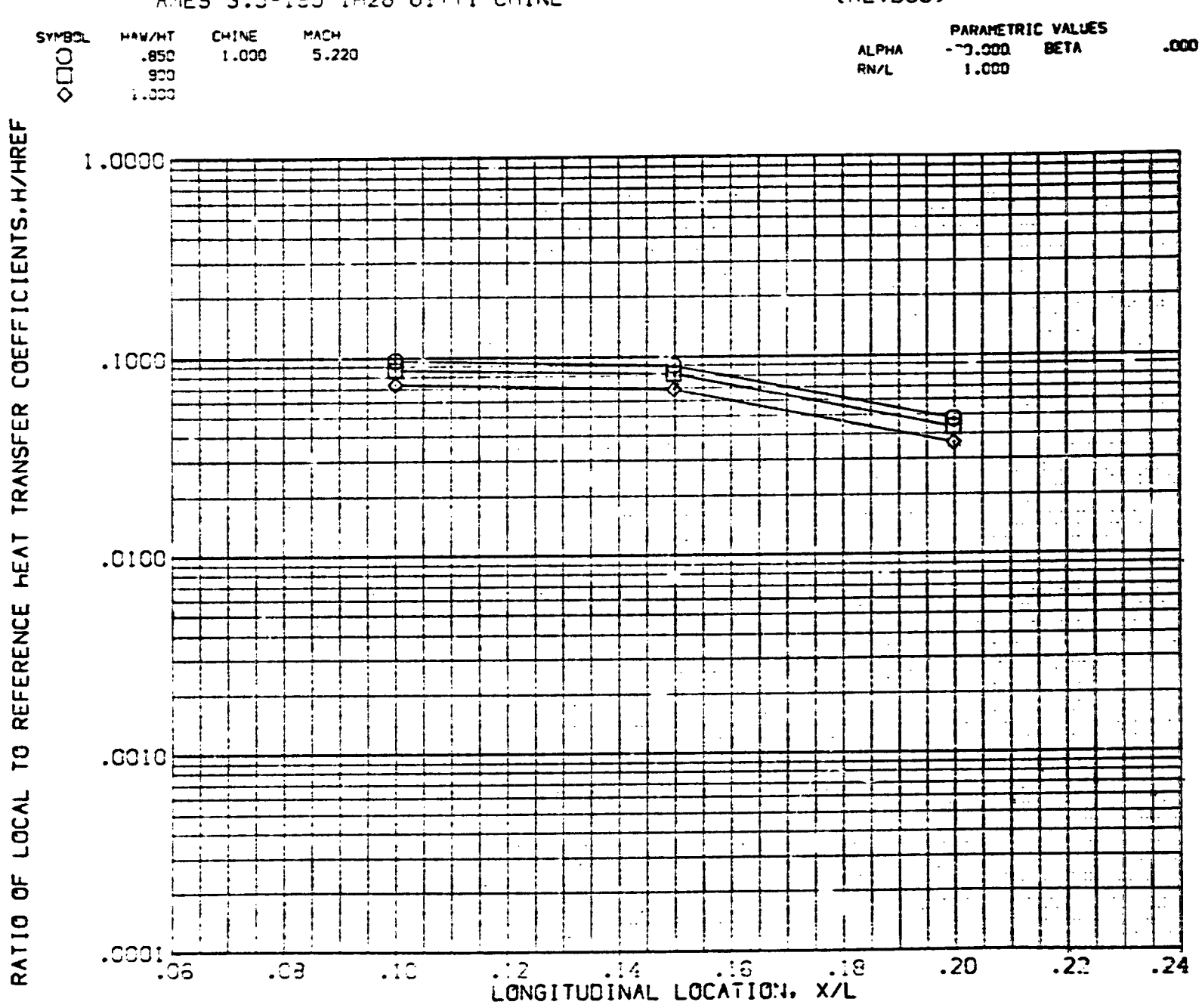

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

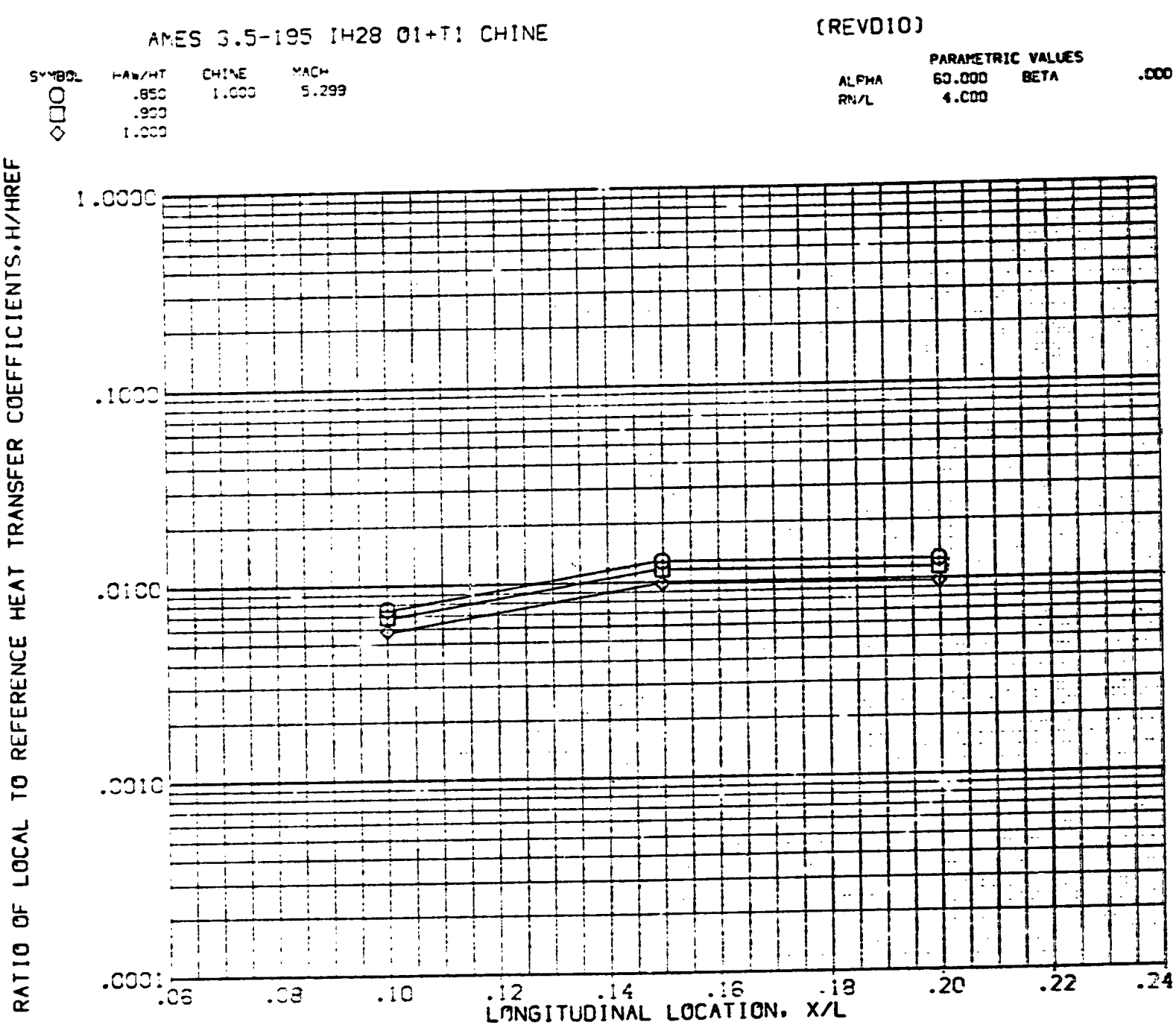

FIG. 17 CHINE. ORBITER IN PRESENCE OF THE TANK

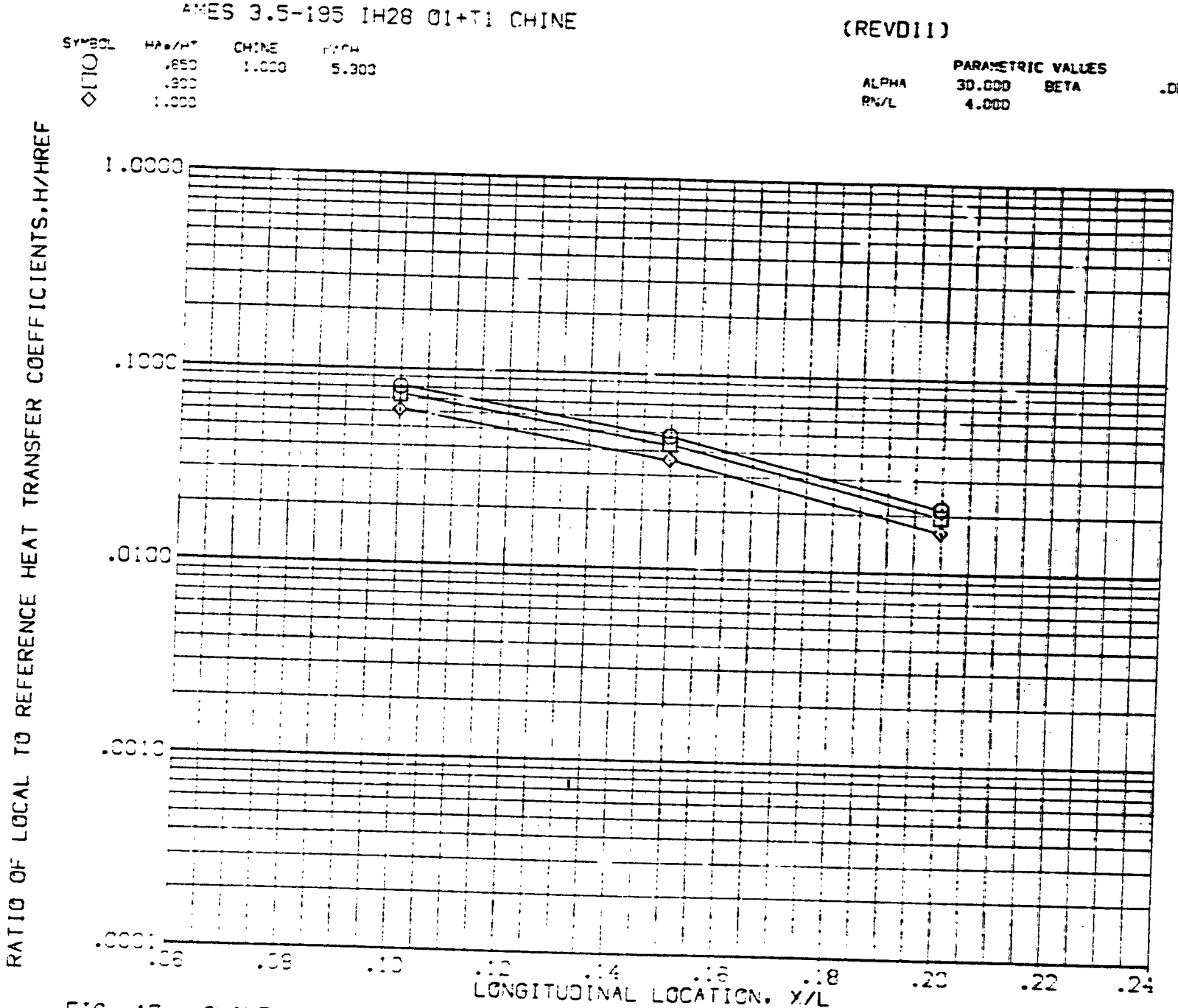

FIG. 17 CHINE, ORBITER IN PRESENCE OF THE TANK

AMES 3.5-195 IH28 01+T1 CHINE

(BEVD01)

SYMBOL	CHINE	HAW/HT	MACH
O	1.000	.900	5.228

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

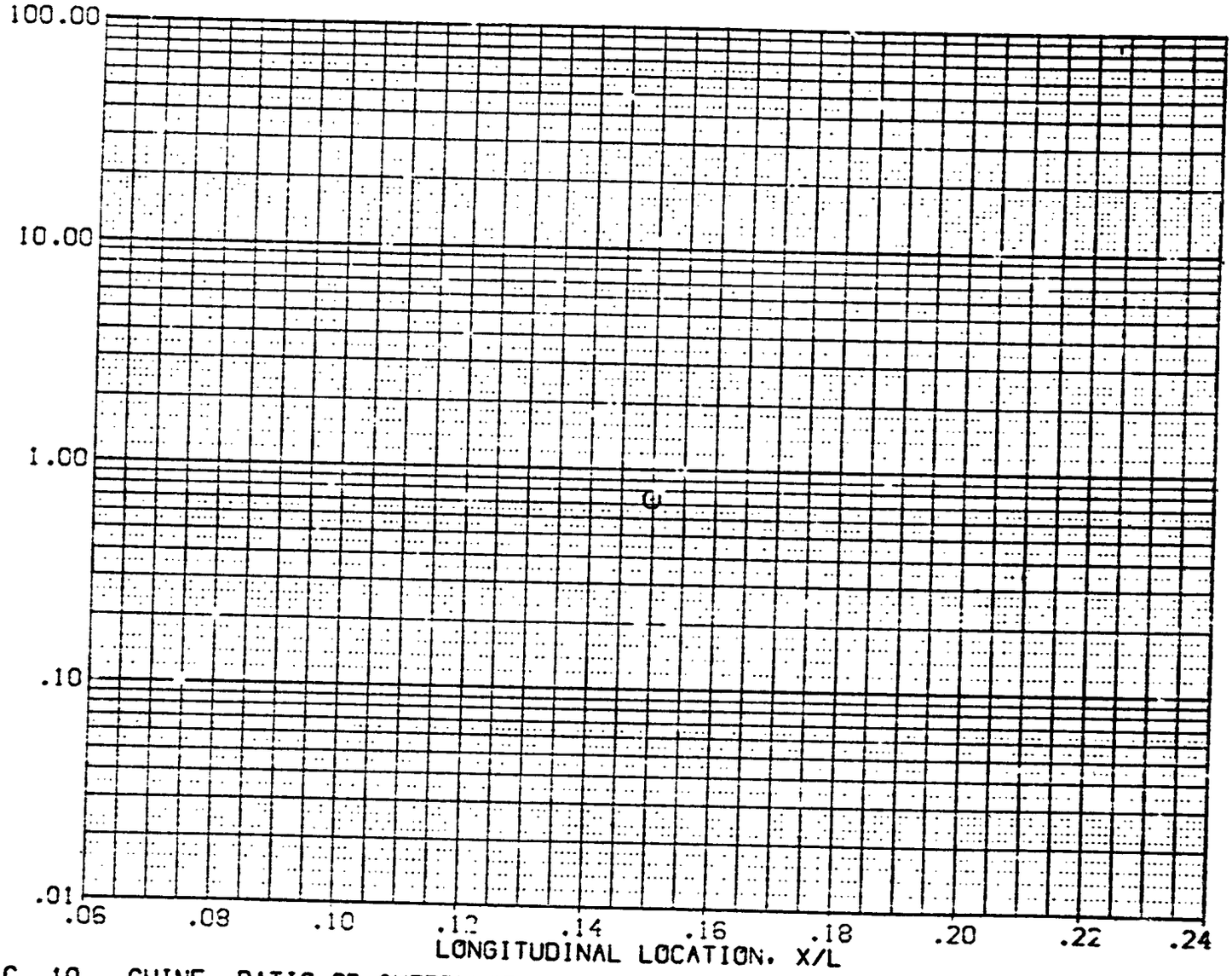

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 CHINE

(BEVD02)

SYMBOL	CHINE	HAW/HT	MACH
O	1.000	.900	5.219

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

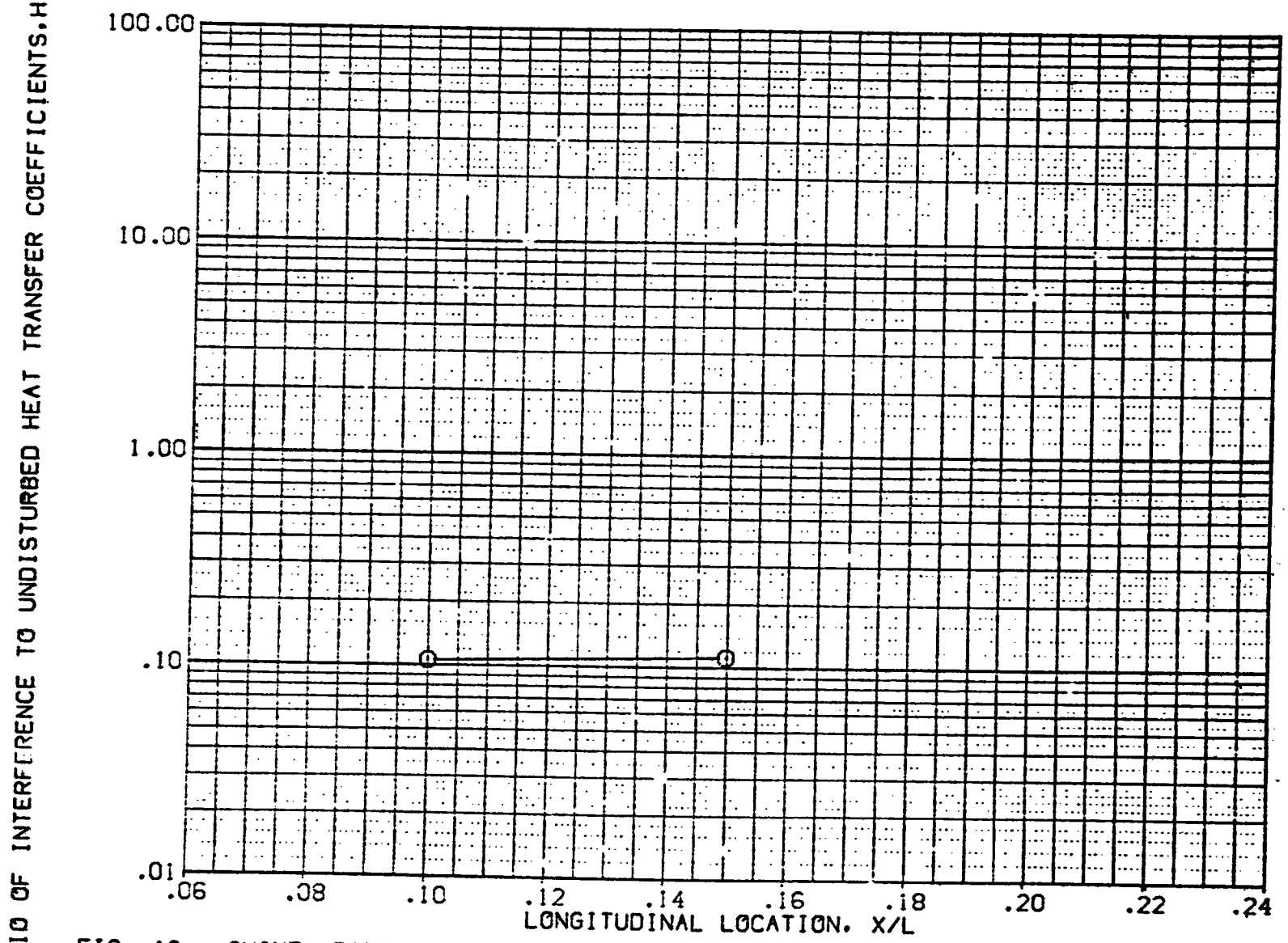

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-135 IH28 01+T1 CHINE (BEVD03)

SYMBOL	CHINE	HAW/HT	MACH
O	1.000	.900	5.220

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

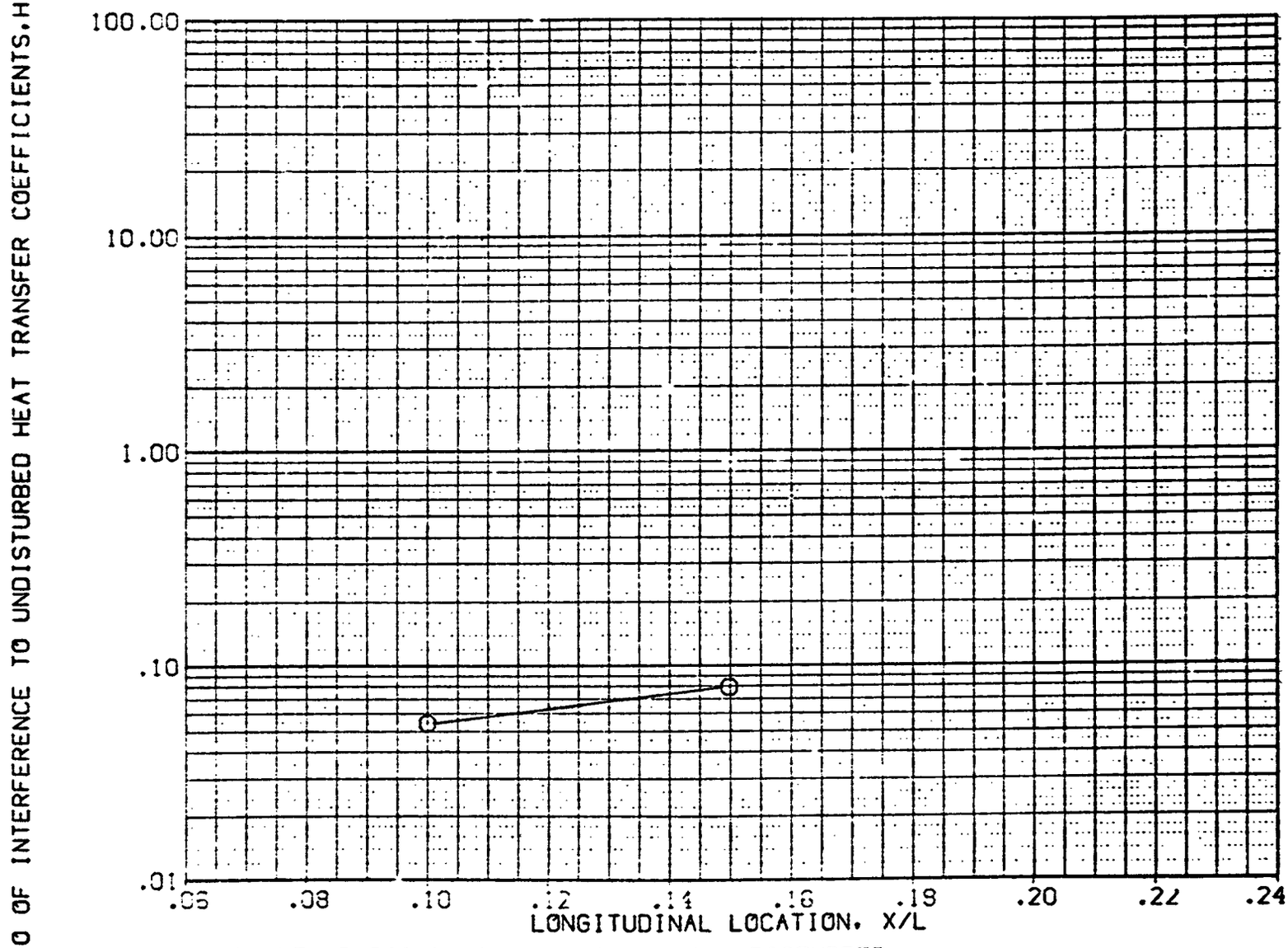

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 C1+T1 CHINE (BEVD04)

SYMBOL	CHINE	HAW/HT	MACH
○	1.000	.900	5.219

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

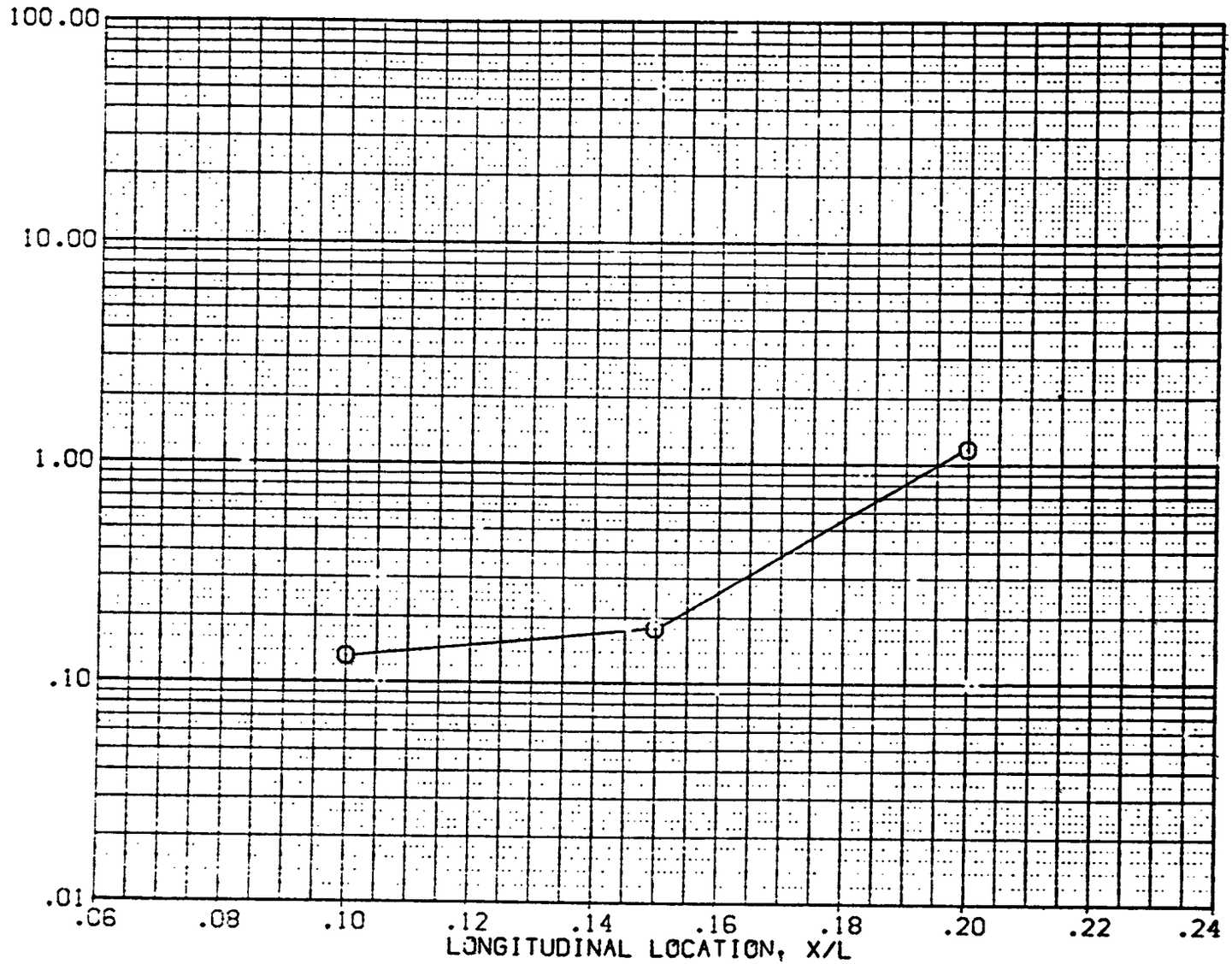

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 CHINE (BEVD05)

SYMBOL	CHINE	HAW/HT	MACH
○	1.000	.900	5.220

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

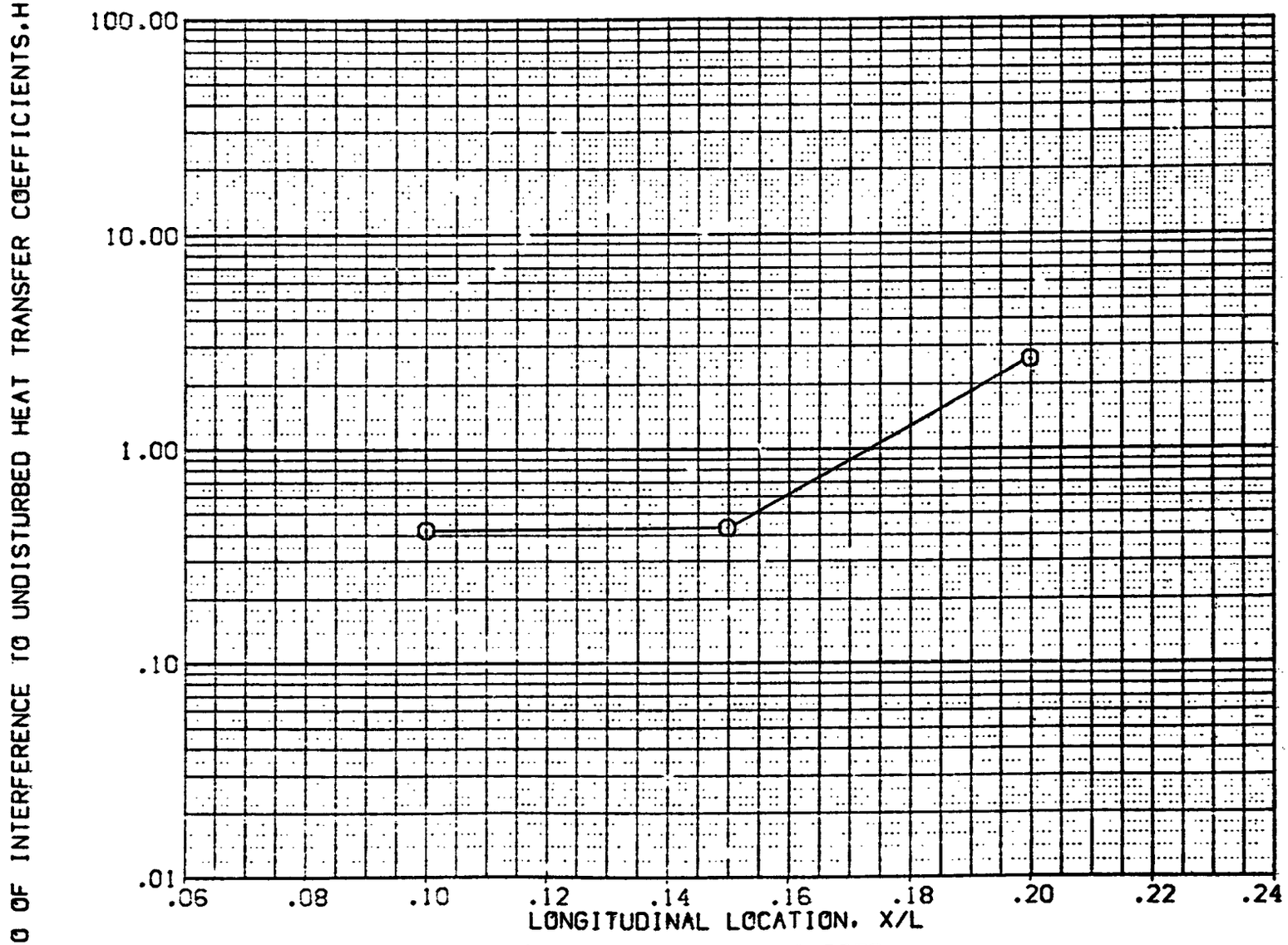

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

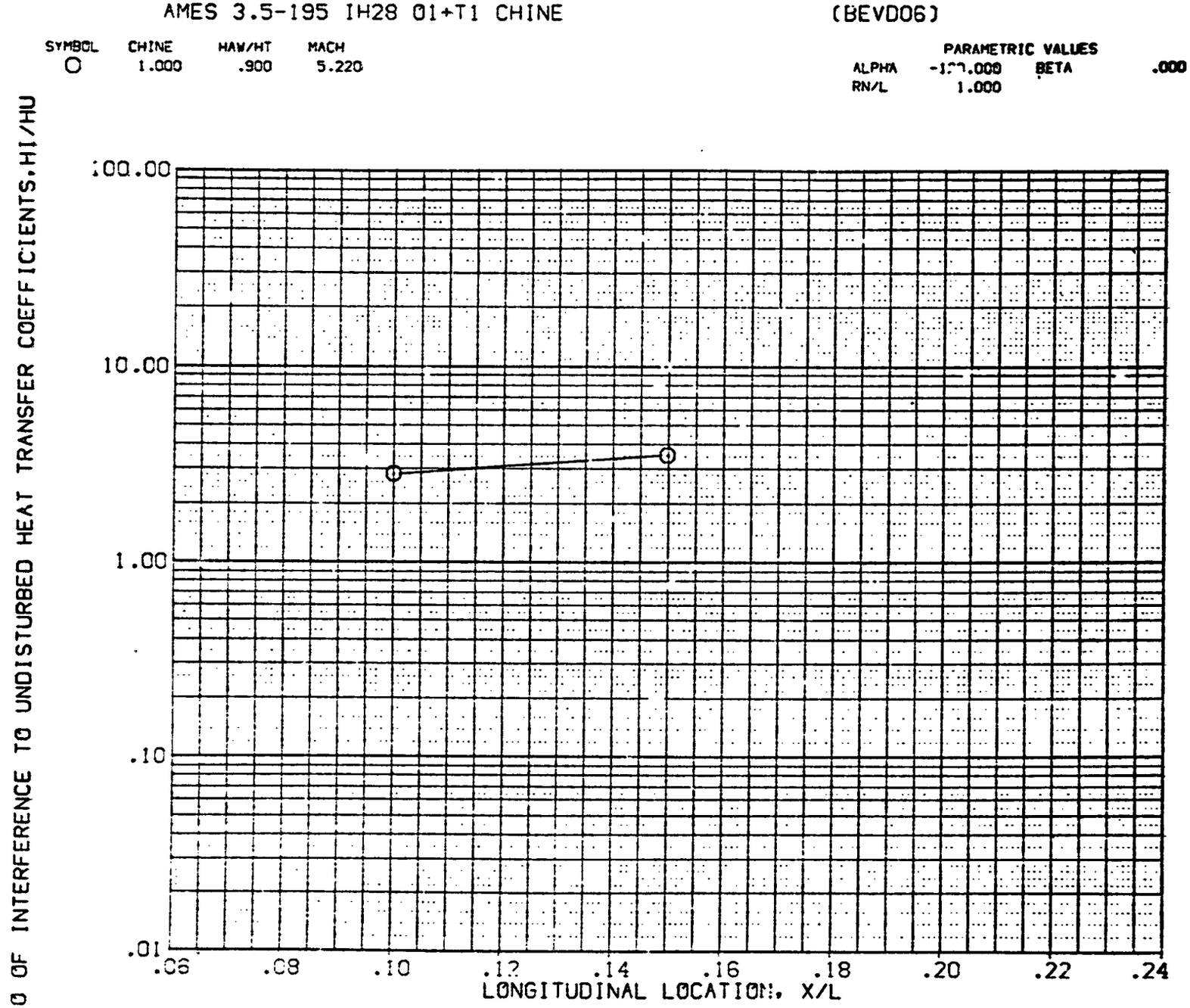

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 0!+T1 CHINE (BEVD07)

SYMBOL	CHINE	HAW/HT	MACH
O	1.000	.900	5.219

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

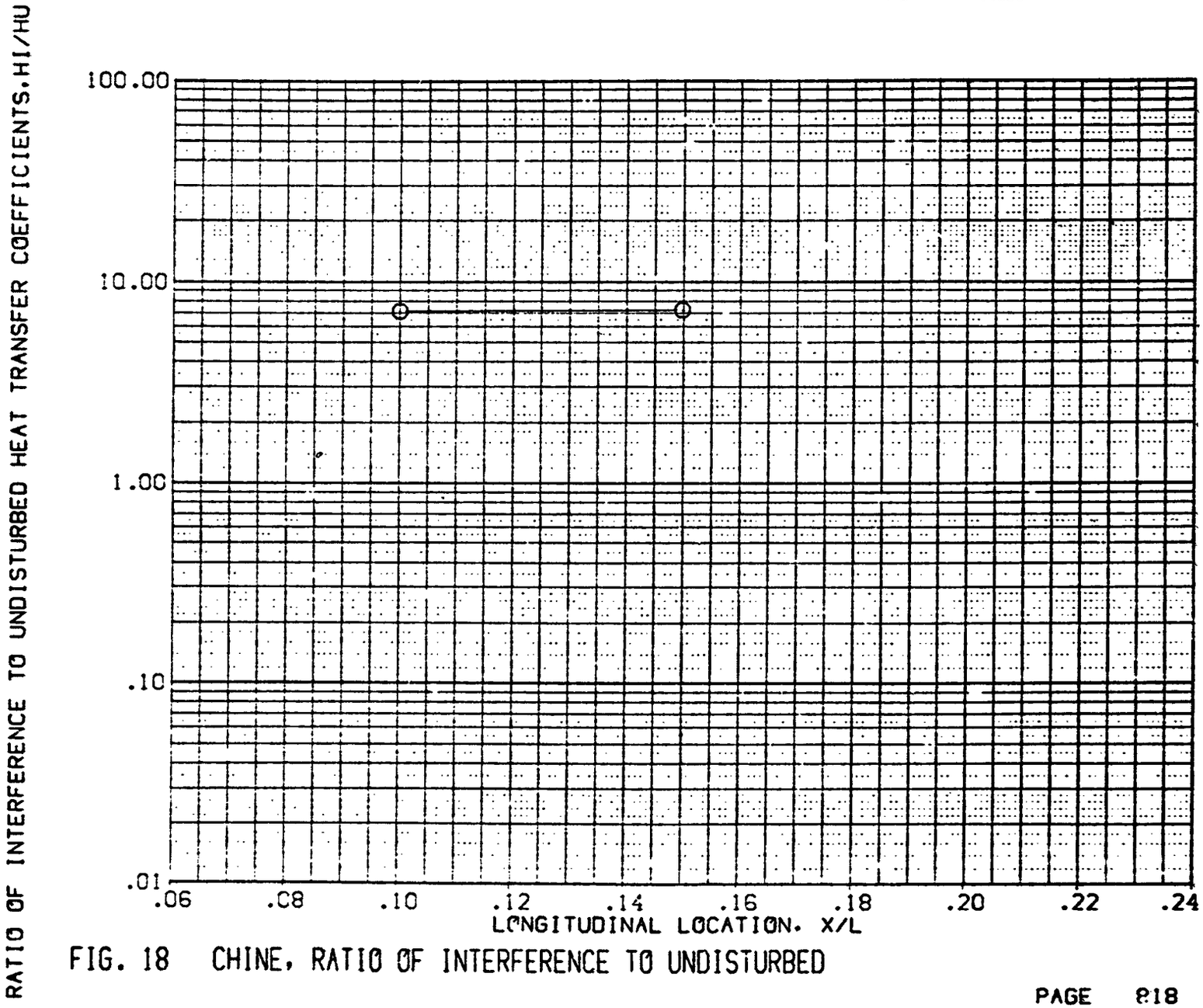

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 CHINE (BEVD08)

SYMBOL	CHINE	HAW/HT	MACH
○	1.000	.900	5.220

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

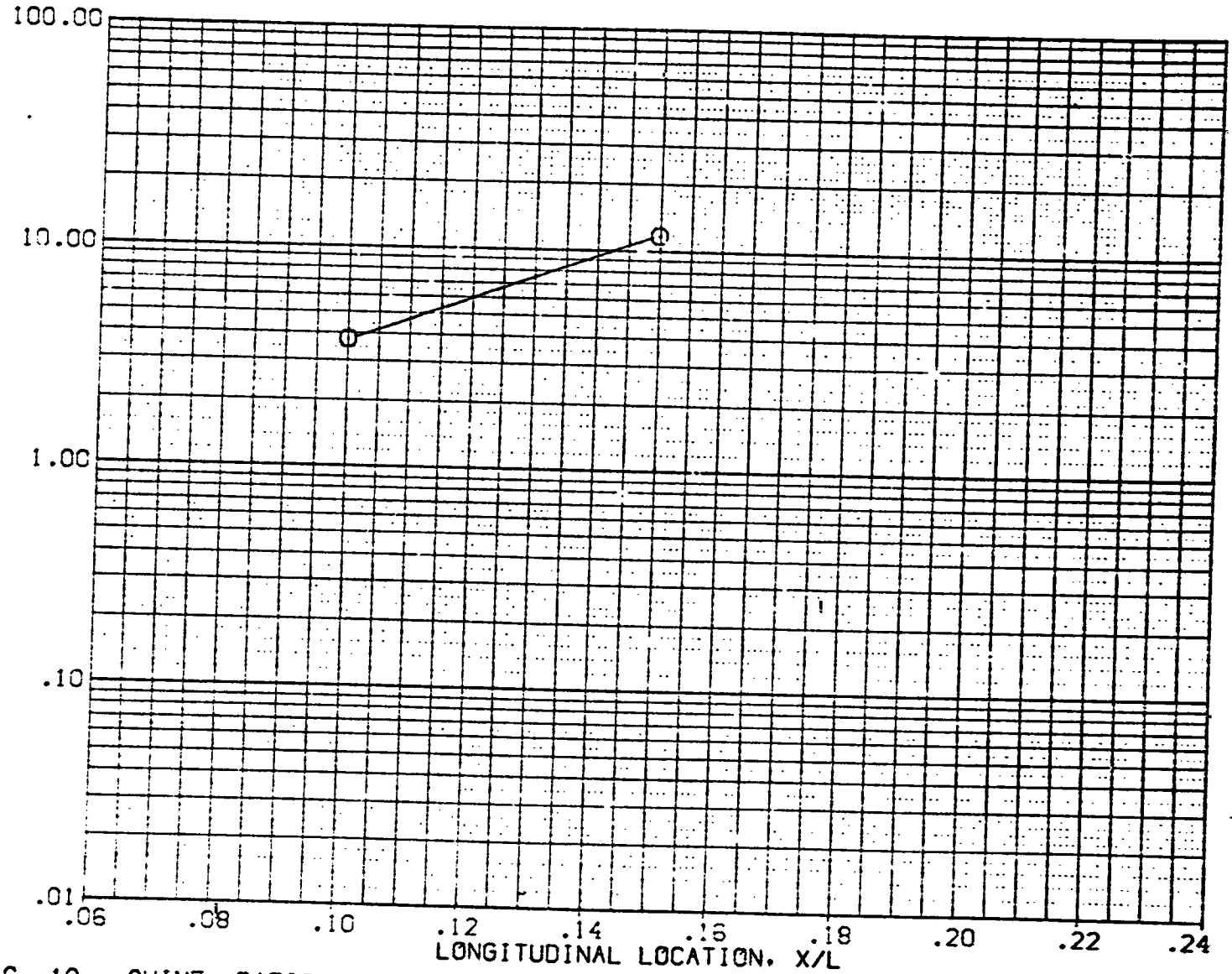

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 C1+T1 CHINE (BEVD09)

SYMBOL	CHINE	HAW/HT	MACH
O	1.000	.900	5.220

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

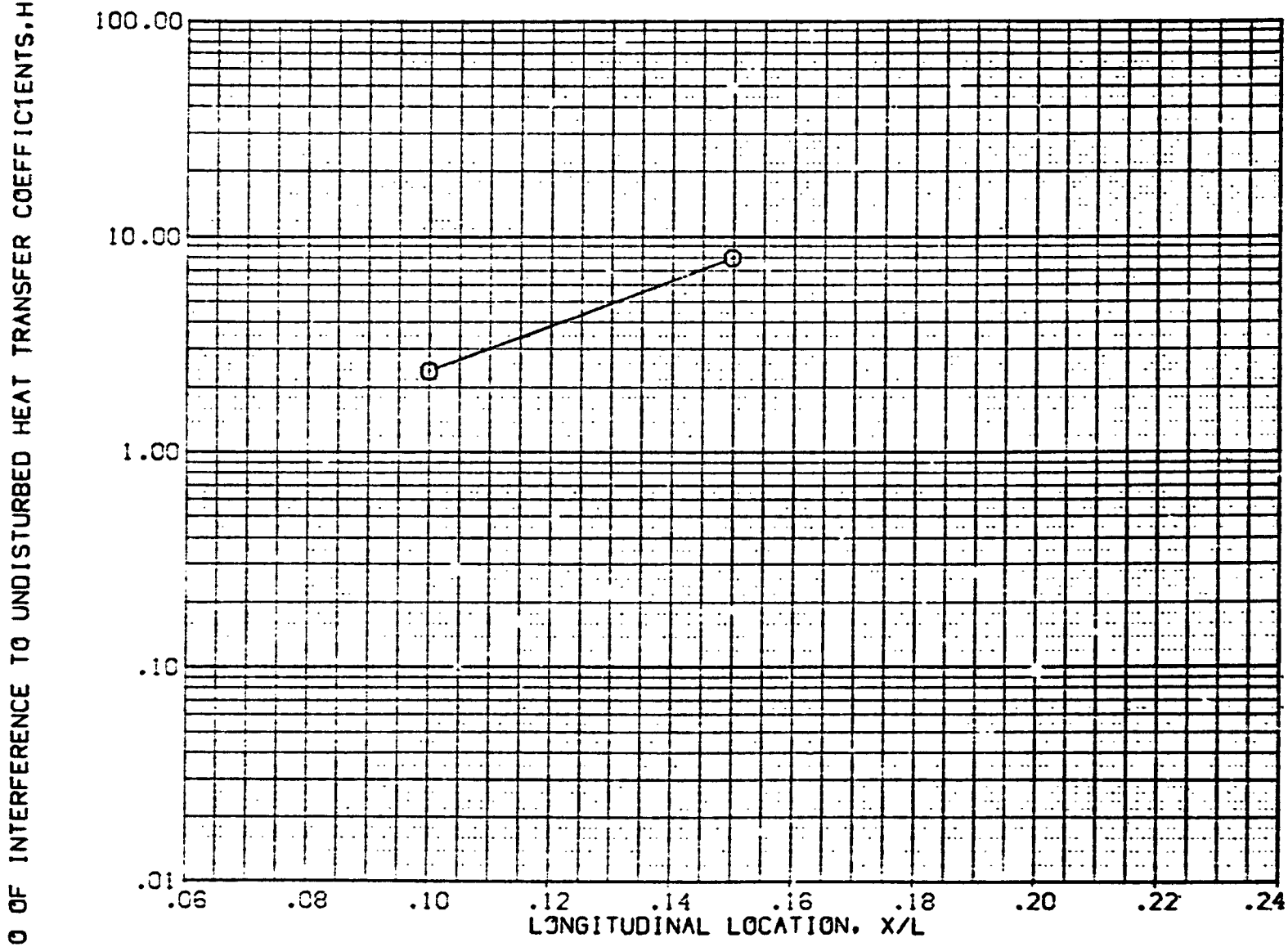

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

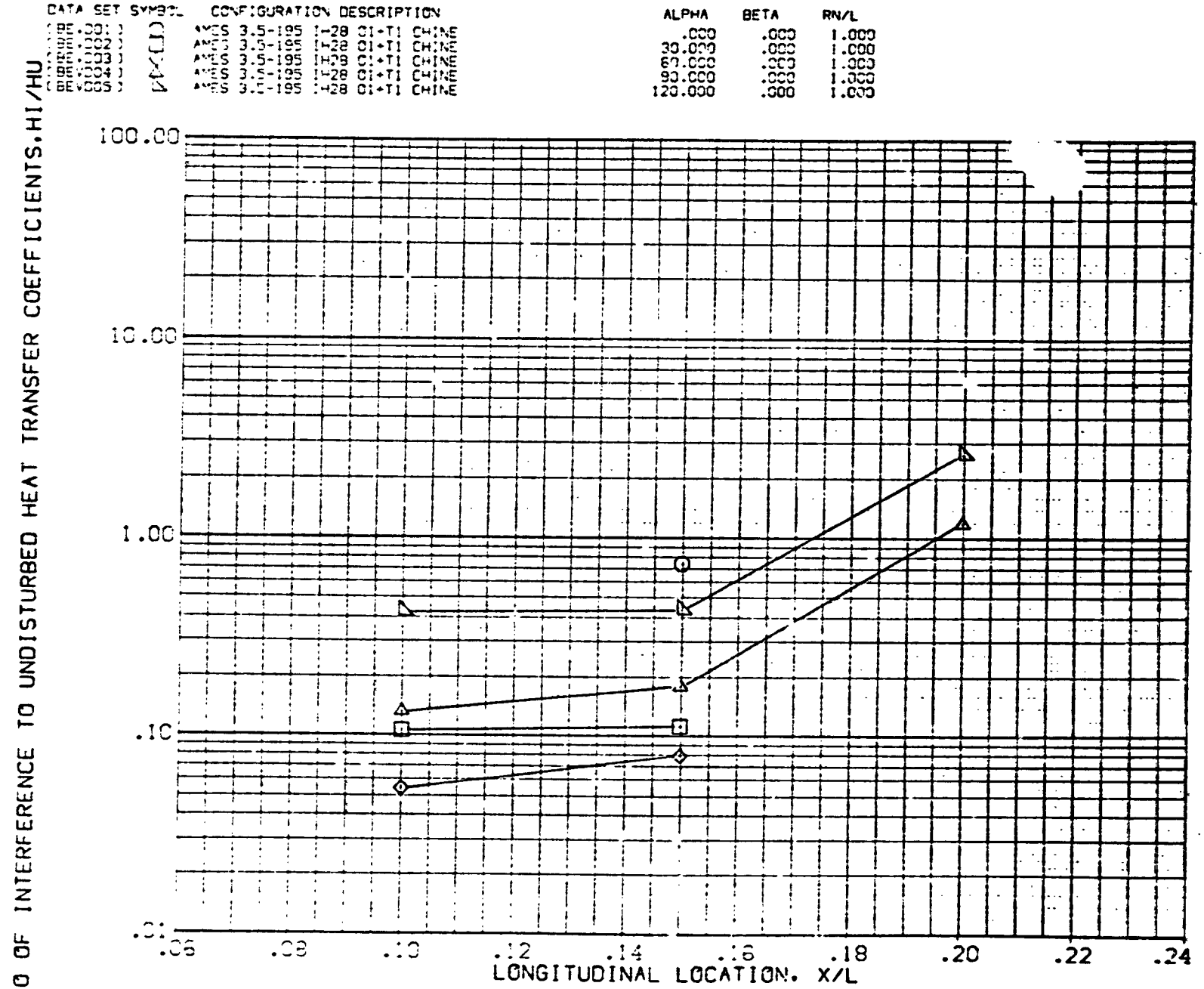

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 CHINE = 1.000

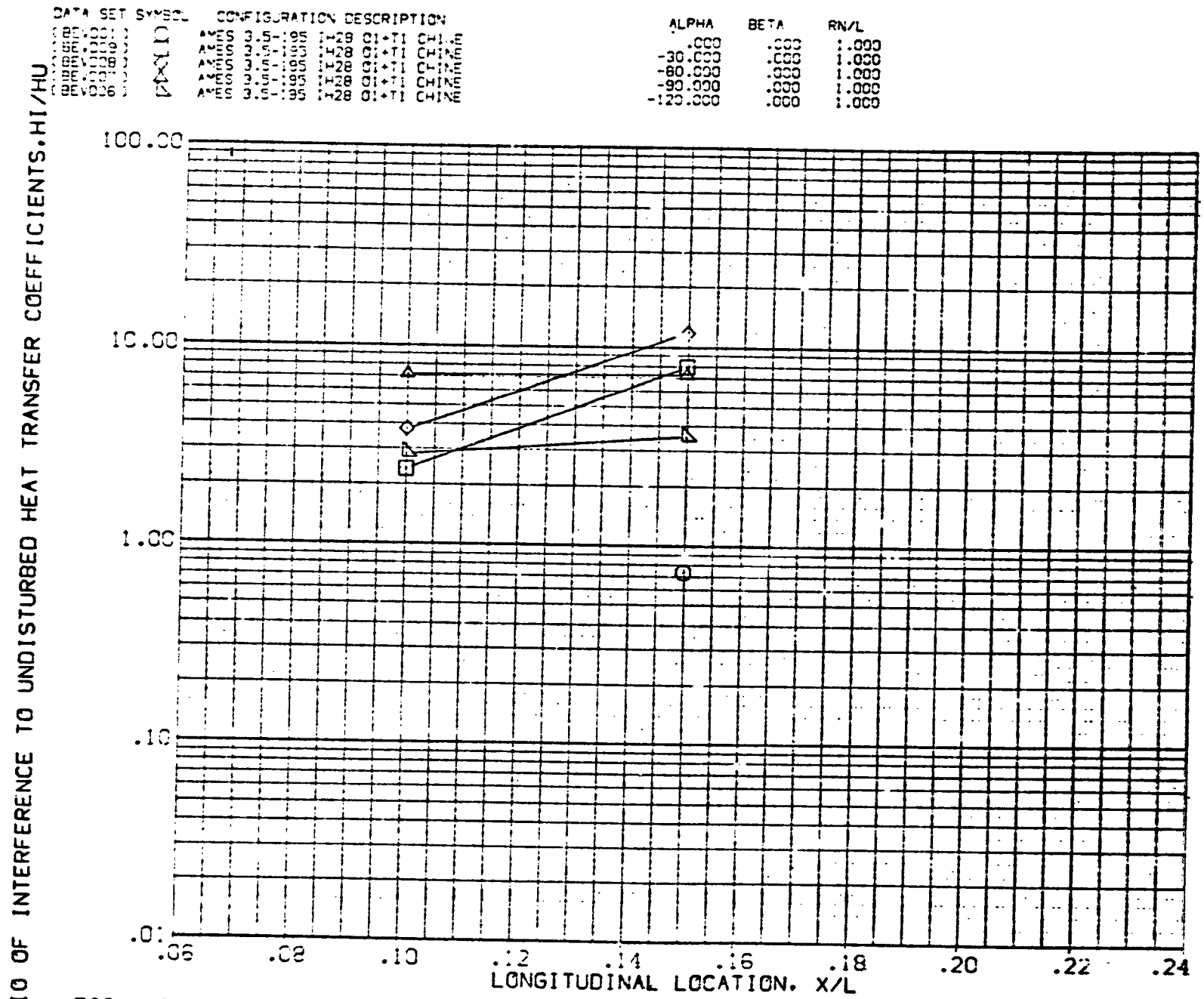

FIG. 18 CHINE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 RN/FT= .800 CHINE = 1.000

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF19)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA .000 BETA .000

RN/L 1.000

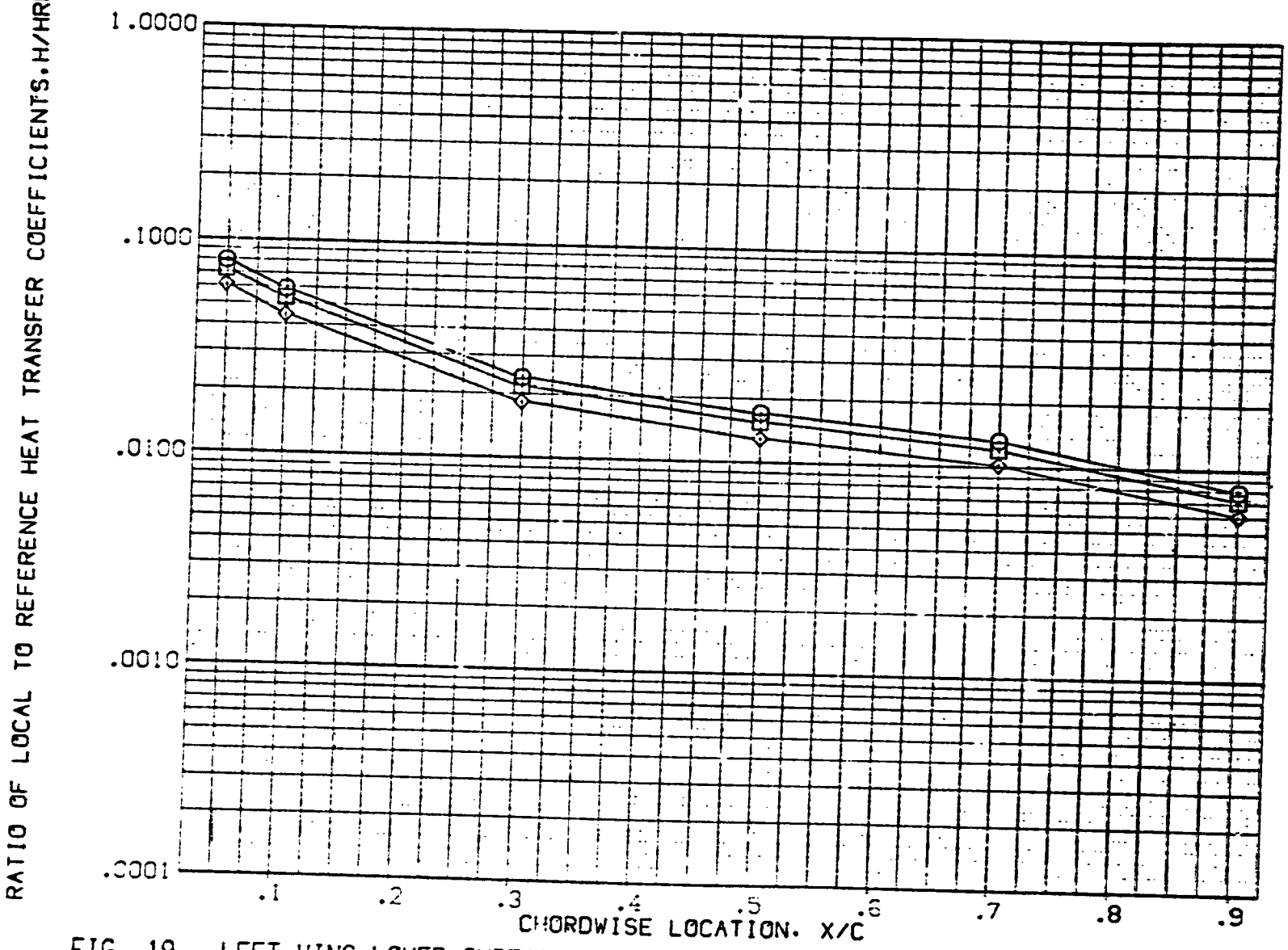

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF19)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

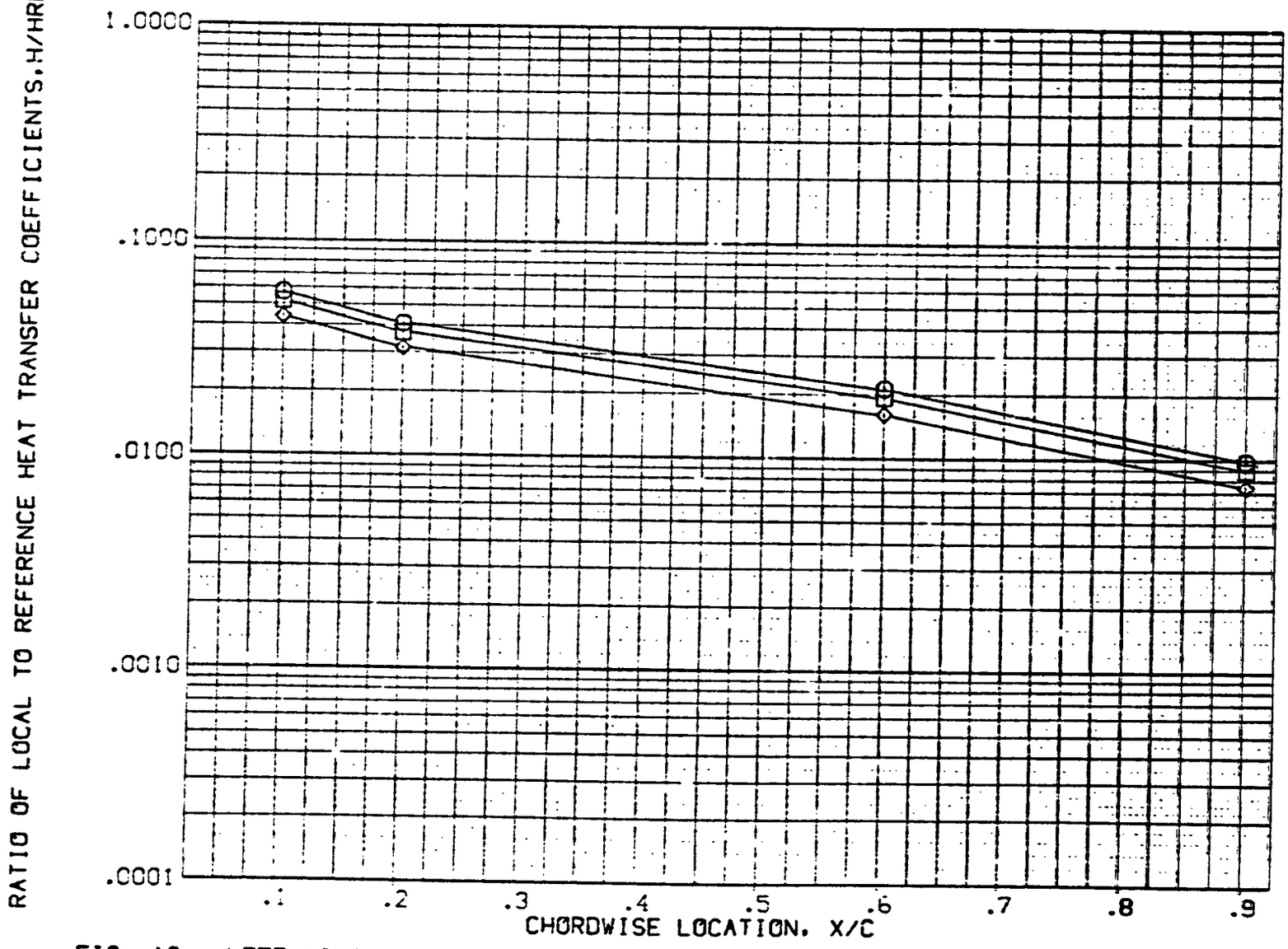

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF19)

SYMBOL	HAW/HT	2Y/B	MACH
◇	.850	.800	5.220
□	.900		
○	1.000		

PARAMETRIC VALUES

ALPHA .000 BETA .000

PV/L 1.000

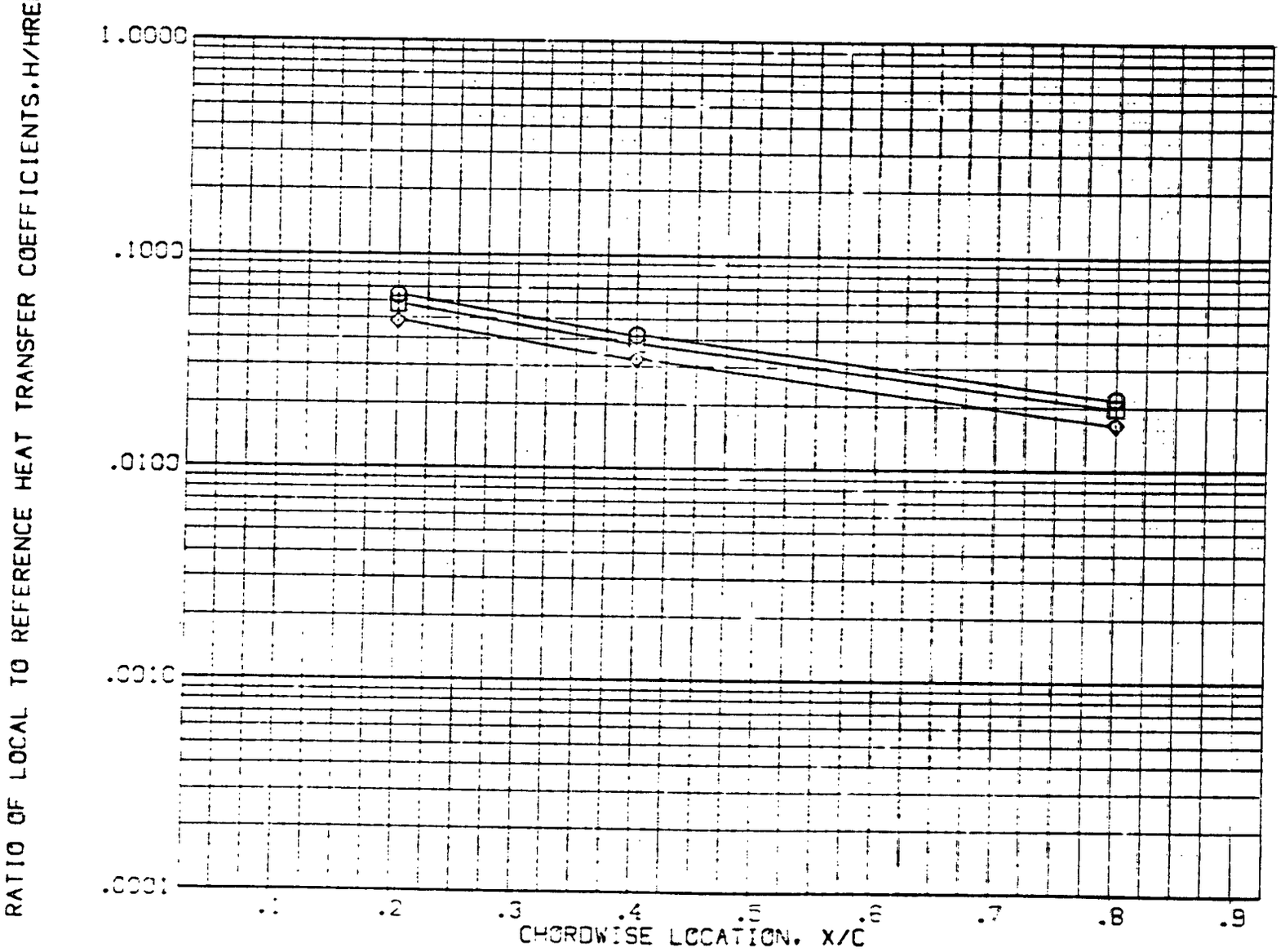

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

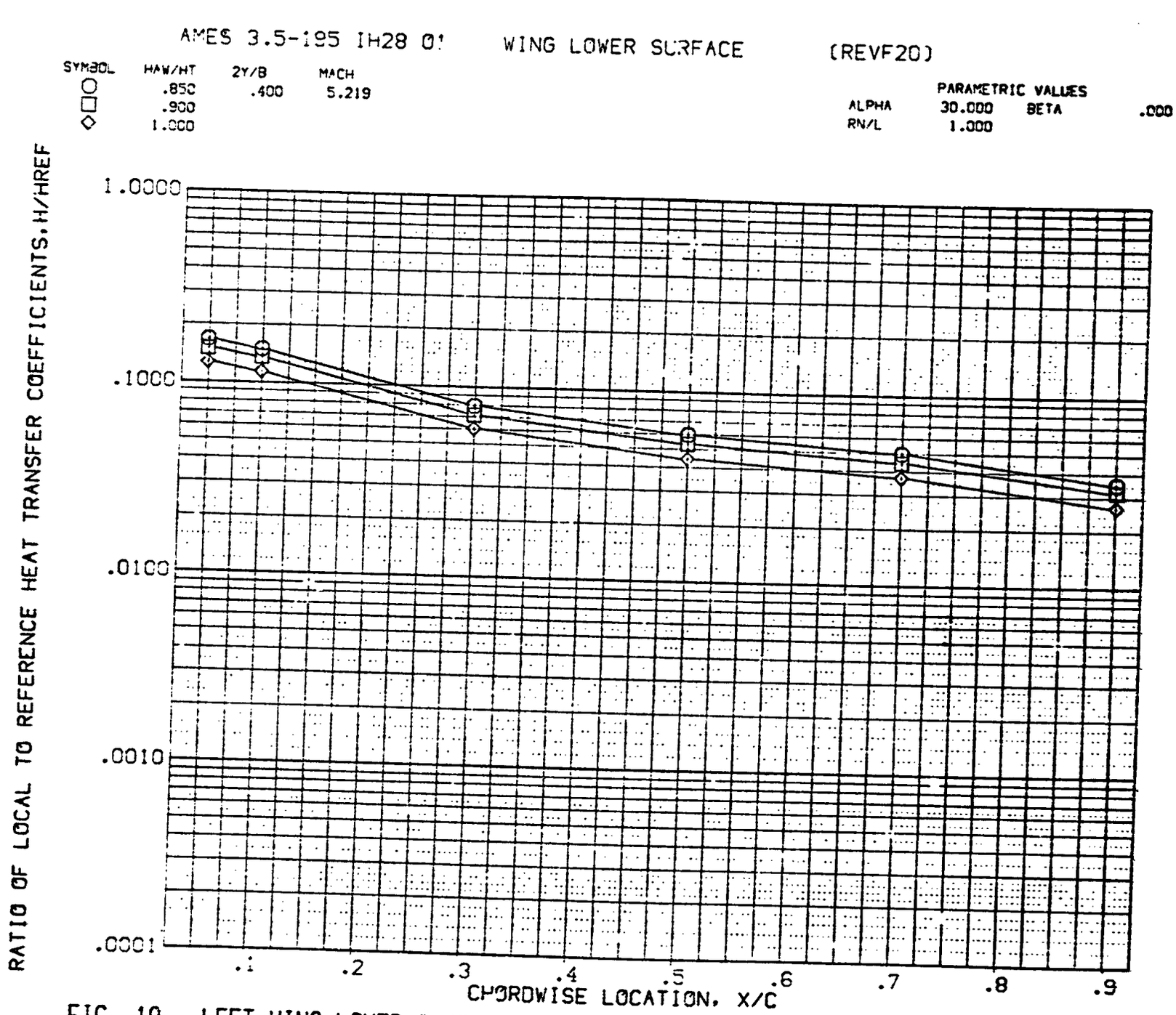

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

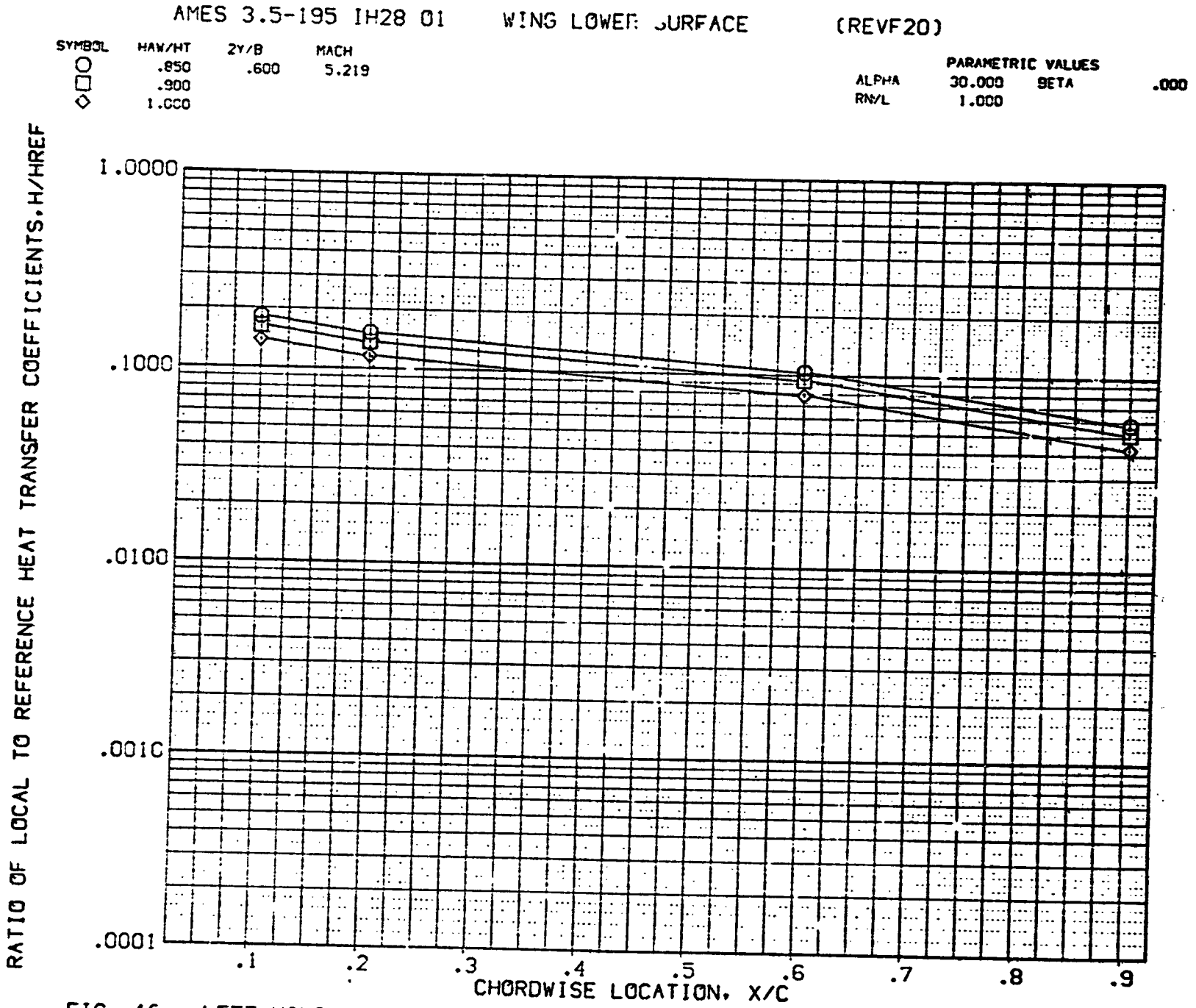

FIG. 19 LEFT WING LOWER SURFACE- ORBITER ALONE

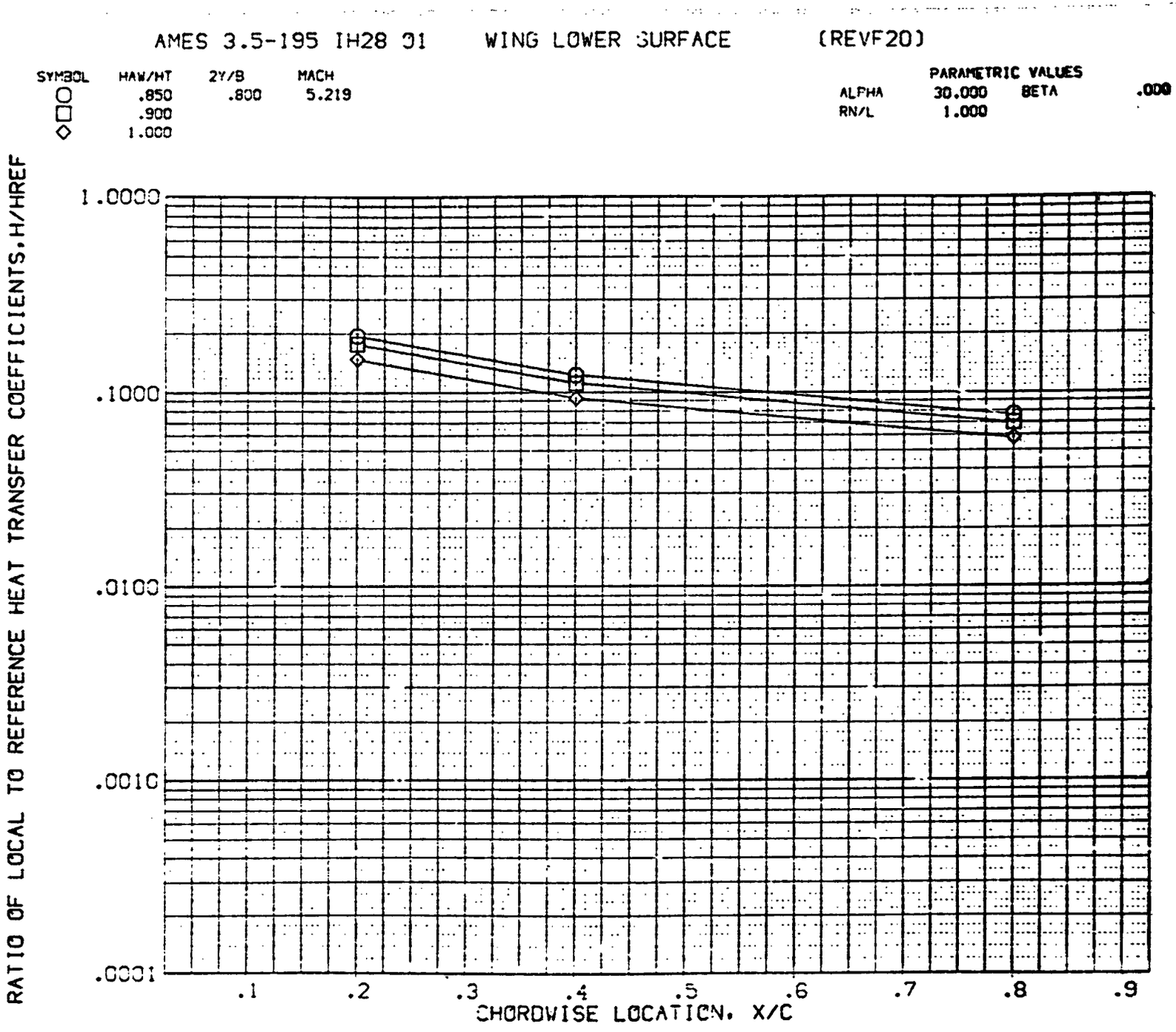

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

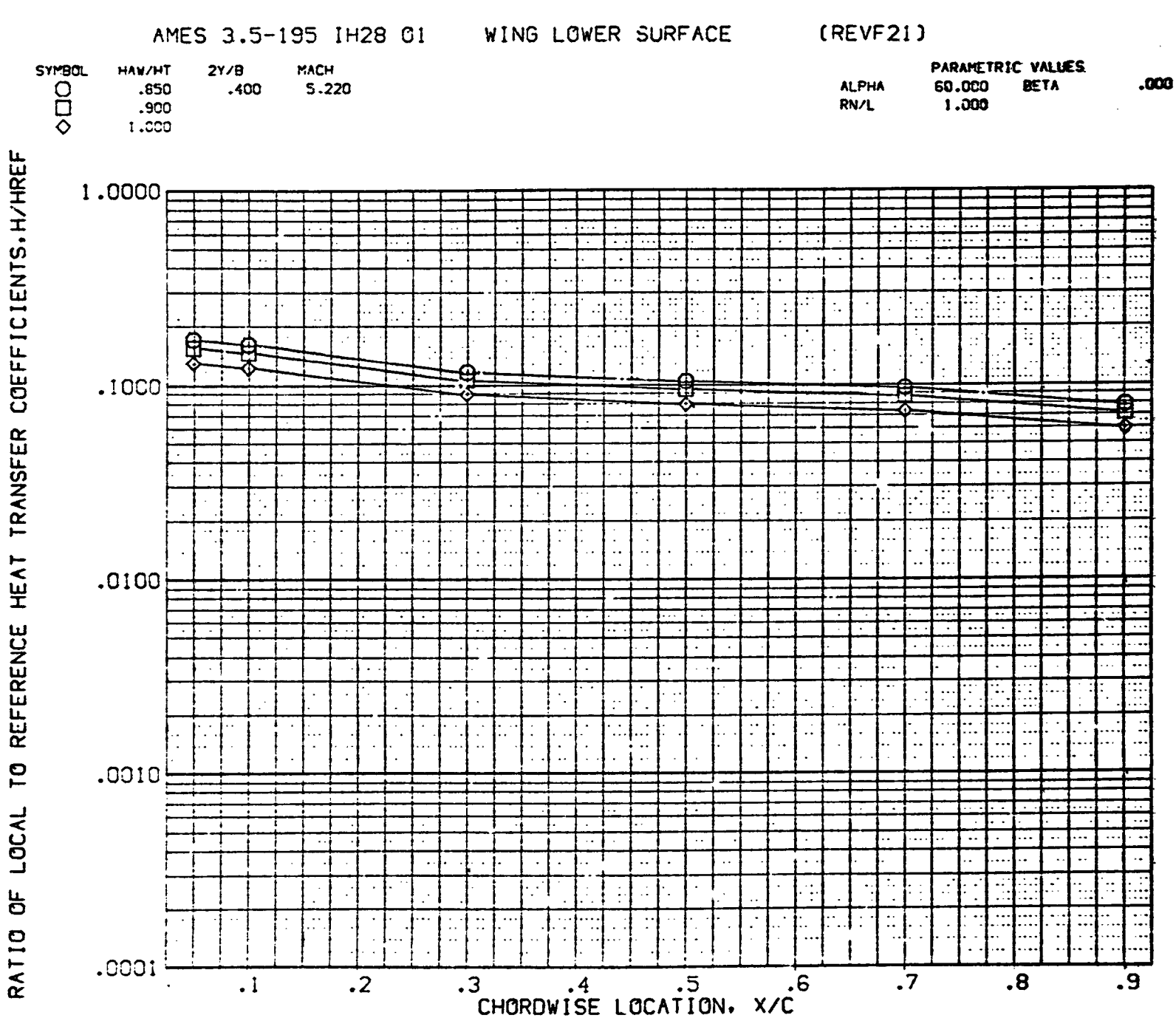

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF21)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

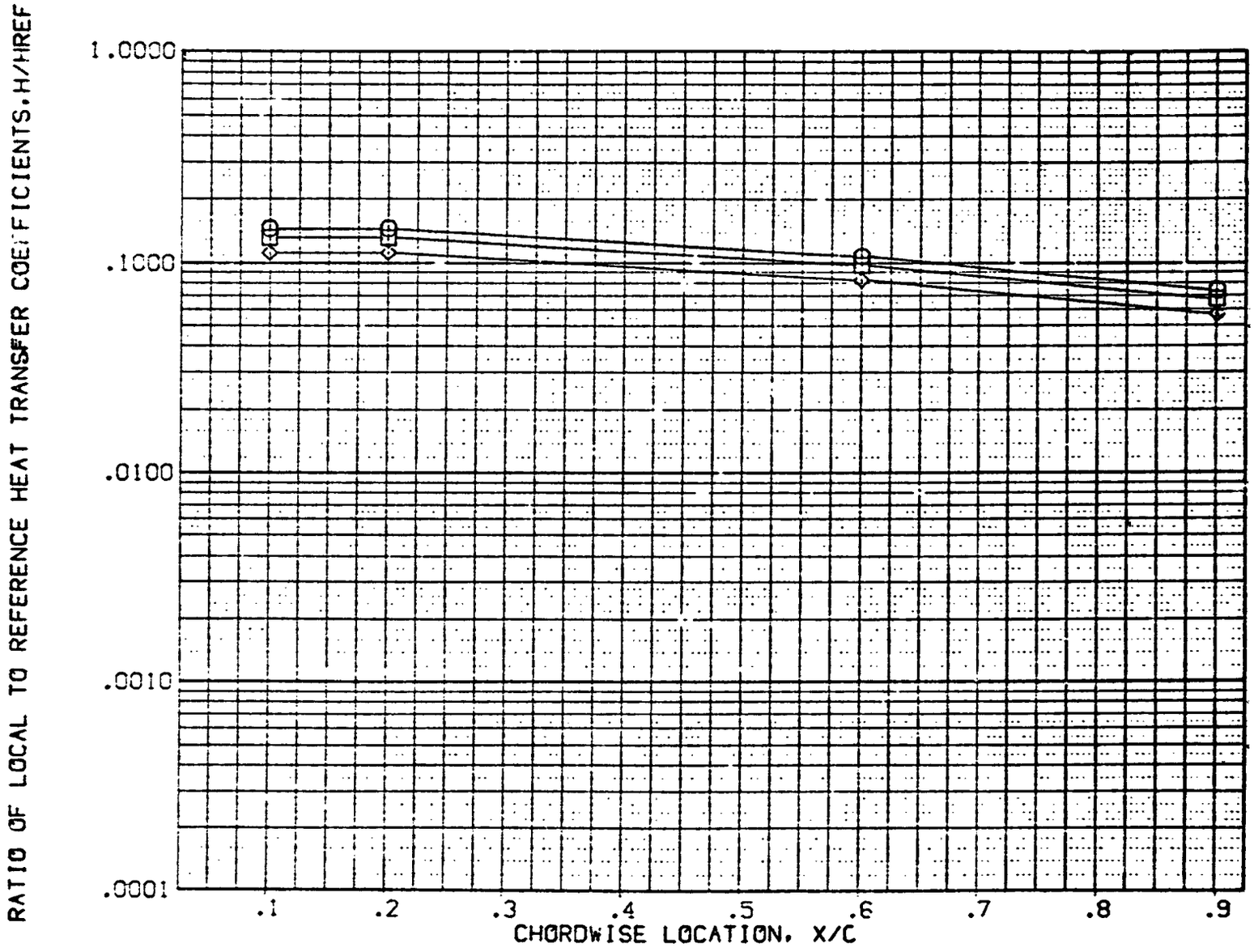

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF21)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.900	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

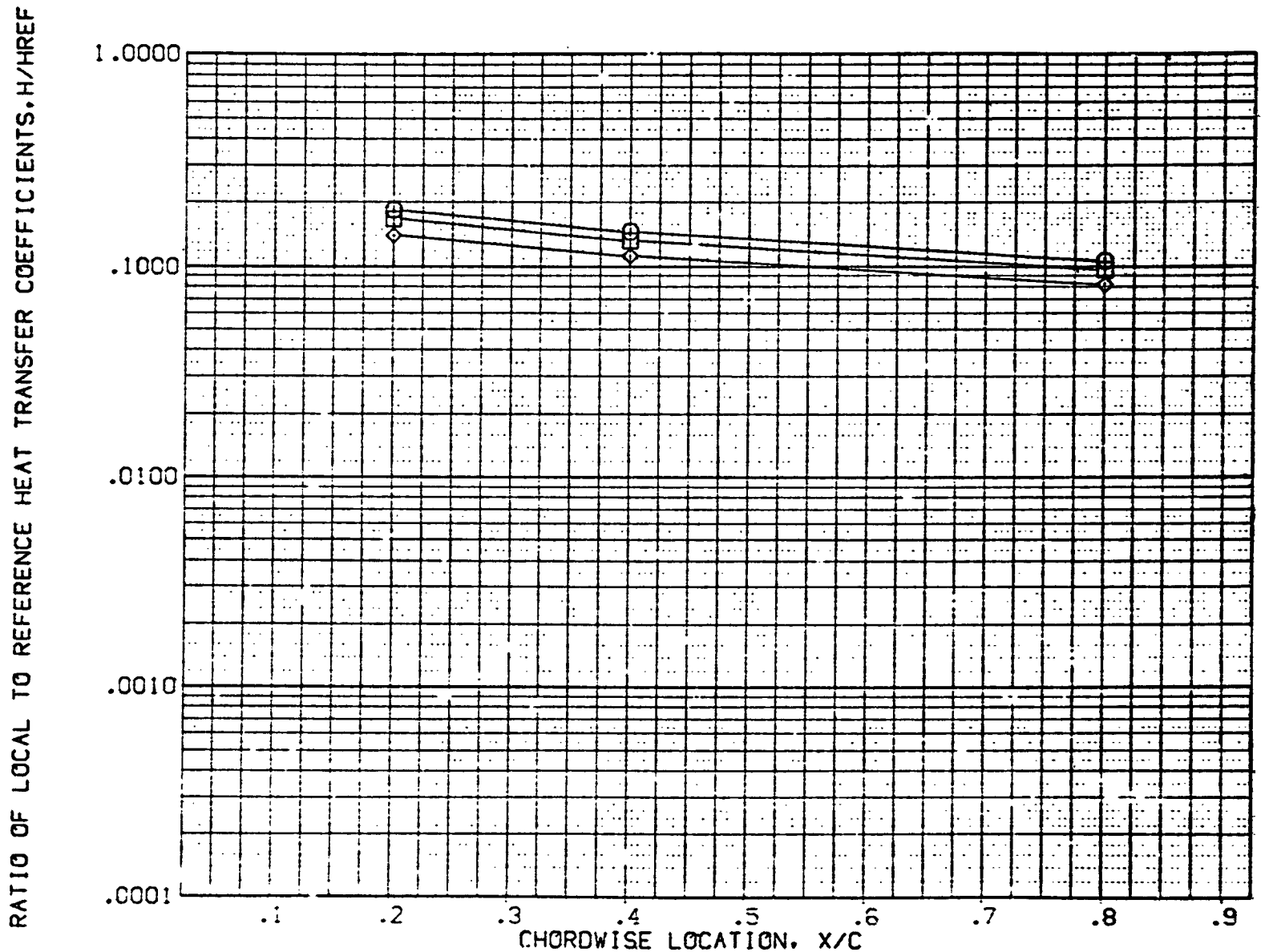

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF22)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

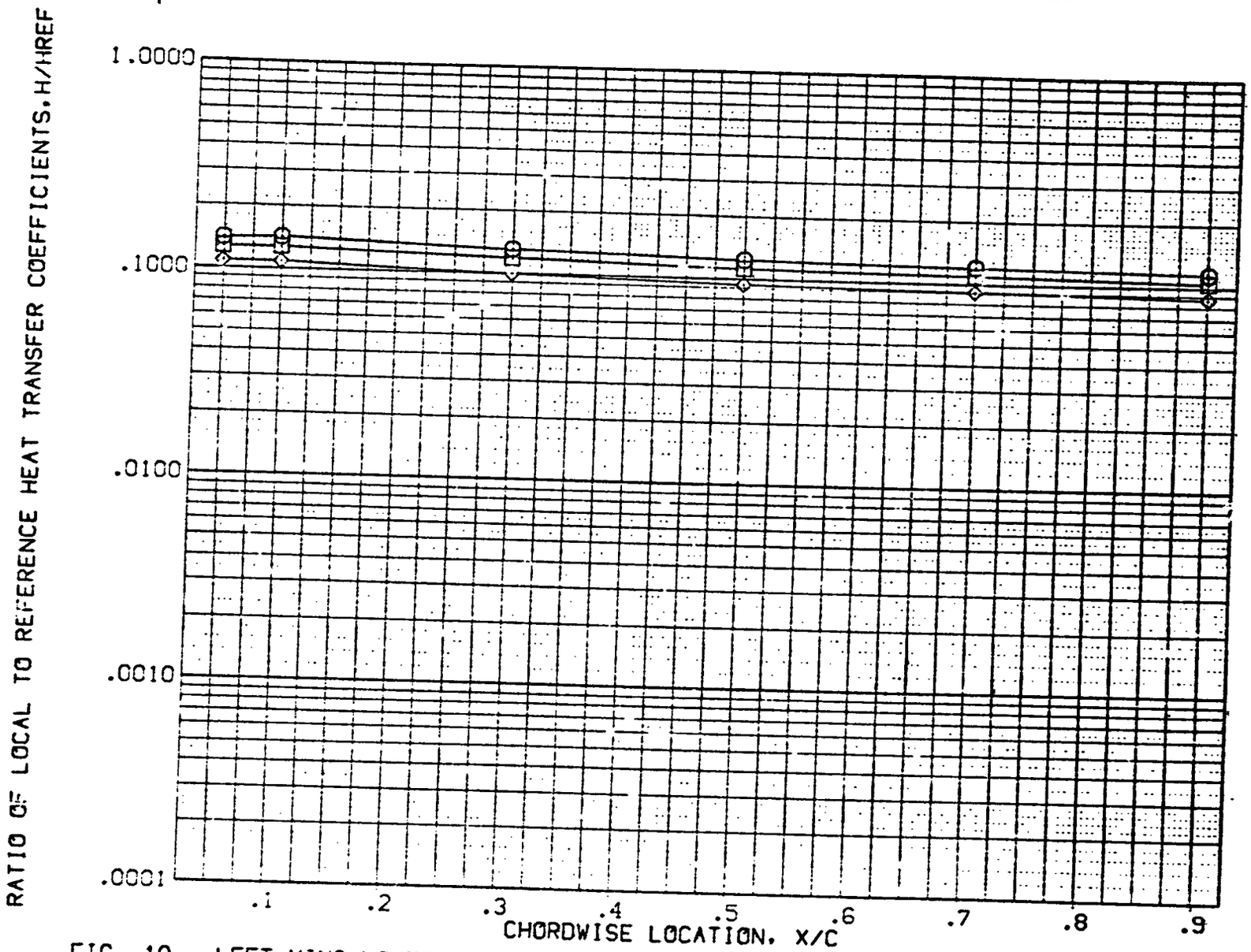

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF22)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA 90.000 BETA .000

RN/L 1.000

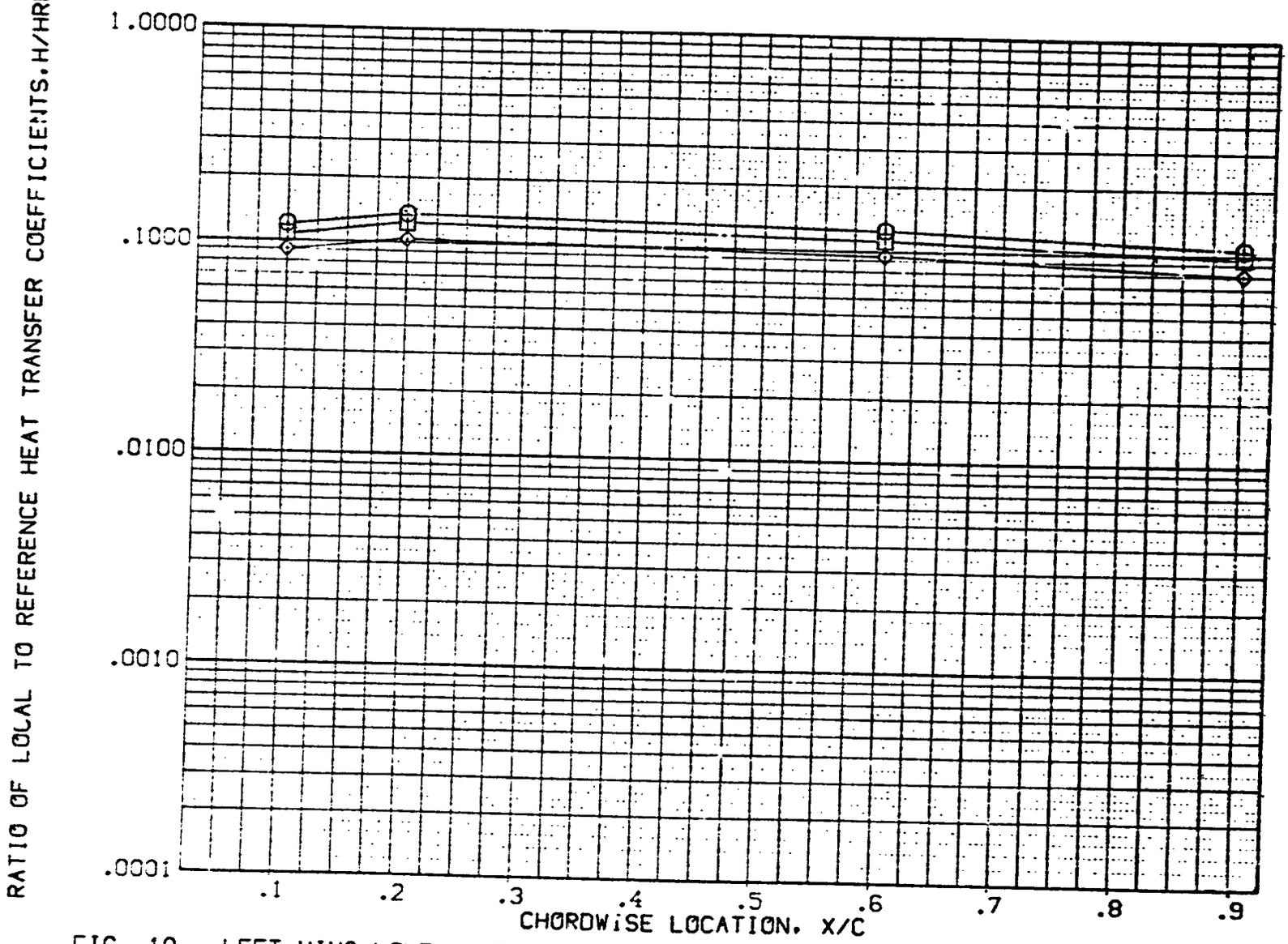

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

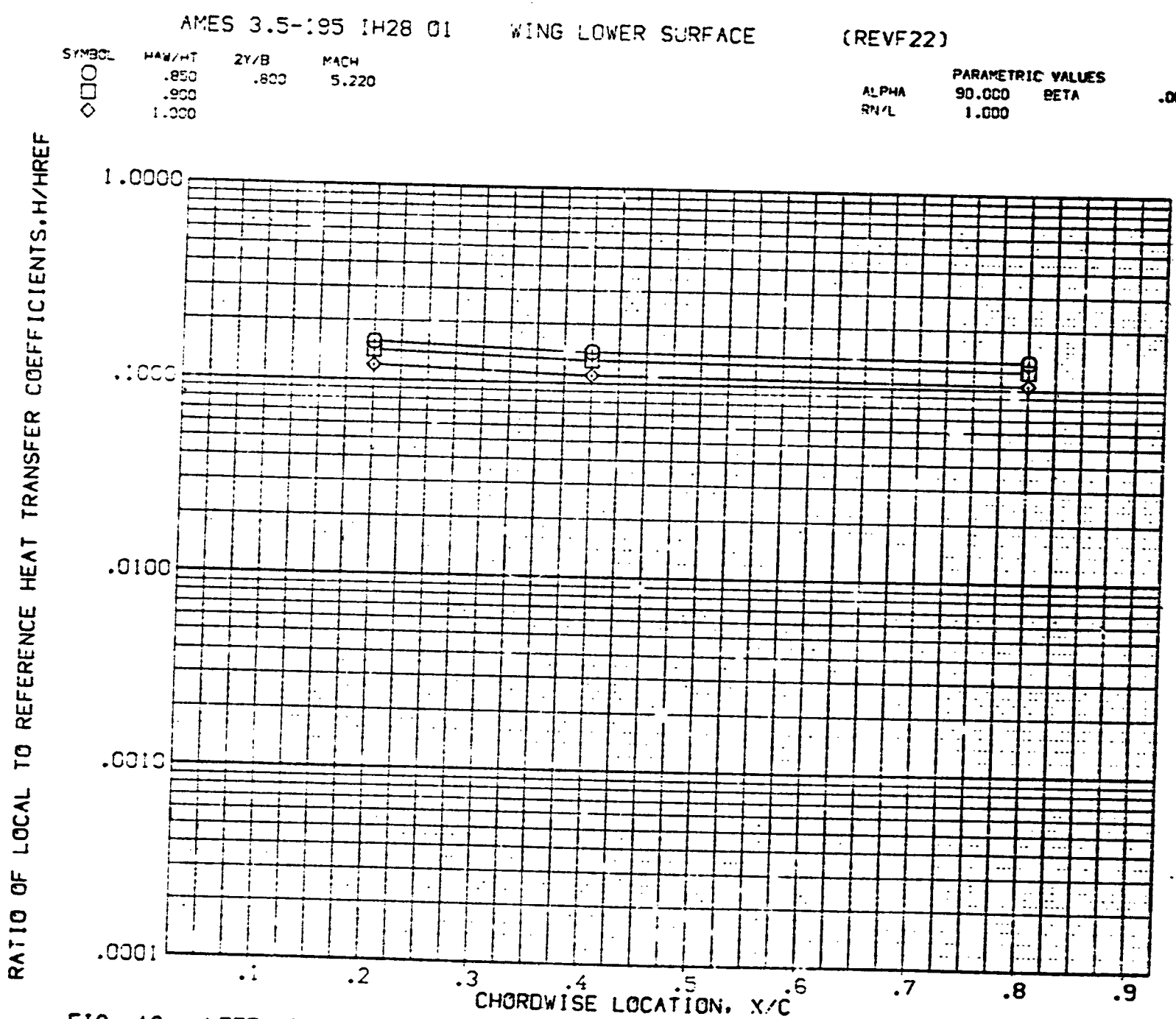

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

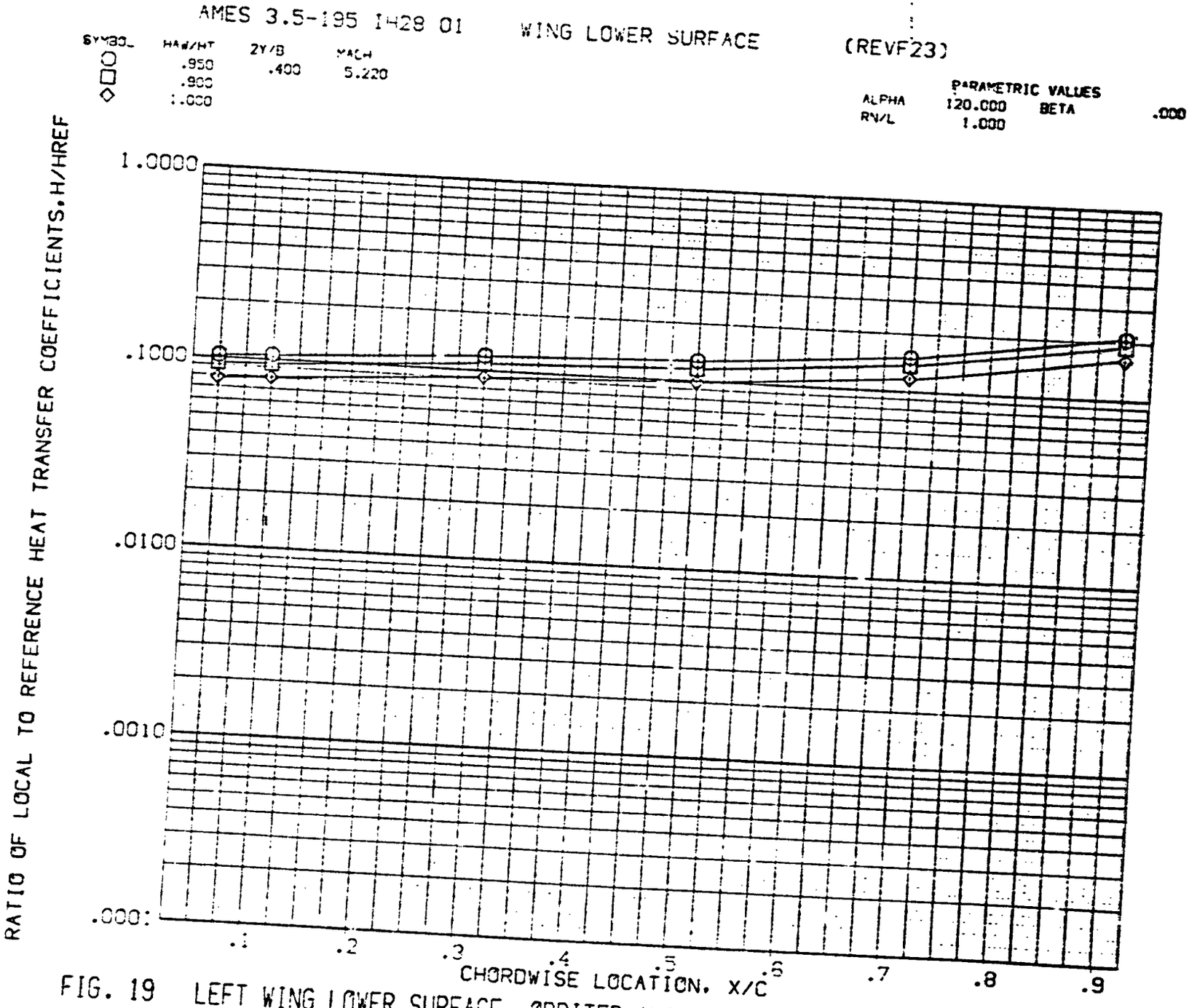

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

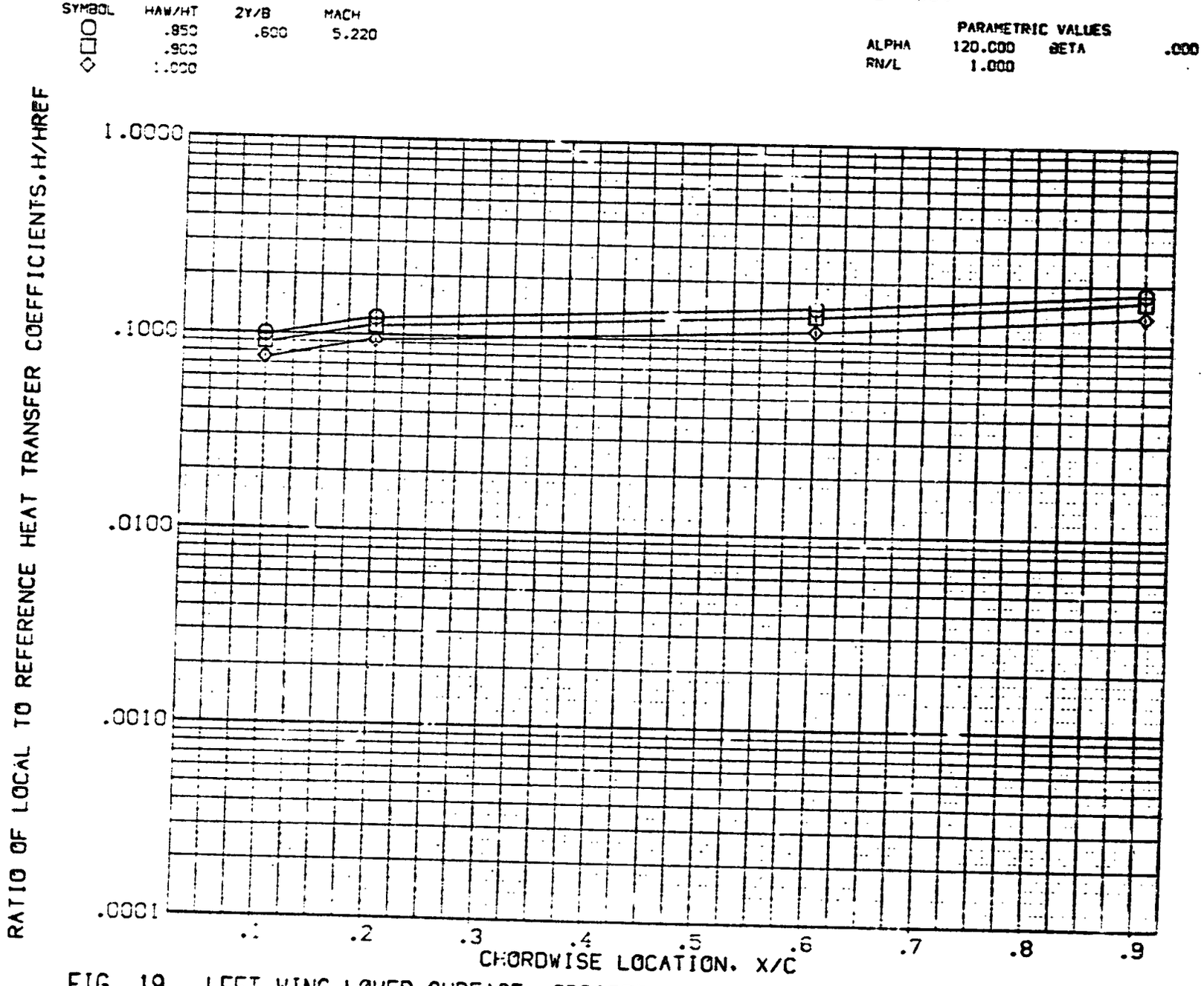

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF23)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.900	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

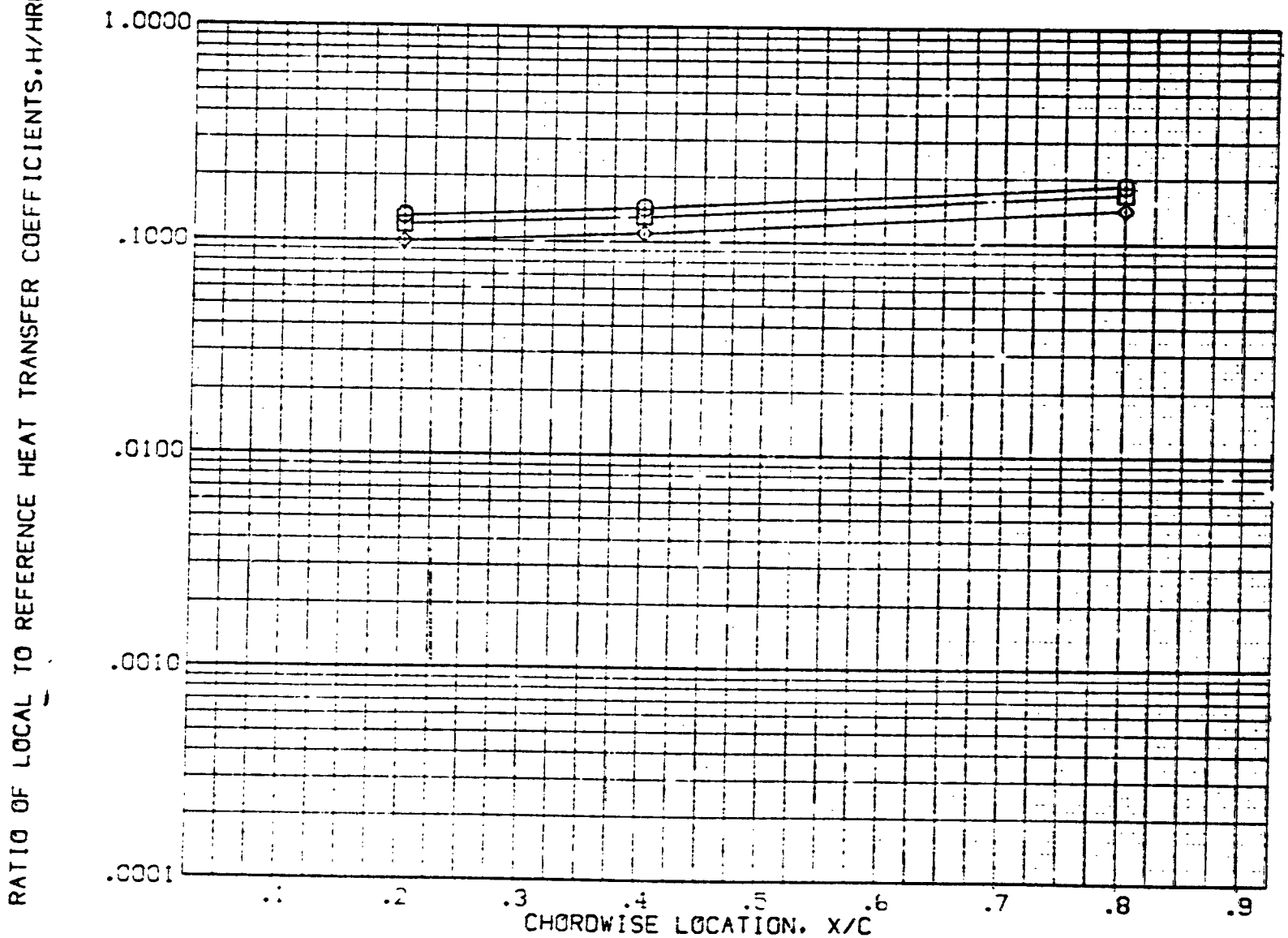

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

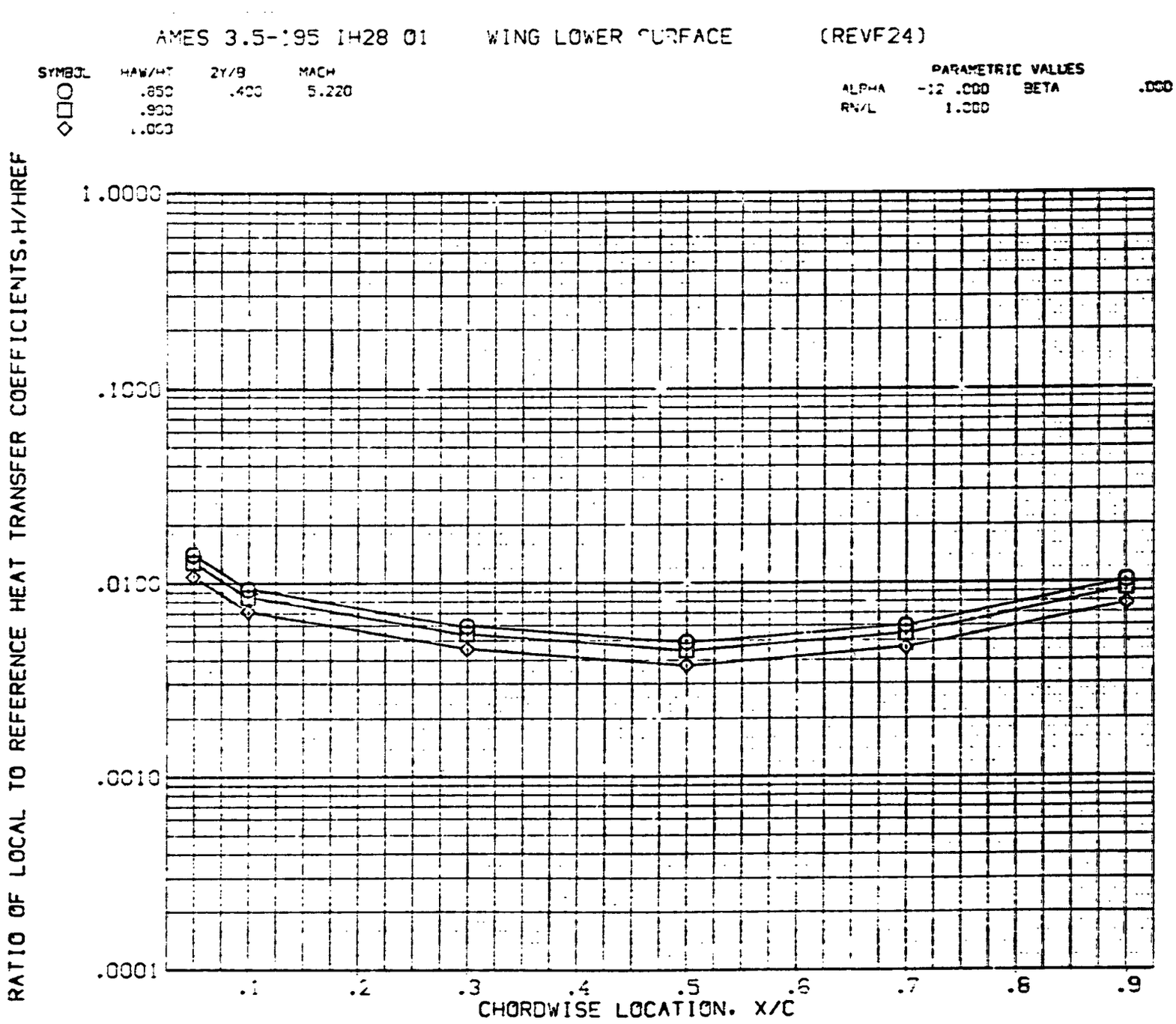

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 I-28 0' WING LOWER SURFACE (REVF24)

SYMBOL	HAW/HT	Z*/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

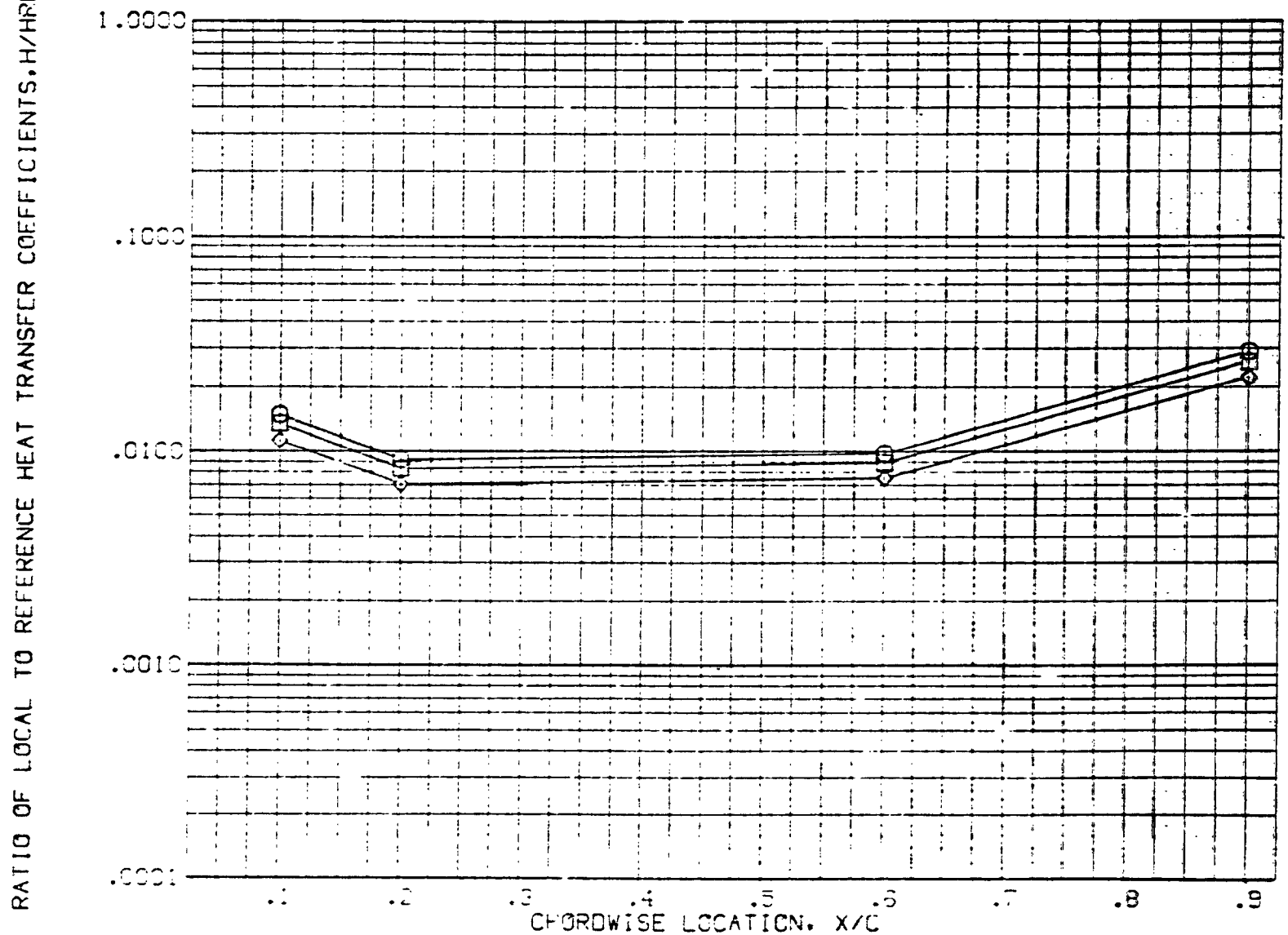

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF24)

SYMBOL	HAW/HT	ZY/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

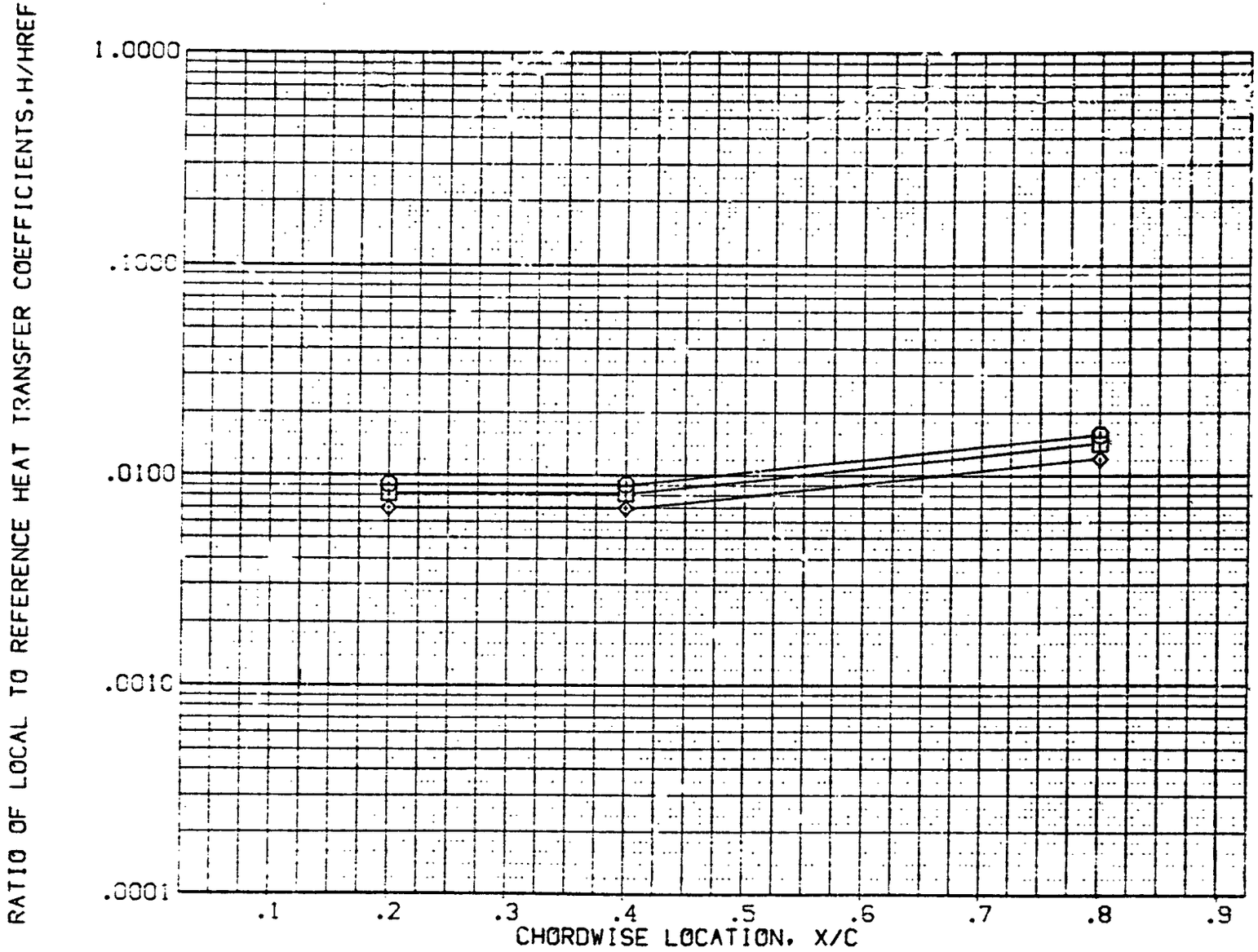

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 C1 WING LOWER SURFACE (REVF25)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

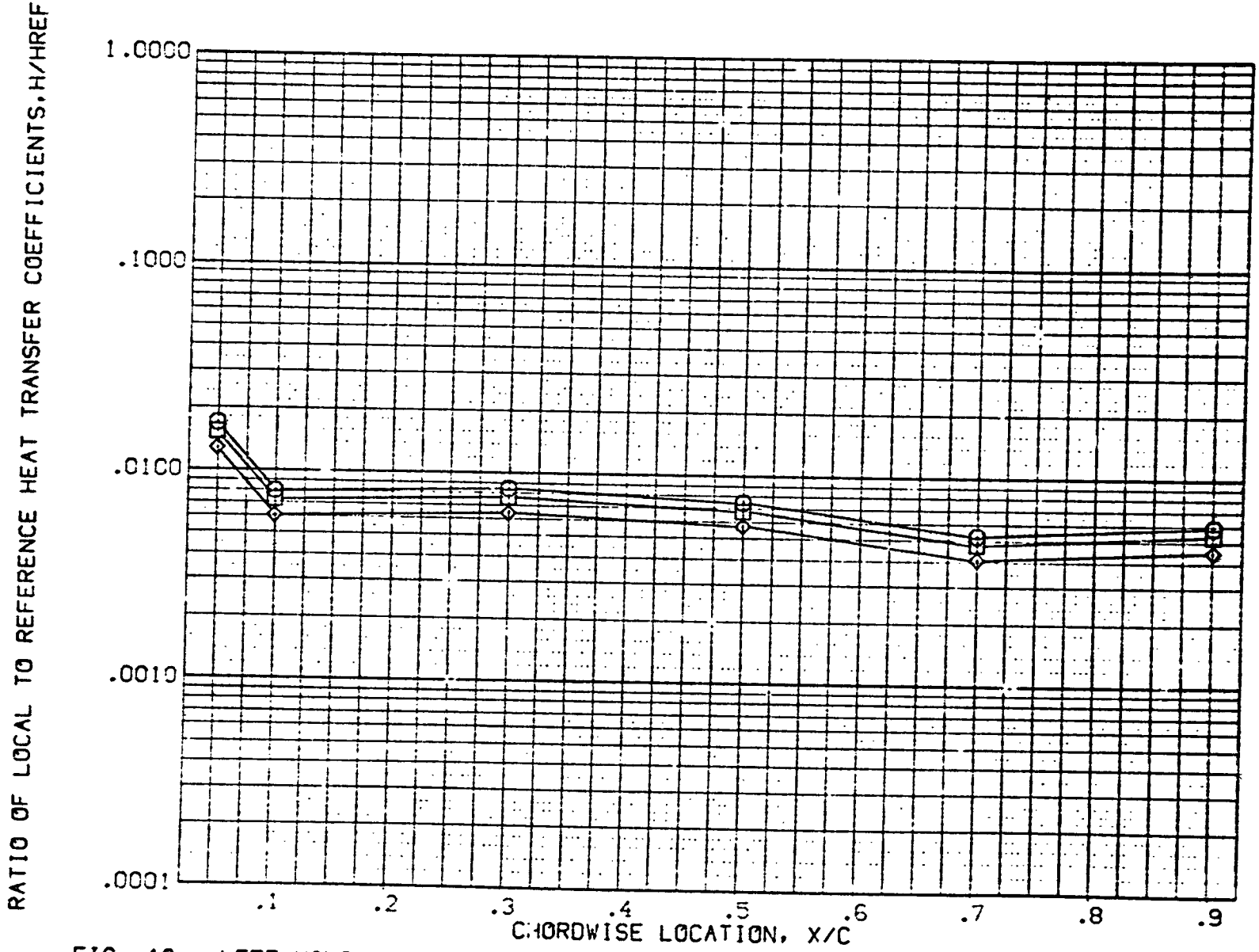

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

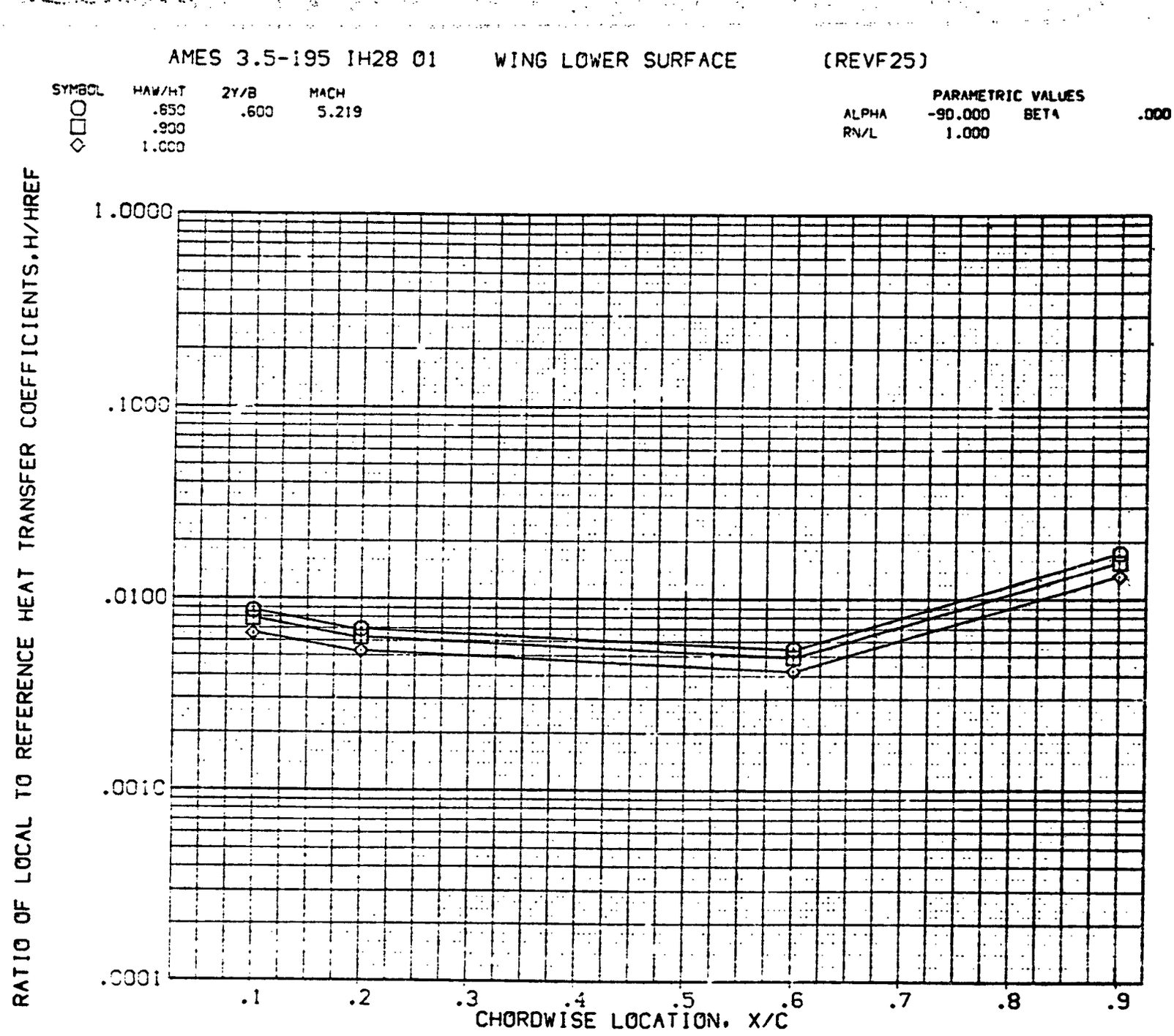

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF25)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

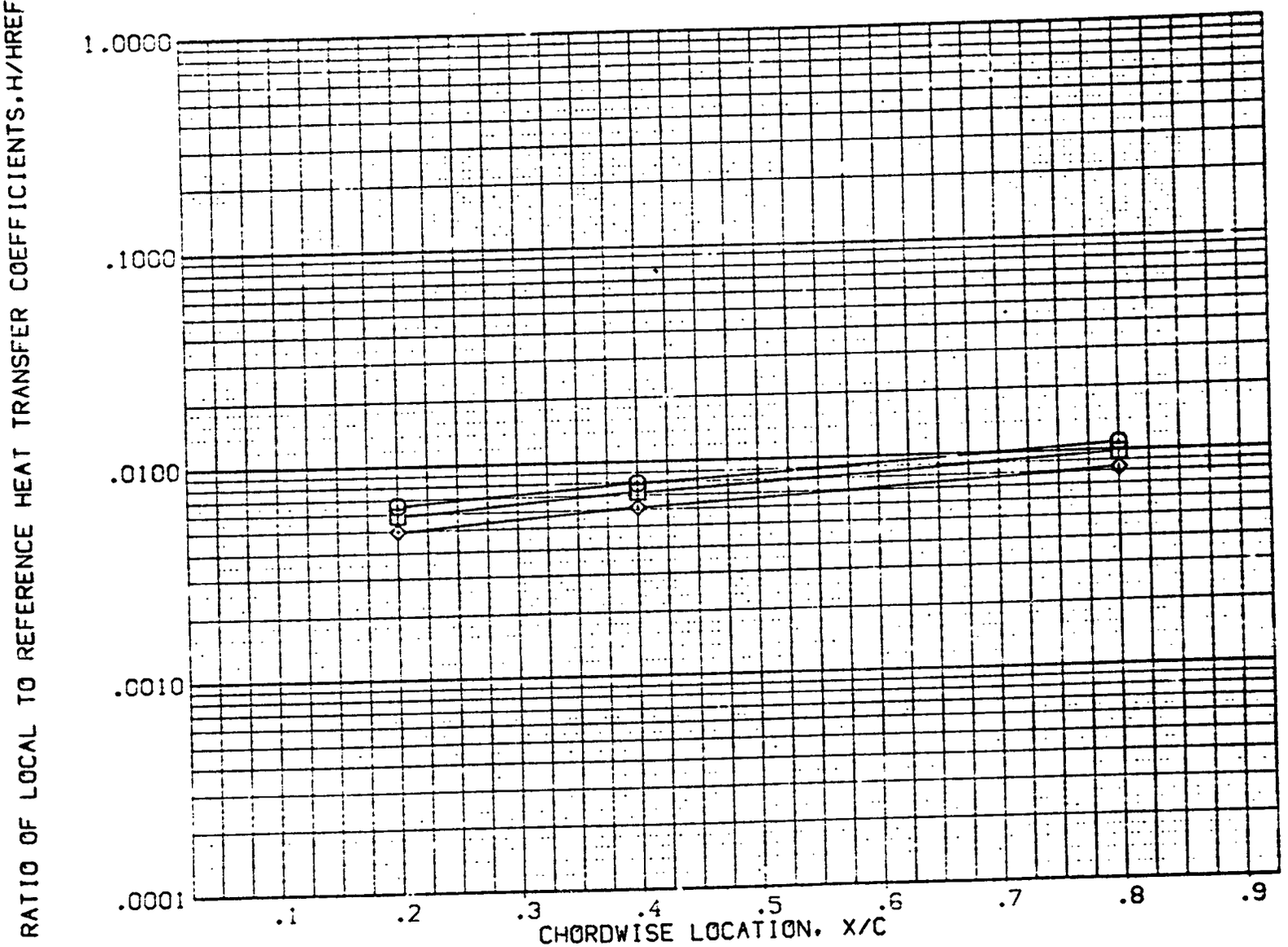

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF26)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

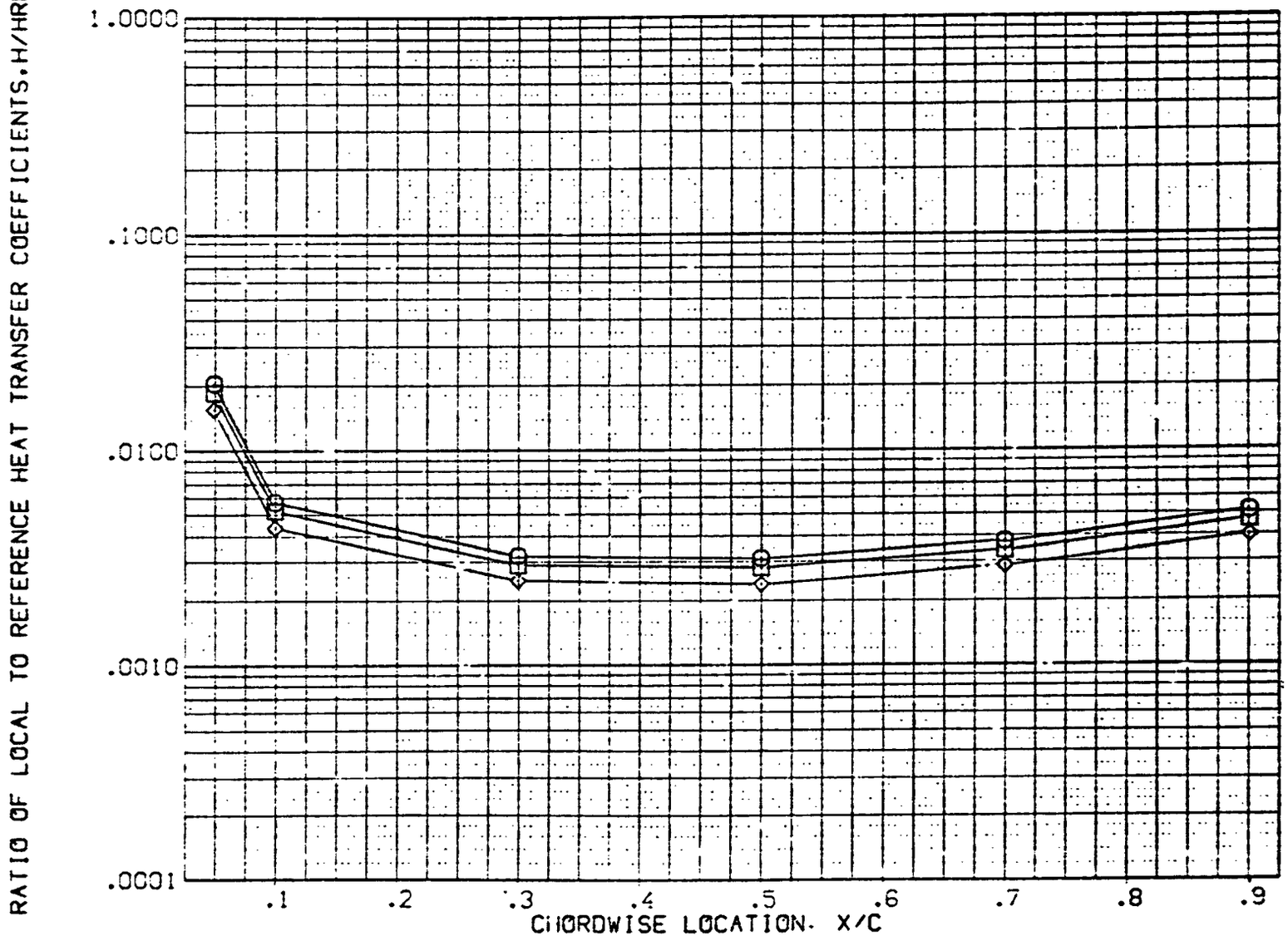

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF26)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

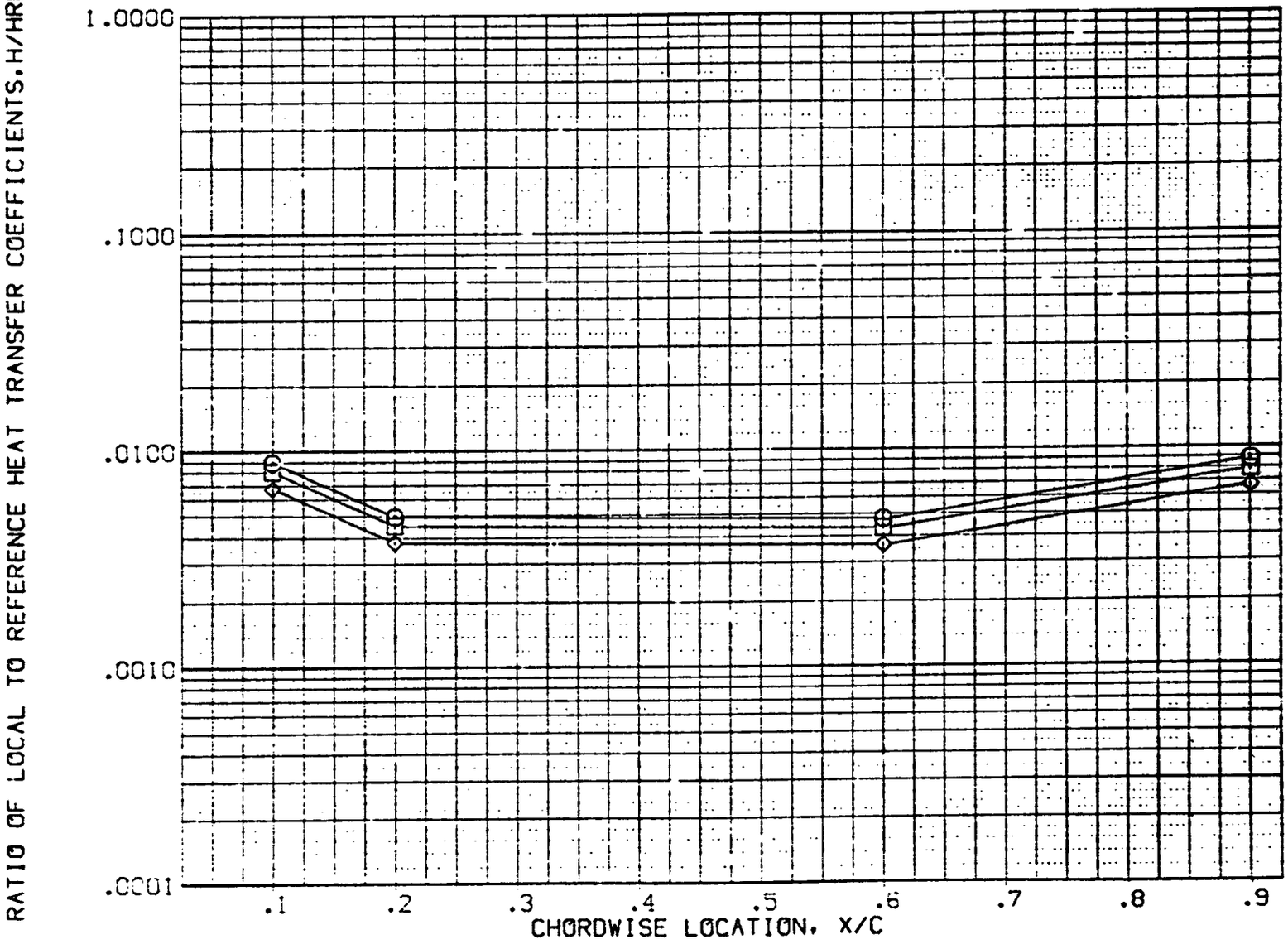

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF26)

SYMBOL	HAW/HT	2Y/B	MACH
□	.850	.900	5.220
○	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

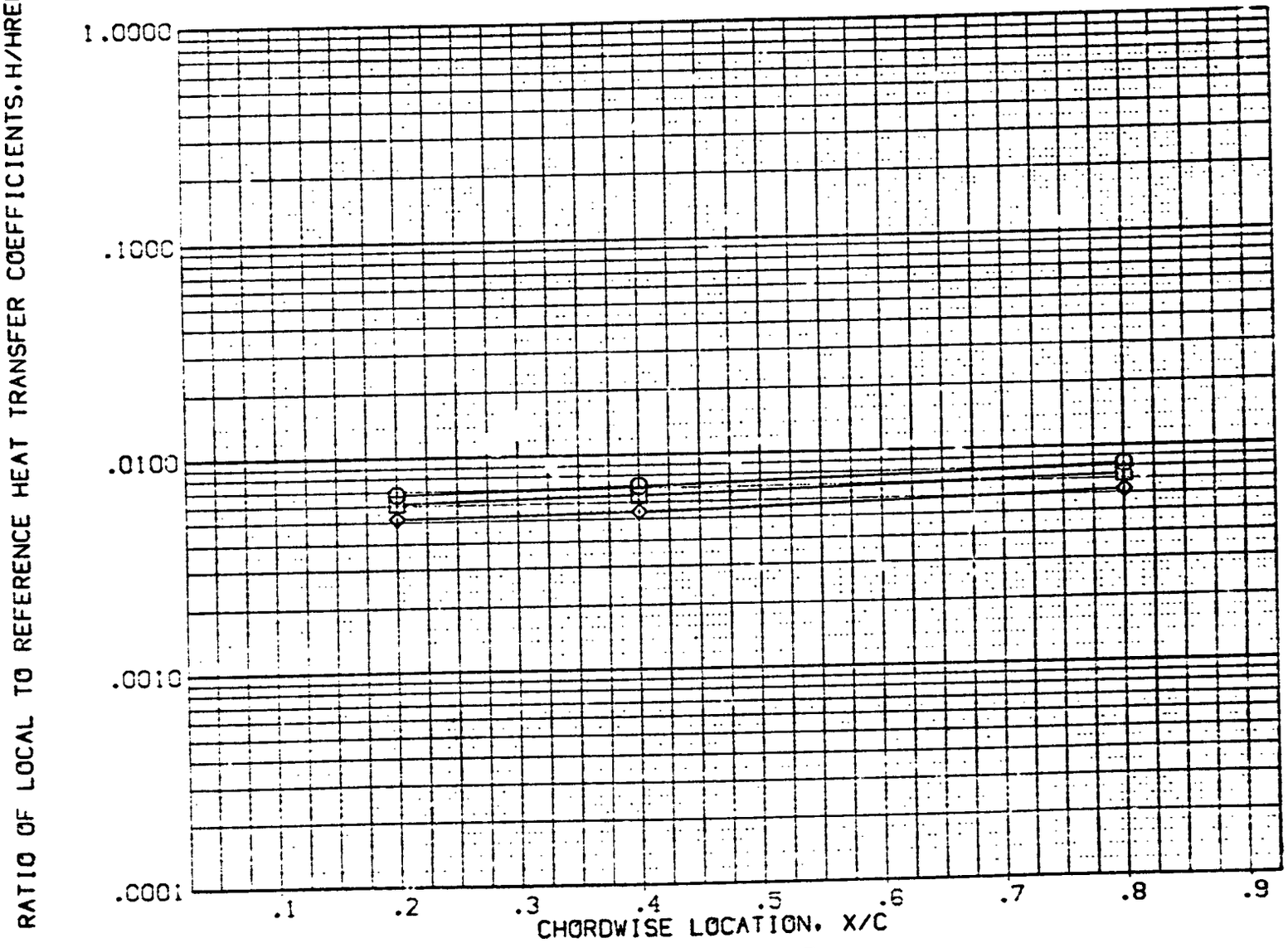

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF27)

SYMBOL	HAW/HT	ZY/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

*PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

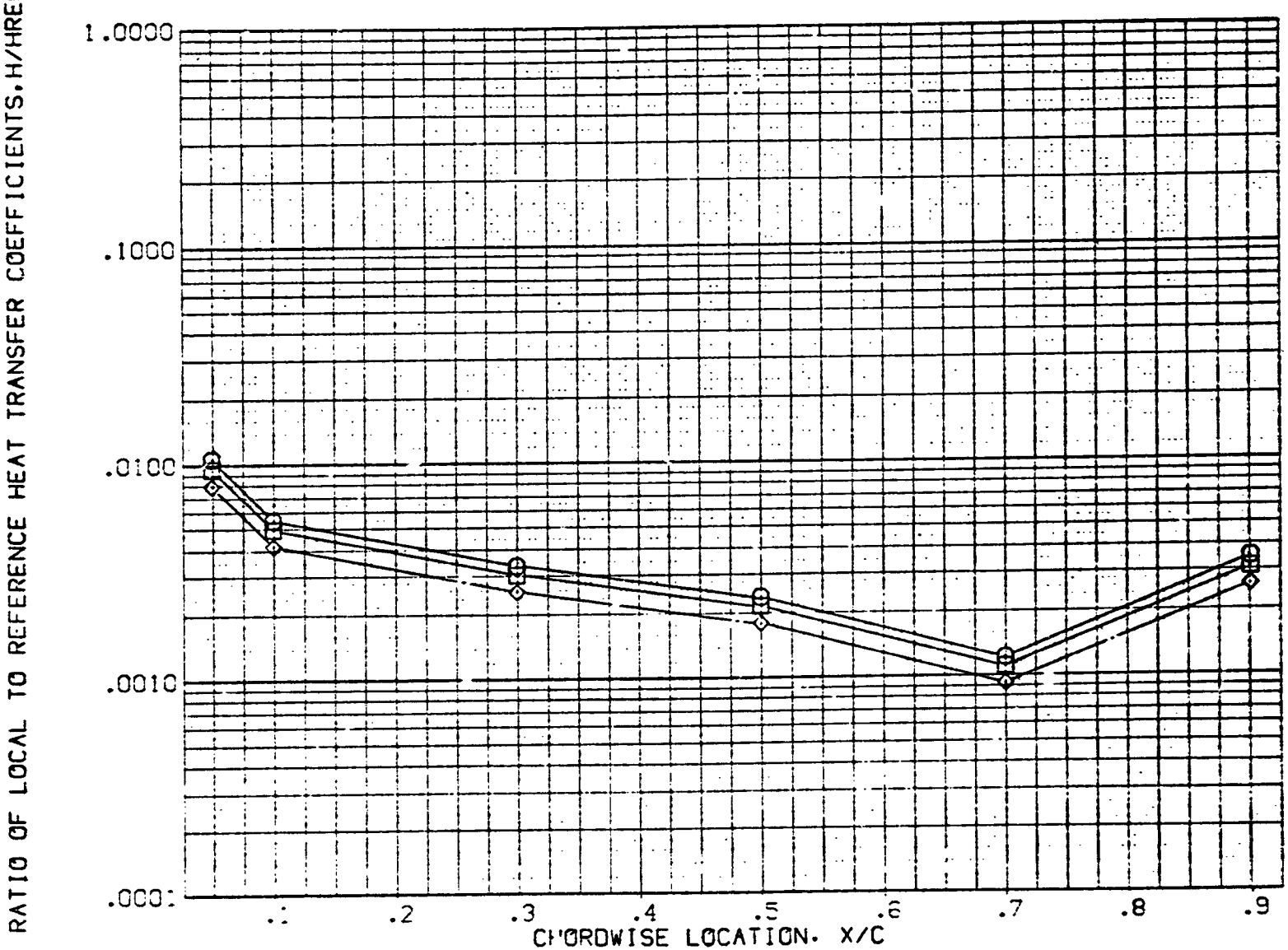

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING LOWER SURFACE (REVF27)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

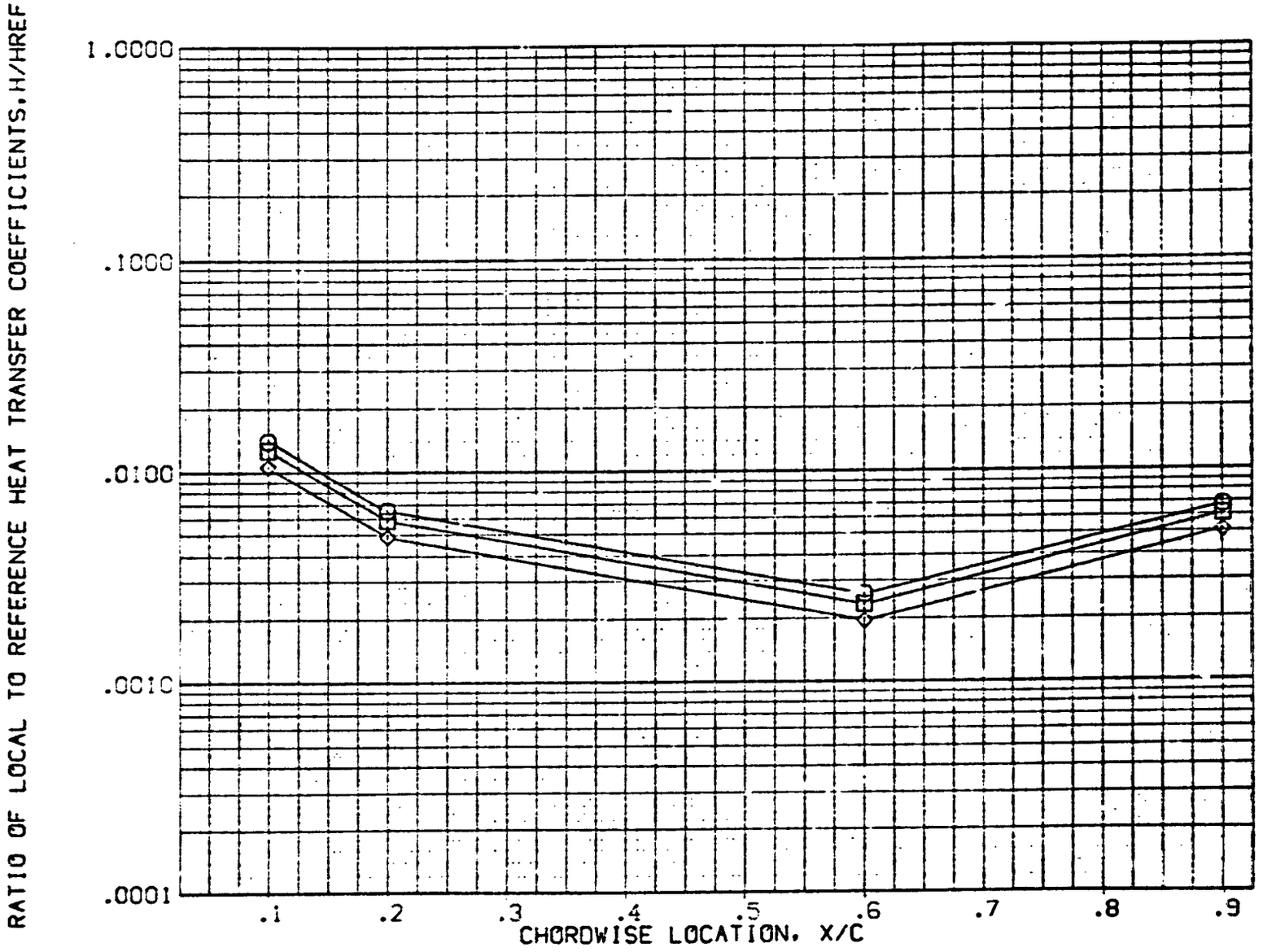

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 C1 WING LOWER SURFACE (REVF27)

SYMBOL	HAW/HT	Z*/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

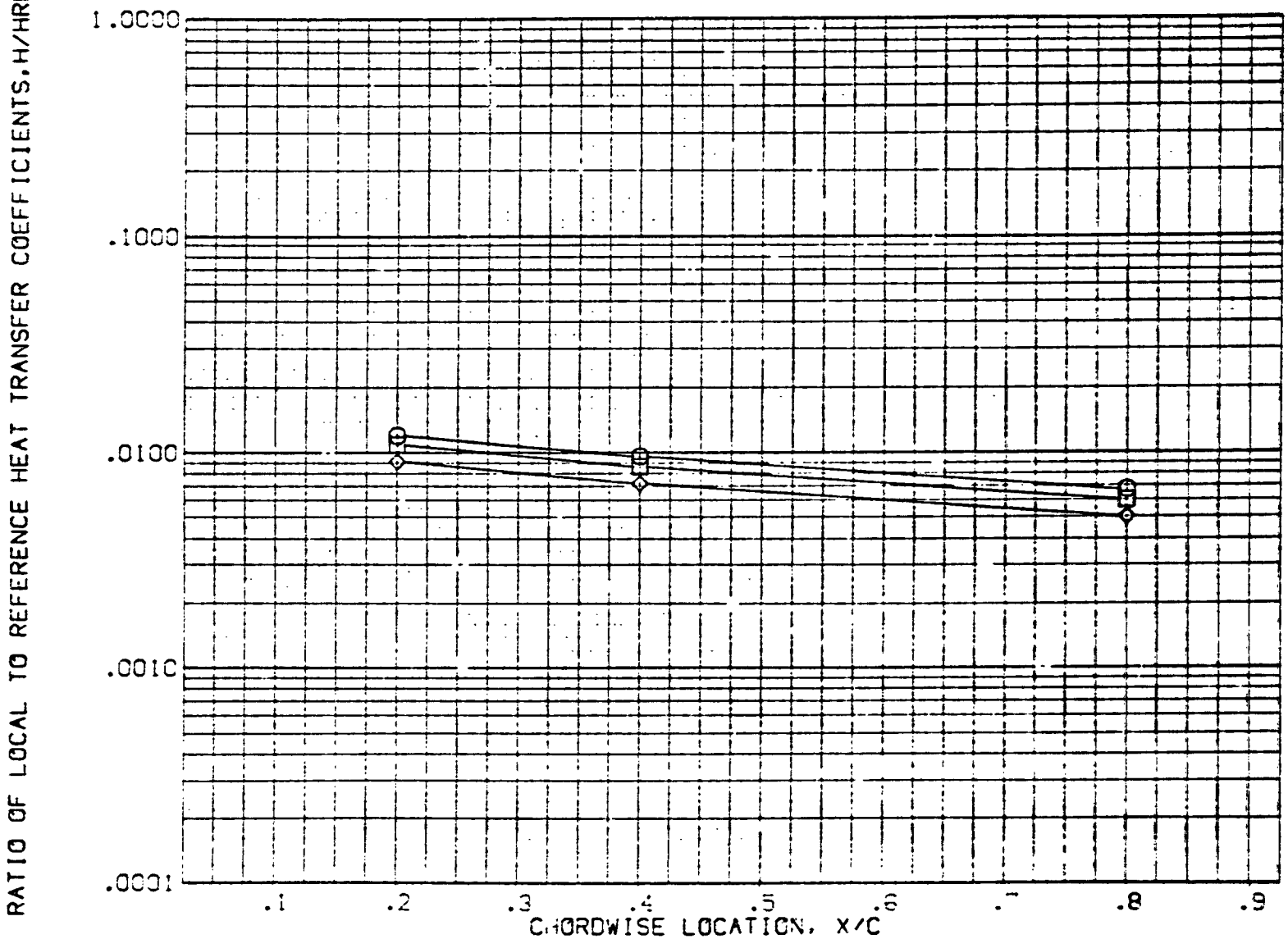

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVF19)	□	AMES 3.5-195 IH28 01	WING LOWER SURFACE	.000	.000	1.000
(REVF20)	△	AMES 3.5-195 IH28 01	WING LOWER SURFACE	30.000	.000	1.000
(REVF21)	◇	AMES 3.5-195 IH28 01	WING LOWER SURFACE	60.000	.000	1.000
(REVF22)	⊞	AMES 3.5-195 IH28 01	WING LOWER SURFACE	90.000	.000	1.000
(REVF23)	⊕	AMES 3.5-195 IH28 01	WING LOWER SURFACE	120.000	.000	1.000

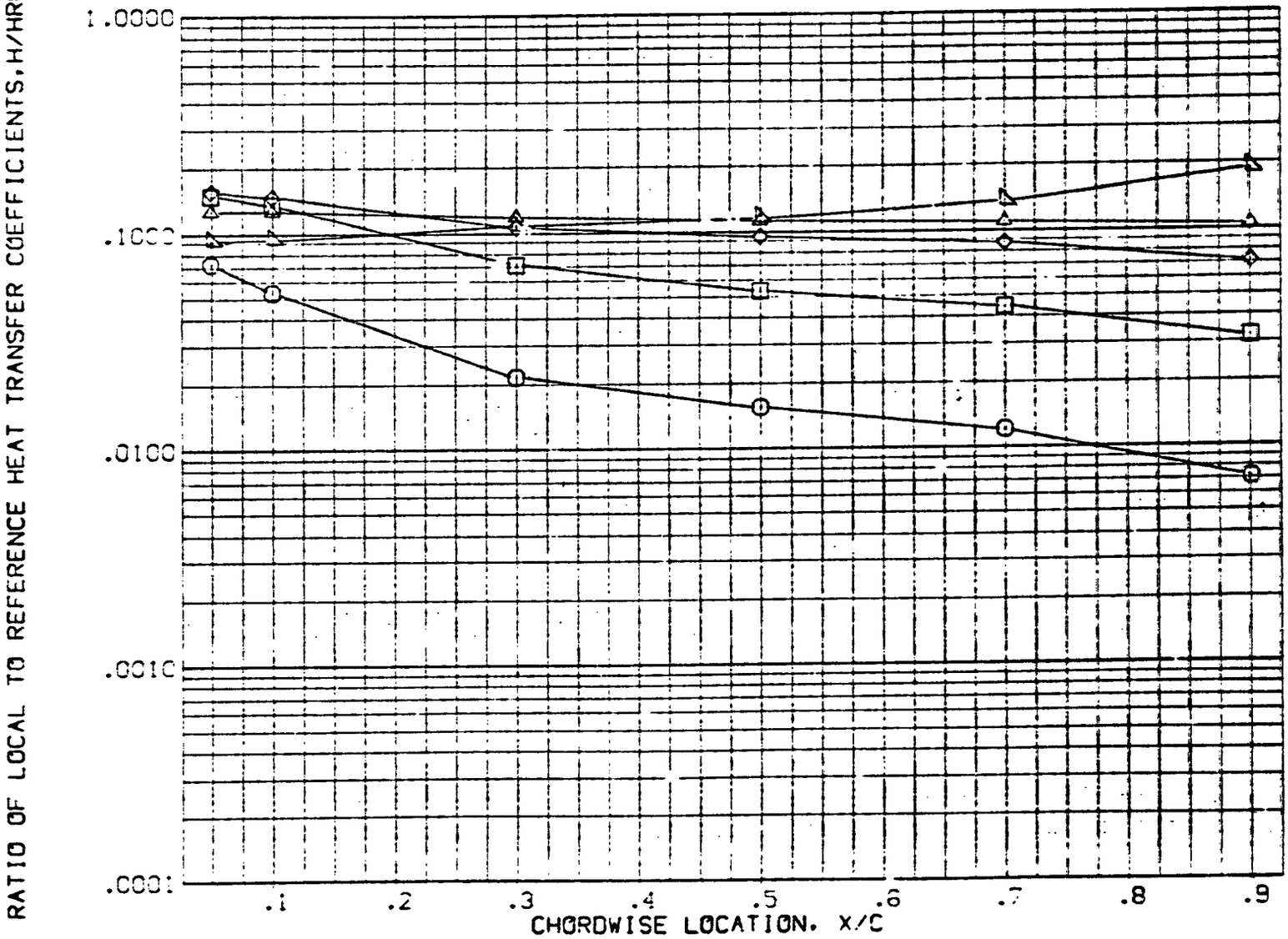

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .800 ZW/B = .400

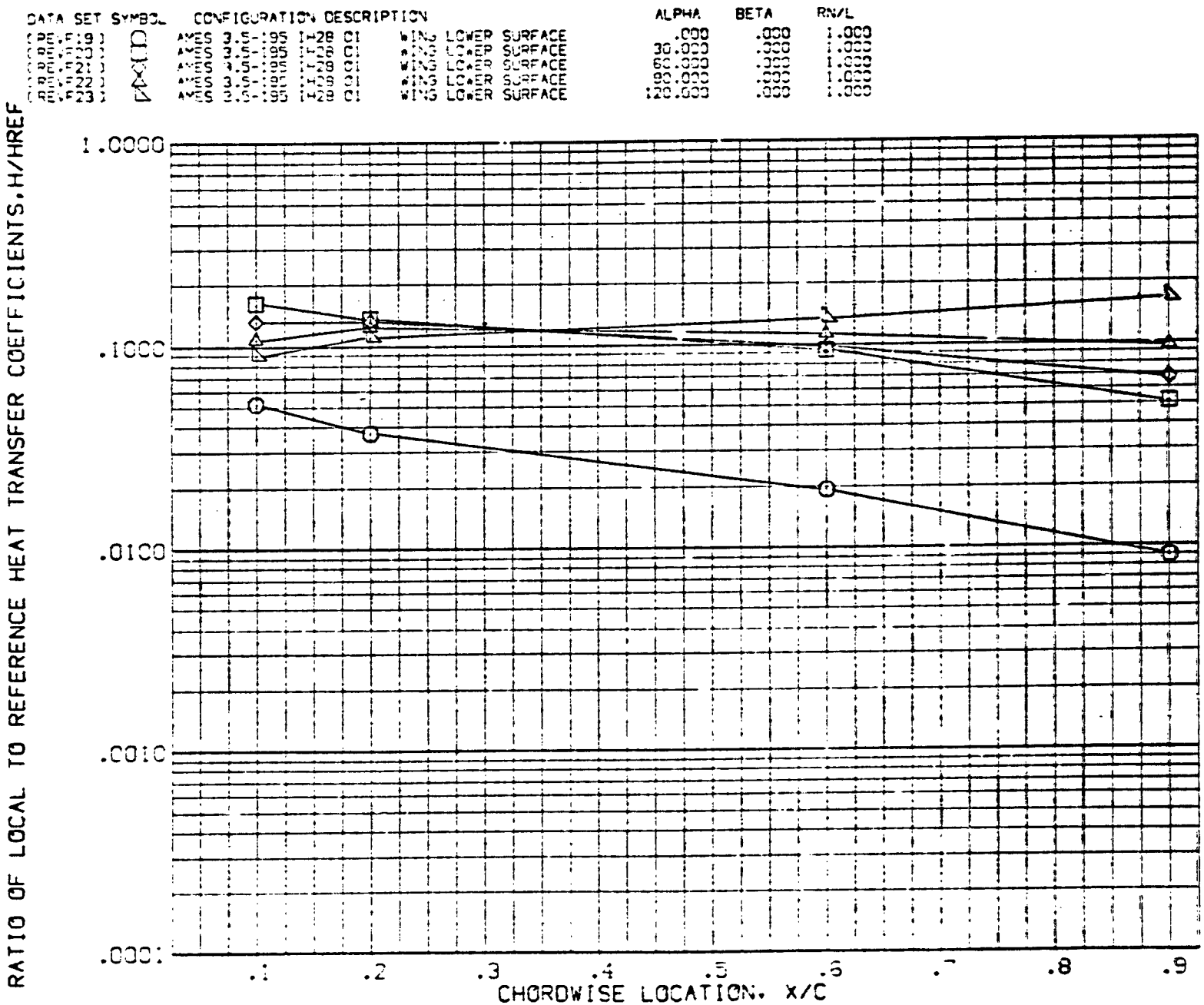

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 DY/B = .600

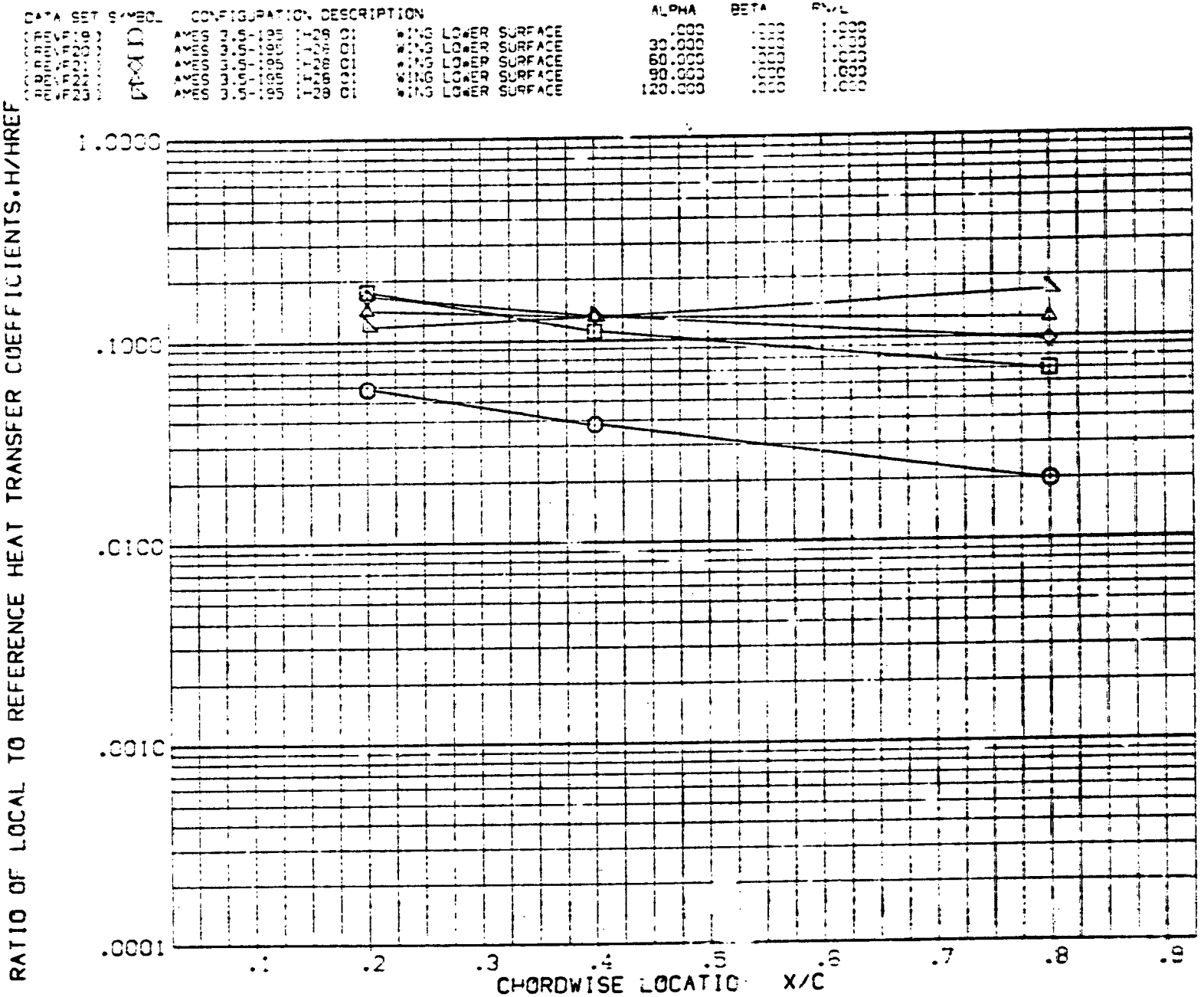

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALO

MACH = 5.300 HA*/HT= 900 2Y/B = .900

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVF19)	□	AMES 3.5-195 IH28 01	WING LOWER SURFACE	.000	.000	1.000
(REVF27)	▽	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-30.000	.000	1.000
(REVF26)	◇	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-60.000	.000	1.000
(REVF25)	△	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-90.000	.000	1.000
(REVF24)	▷	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-120.000	.000	1.000

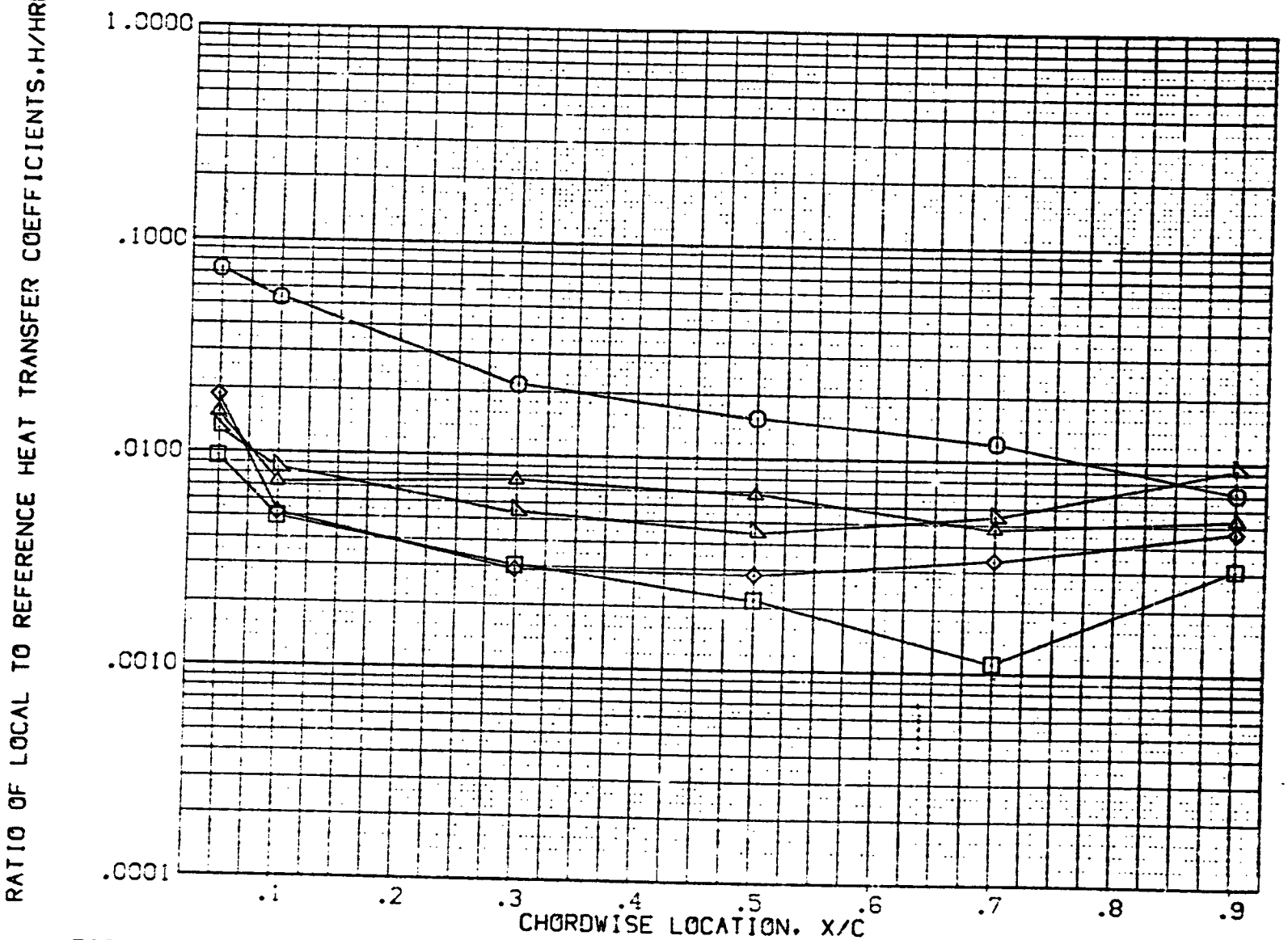

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .800 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVF19)	○	AMES 3.5-195 IH28 01	WING LOWER SURFACE	.000	.000	1.000
(REVF27)	□	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-30.000	.000	1.000
(REVF26)	◇	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-60.000	.000	1.000
(REVF25)	△	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-90.000	.000	1.000
(REVF24)	▽	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-120.000	.000	1.000

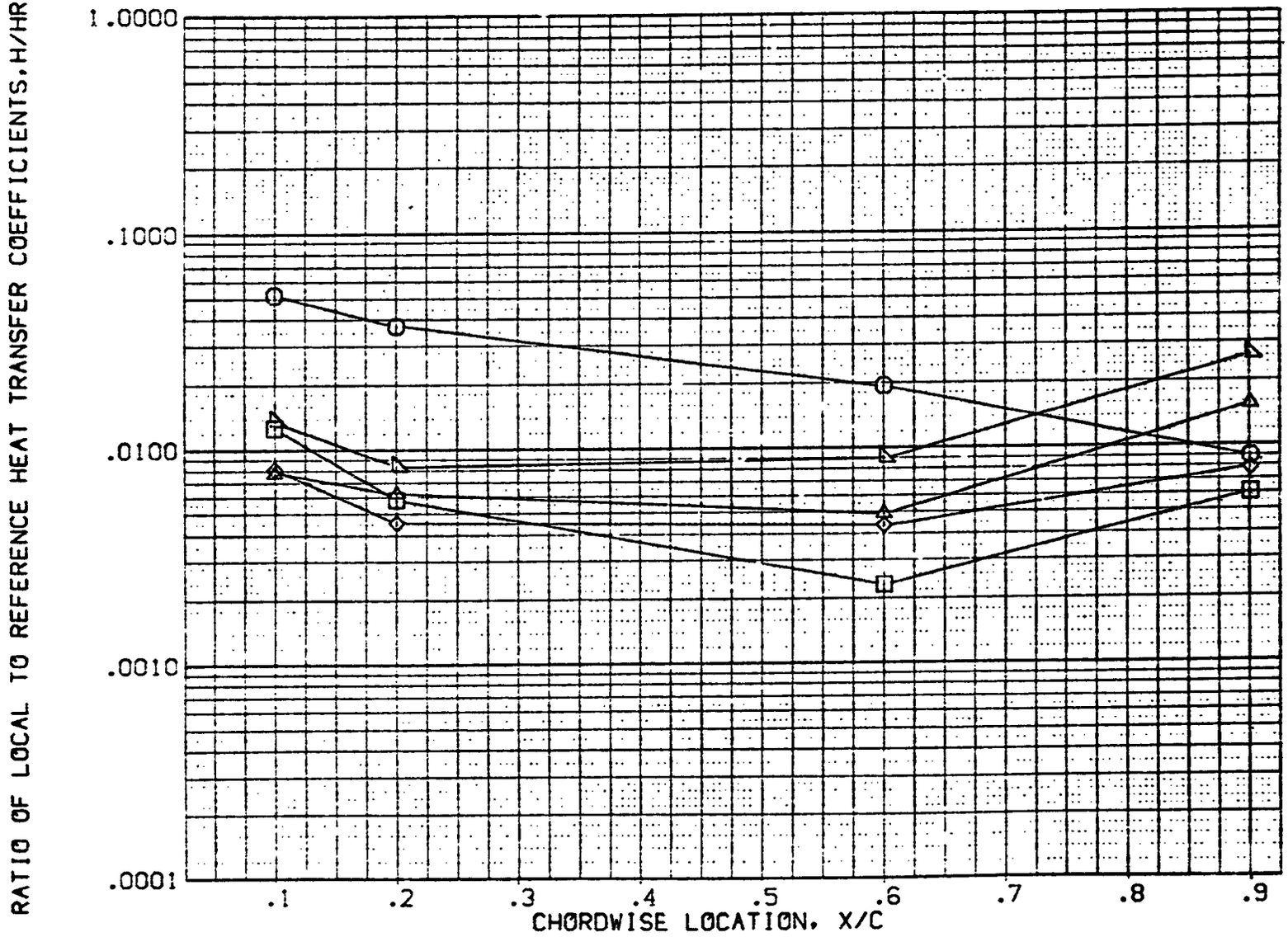

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVF19)	○	AMES 3.5-195 IH28 01	WING LOWER SURFACE	.000	.000	1.000
(REVF27)	□	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-30.000	.000	1.000
(REVF26)	◇	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-60.000	.000	1.000
(REVF25)	△	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-90.000	.000	1.000
(REVF24)	◁	AMES 3.5-195 IH28 01	WING LOWER SURFACE	-120.000	.000	1.000

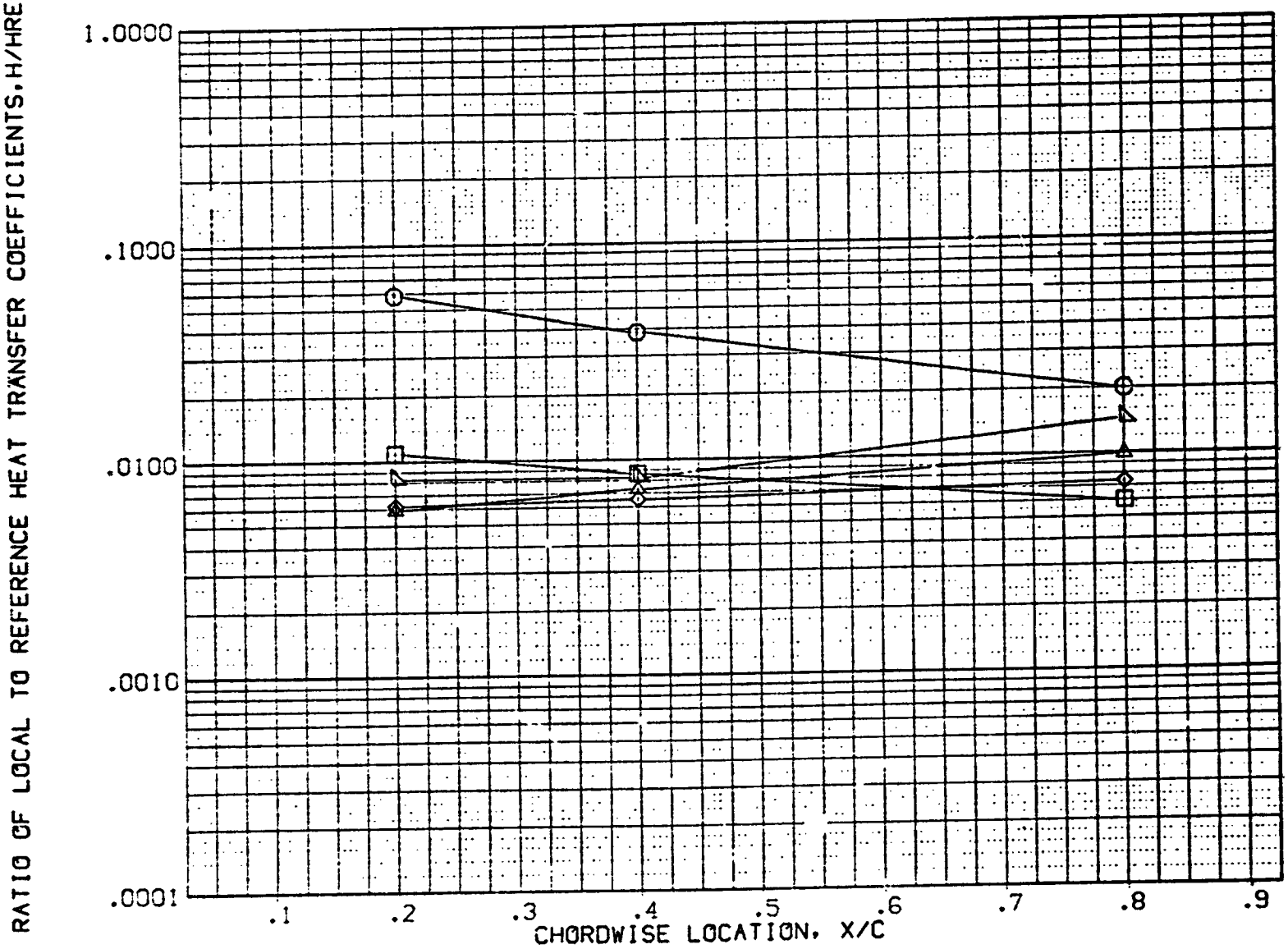

FIG. 19 LEFT WING LOWER SURFACE, ORBITER ALONE

MACH = 5.300 HA#/HT= .900 2Y/B = .800

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF01)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.228
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
PN/L	1.000		

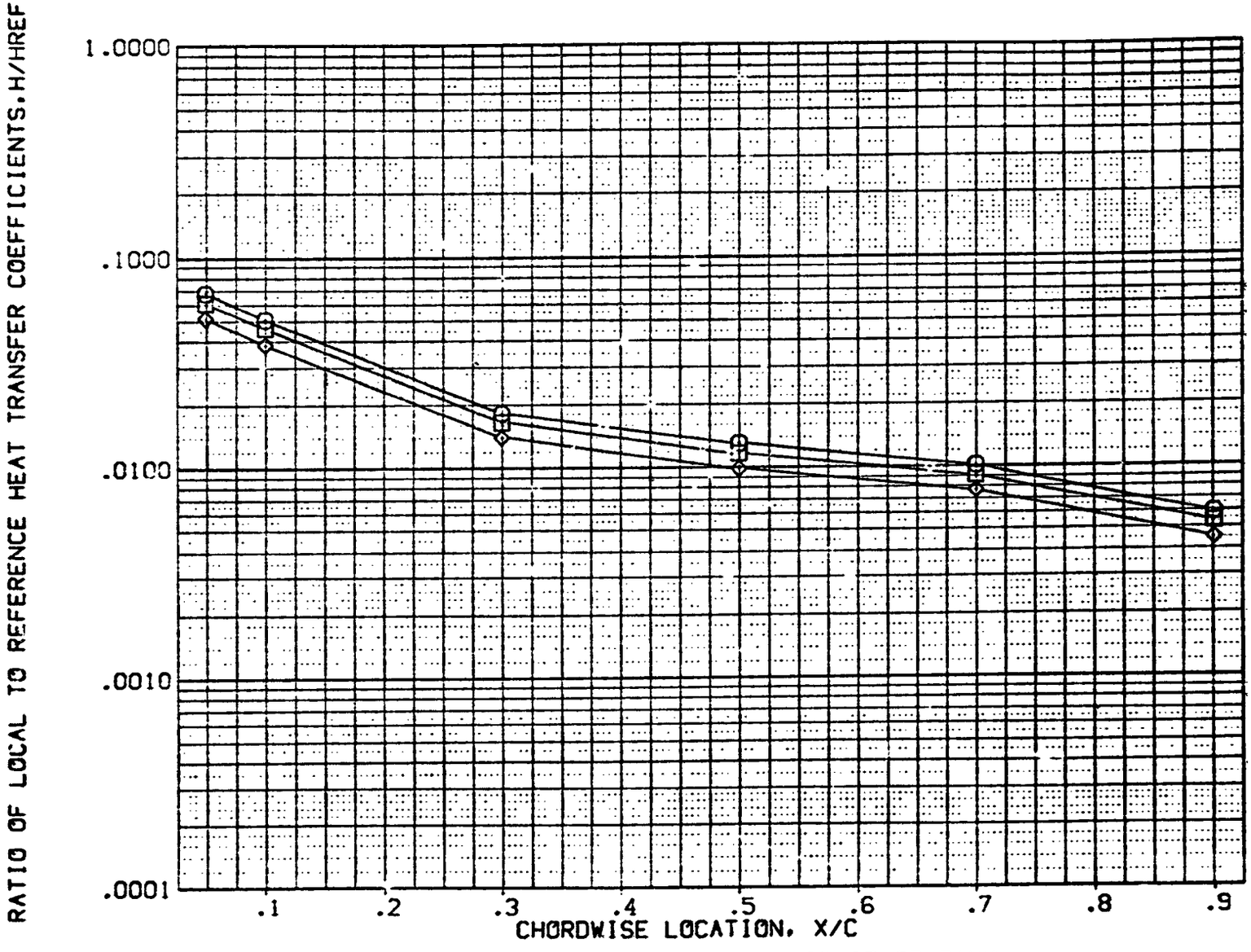

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 Ci+Ti WING LOWER SURFACE (REVF01)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.228
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

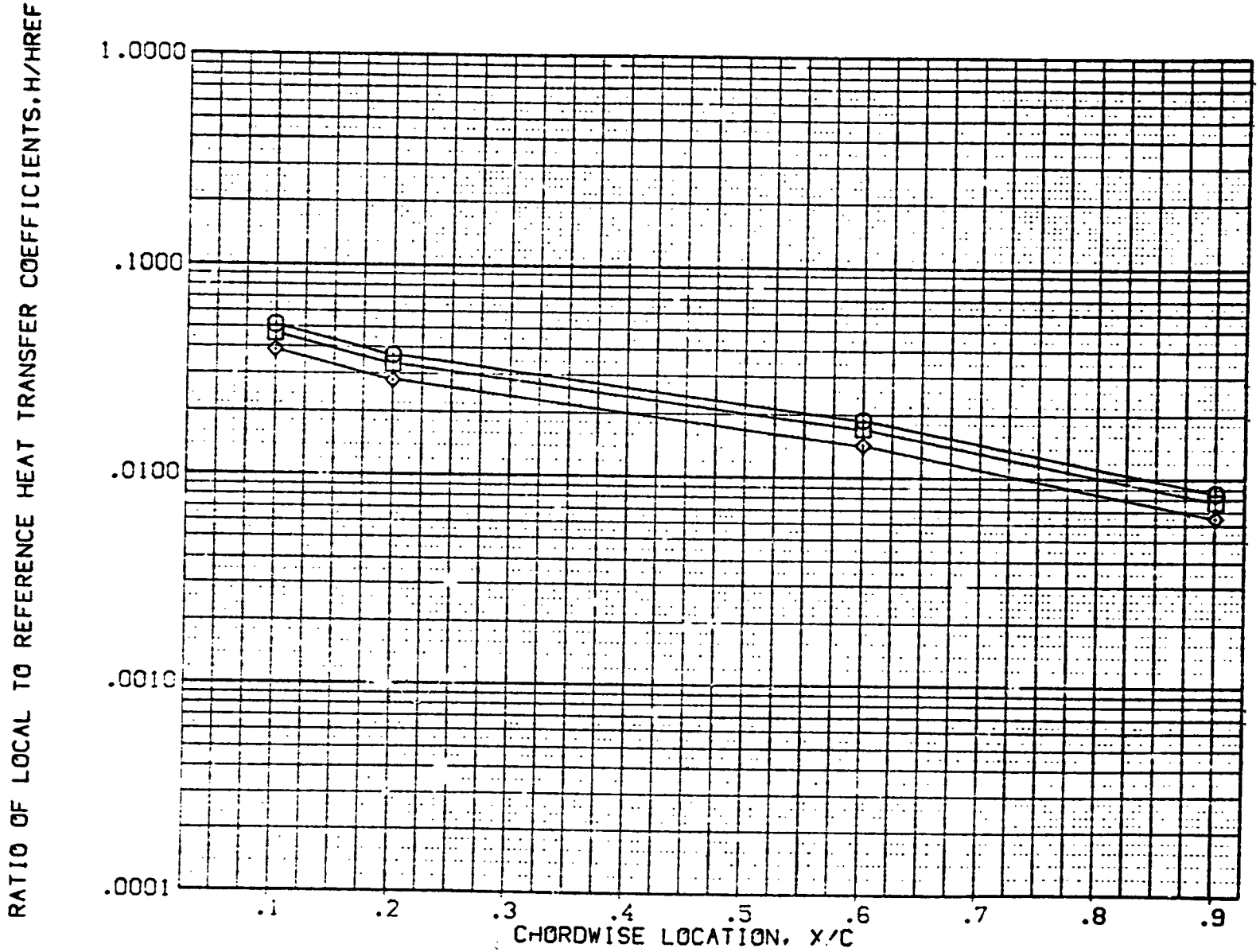

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

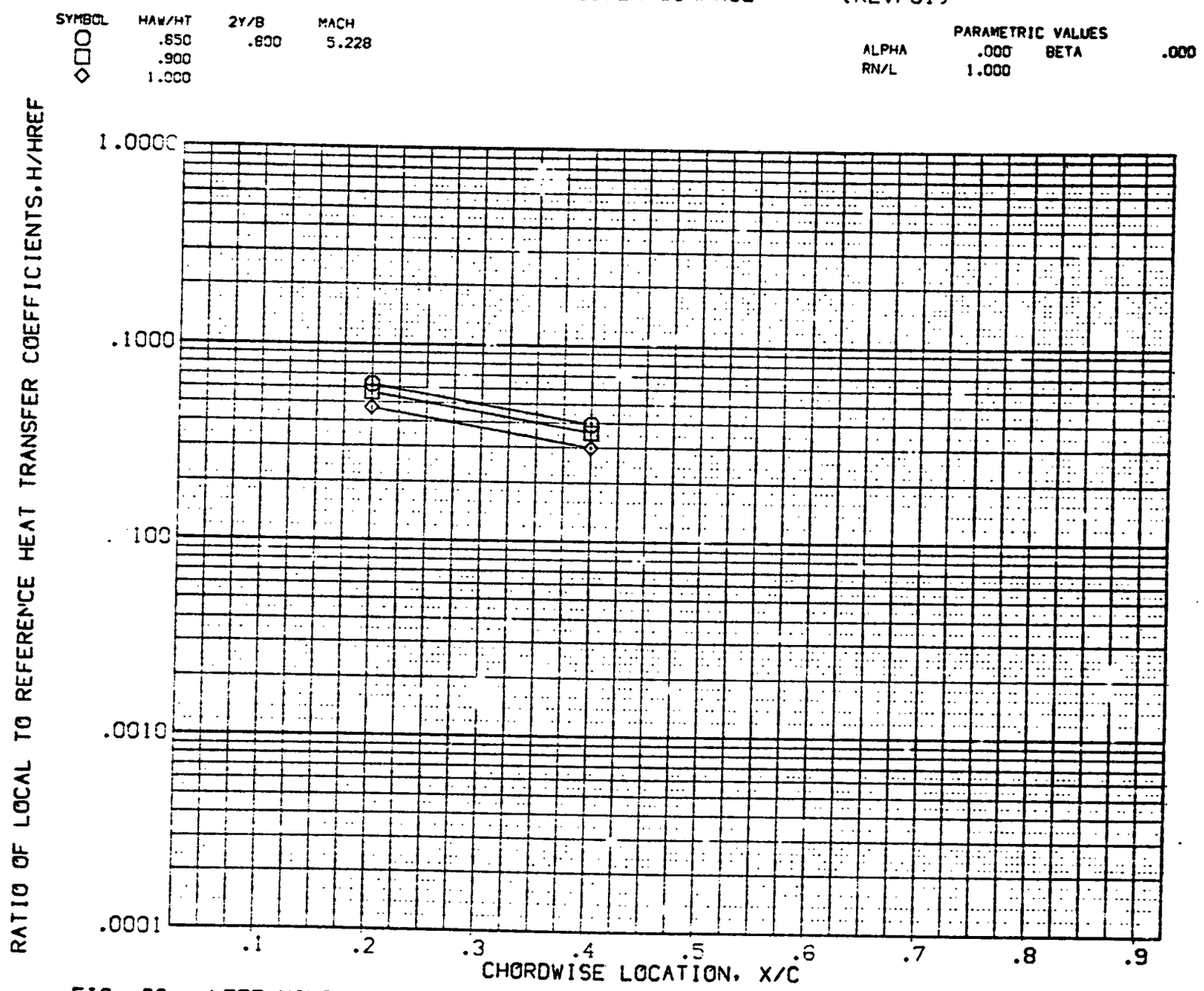

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

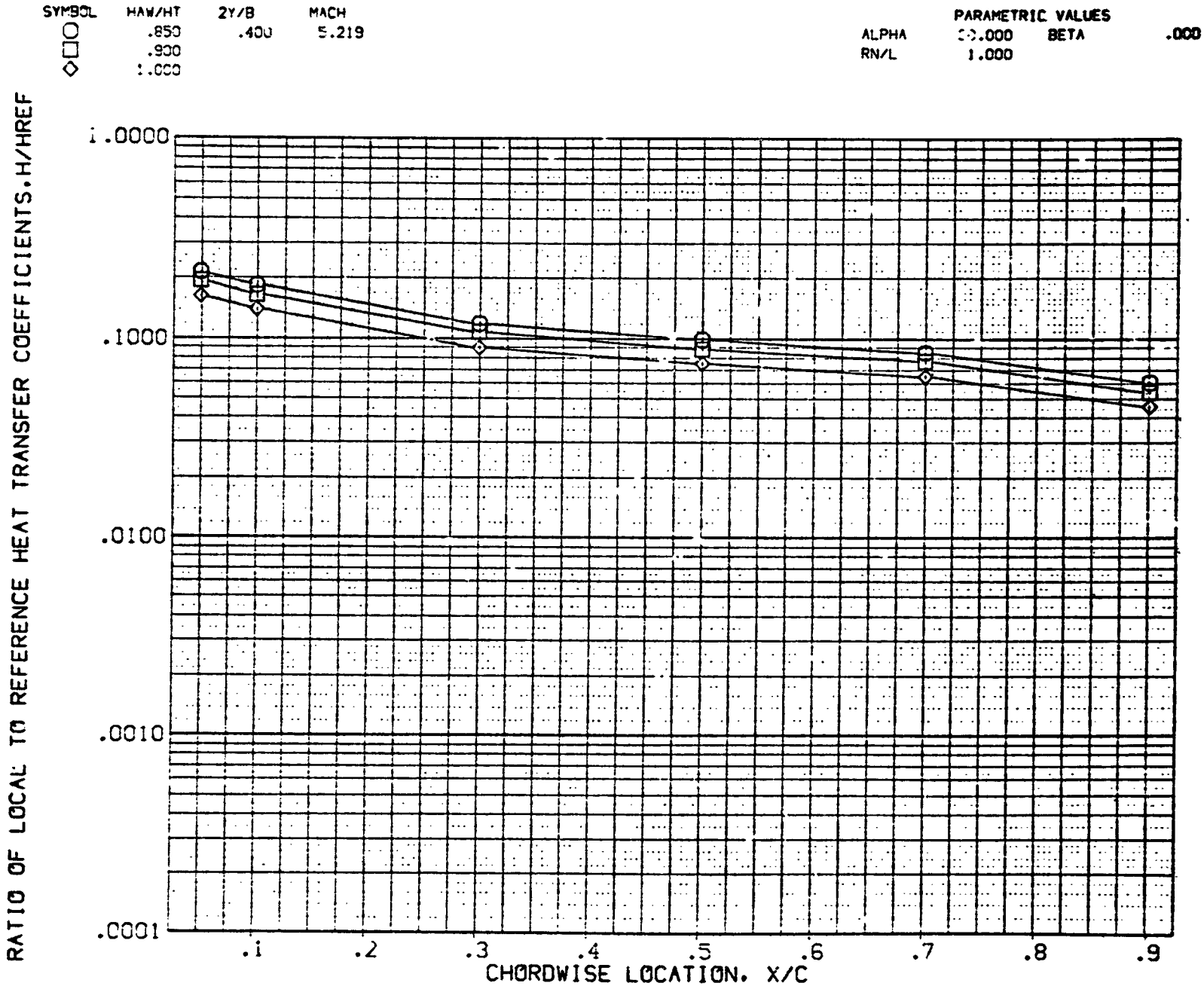

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

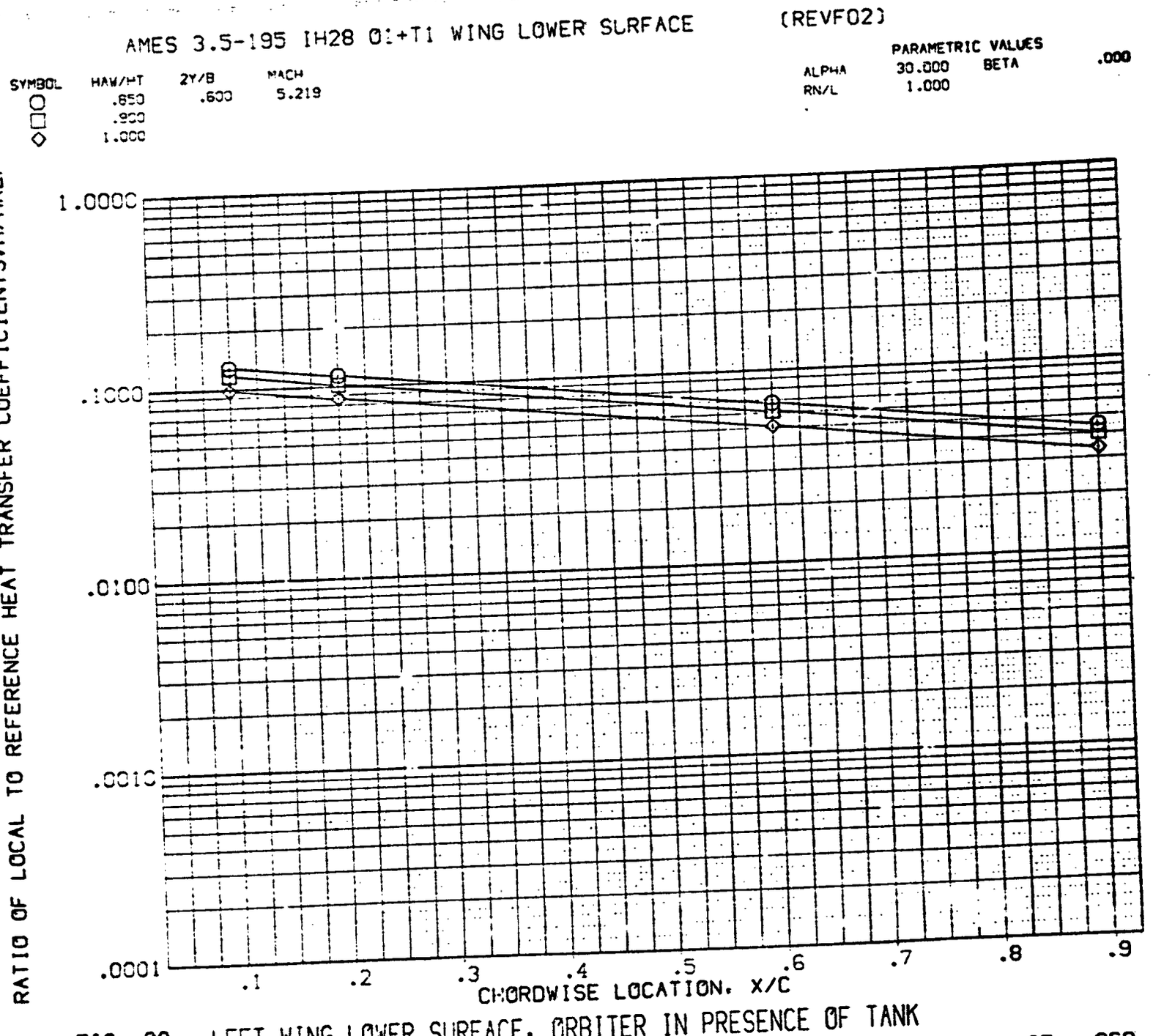

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF02)

SYMBOL	HAW/HT	ZY/B	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

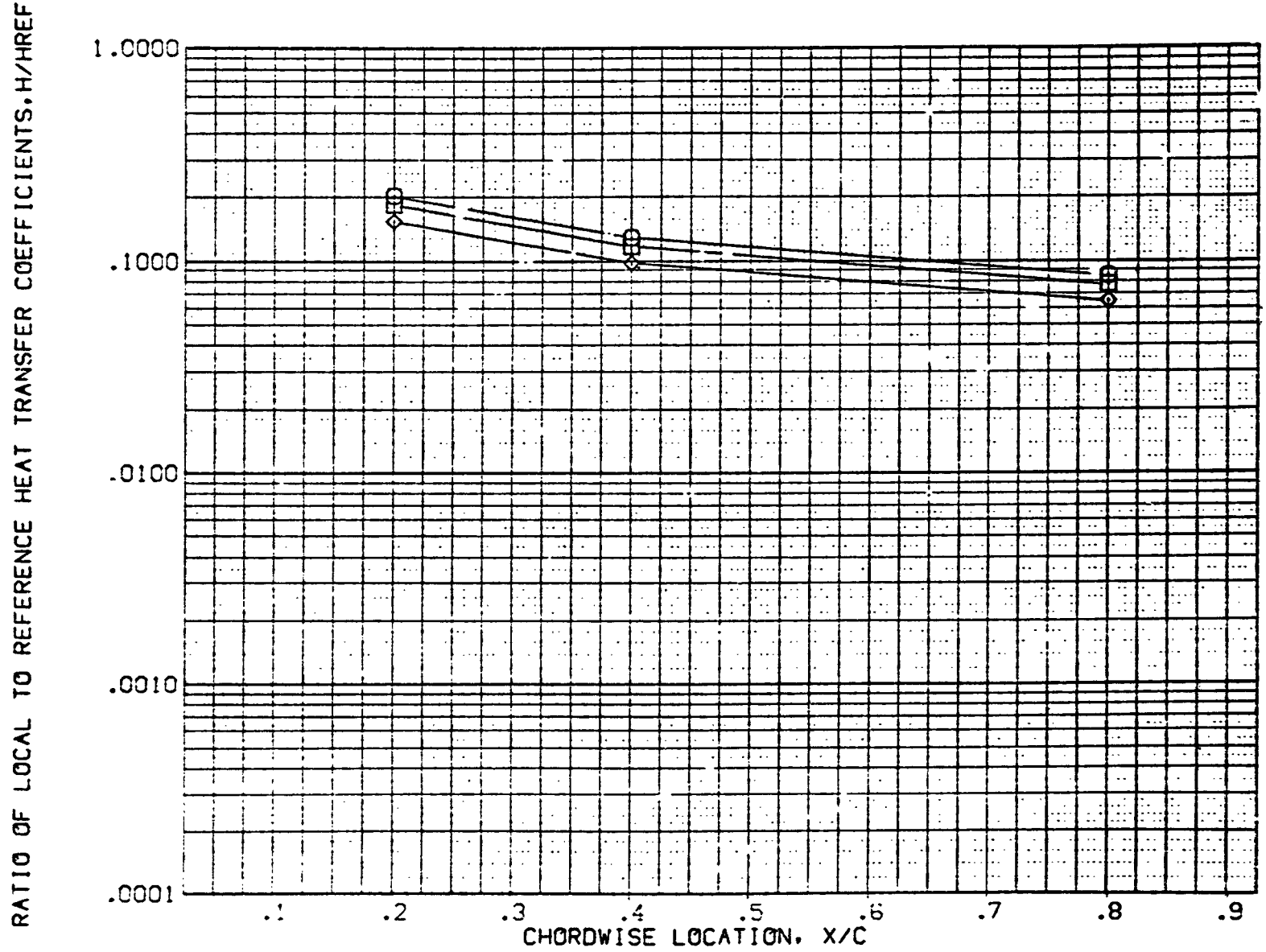

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 0:+T1 WING LOWER SURFACE (REVF03)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

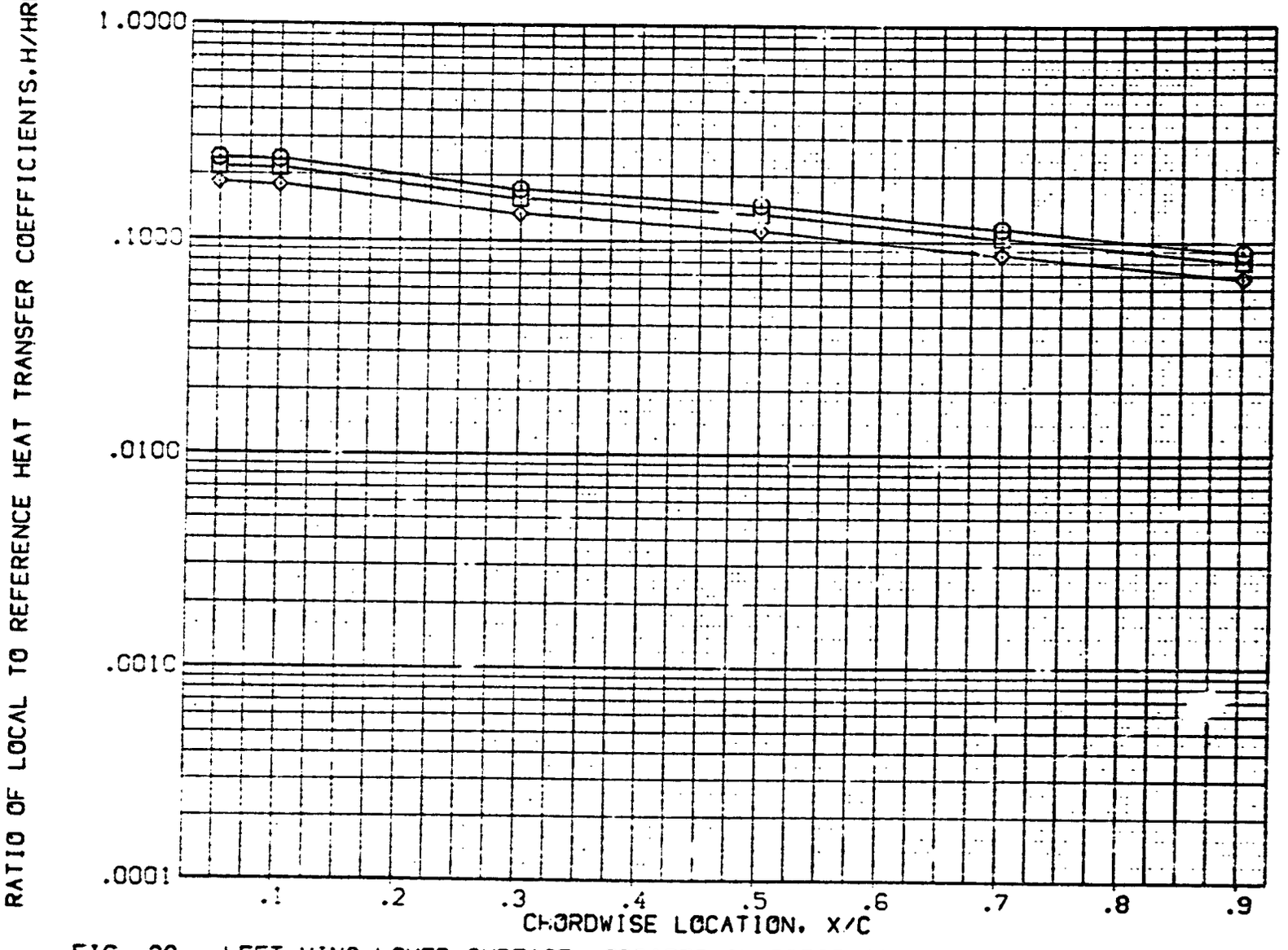

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REVF03)

SYMBOL	HAW/HT	ZY/B	MACH
○	.650	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.00	BETA	.000
RN/L	1.000		

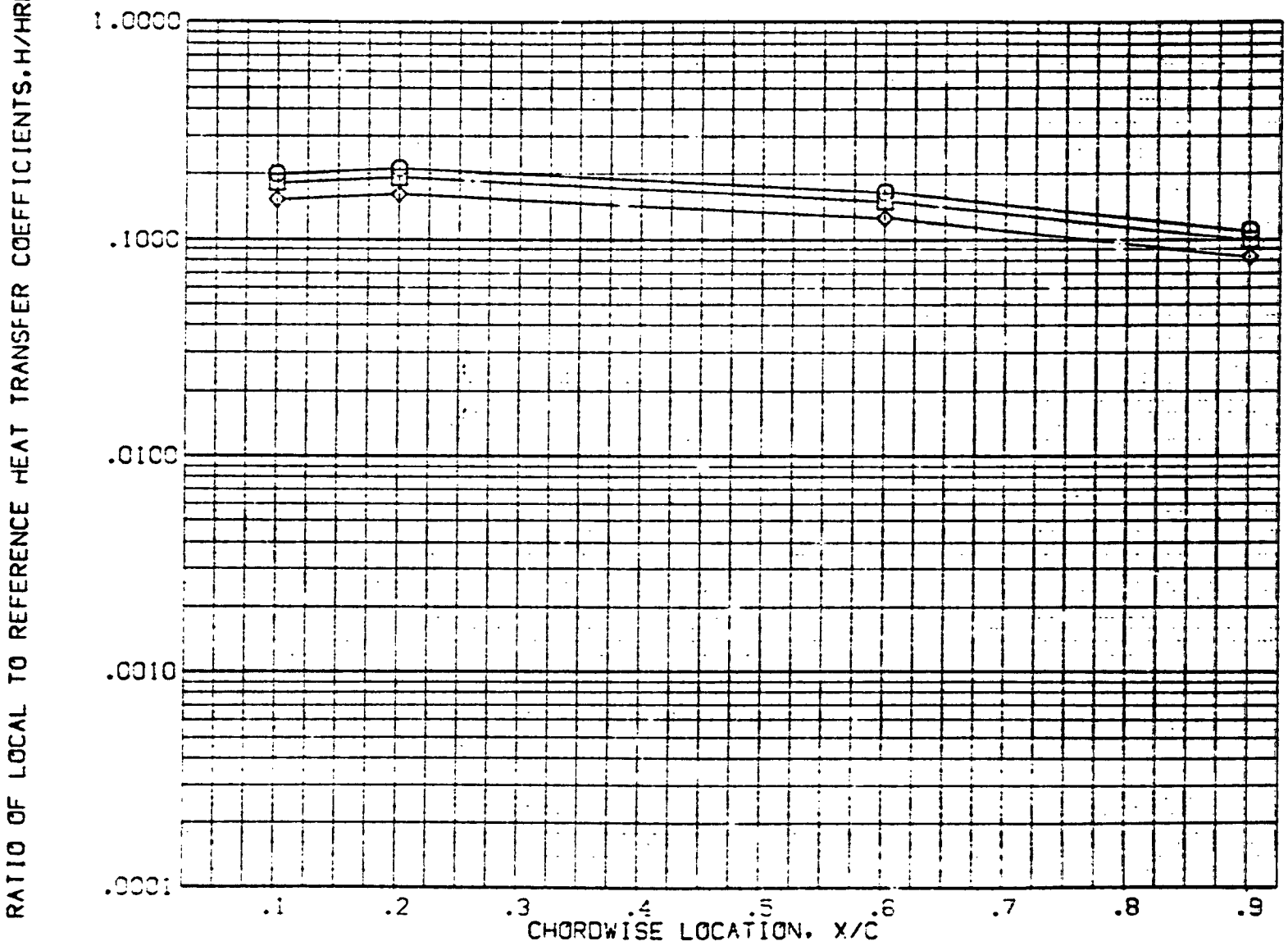

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF03)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

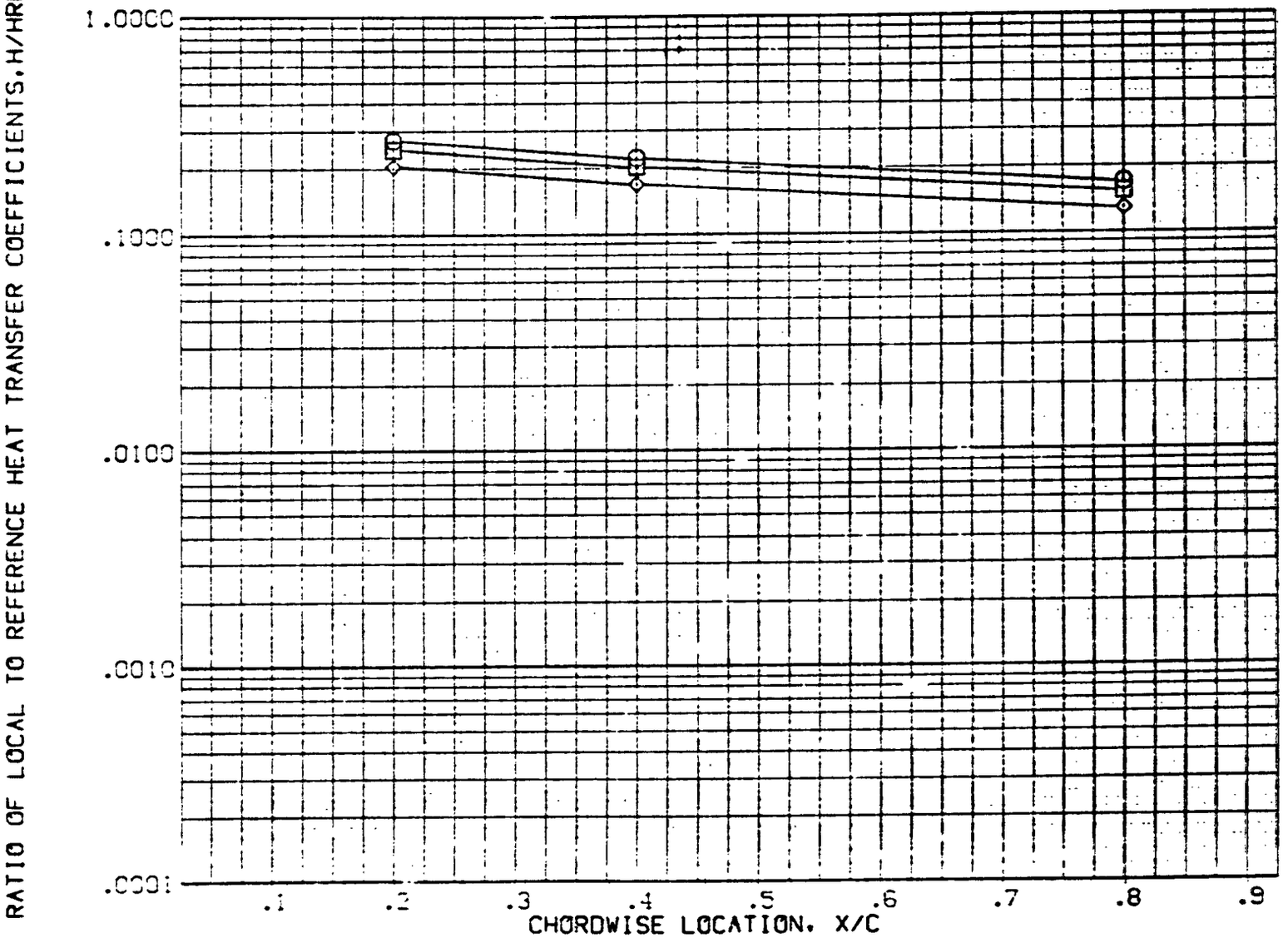

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 I128 01+T1 WING LOWER SURFACE (REVF04)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA 90.000 BETA .000

RN/L 1.000

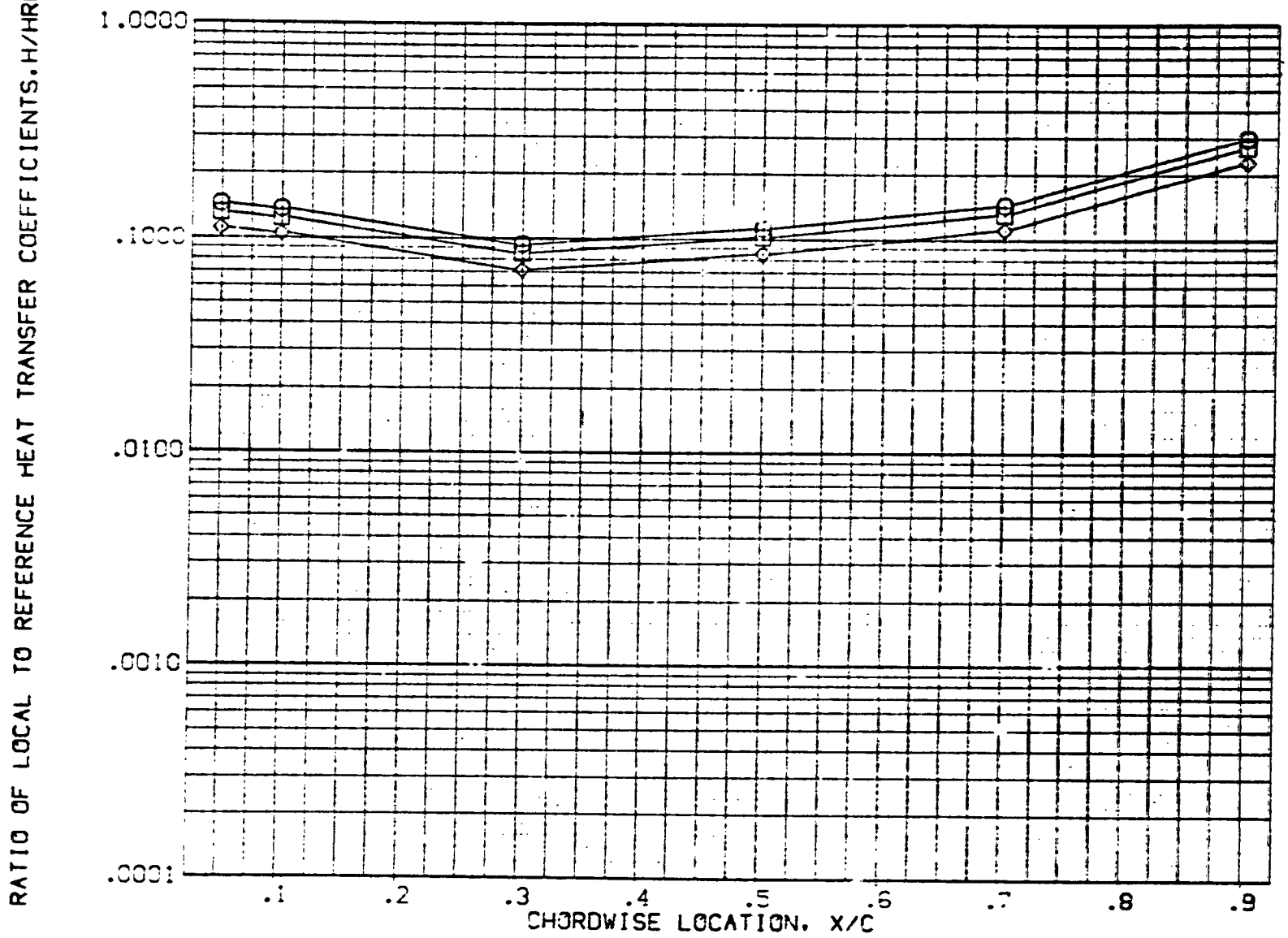

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVFD4)

SYMBOL	HAW/HT	ZY/B	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

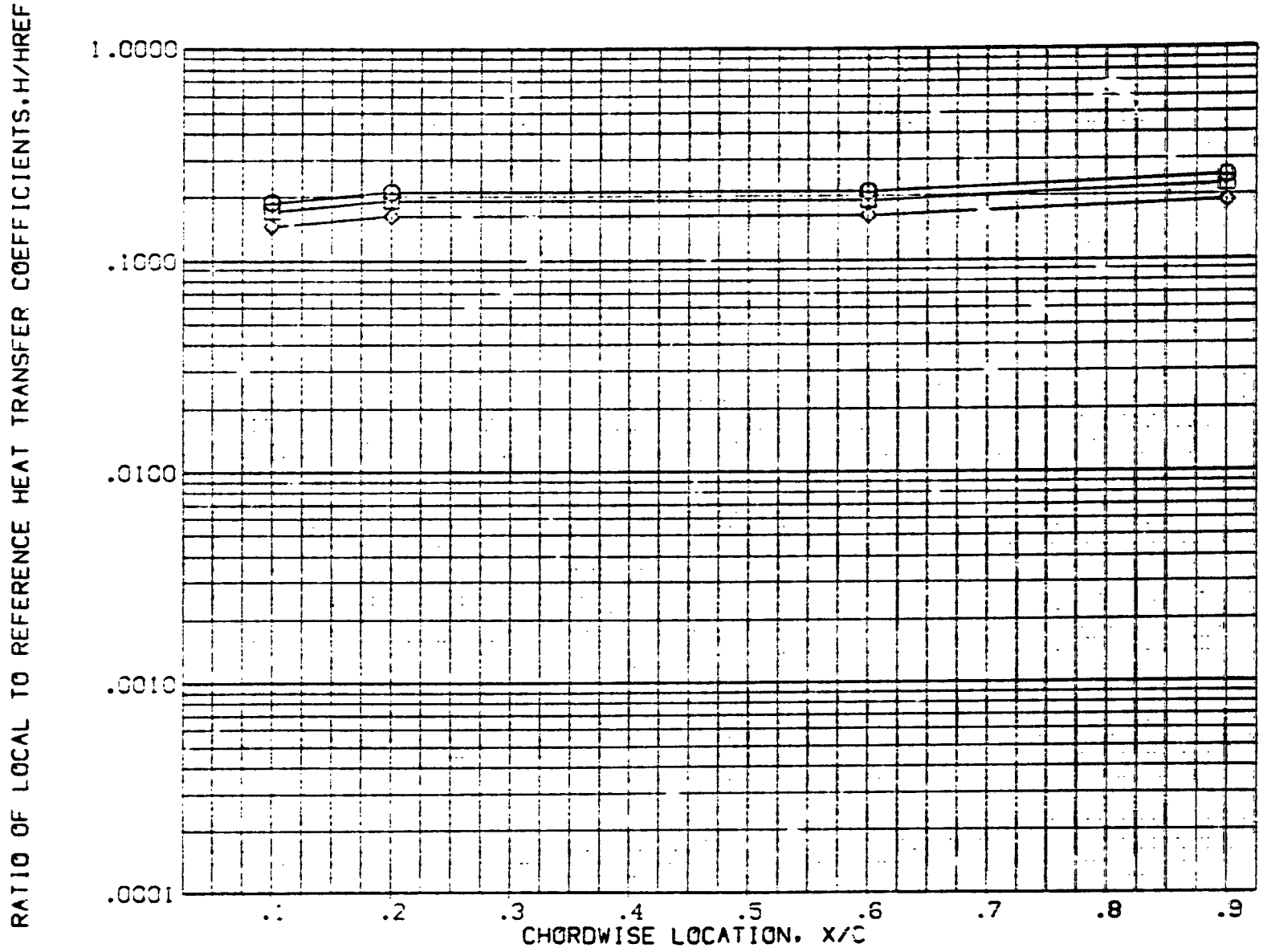

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

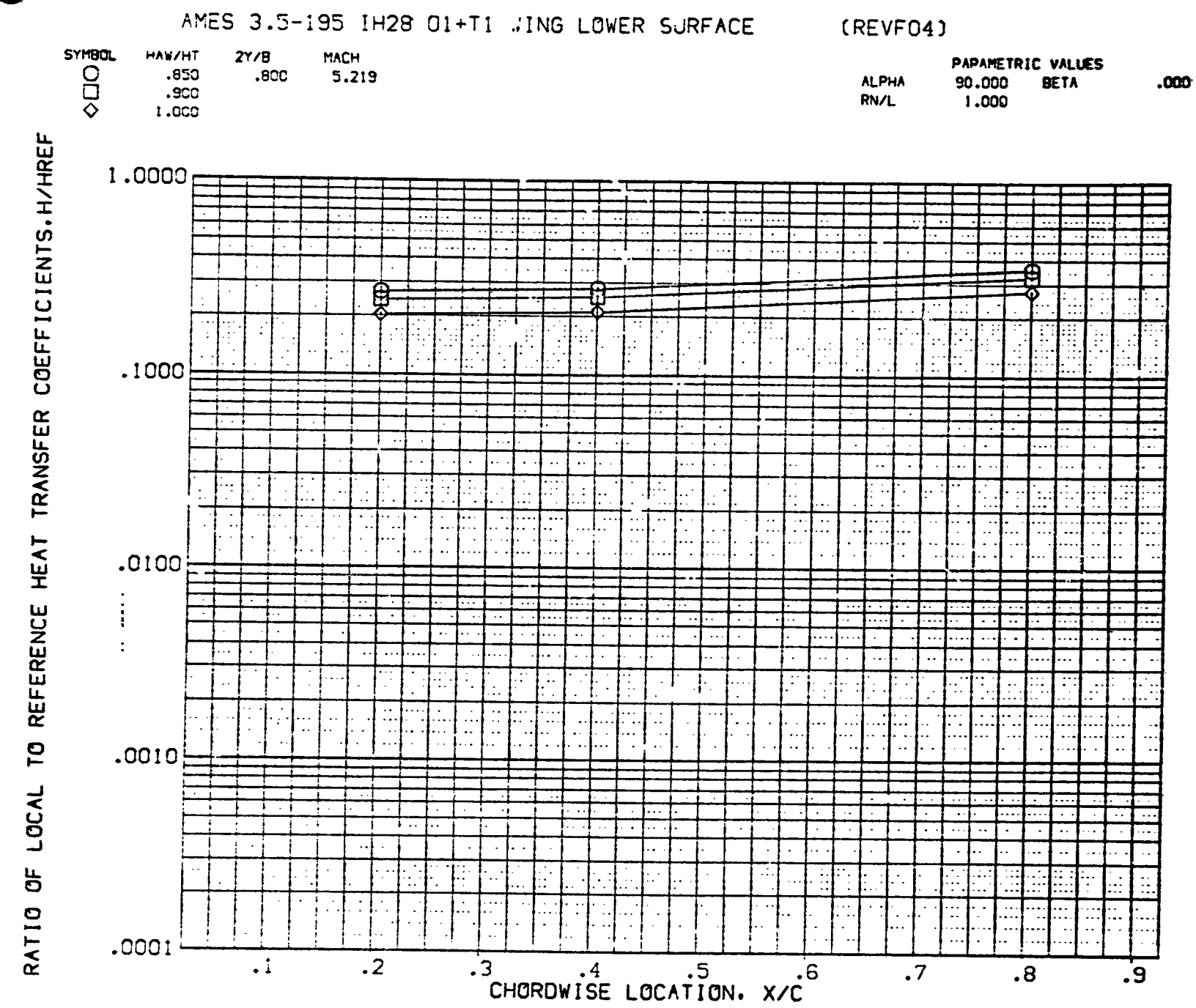

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 iH28 01-T1 WING LOWER SURFACE (REVF05)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

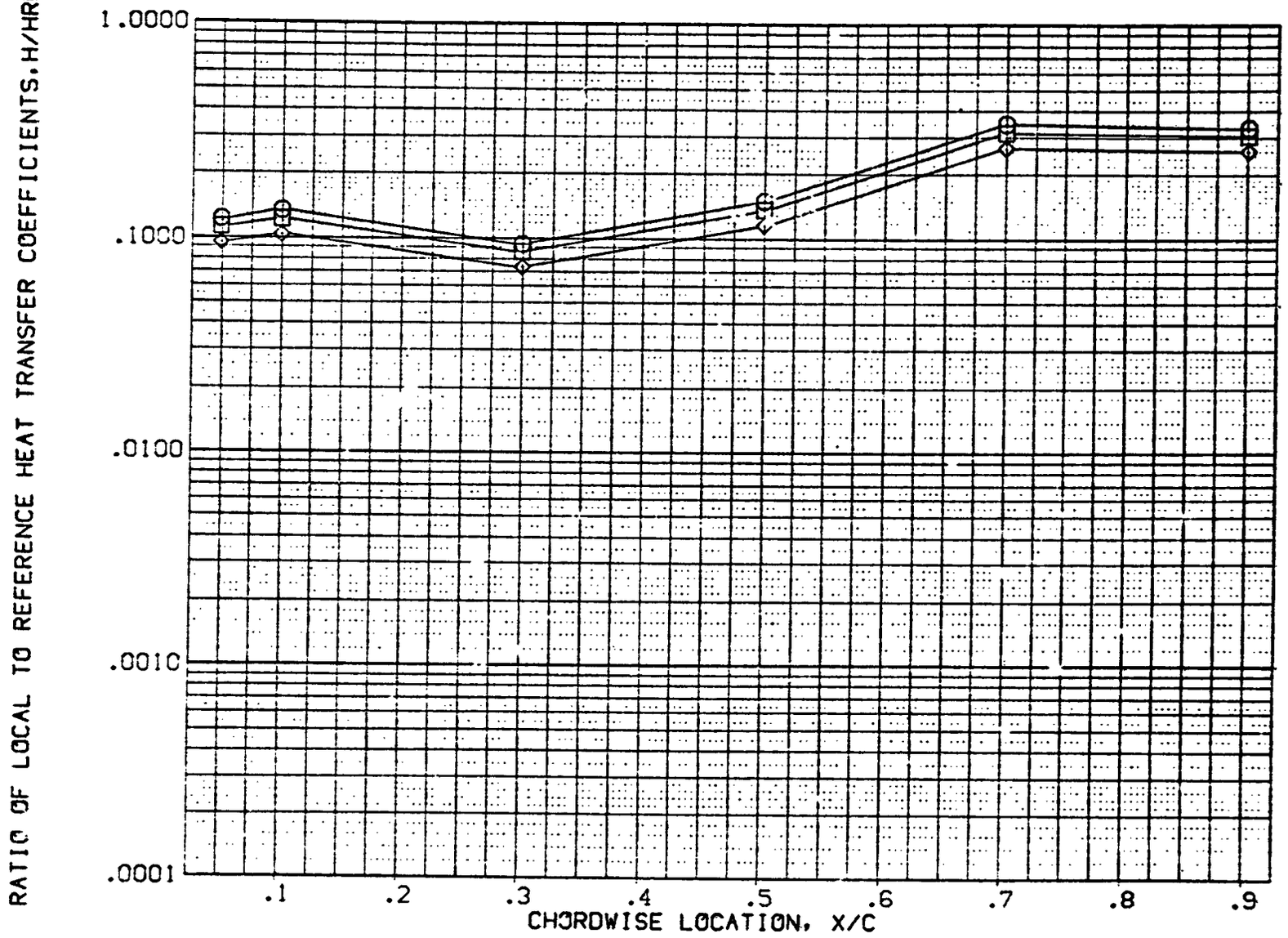

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+TI WING LOWER SURFACE (REVF05)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

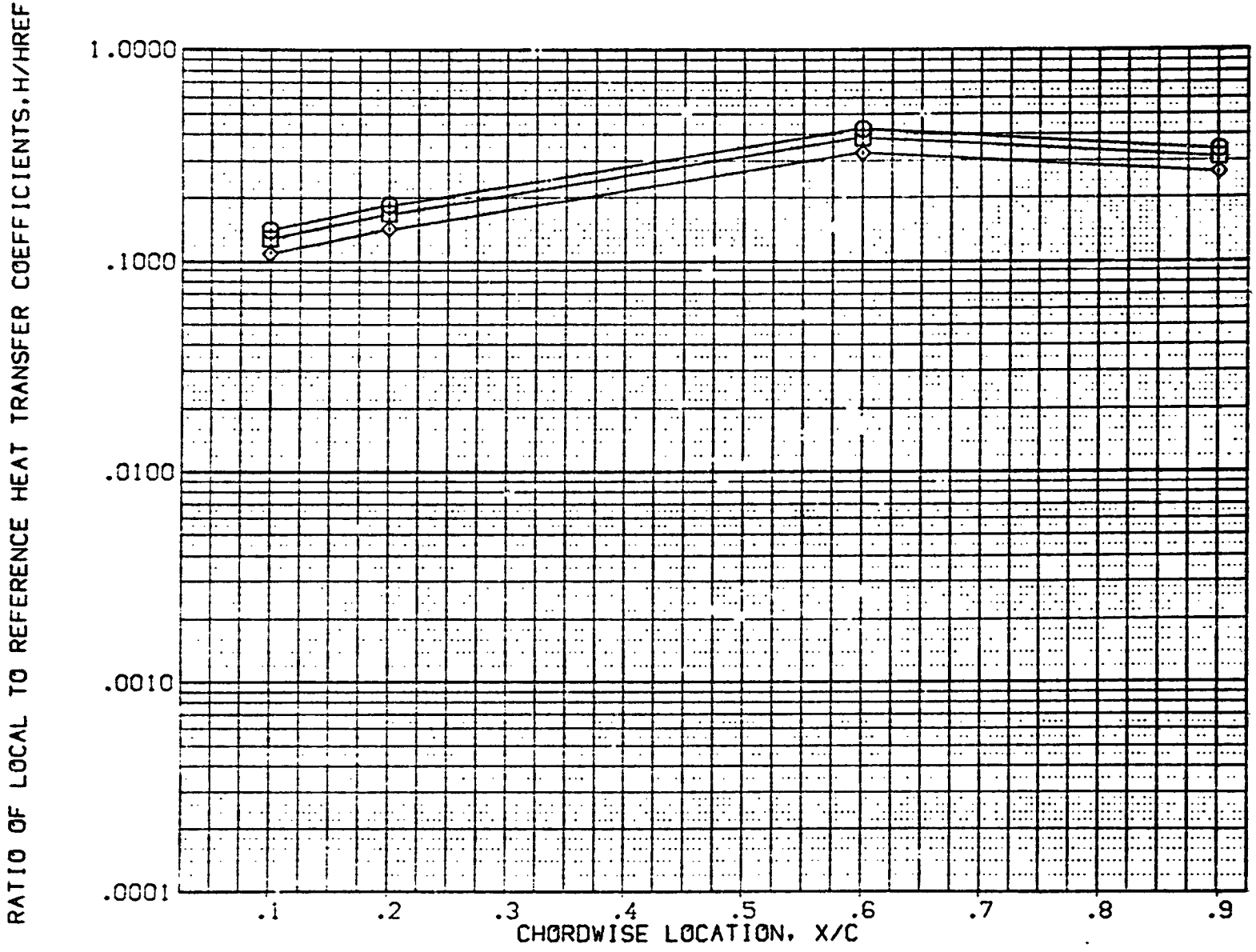

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

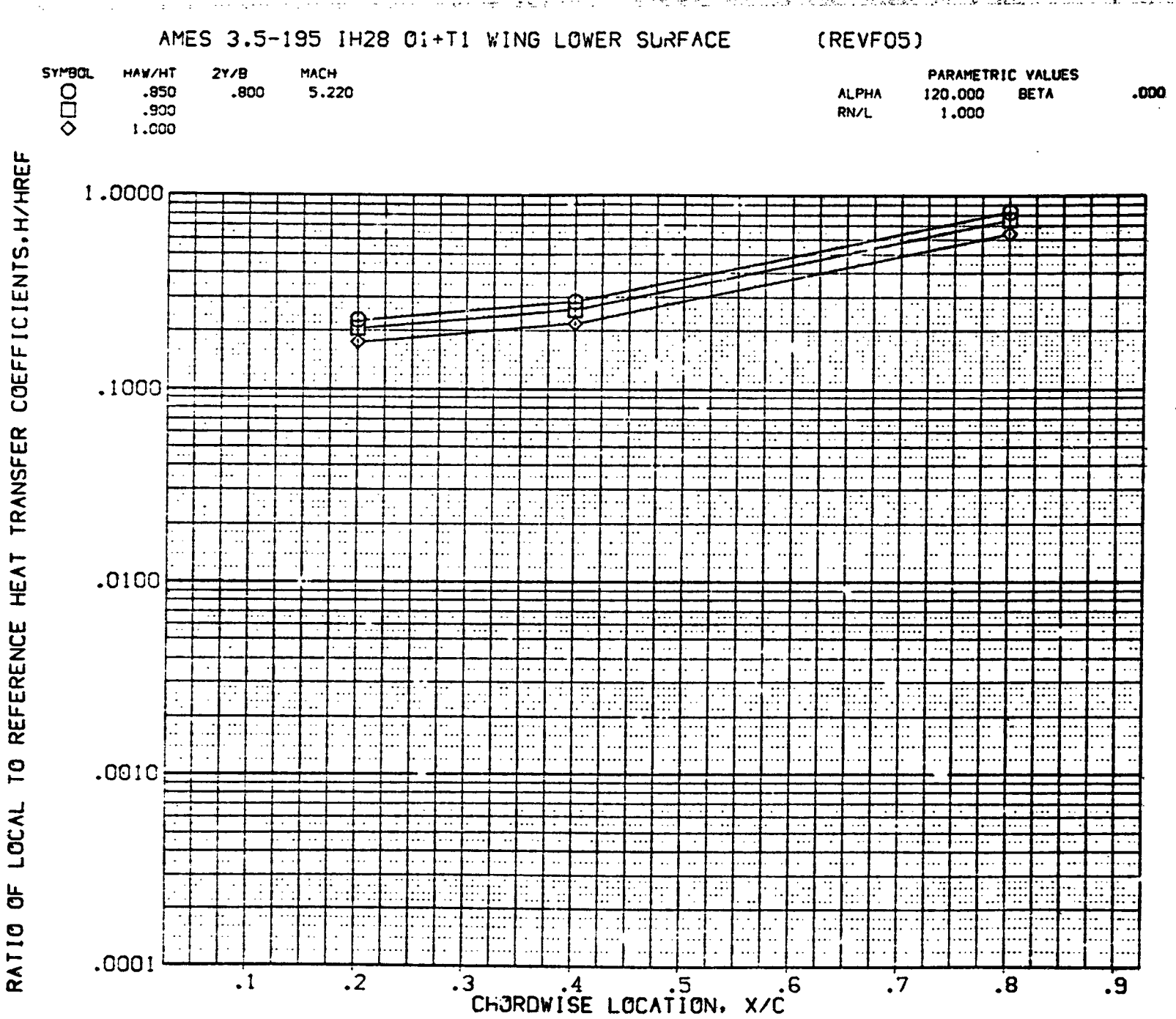

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF06)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

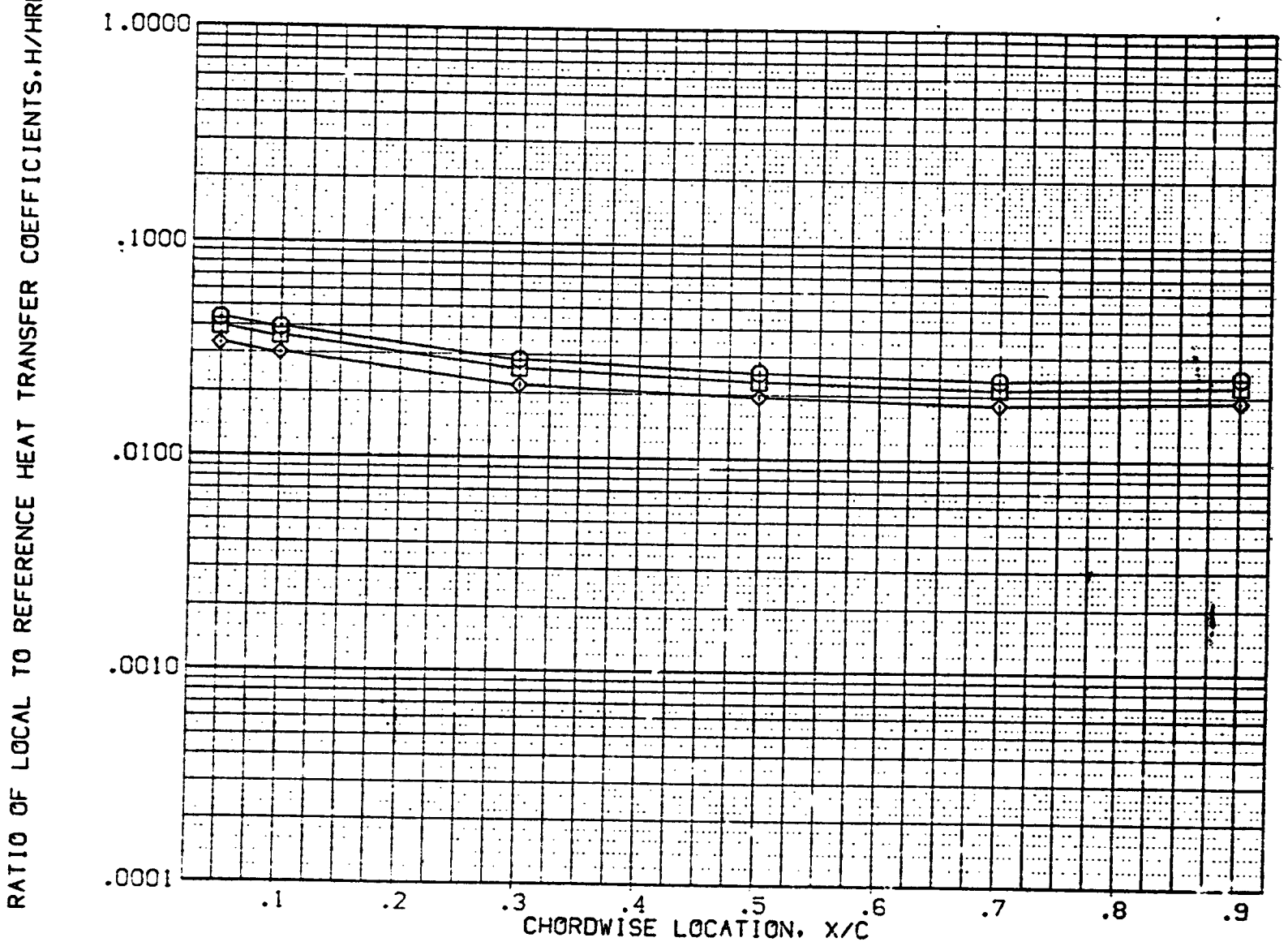

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF06)

SYMBOL	HAW/HT	ZY/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-12C.000	BETA	.000
RN/L	1.000		

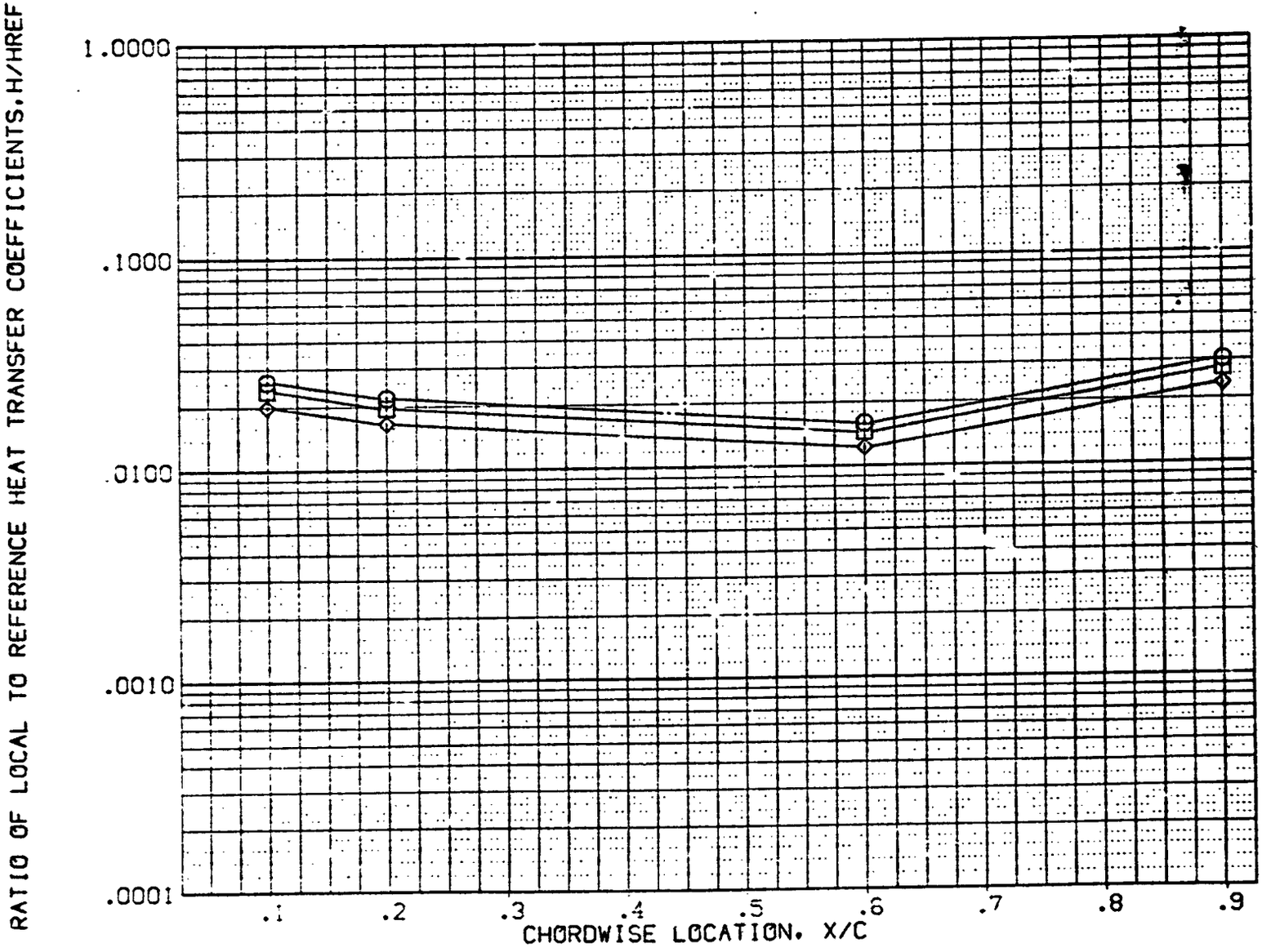

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REVF06)

SYMBOL	HAW/HT	ZY/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

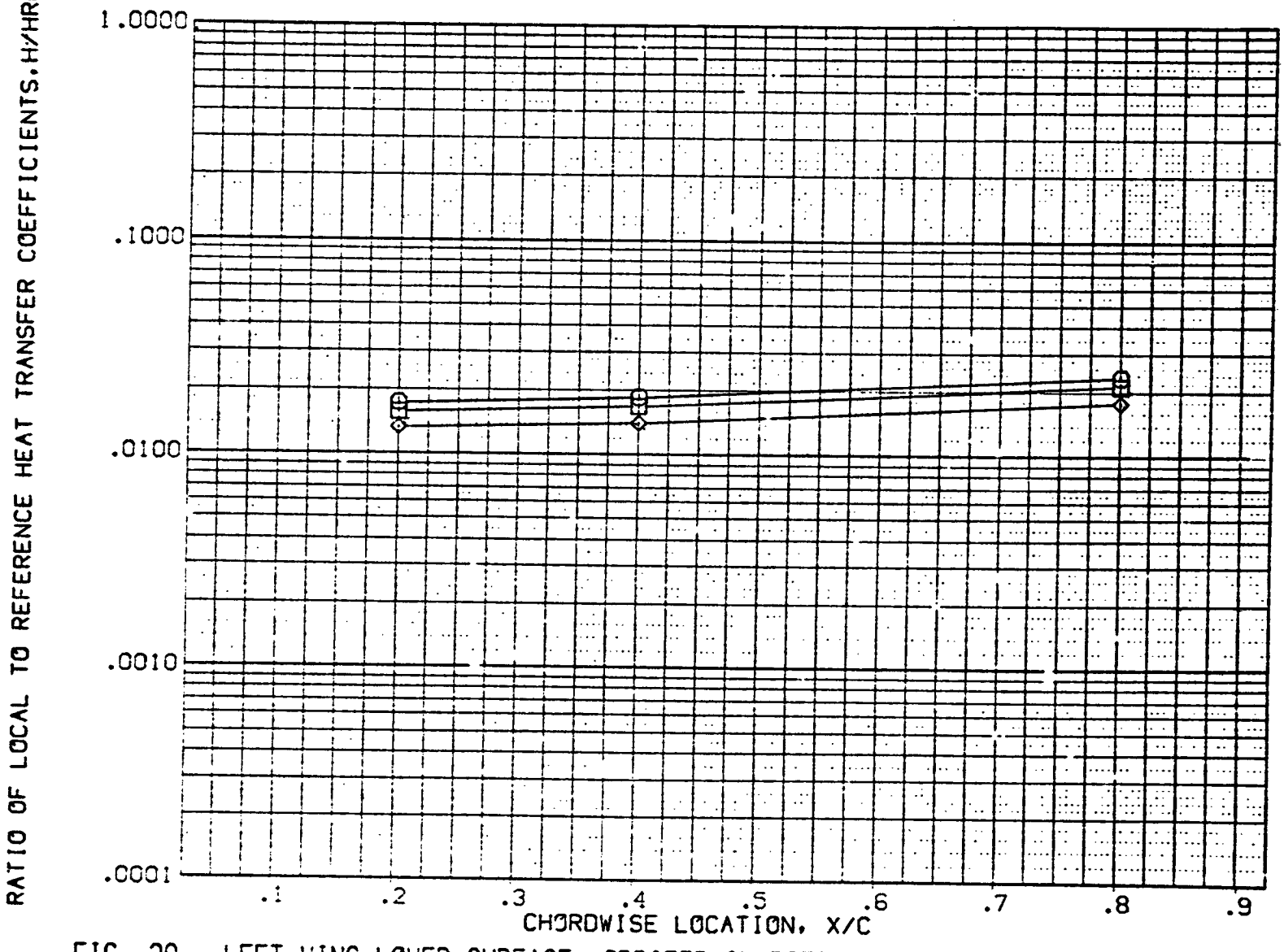

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF07)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

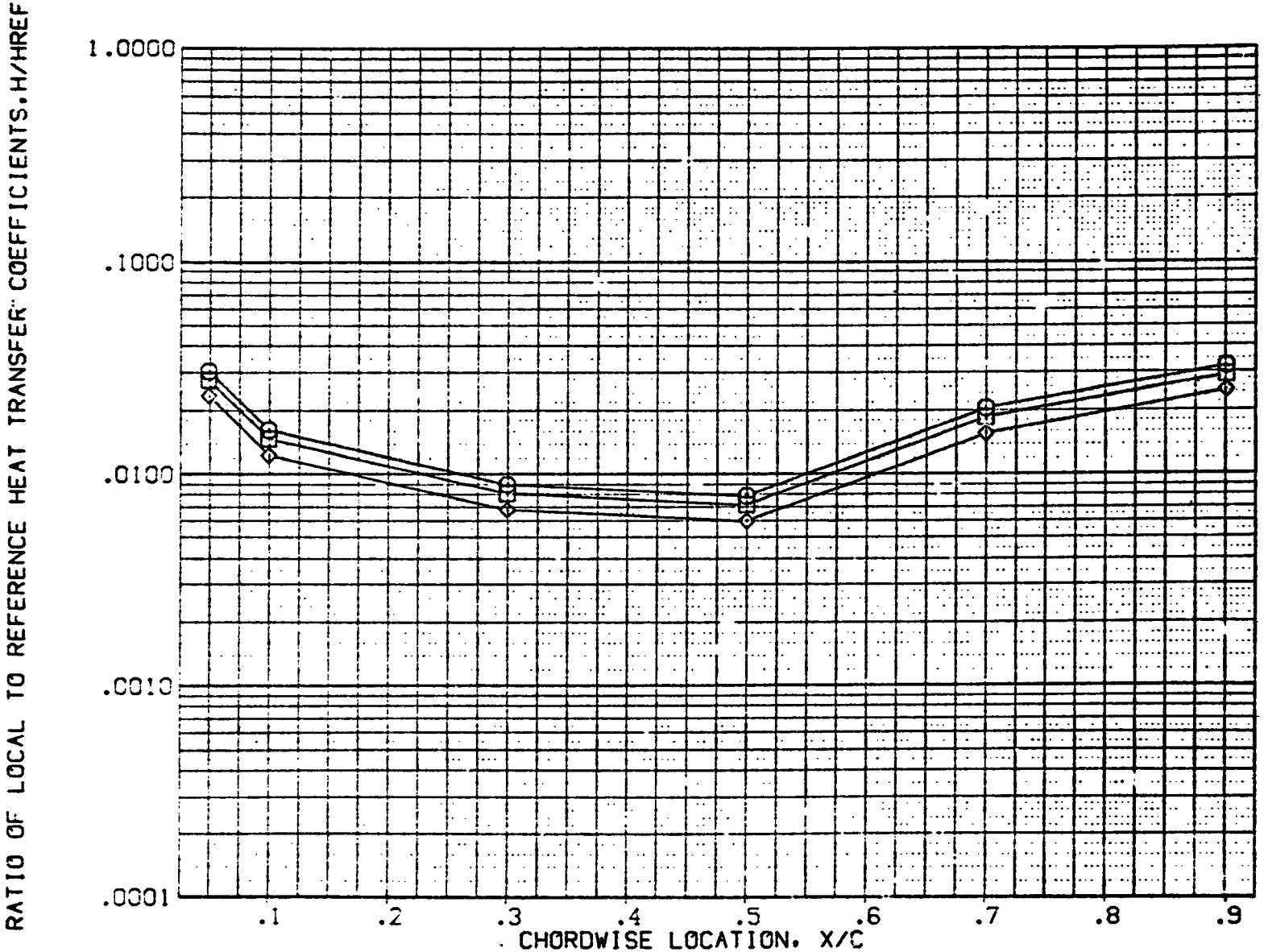

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

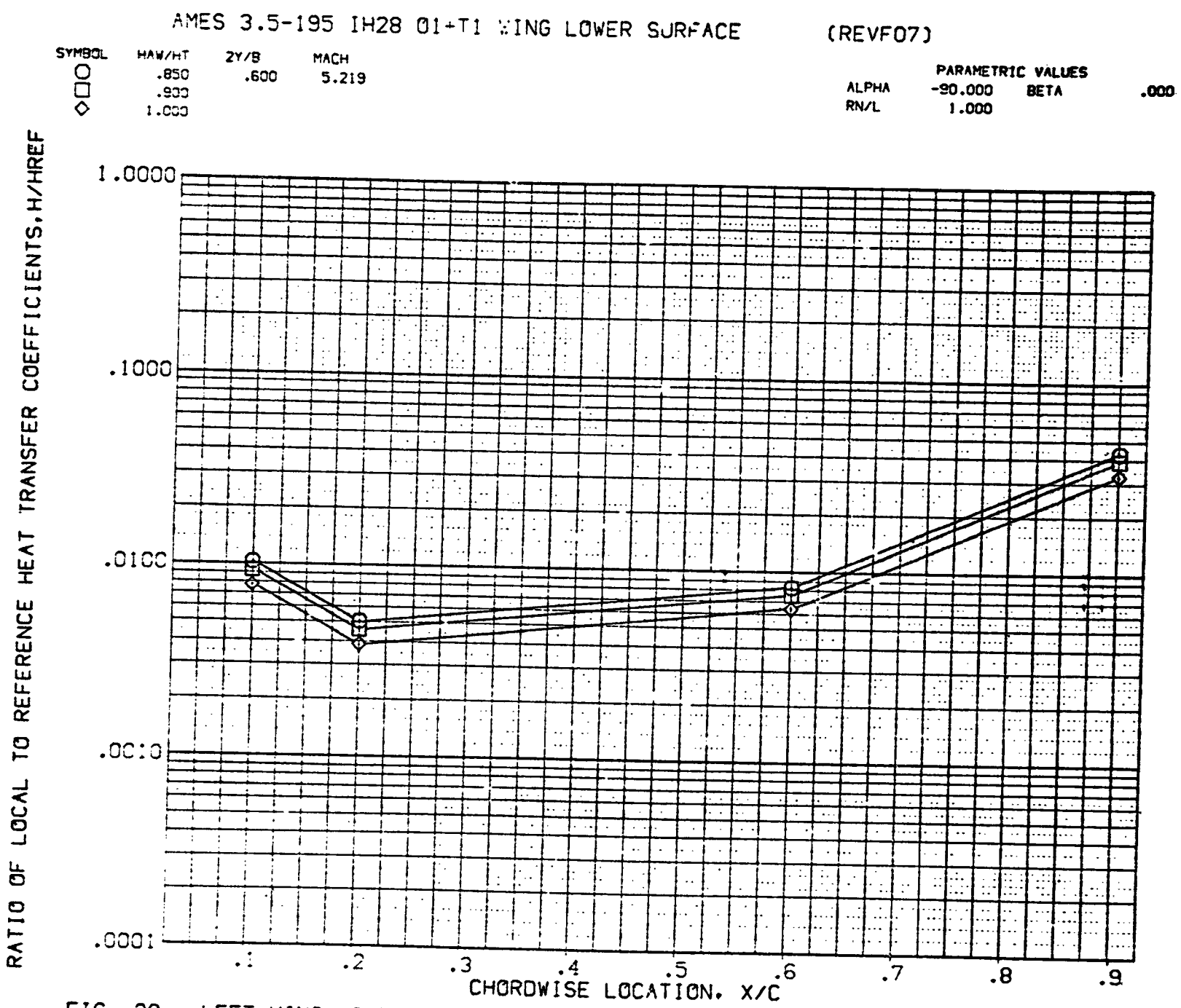

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF07)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

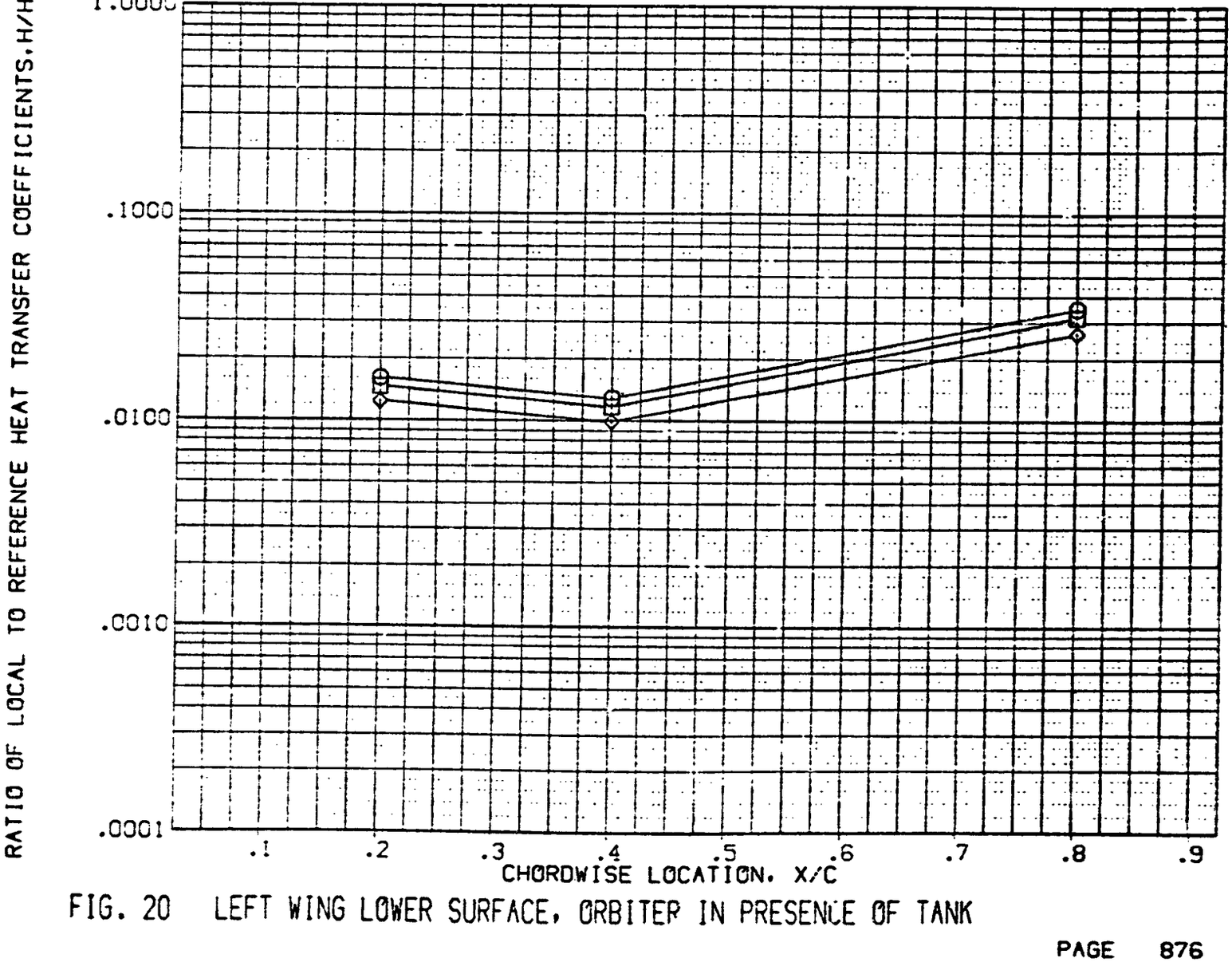

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+TI WING LOWER SURFACE (REVF08)

SYMBOL	HAW/HT	2Y/B	MACH
□	.850	.400	5.220
○	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

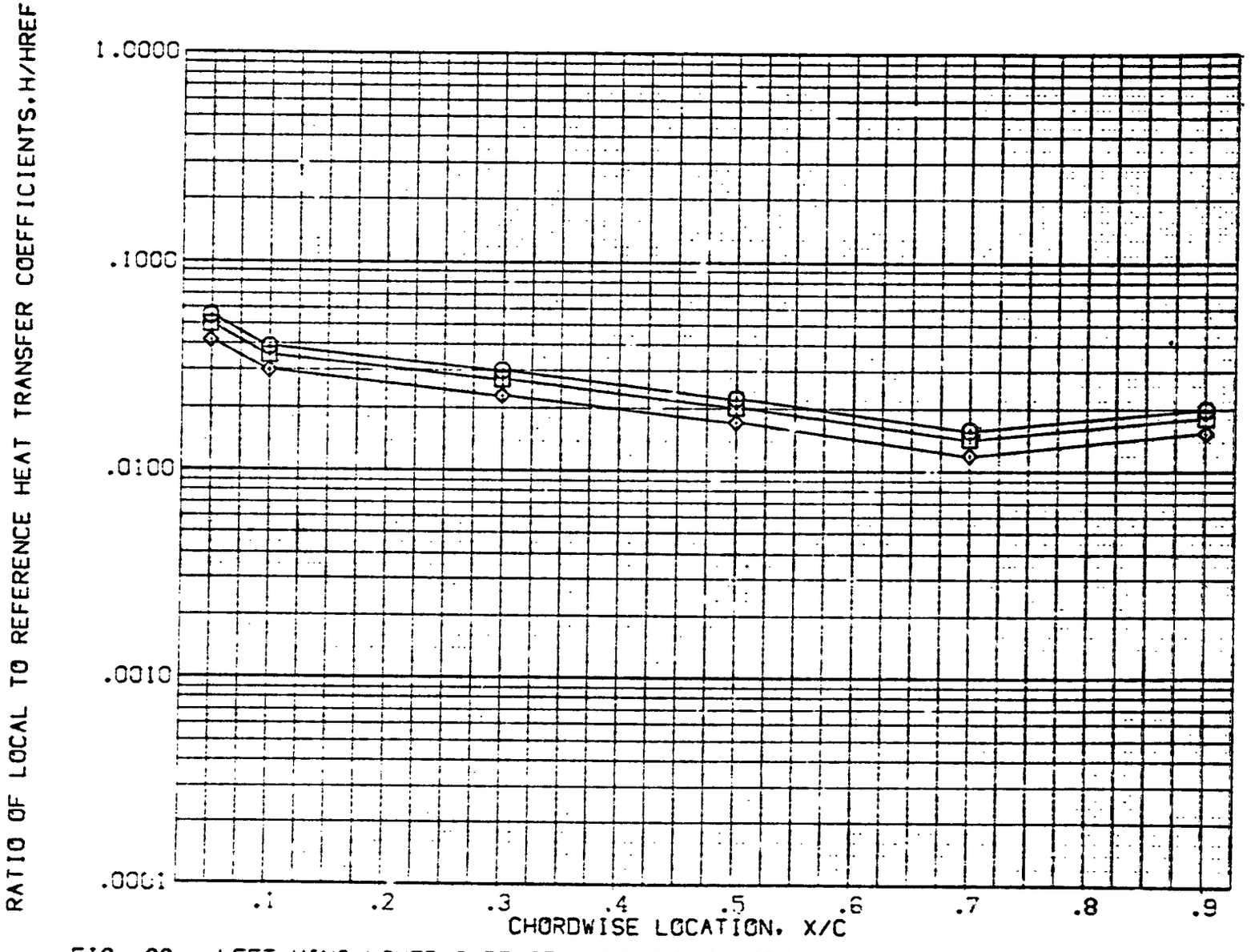

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

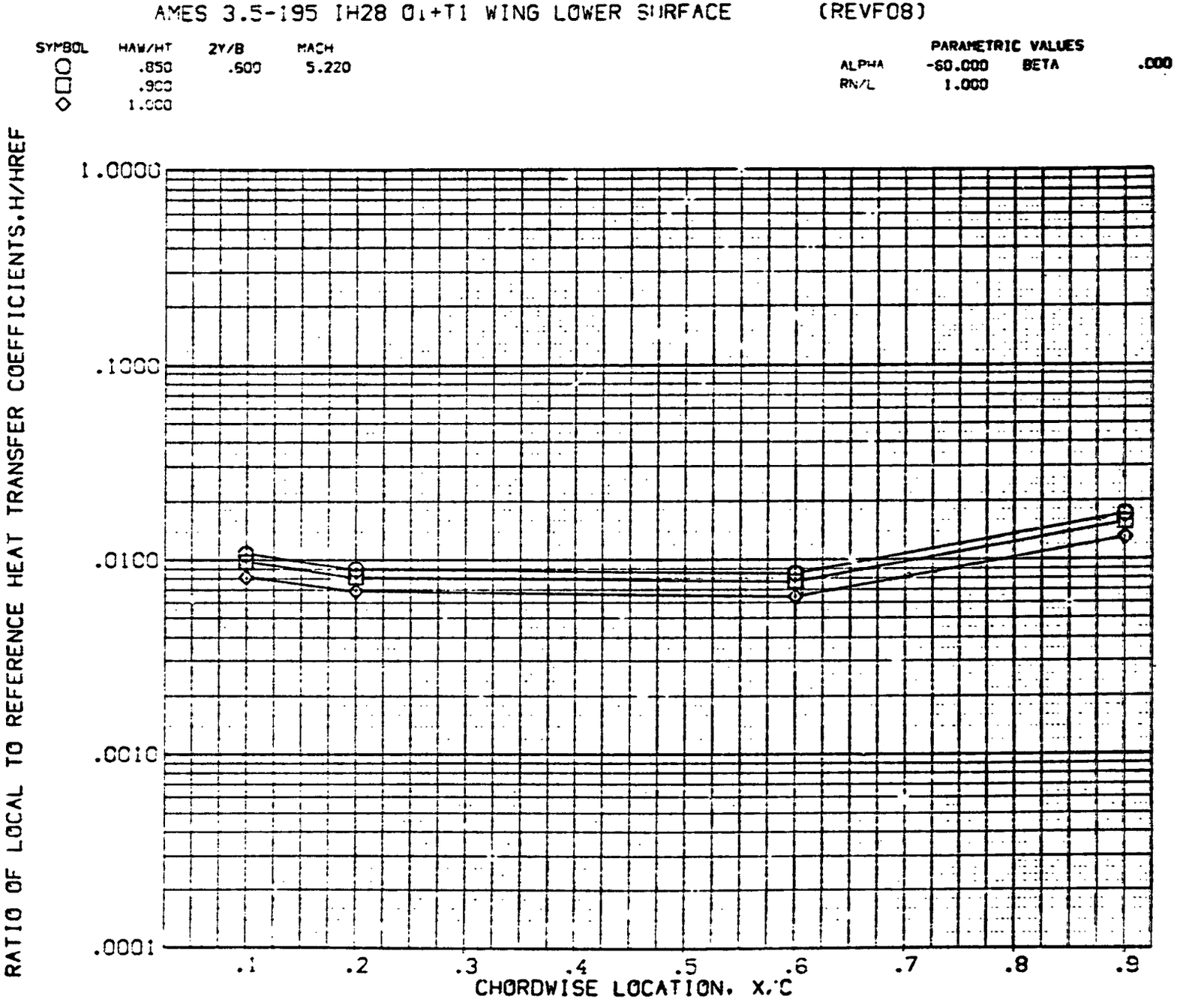

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

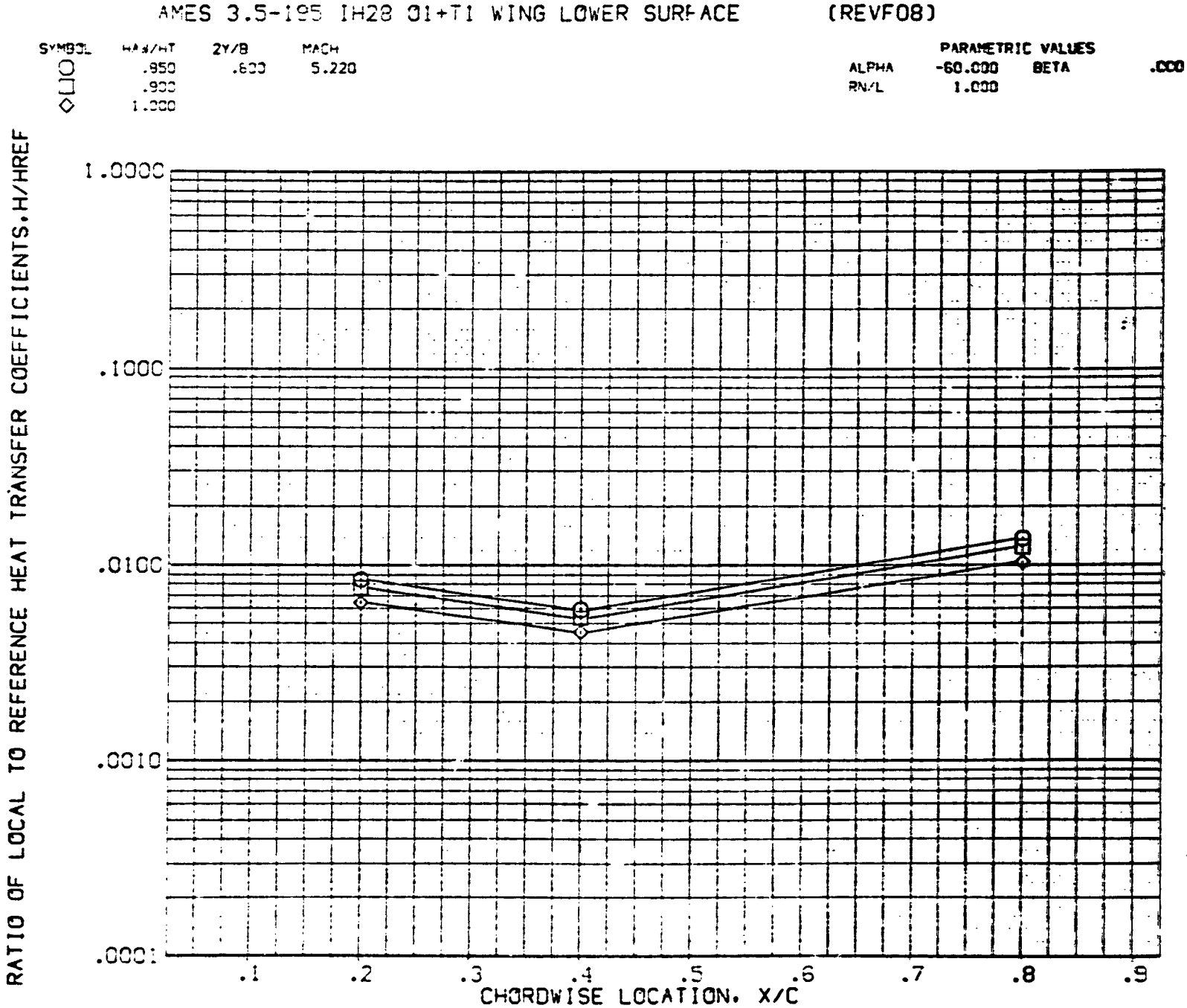

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF09)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -30.000 BETA .000

PN/L 1.000

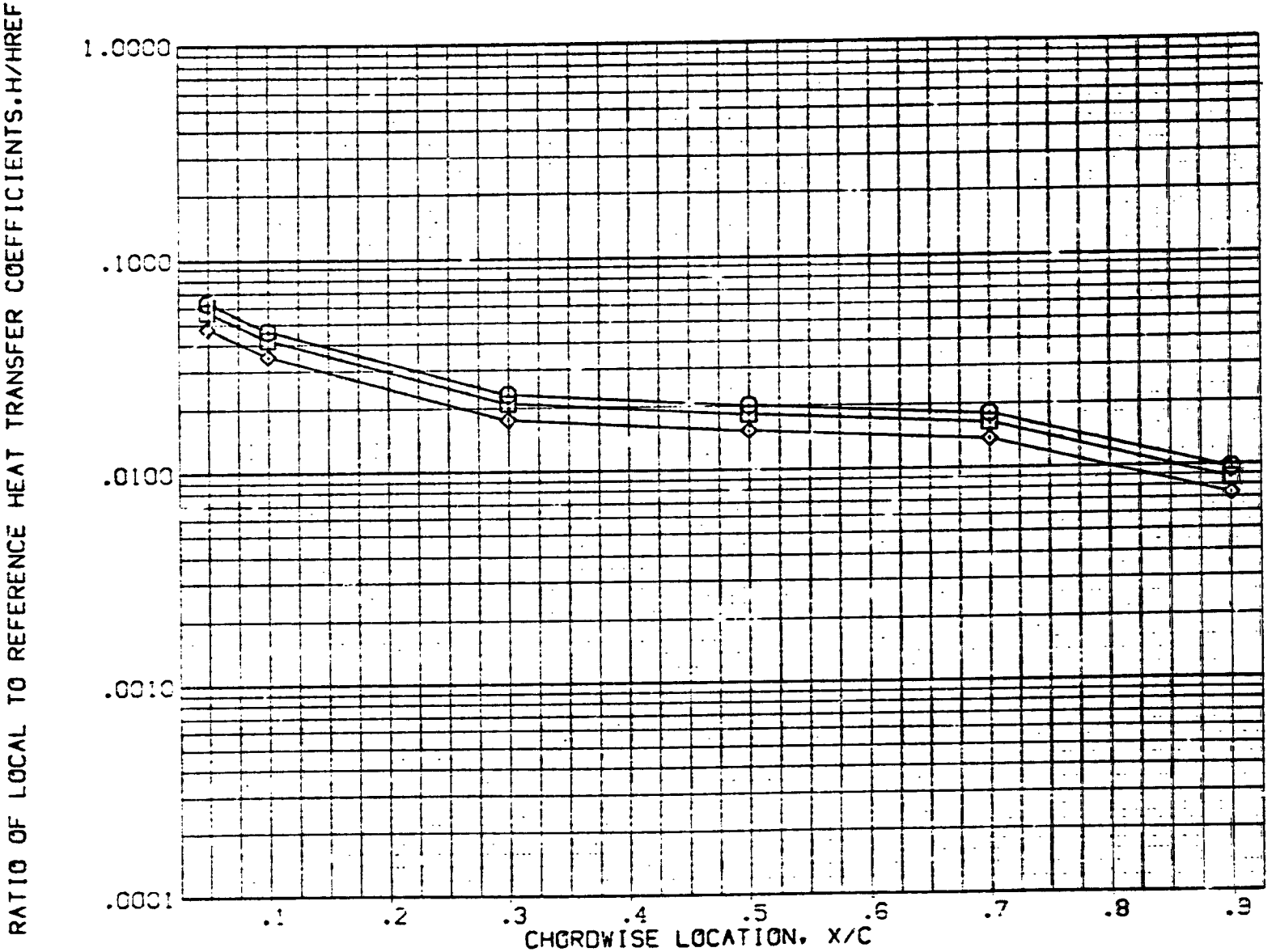

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01 PT1 WING LOWER SURFACE (REVF09)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

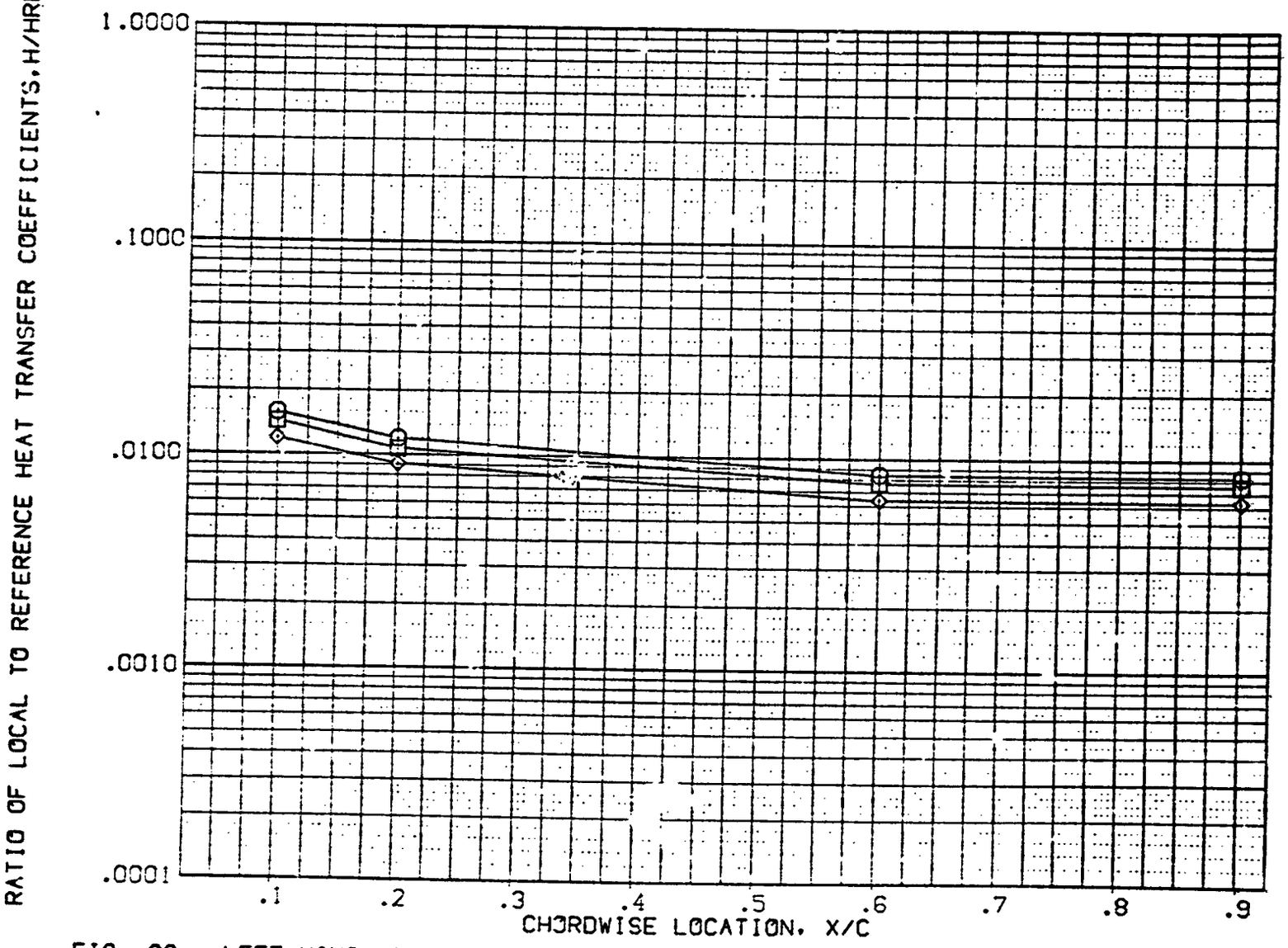

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

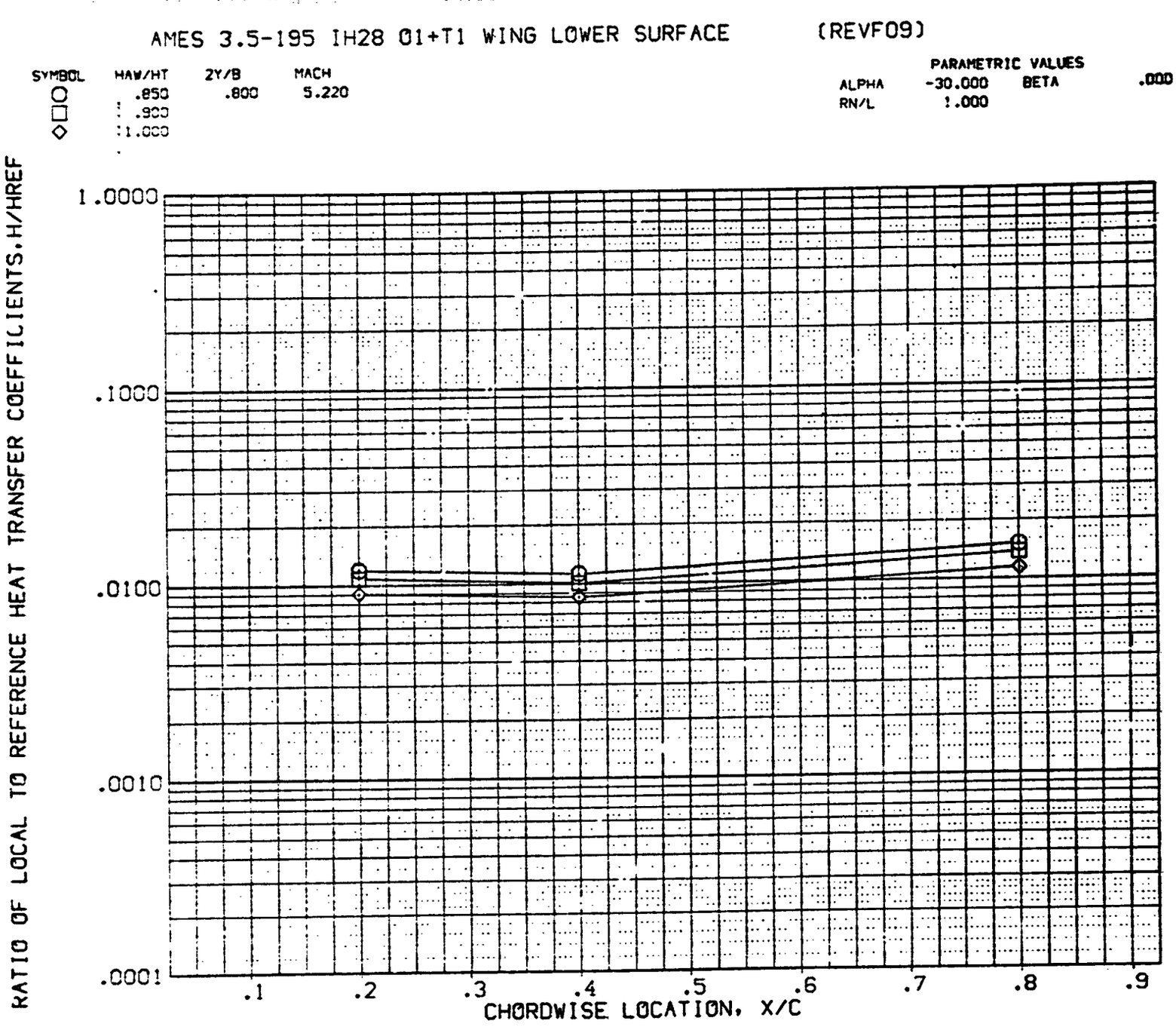

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

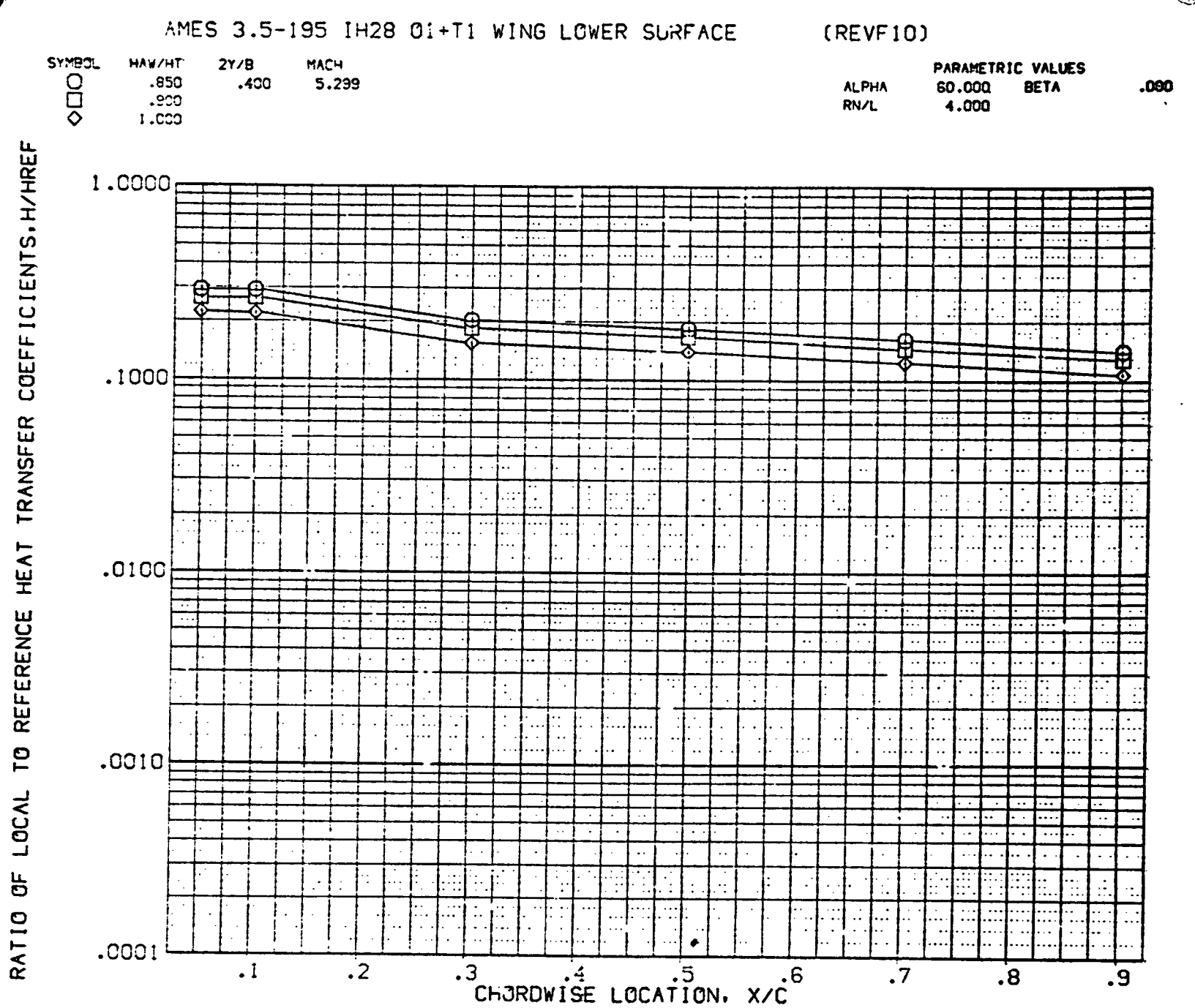

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

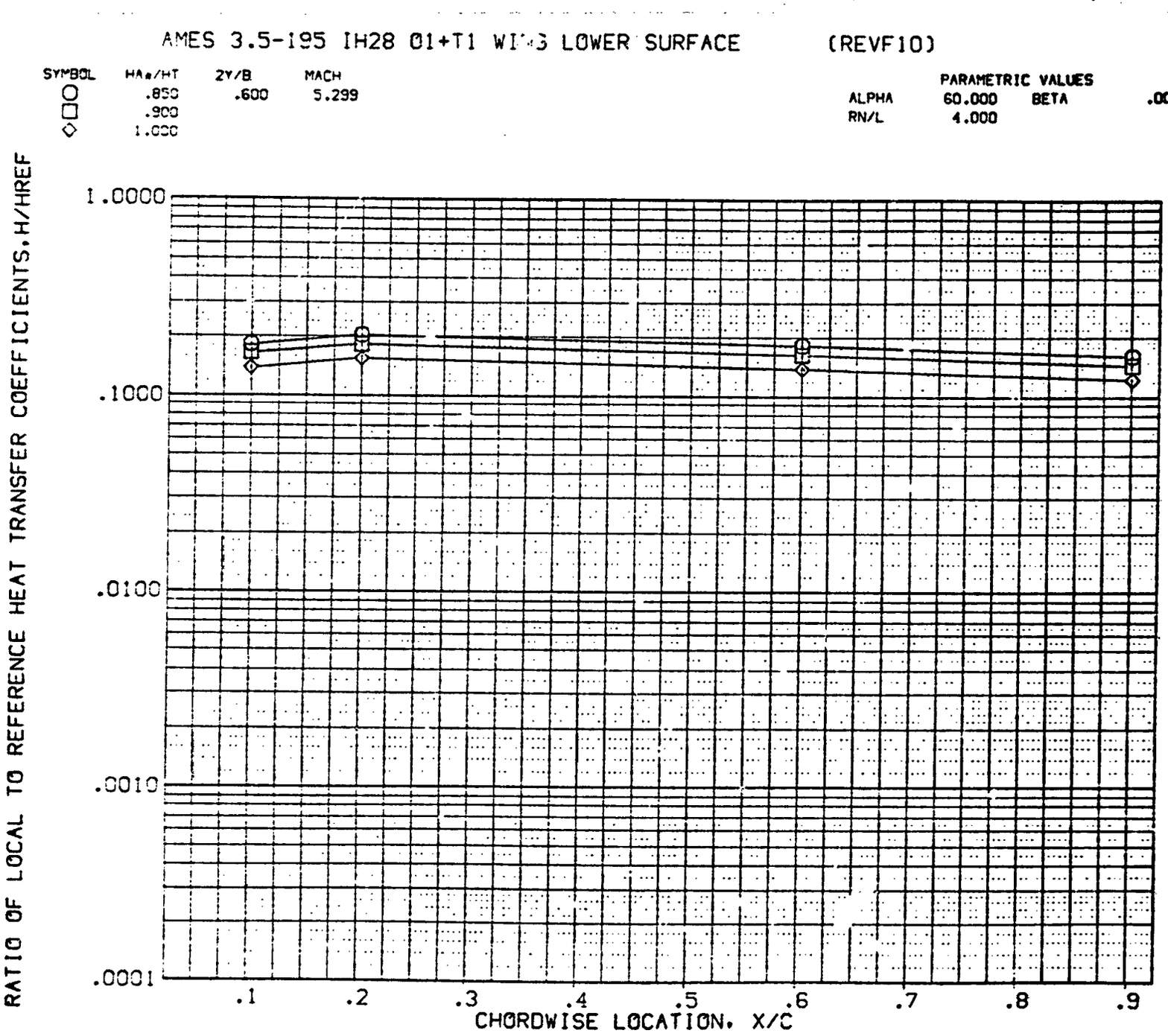

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

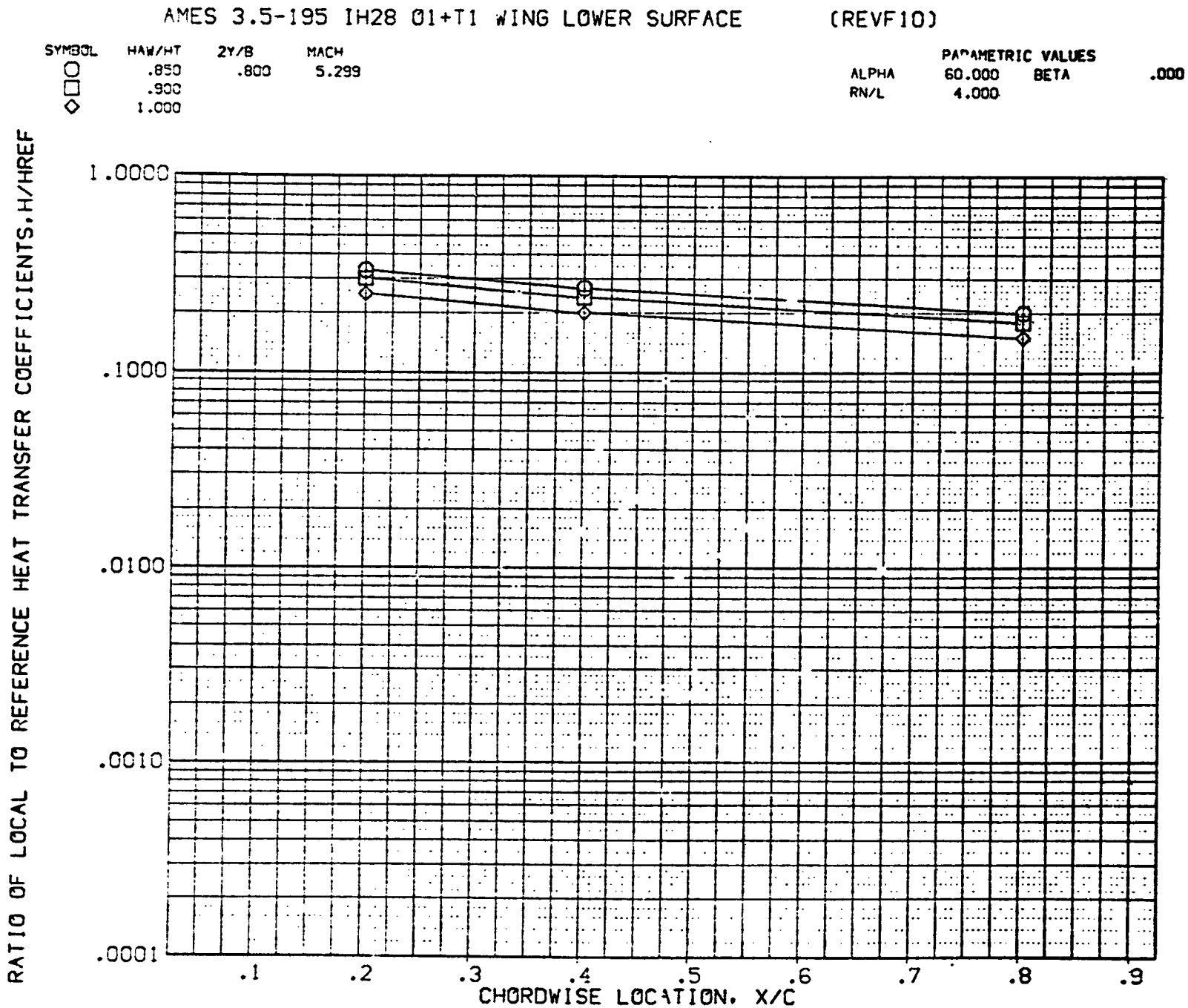

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

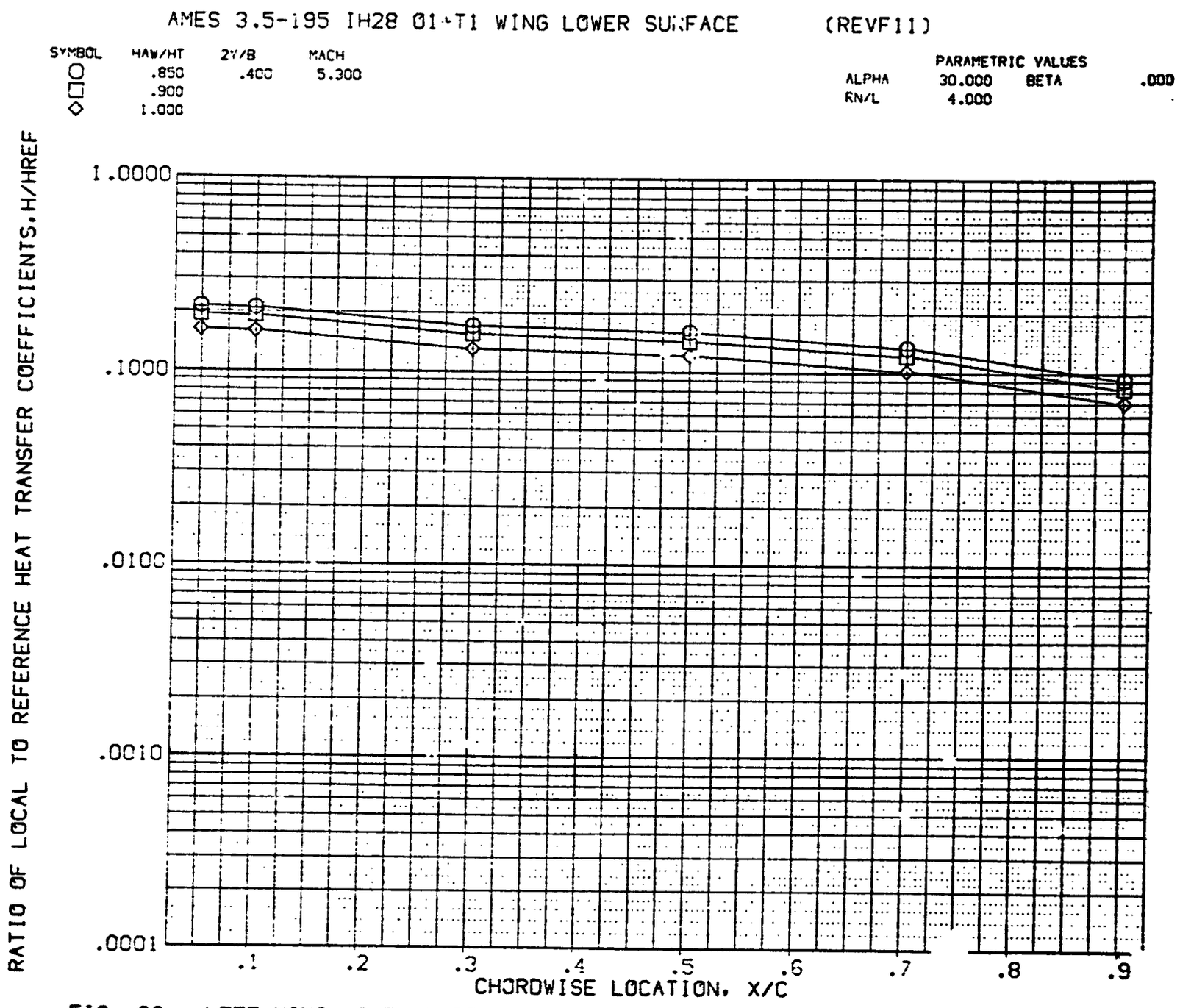

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF11)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.300
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	4.000		

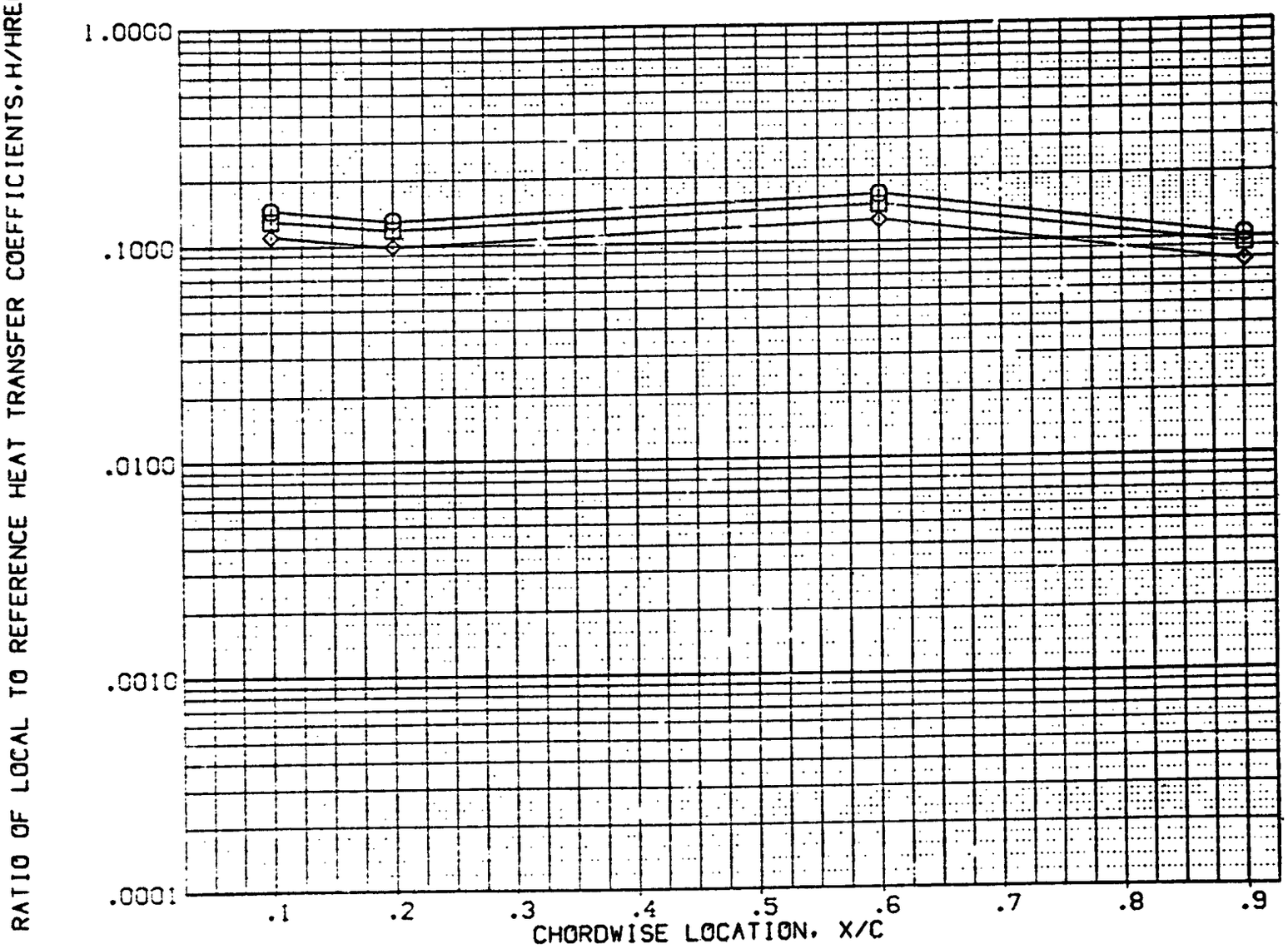

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

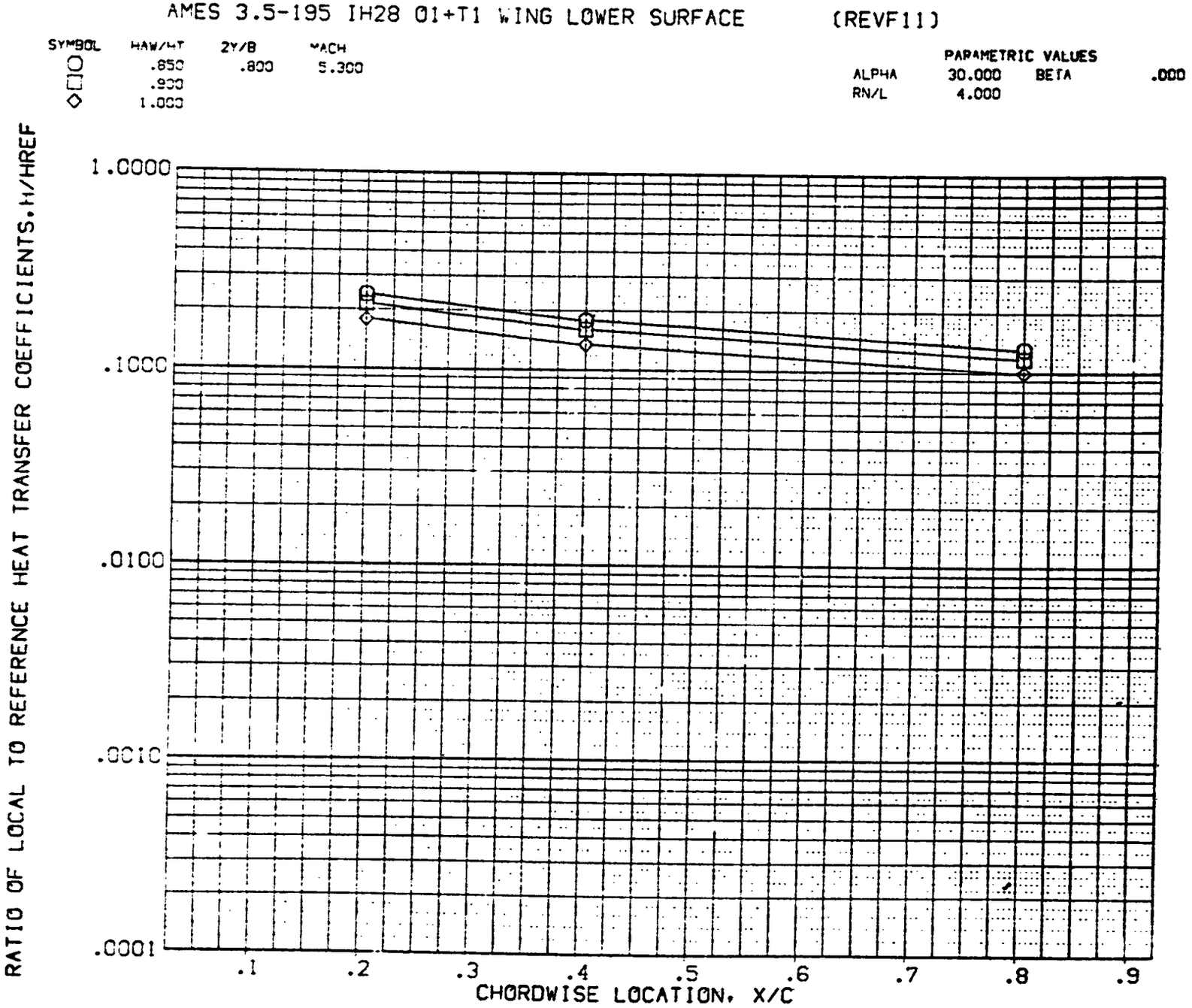

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01-T1 WING LOWER SURFACE (REVF12)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

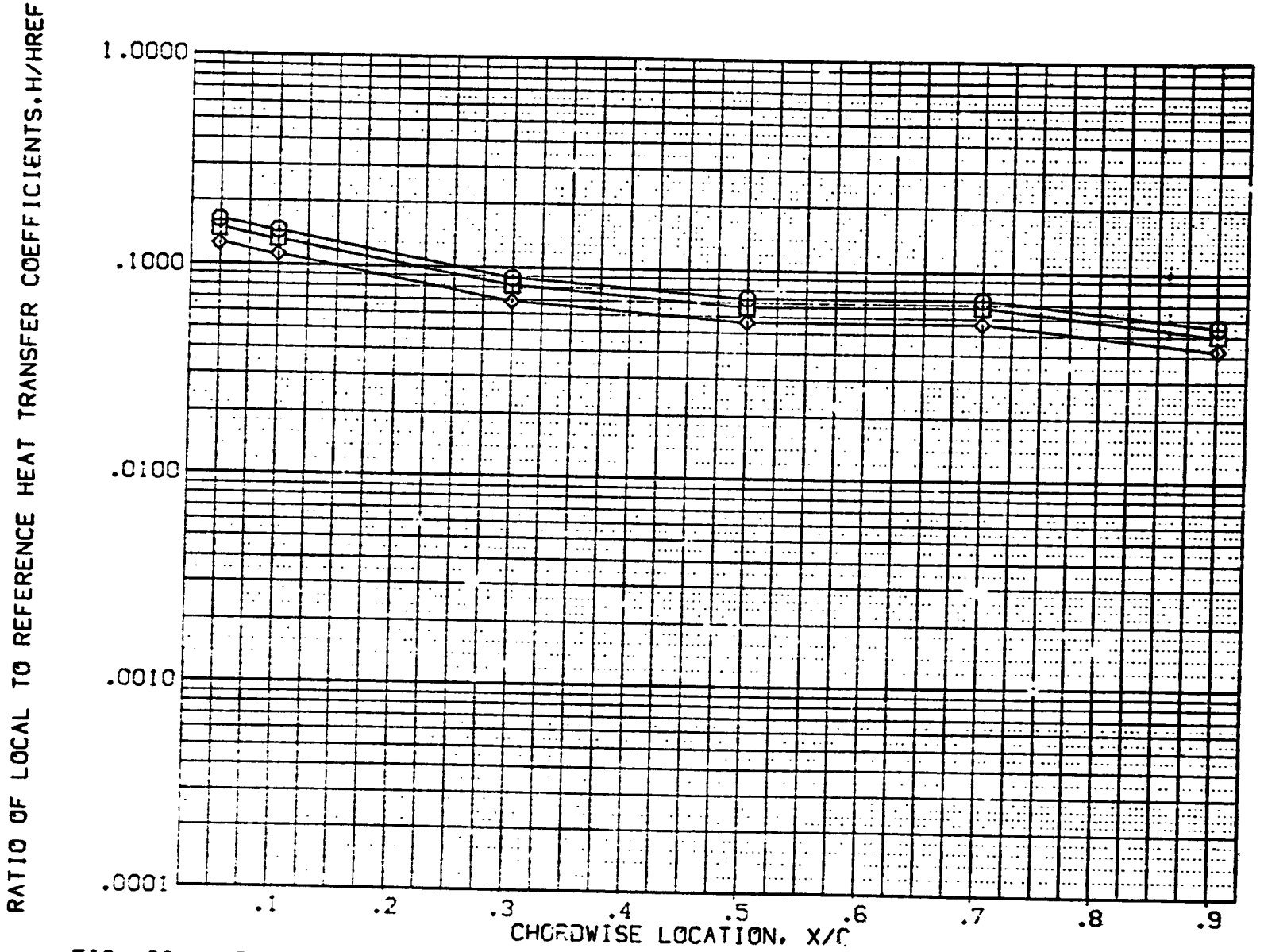

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

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OF POOR QUALITY

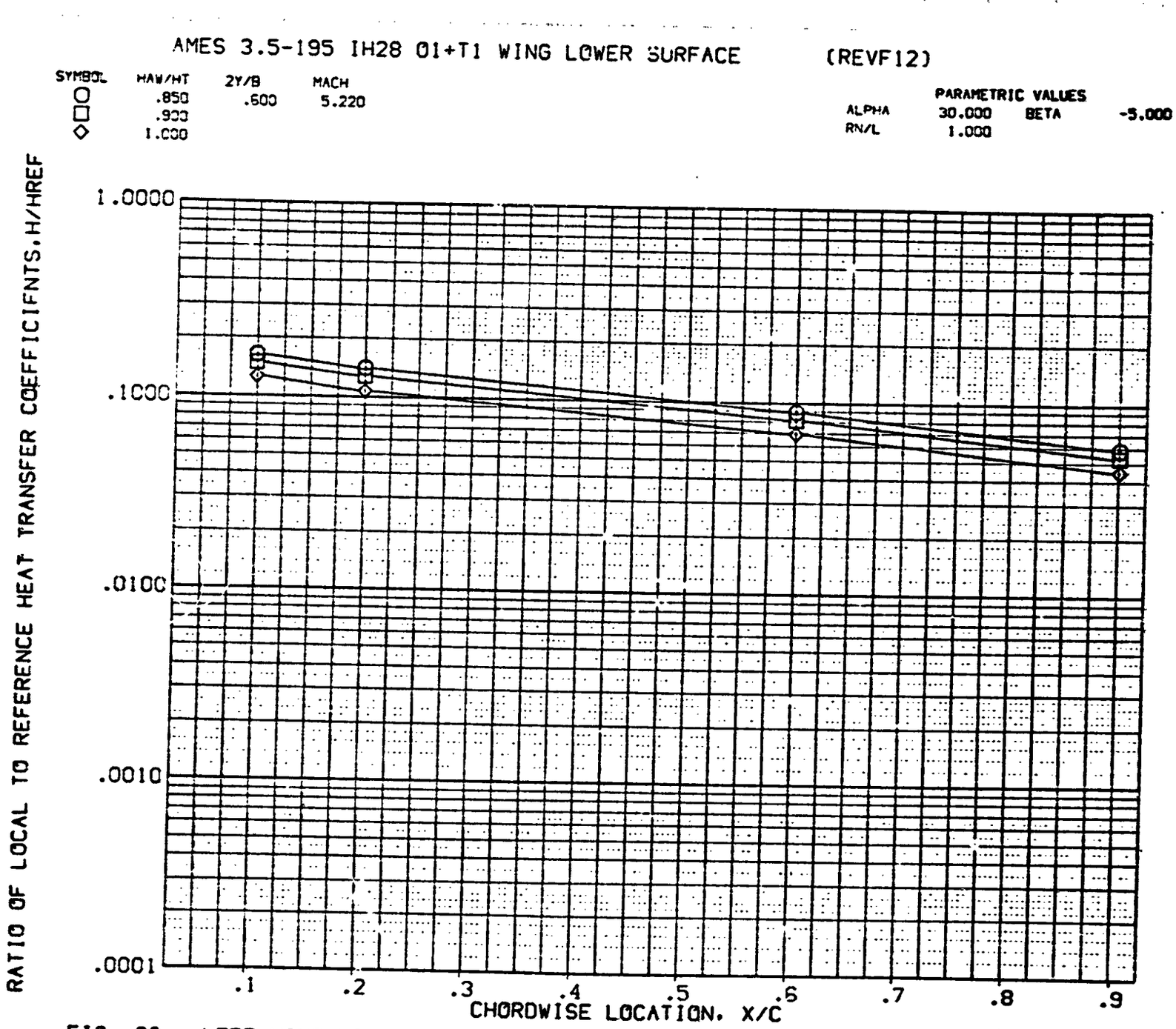

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (REVF12)

SYMBOL	HAW/HT	2Y/B	MACH
○	.650	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

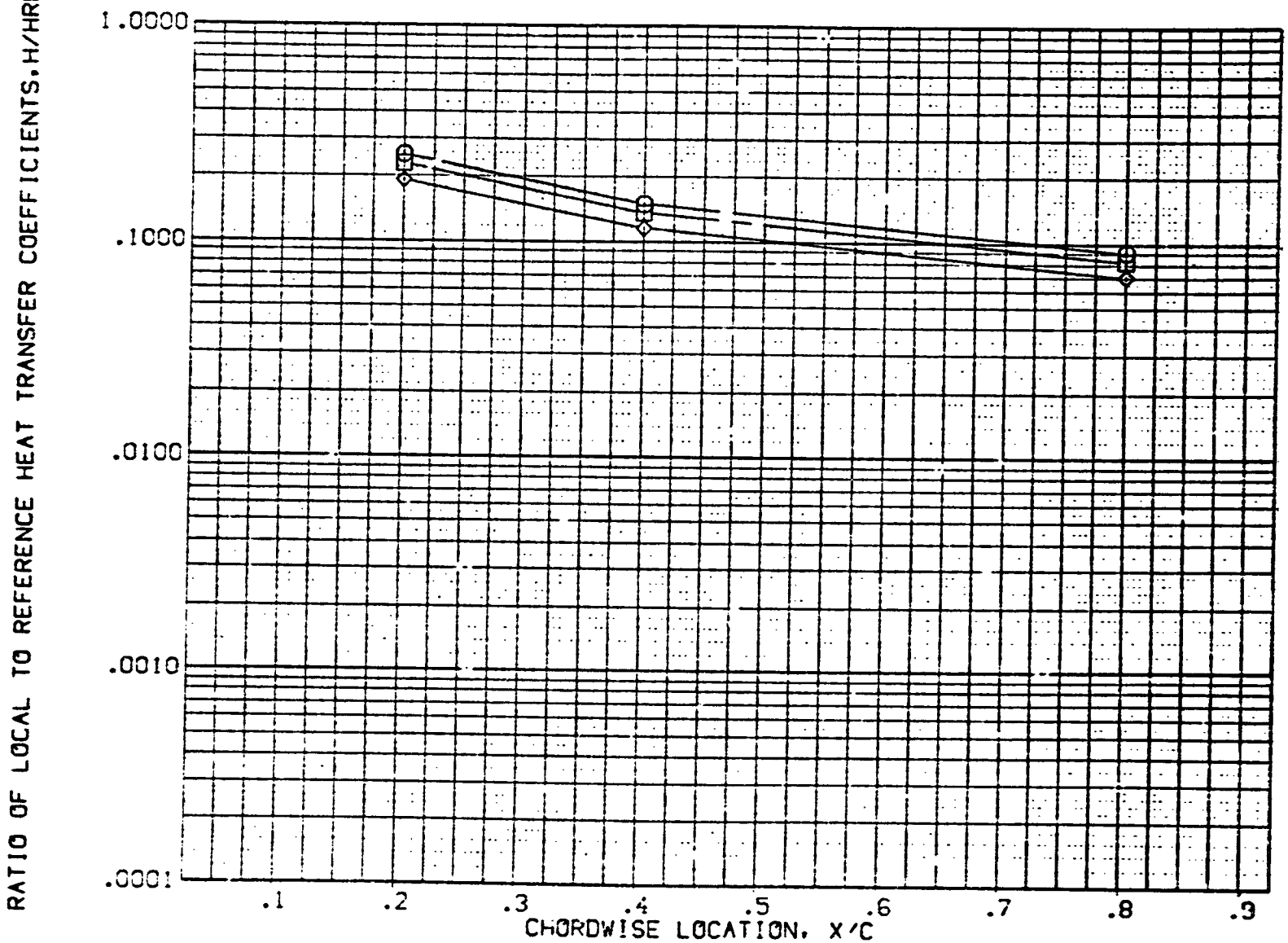

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF01)	◇	AMES 3.5-195 I-28 01+T1 WING LOWER SURFACE	.000	.000	1.000
(REVF02)	□	AMES 3.5-195 I-28 01+T1 WING LOWER SURFACE	30.000	.000	1.000
(REVF03)	△	AMES 3.5-195 I-28 01+T1 WING LOWER SURFACE	60.000	.000	1.000
(REVF04)	○	AMES 3.5-195 I-28 01+T1 WING LOWER SURFACE	90.000	.000	1.000
(REVF05)	▽	AMES 3.5-195 I-28 01+T1 WING LOWER SURFACE	120.000	.000	1.000

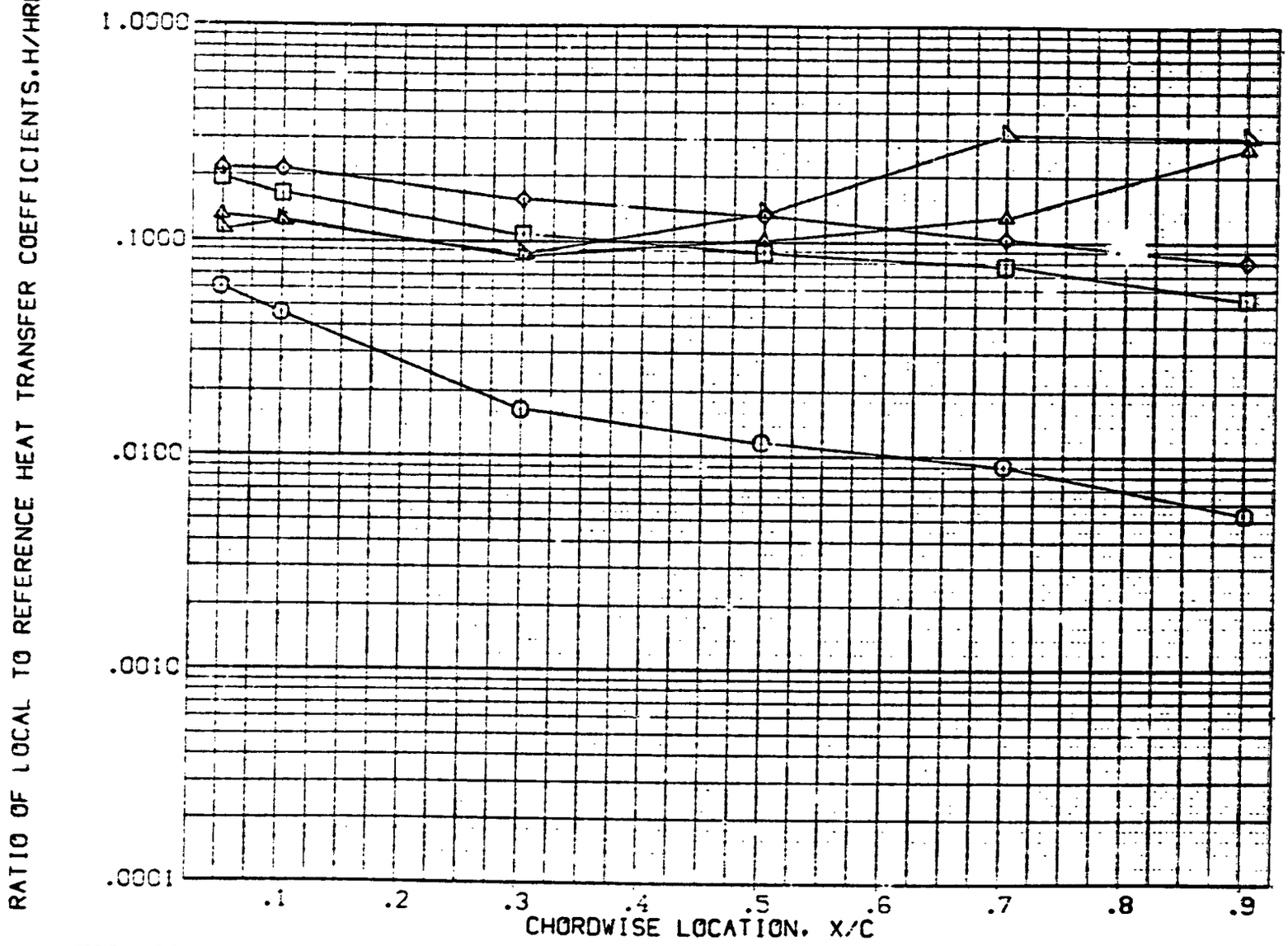

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

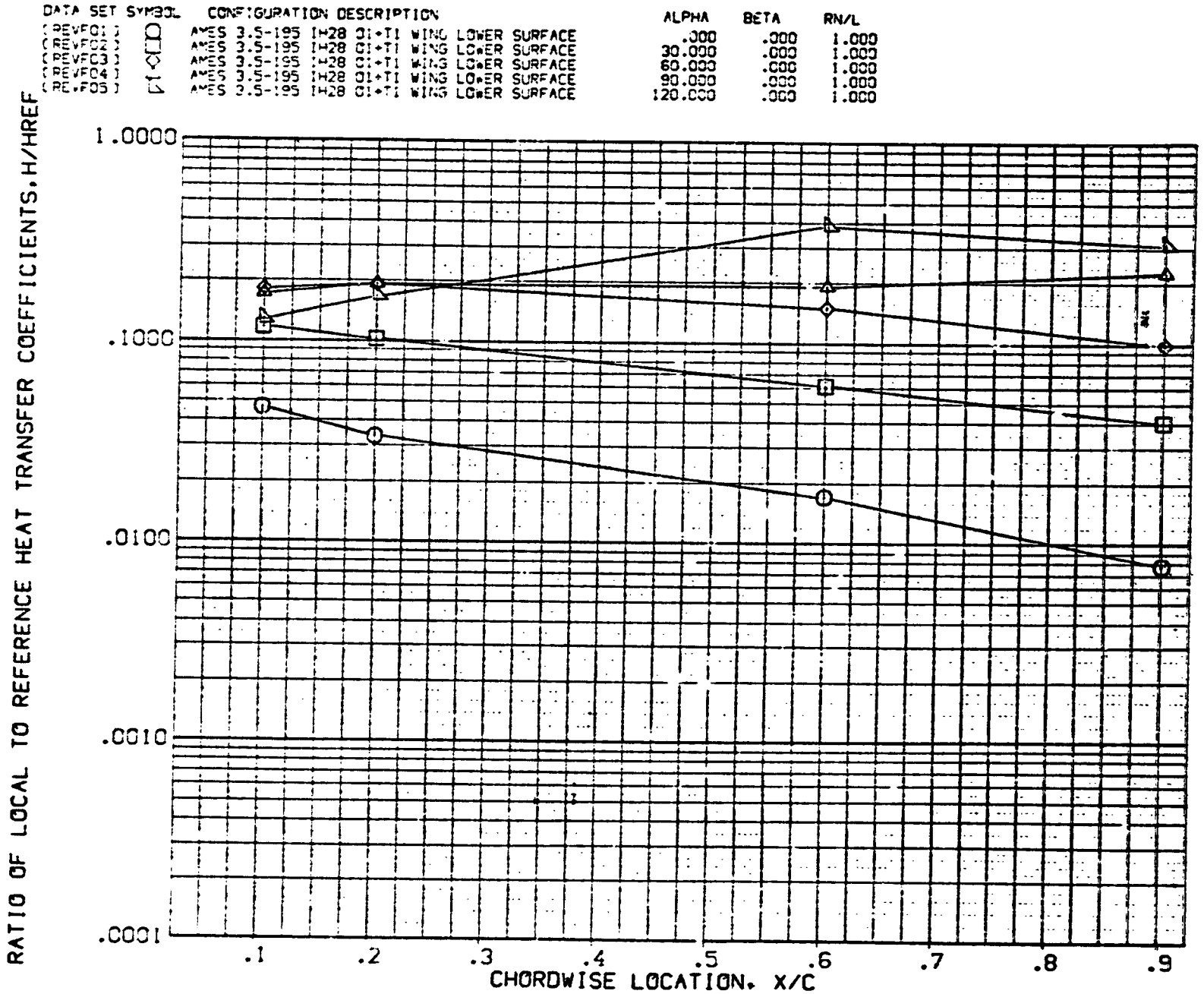

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .600

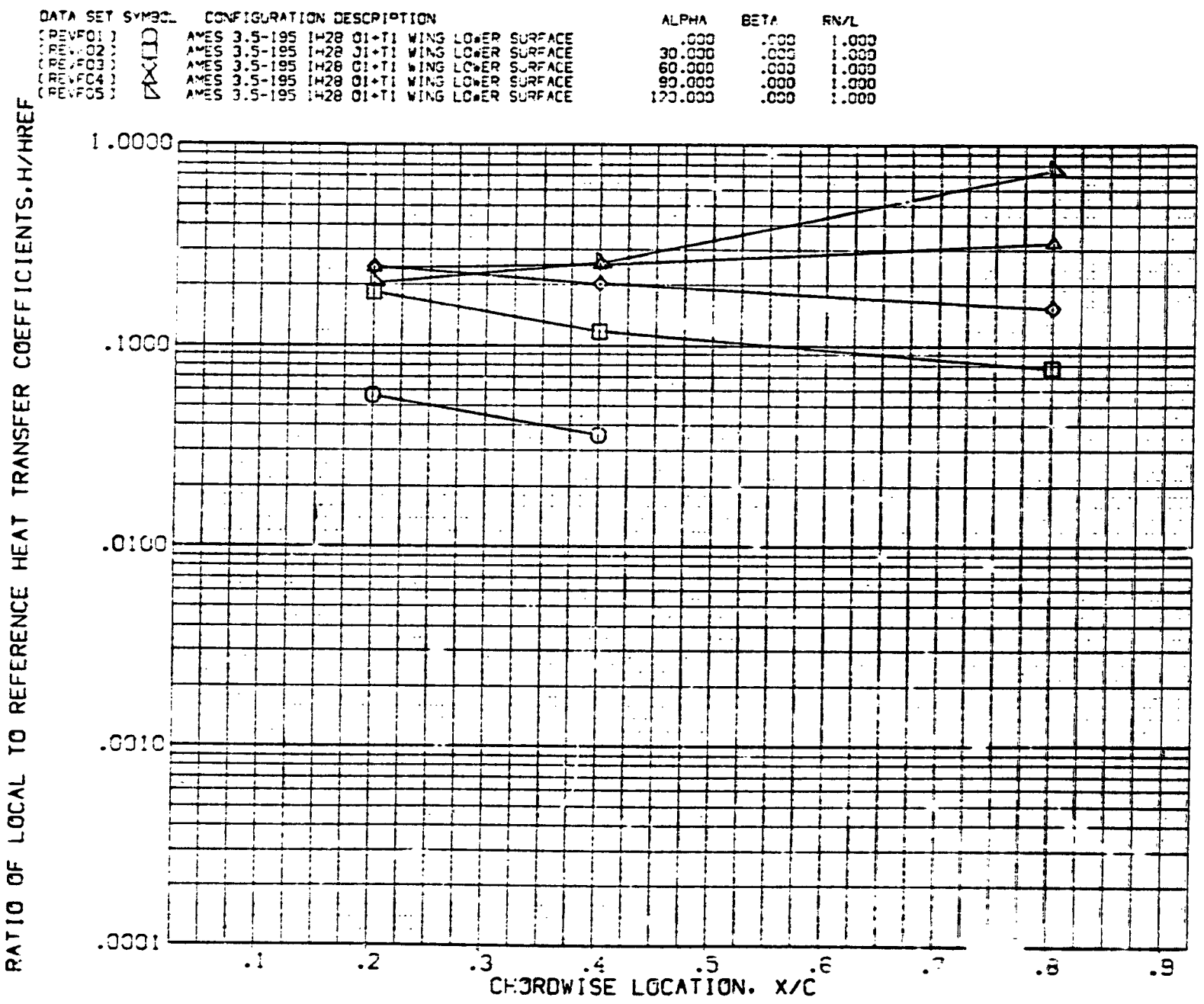

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .300 2Y/B = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF01)	□	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	.000	.000	1.000
(REVF09)	◇	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-30.000	.000	1.000
(REVF08)	◁	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-60.000	.000	1.000
(REVF07)	△	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-90.000	.000	1.000
(REVF06)	○	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-120.000	.000	1.000

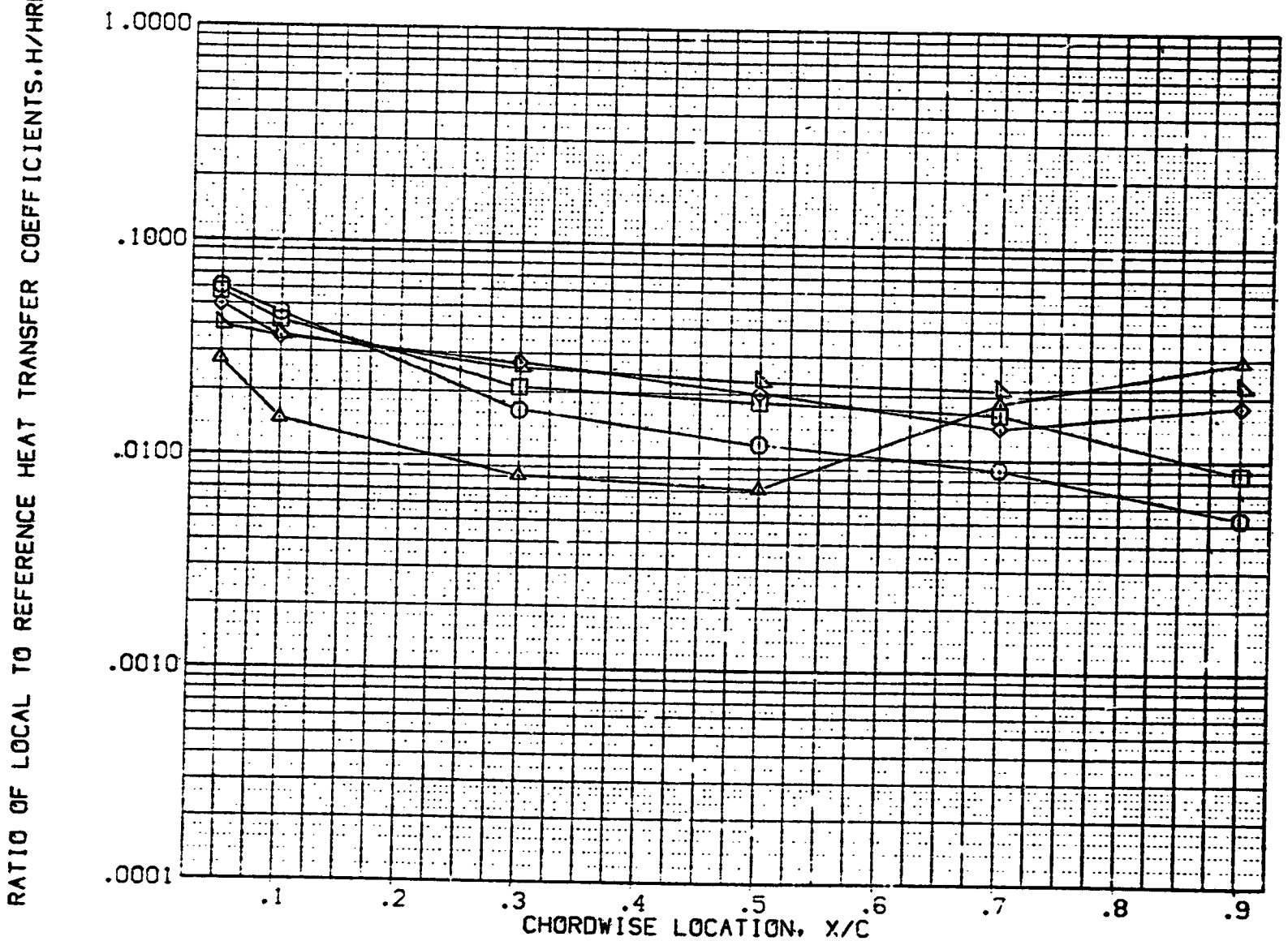

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF01)	○	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	.000	.000	1.000
(REV 09)	△	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	-30.000	.000	1.000
(REVF08)	□	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	-60.000	.000	1.000
(REVF07)	◇	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	-90.000	.000	1.000
(REVF06)	▽	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	-120.000	.000	1.000

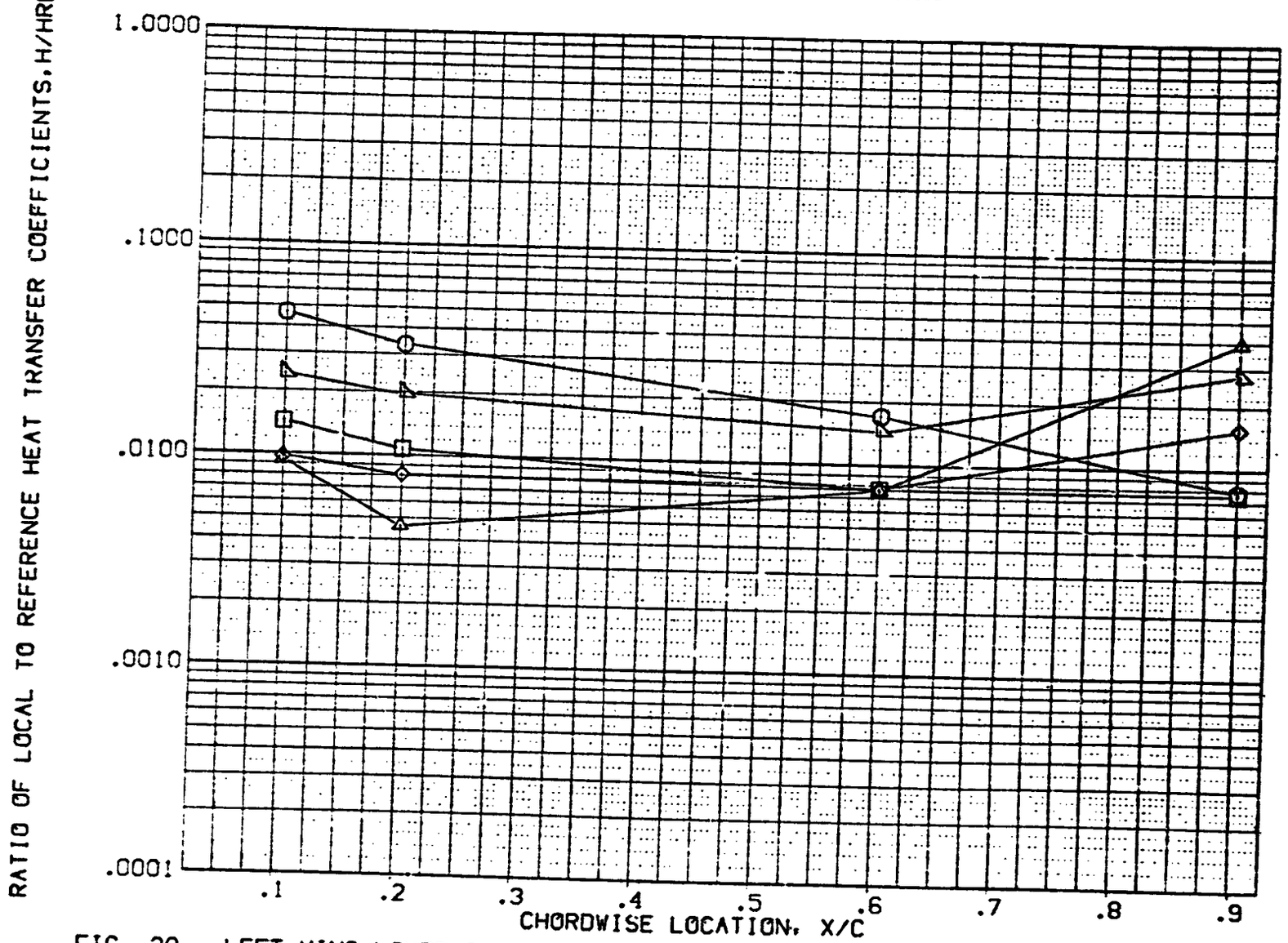

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF01)	◇	AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	.000	.000	1.000
(REVF03)		AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	-30.000	.000	1.000
(REVF08)		AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	-60.000	.000	1.000
(REVF07)		AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	-90.000	.000	1.000
(REVF06)		AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	-120.000	.000	1.000

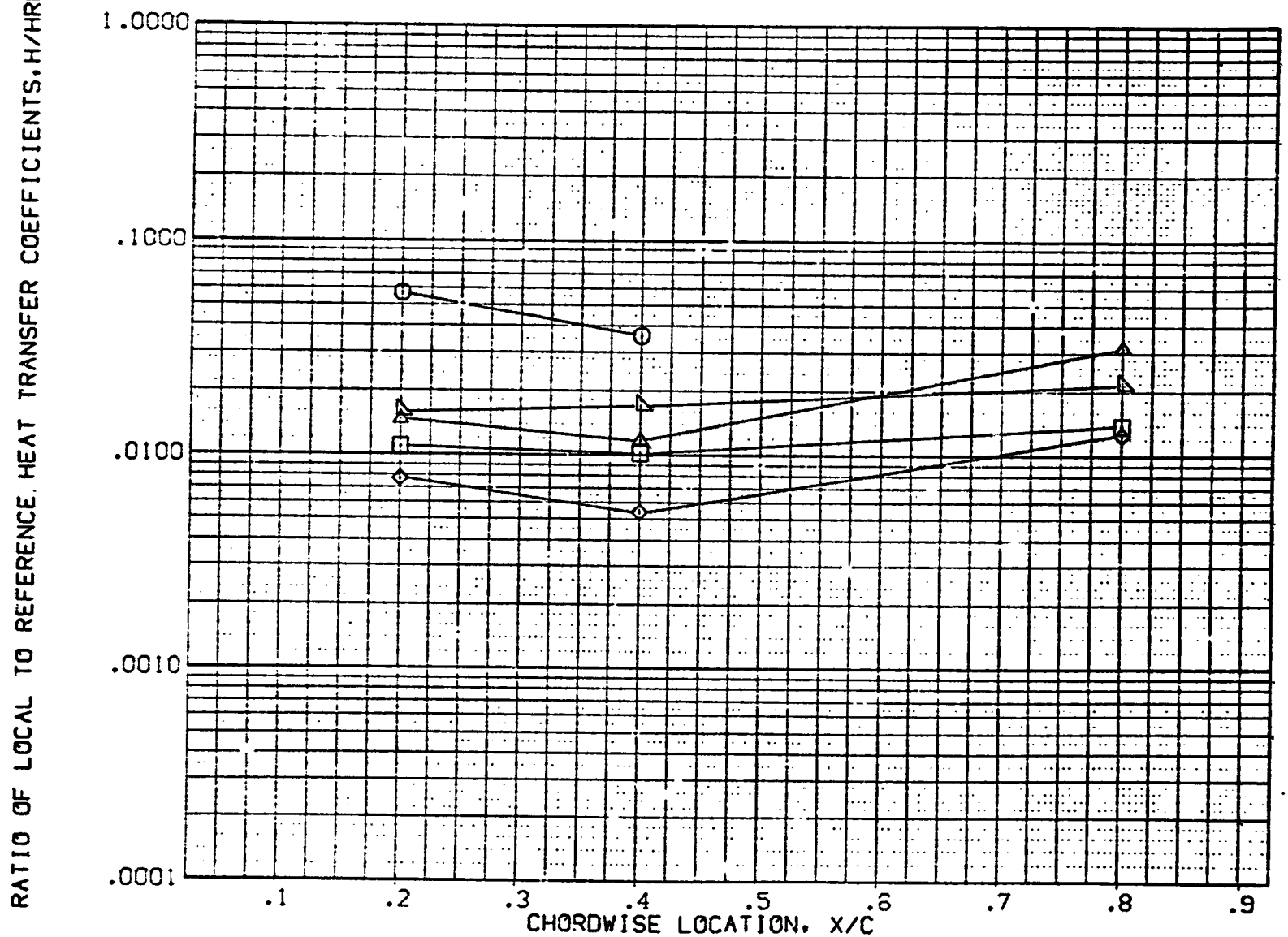

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF02)	□	AMES 3.5-195 I.28 01+T1 WING LOWER SURFACE	30.000	.000	1.000
(REVF11)	⊠	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	30.000	.000	4.000
(REVF03)	⋈	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	60.000	.000	1.000
(REVF10)	△	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	60.000	.000	4.000

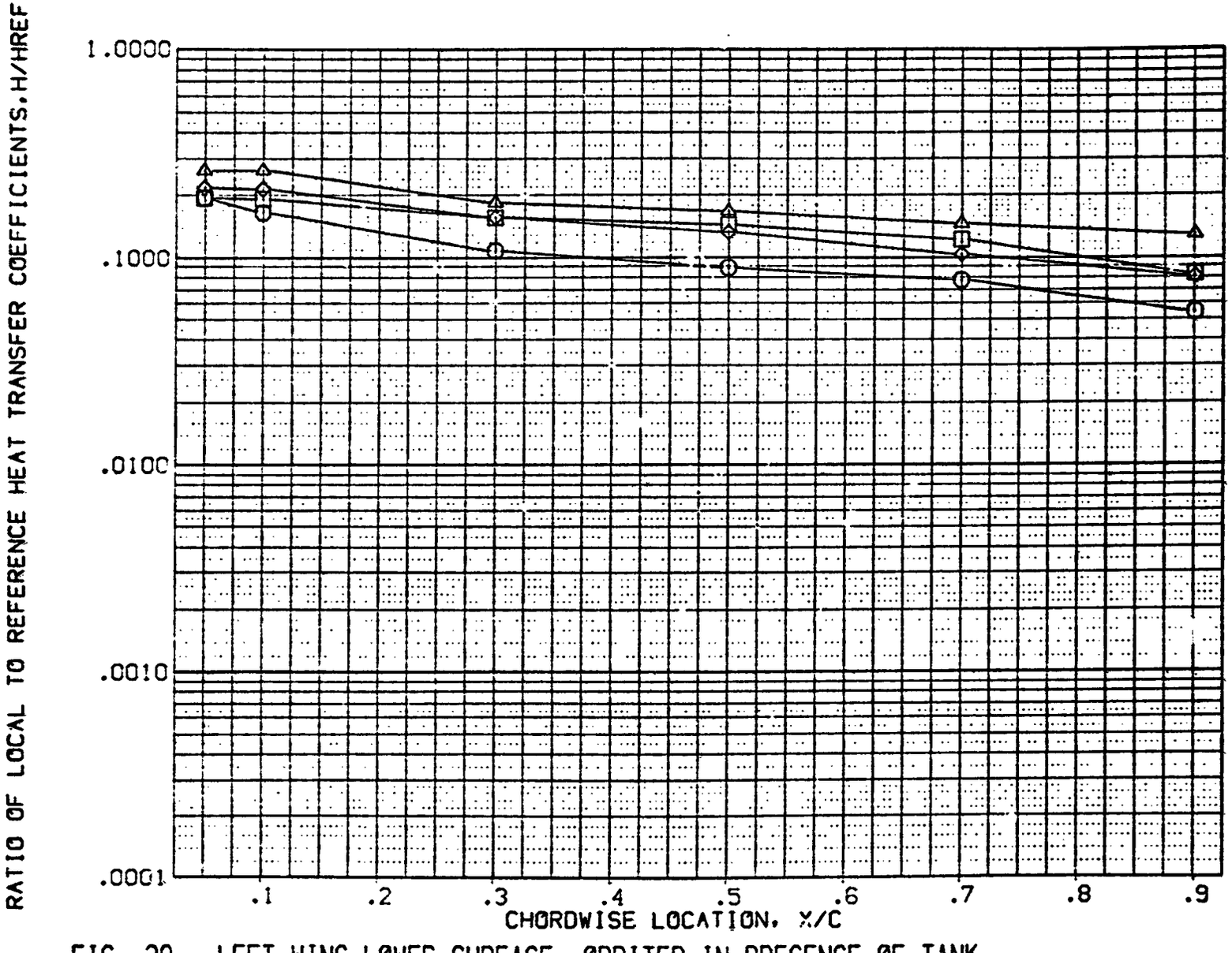

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF02)	○	AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	30.000	.000	1.000
(REVF11)	□	AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	30.000	.000	4.000
(REVF03)	◇	AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	60.000	.000	1.000
(REVF10)	△	AMES 3.5-195 IH28 OI+TI WING LOWER SURFACE	60.000	.000	4.000

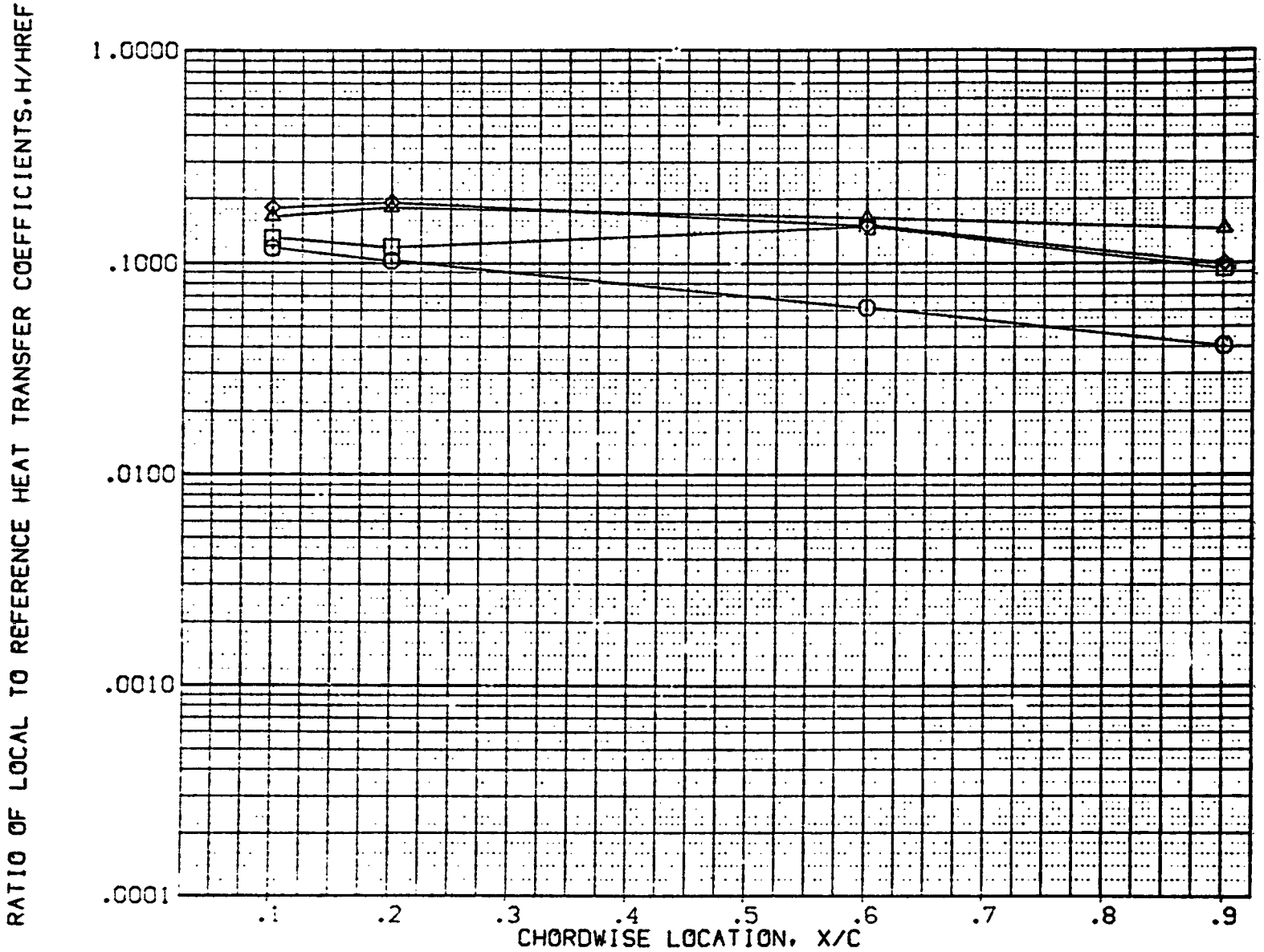

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF02)	□	AMES 3.5-195 IH28 CI+TI WING LOWER SURFACE	30.000	.000	1.000
(REVF11)	◇	AMES 3.5-195 IH28 CI+TI WING LOWER SURFACE	30.000	.000	4.000
(REVF03)	⊠	AMES 3.5-195 IH28 CI+TI WING LOWER SURFACE	60.000	.000	1.000
(REVF10)	△	AMES 3.5-195 IH28 CI+TI WING LOWER SURFACE	60.000	.000	4.000

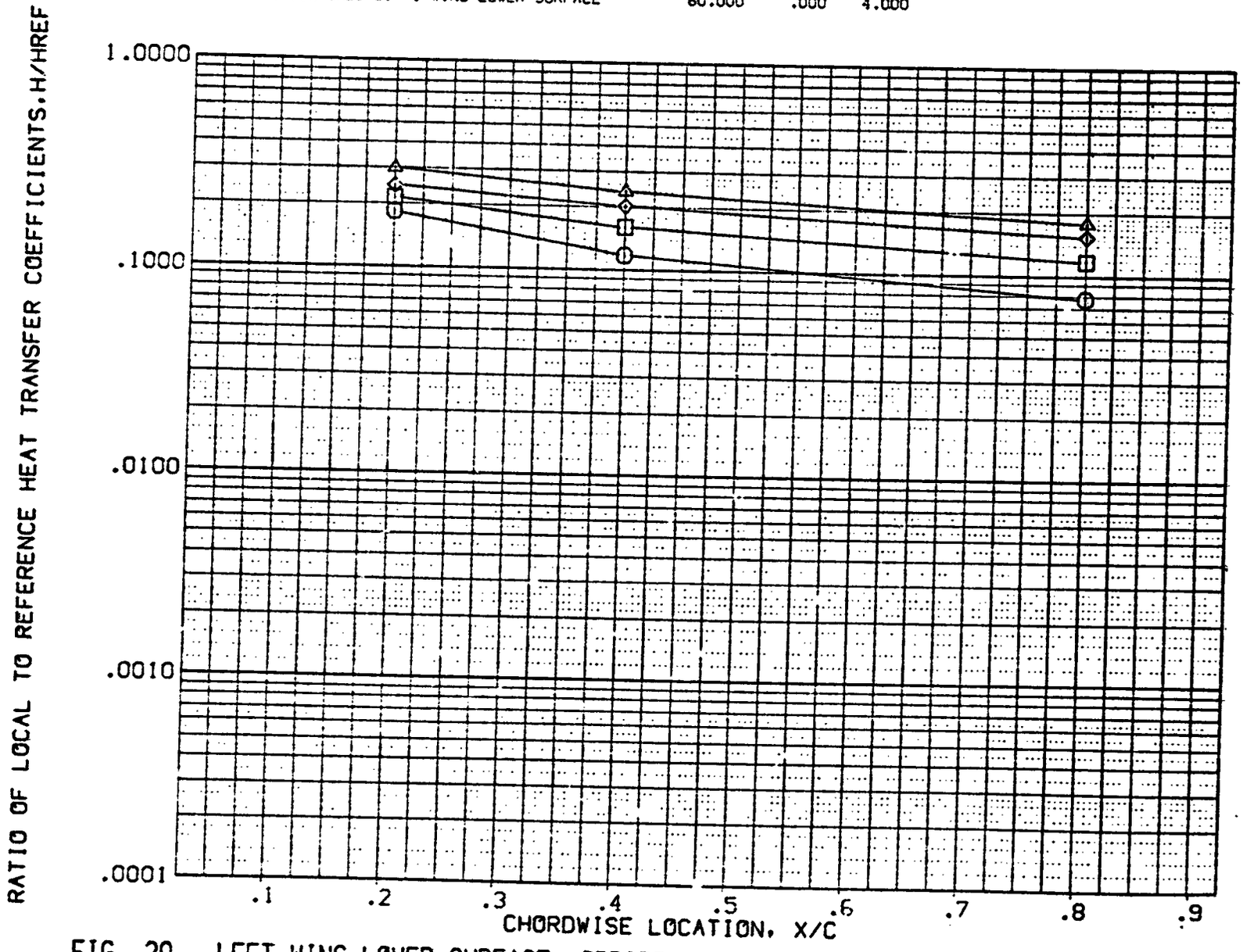

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HA#/HT= .900 2Y/B = .800

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF02) ○	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	30.000	.000	1.000
(REVF12) □	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	30.000	-5.000	1.000

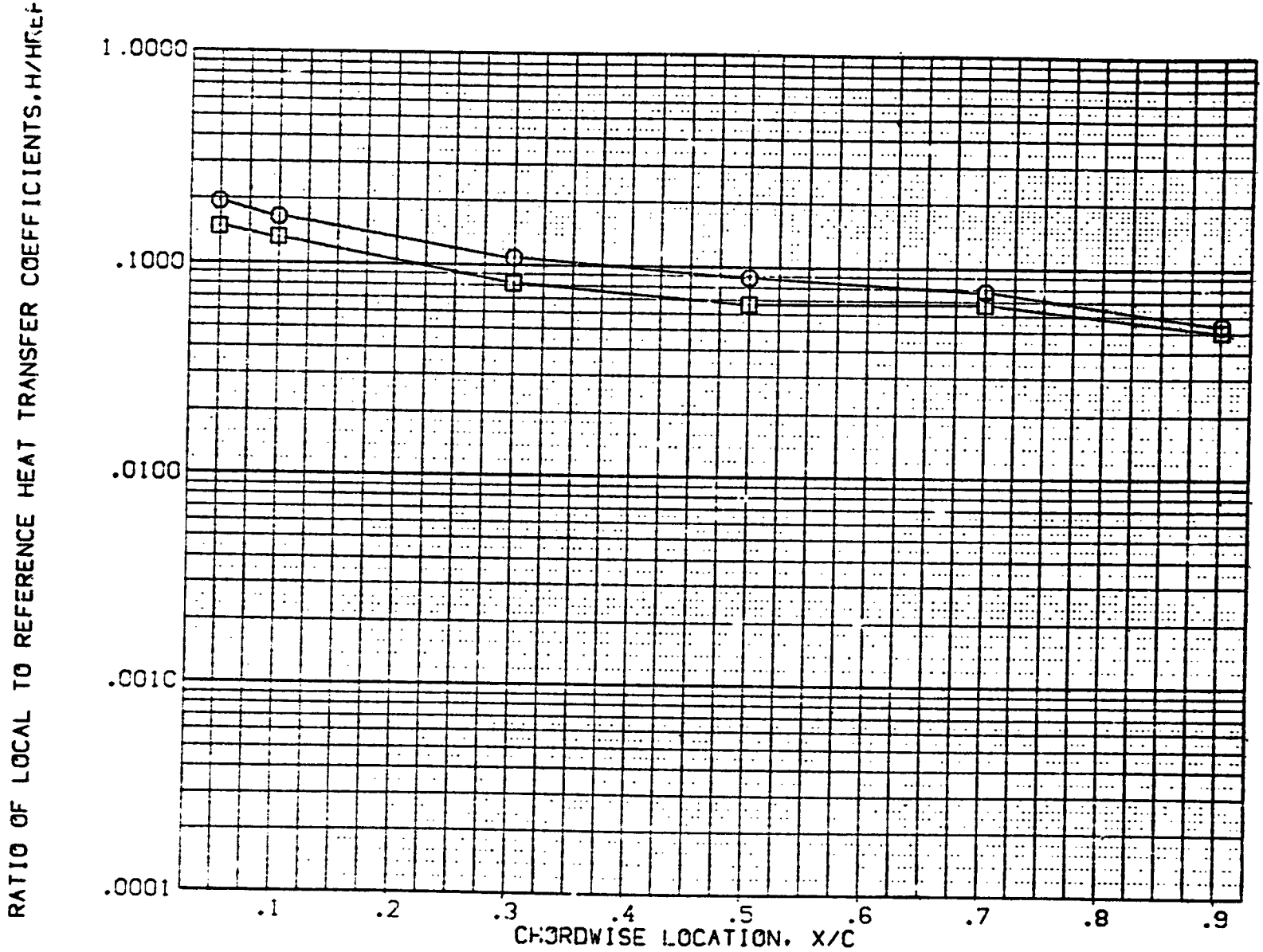

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF02)	⊡	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	30.000	.000	1.000
(REVF12)	⊟	AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	30.000	-5.000	1.000

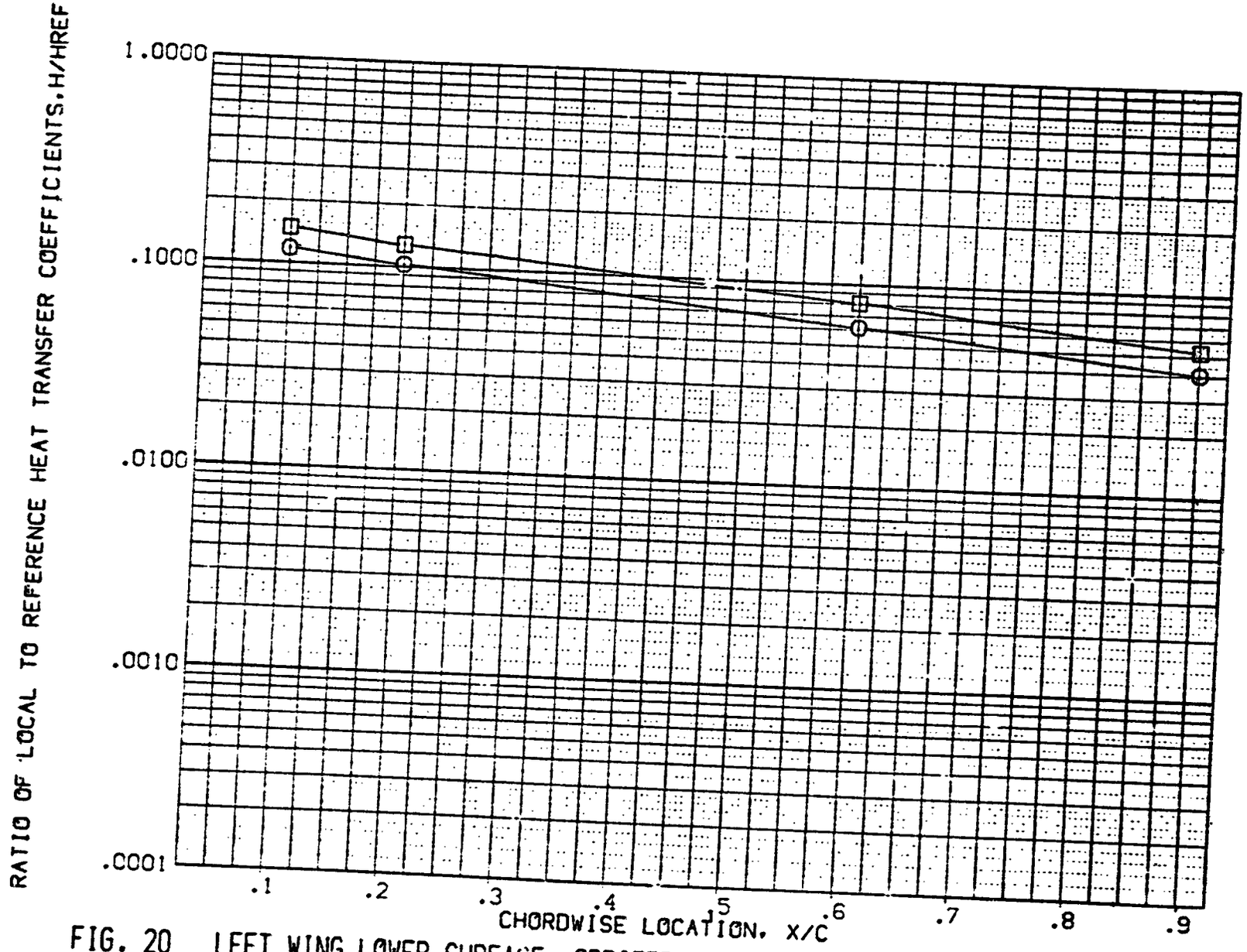

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVF02)	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	30.000	.000	1.000
(REVF12)	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	30.000	-5.000	1.000

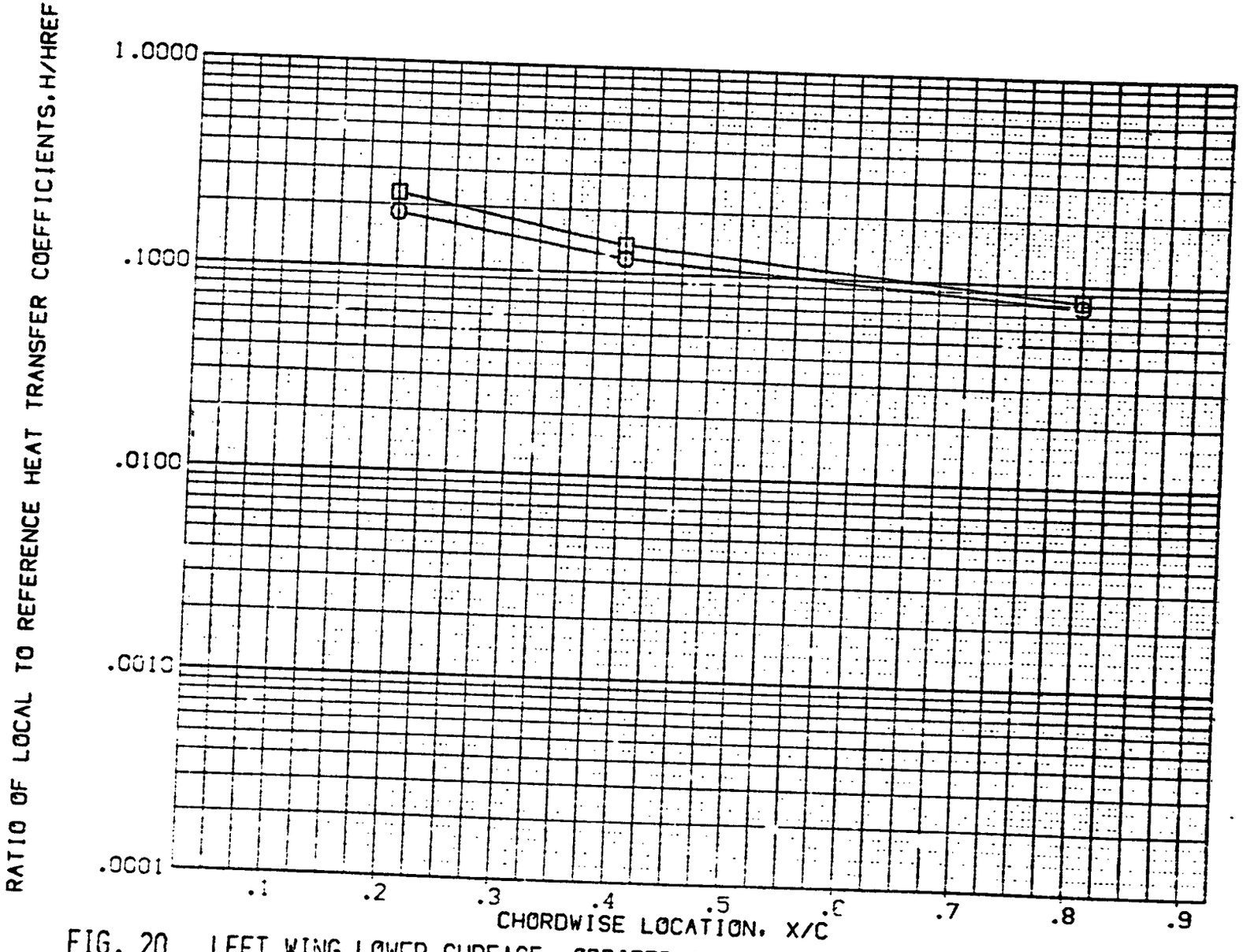

FIG. 20 LEFT WING LOWER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .800

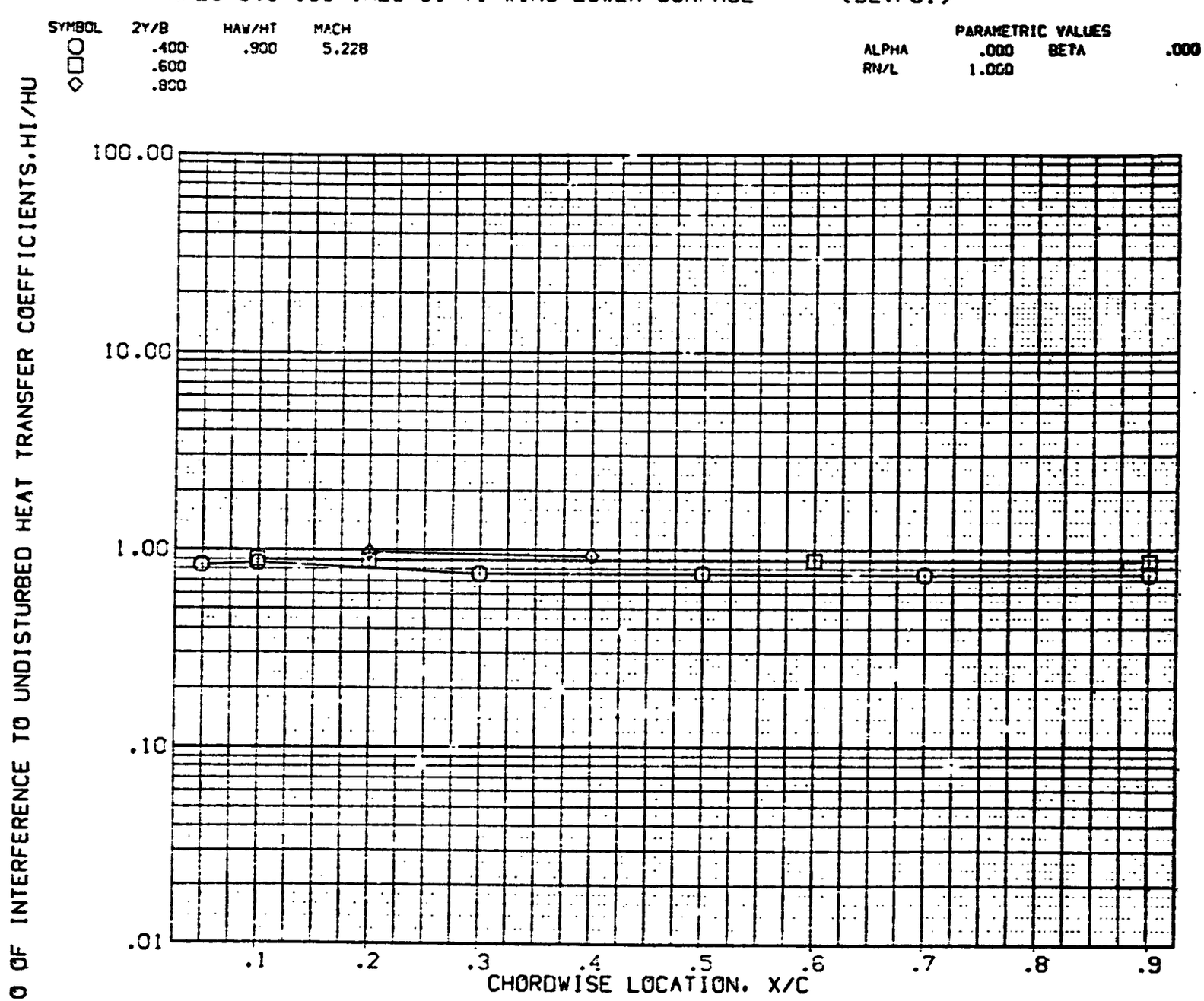

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

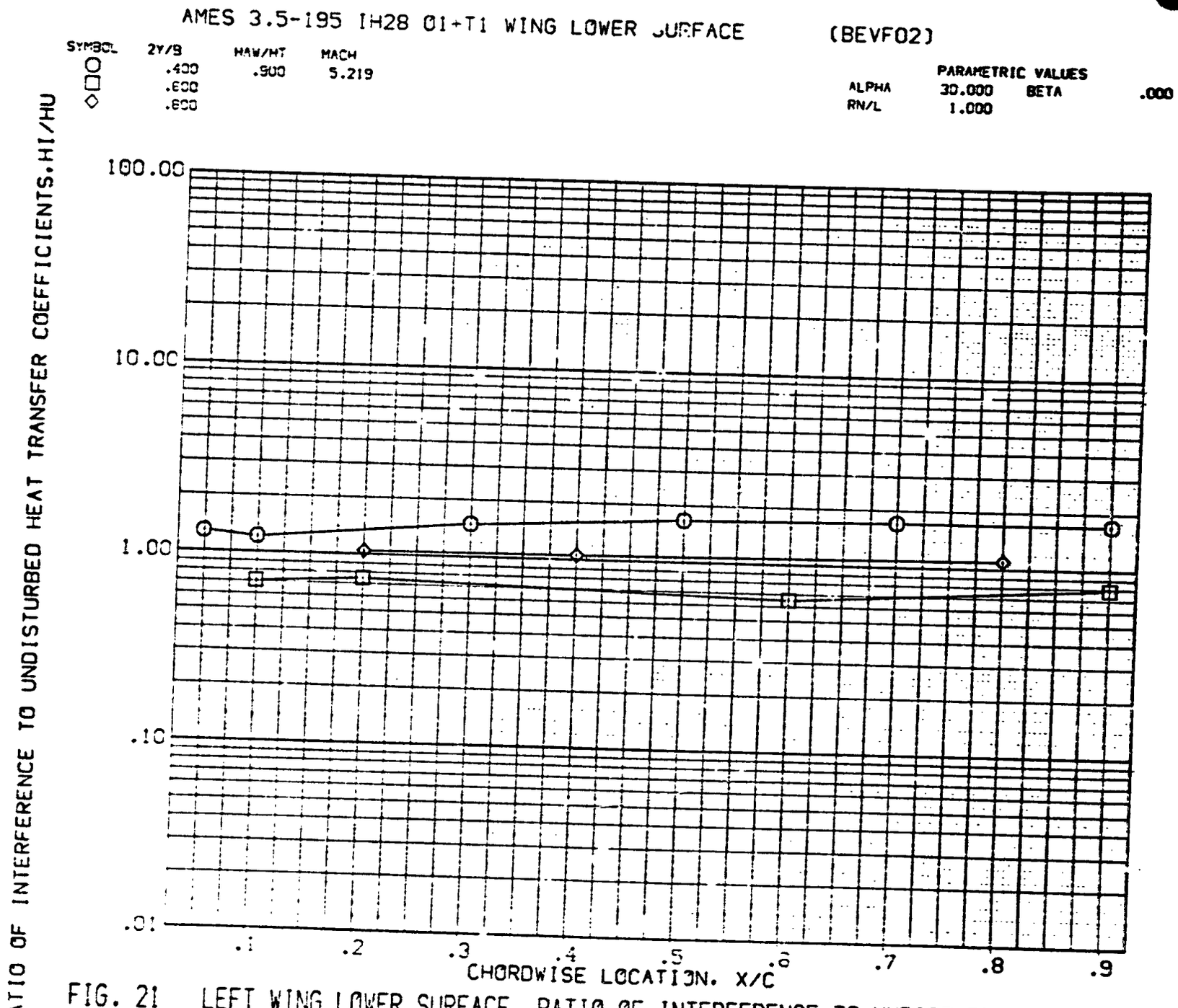

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF03)

SYMBOL	2Y/B	HAW/HT	MACH
○	.400	.900	5.220
□	.600		
◇	.800		

PARAMETRIC VALUES

ALPHA	00.000	BETA	.000
RN/L	1.000		

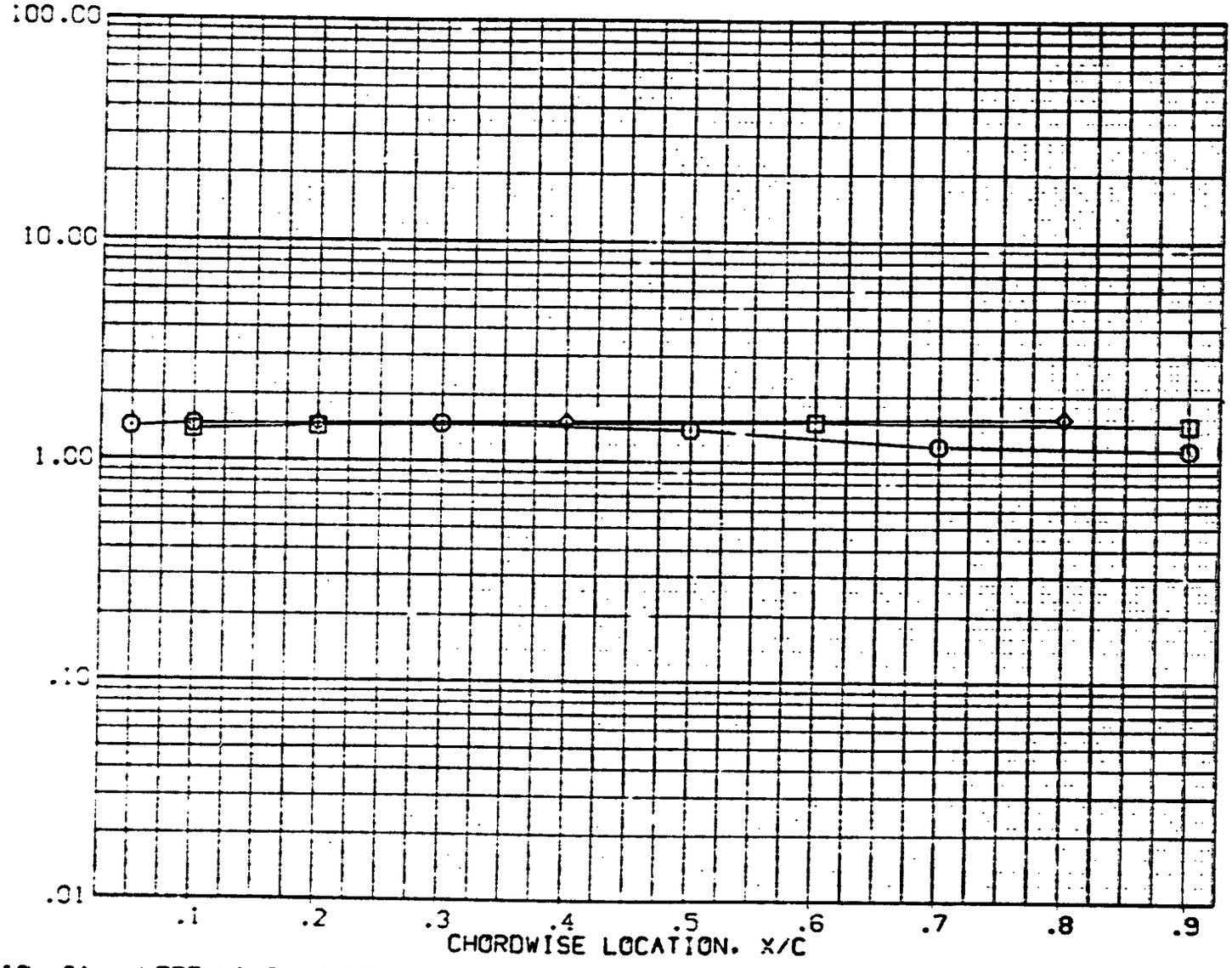

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF04)

SYMBOL	2Y/B	HAW/HT	MACH
○	.400	.900	5.219
□	.600		
◇	.800		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

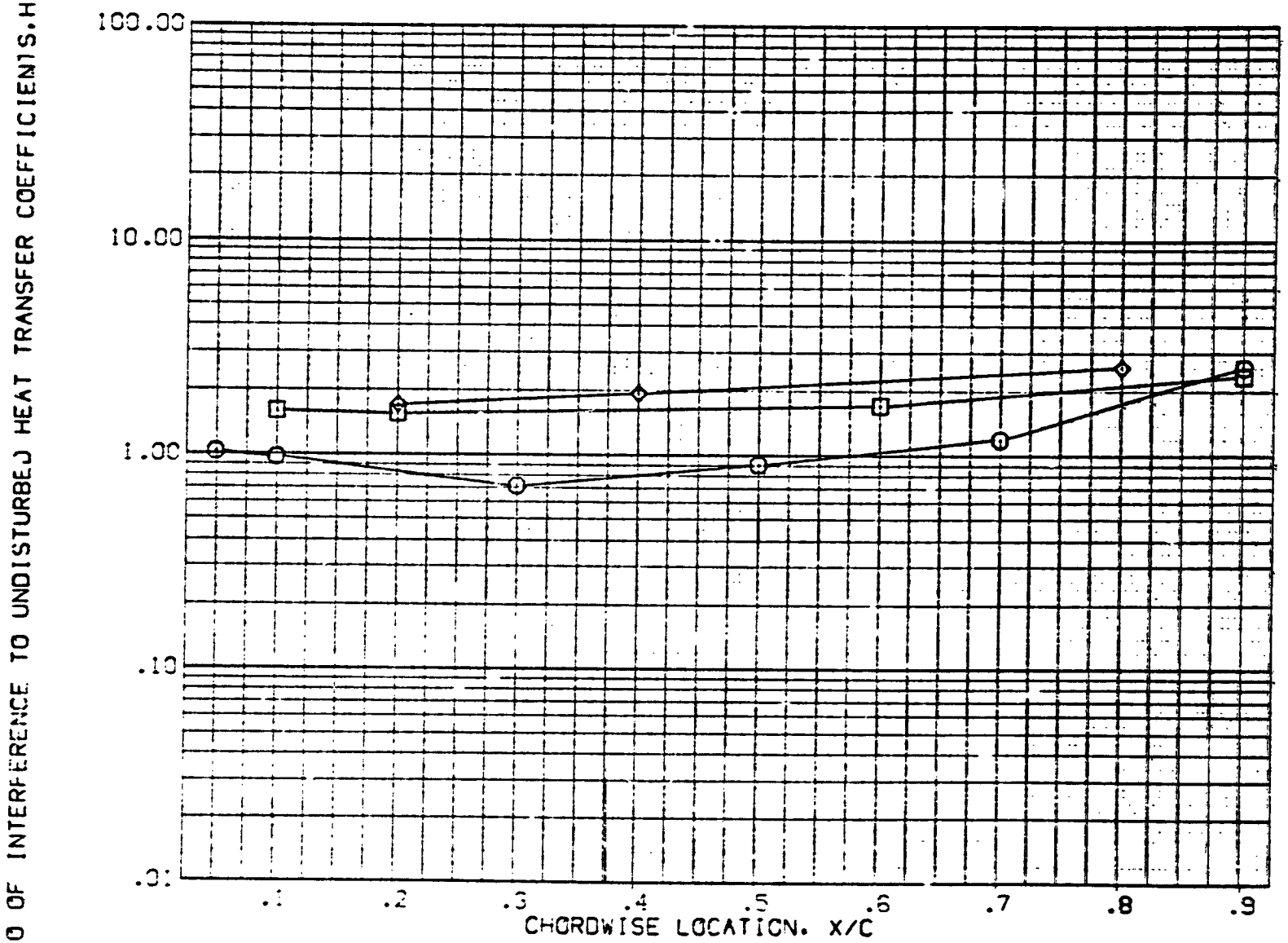

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

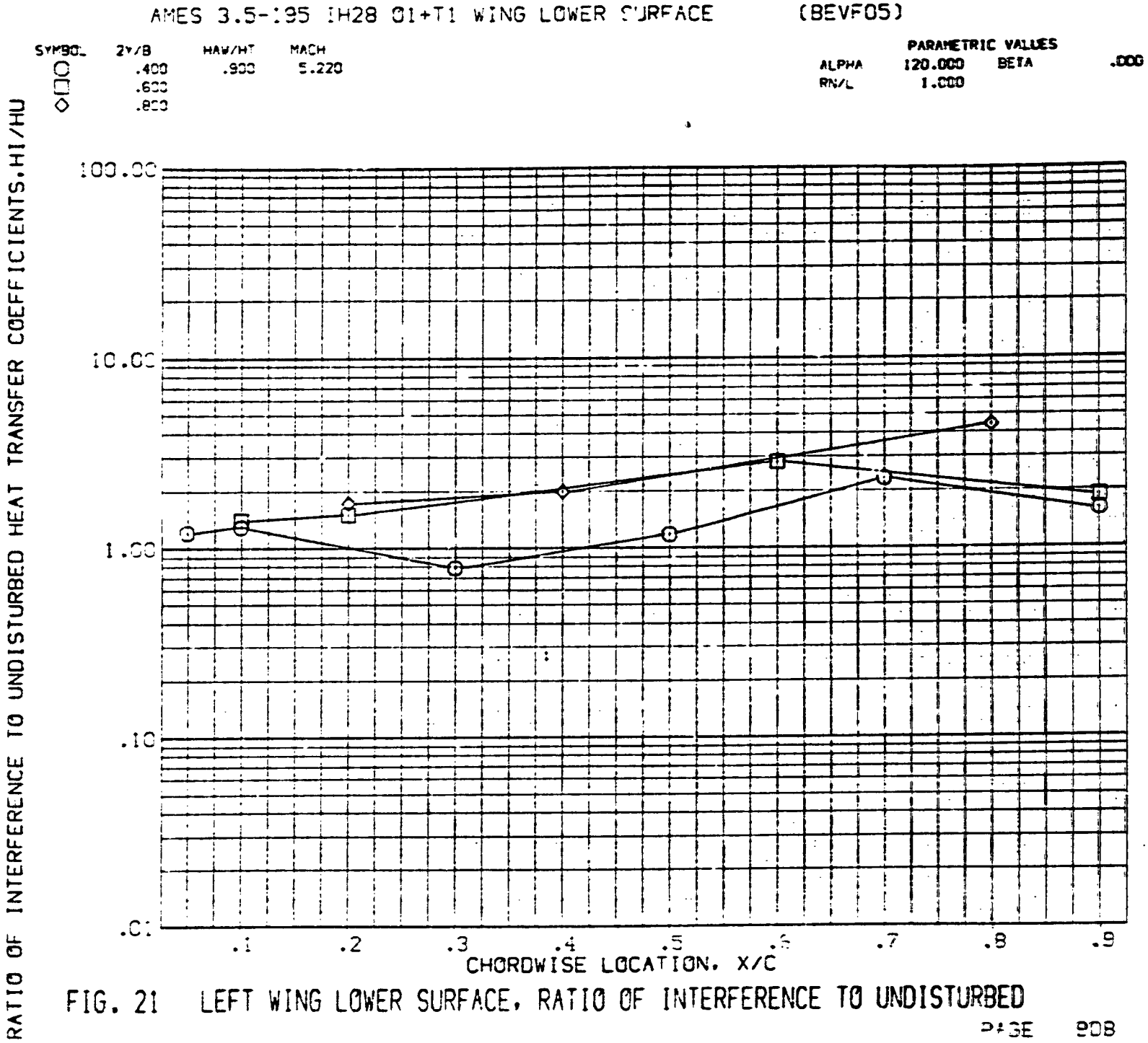

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE (BEVF06)

SYMBOL	2Y/B	HAW/HT	MACH
○	.400	.900	5.220
□	.600	:	
◇	.800		

PARAMETRIC VALUES

ALPHA -120.000 BETA .000

RN/L 1.000

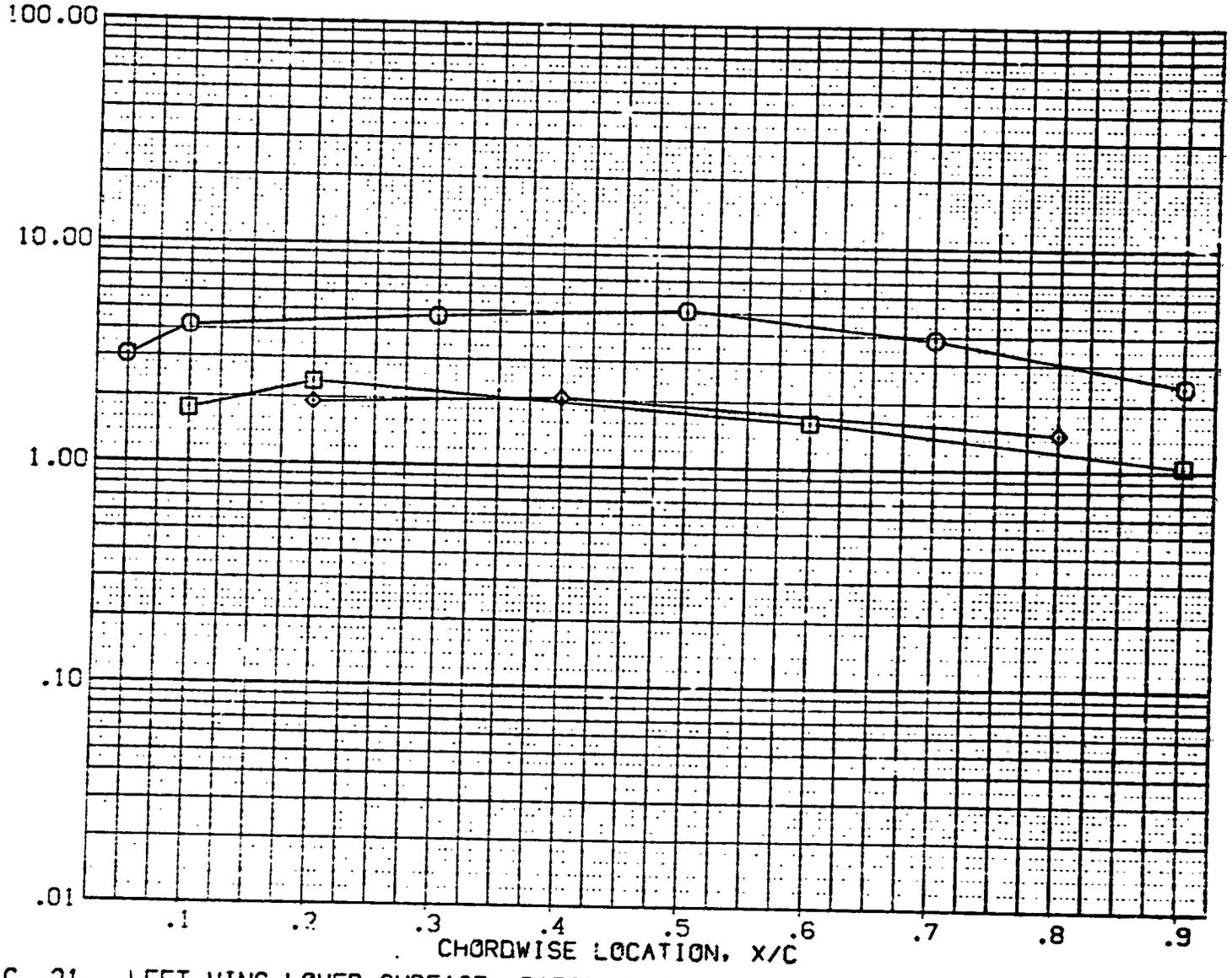

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

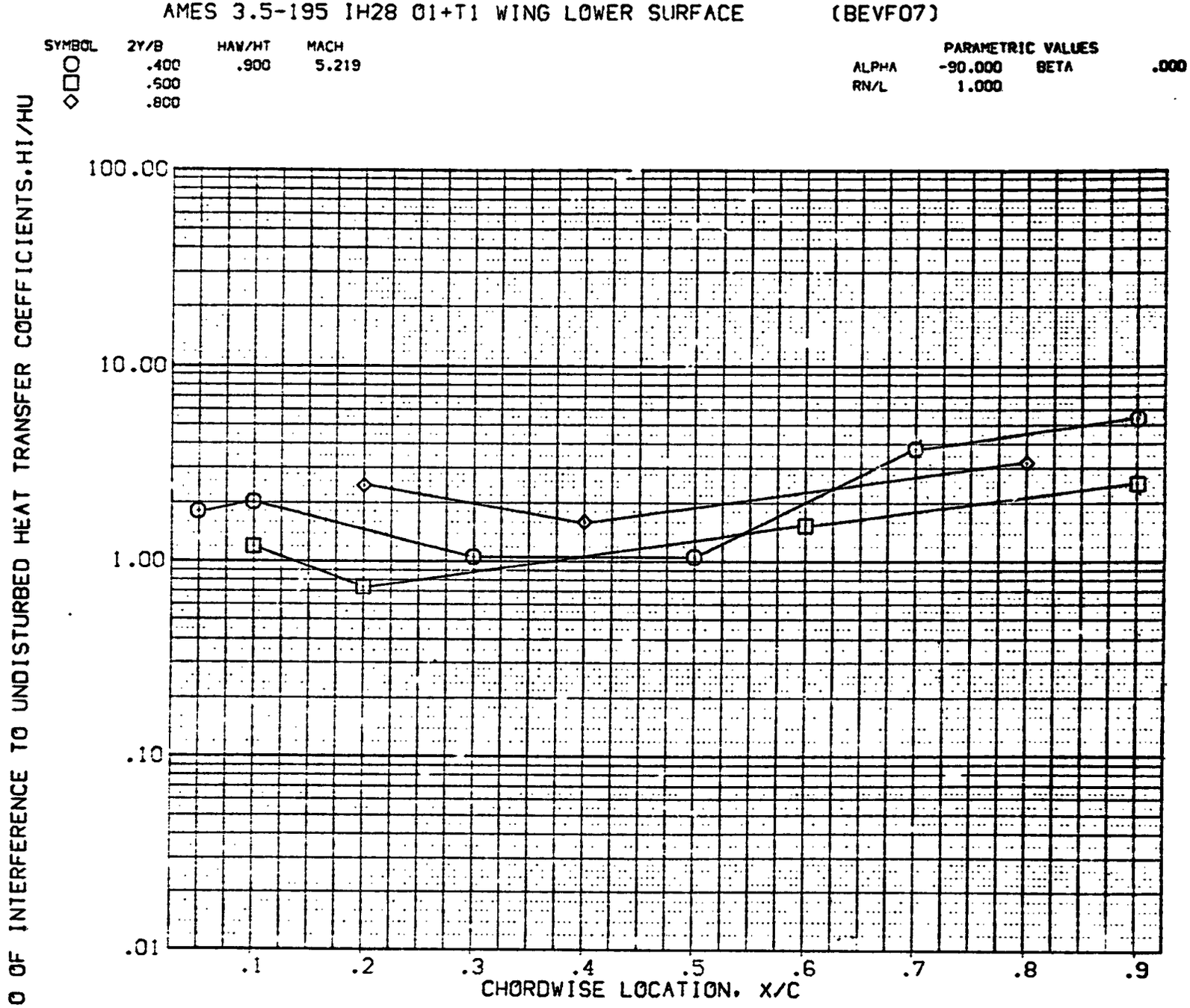

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

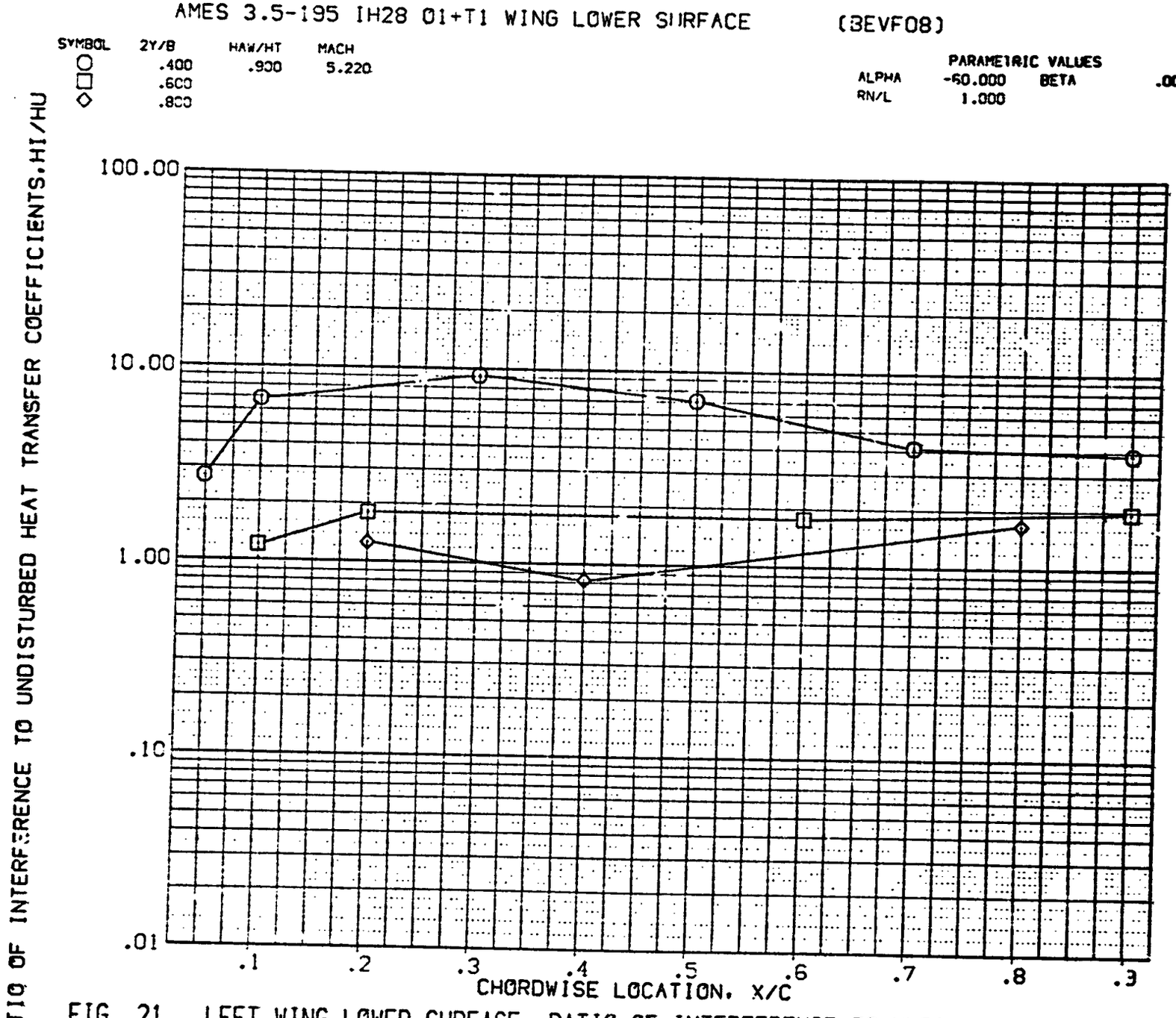

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

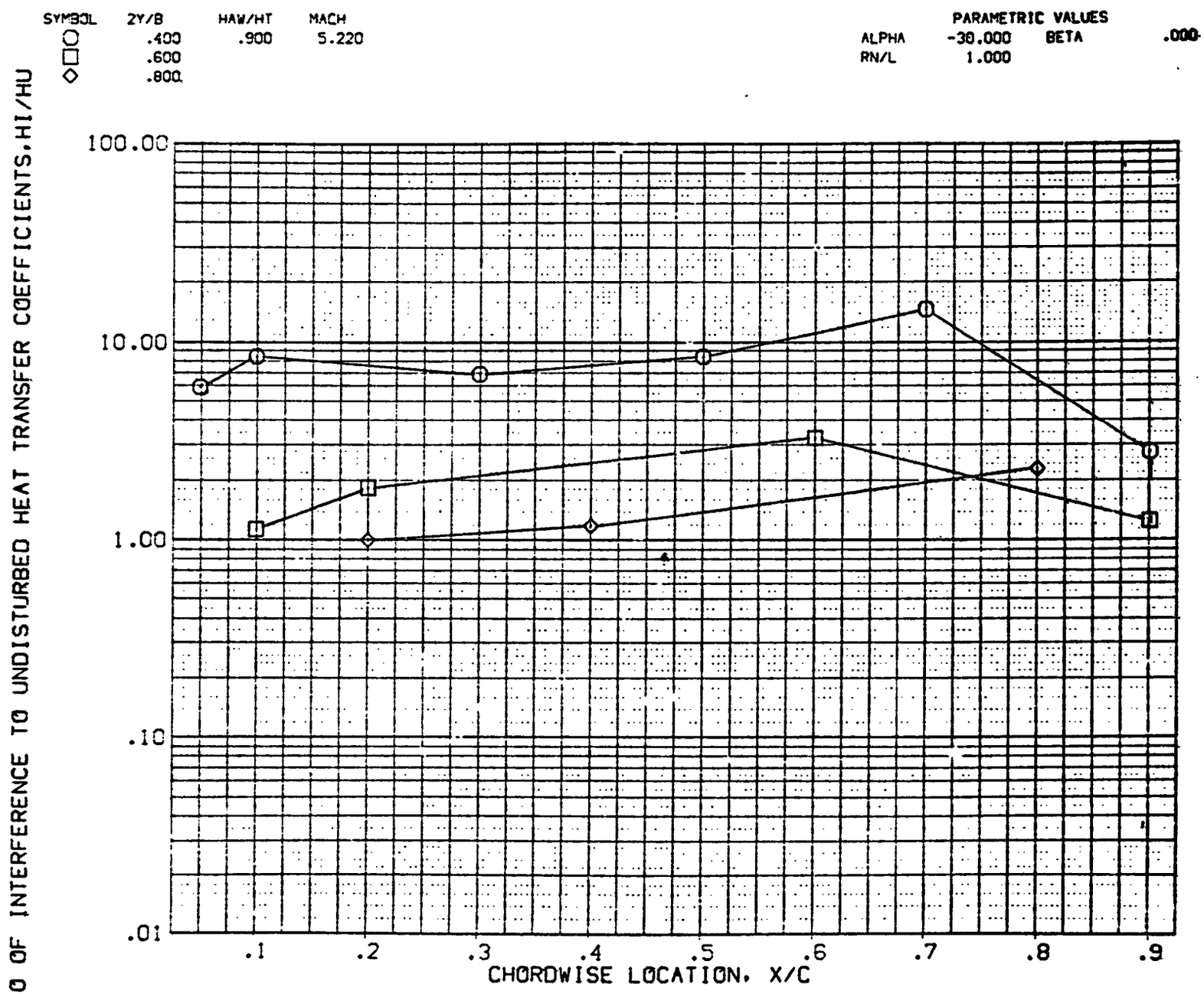

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVF01)	◇	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	.000	.000	1.000
(BEVF02)	△	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	30.000	.000	1.000
(BEVF03)	□	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	60.000	.000	1.000
(BEVF04)	◁	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	90.000	.000	1.000
(BEVF05)	○	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	120.000	.000	1.000

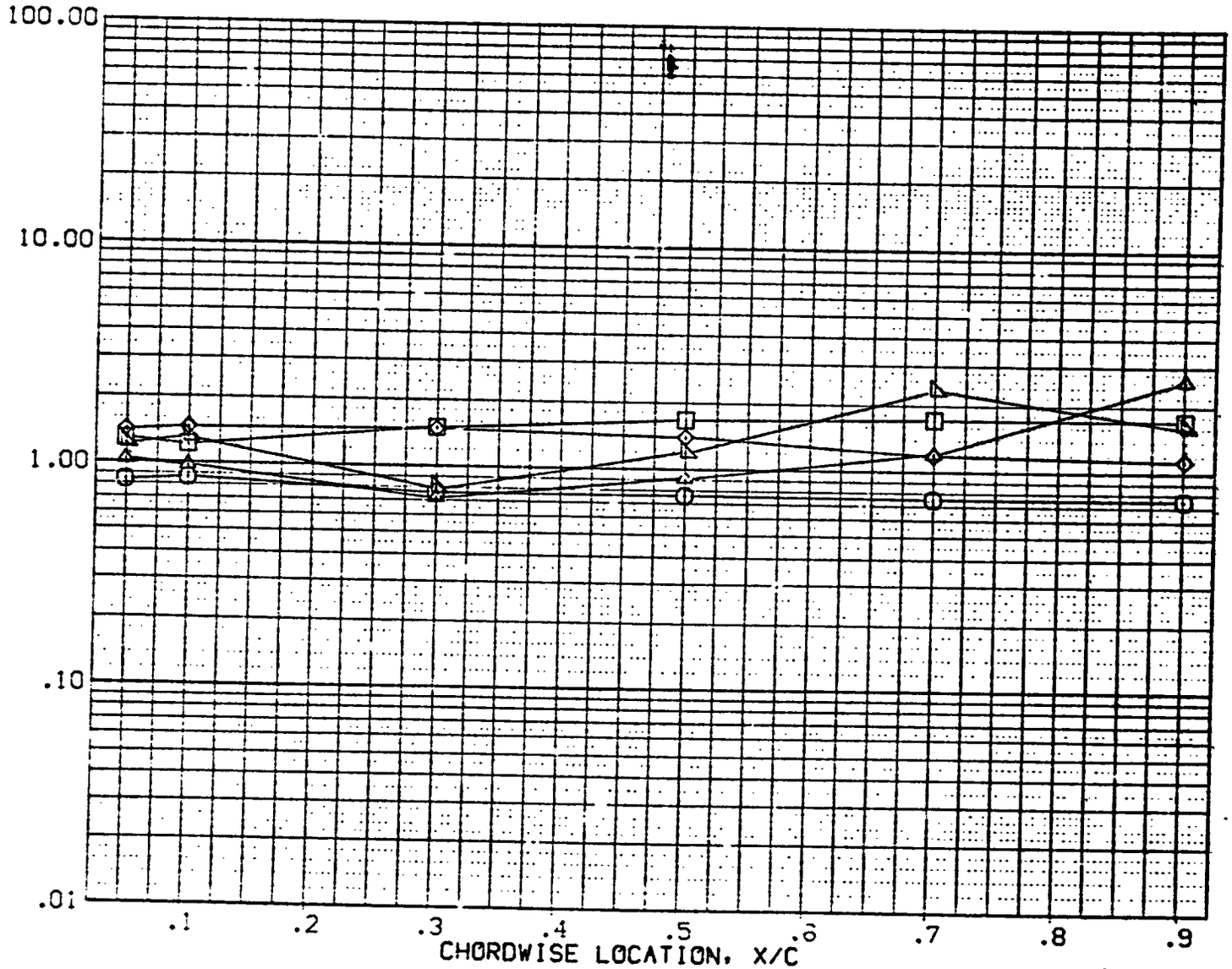

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVF01)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	.000	.000	1.000
(BEVF02)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	30.000	.000	1.000
(BEVF03)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	60.000	.000	1.000
(BEVF04)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	90.000	.000	1.000
(BEVF05)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	120.000	.000	1.000

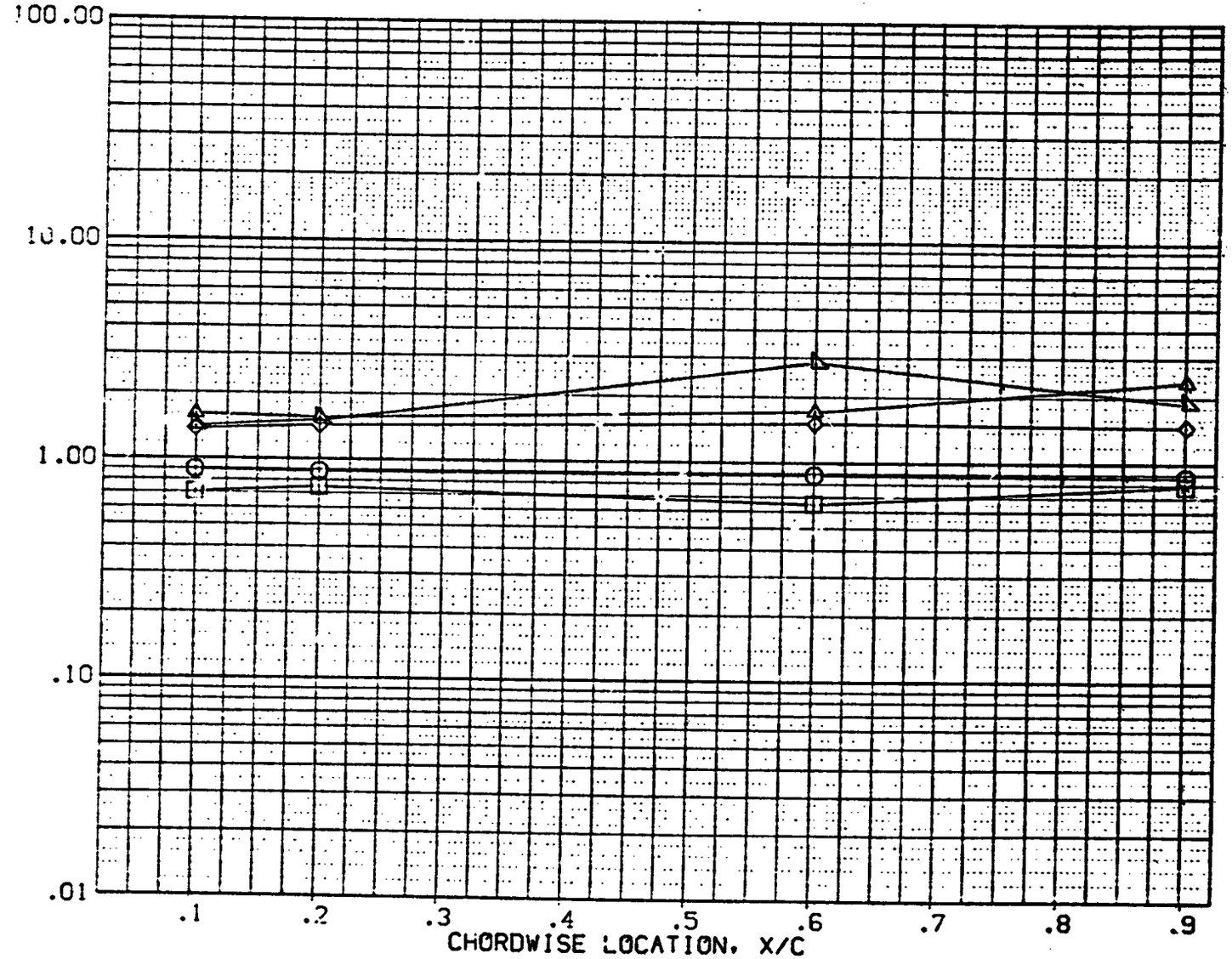

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 2Y/B = 600

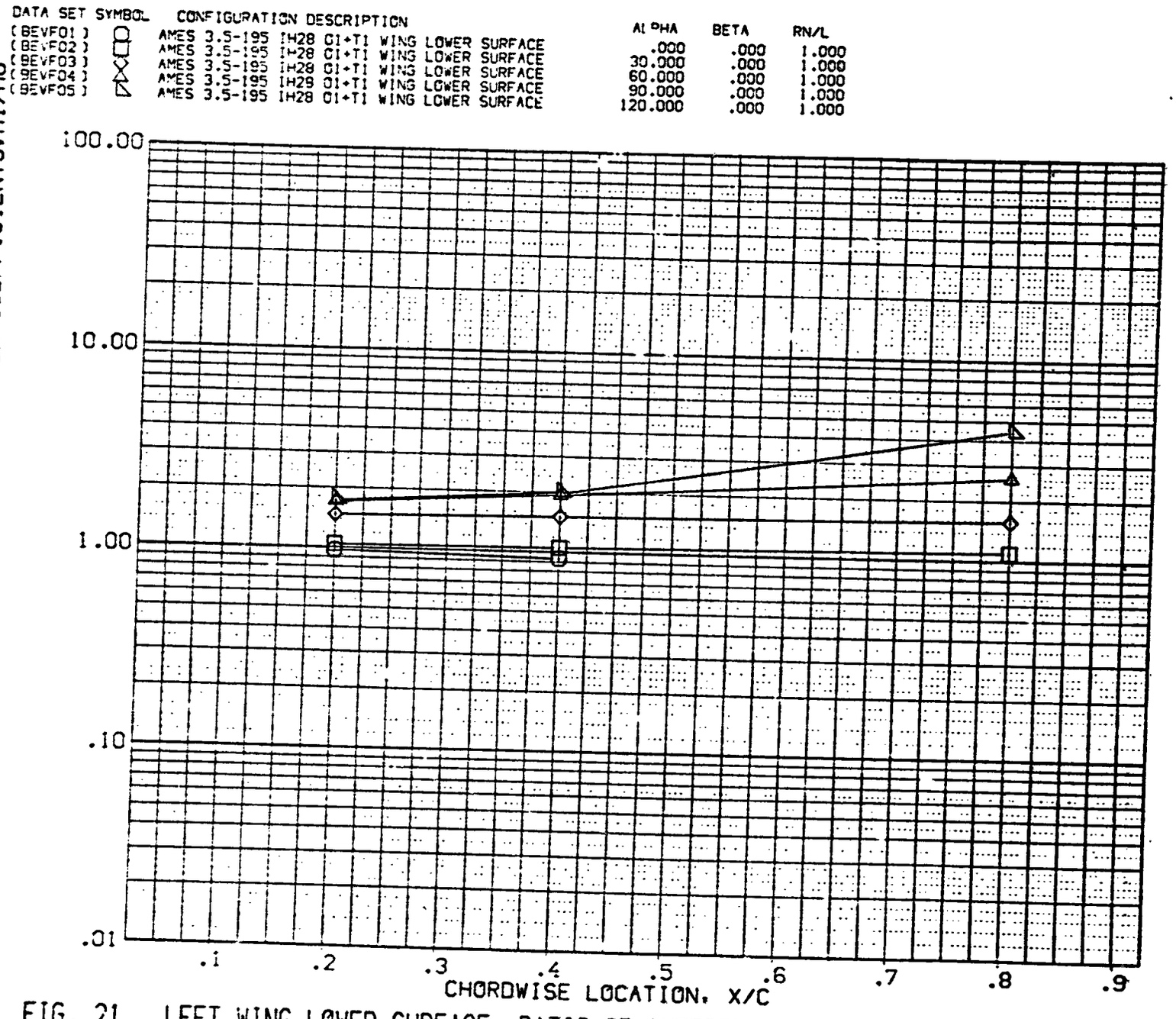

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 2Y/B = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVF01)	□	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	.000	.000	1.000
(BEVF09)	◇	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-30.000	.000	1.000
(BEVF08)	△	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-60.000	.000	1.000
(BEVF07)	○	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-90.000	.000	1.000
(BEVF06)	⊠	AMES 3.5-195 IH28 01+T1 WING LOWER SURFACE	-120.000	.000	1.000

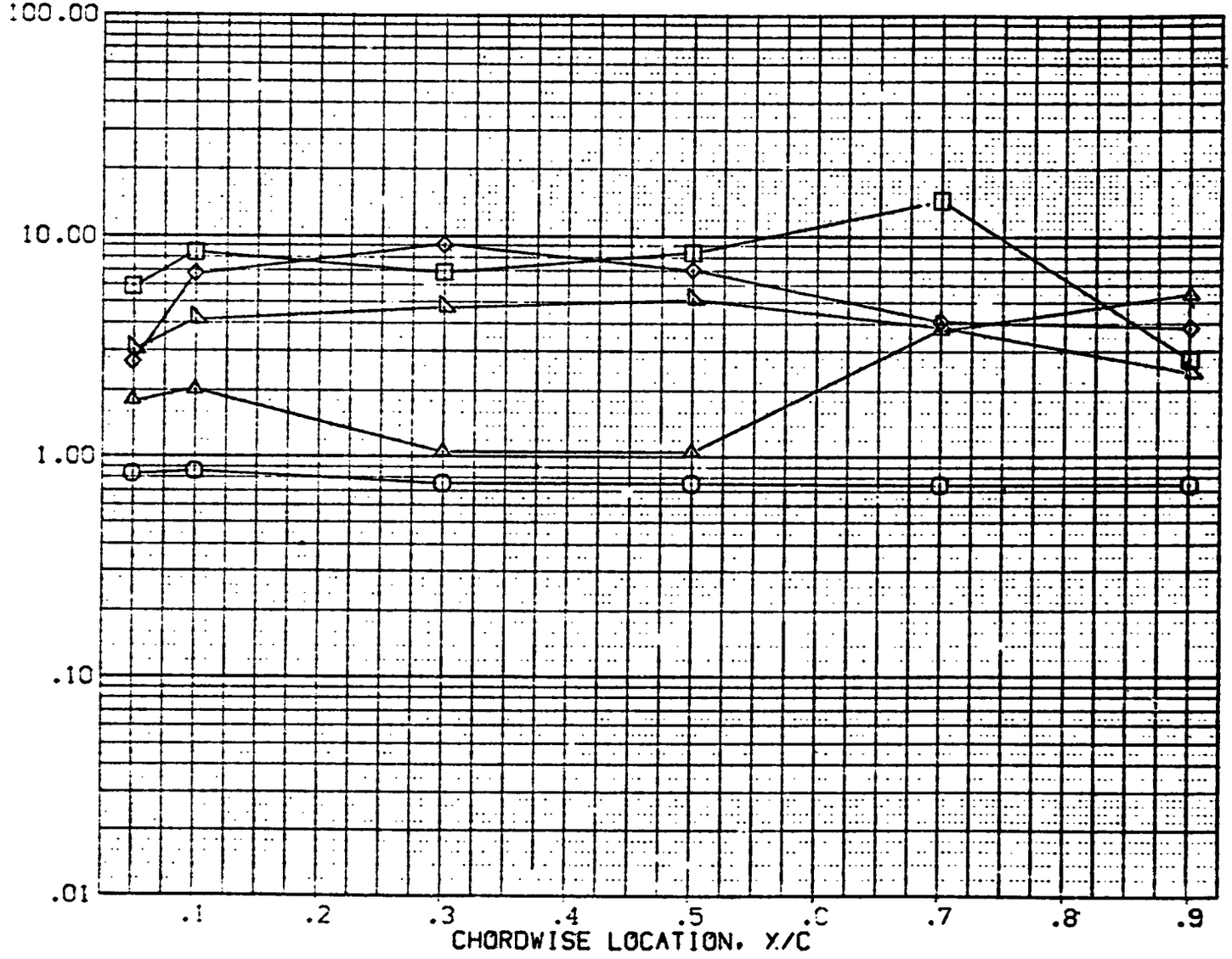

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVF01)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	.000	.000	1.000
(BEVF09)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	-30.000	.000	1.000
(BEVF08)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	-60.000	.000	1.000
(BEVF07)		AMES 3.5-195 IH29 01+TI WING LOWER SURFACE	-90.000	.000	1.000
(BEVF06)		AMES 3.5-195 IH28 01+TI WING LOWER SURFACE	-120.000	.000	1.000

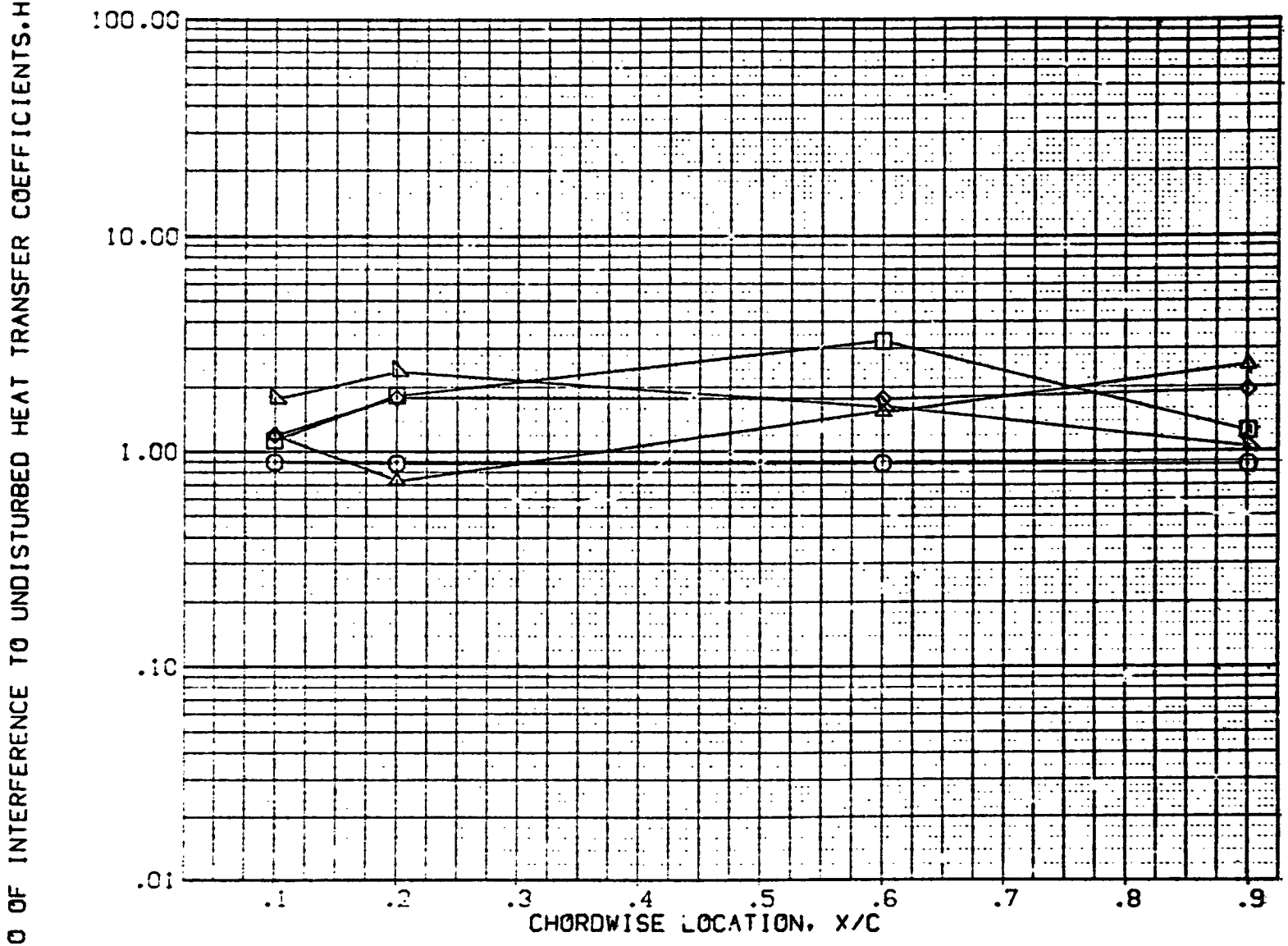

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 2Y/B = 600

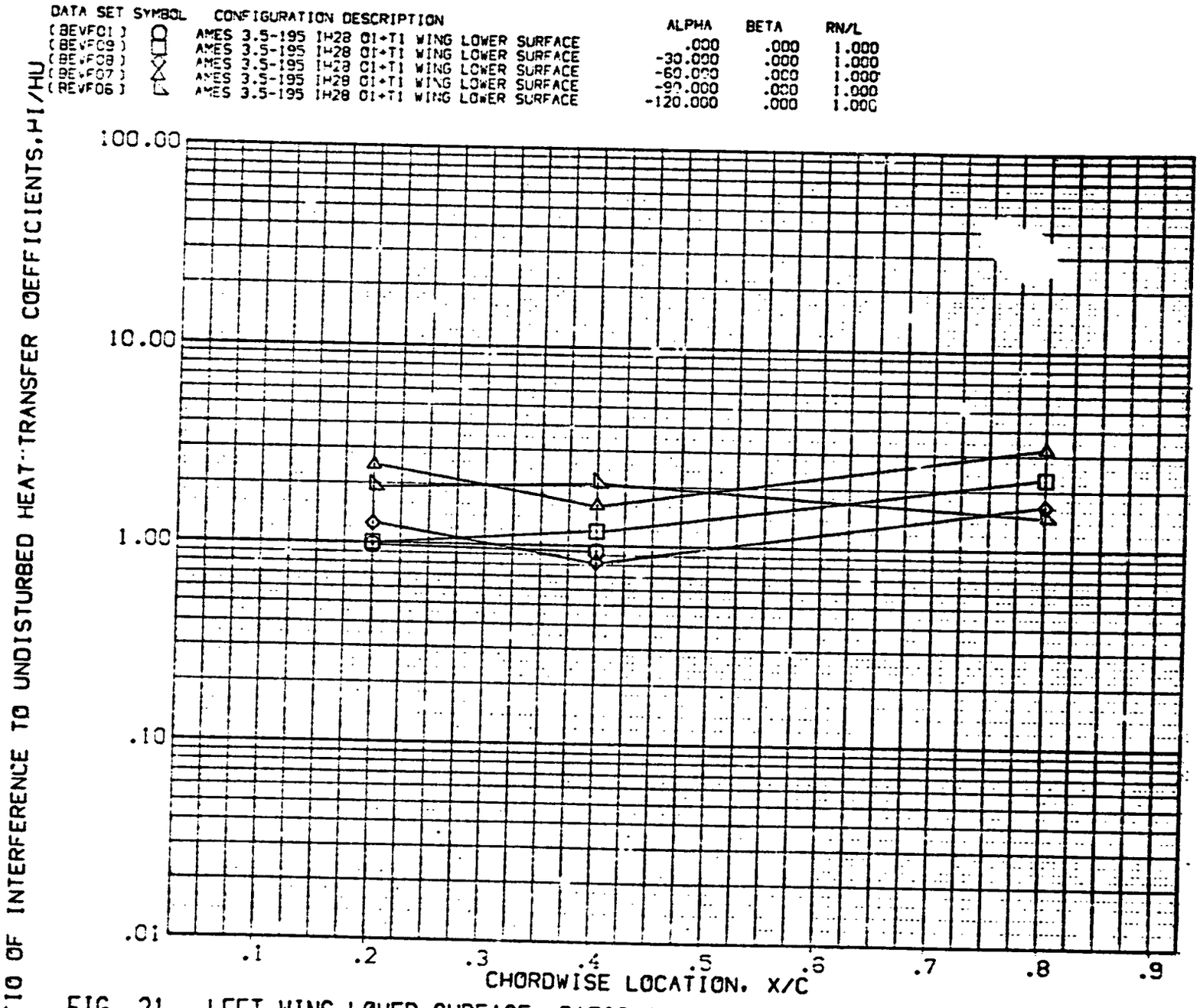

FIG. 21 LEFT WING LOWER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 2Y/B = .800

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG19)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

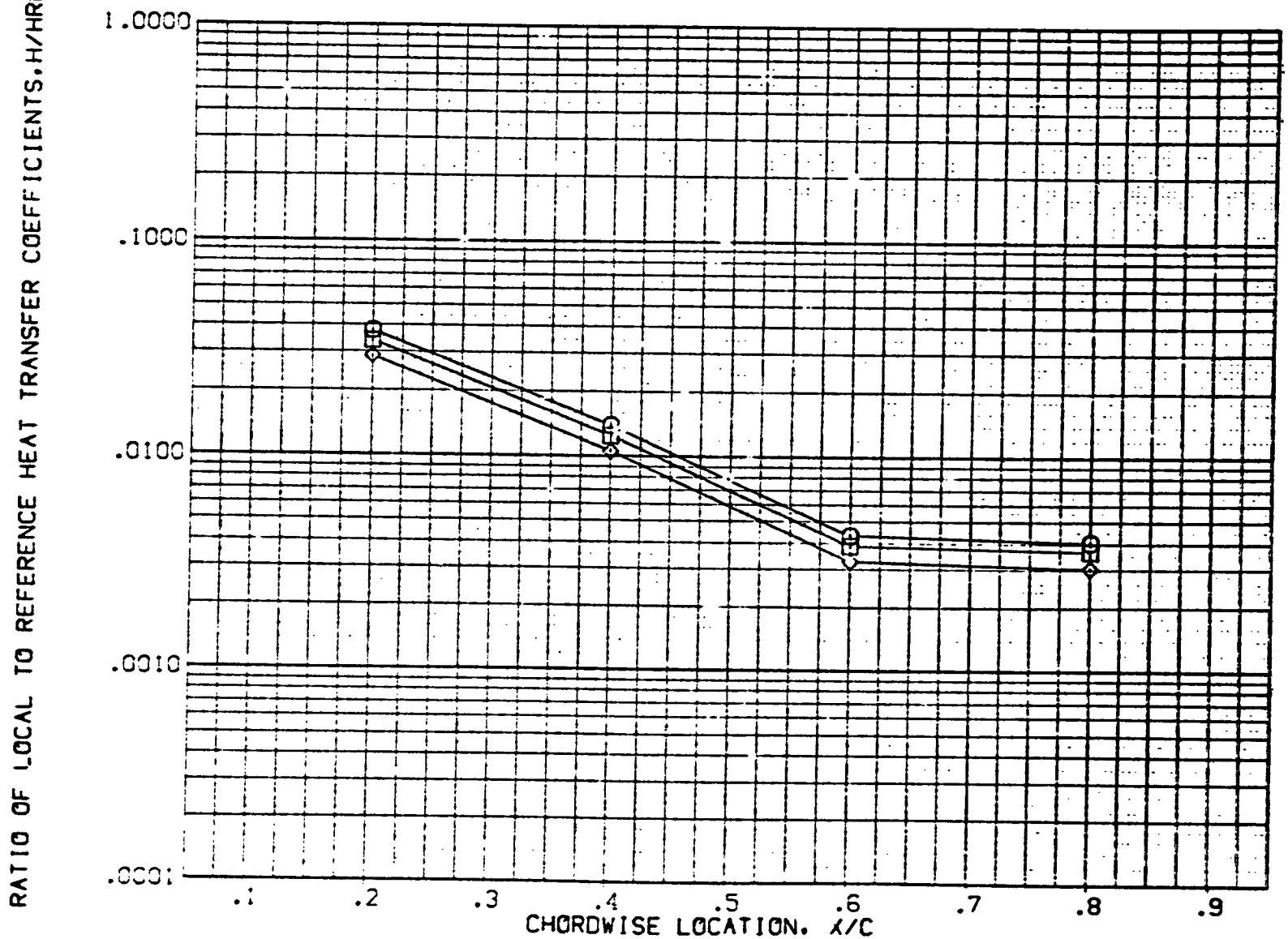

FIG. 22 RIGHT WING UPPER SURFACE. ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG19)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

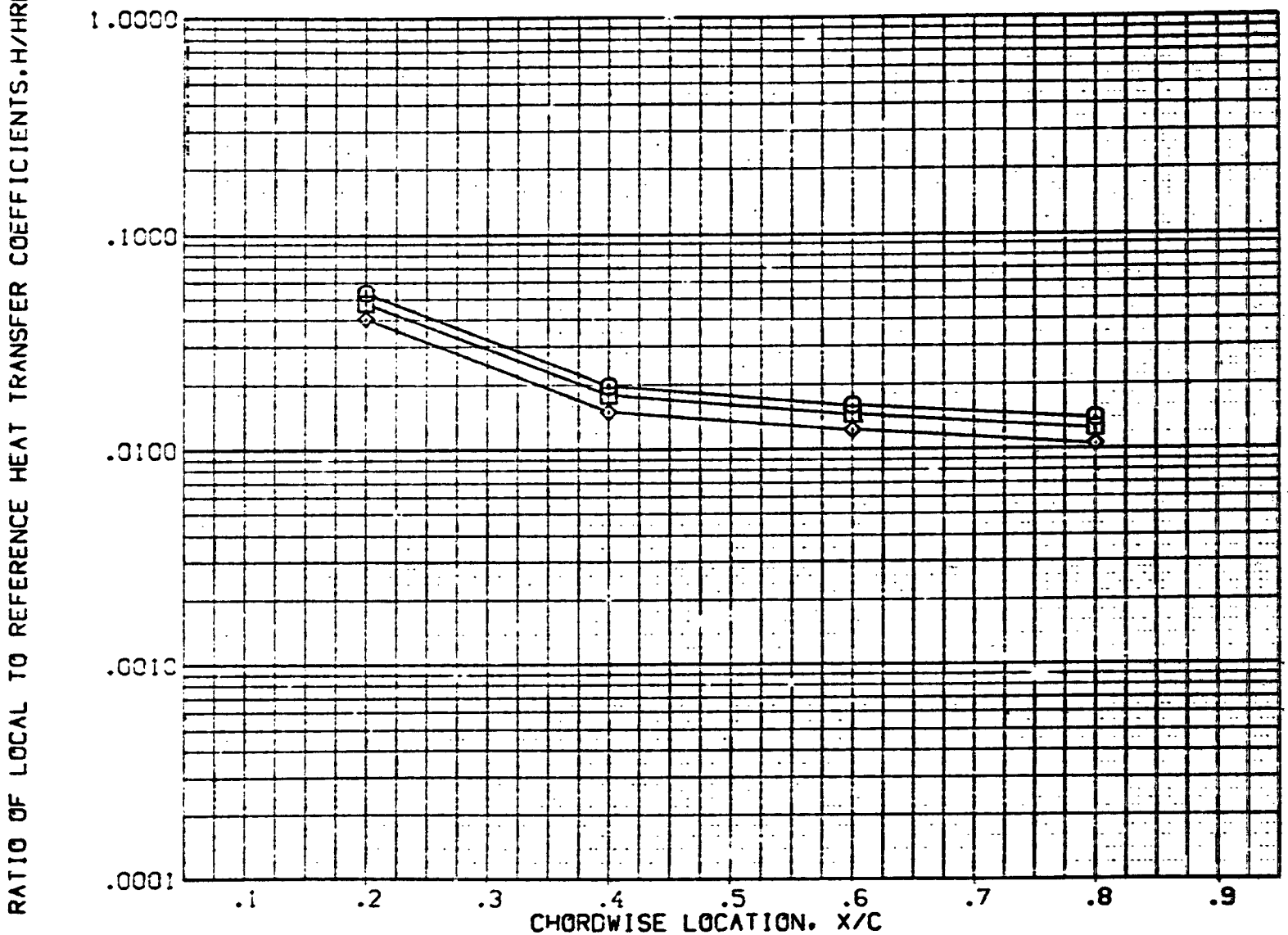

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

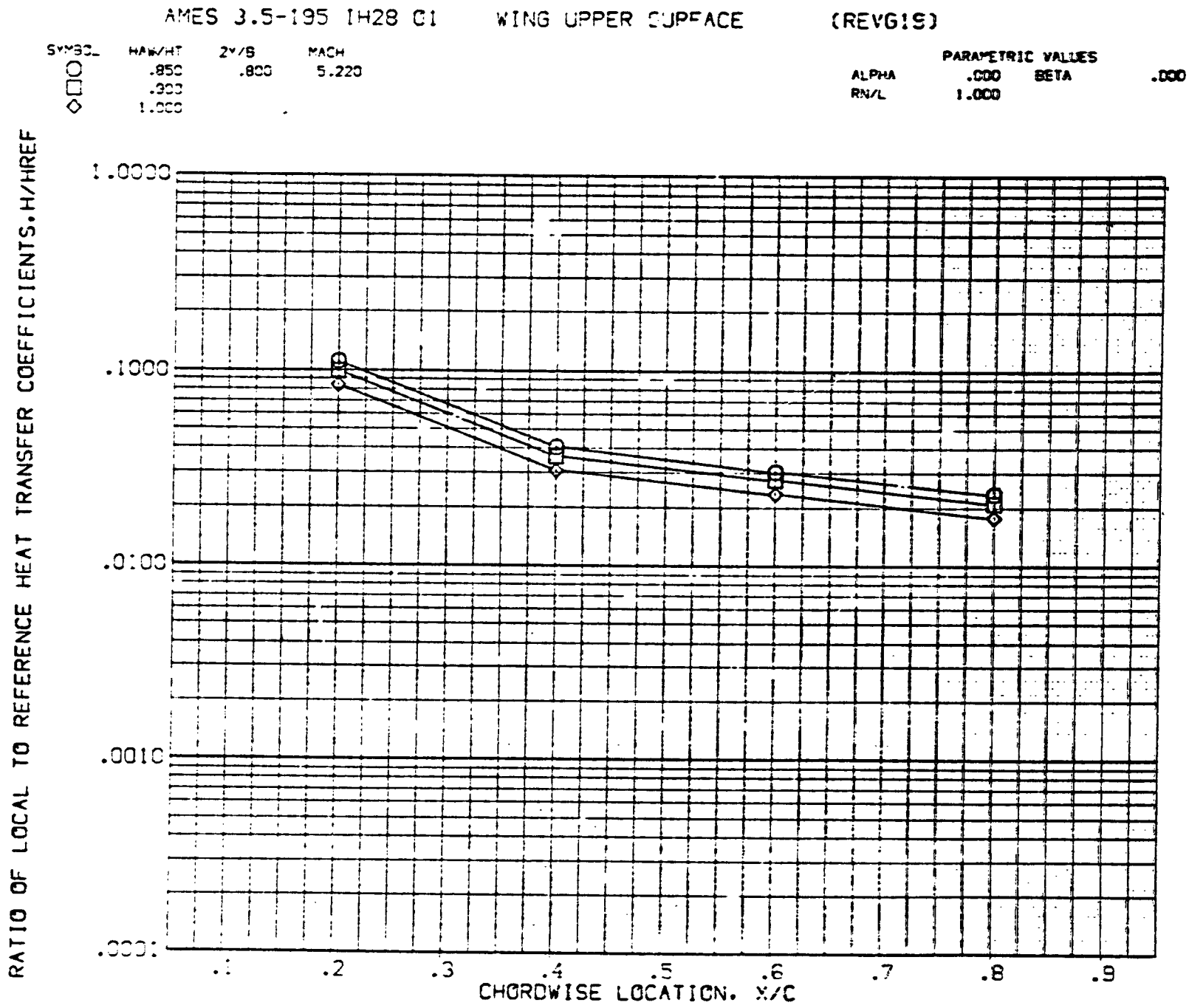

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG20)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

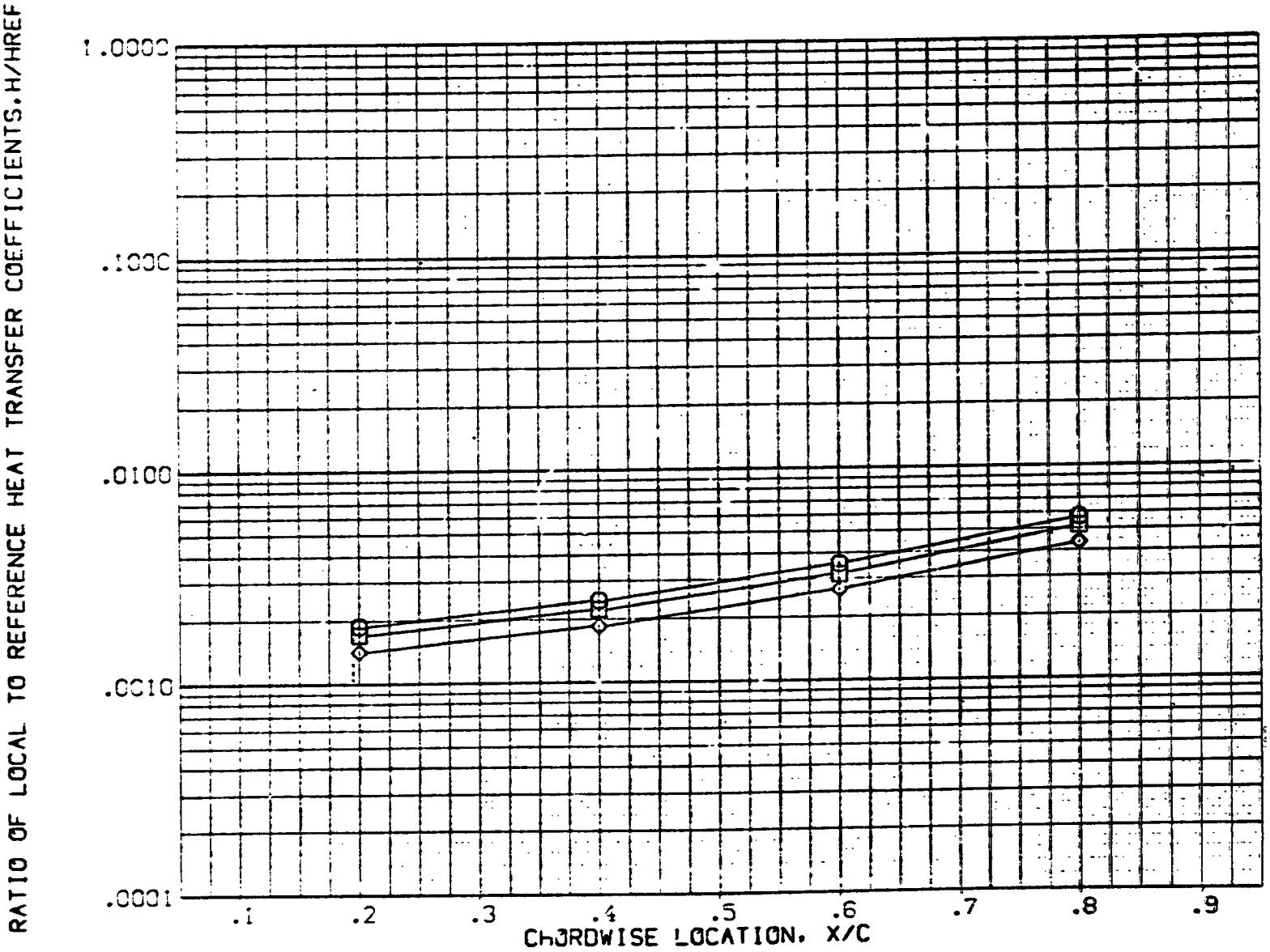

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

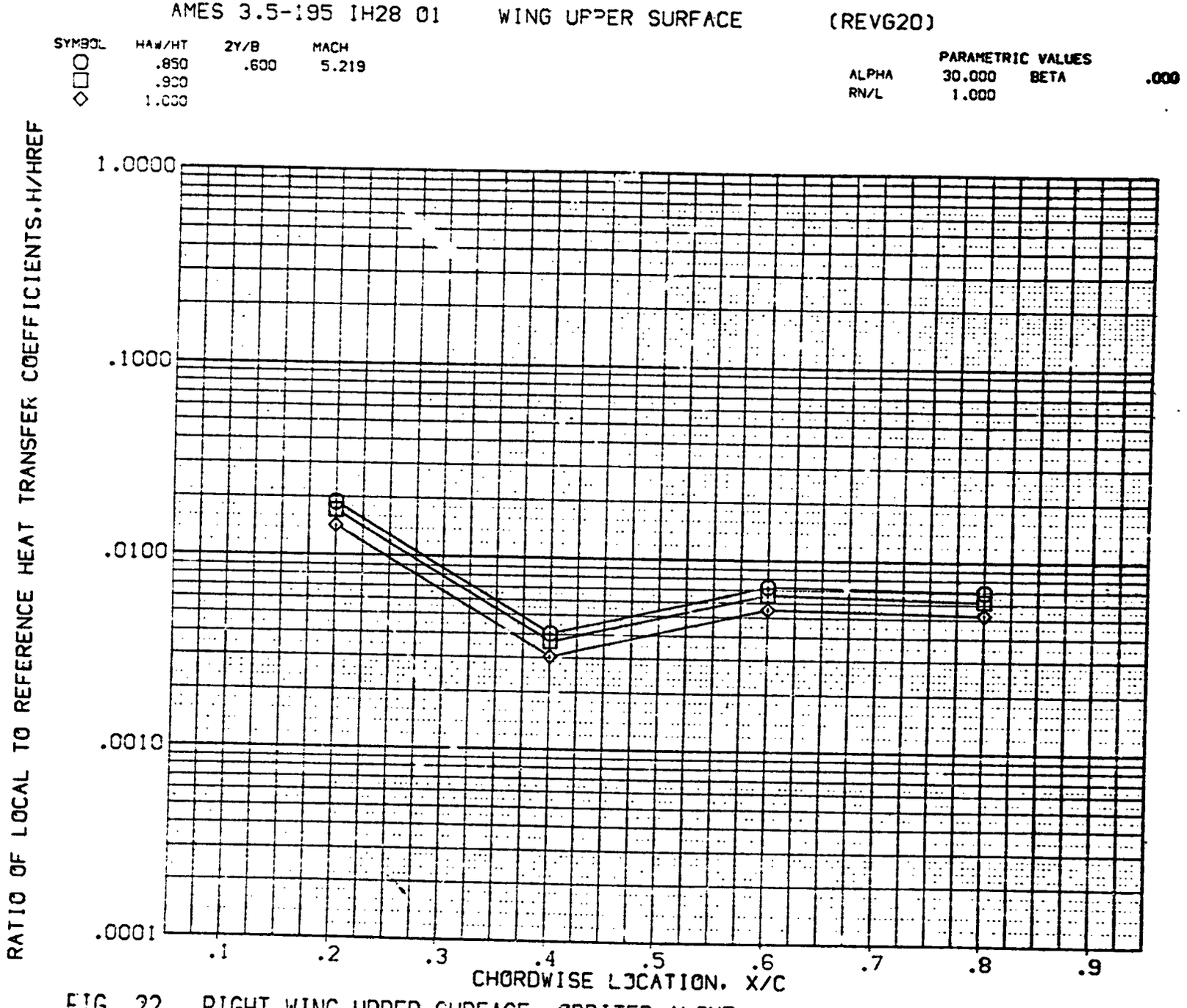

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG20)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

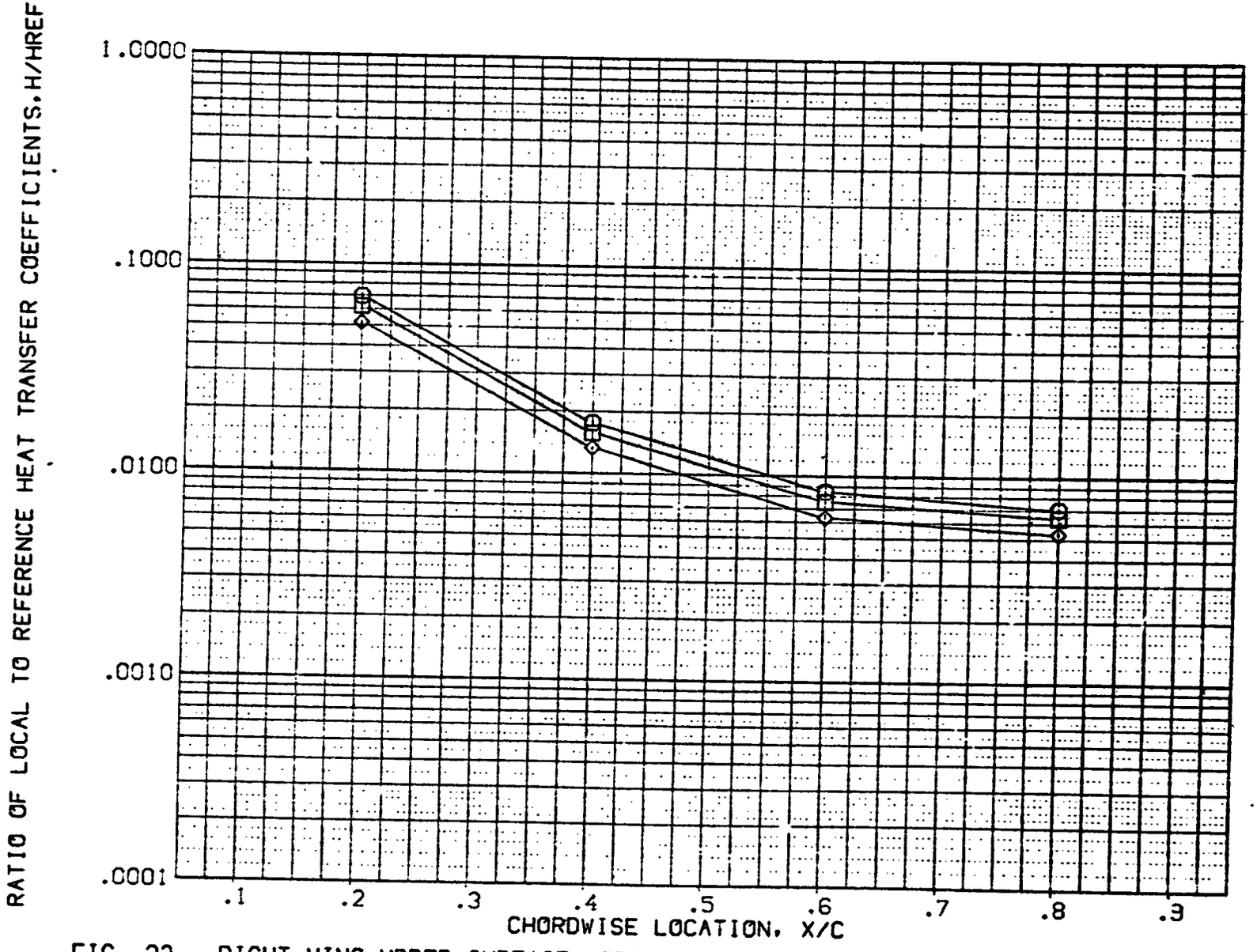

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG21)

SYMBOL	HAW/HT	Zr/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

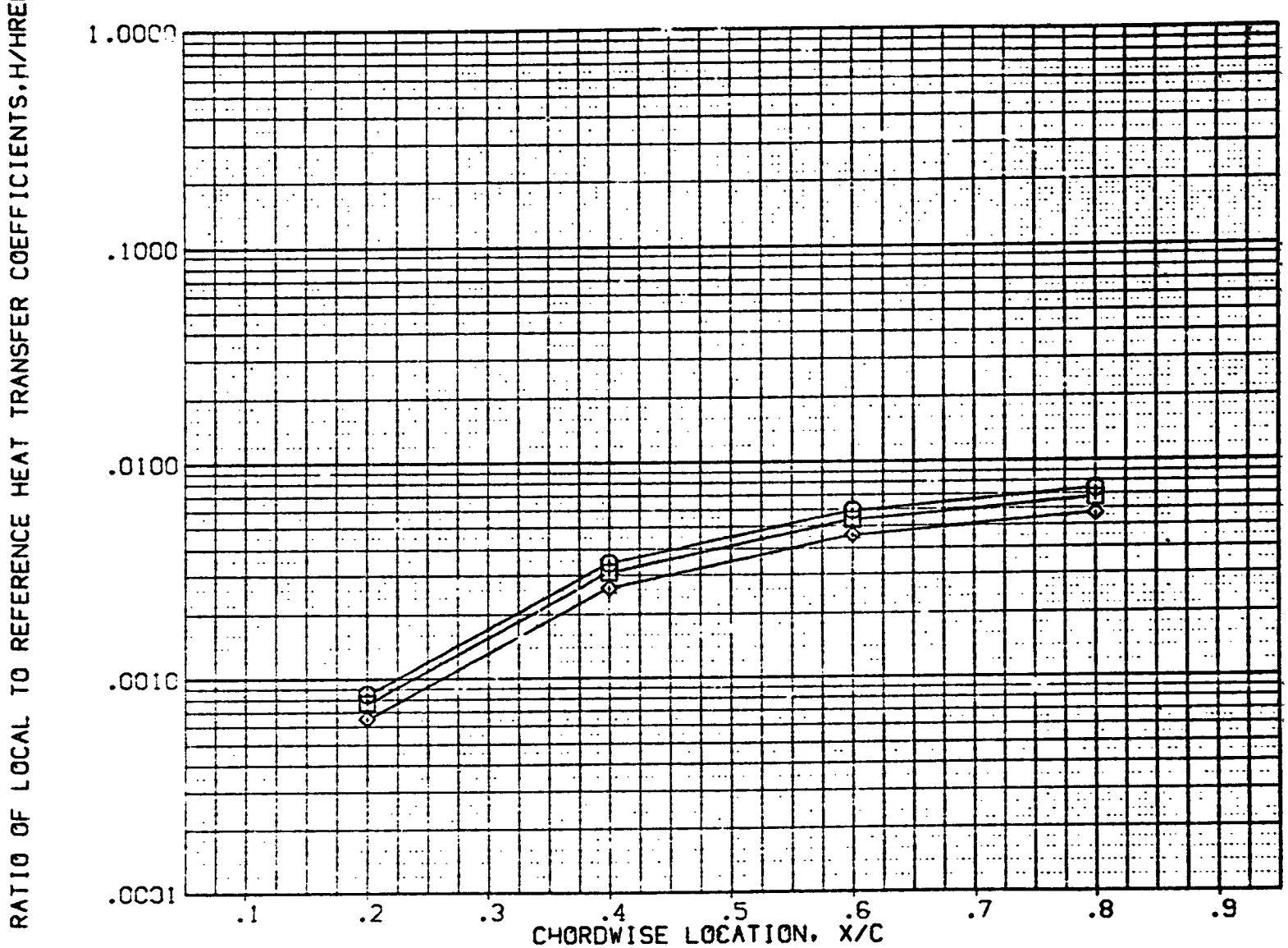

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

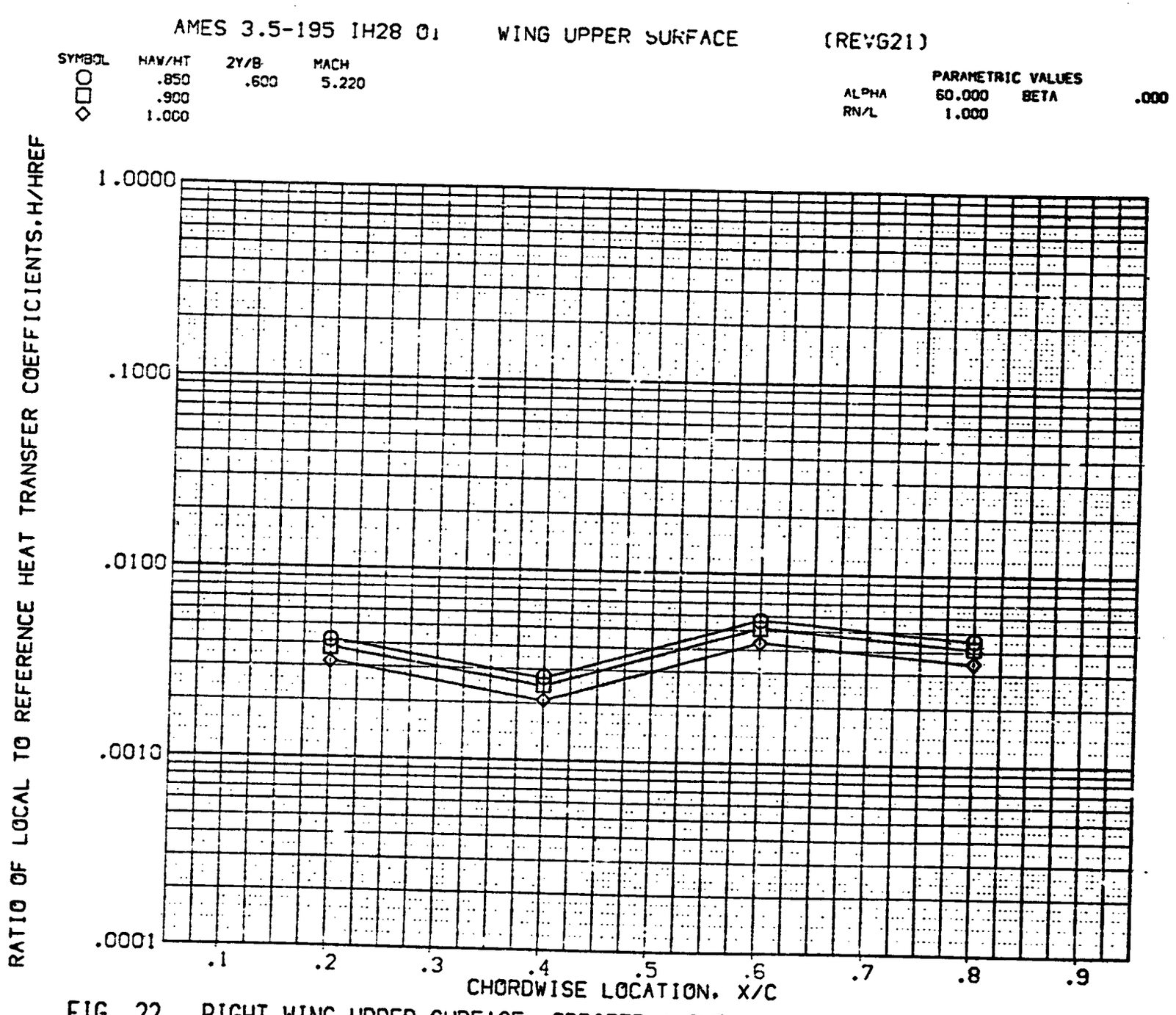

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

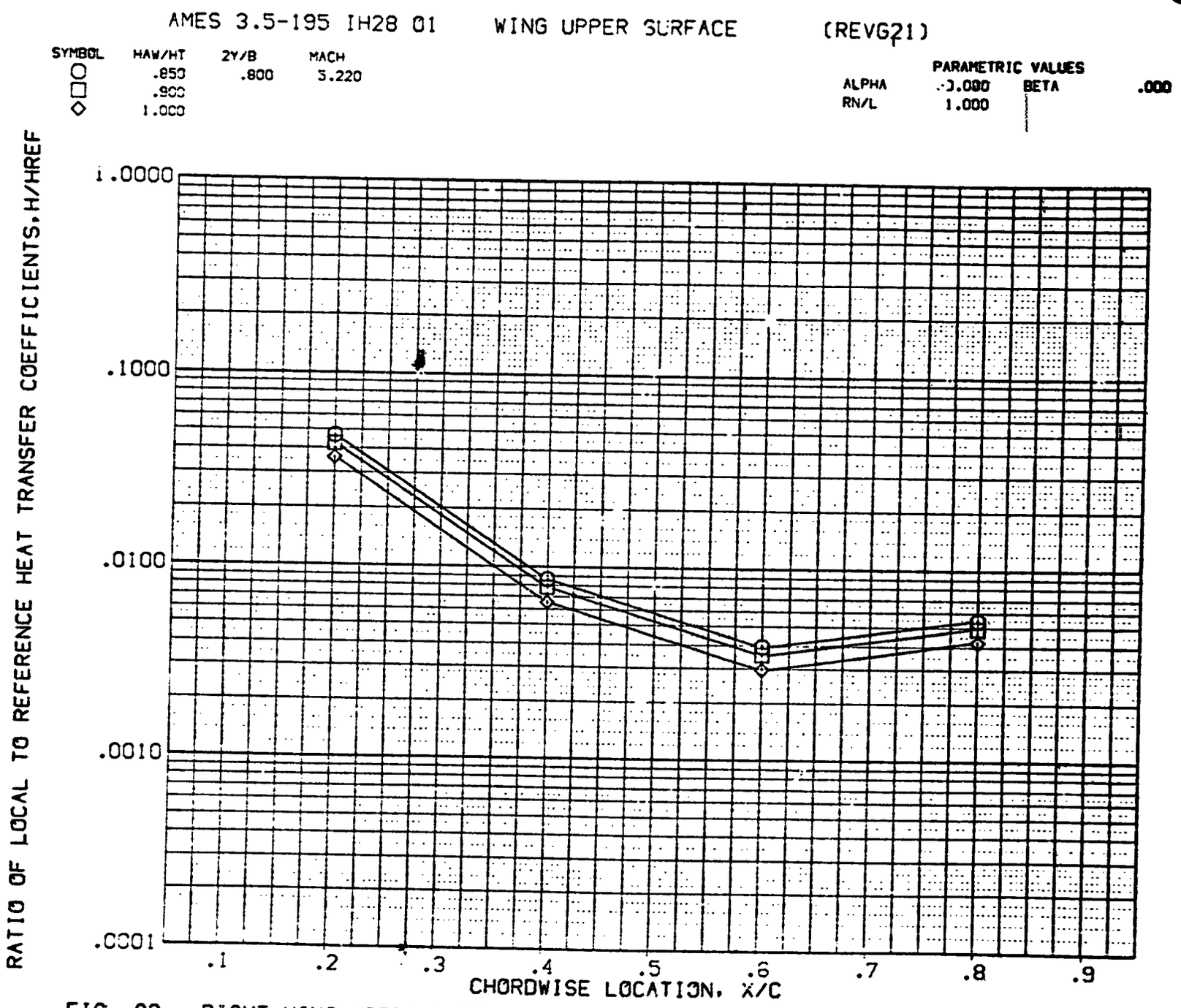

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE.

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG22)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

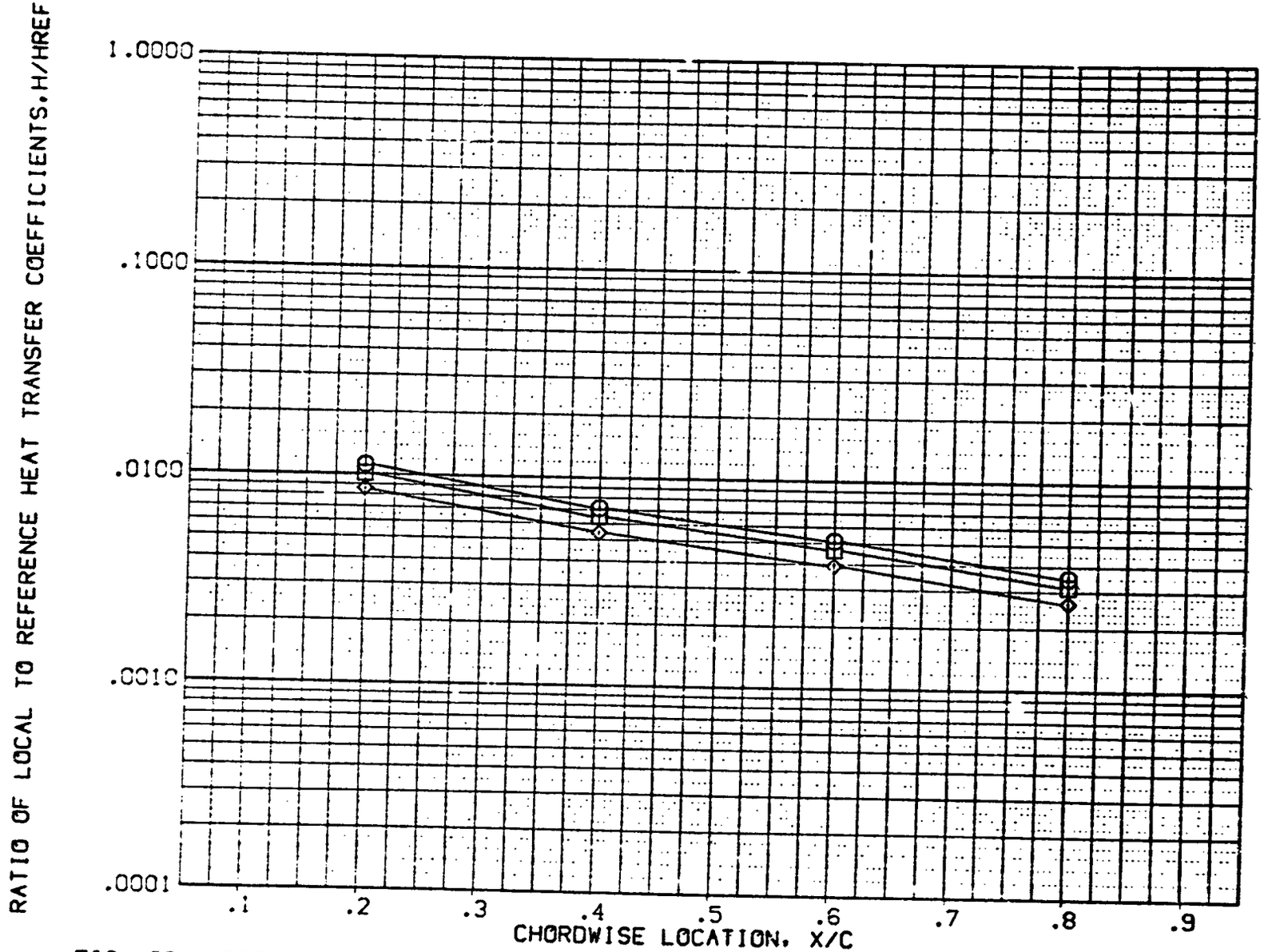

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV622)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

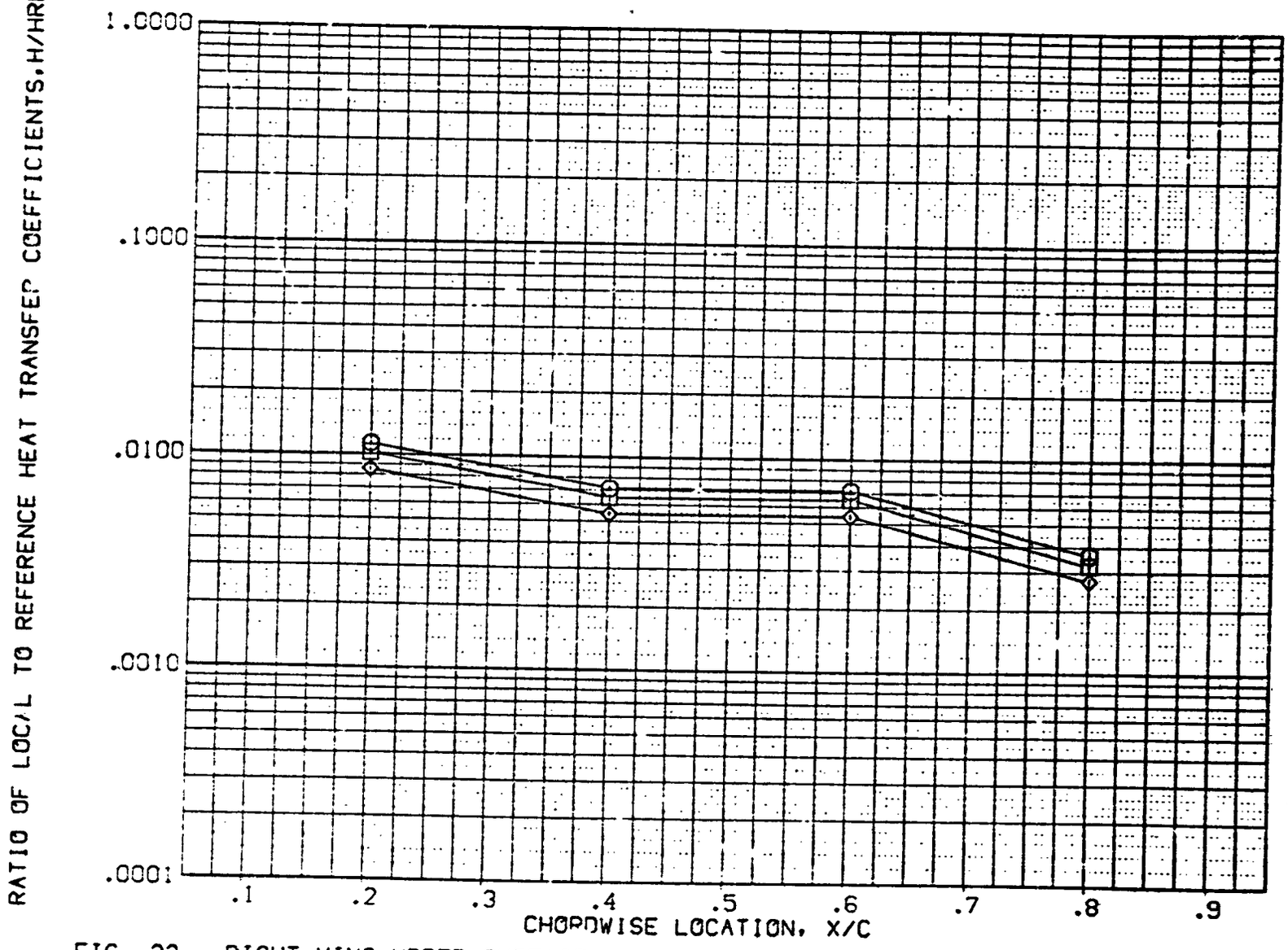

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

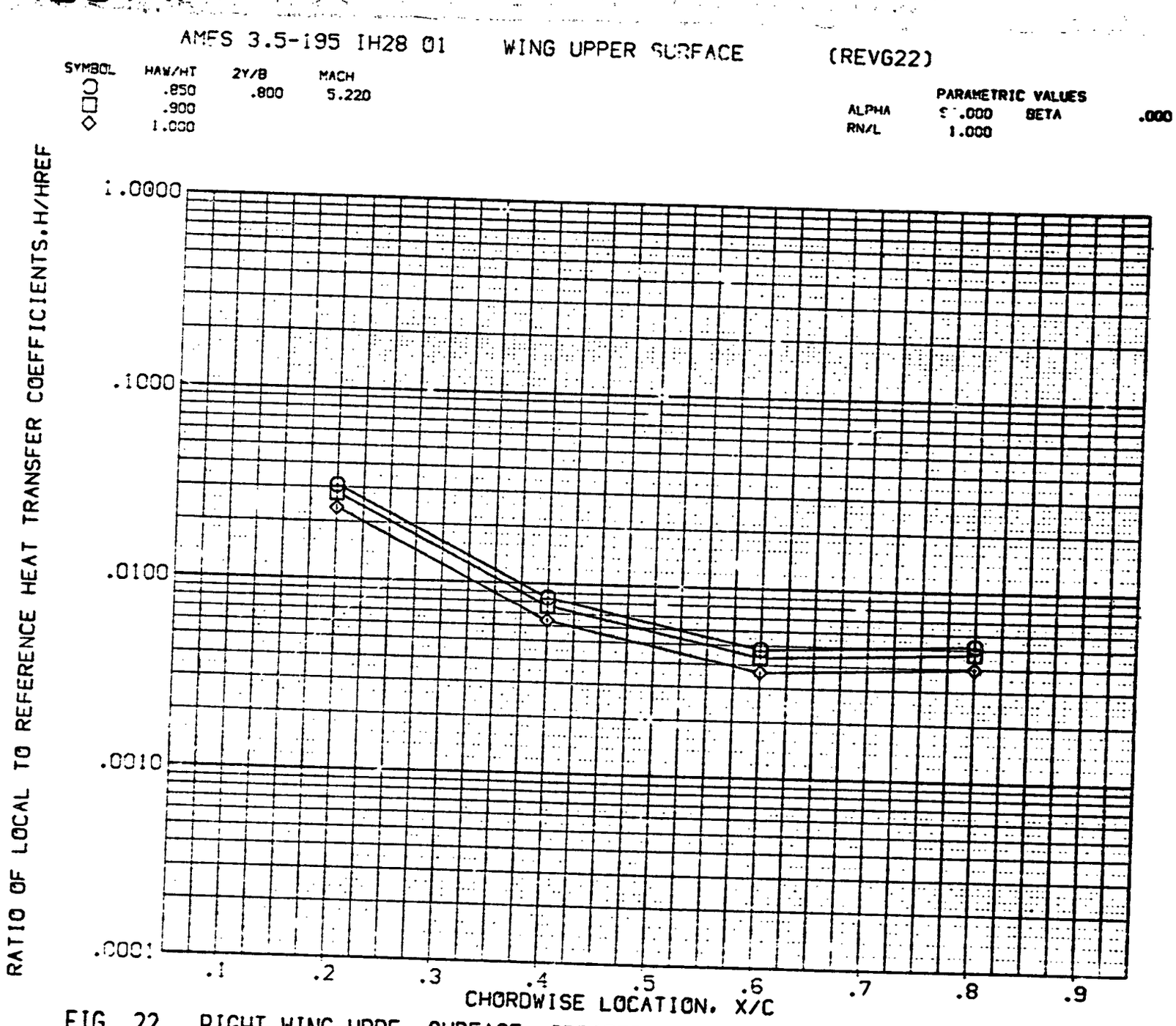

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

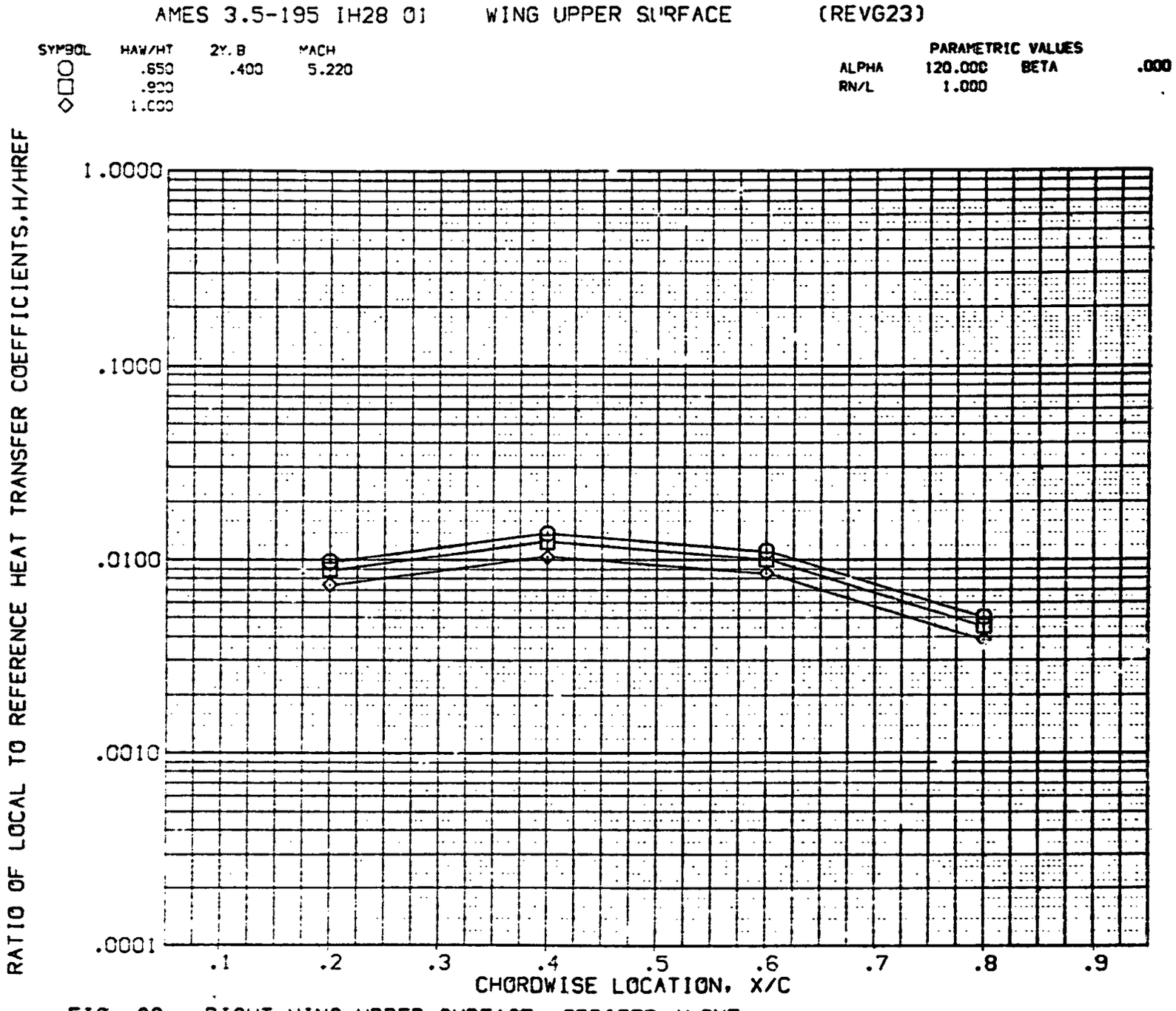

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

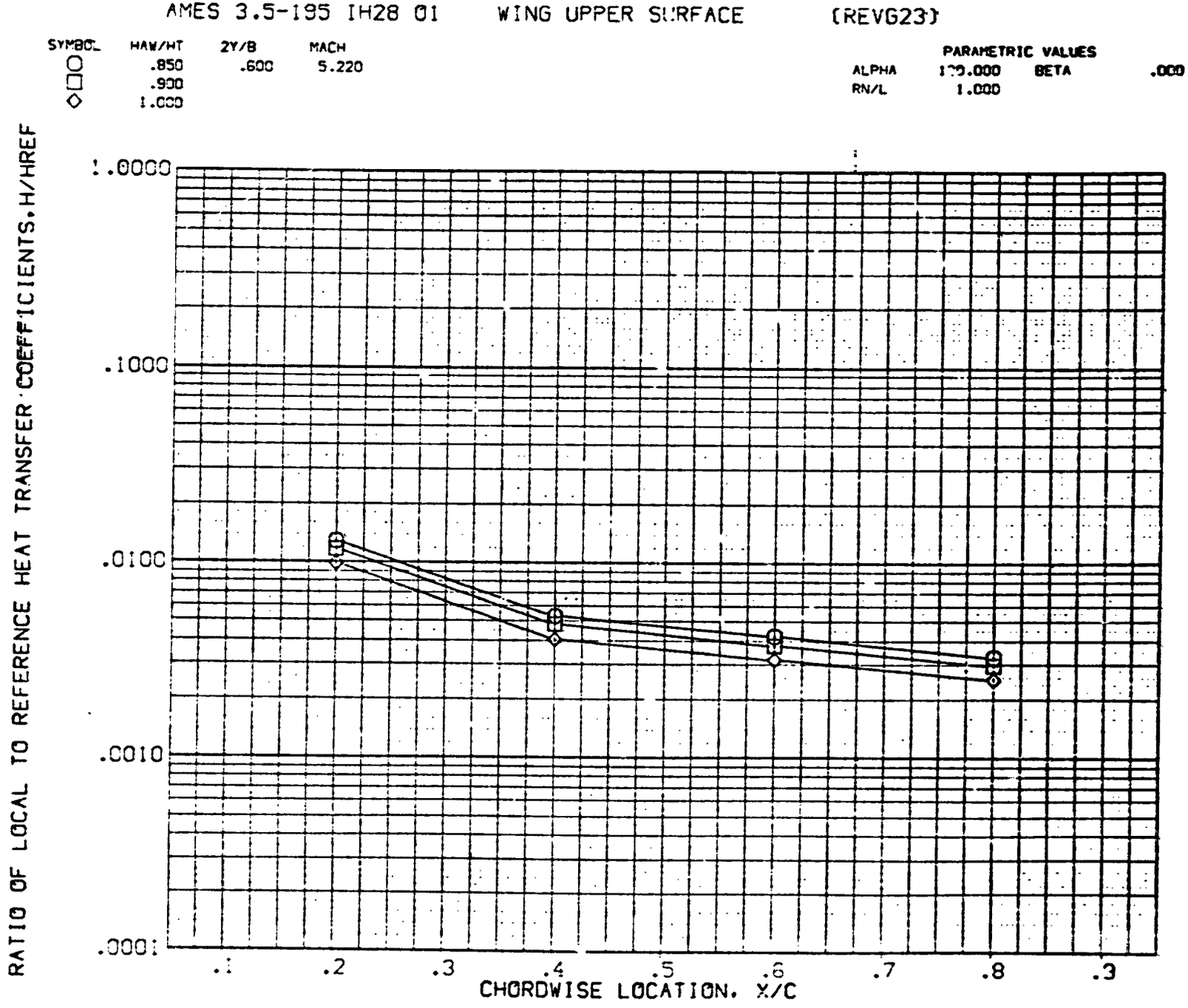

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

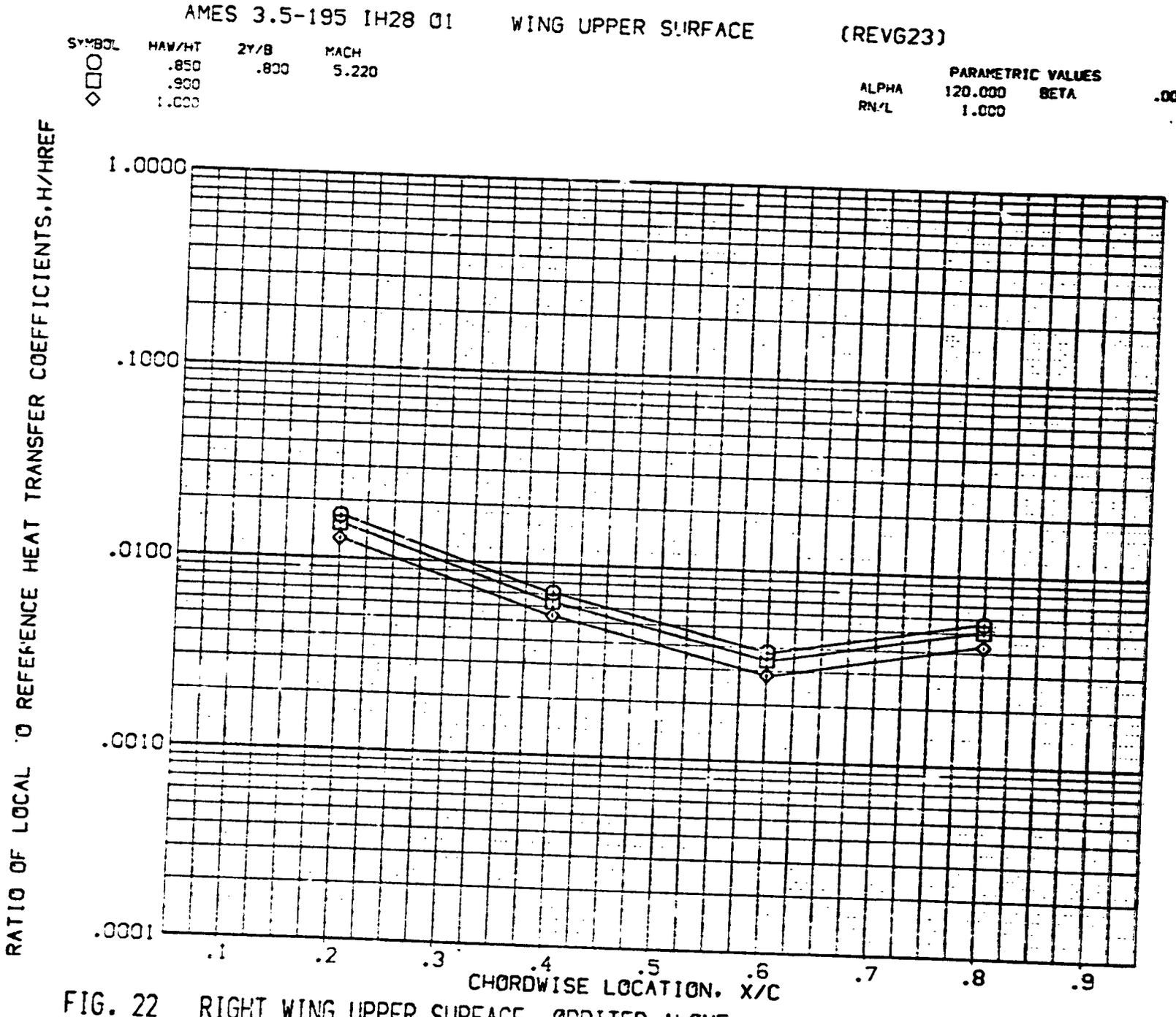

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REV524)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

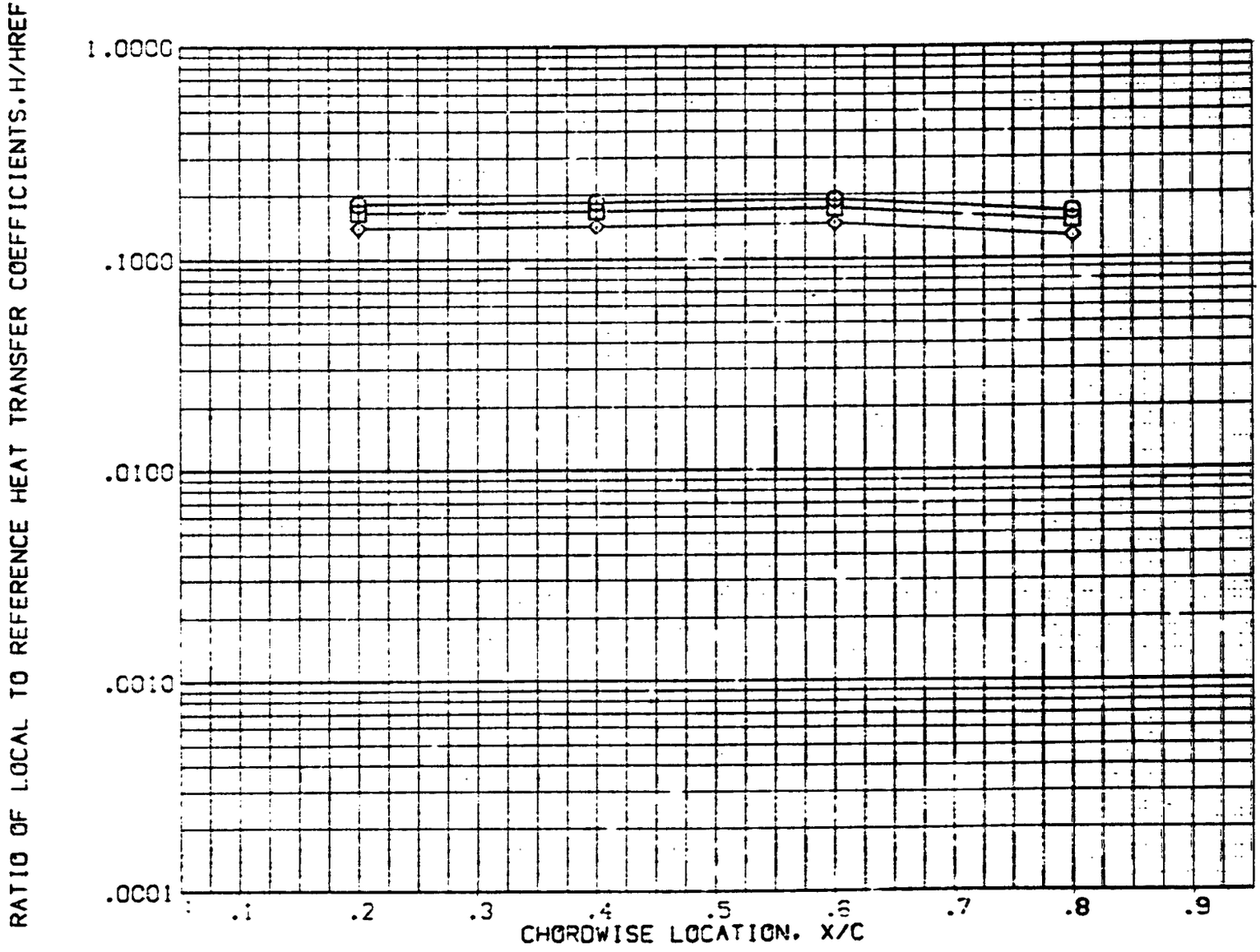

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

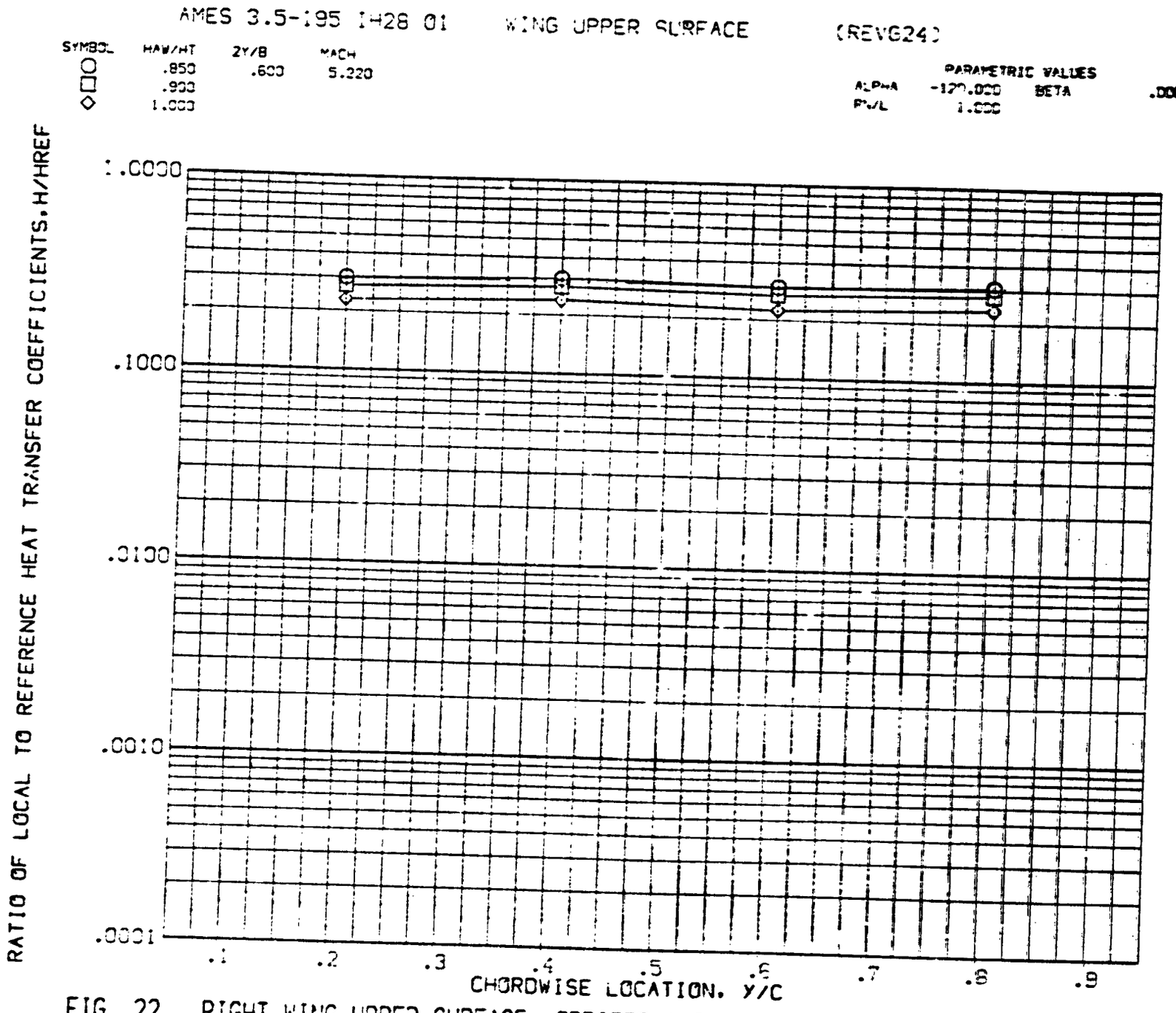

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG24)

SYMBOL	MAW/HT	2Y/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -120.000 BETA .000

R*/L 1.000

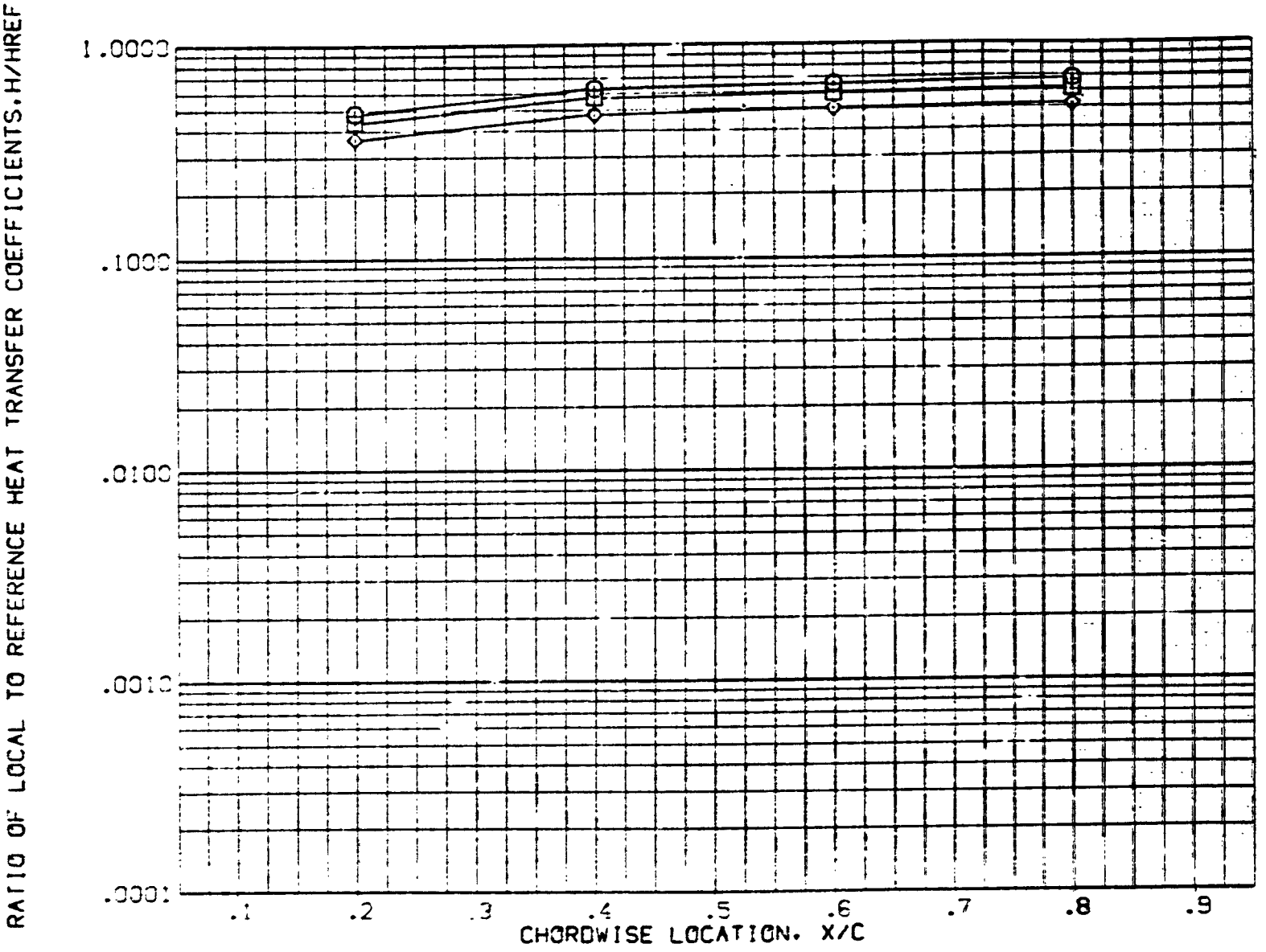

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -30.000 BETA .000

RN/L 1.000

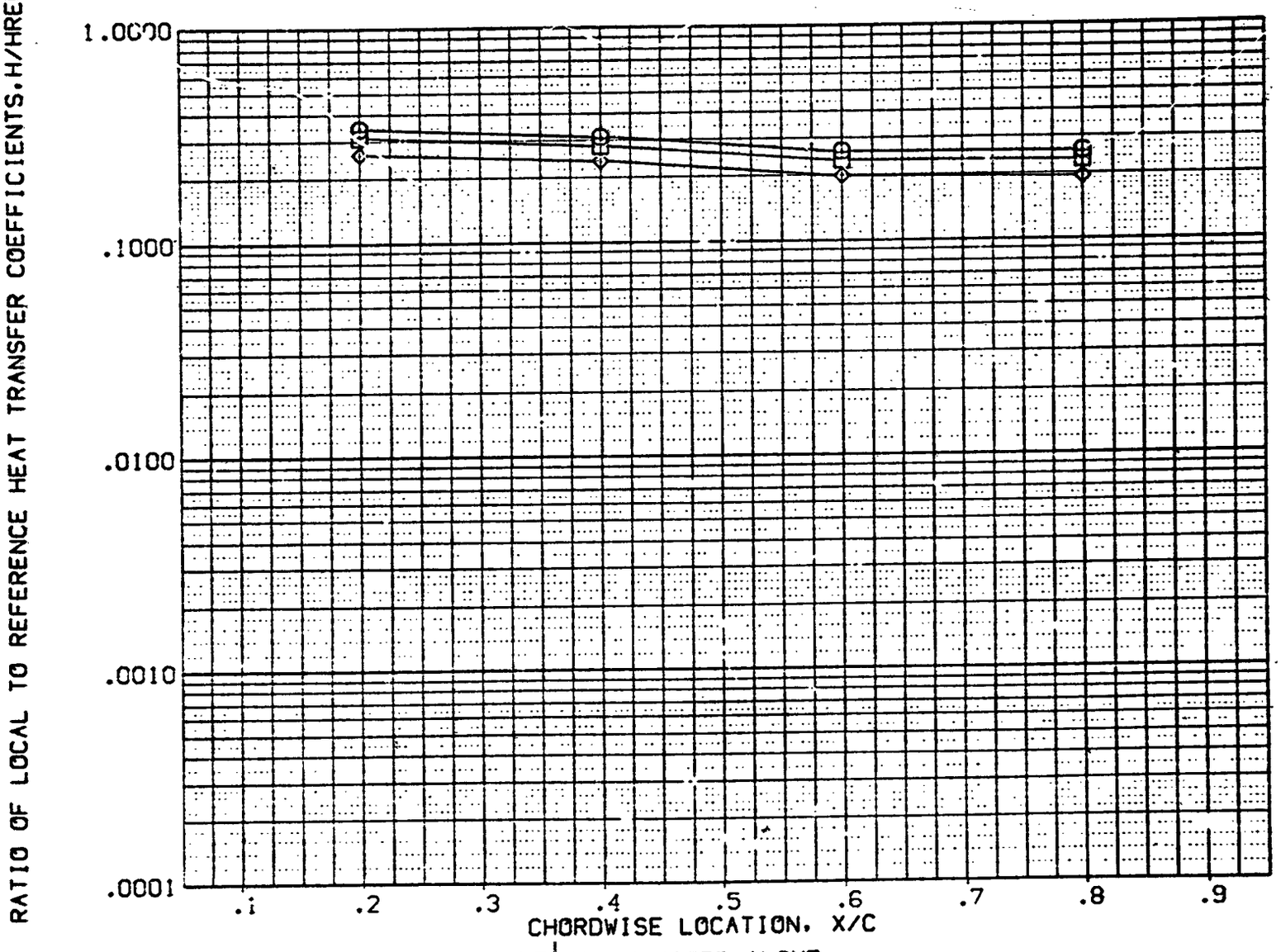

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-9..000	BETA	.000
RN/L	1.000		

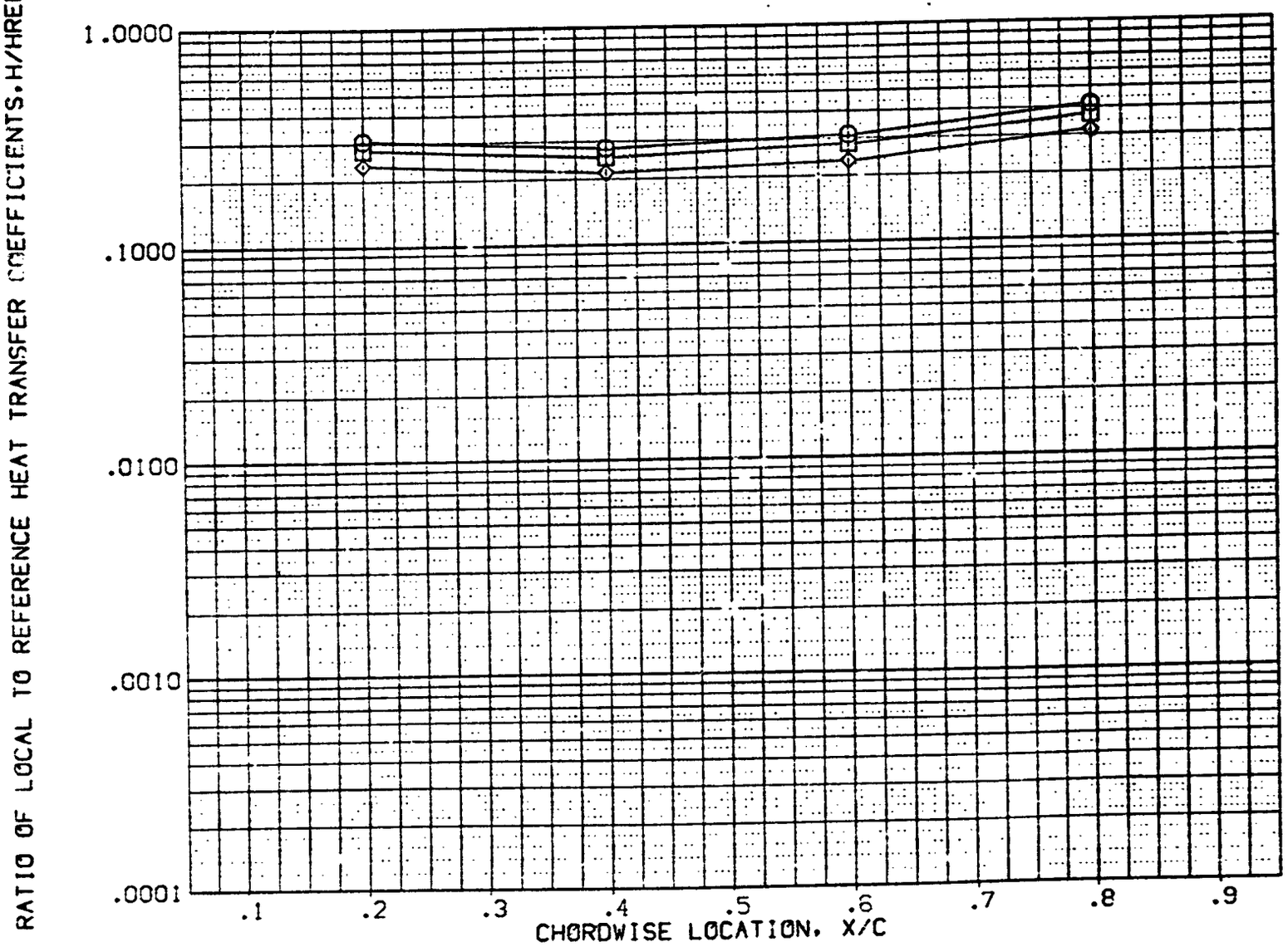

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

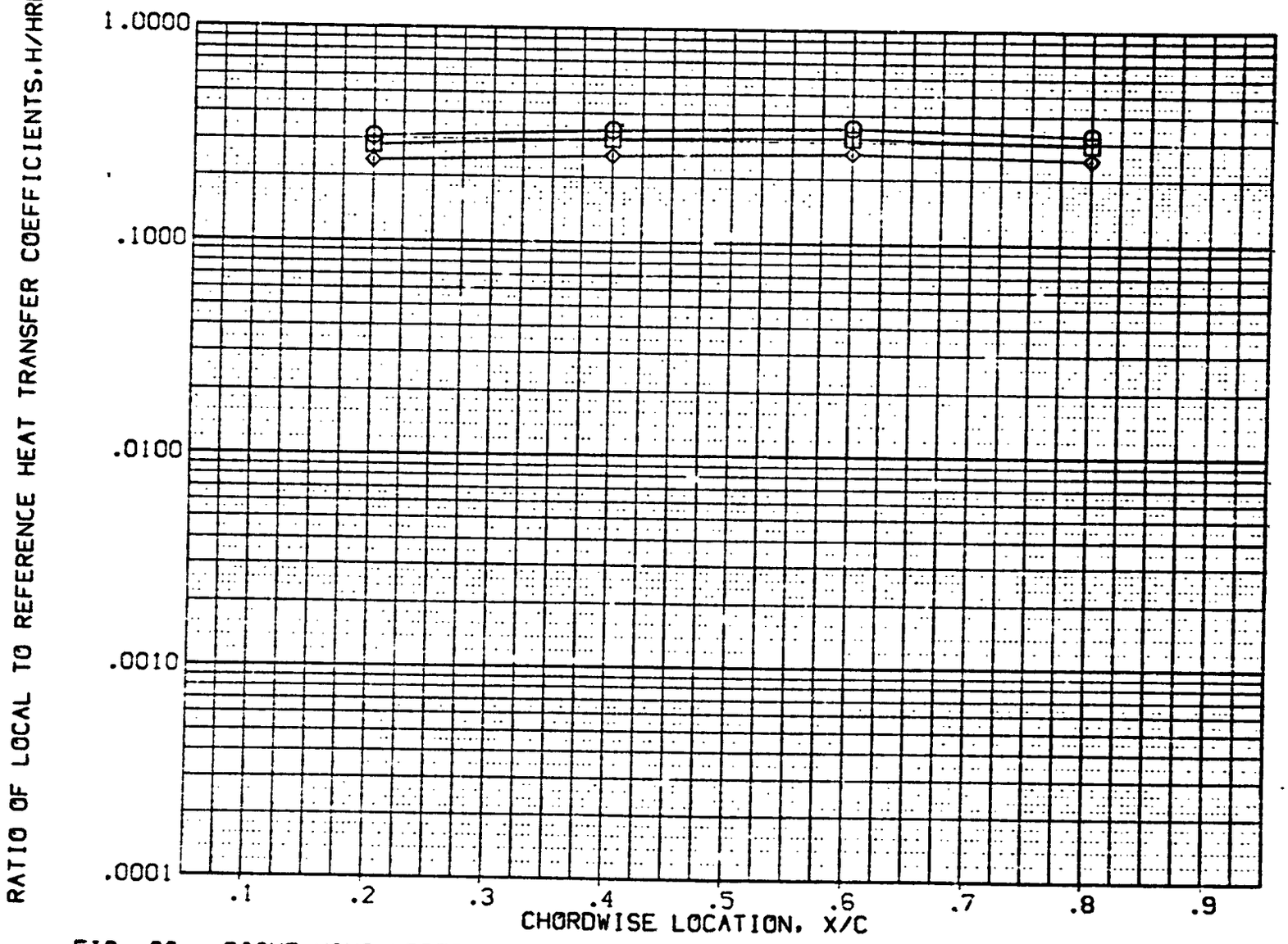

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG26)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALLES

ALPHA	-6..000	BETA	.000
RN/L	1.000		

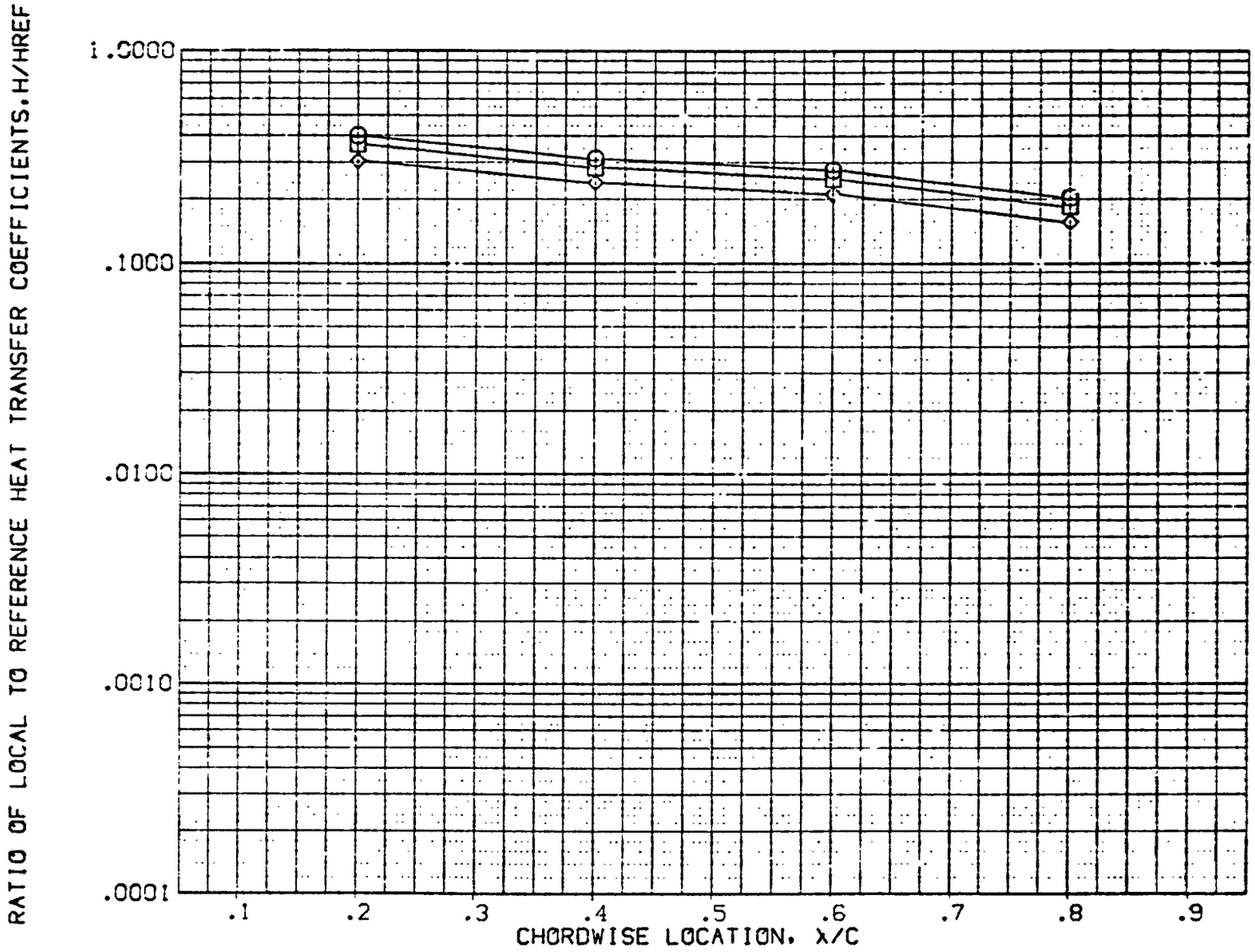

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

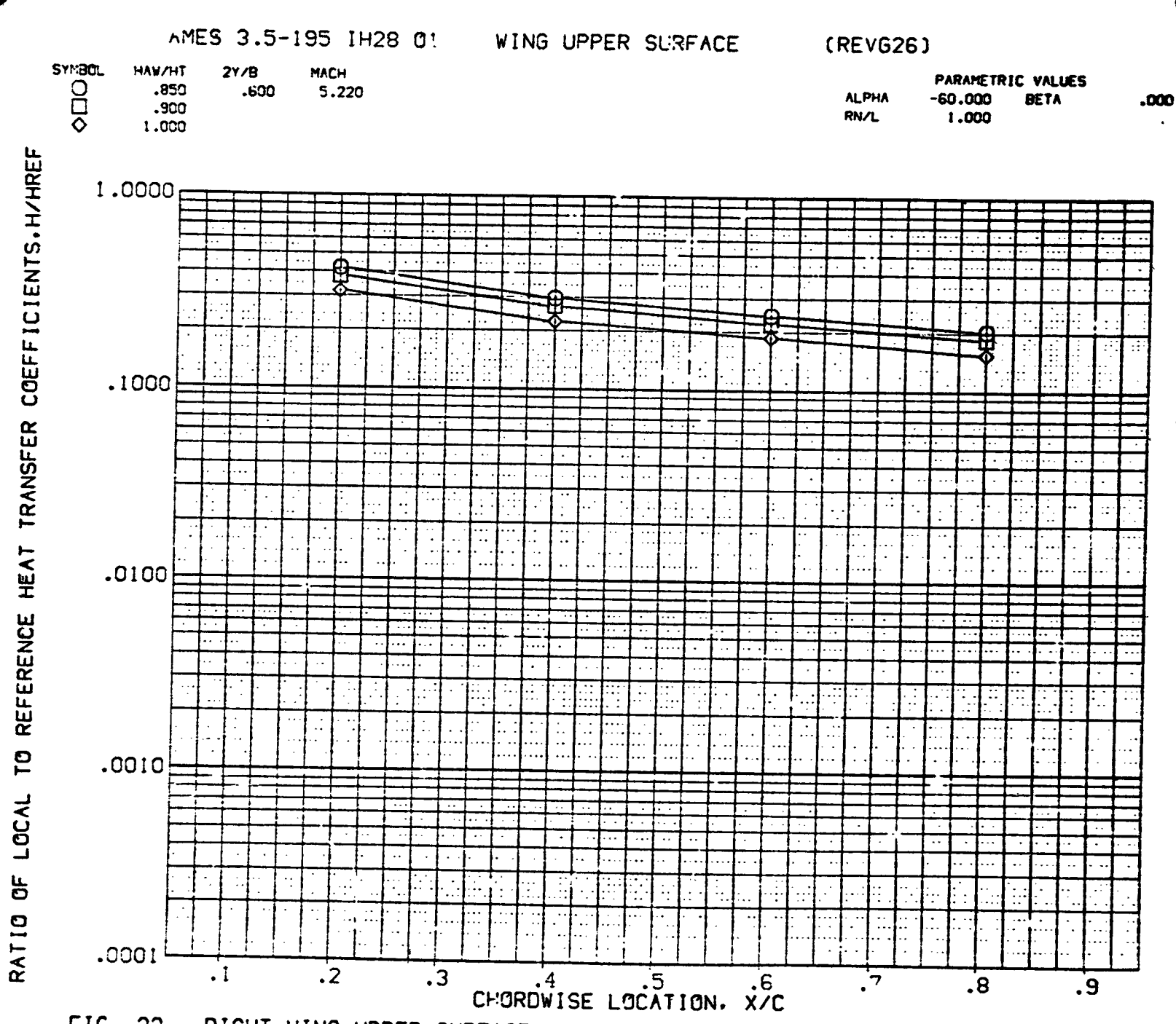

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

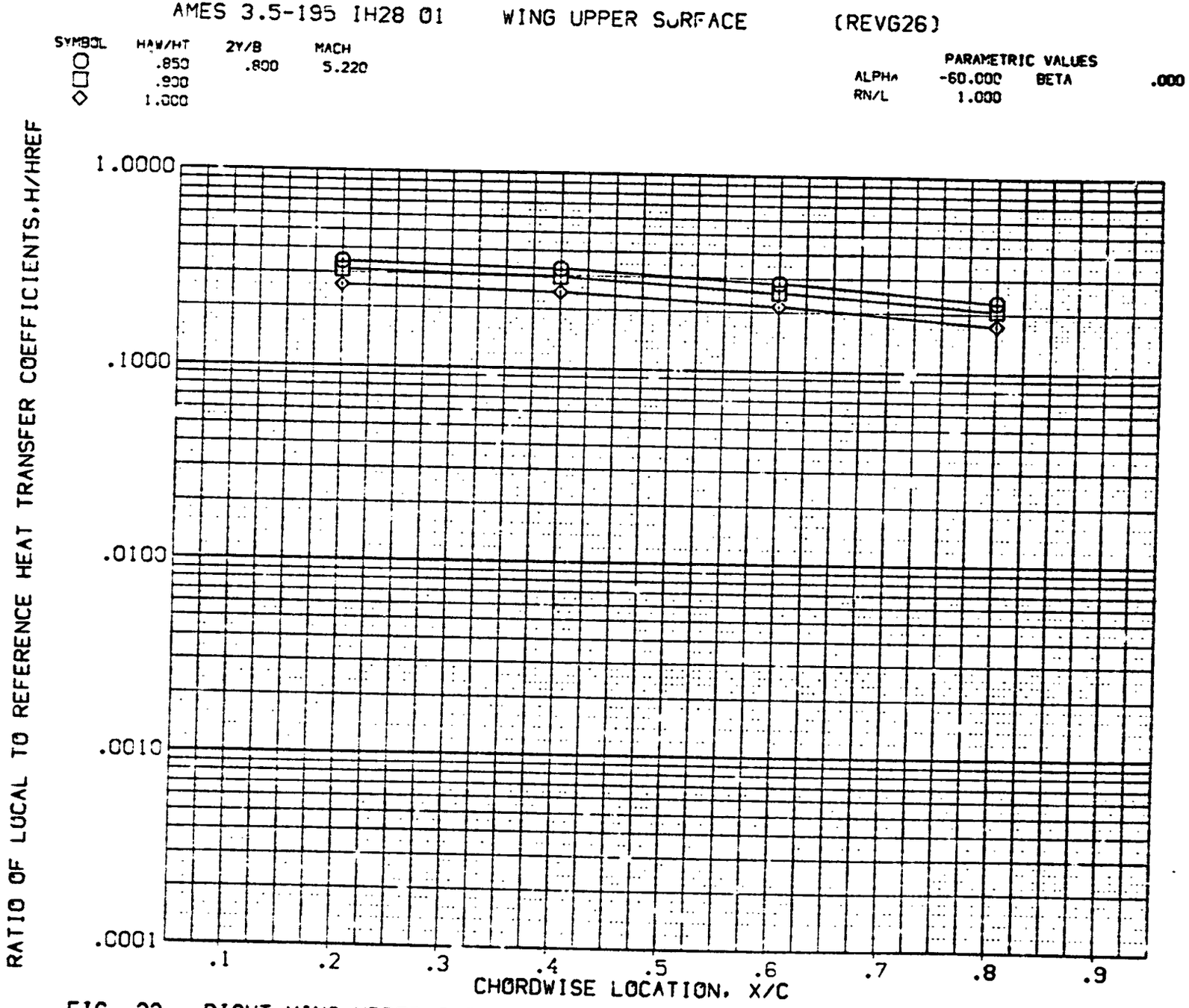

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG27)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BET.	.000
RN/L	1.000		

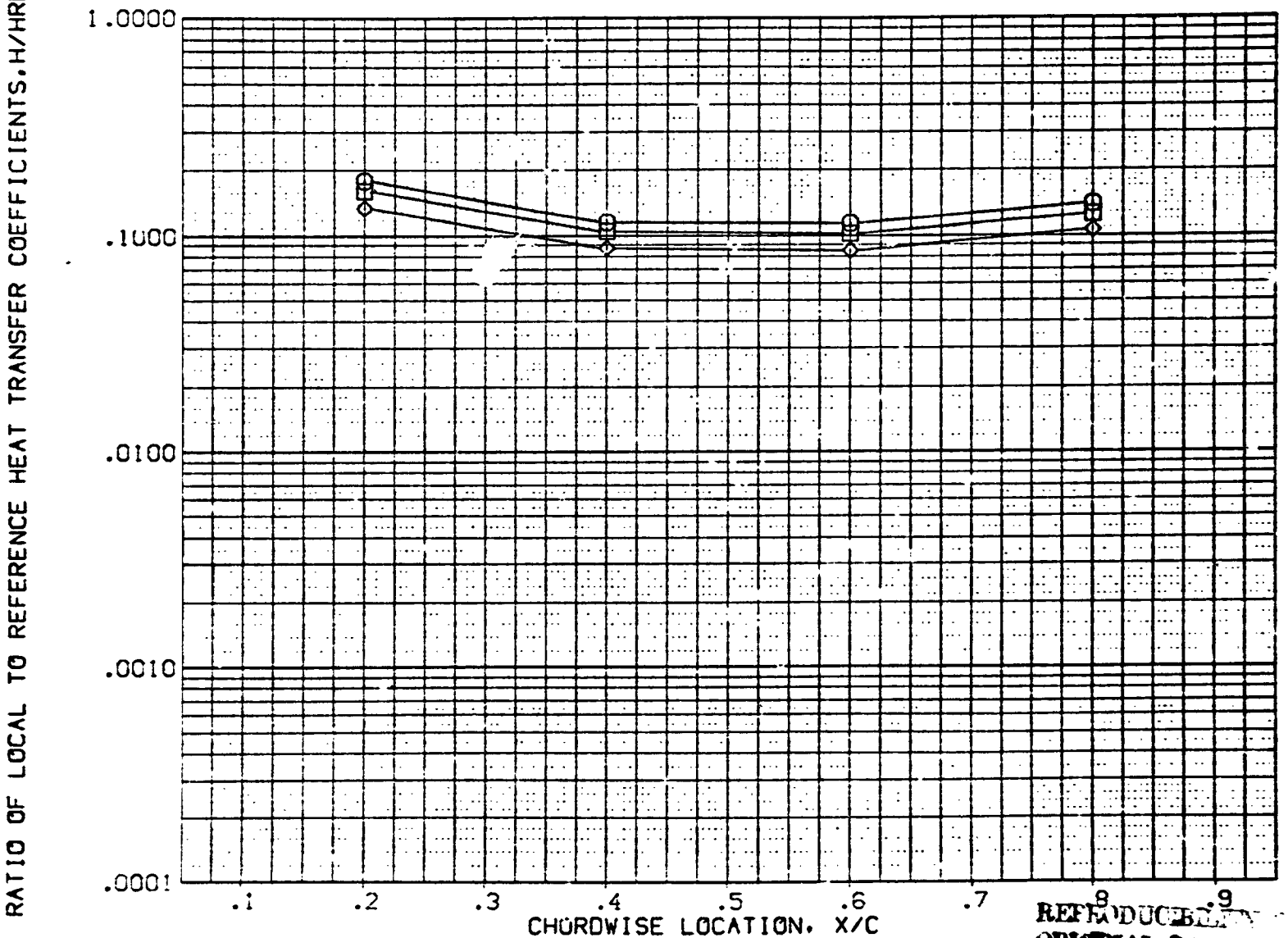

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FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG27)

SYMBOL	HAW/HT	Zr/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

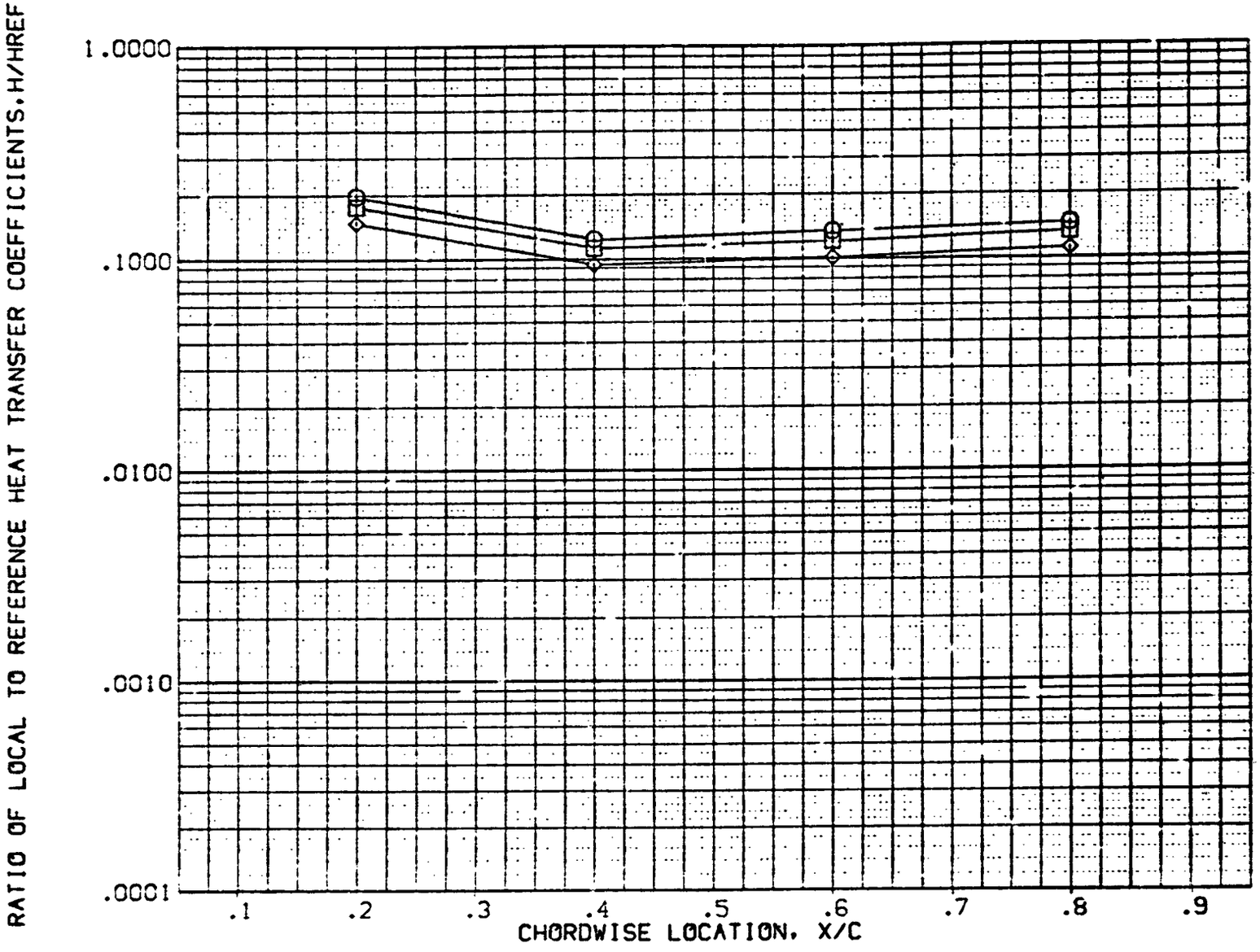

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG27)

SYMBOL	HAW/HT	ZY/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

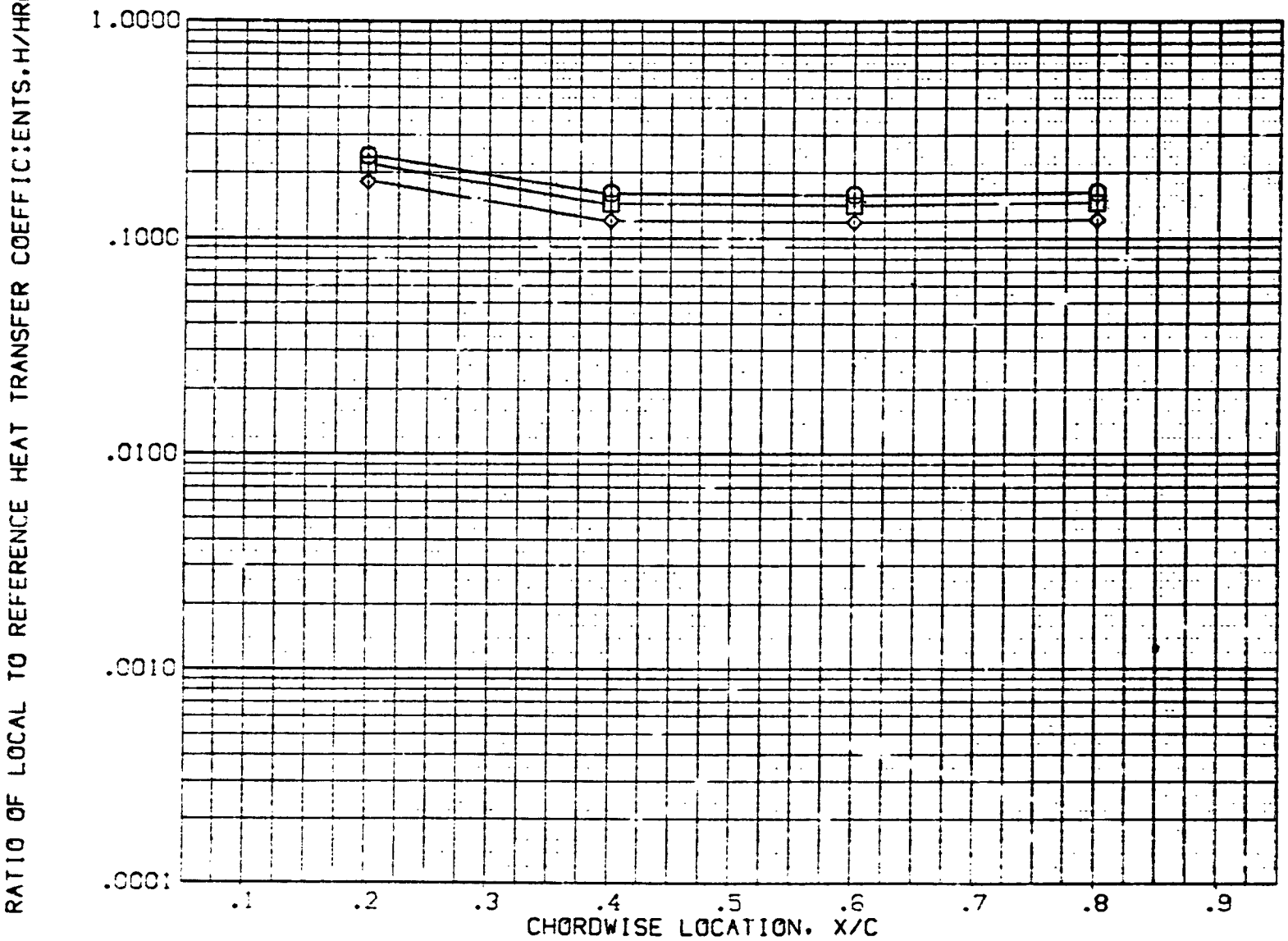

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

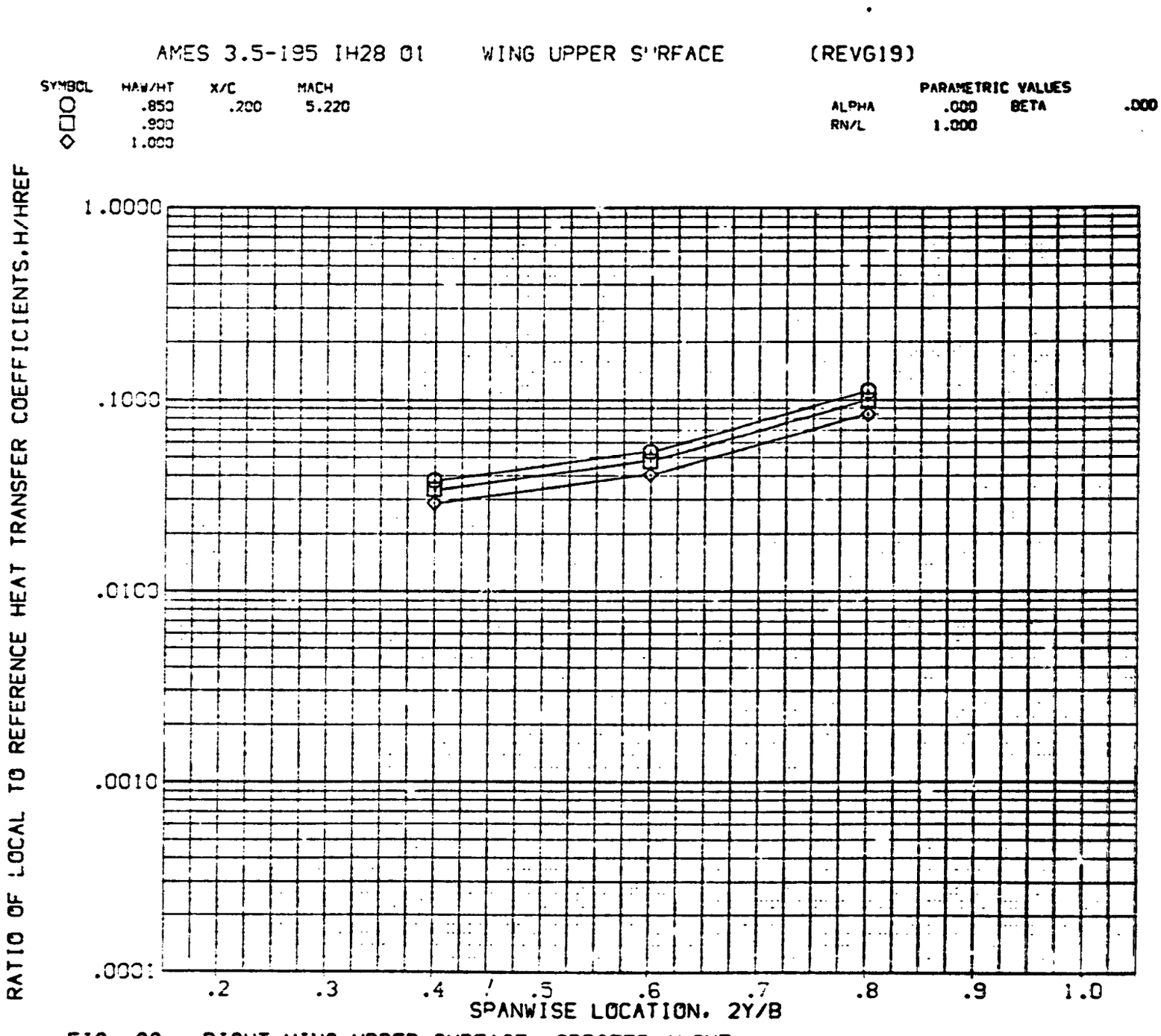

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

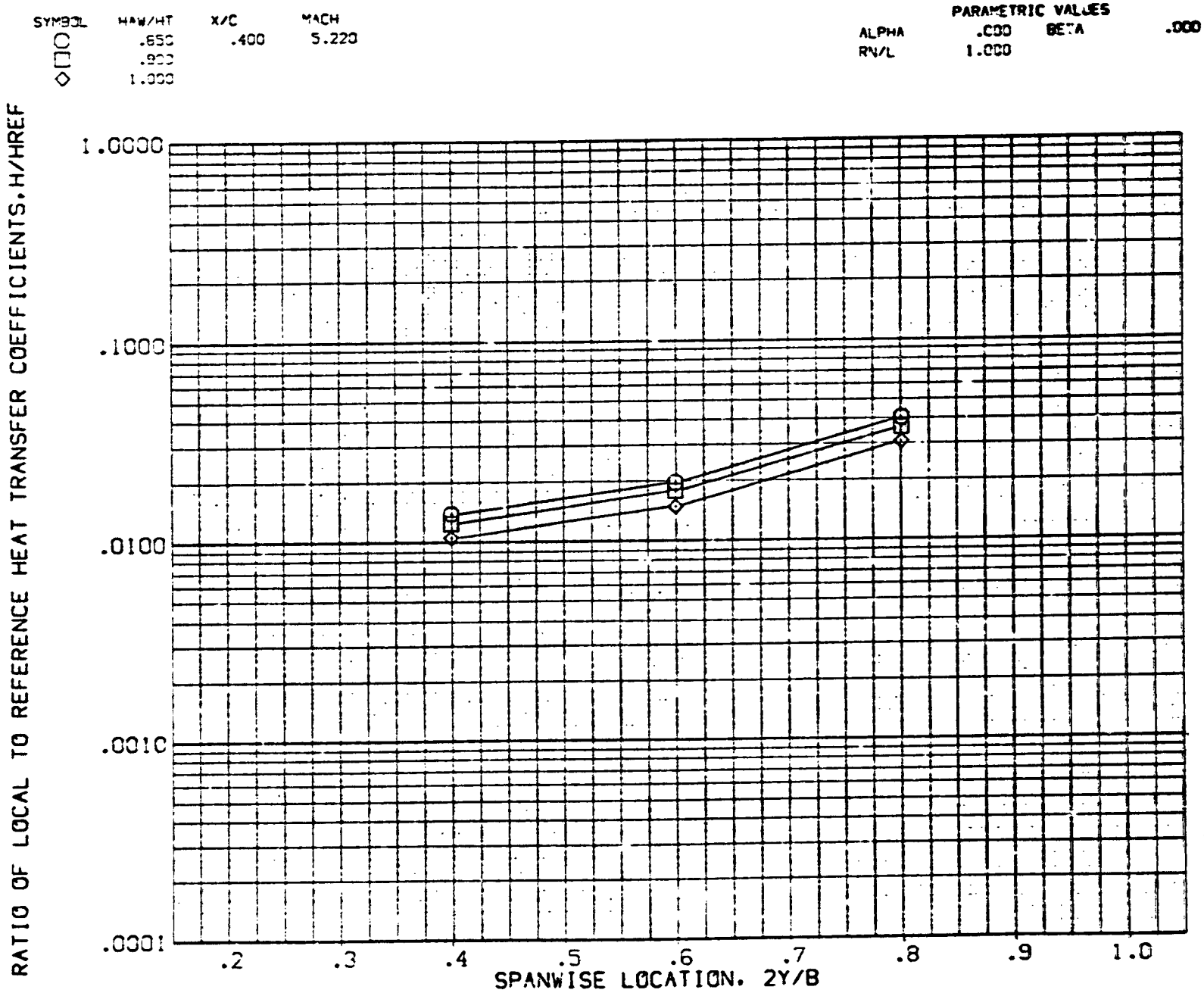

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

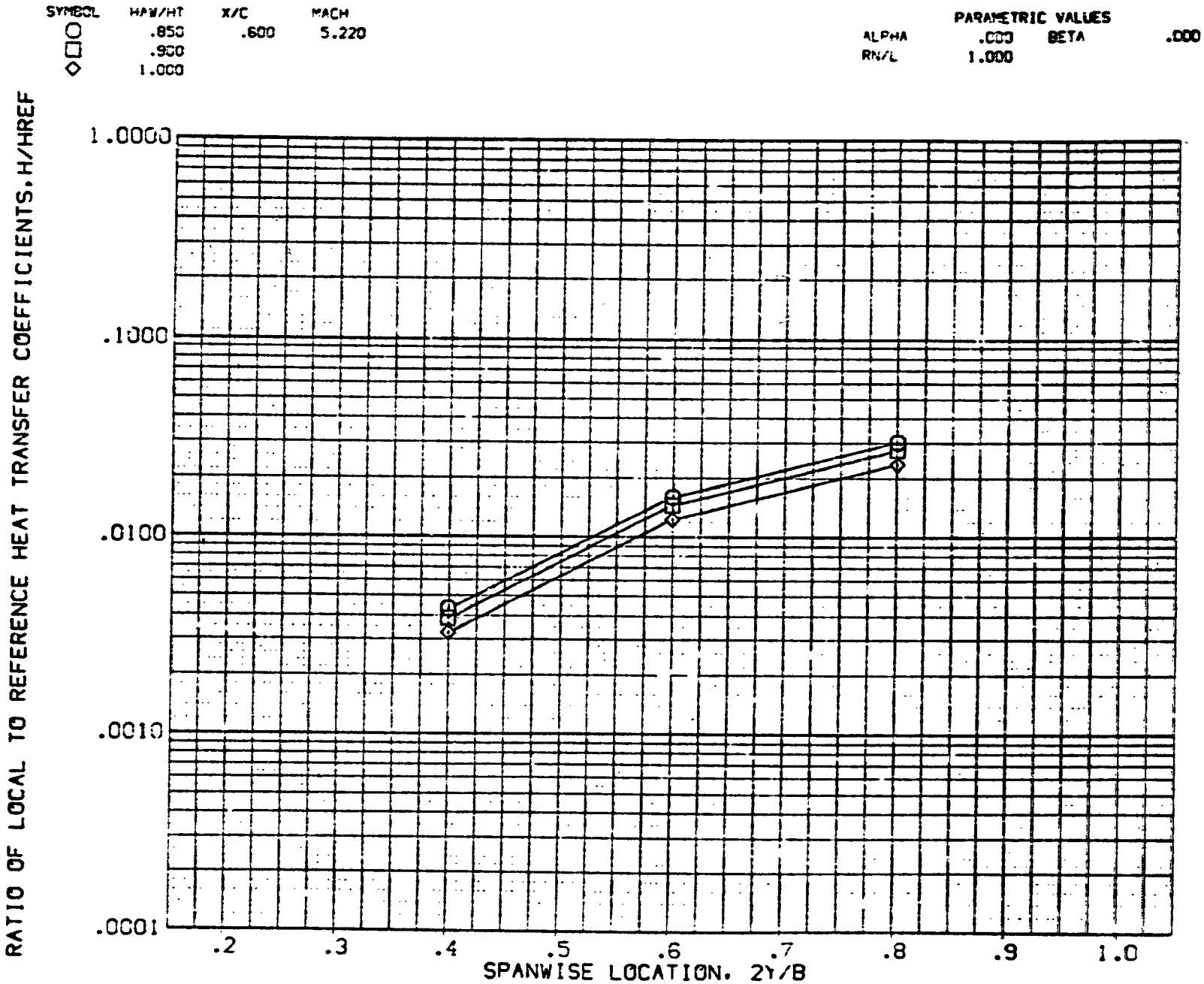

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG19)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

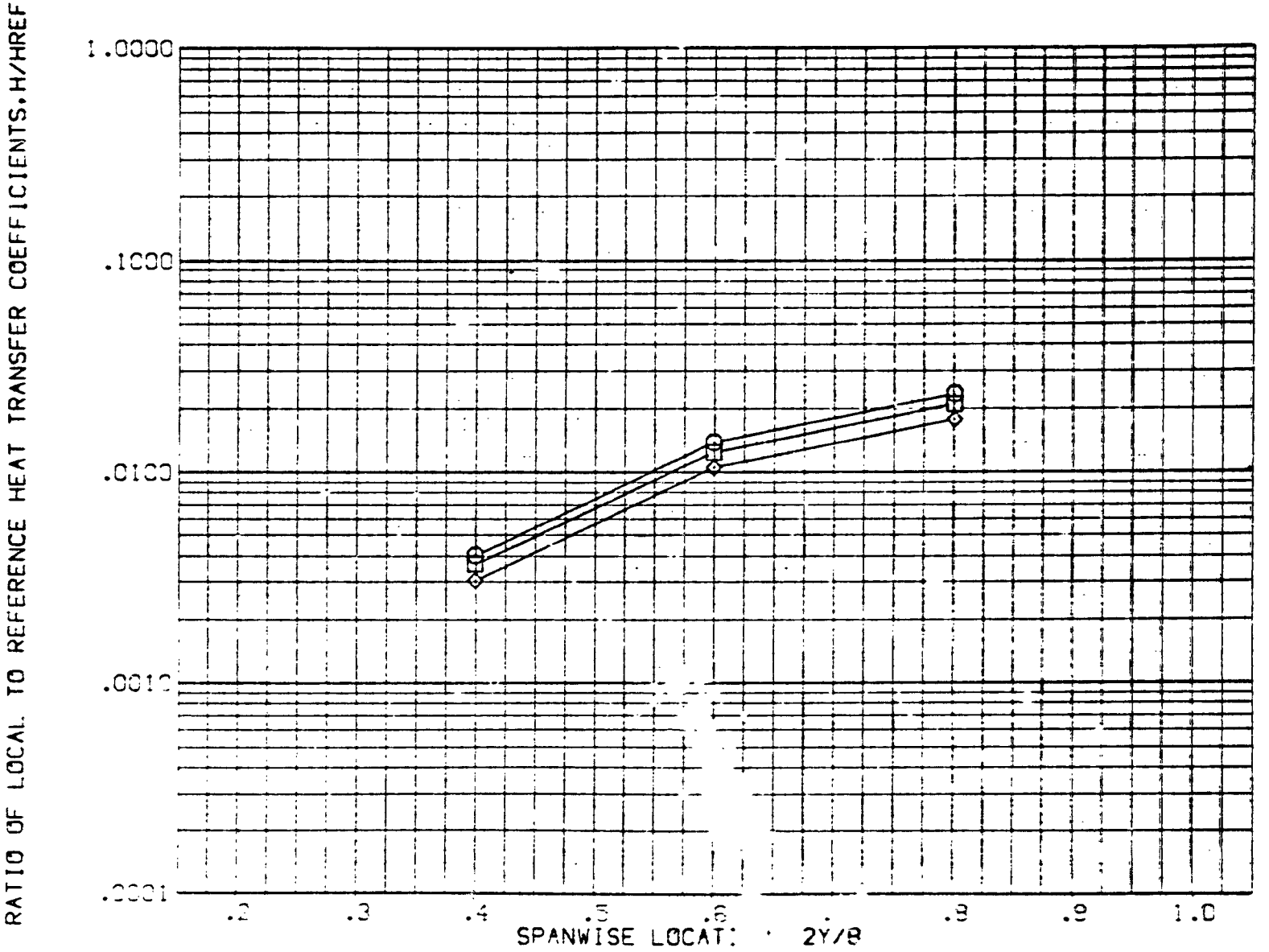

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER A[illegible]

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG20)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

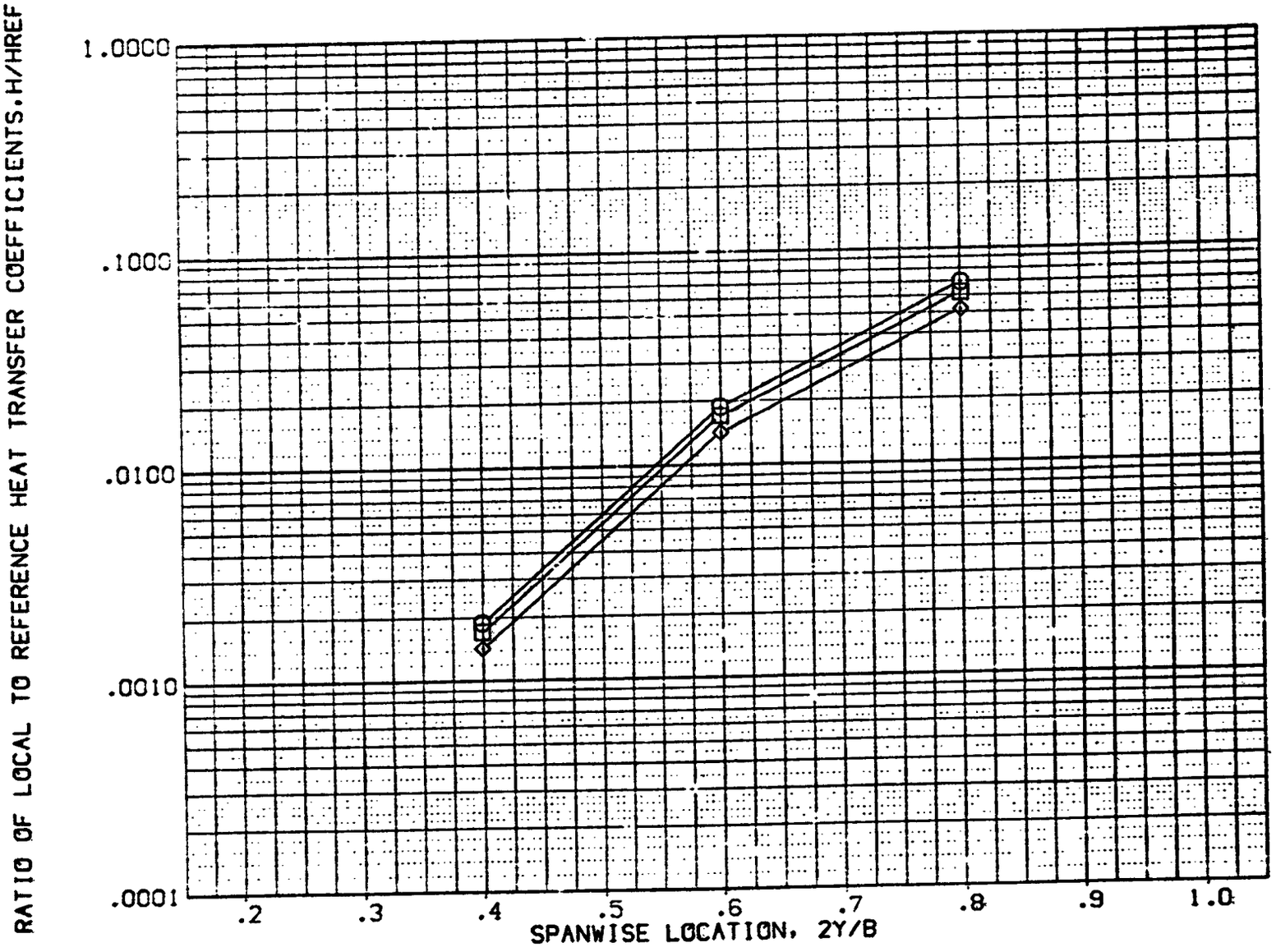

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG20)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RNYL	1.000		

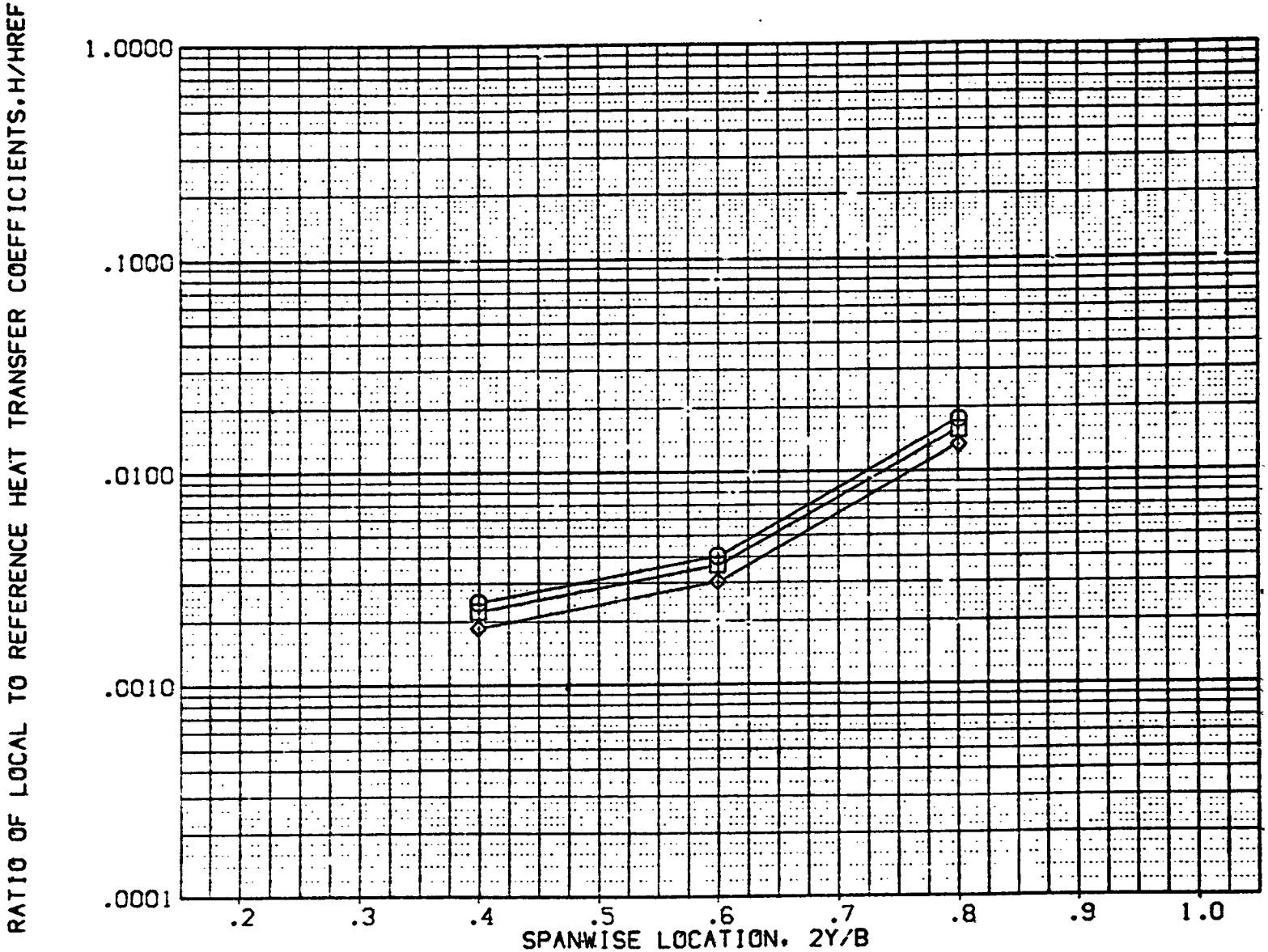

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

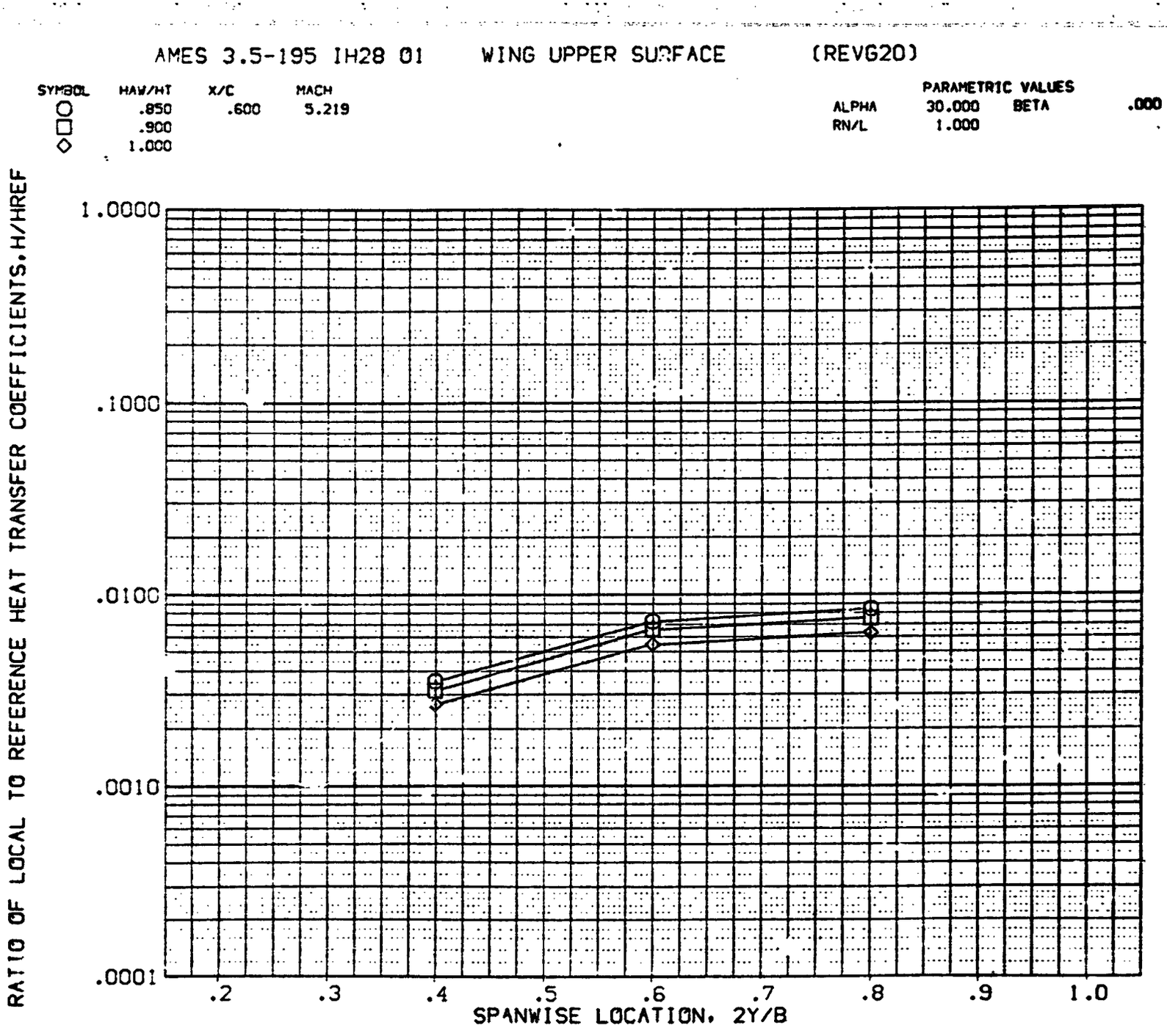

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG20)

SYMBOL	H'W/HT	X/C	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

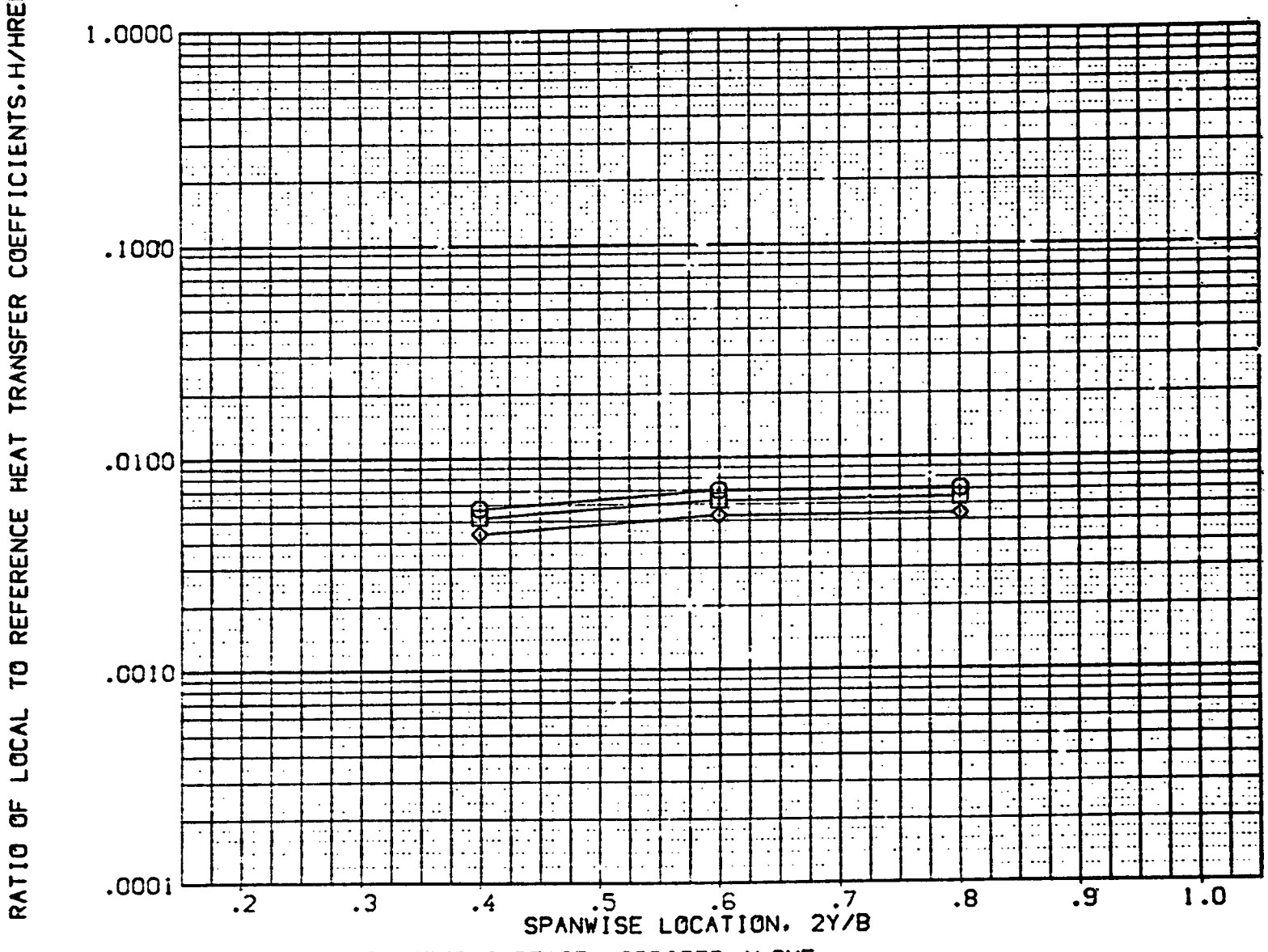

FIG. 22 RIGHT WING UPPER SURFACE. ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG21)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

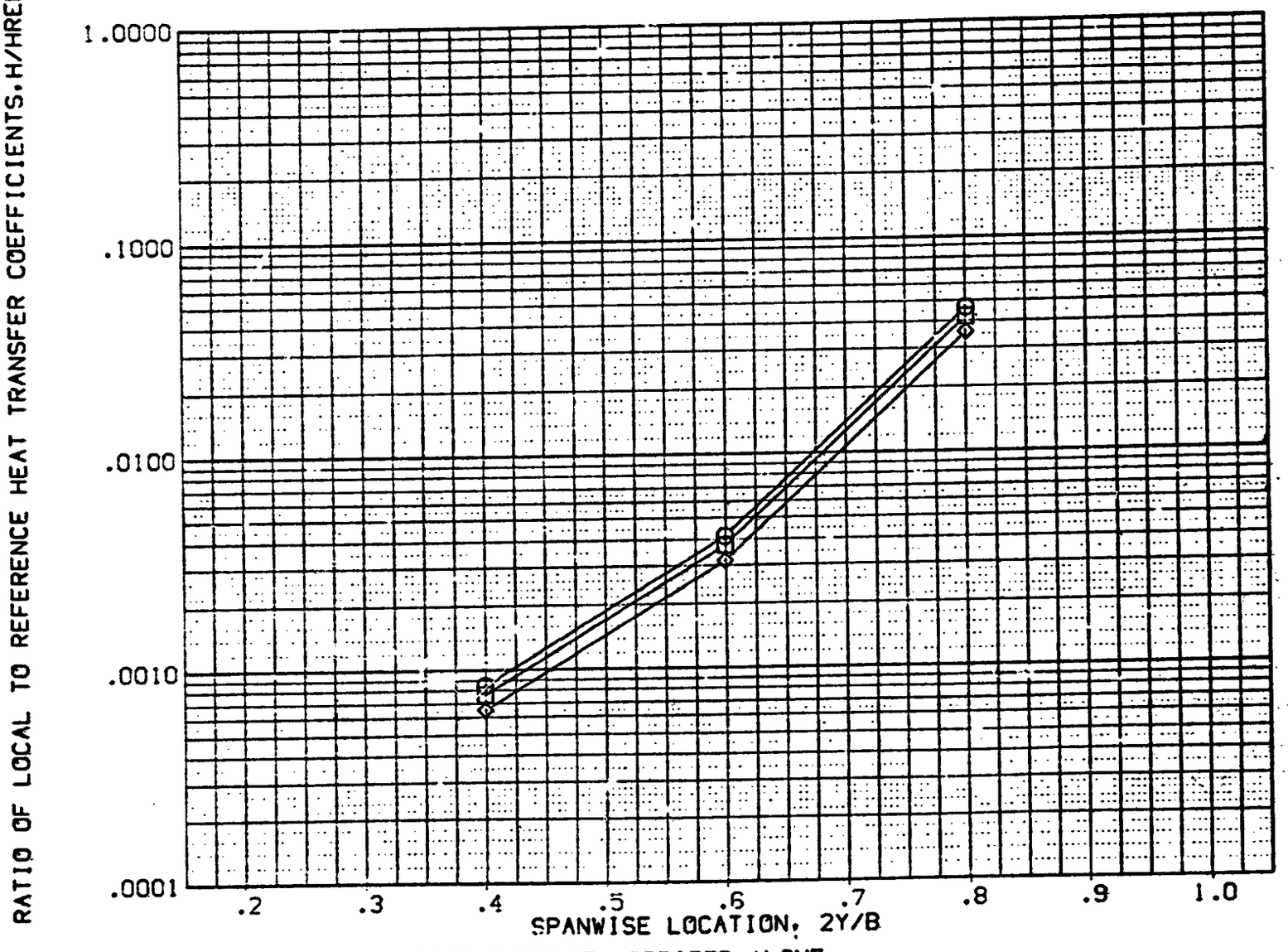

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG21)

SYMBOL	HAB/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

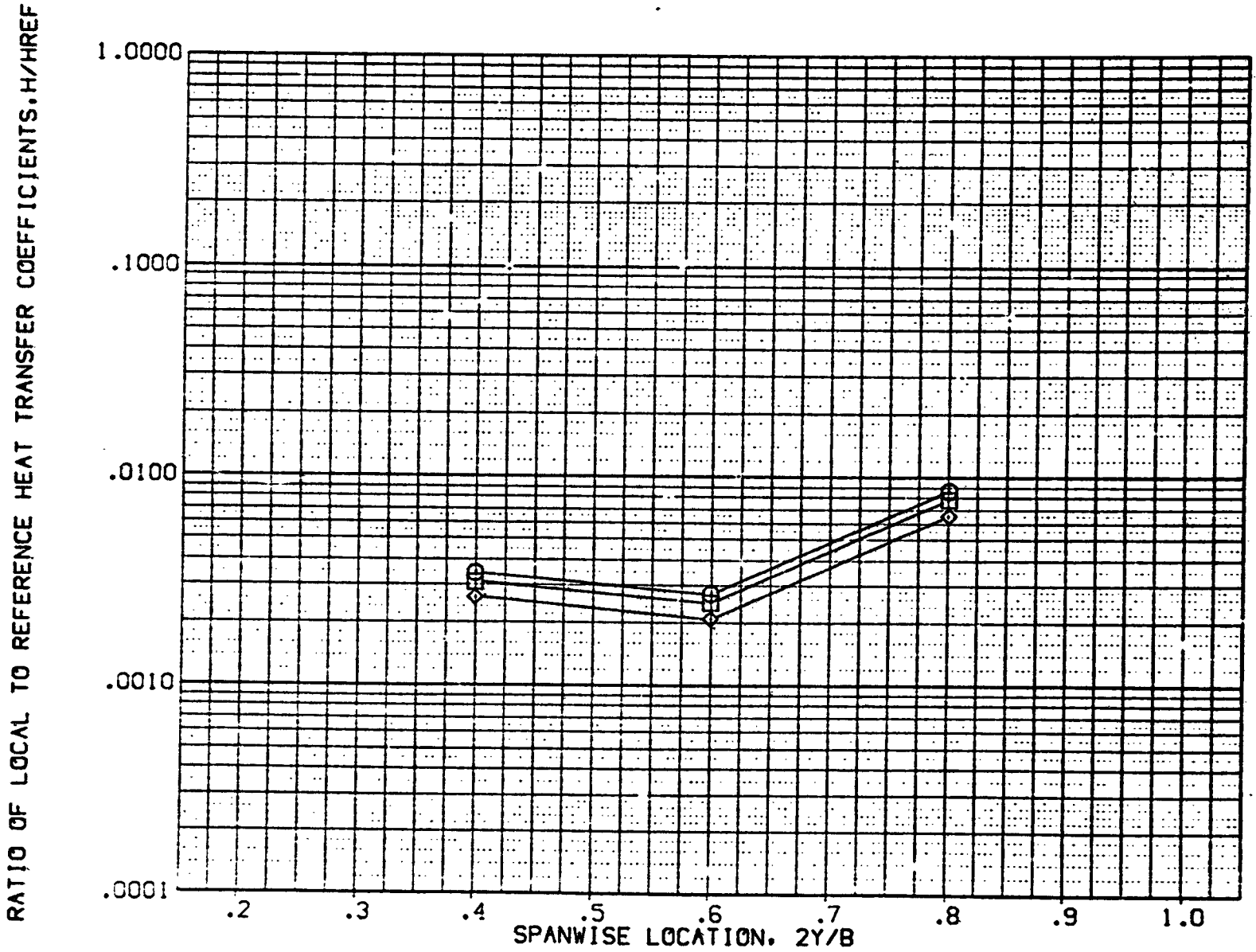

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG21)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	40.000	BETA	.000
RN/L	1.000		

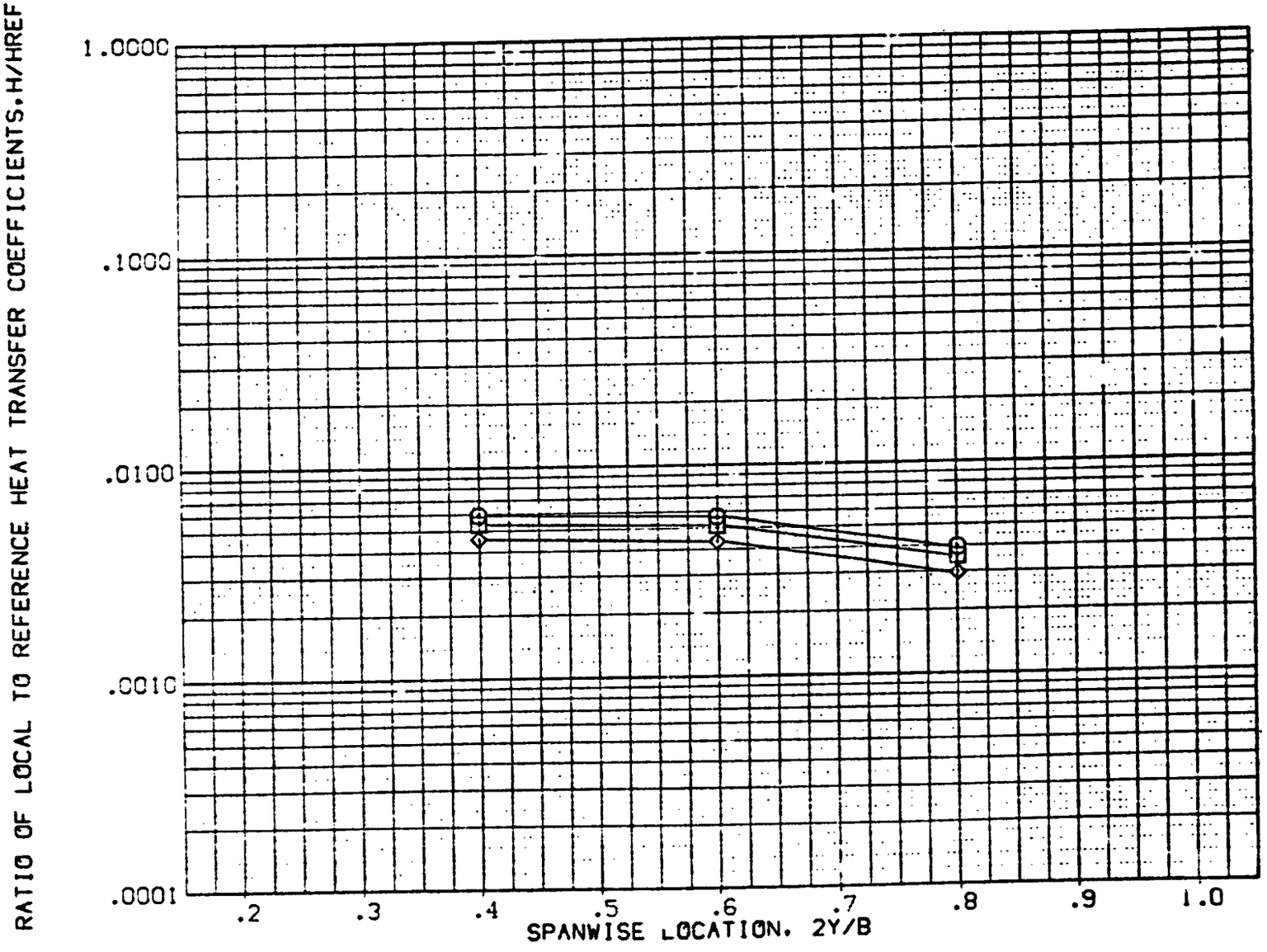

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

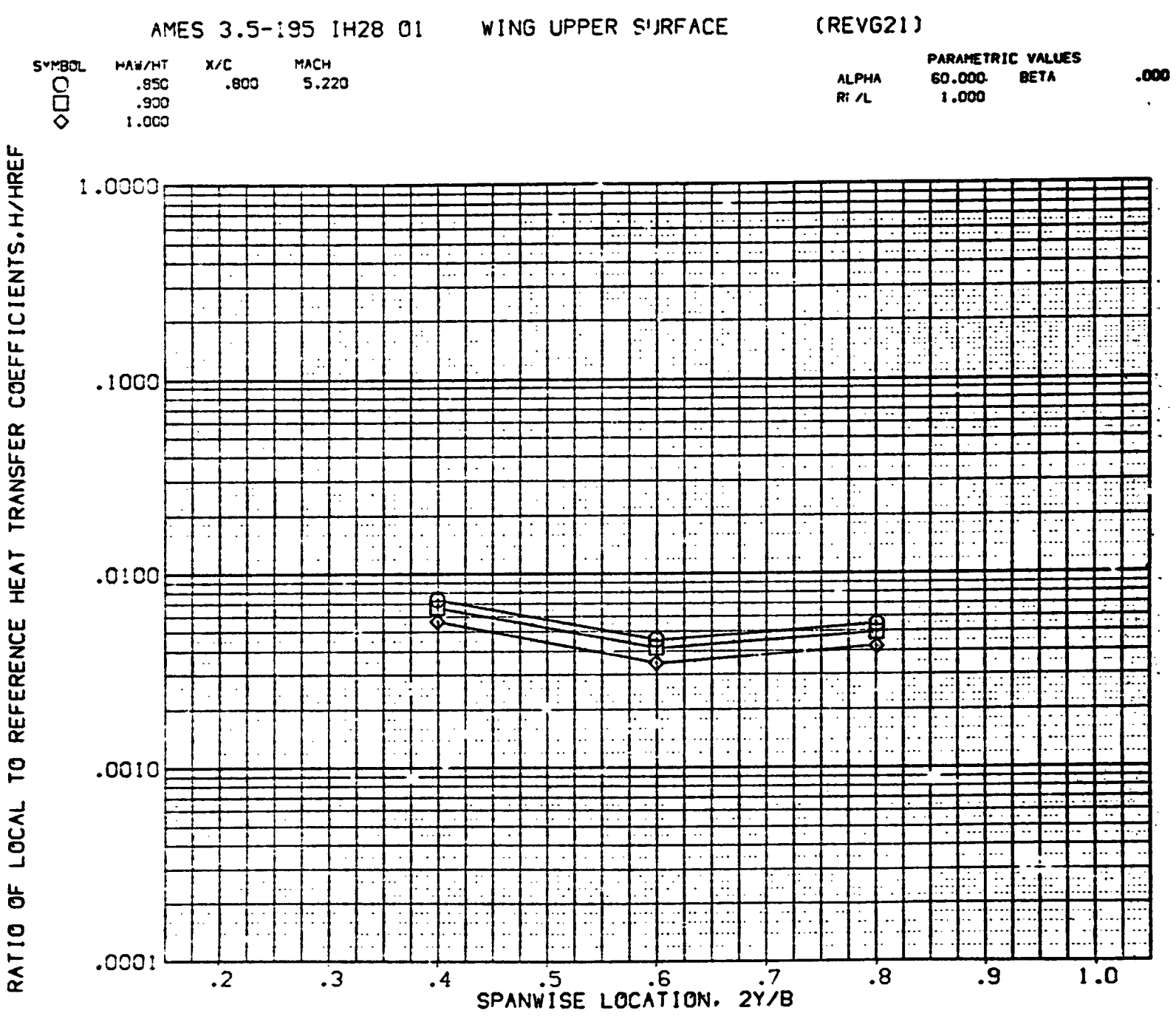

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG22)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

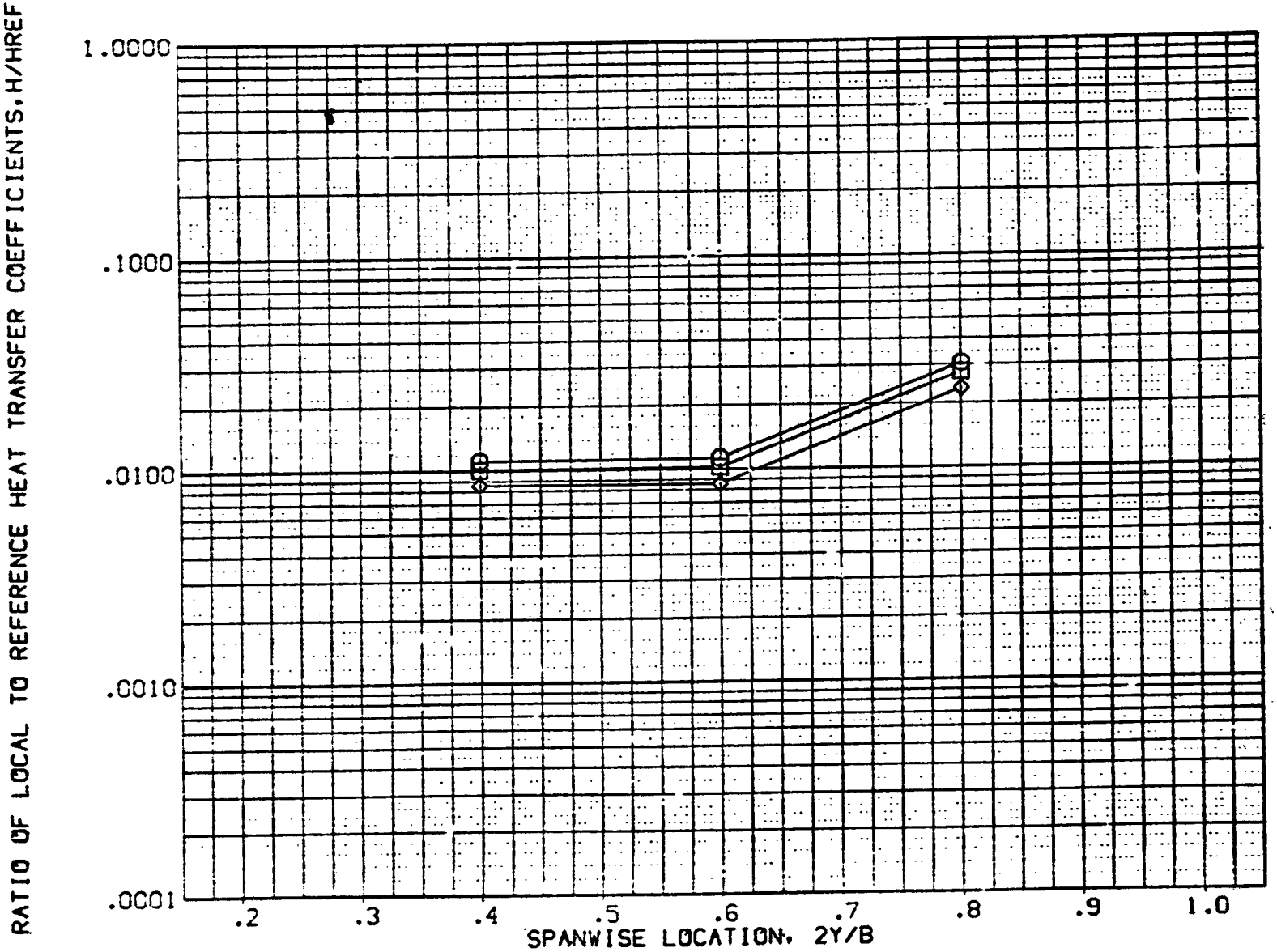

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG22)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

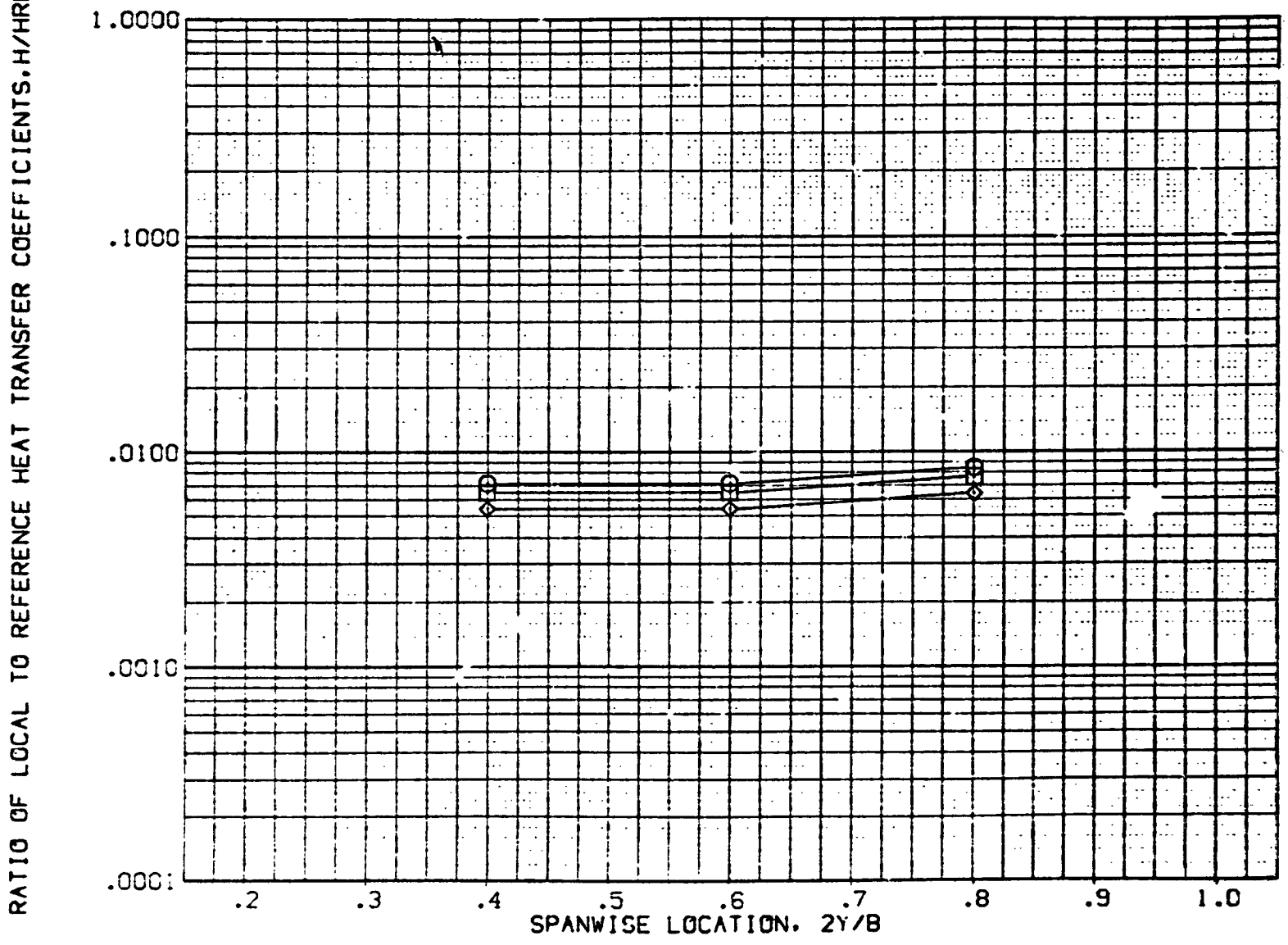

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

SYMBOL	HAW/HT	X/C	MACH
○□	.850	.600	5.220
	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA 90.0[illegible] BETA .000

RN/L 1.0[illegible]

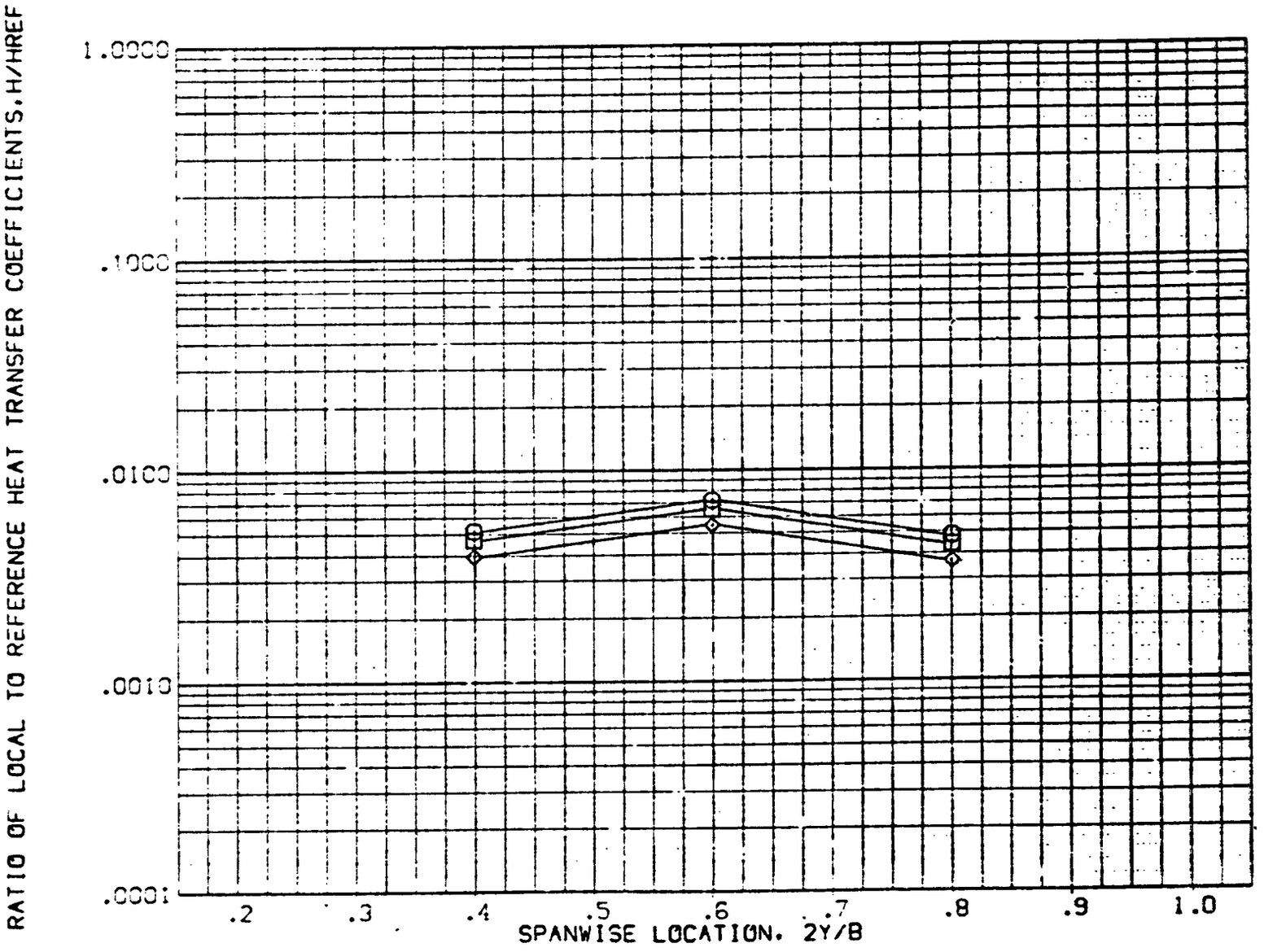

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG22)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	9°.000	BETA	.000
RN/L	1.000		

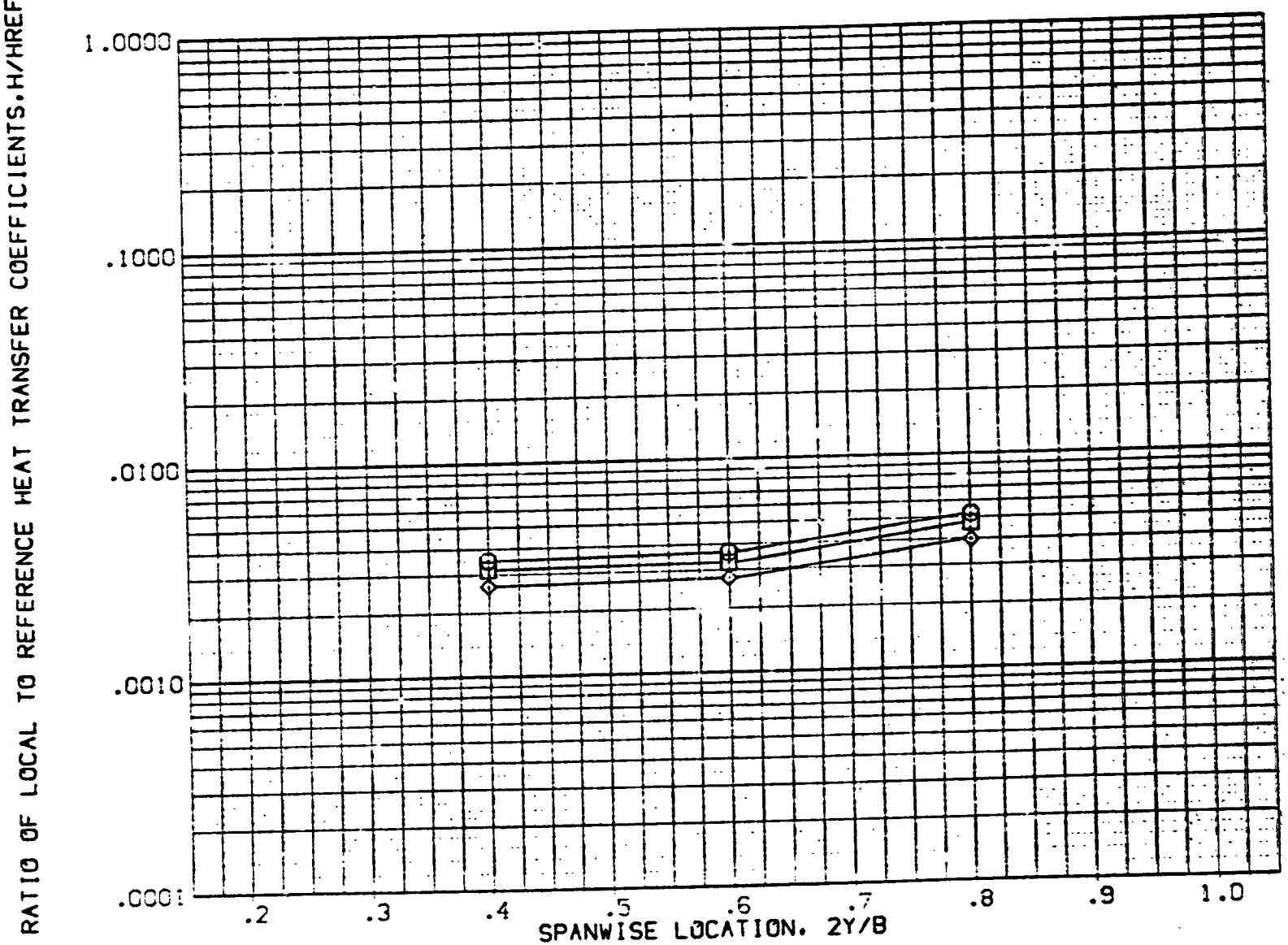

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE [REV6233]

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

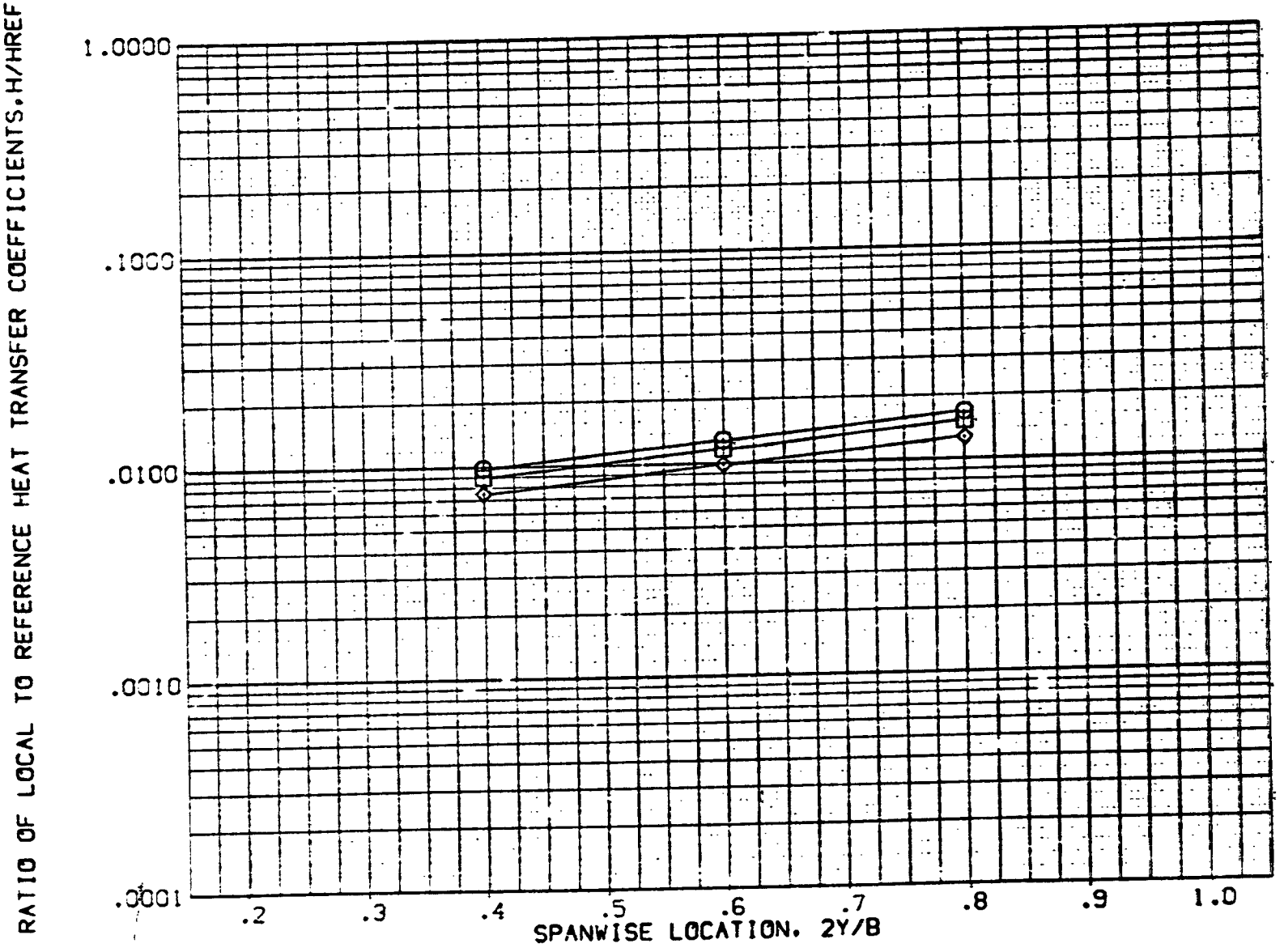

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG23)

SYMBOL	HA*/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

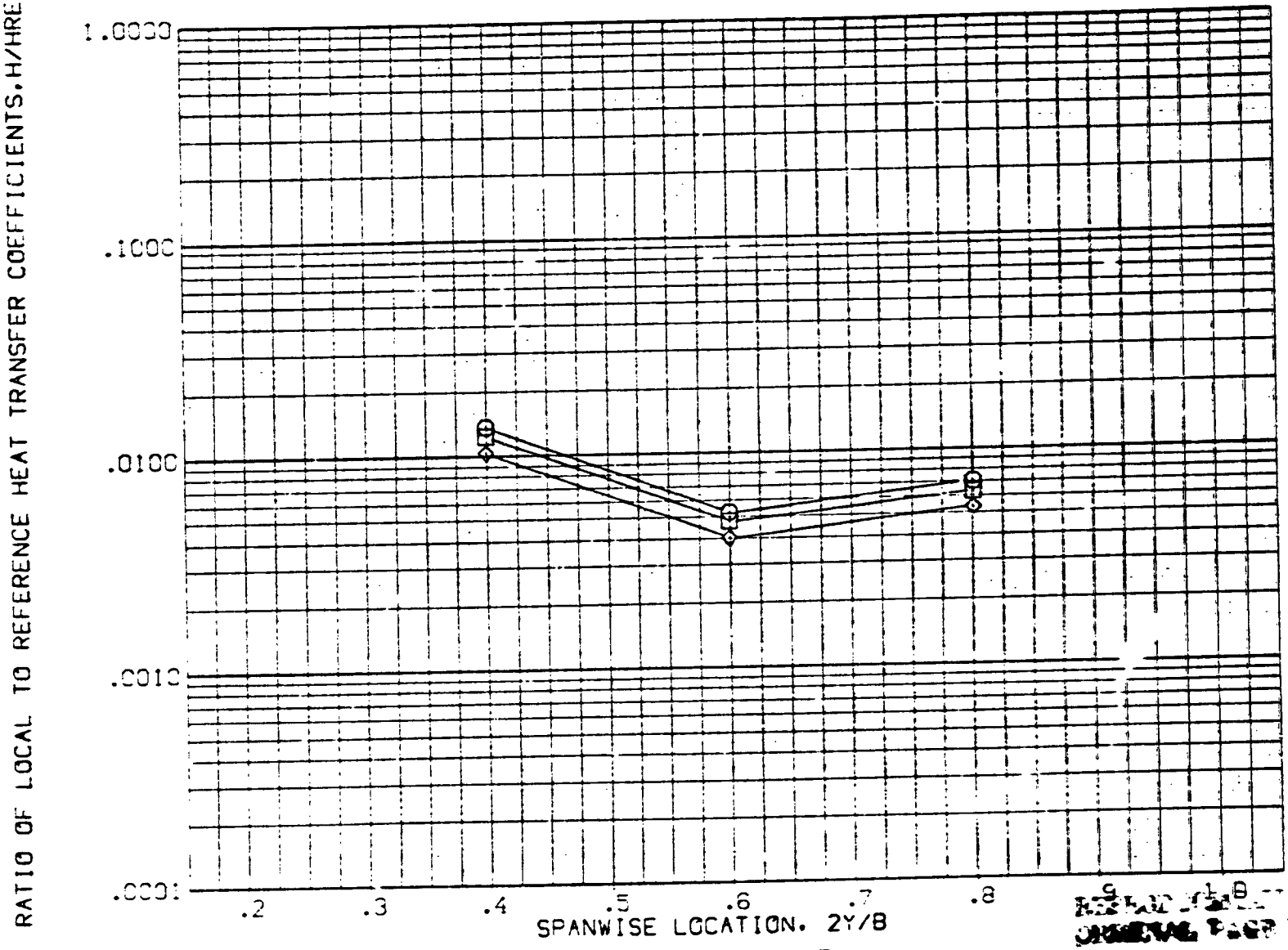

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

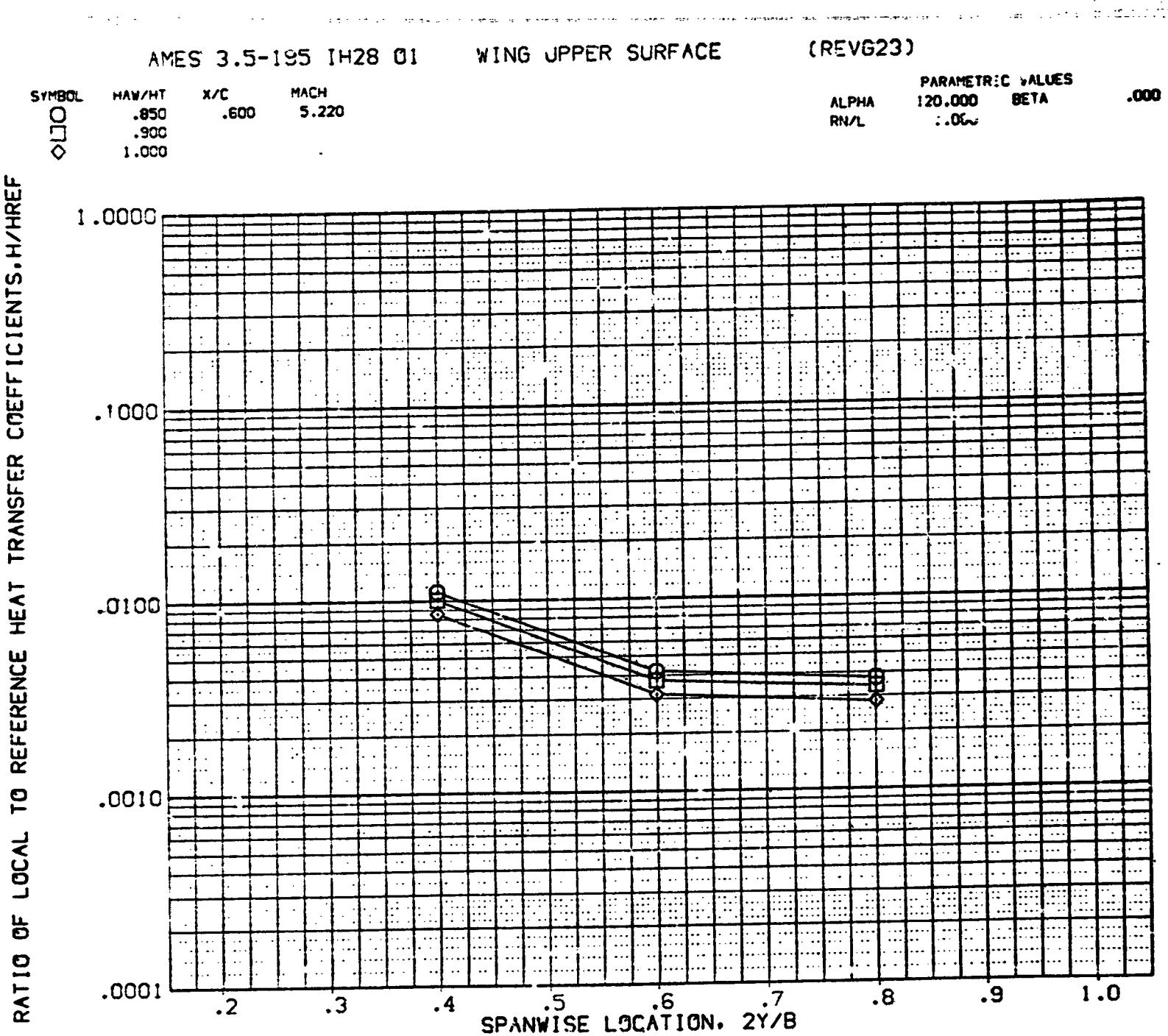

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG23)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

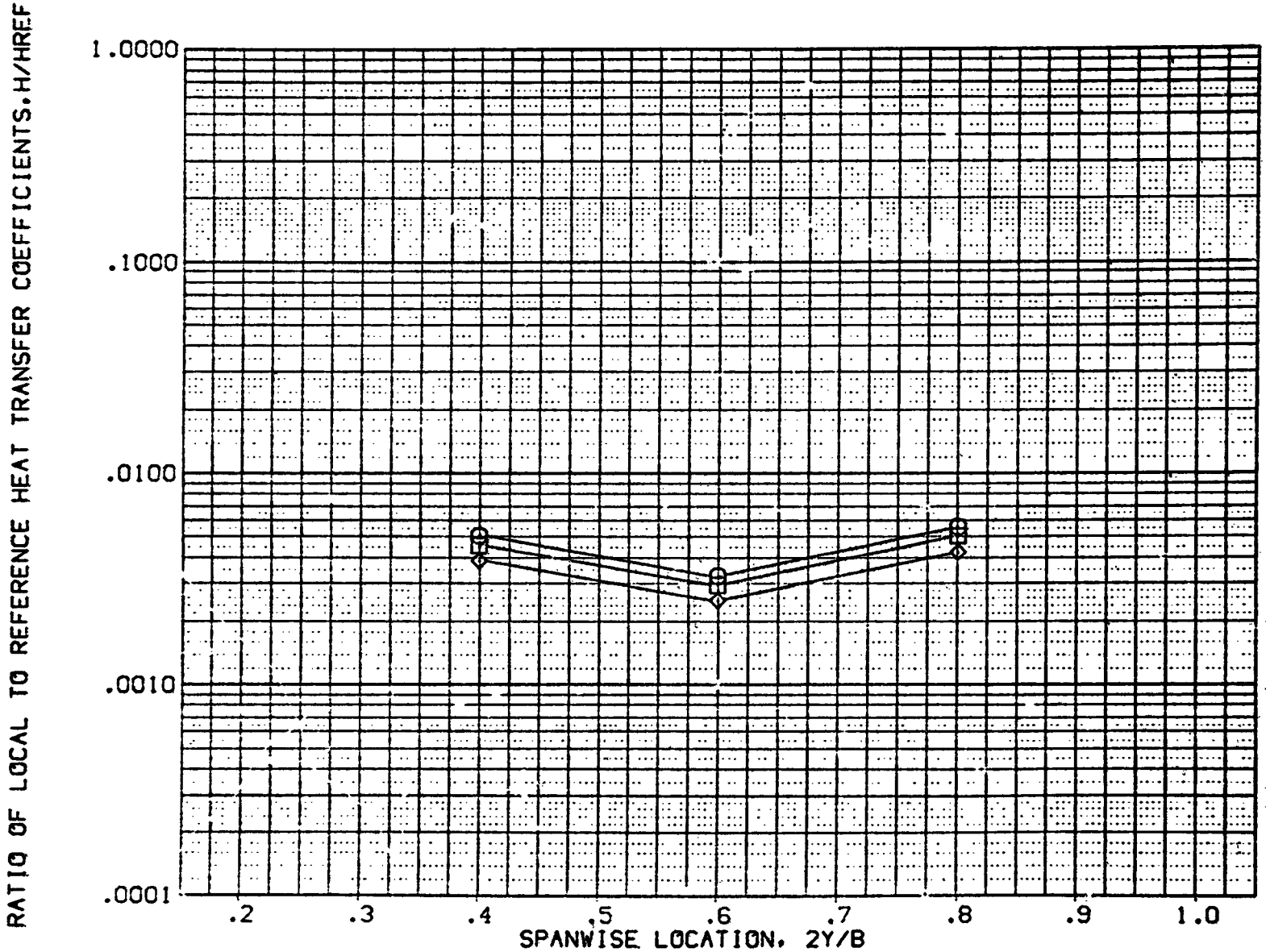

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG24)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

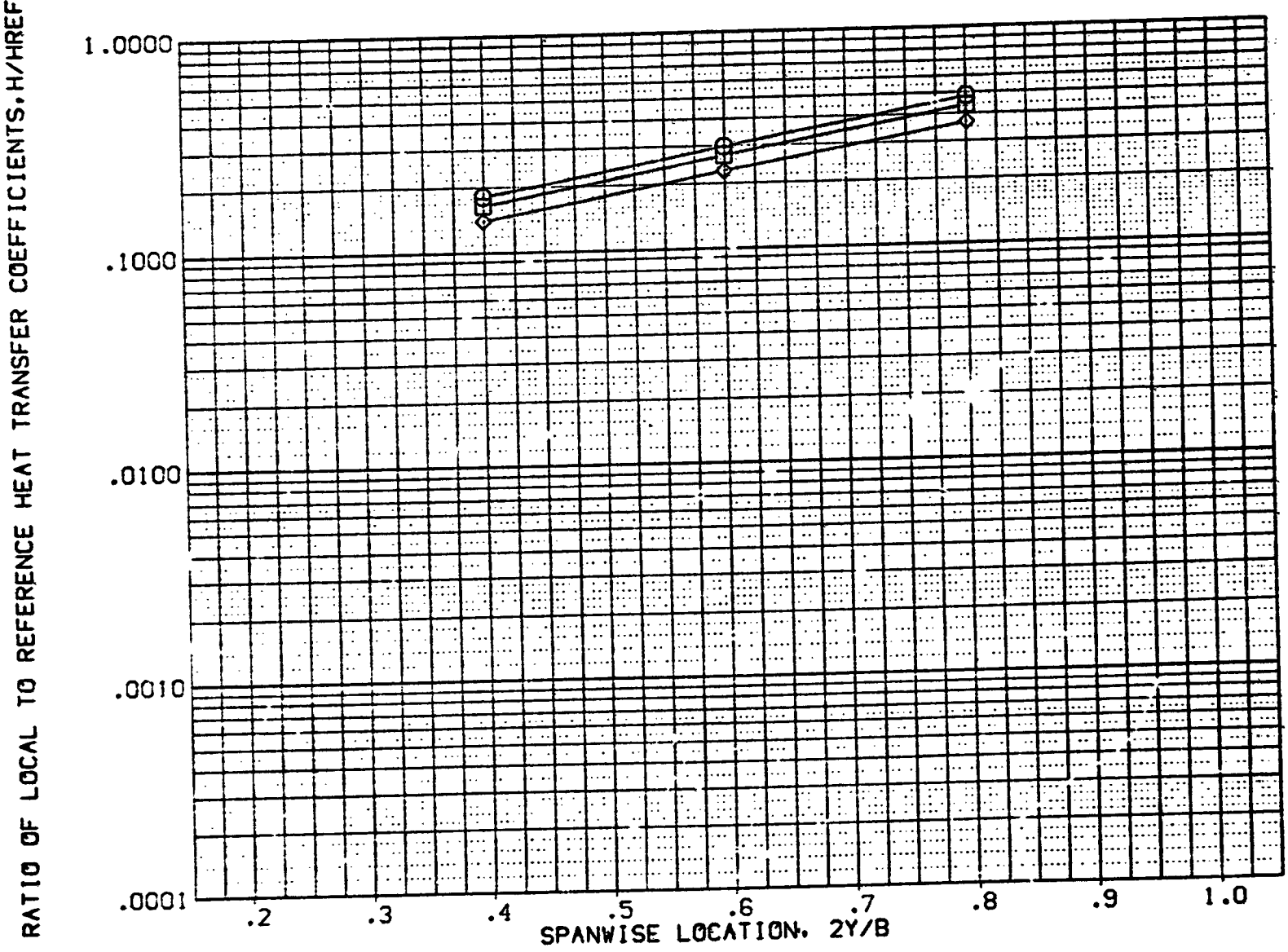

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG24)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

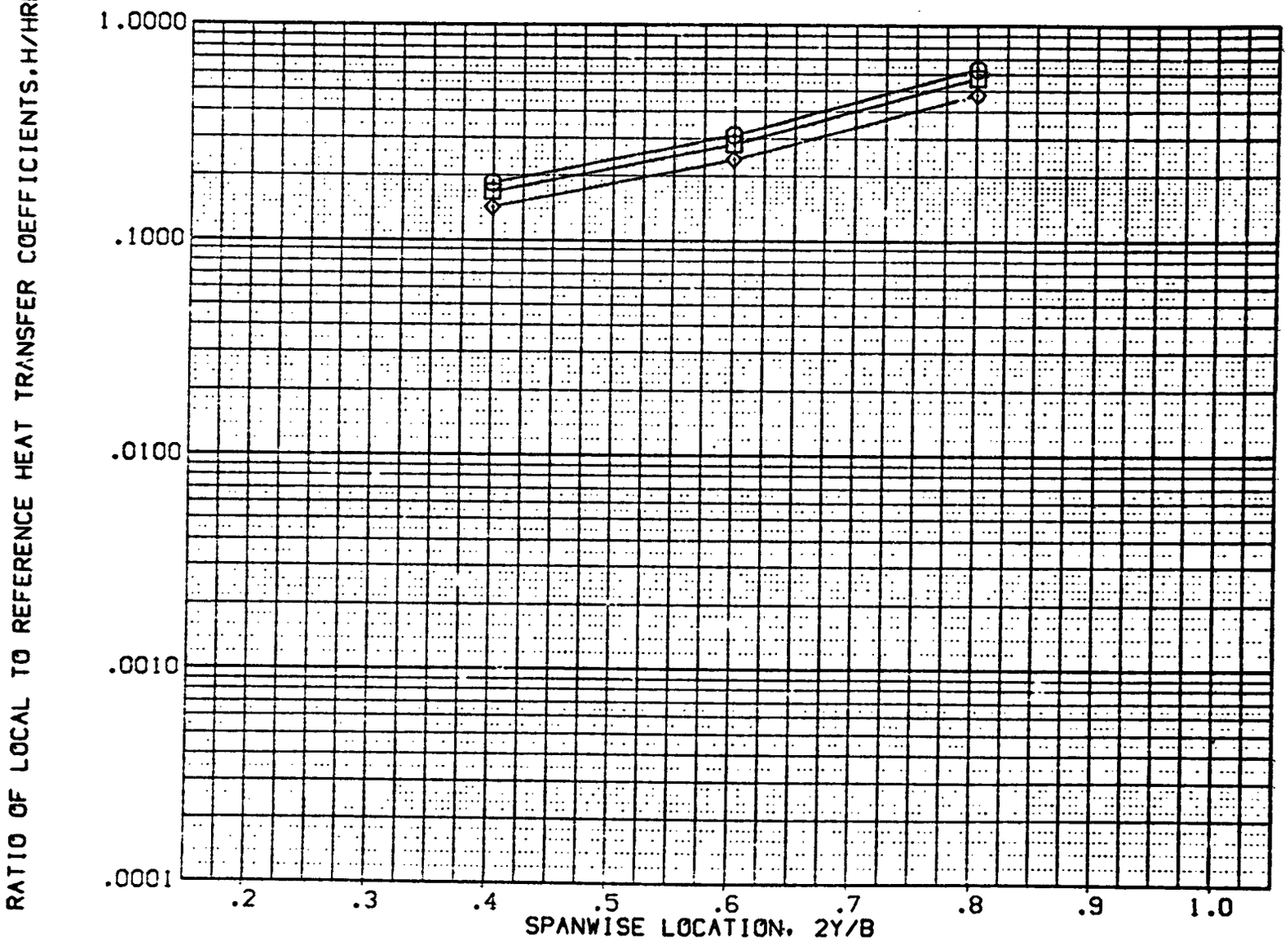

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG24)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -120.000 BETA .000

RN/L 1.000

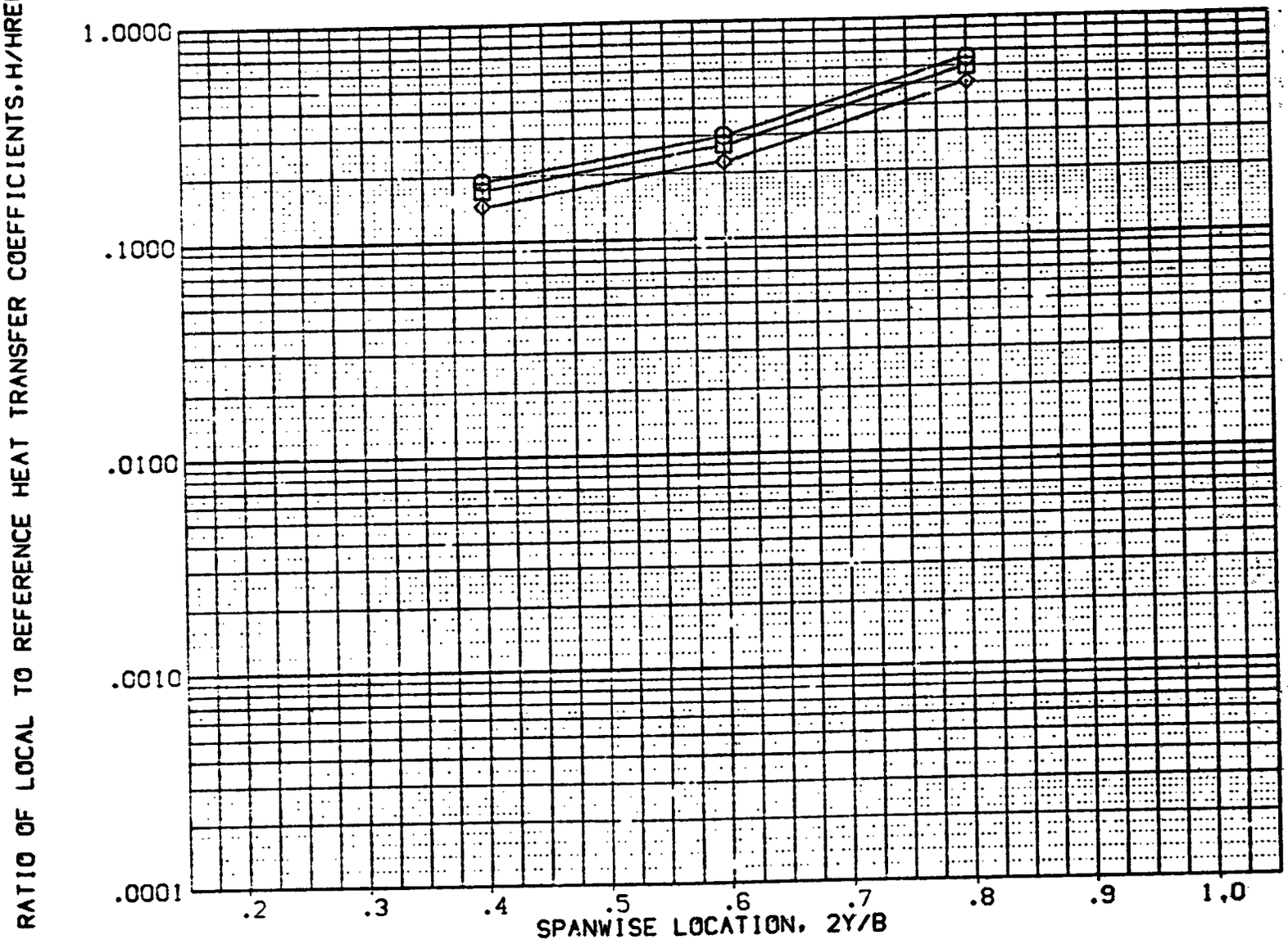

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

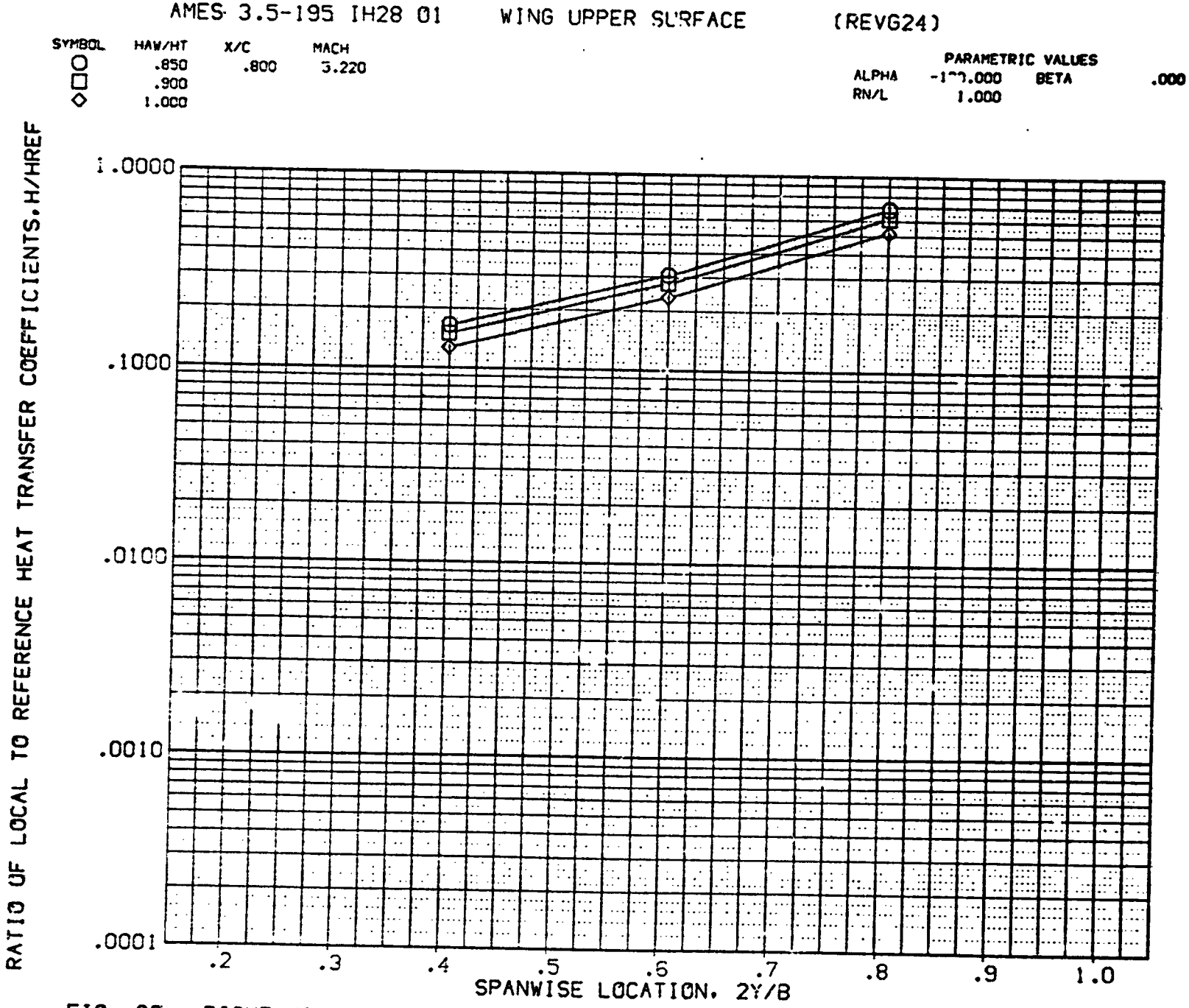

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

PARAMETRIC VALUES

ALPHA -90.000 BETA .000

RN/L 1.000

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.219
□	.900		
◇	1.000		

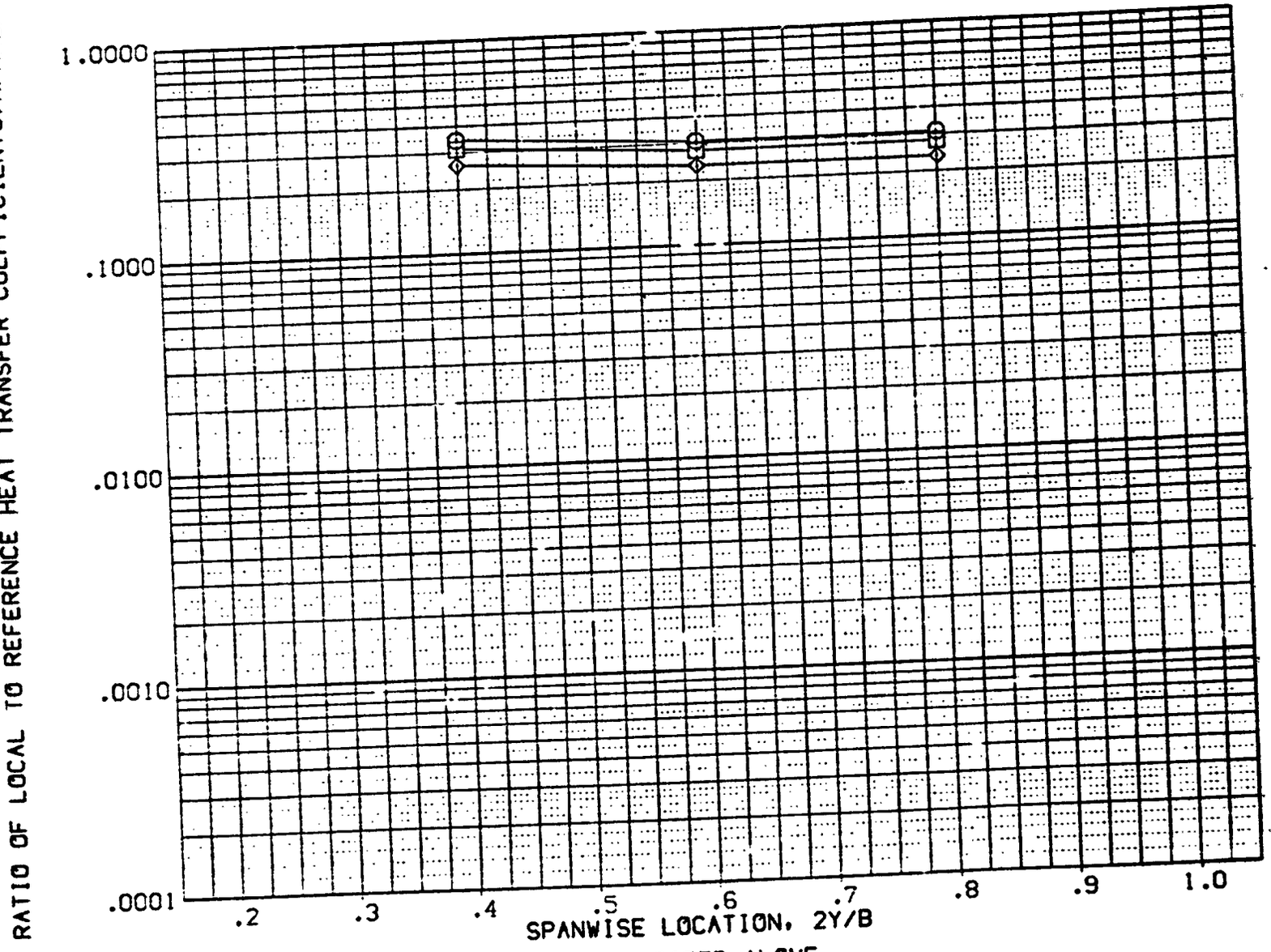

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

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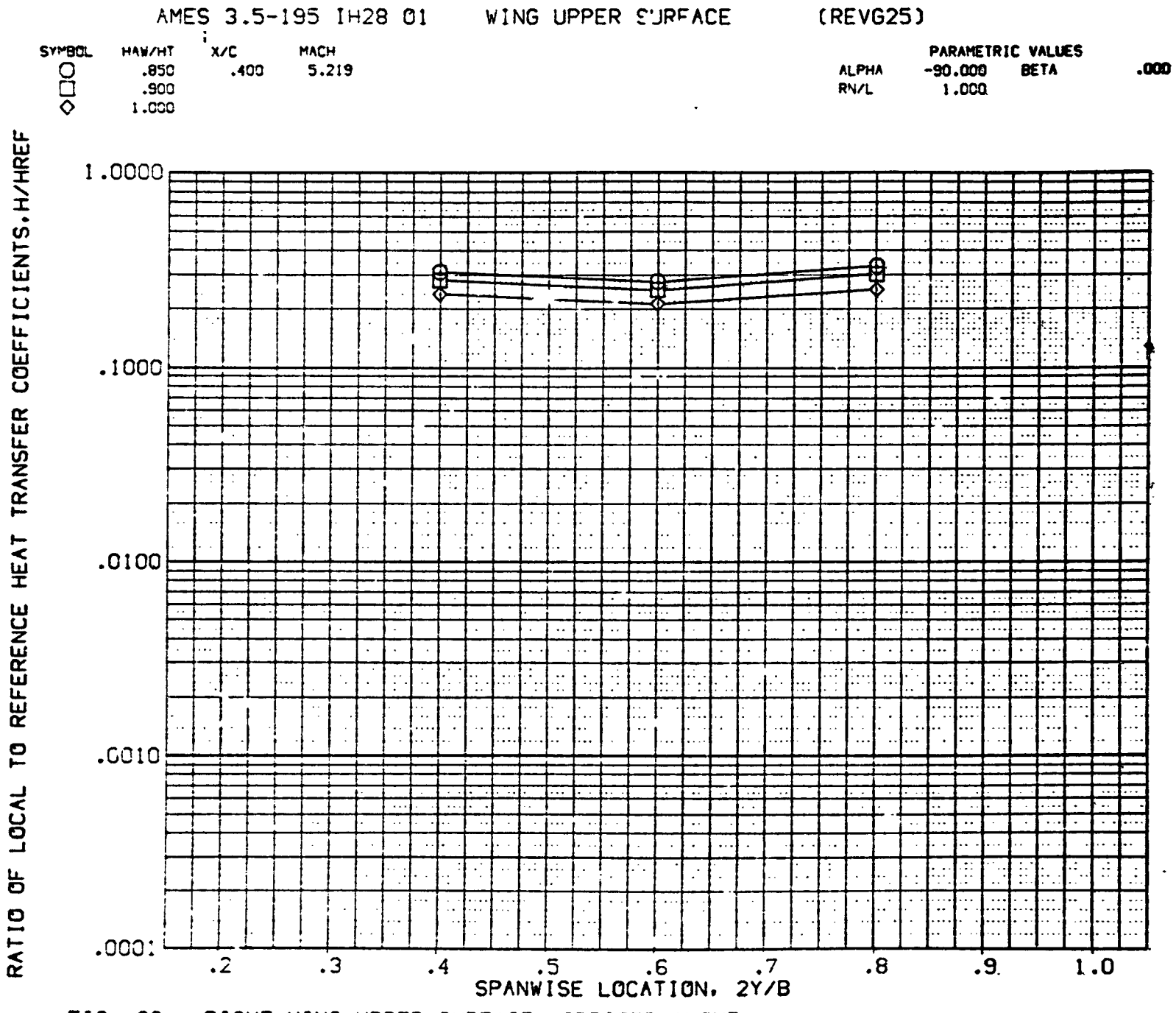

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

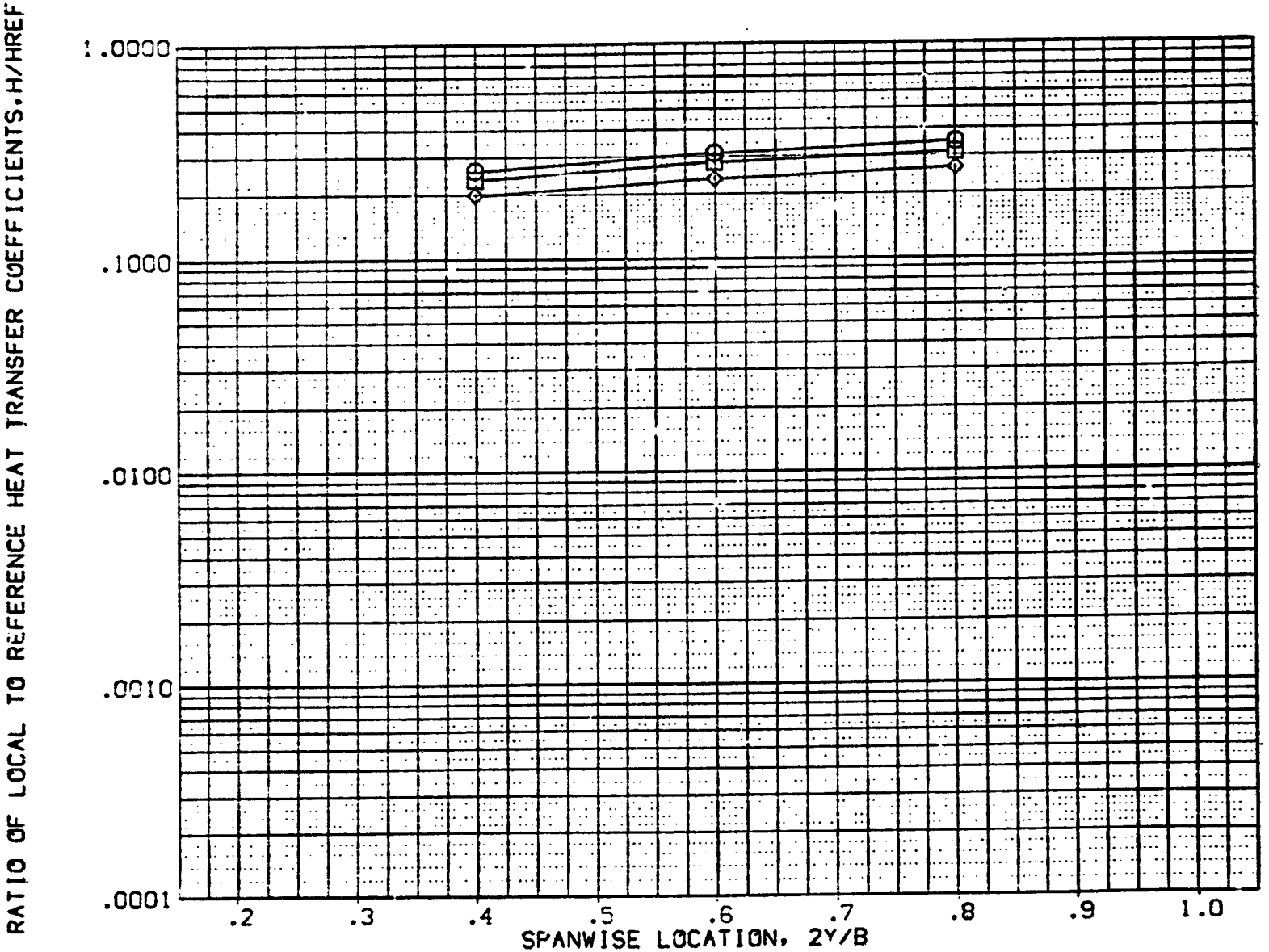

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG25)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

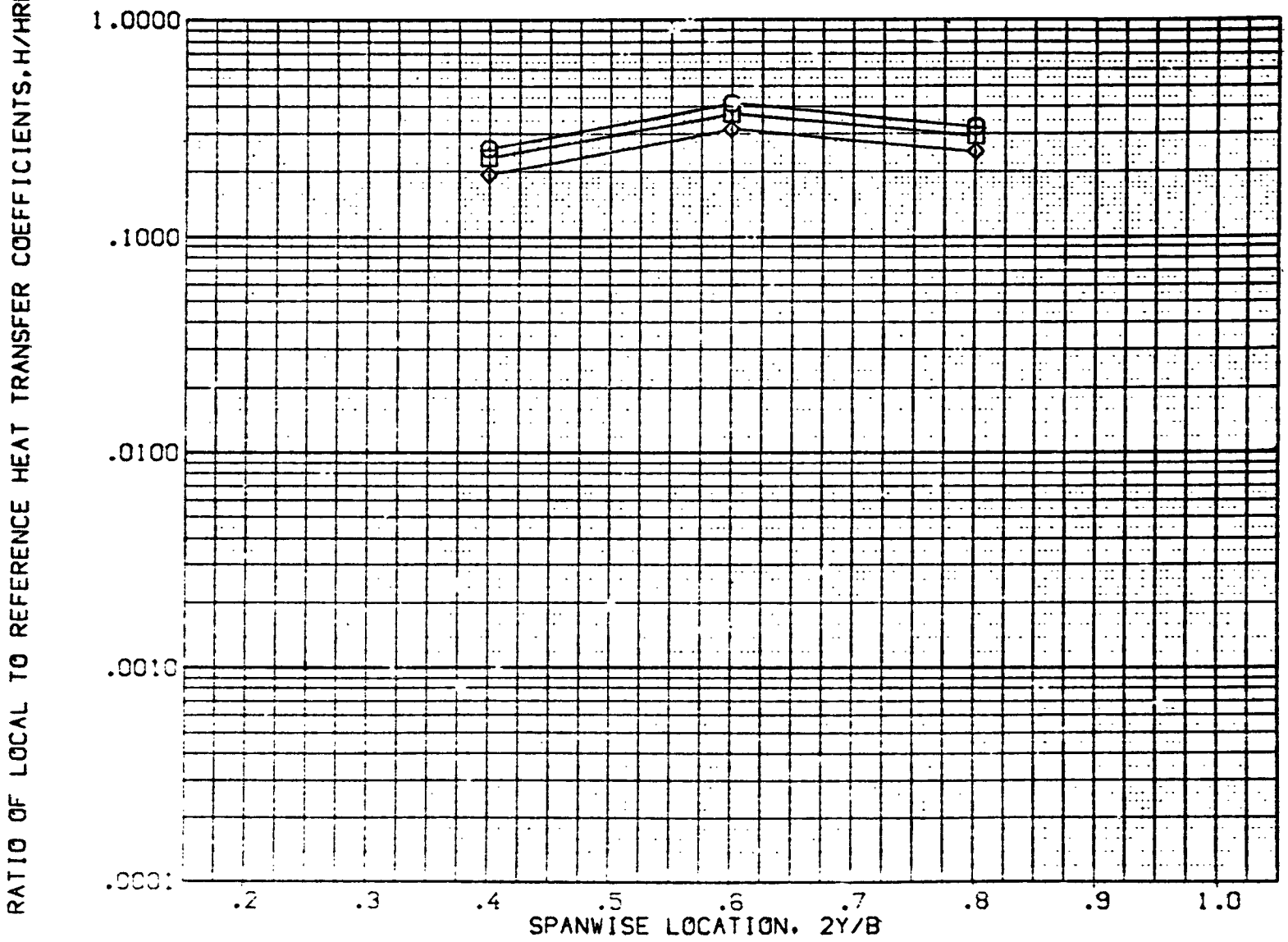

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

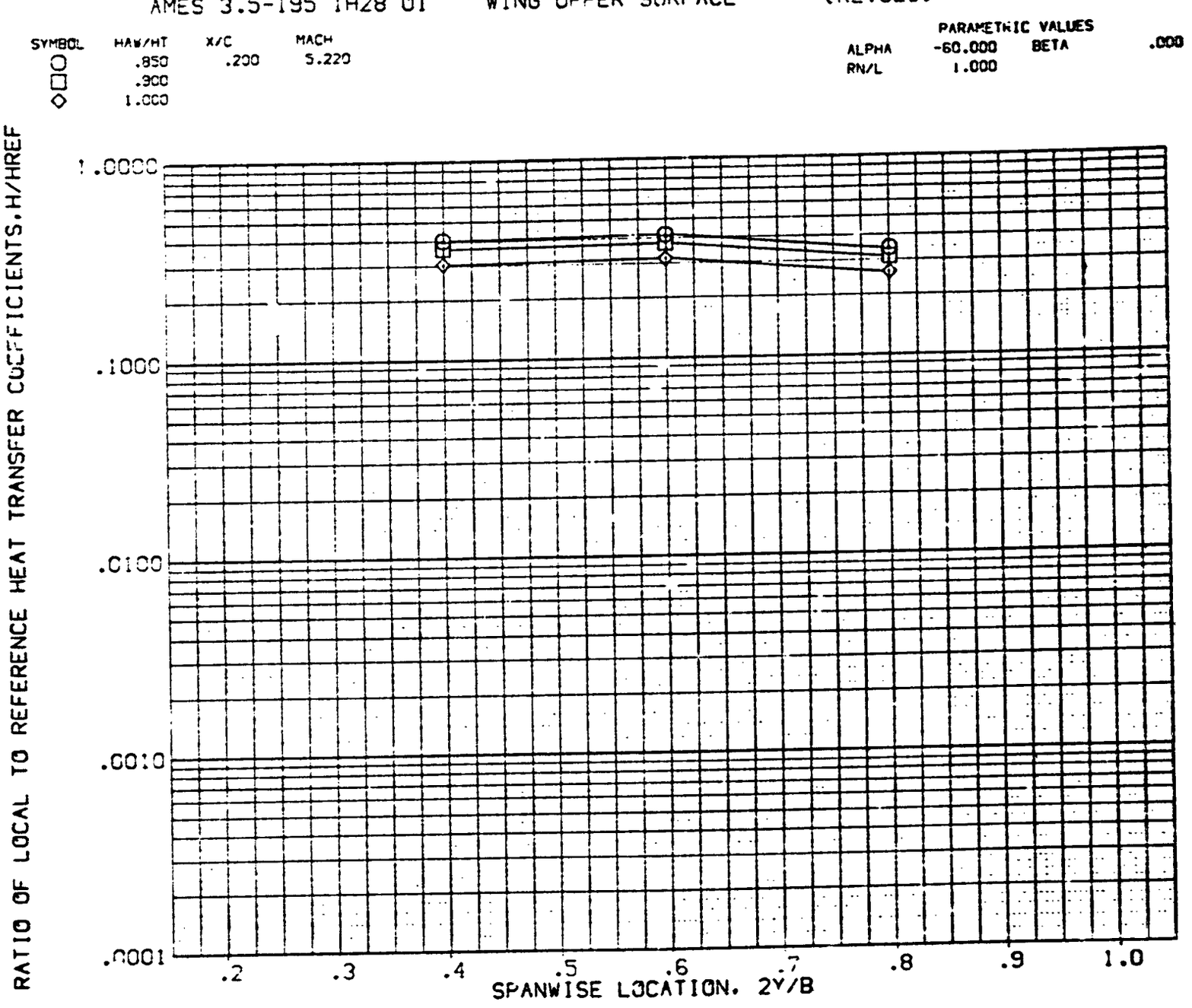

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG26)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

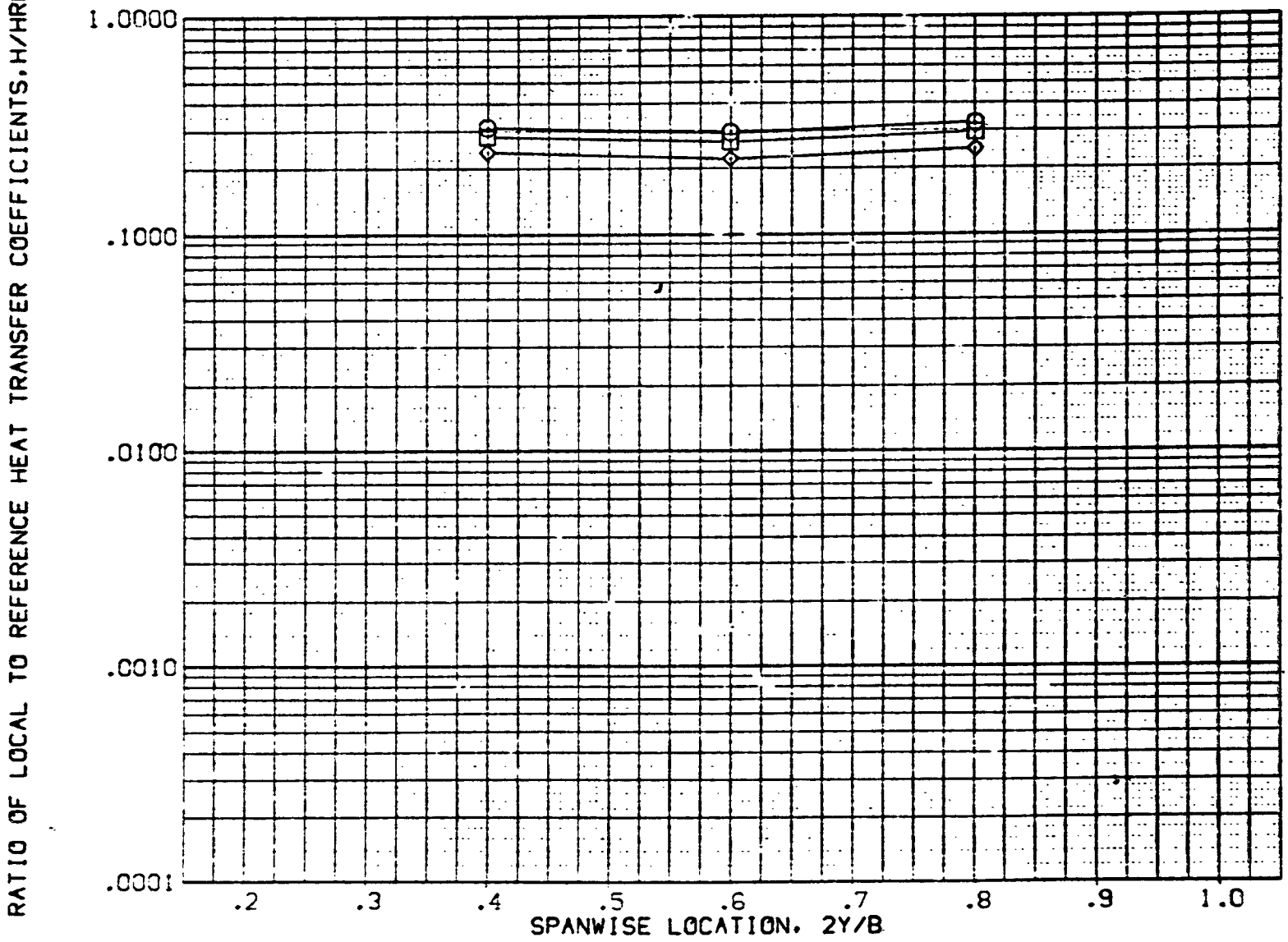

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

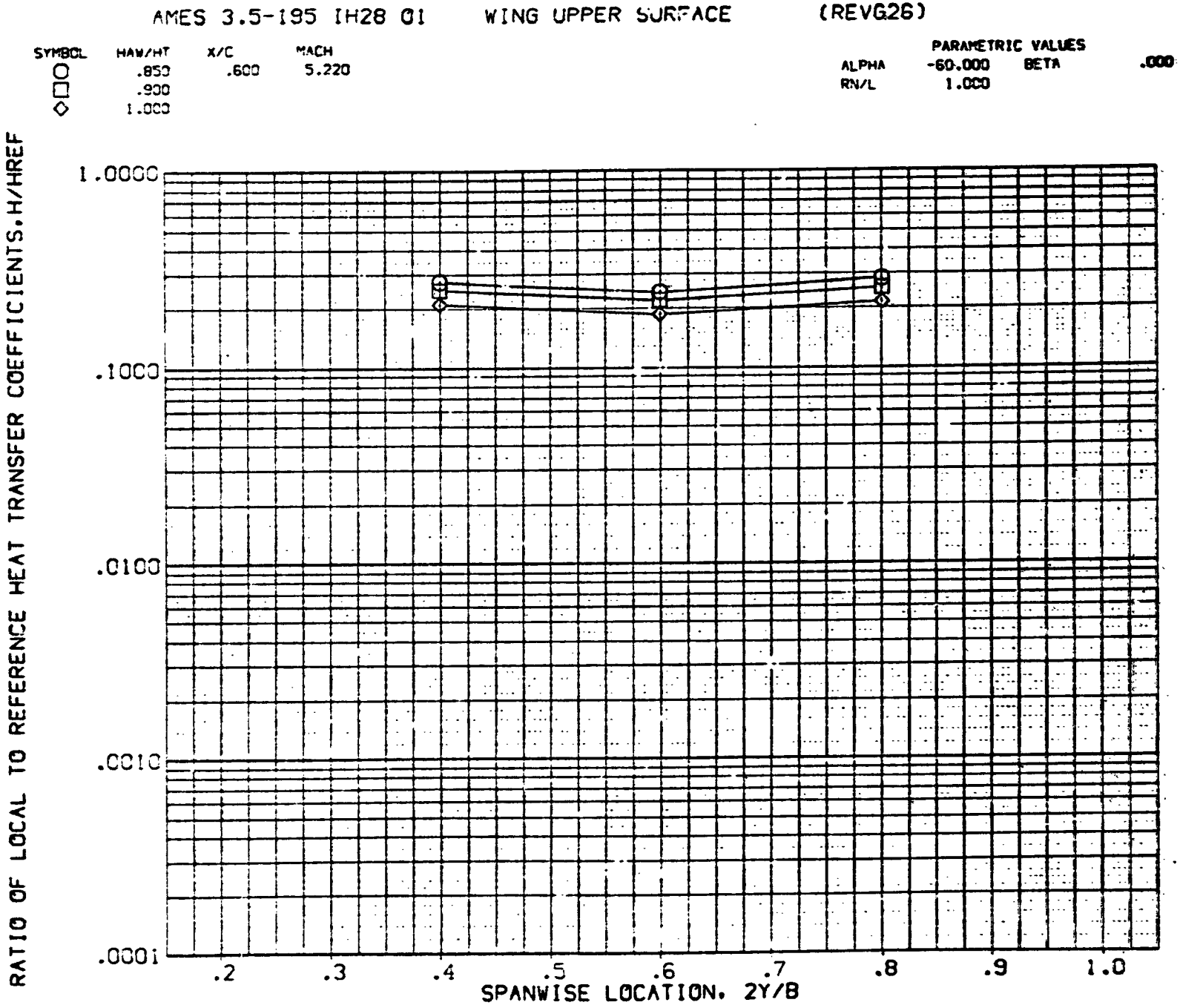

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

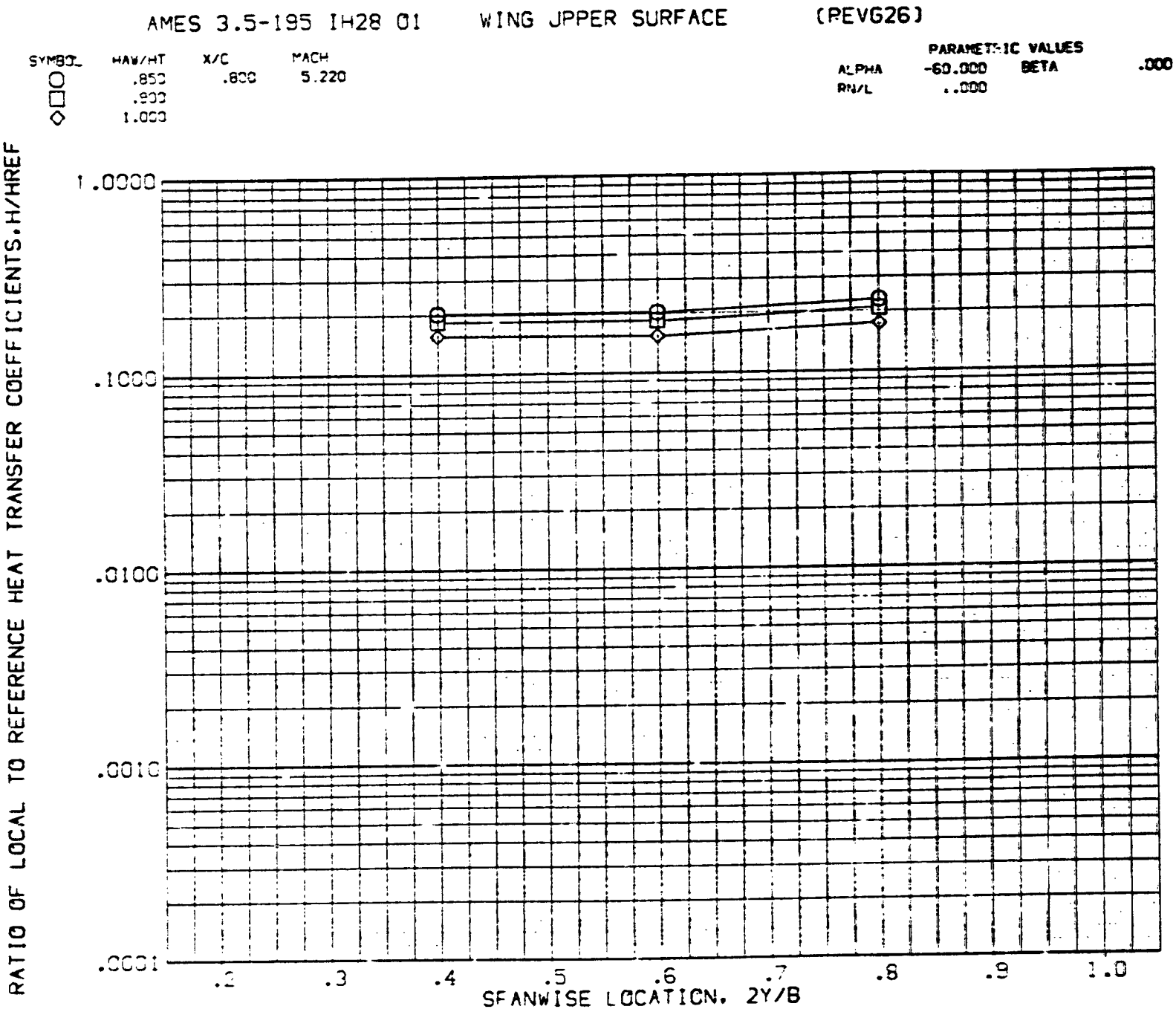

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG27)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

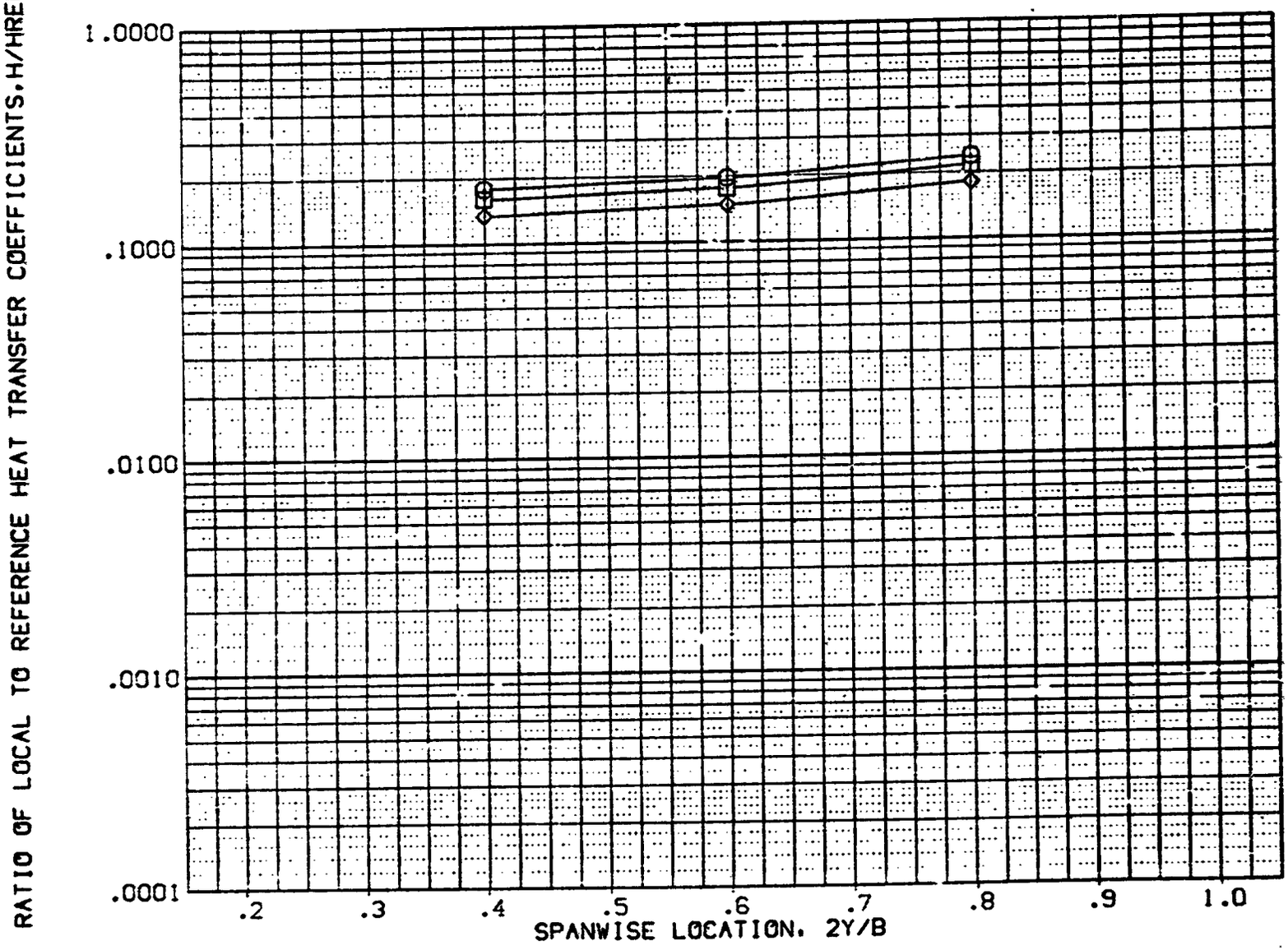

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

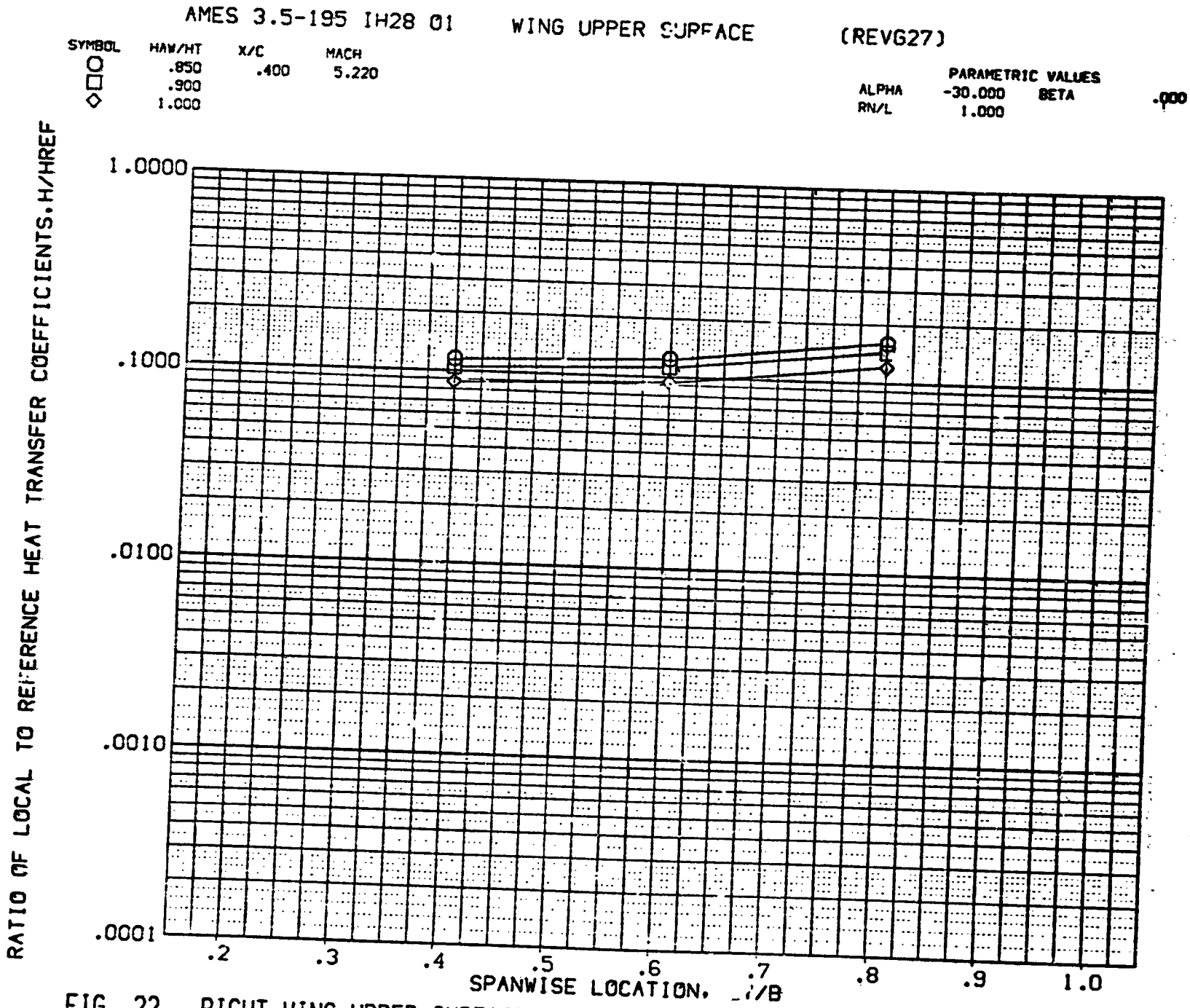

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

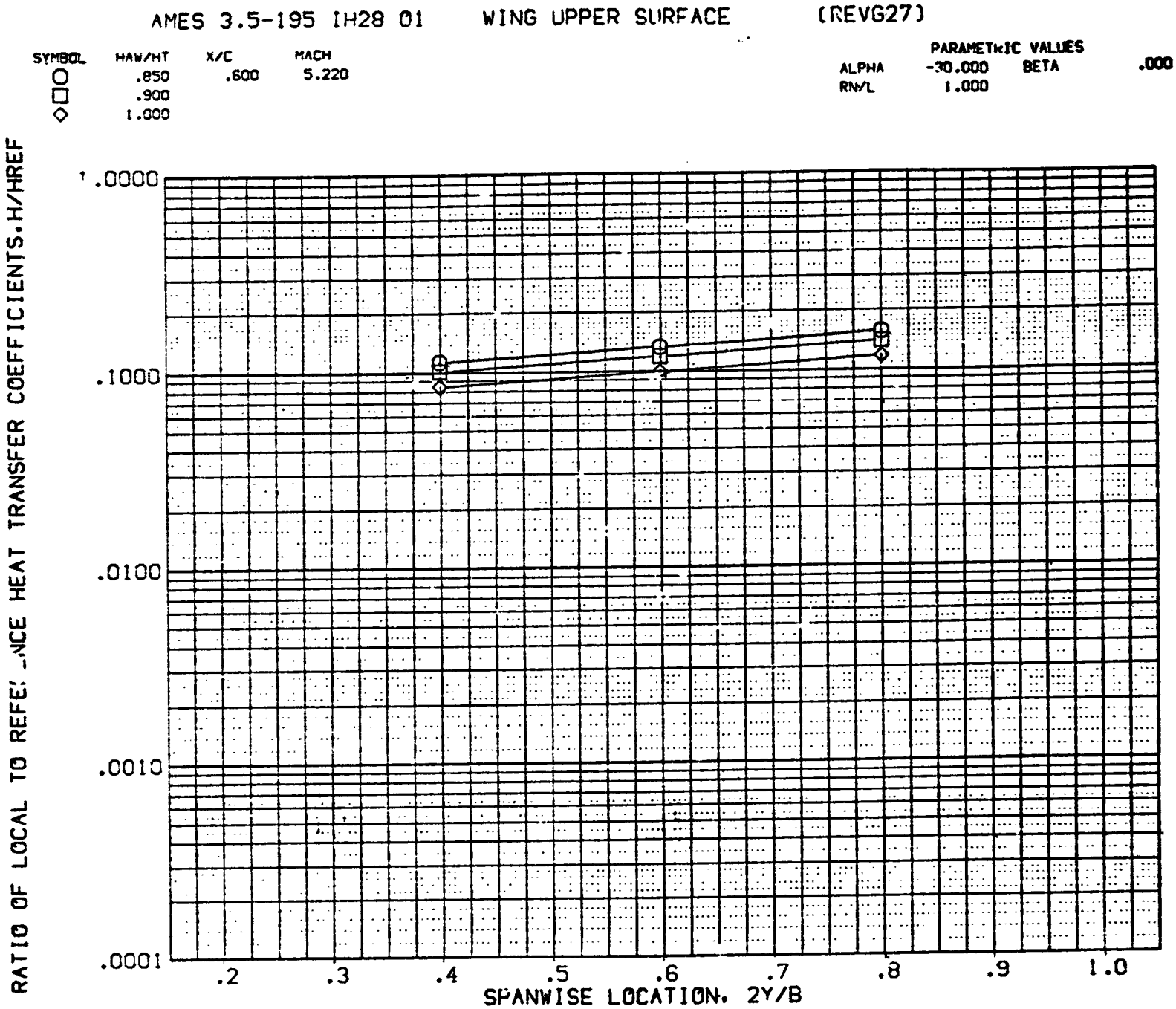

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

AMES 3.5-195 IH28 01 WING UPPER SURFACE (REVG27)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

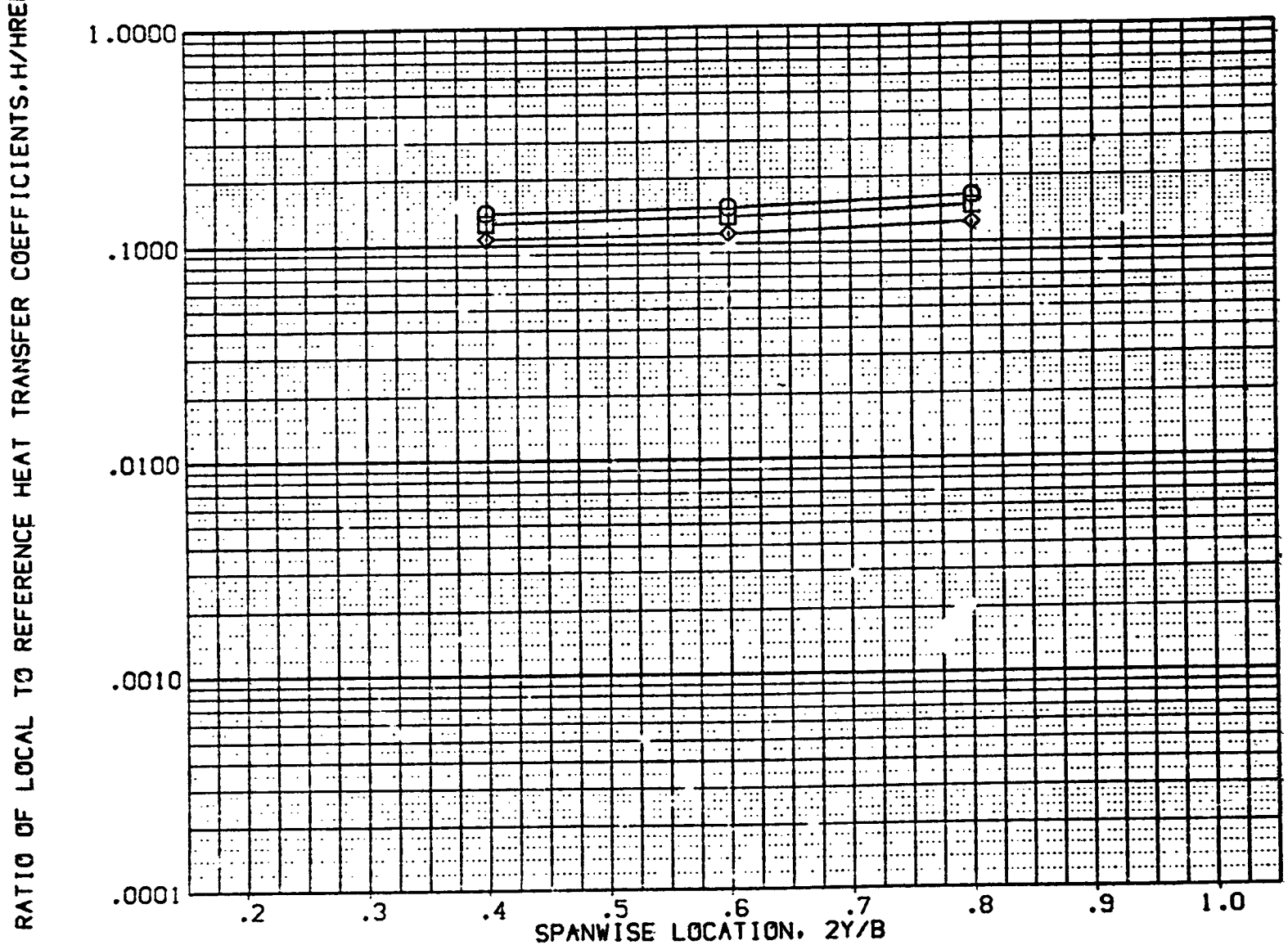

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	○	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG20)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	30.000	.000	1.000
(REVG21)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	60.000	.000	1.000
(REVG22)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	90.000	.000	1.000
(REVG23)	▽	AMES 3.5-195 IH28 01	WING UPPER SURFACE	120.000	.000	1.000

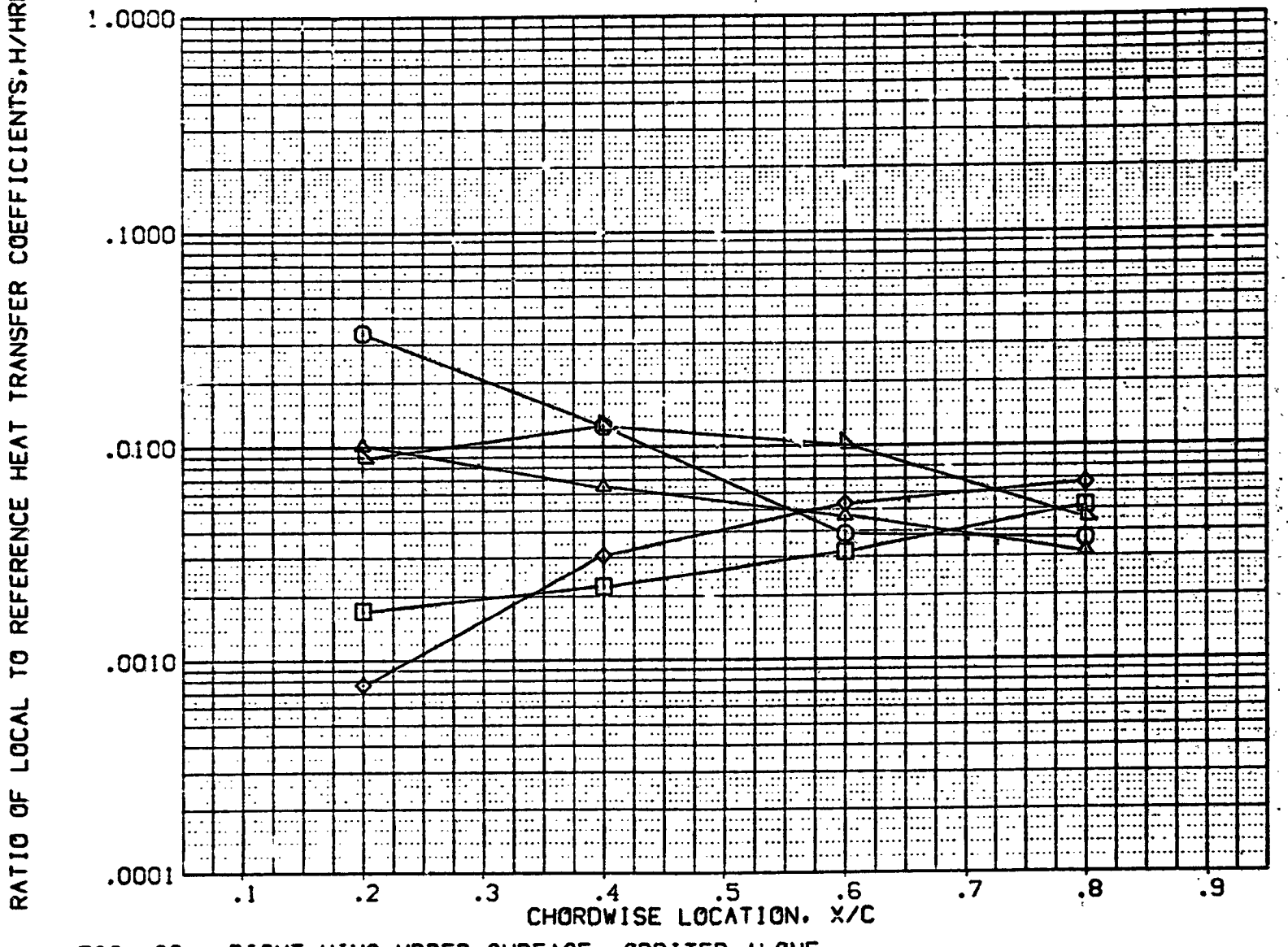

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 2Y/B = .400

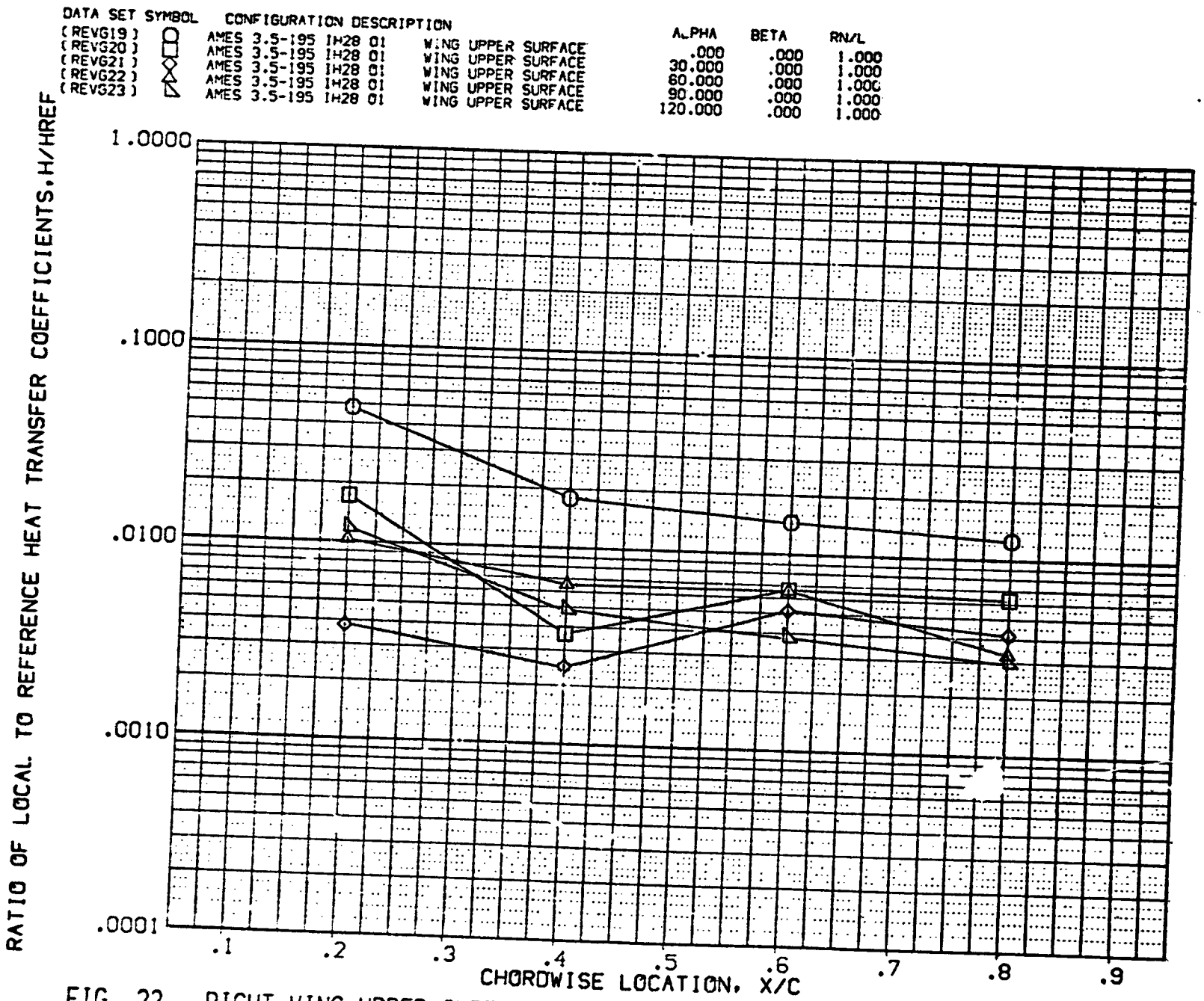

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG20)	⊠	AMES 3.5-195 IH28 01	WING UPPER SURFACE	30.000	.000	1.000
(REVG21)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	60.000	.000	1.000
(REVG22)	○	AMES 3.5-195 IH28 01	WING UPPER SURFACE	90.000	.000	1.000
(REVG23)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	120.000	.000	1.000

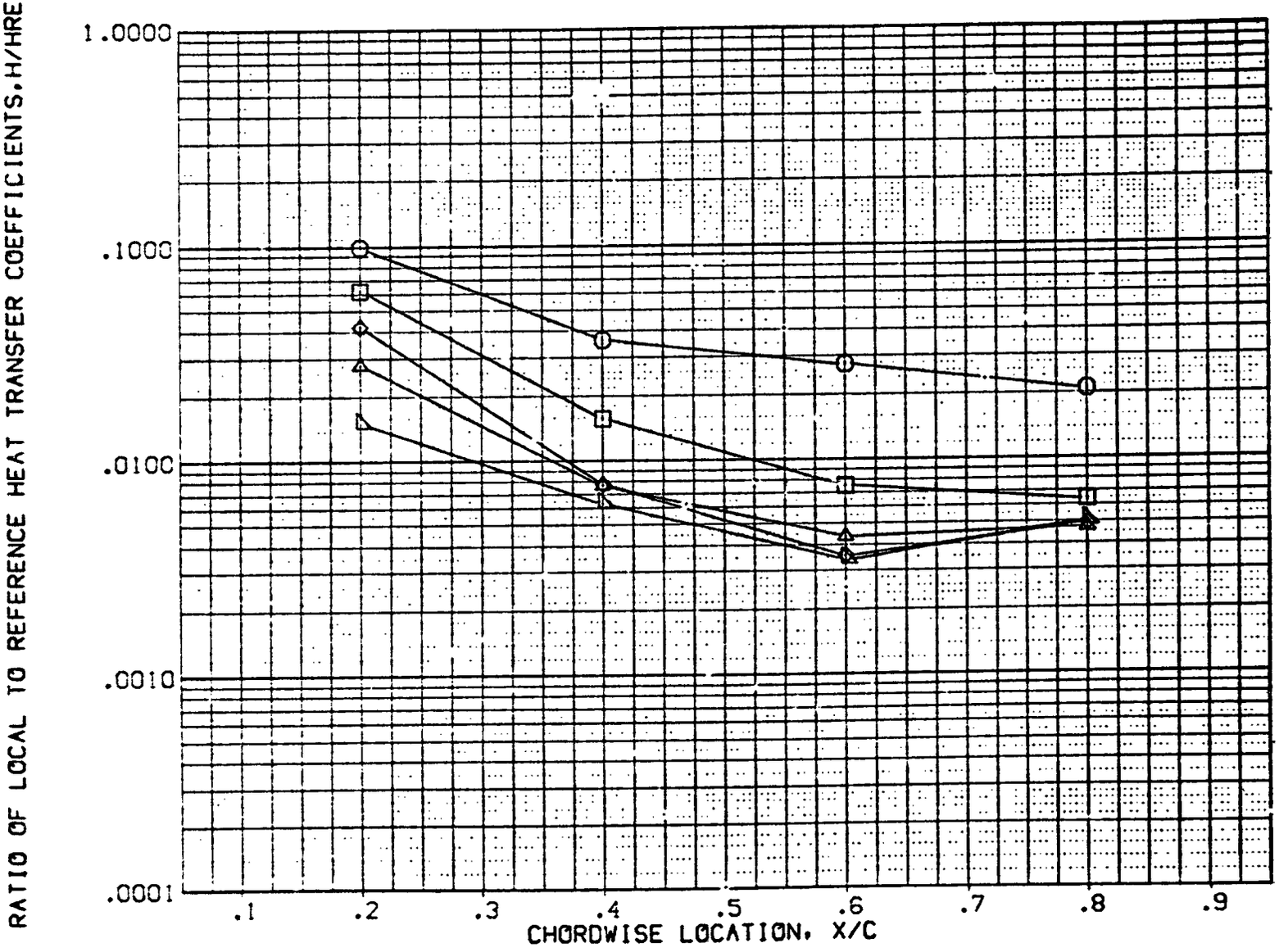

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 2Y/B = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG27)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-30.000	.000	1.000
(REVG26)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-60.000	.000	1.000
(REVG25)	▽	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-90.000	.000	1.000
(REVG24)	○	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-120.000	.000	1.000

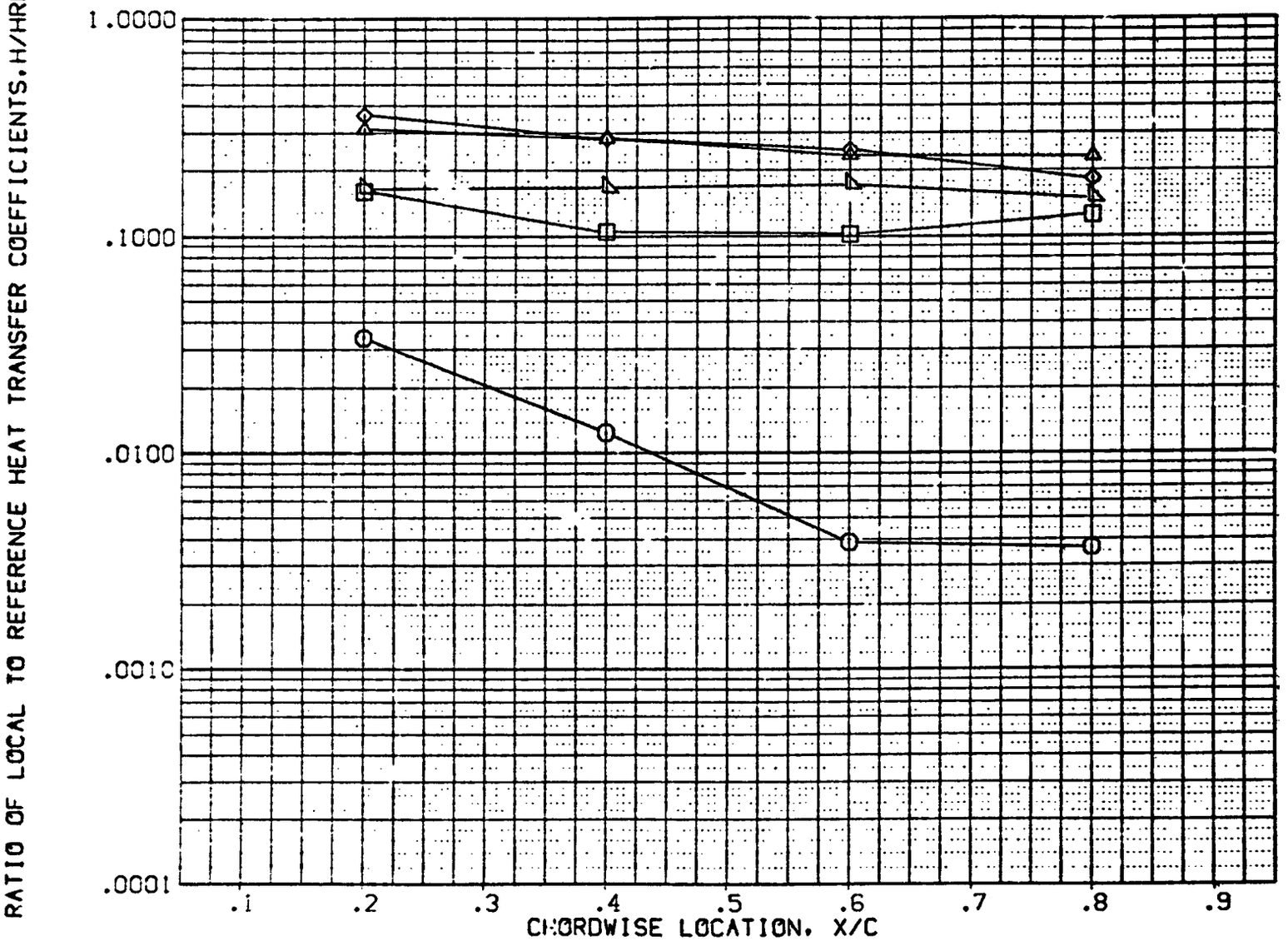

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HA/HT= .900 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG27)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	-30.000	.000	1.000
(REVG26)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	-60.000	.000	1.000
(REVG25)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	-90.000	.000	1.000
(REVG24)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	-120.000	.000	1.000

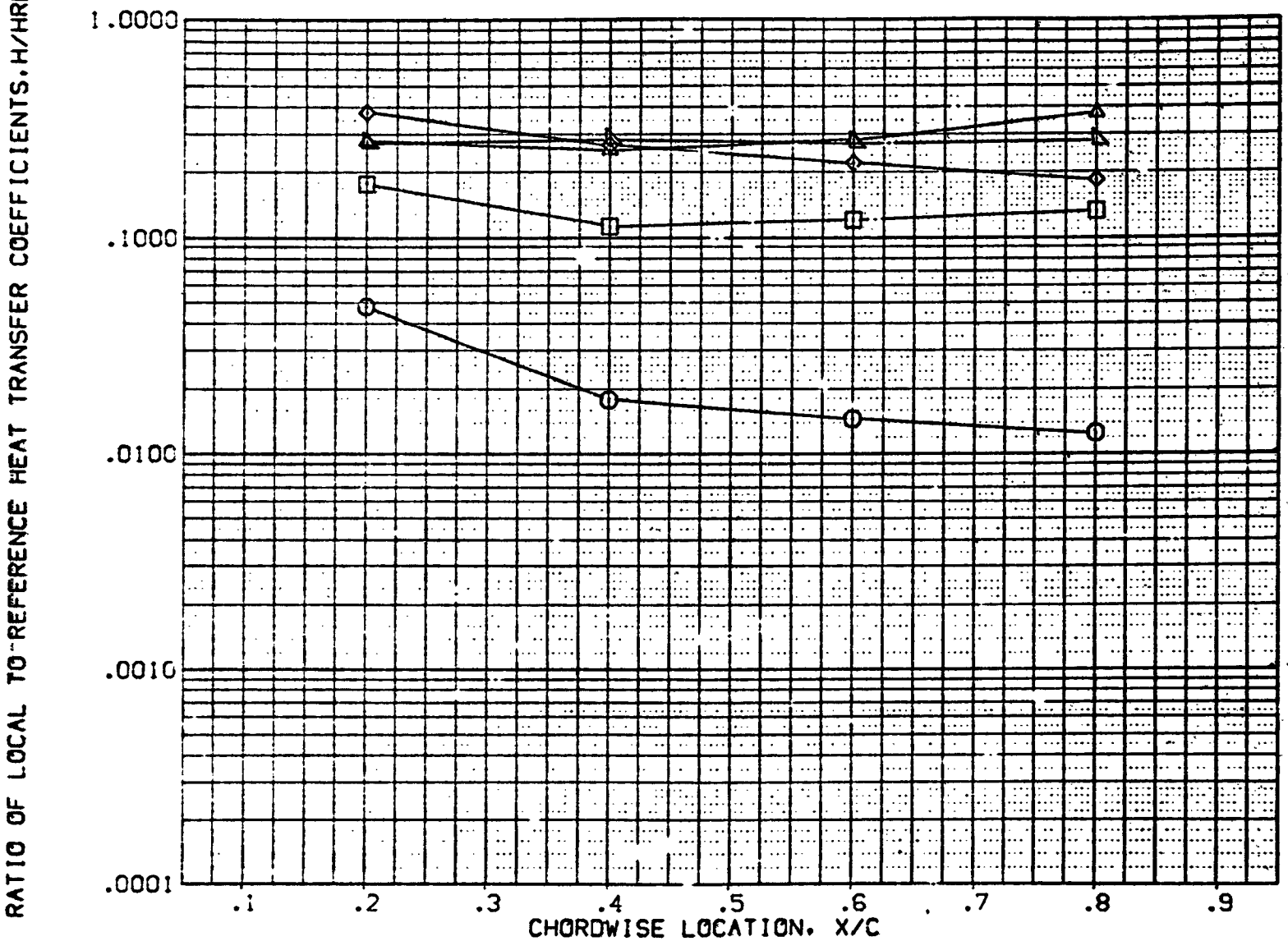

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG27)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-30.000	.000	1.000
(REVG26)	▽	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-60.000	.000	1.000
(REVG25)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-90.000	.000	1.000
(REVG24)	○	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-120.000	.000	1.000

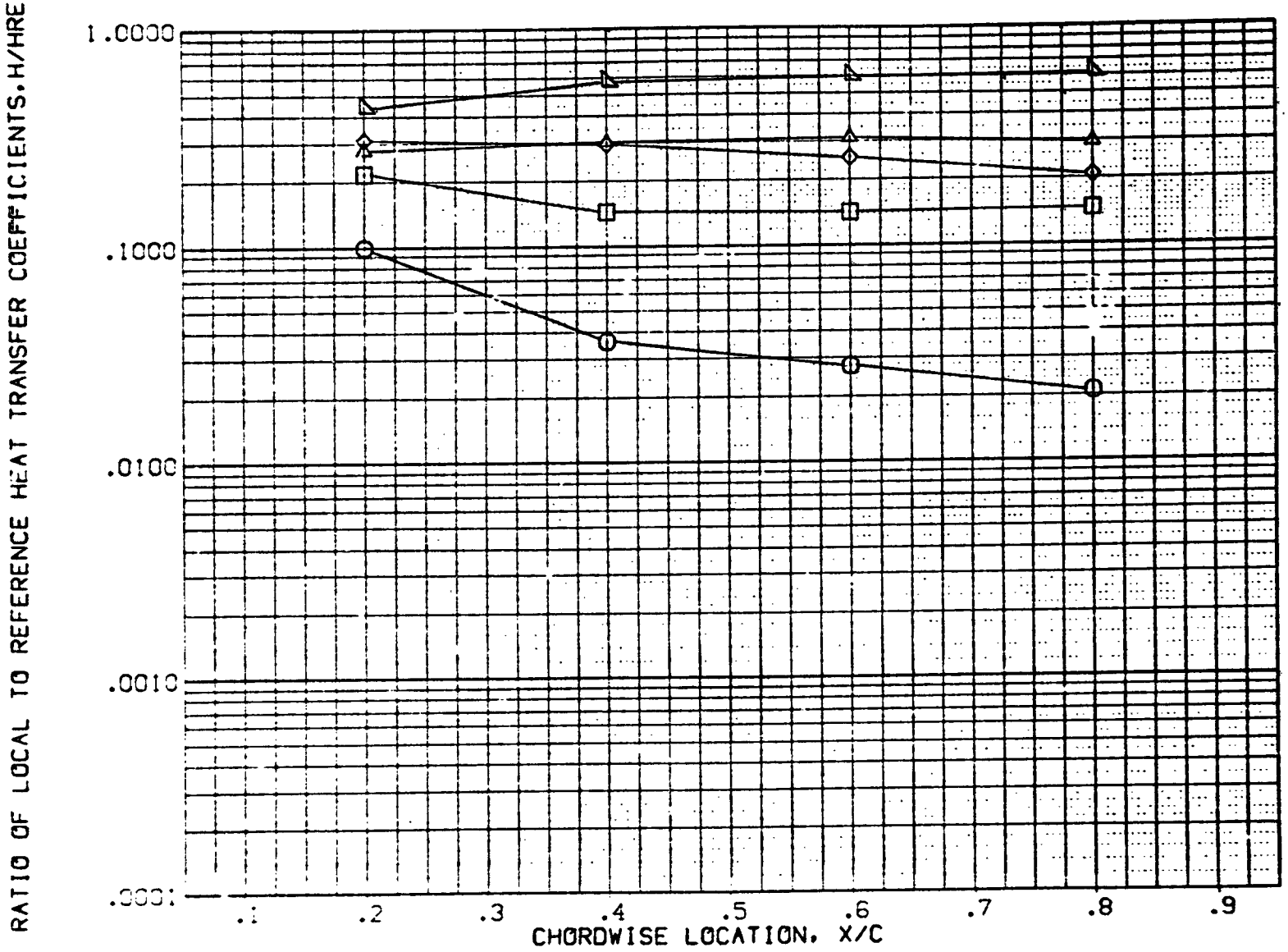

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 H0/H = .900 2Y/B .800

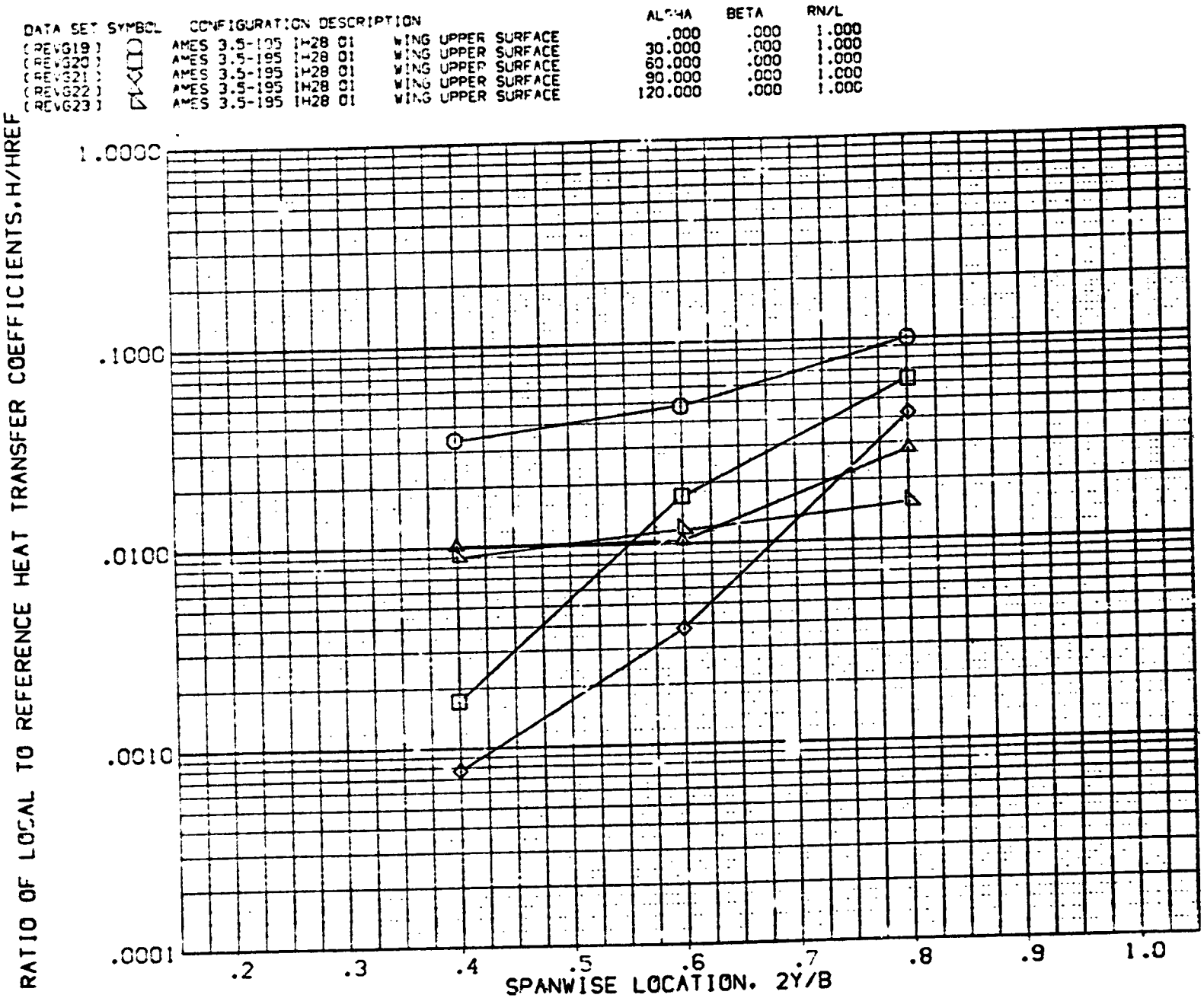

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 X/C = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG18)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG20)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	30.000	.000	1.000
(REVG21)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	60.000	.000	1.000
(REVG22)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	90.000	.000	1.000
(REVG23)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	120.000	.000	1.000

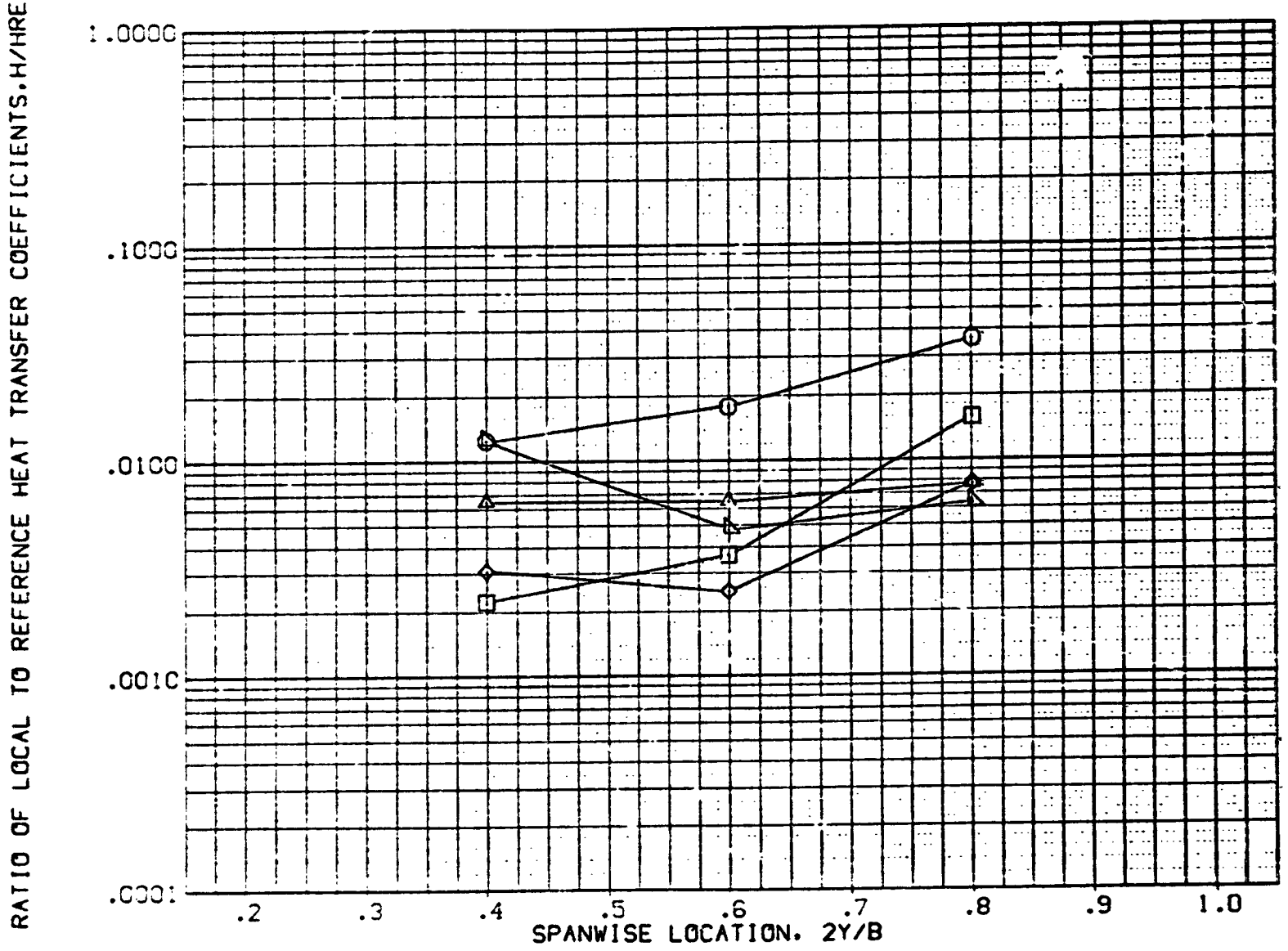

FIG 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 X/C = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)		AMES 3.5-195 IH29 01	WING UPPER SURFACE	.000	.000	1.000
(REVG20)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	30.000	.000	1.000
(REVG21)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	60.000	.000	1.000
(REVG22)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	90.000	.000	1.000
(REVG23)		AMES 3.5-195 IH28 01	WING UPPER SURFACE	120.000	.000	1.000

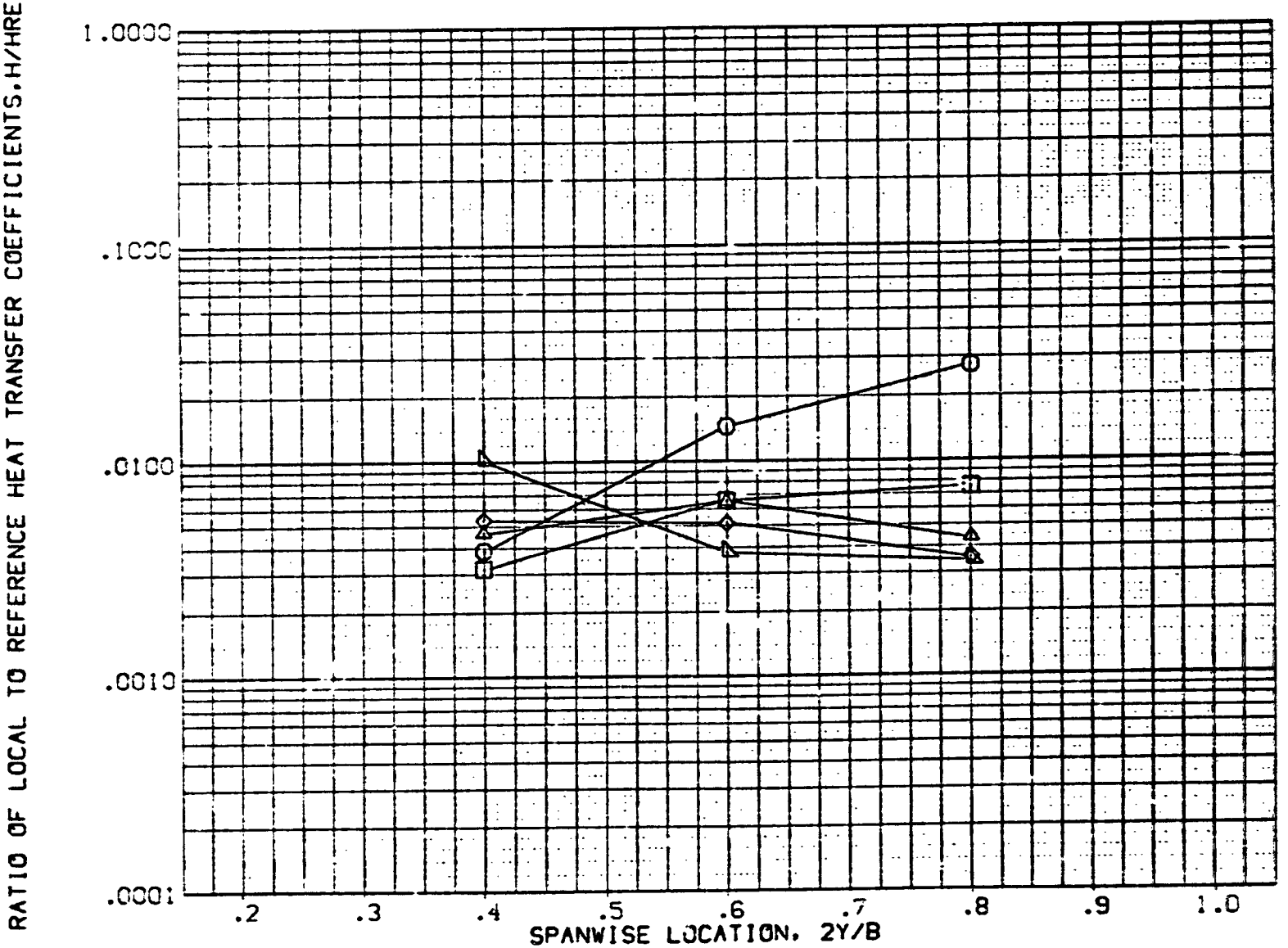

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 TAW/HT= .900 X/C = .300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	PN/L
(REVG19)		AMES 3.5-19S IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG20)		AMES 3.5-19S IH28 01	WING UPPER SURFACE	30.000	.000	1.000
(REVG21)		AMES 3.5-19S IH28 01	WING UPPER SURFACE	60.000	.000	1.000
(REVG22)		AMES 3.5-19S IH28 01	WING UPPER SURFACE	90.000	.000	1.000
(REVG23)		AMES 3.5-19S IH28 01	WING UPPER SURFACE	120.000	.000	1.000

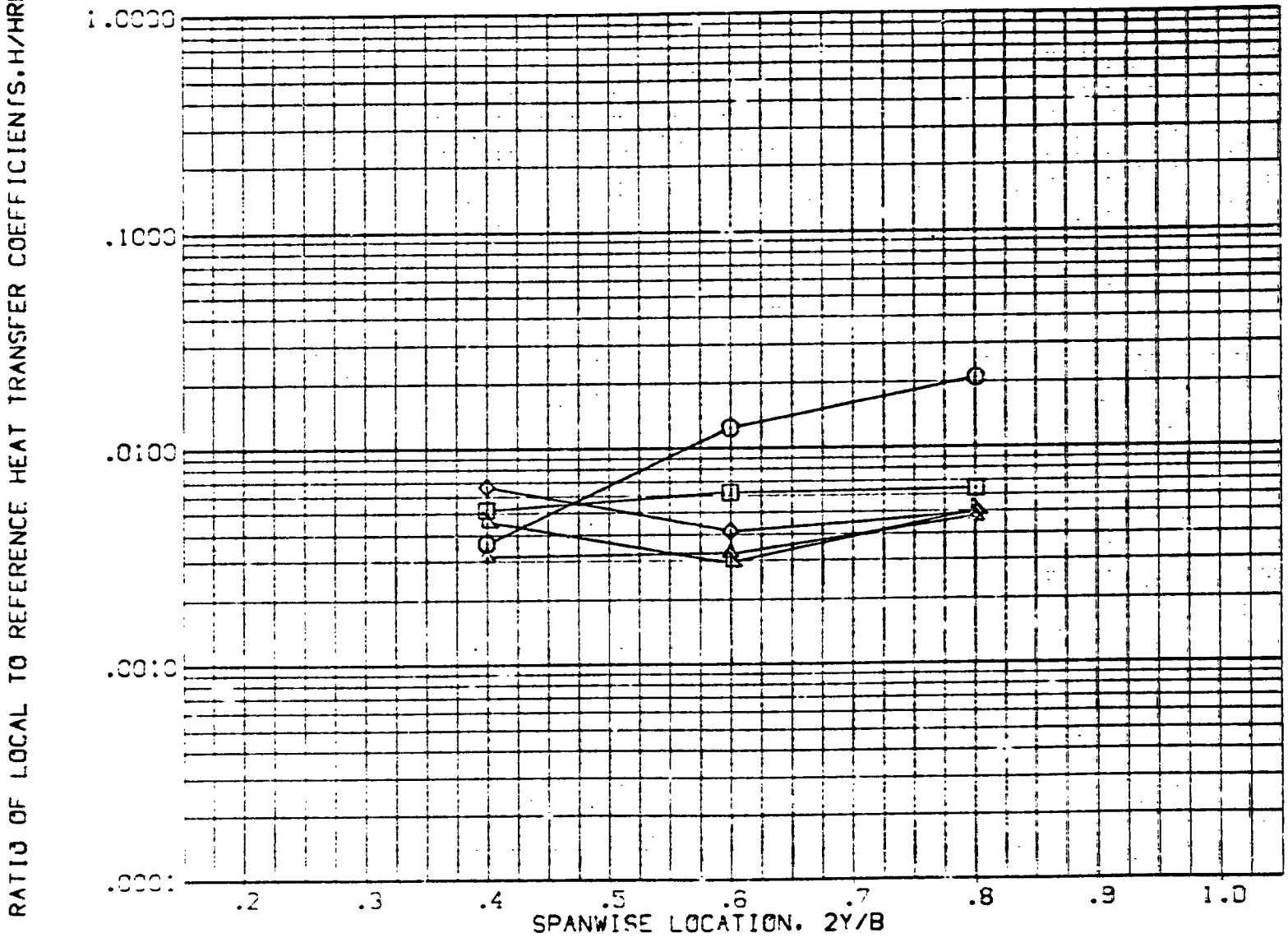

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

M-CH = 5.300 HAA HT= .800 X/C = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG27)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-30.000	.000	1.000
(REVG26)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-60.000	.000	1.000
(REVG25)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-90.000	.000	1.000
(REVG24)	△	AMES 3.5-195 IH26 01	WING UPPER SURFACE	-120.000	.000	1.000

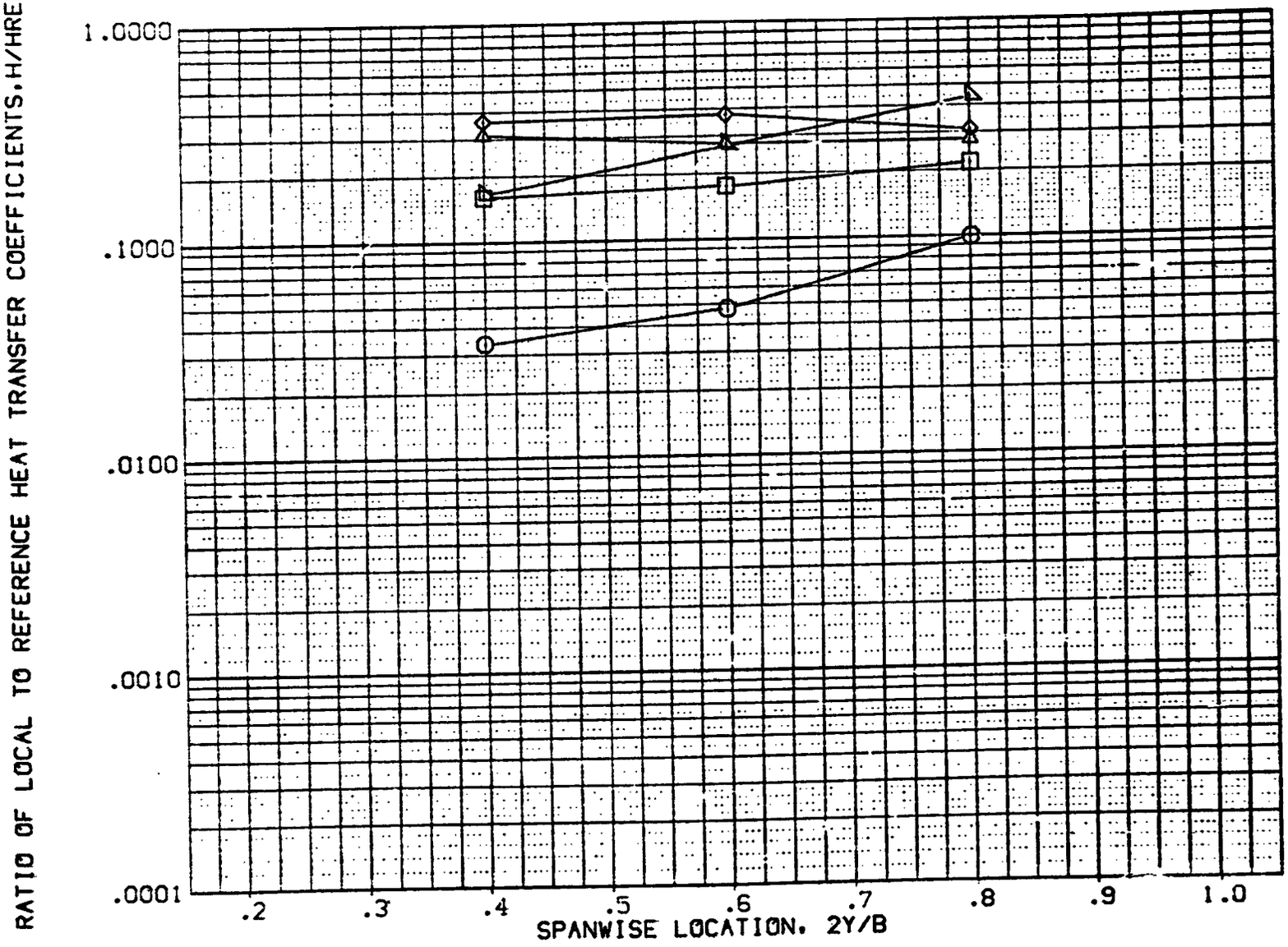

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 X/C = .200

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG27)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-30.000	.000	1.000
(REVG26)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-60.000	.000	1.000
(REVG25)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-90.000	.000	1.000
(REVG24)	◁	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-120.000	.000	1.000

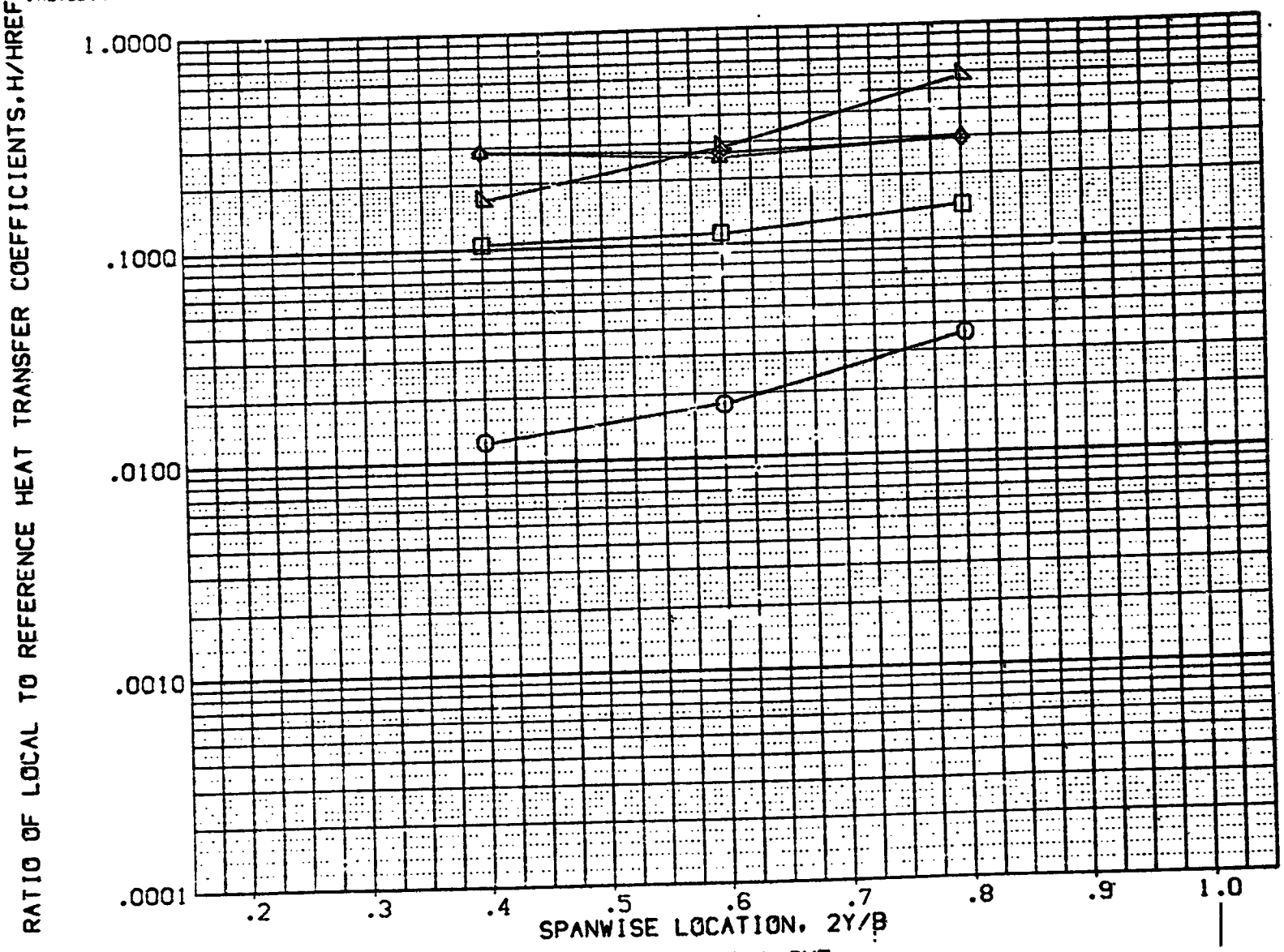

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 X/C = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG27)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-30.000	.000	1.000
(REVG26)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-60.000	.000	1.000
(REVG25)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-90.000	.000	1.000
(REVG24)	▷	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-120.000	.000	1.000

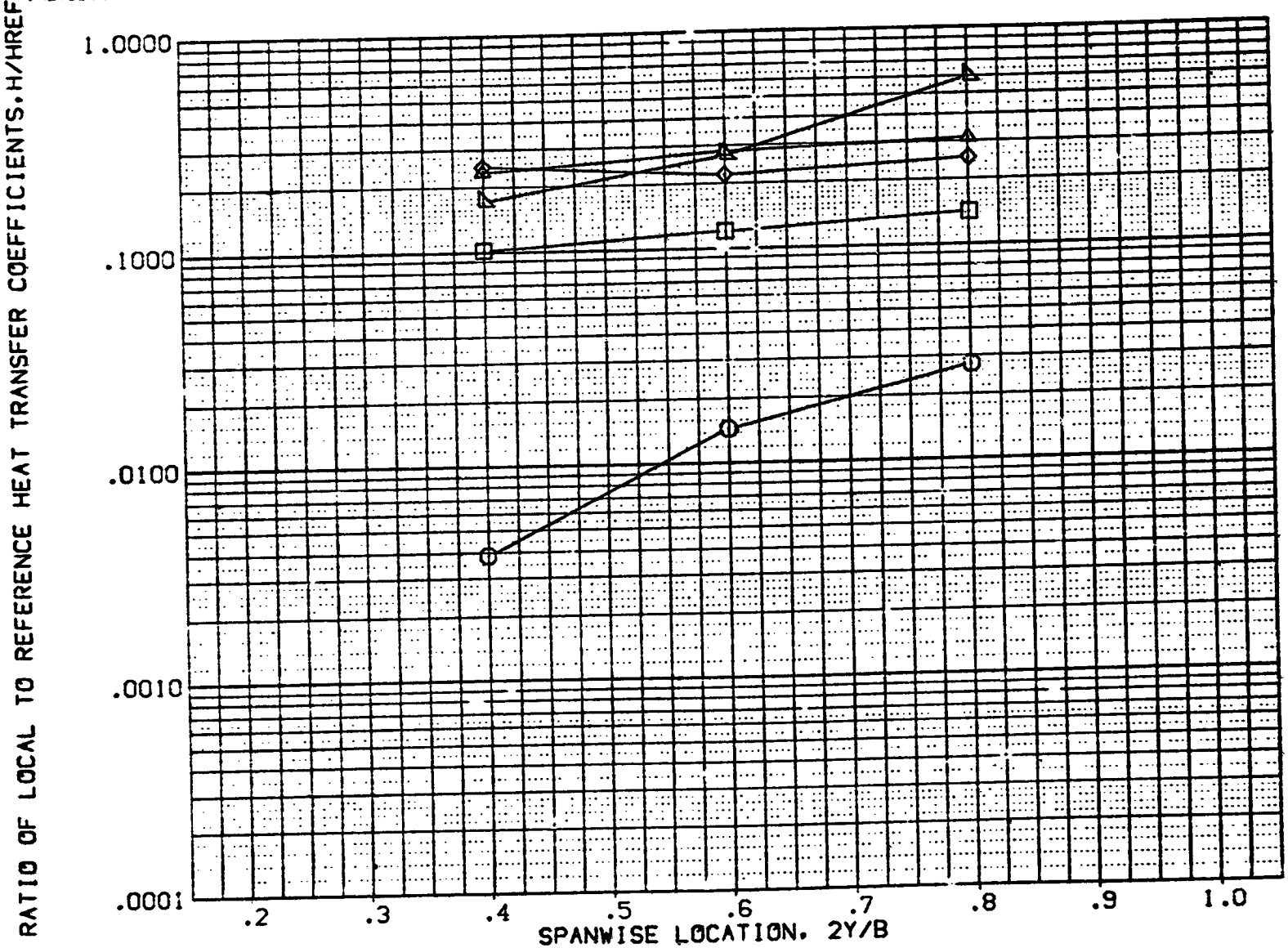

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 X/C = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(REVG19)	○	AMES 3.5-195 IH28 01	WING UPPER SURFACE	.000	.000	1.000
(REVG27)	□	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-30.000	.000	1.000
(REVG26)	◇	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-60.000	.000	1.000
(REVG25)	△	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-90.000	.000	1.000
(REVG24)	▷	AMES 3.5-195 IH28 01	WING UPPER SURFACE	-120.000.	.000	1.000

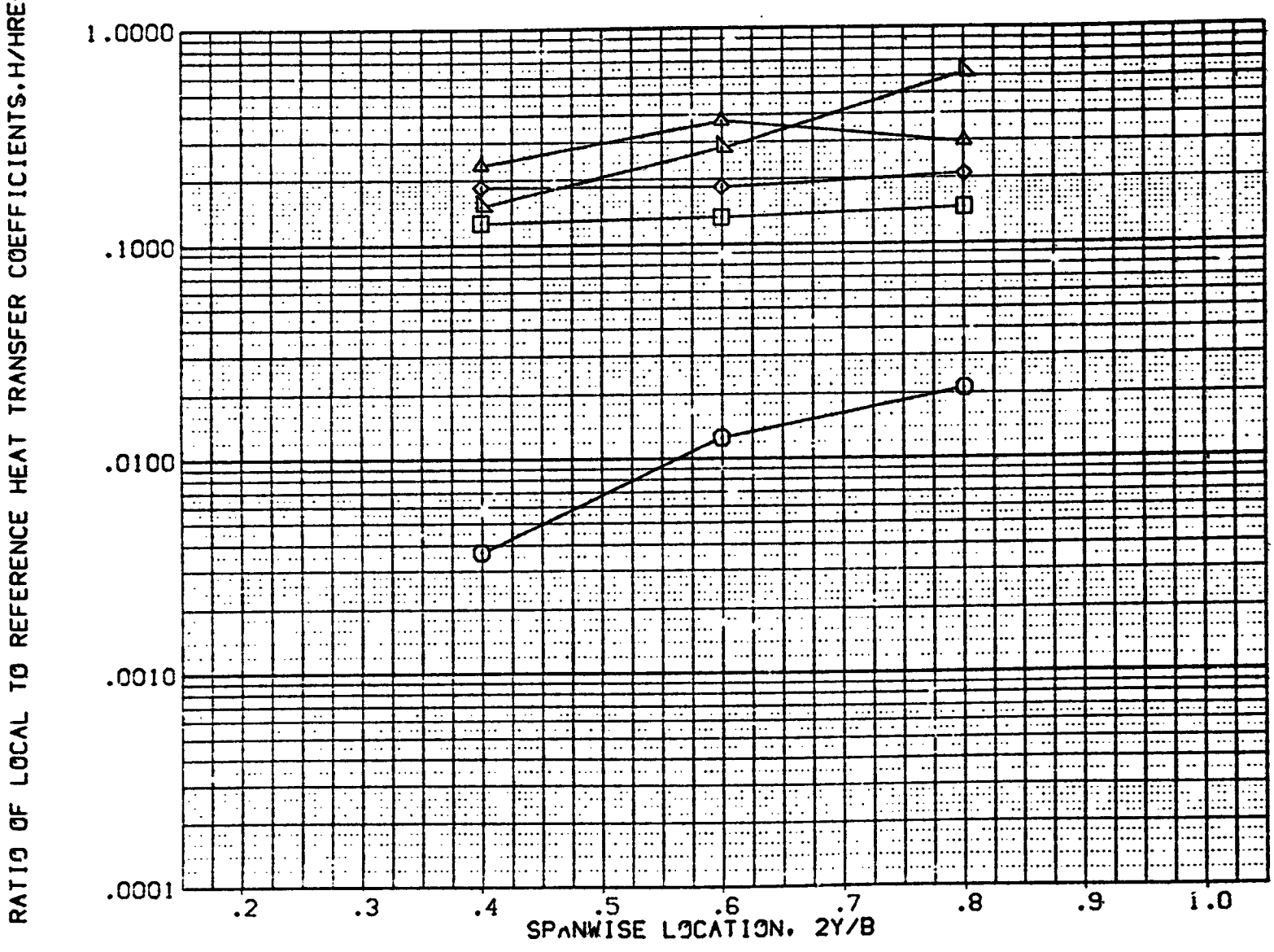

FIG. 22 RIGHT WING UPPER SURFACE, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 X/C = .800

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG01)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.228
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

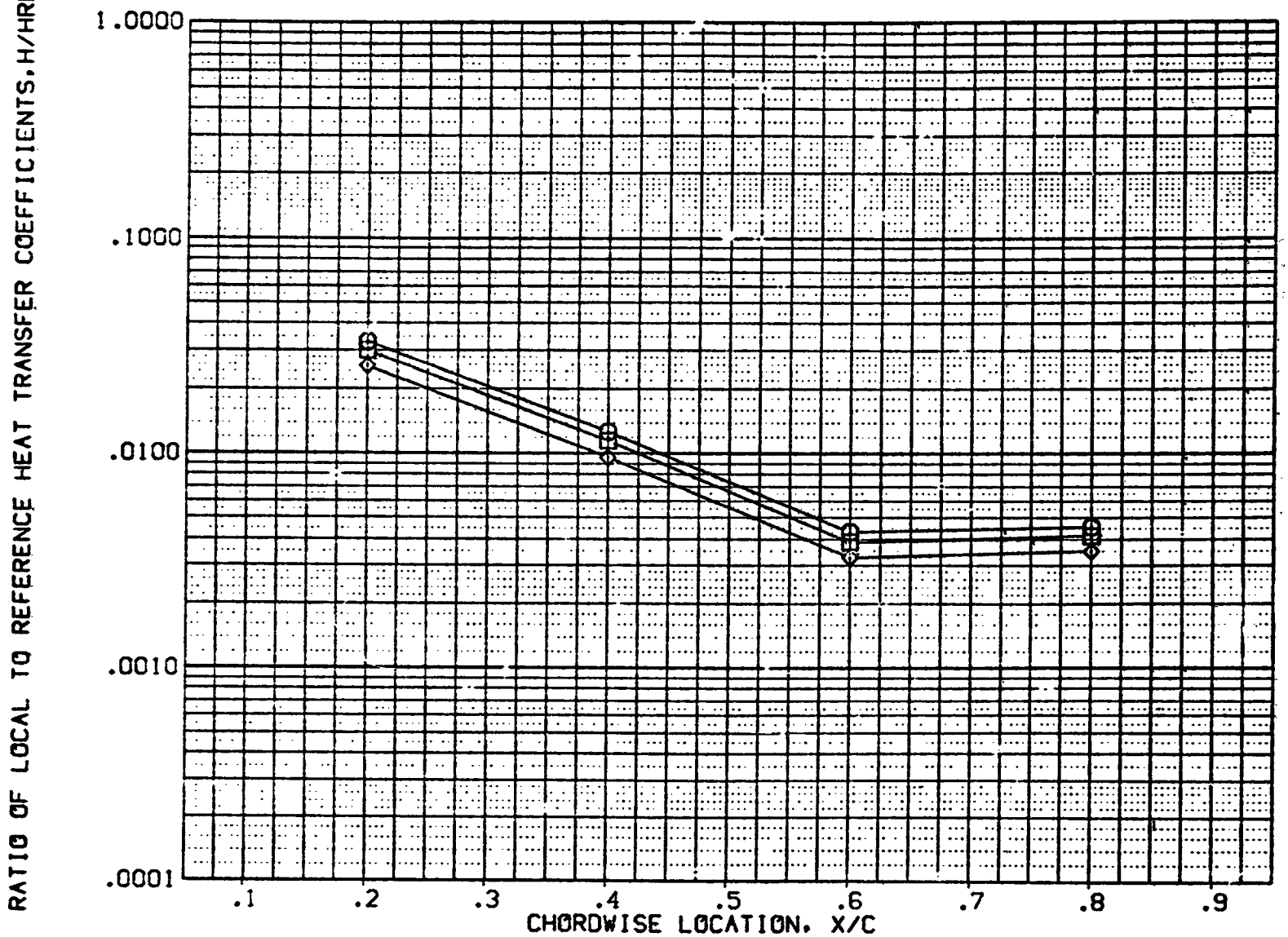

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

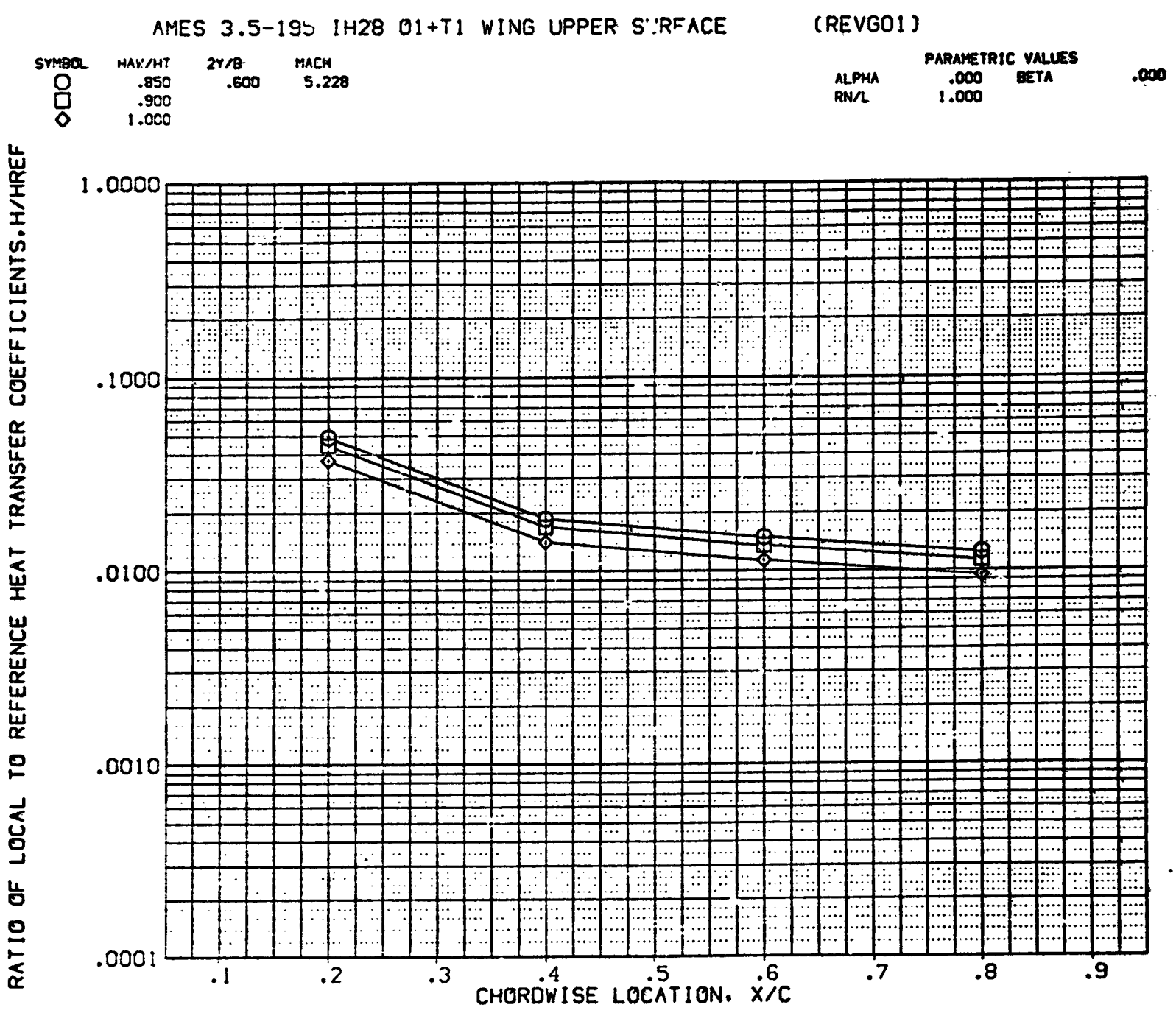

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

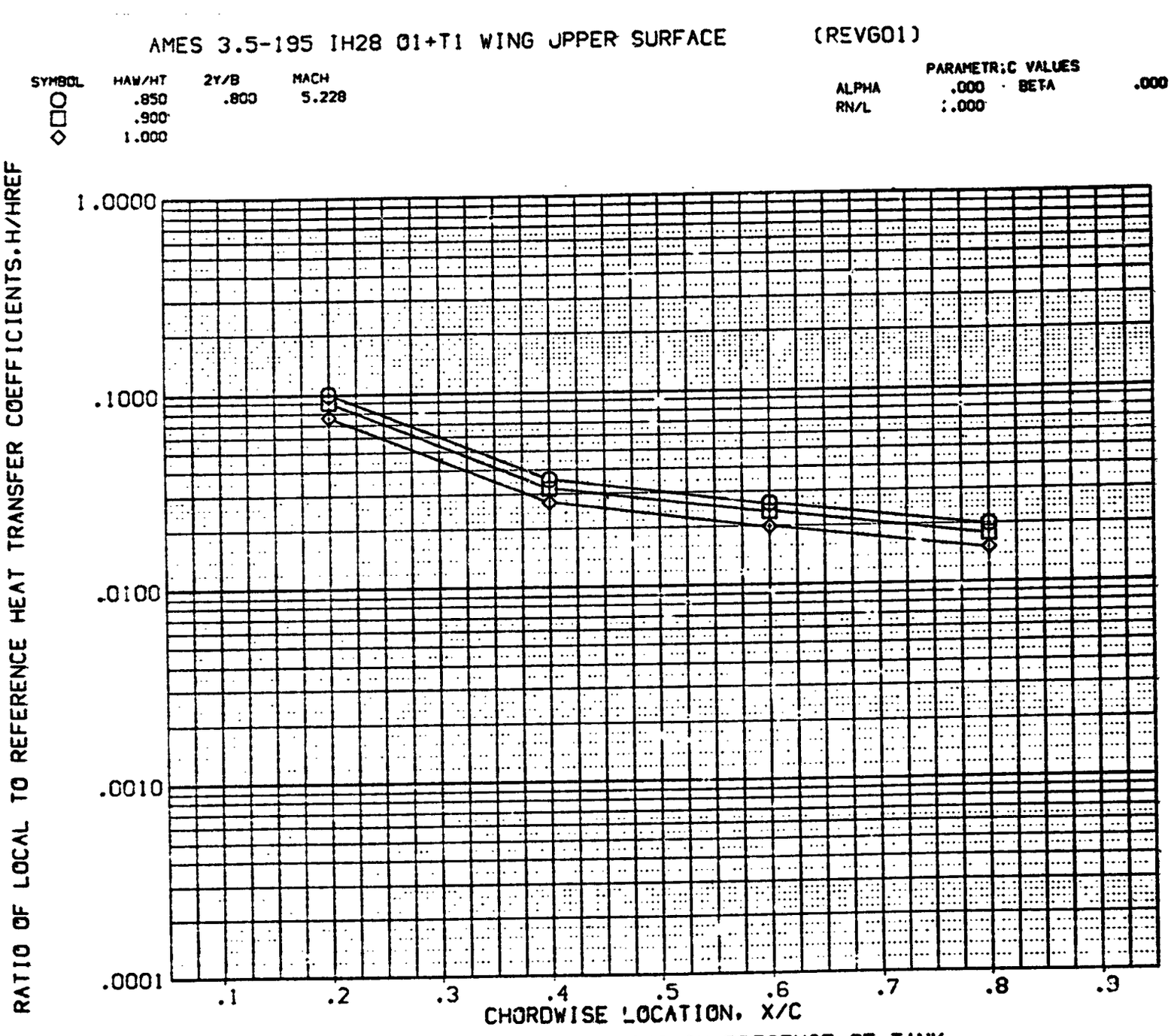

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG02)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

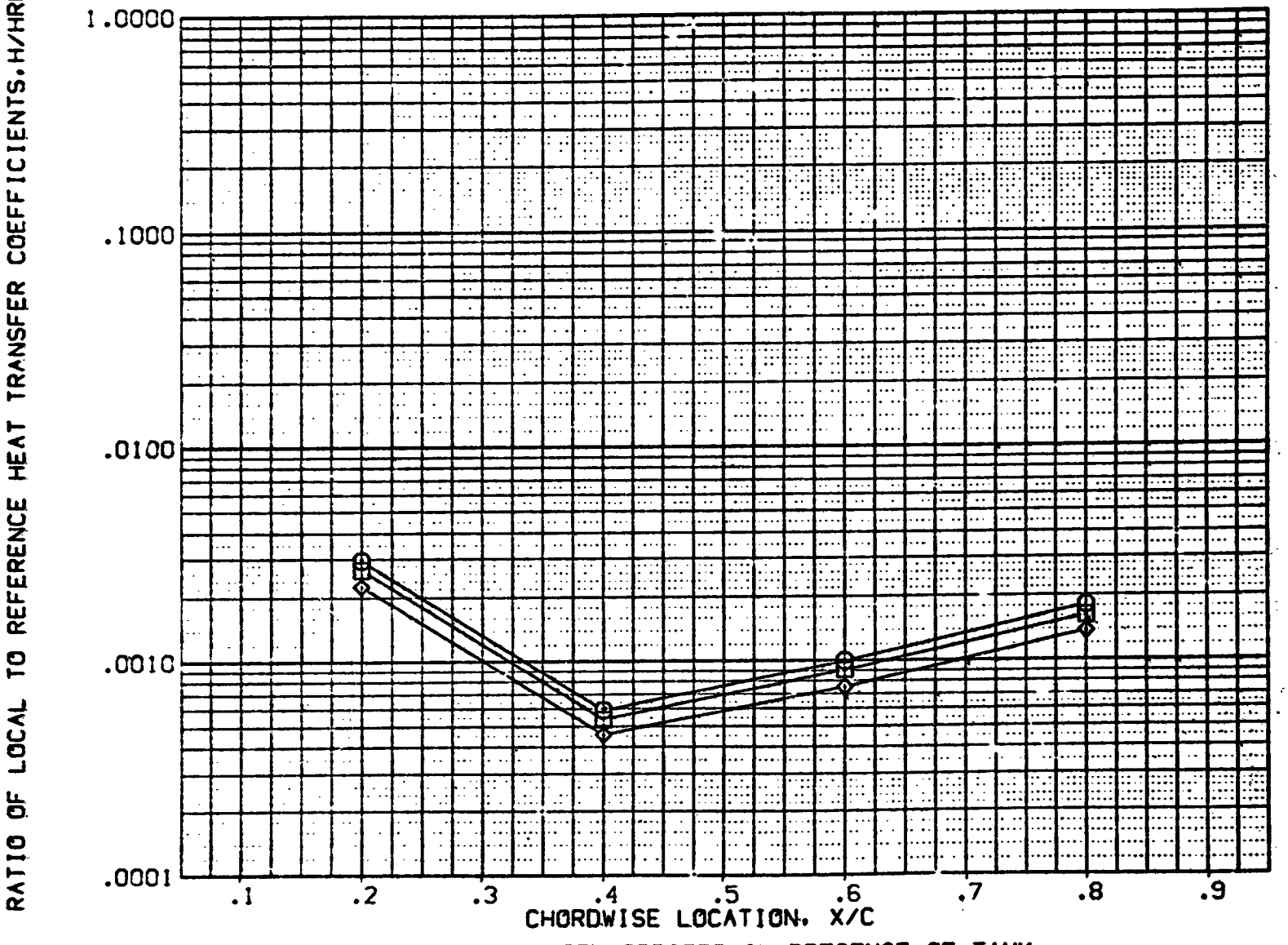

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG02)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

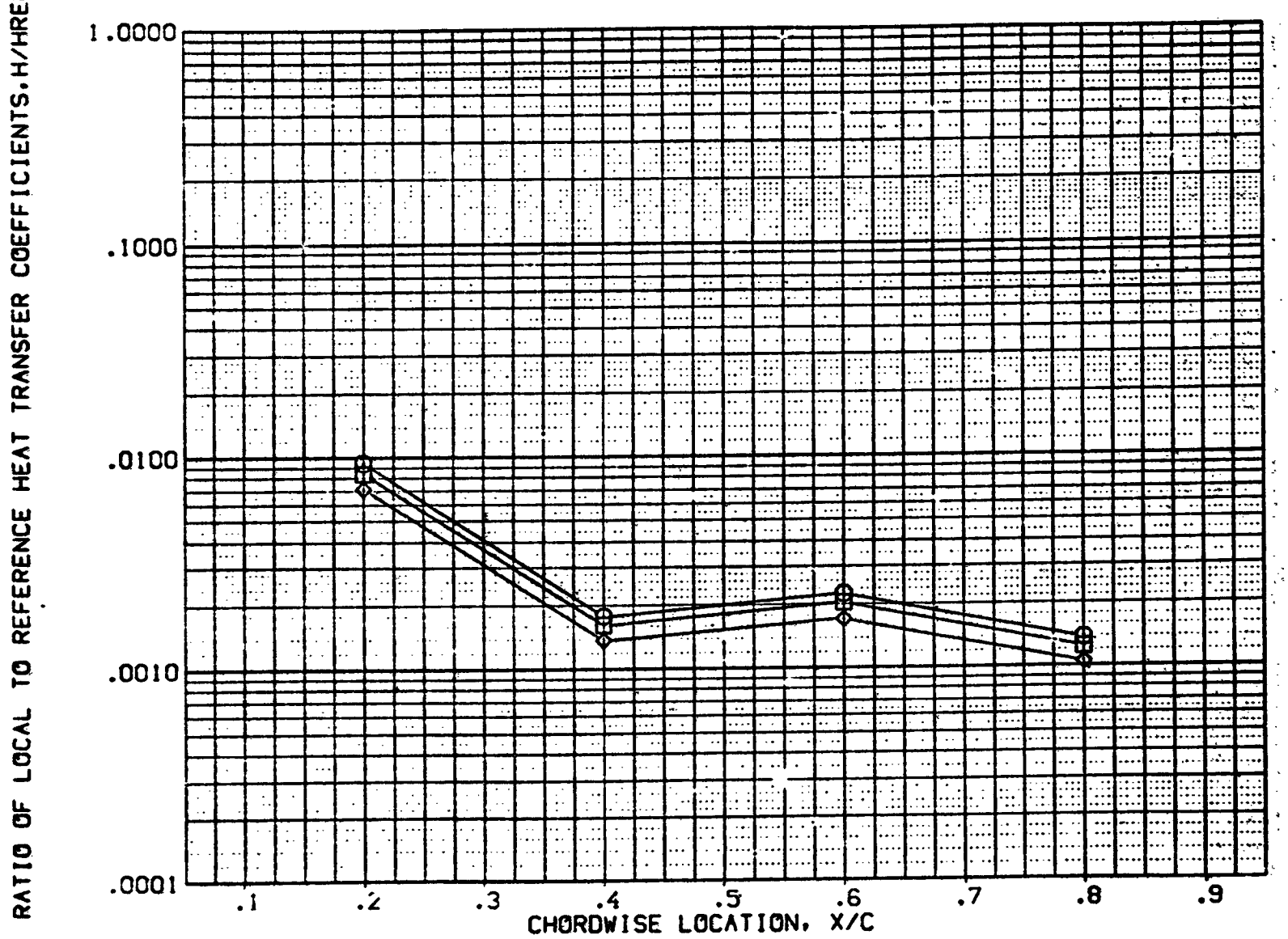

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG02)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

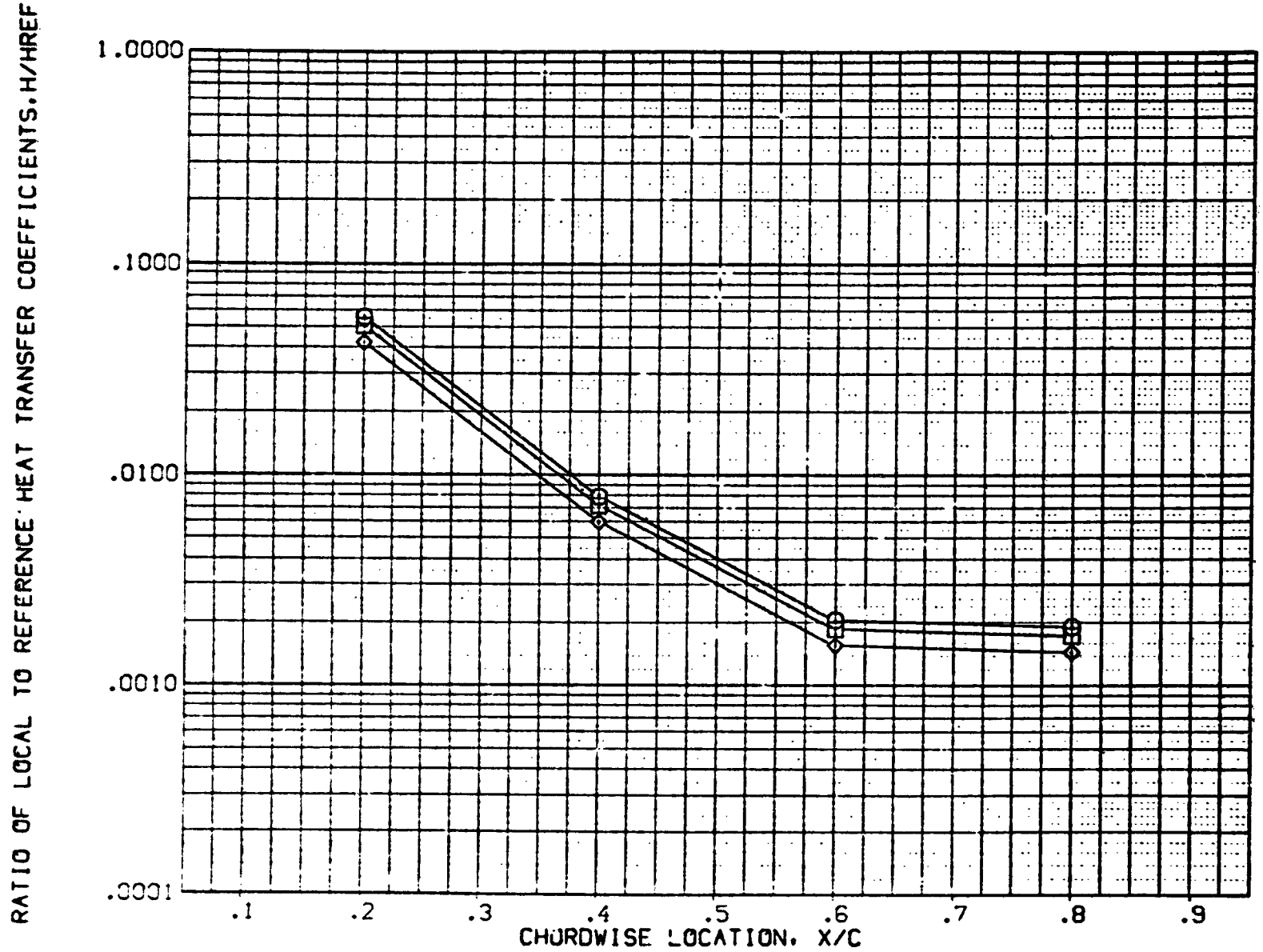

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

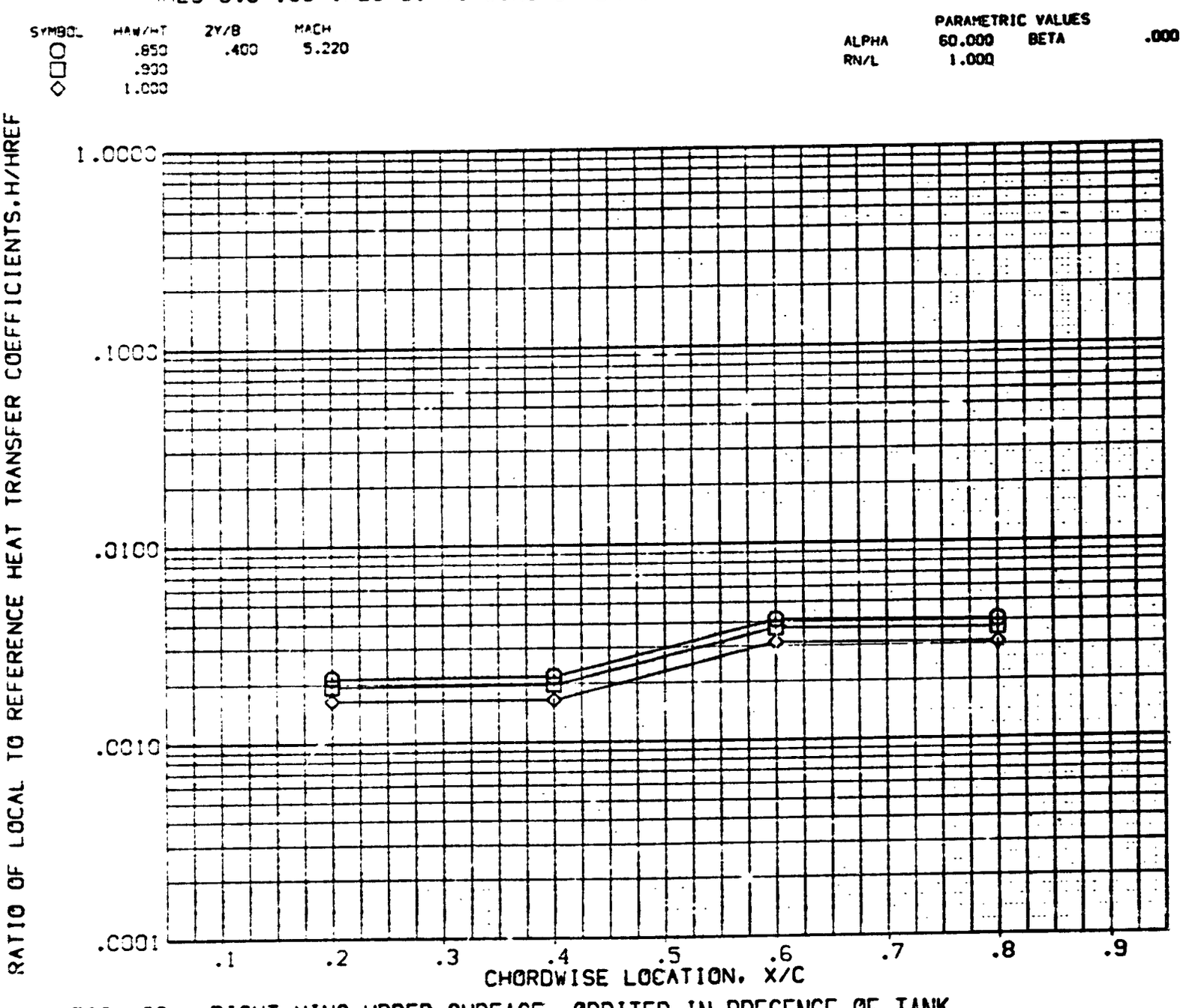

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+TI WING UPPER SURFACE (REVG03)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

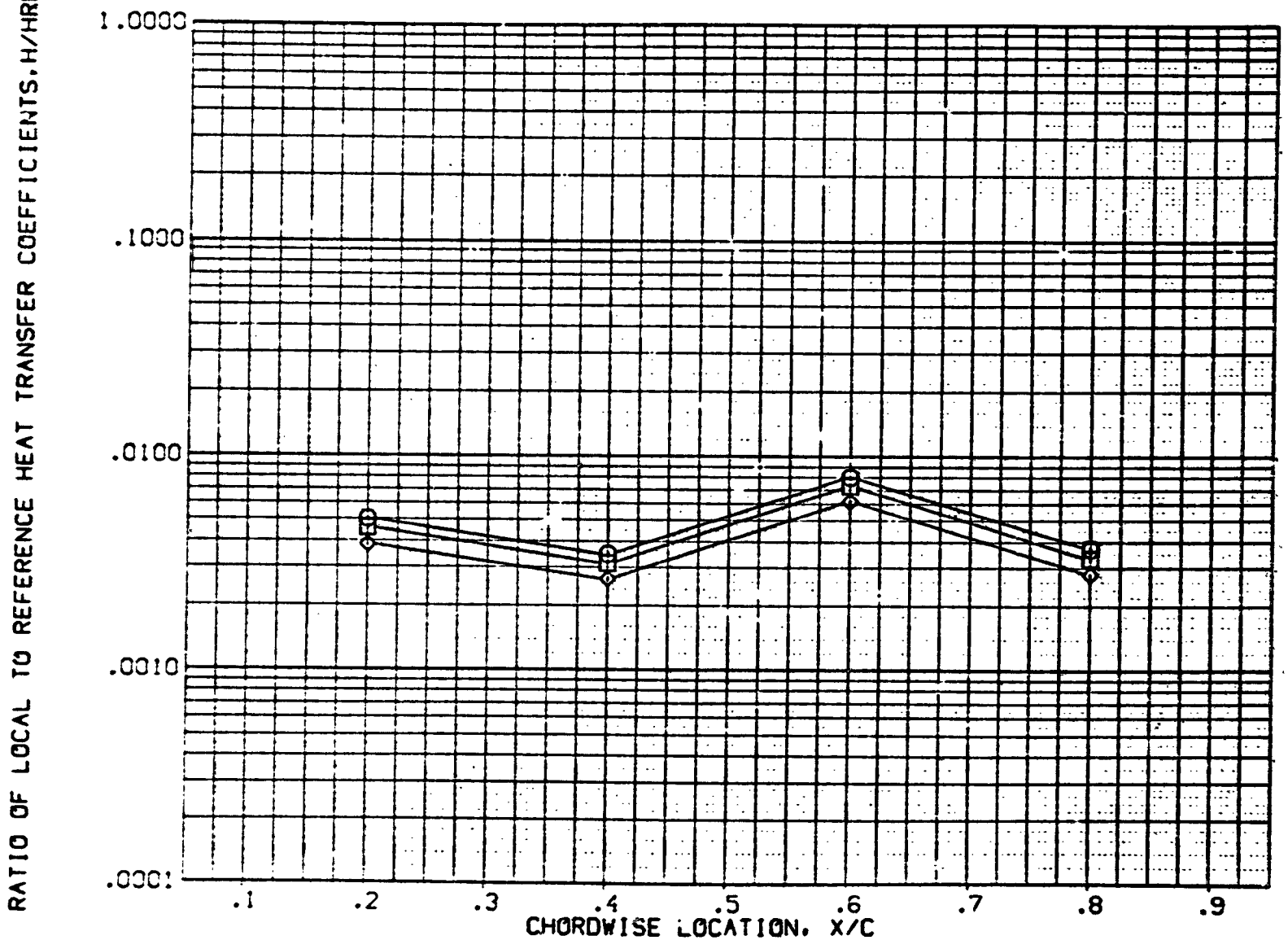

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG03)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

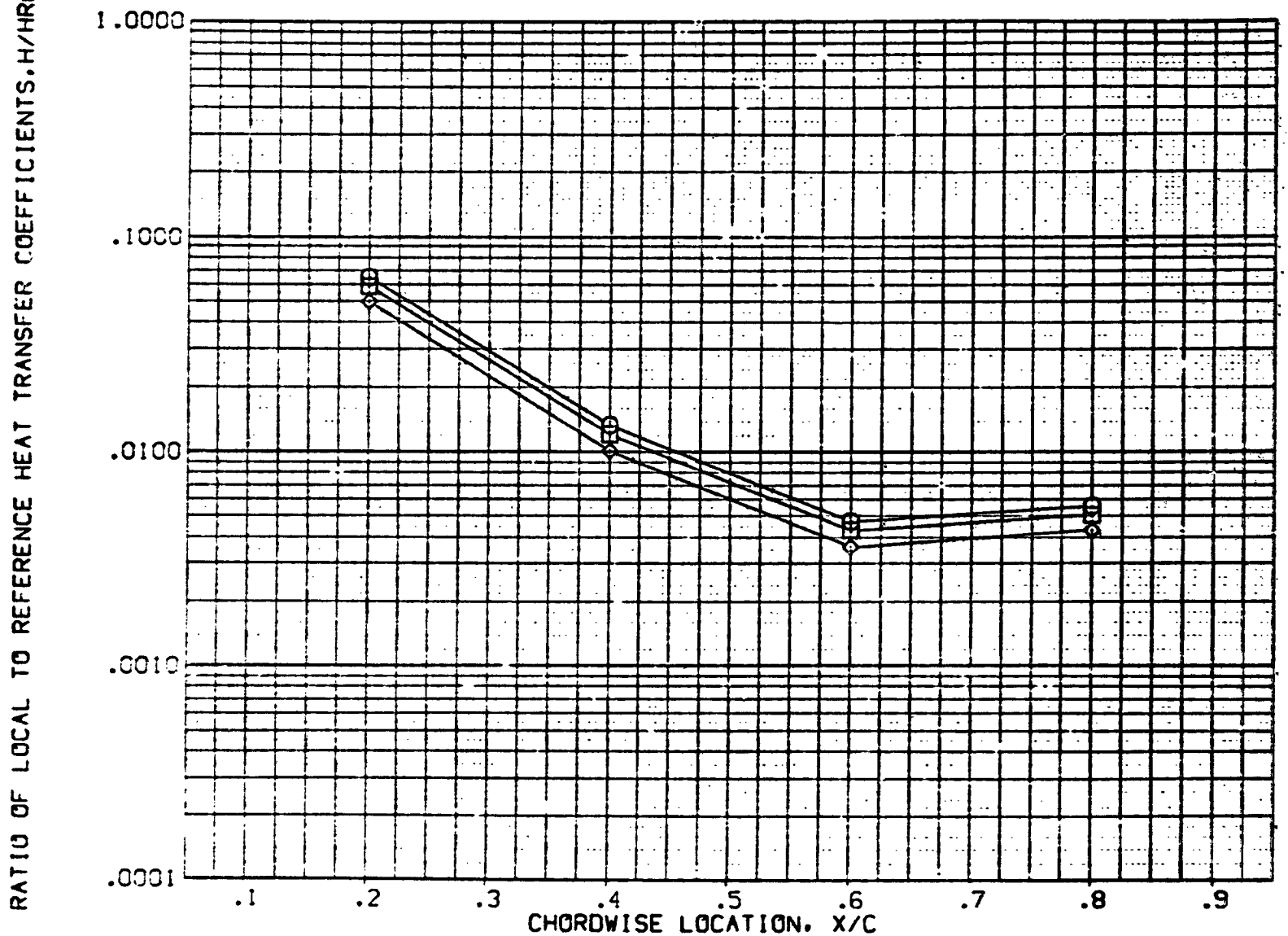

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

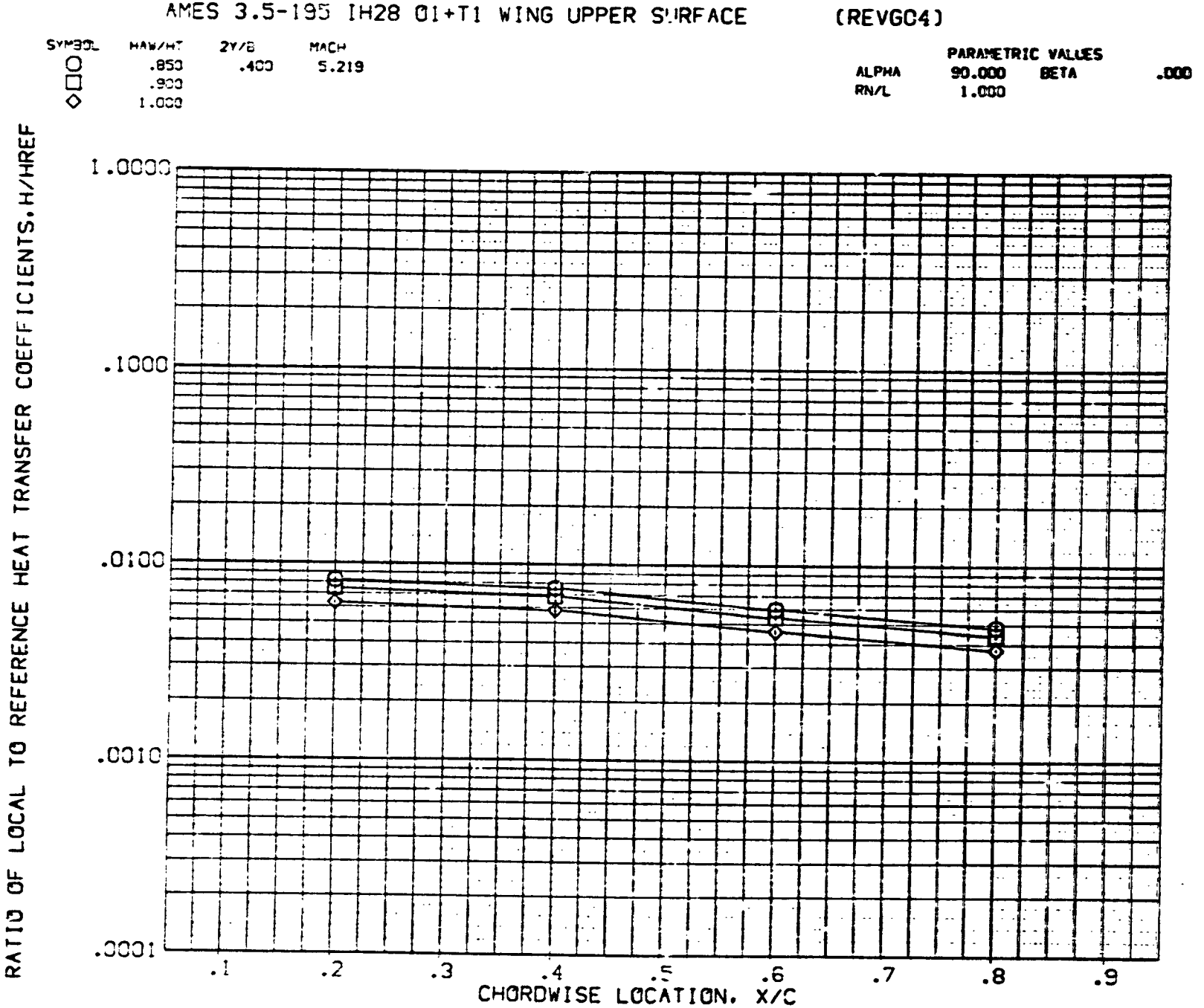

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG04)

SYMBOL	HAV/HT	2Y/B	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	*.000		

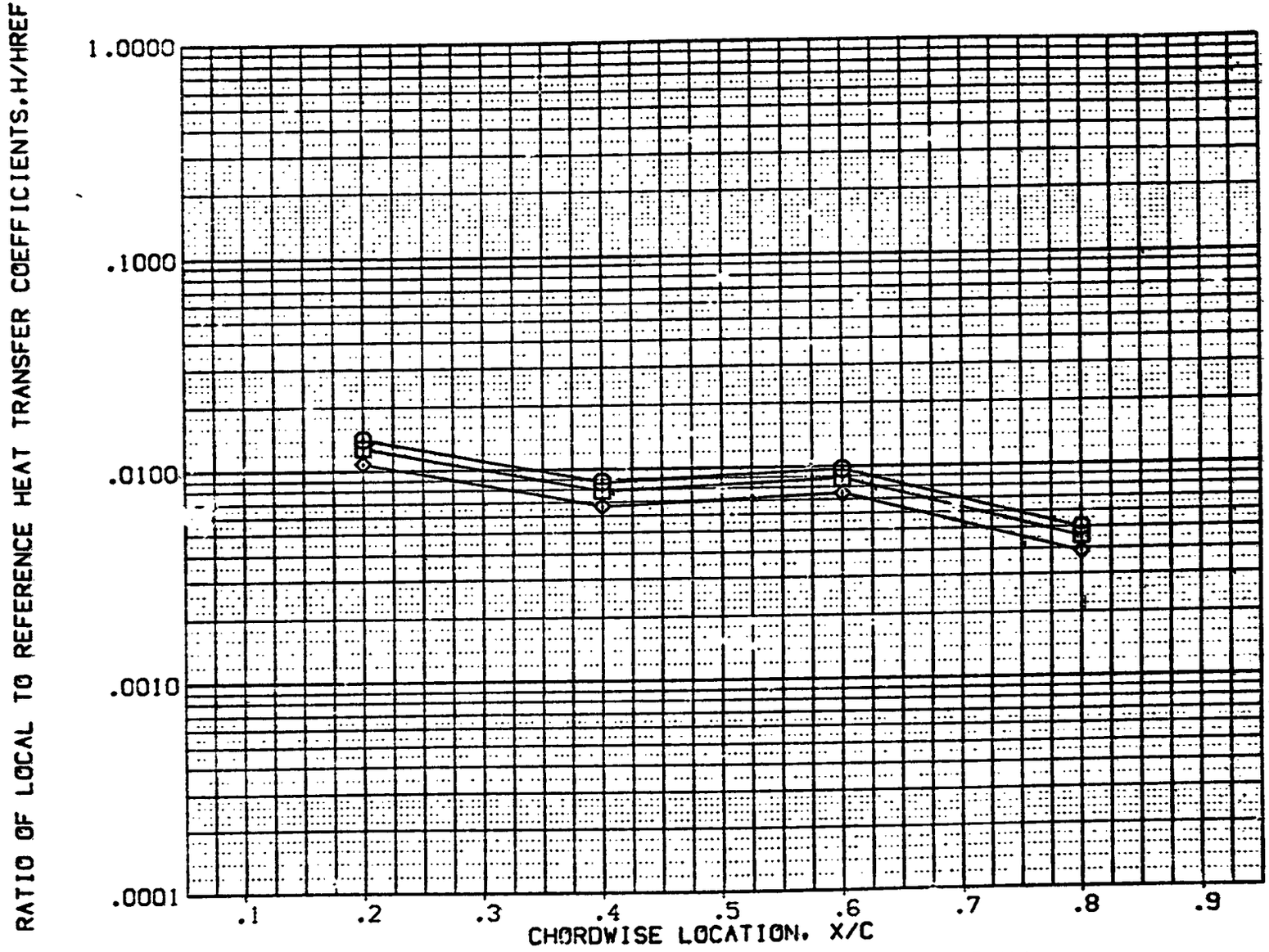

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

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ORIGINAL PAGE IS POOR

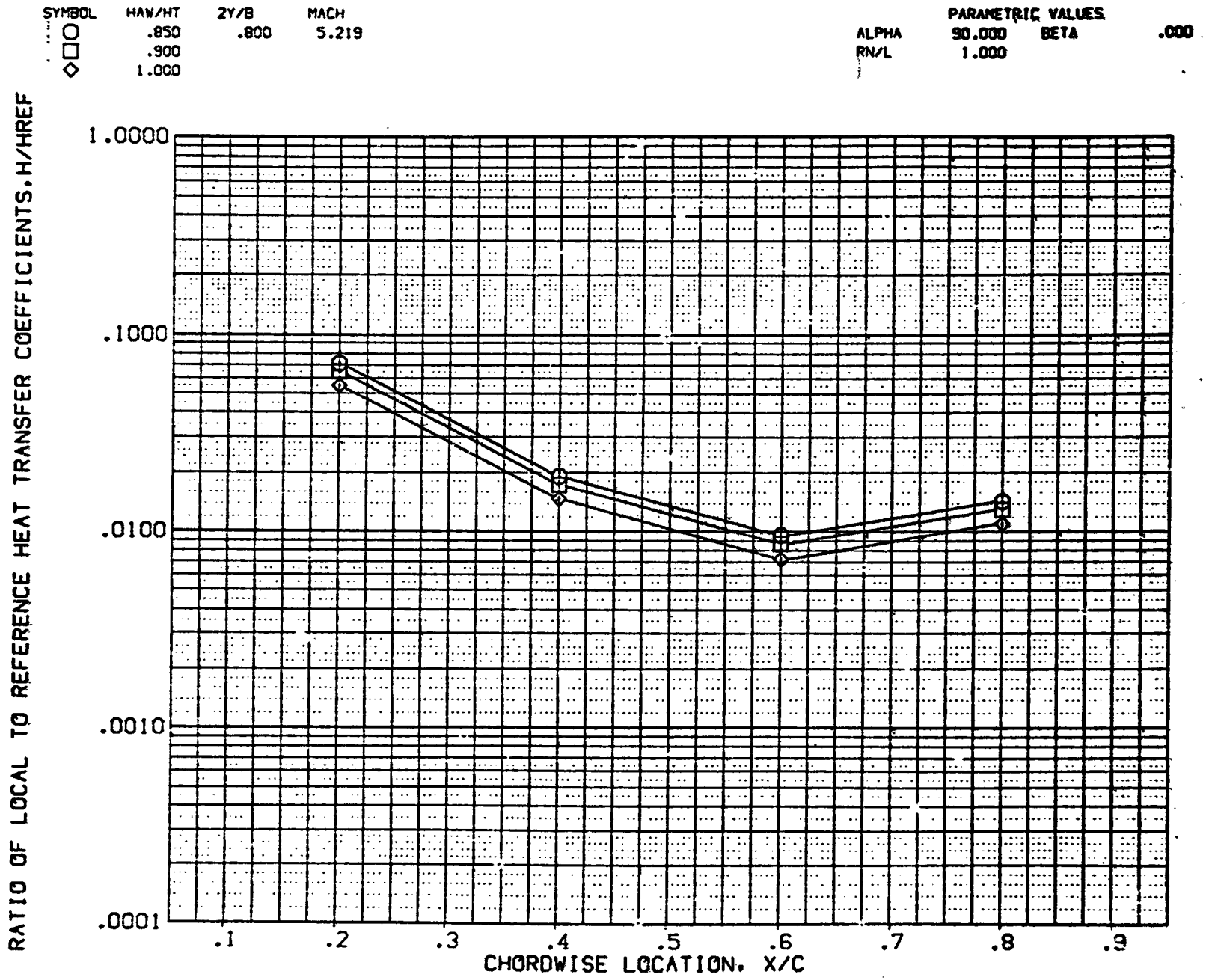

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

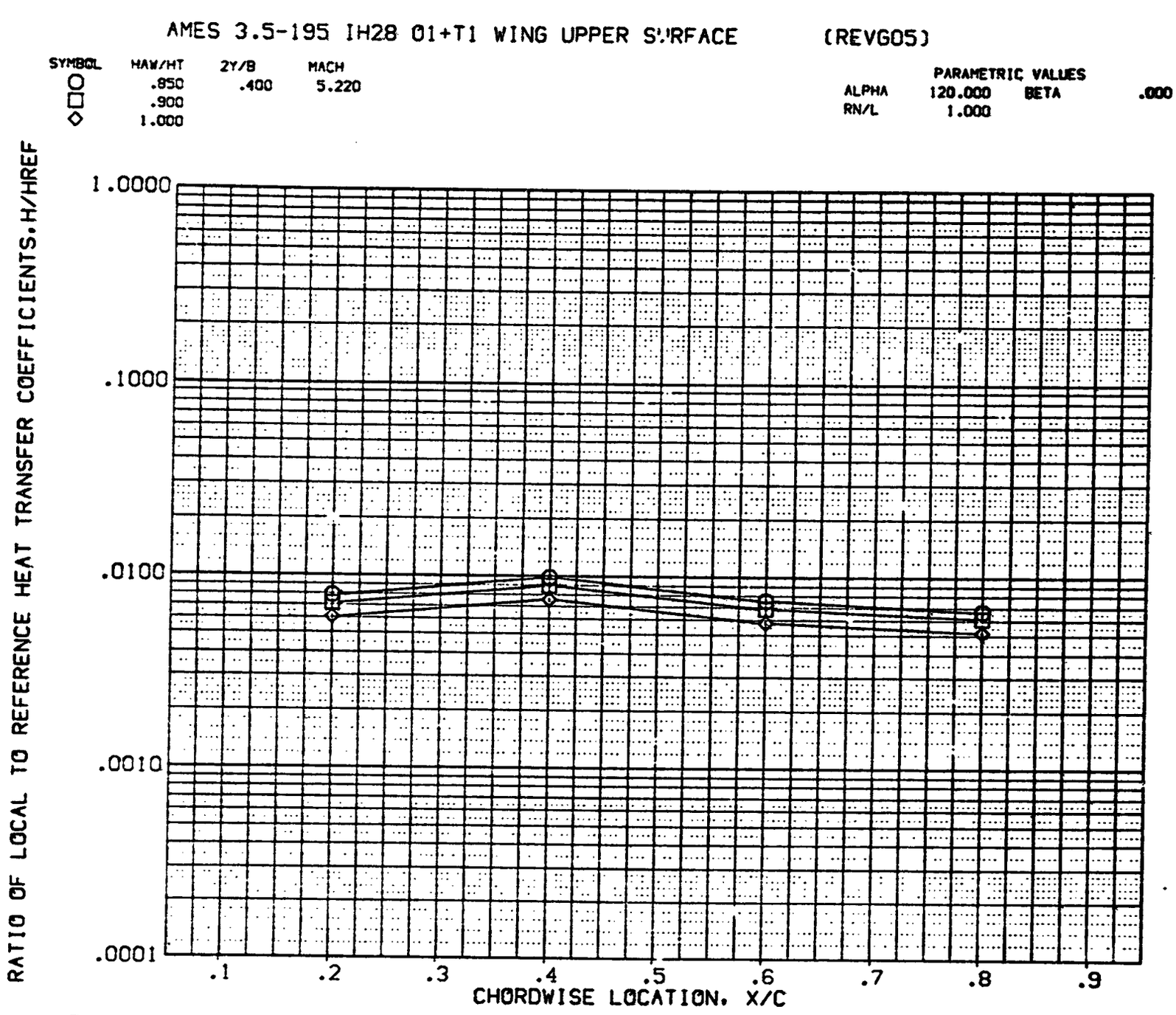

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG05)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

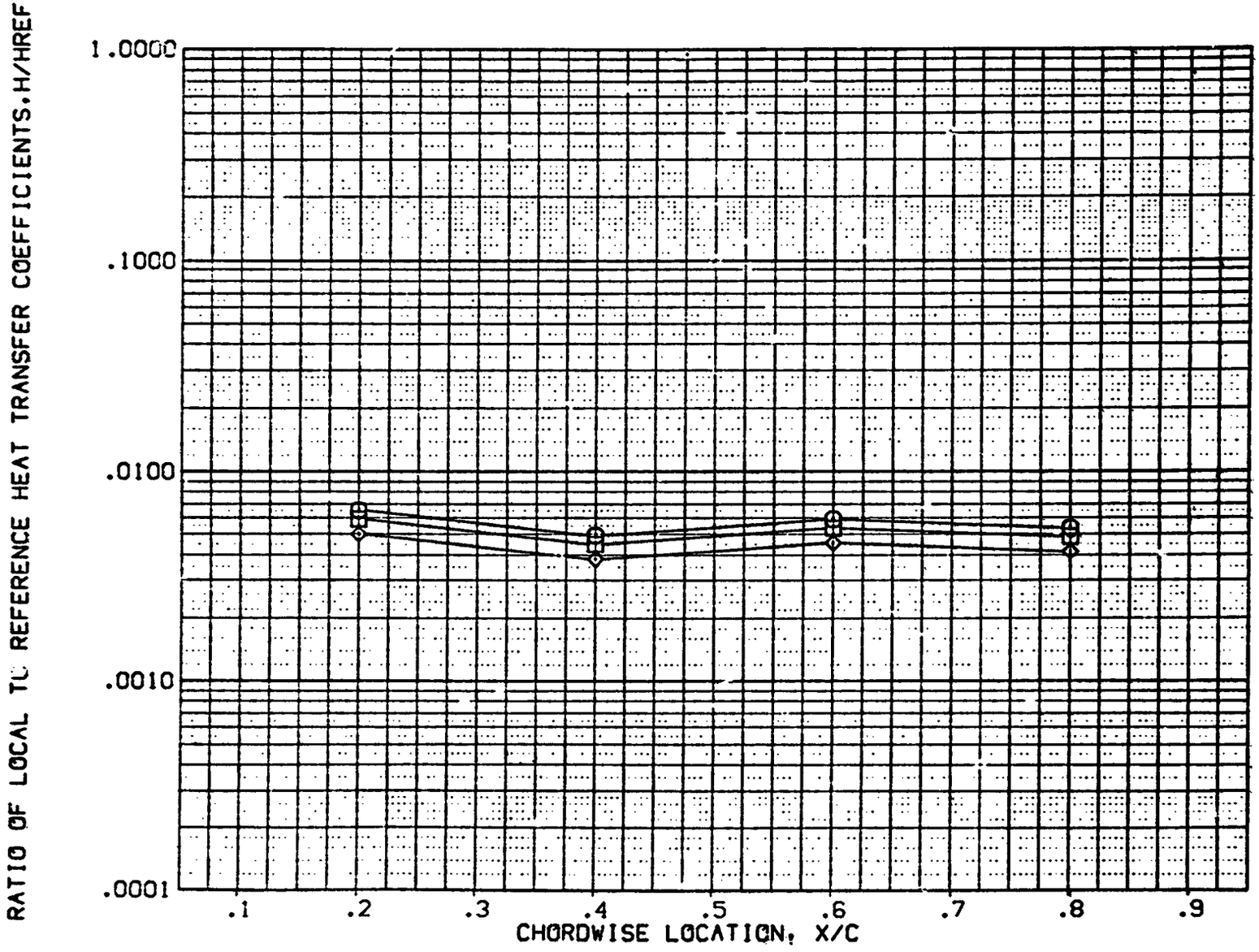

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG05)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

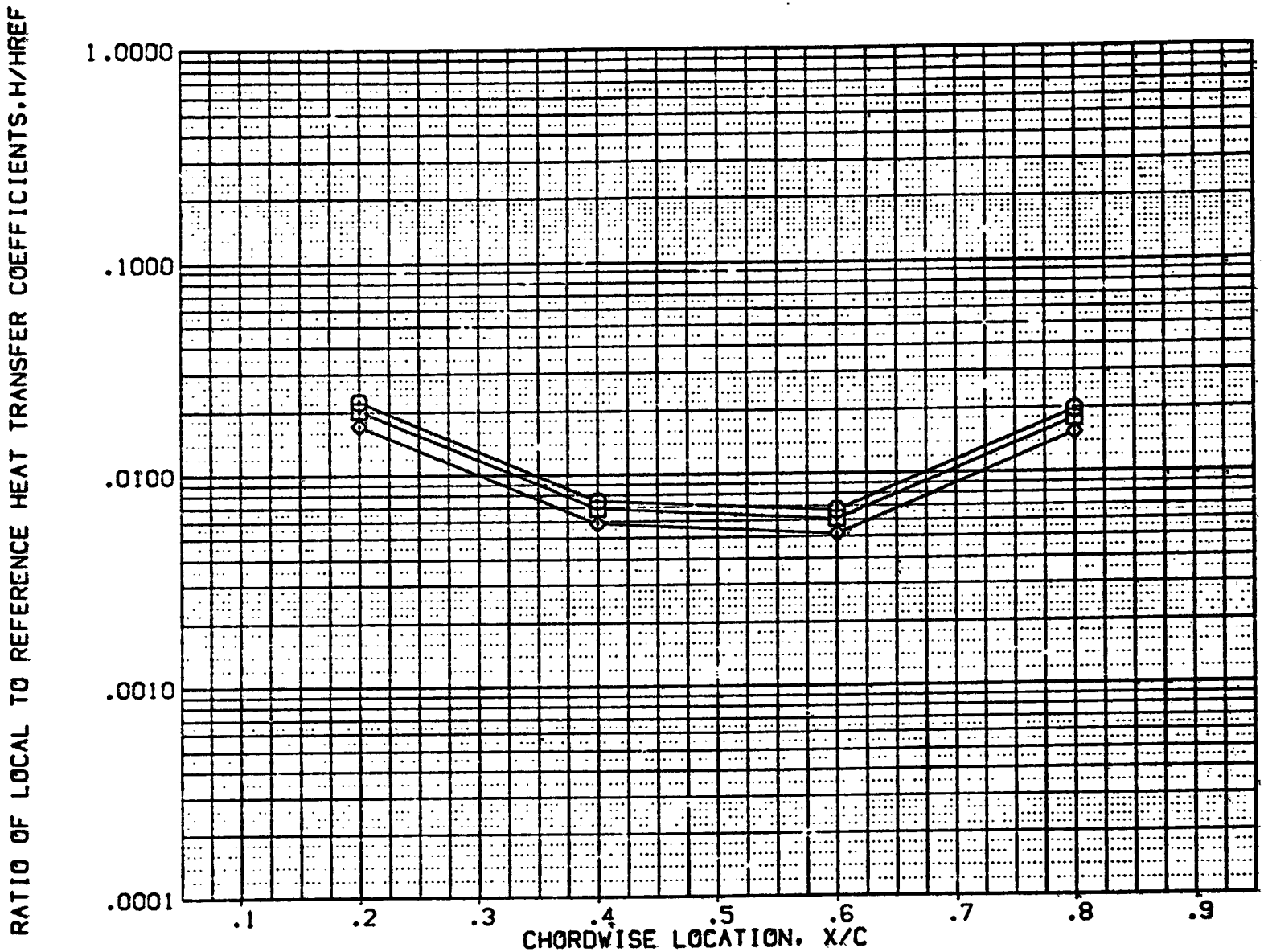

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

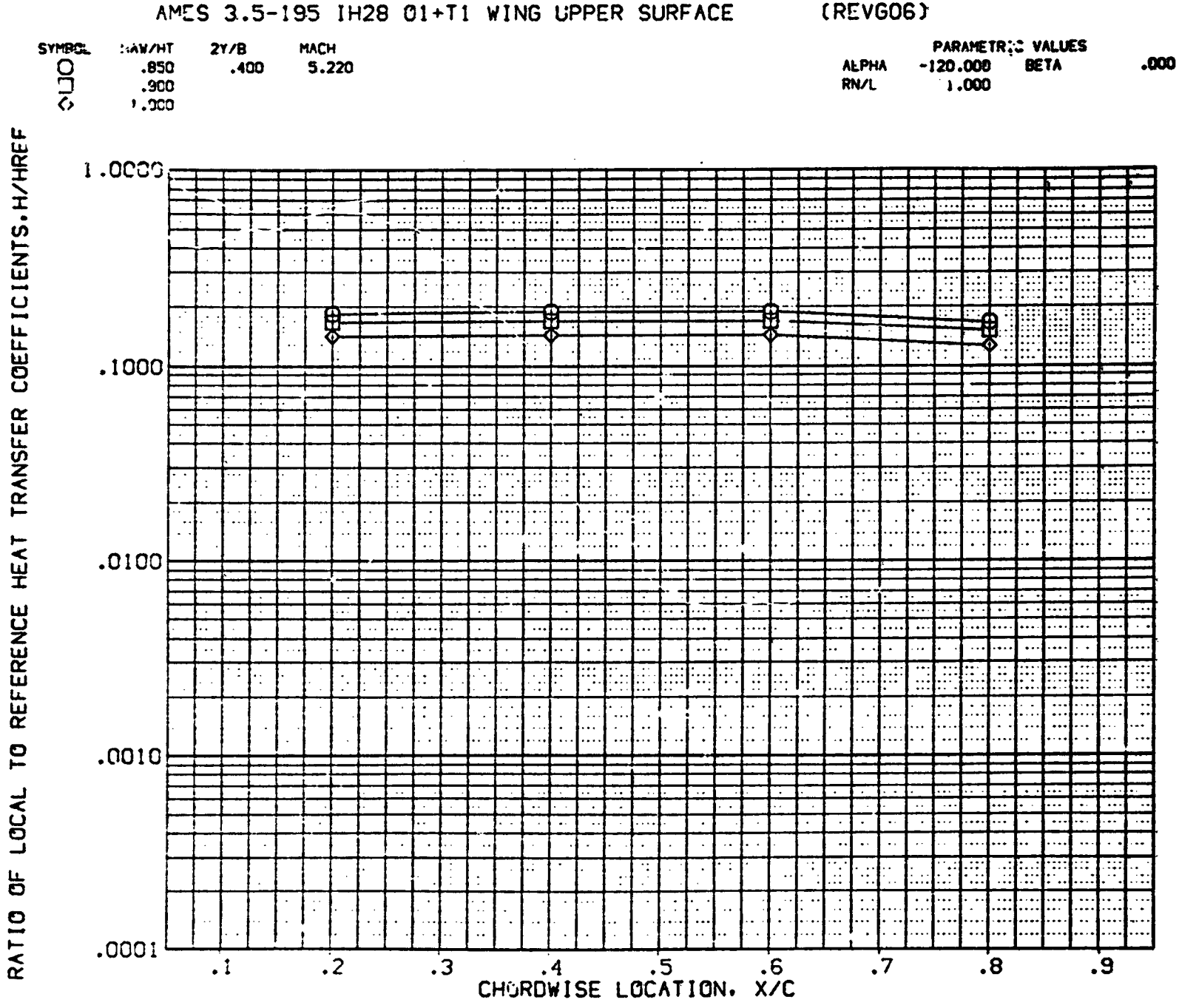

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG06)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

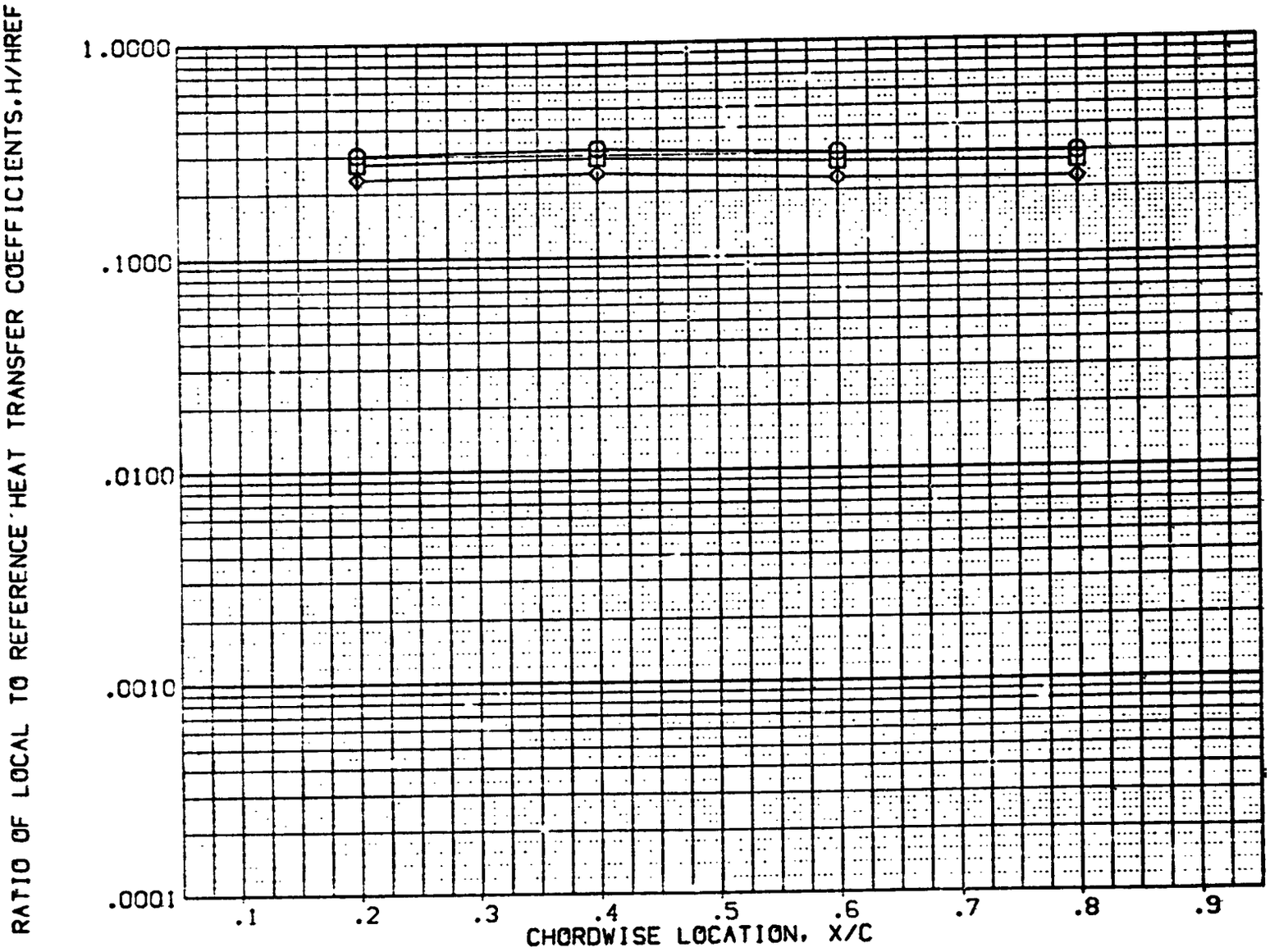

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

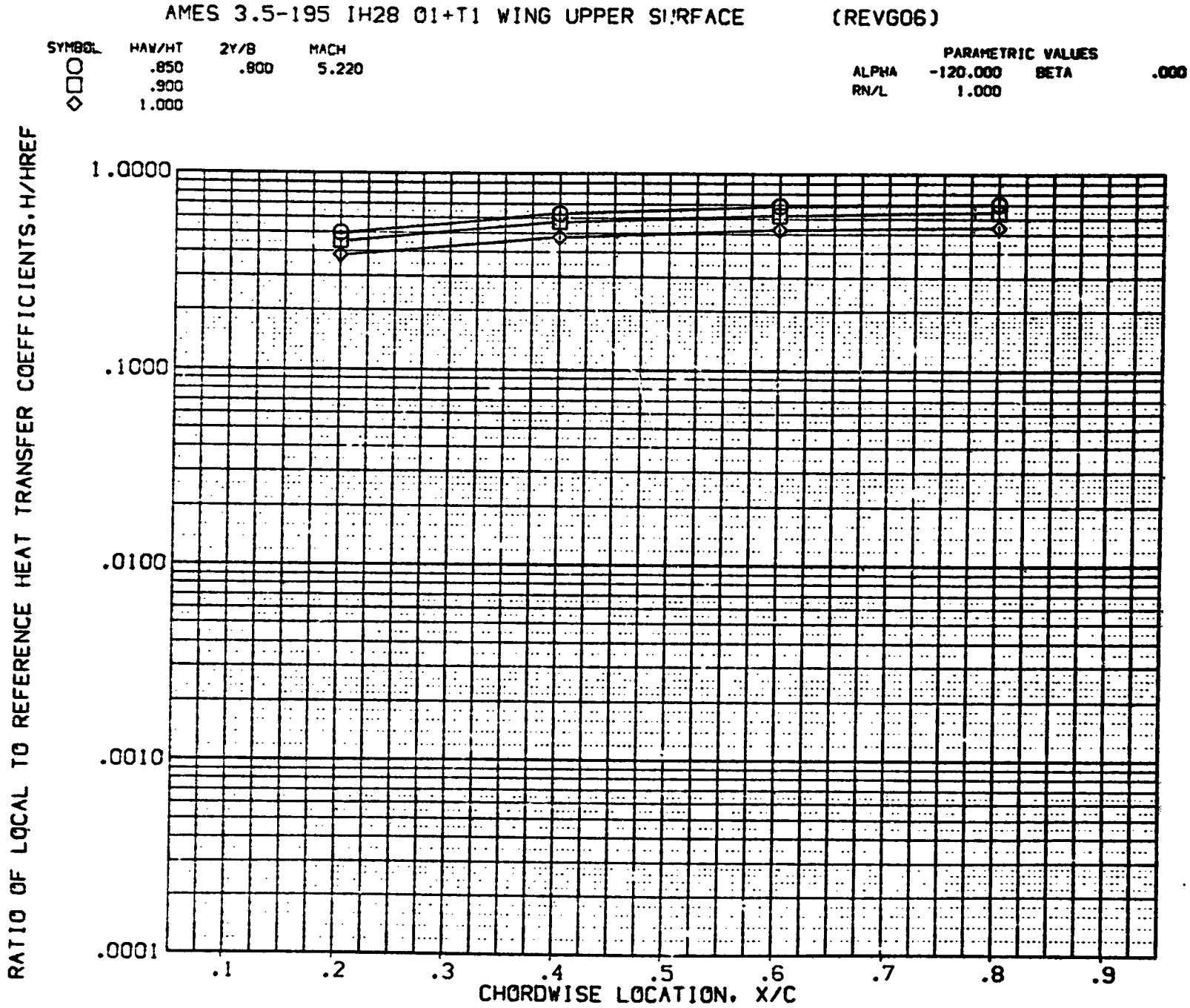

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

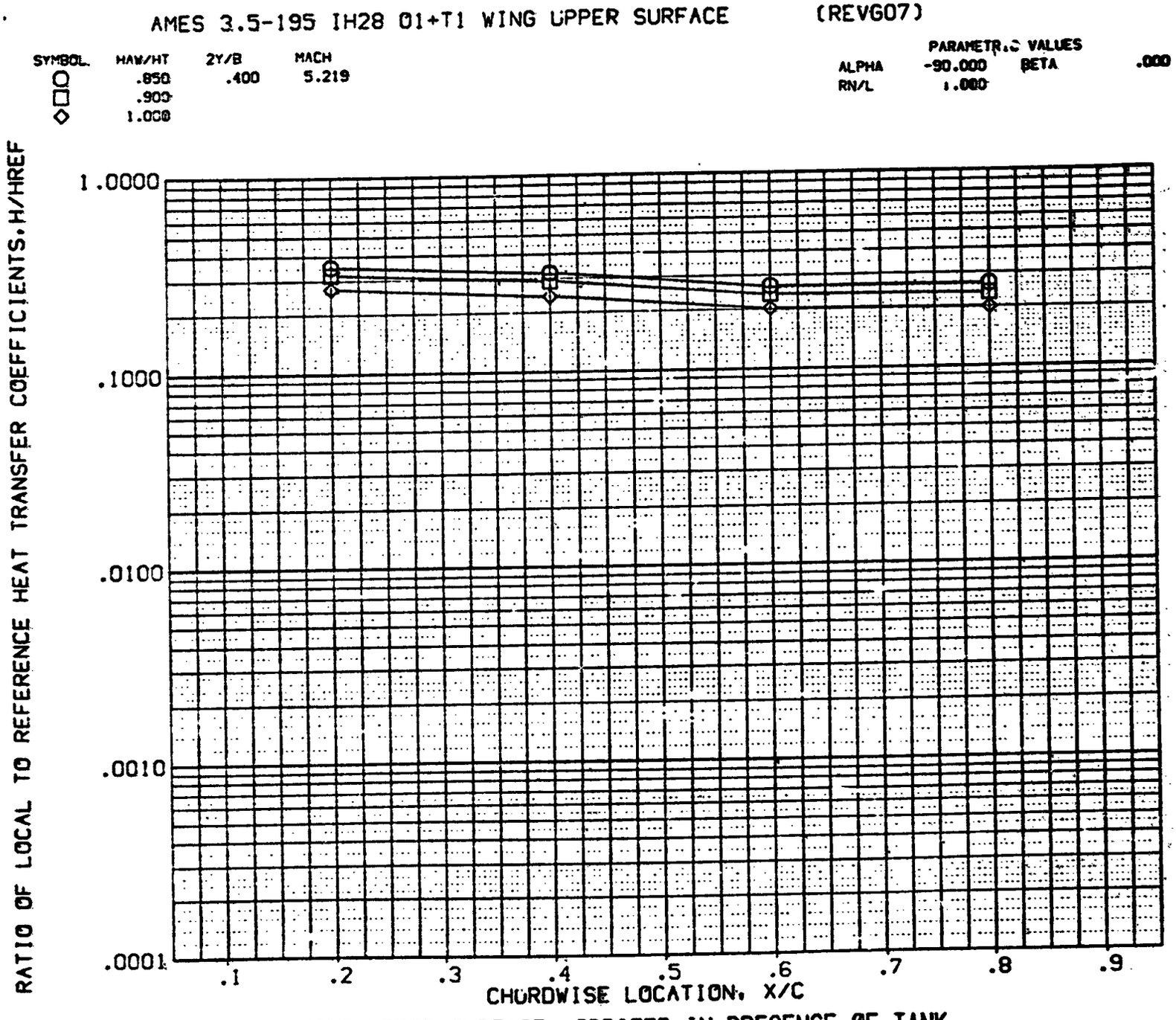

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG07)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA 0.000 BETA .000

RN/L 0

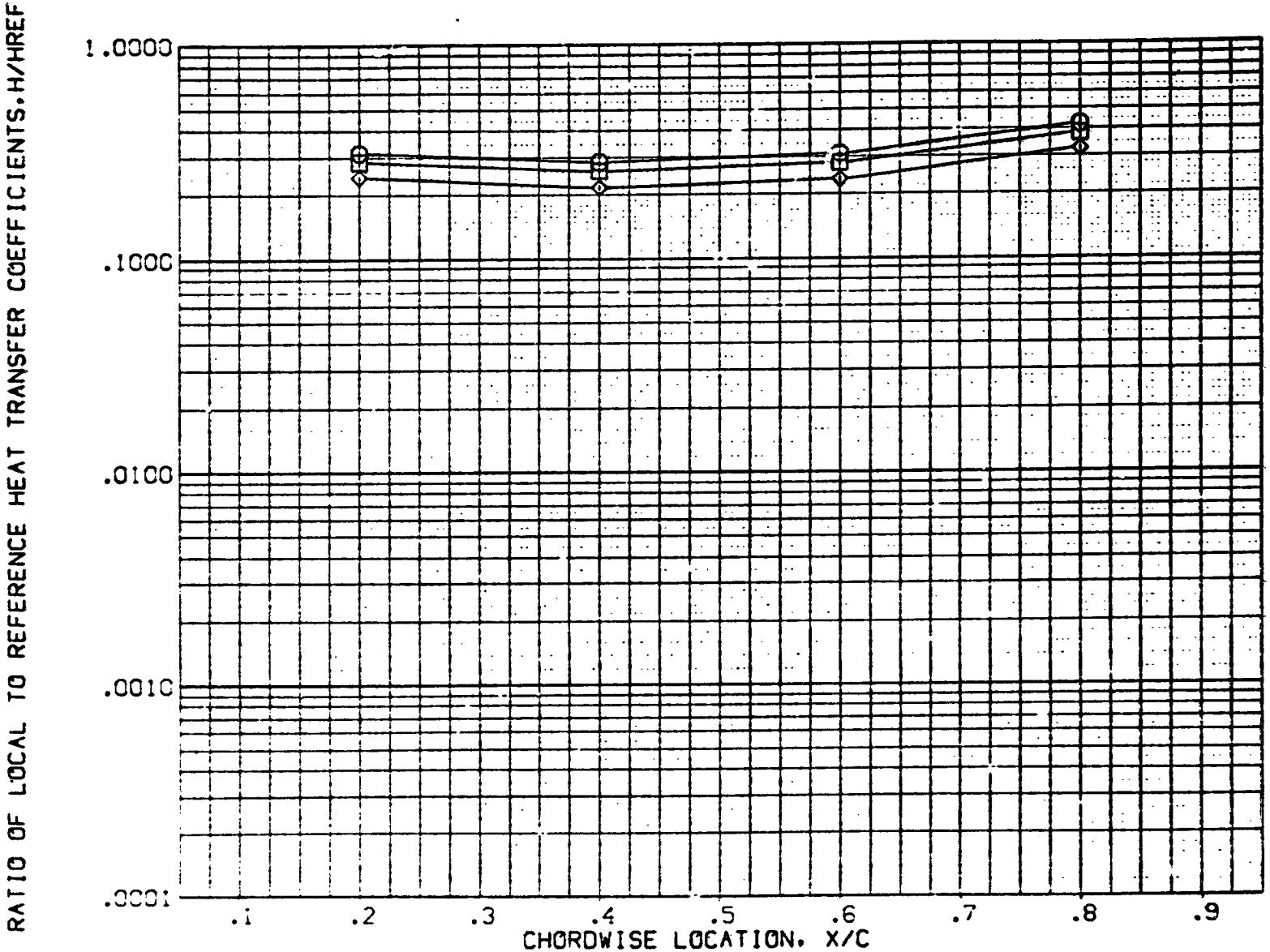

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

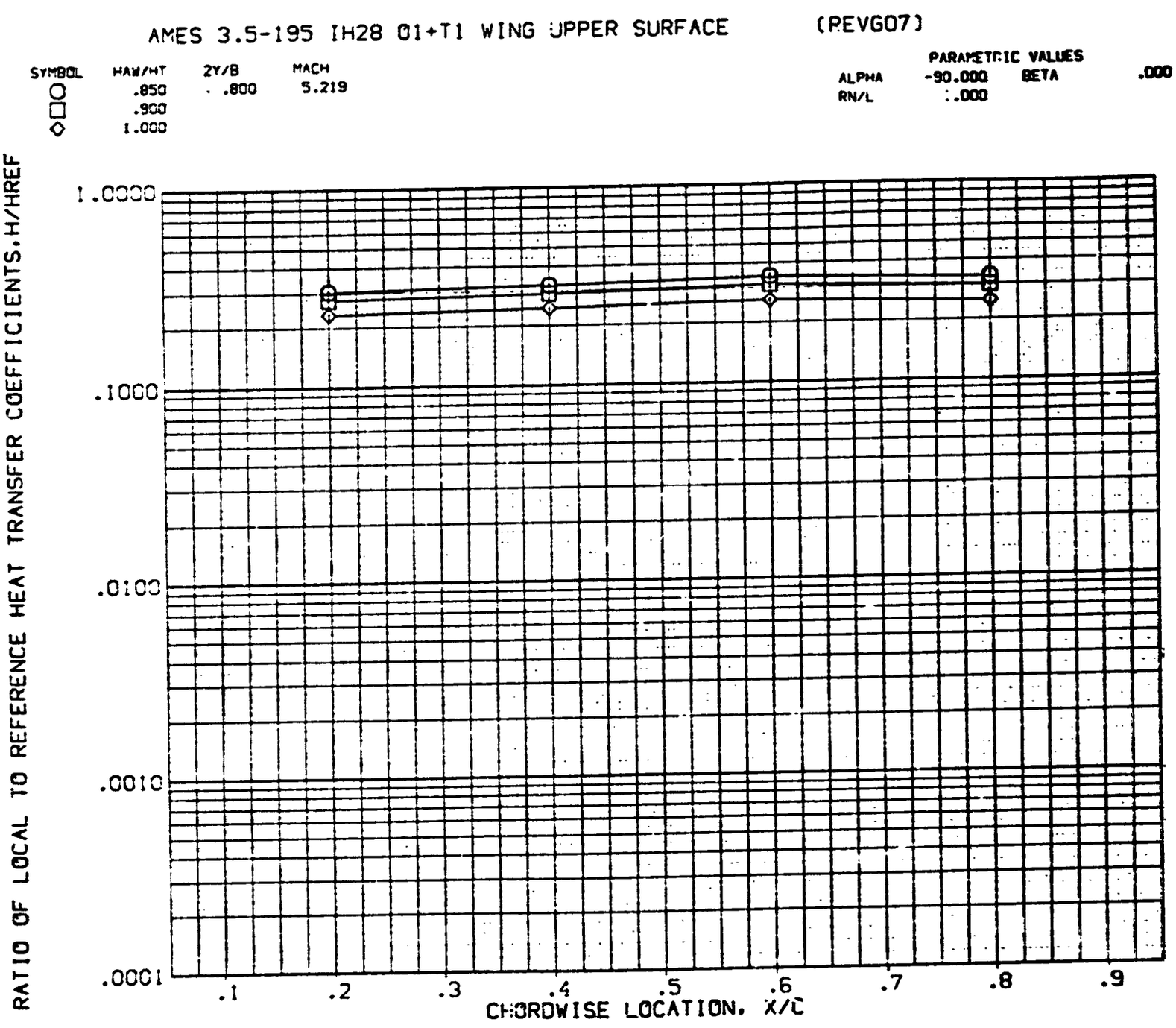

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

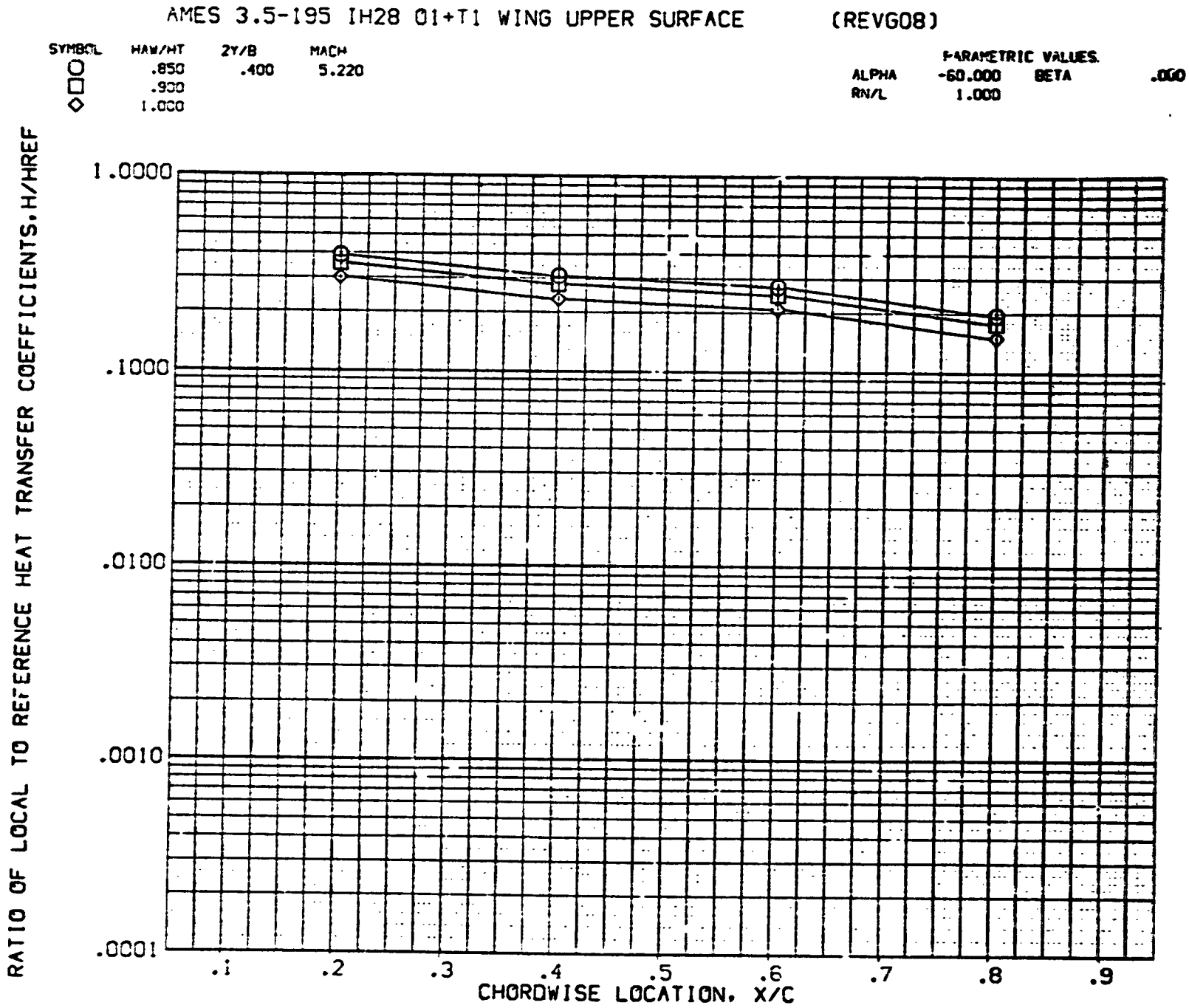

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

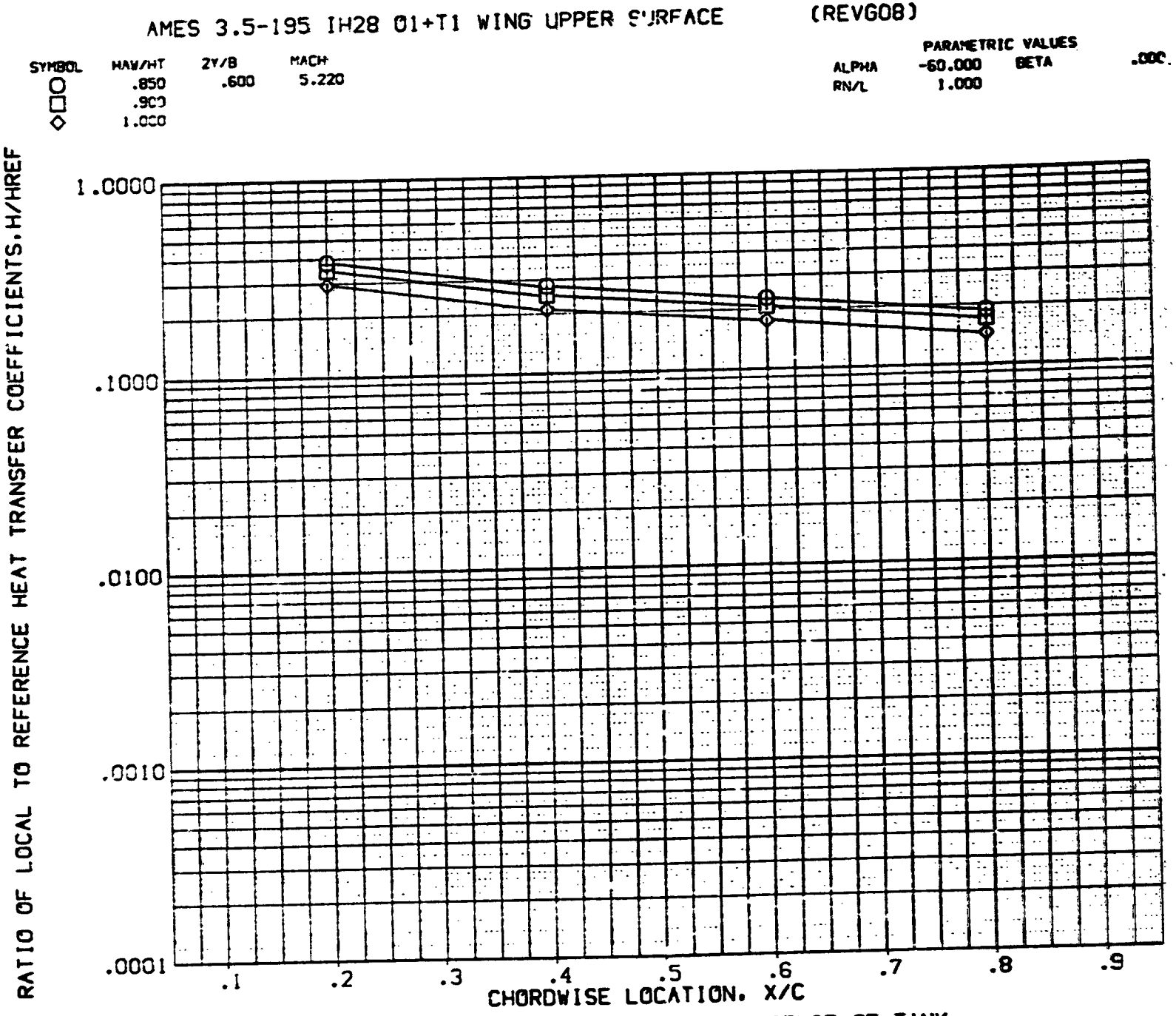

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG08)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETPIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	*.000		

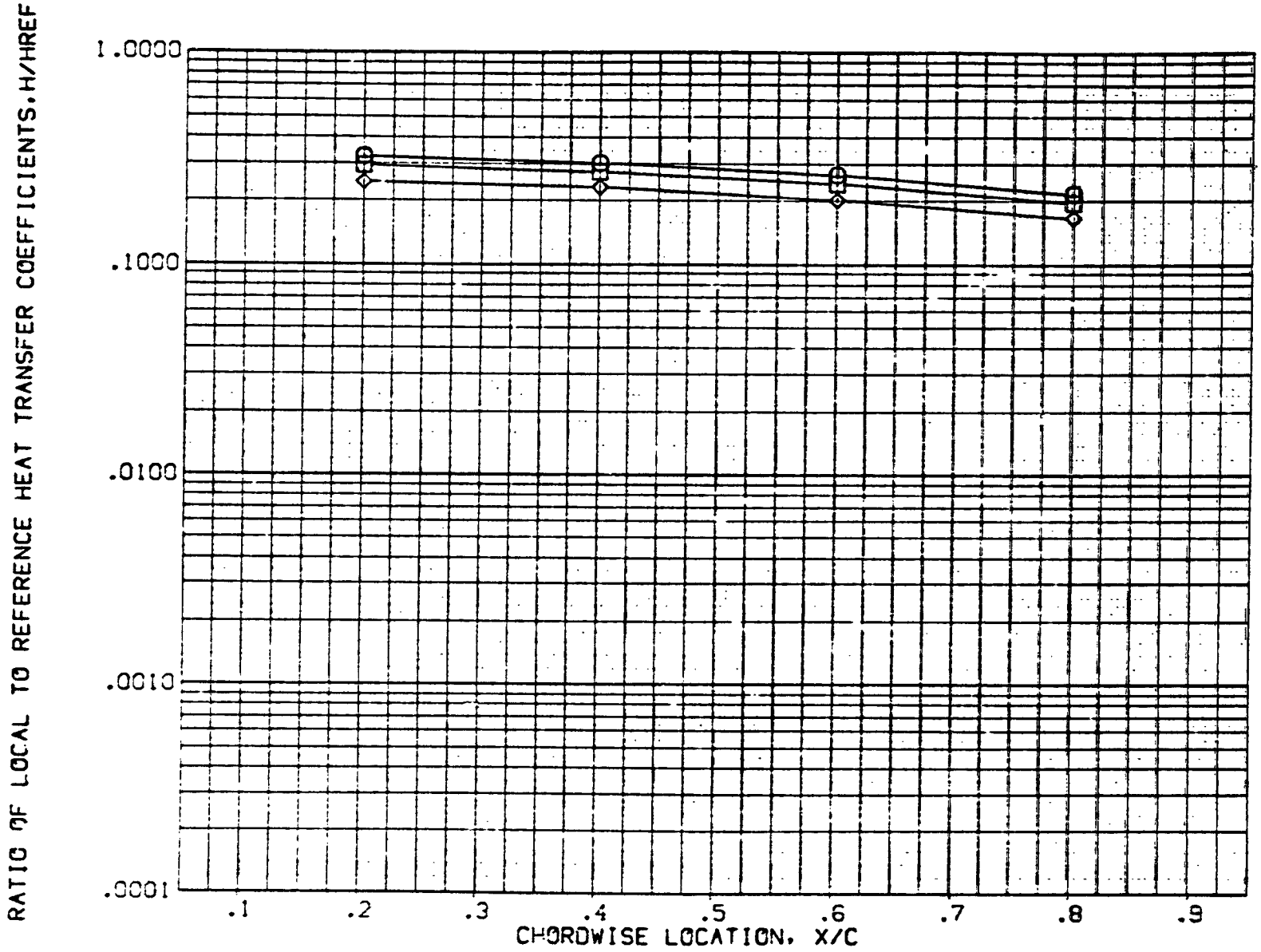

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

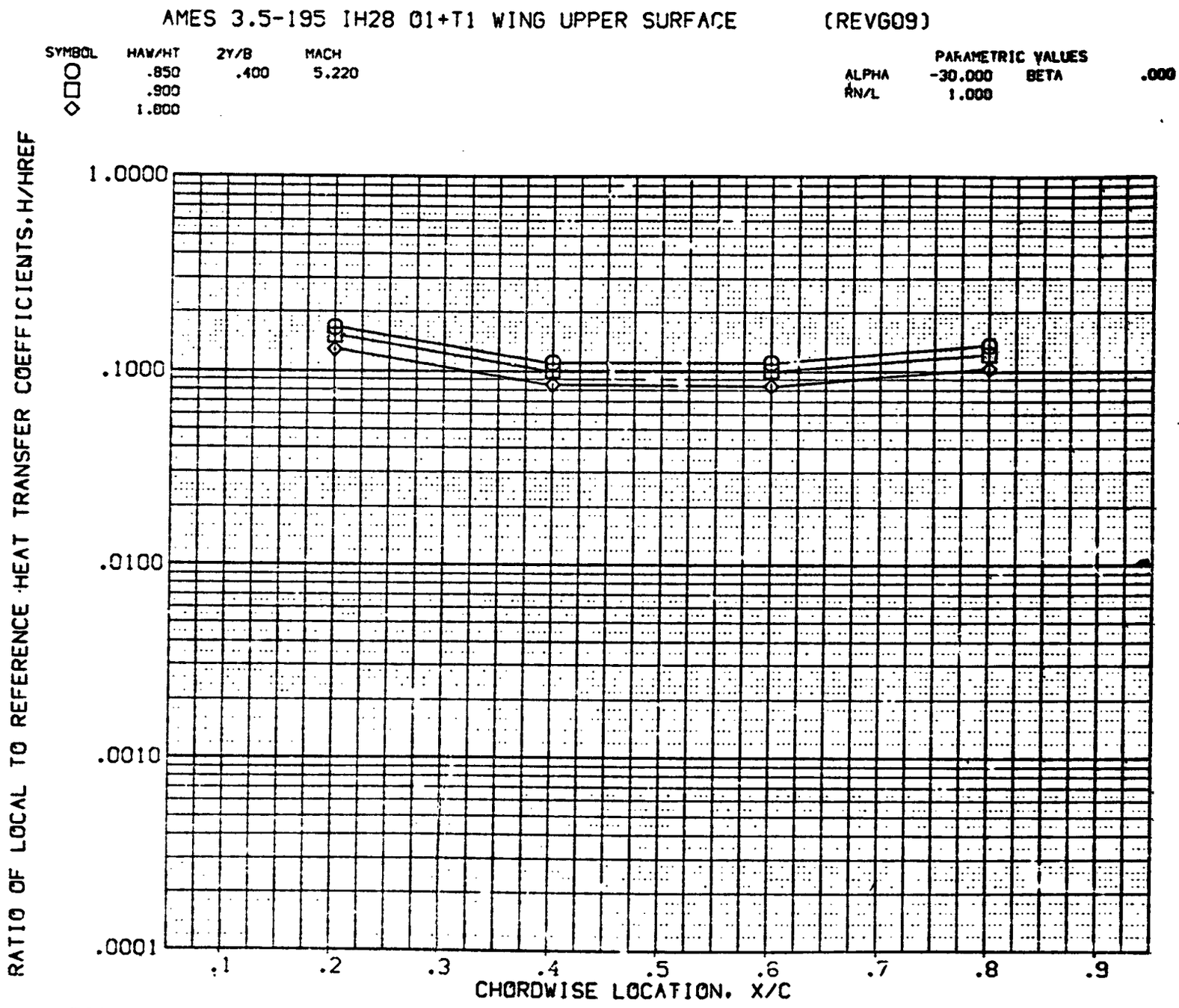

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

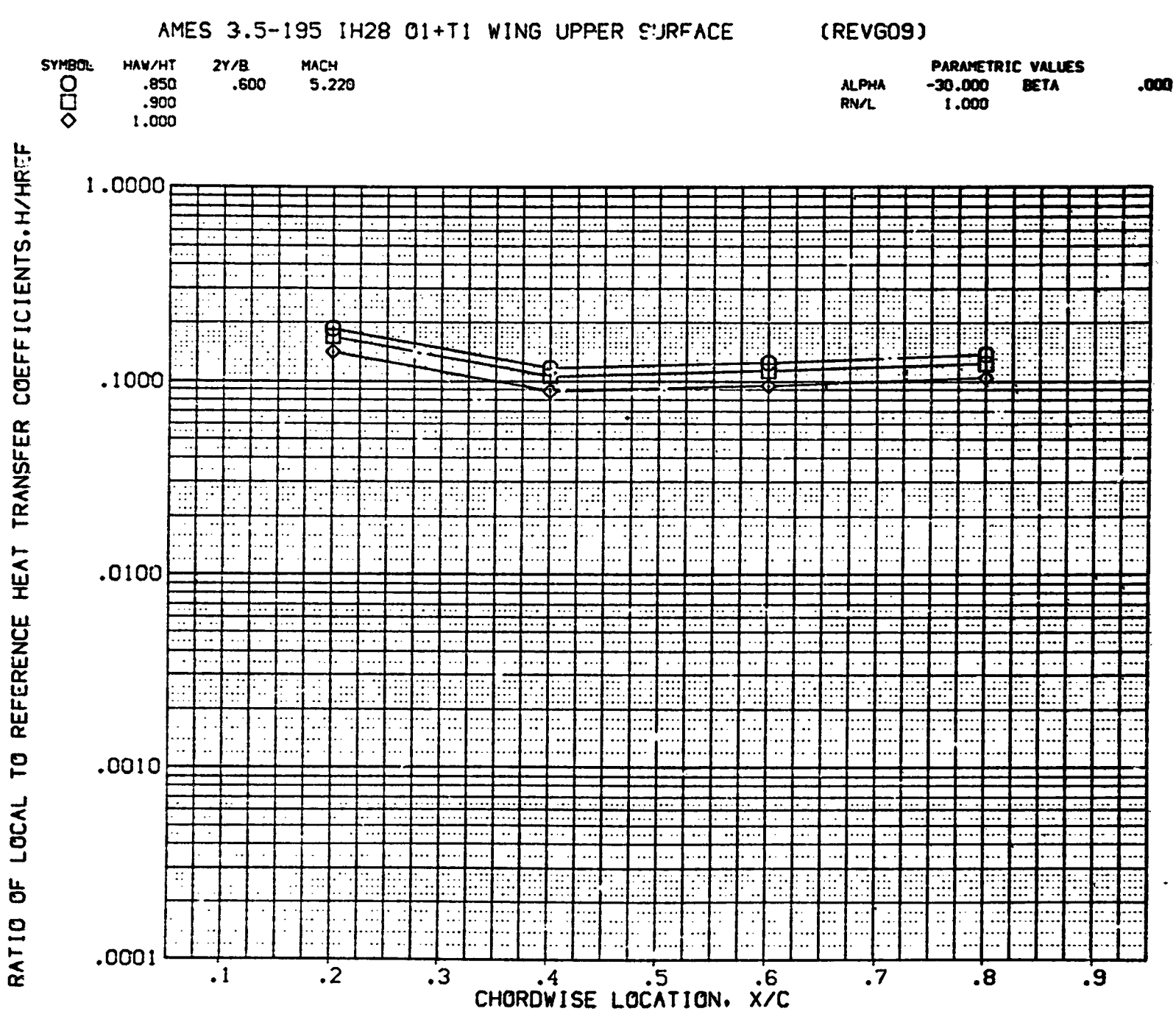

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

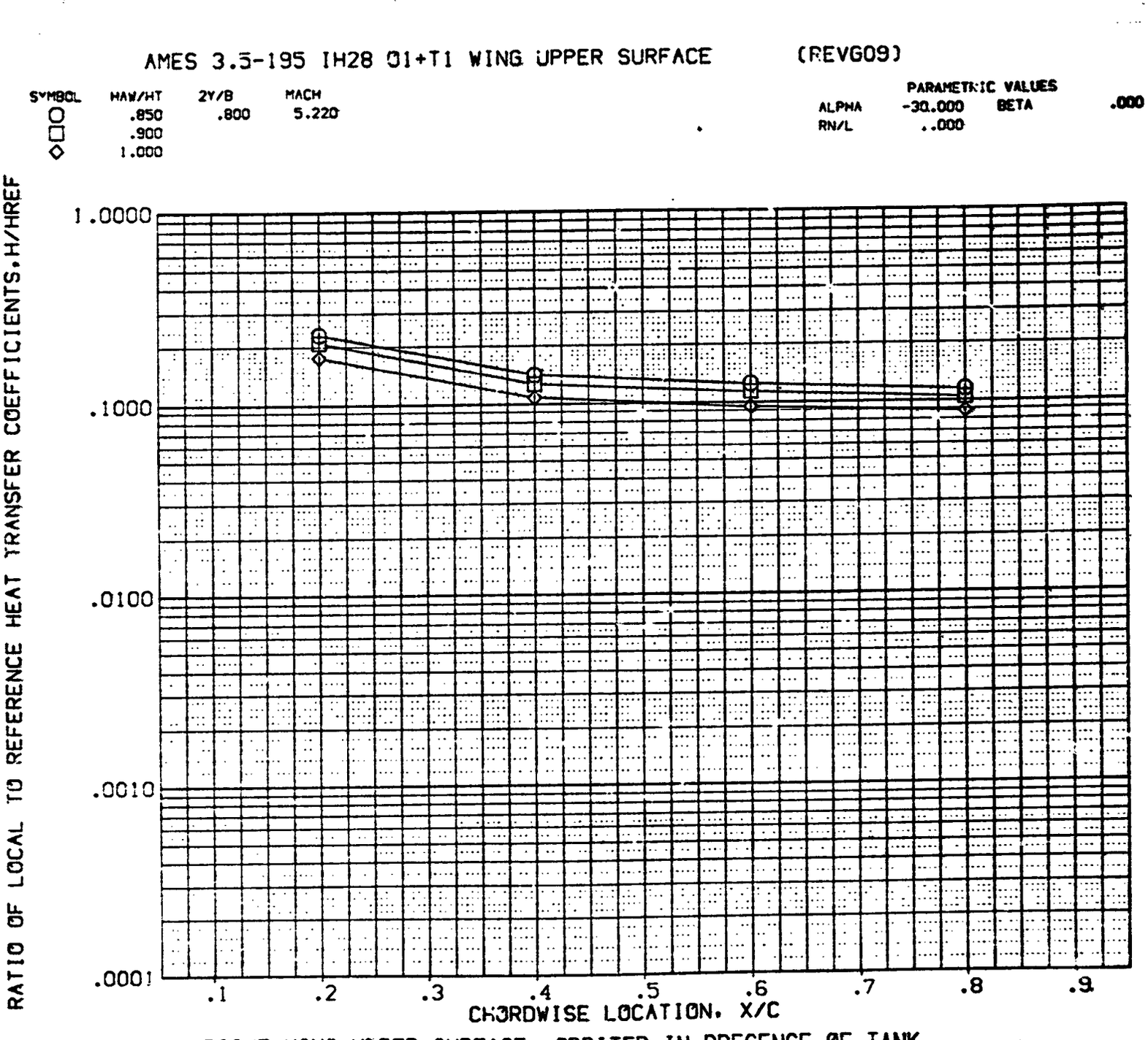

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

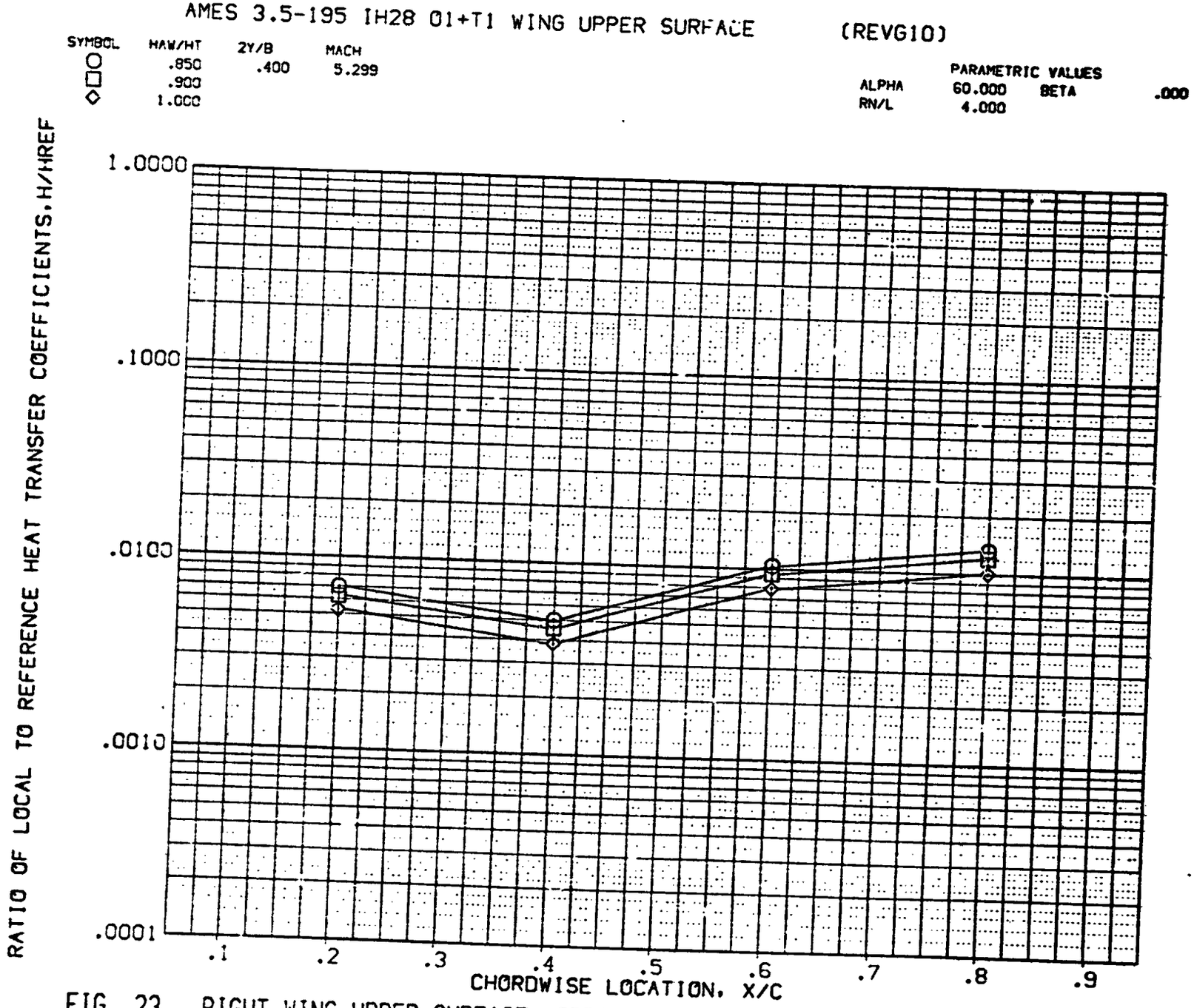

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

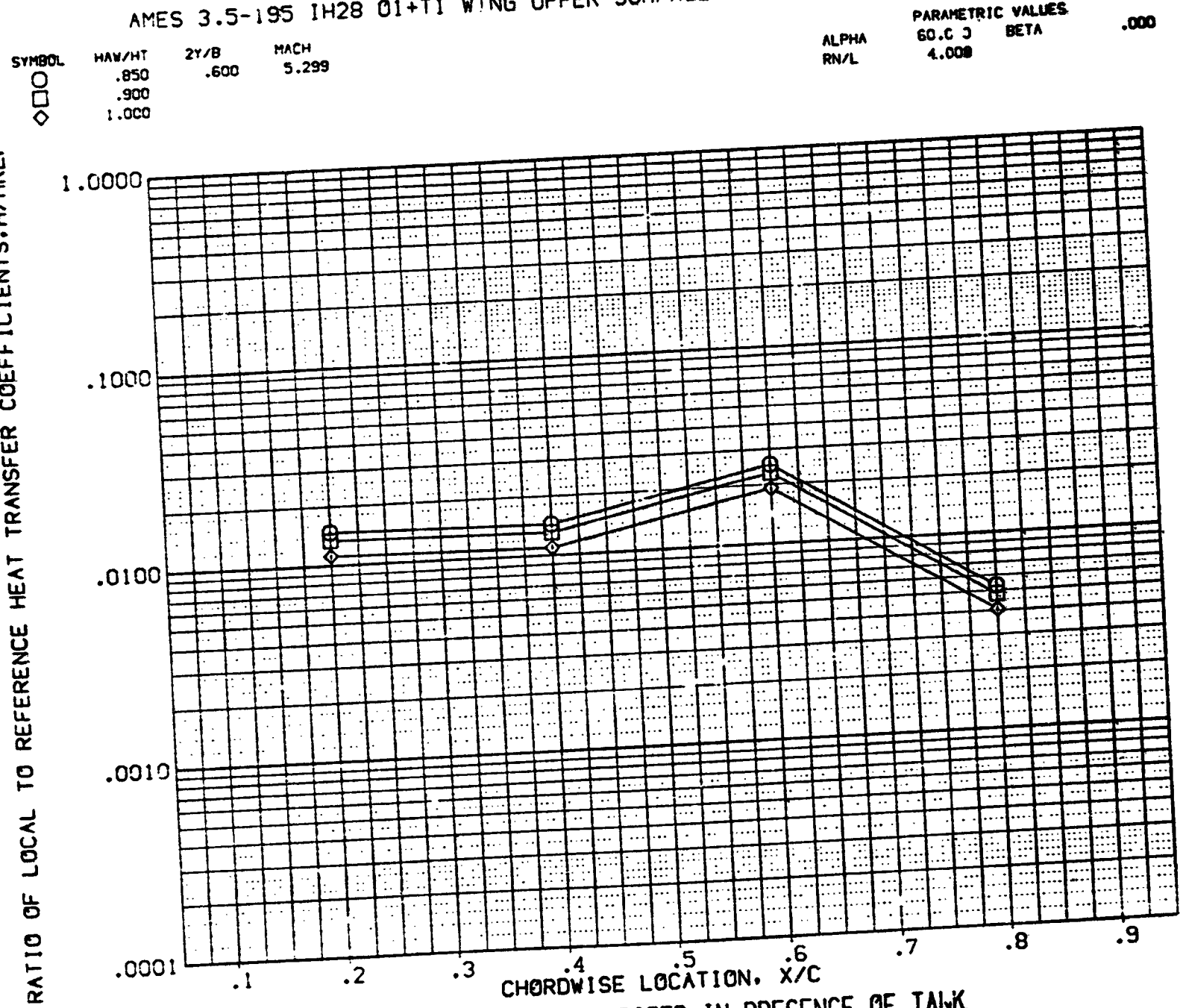

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG10)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.299
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	4,000		

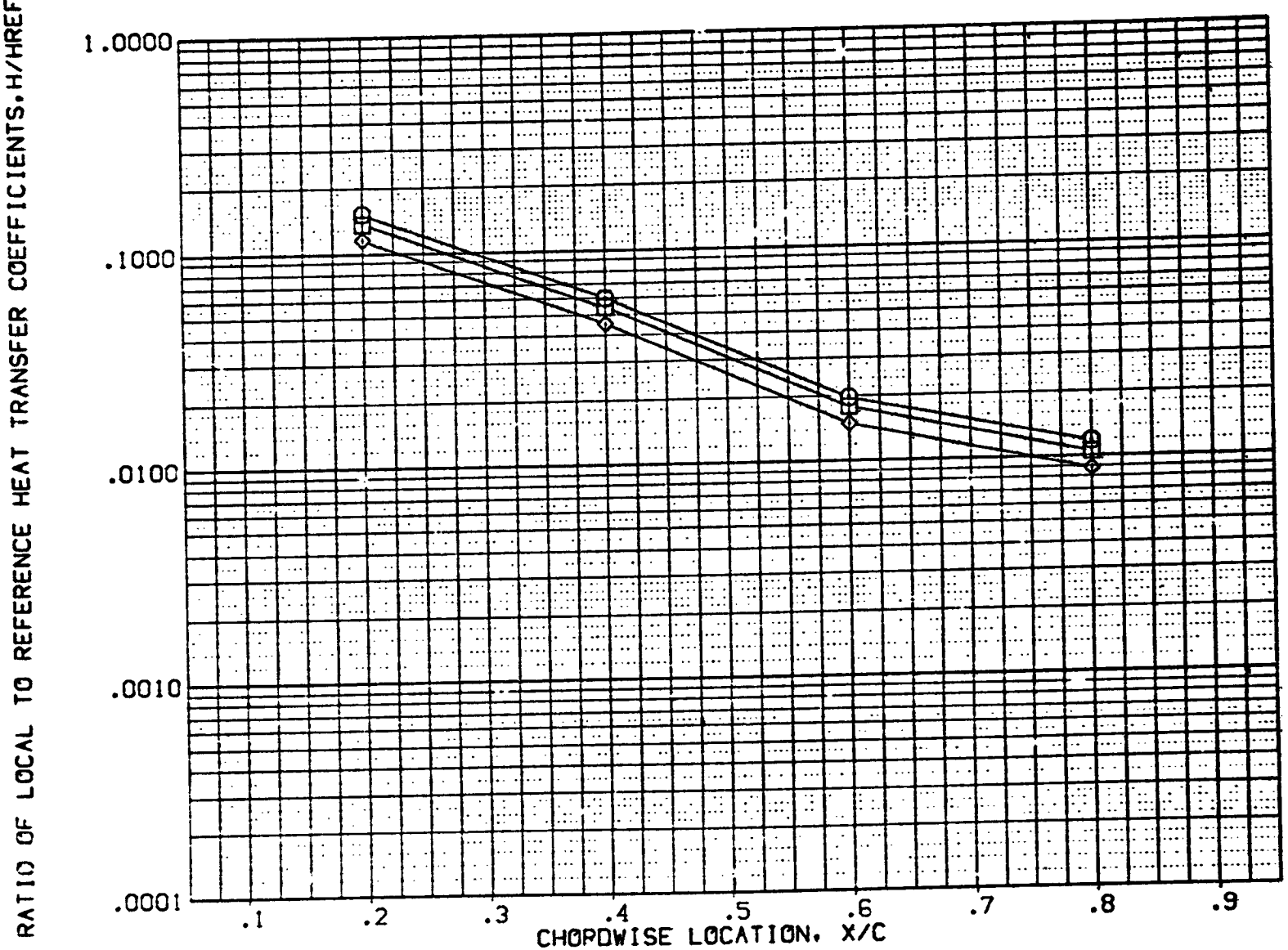

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG11)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.400	5.300
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	4.000		

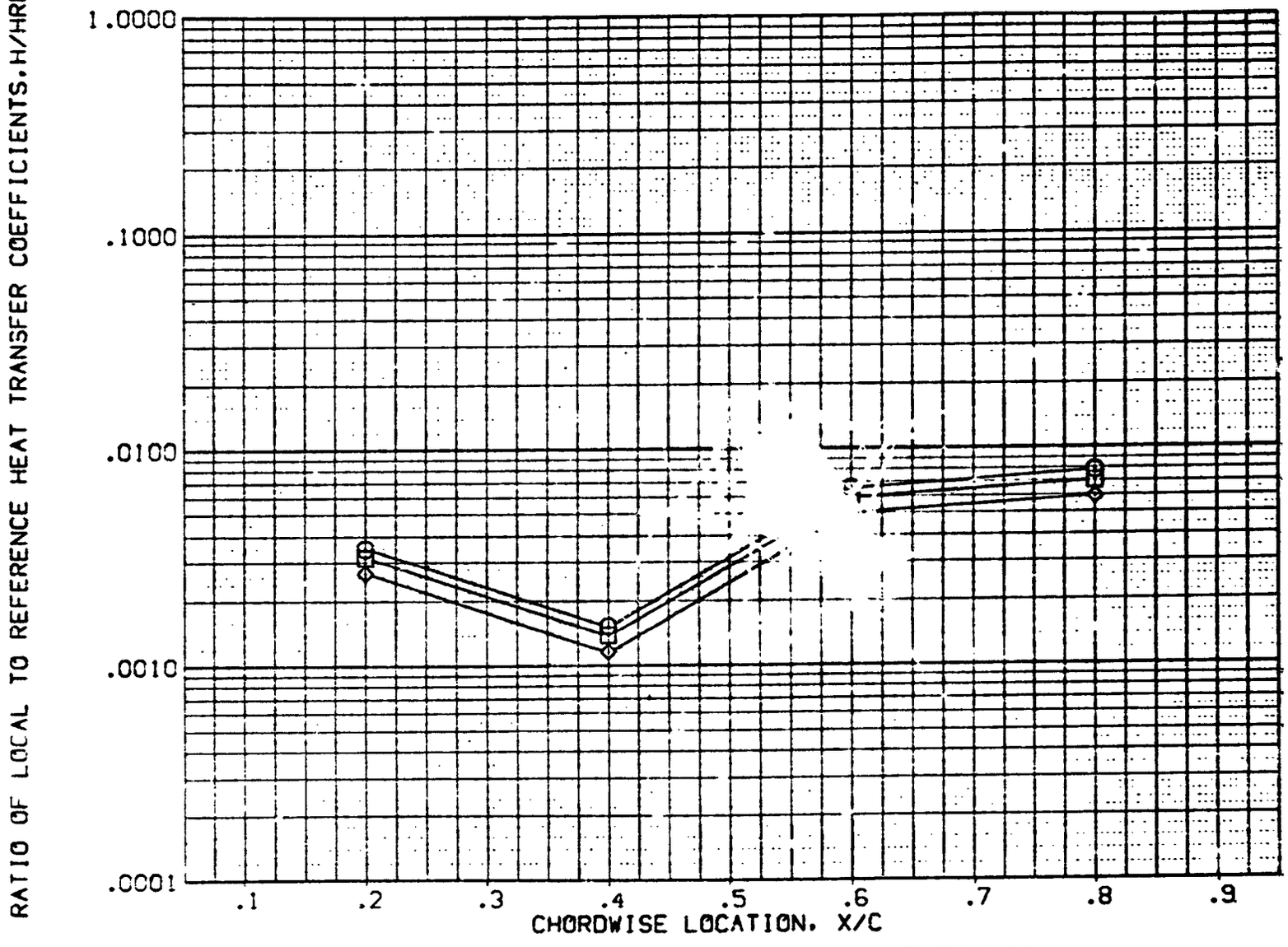

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

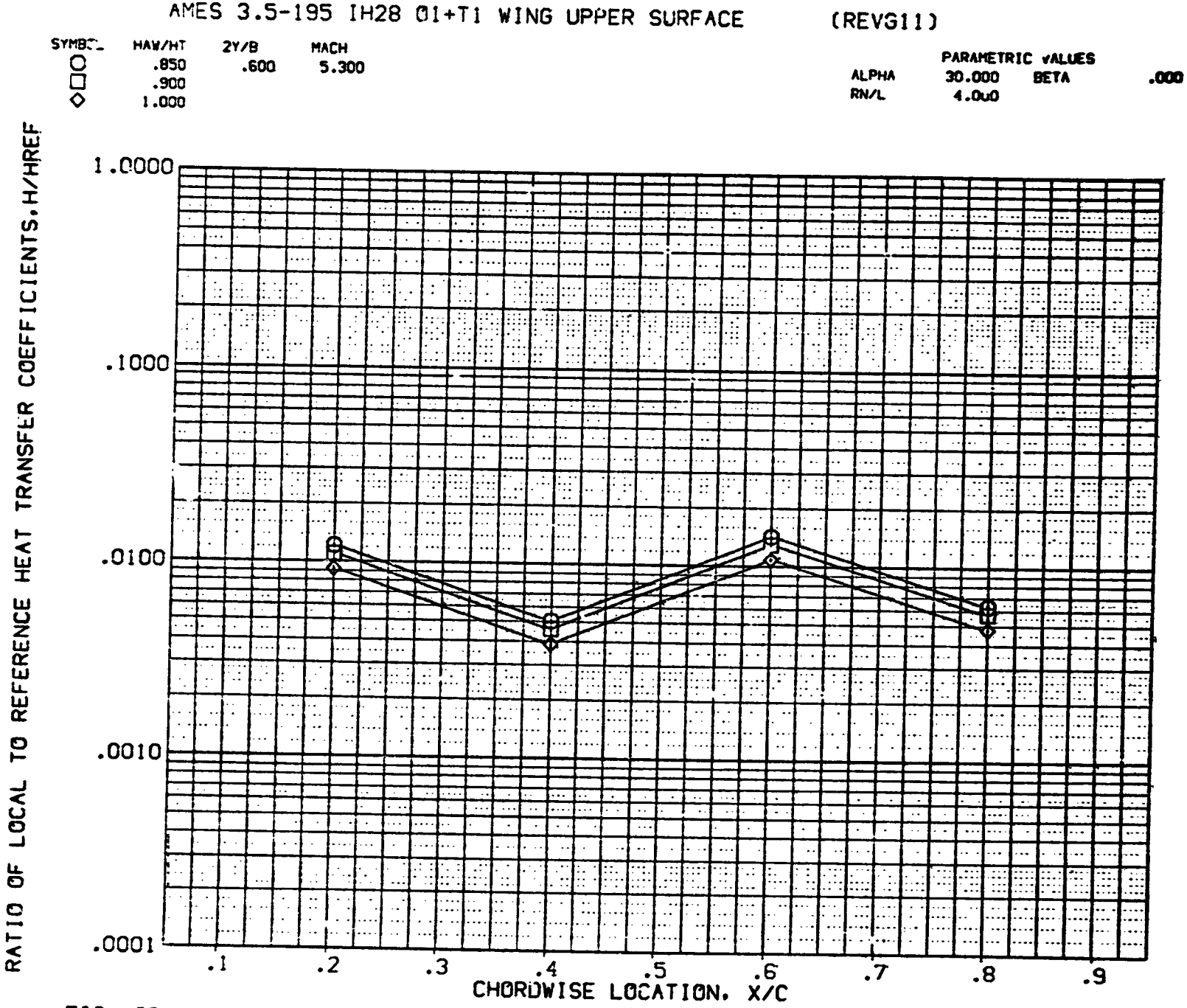

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG11)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.300
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	4.000		

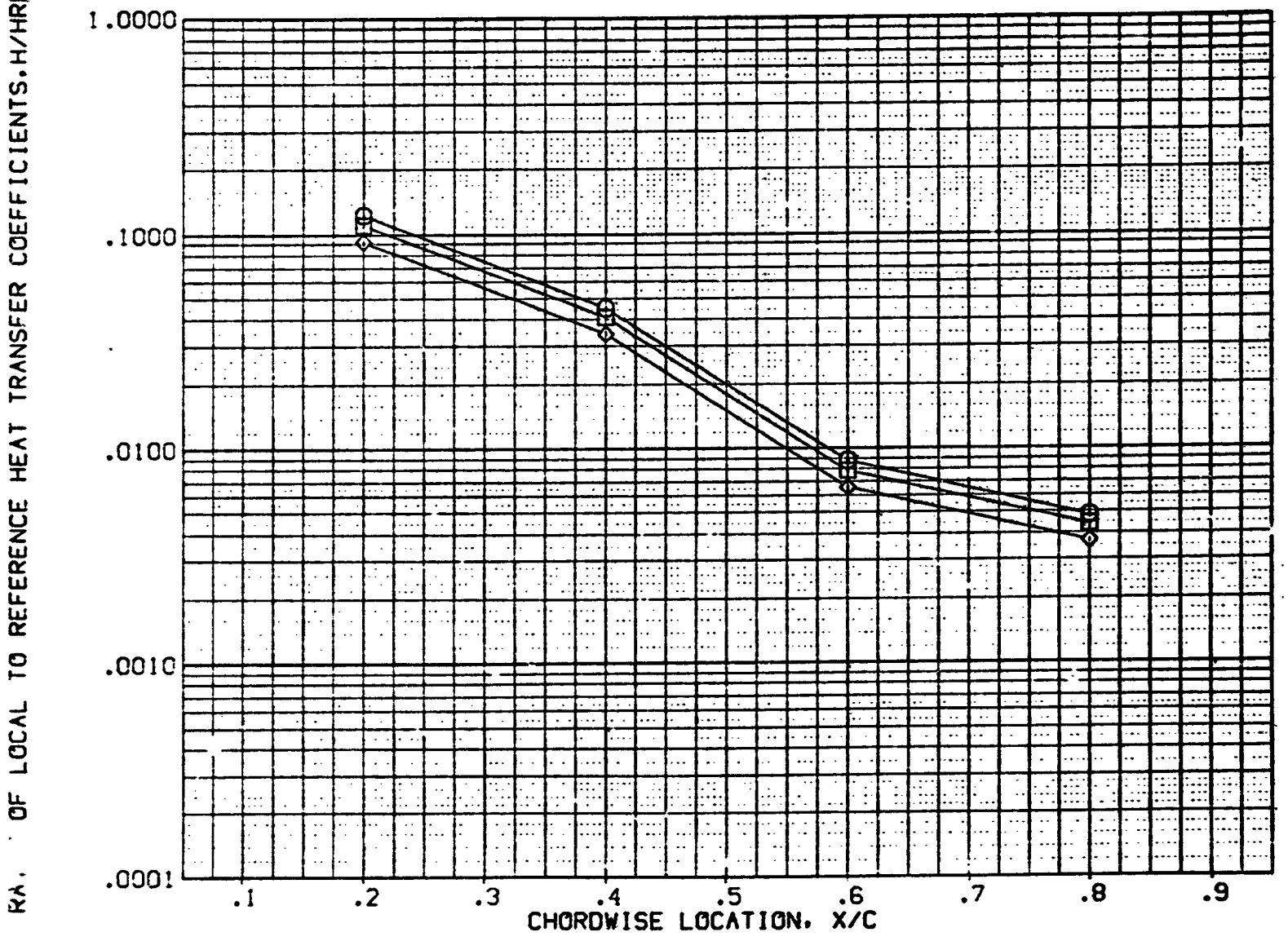

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 C1+T1 WING UPPER SURFACE (REVG12)

SYMBOL	HAW/HT	2Y/B	MACH.
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

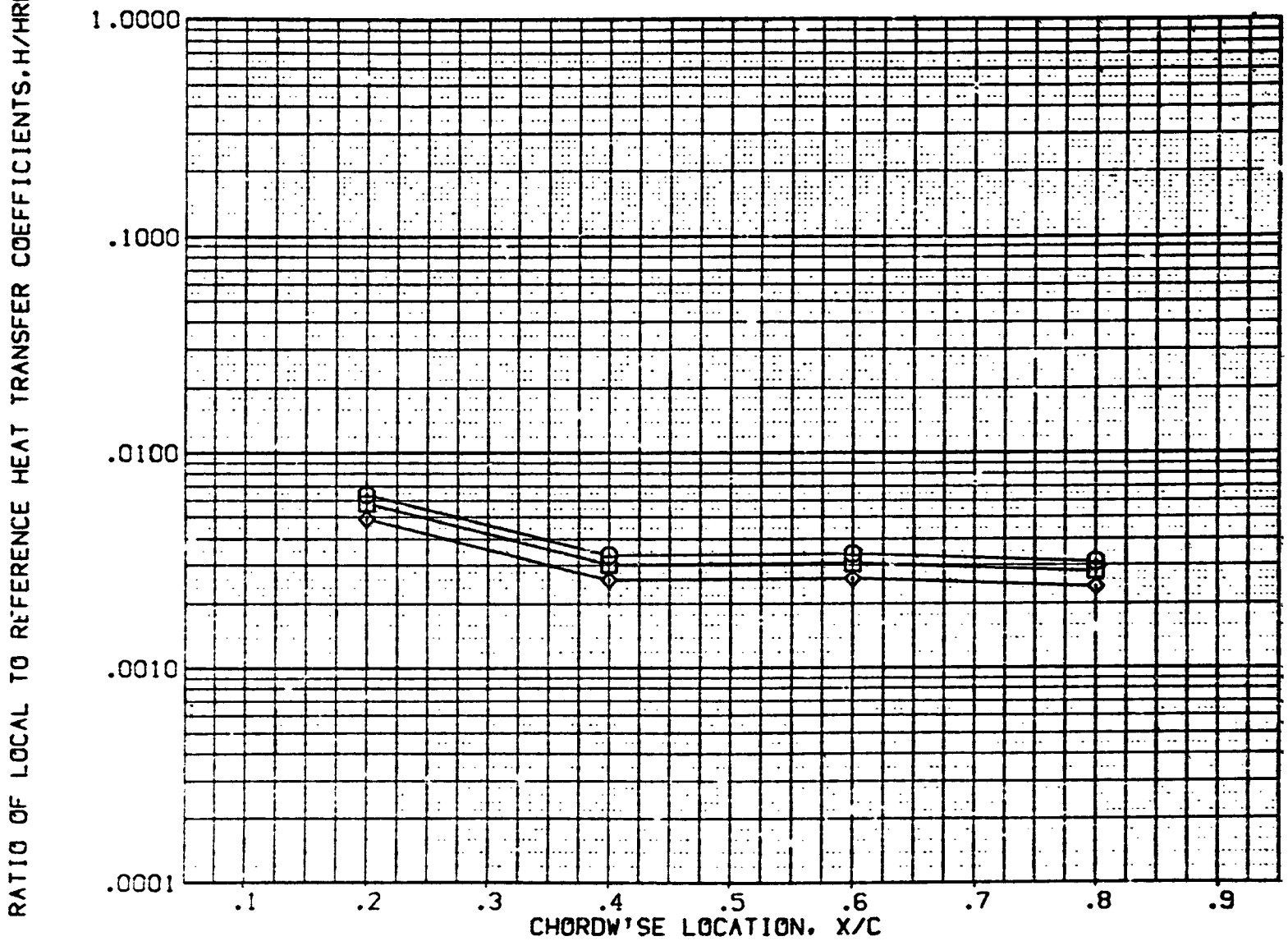

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

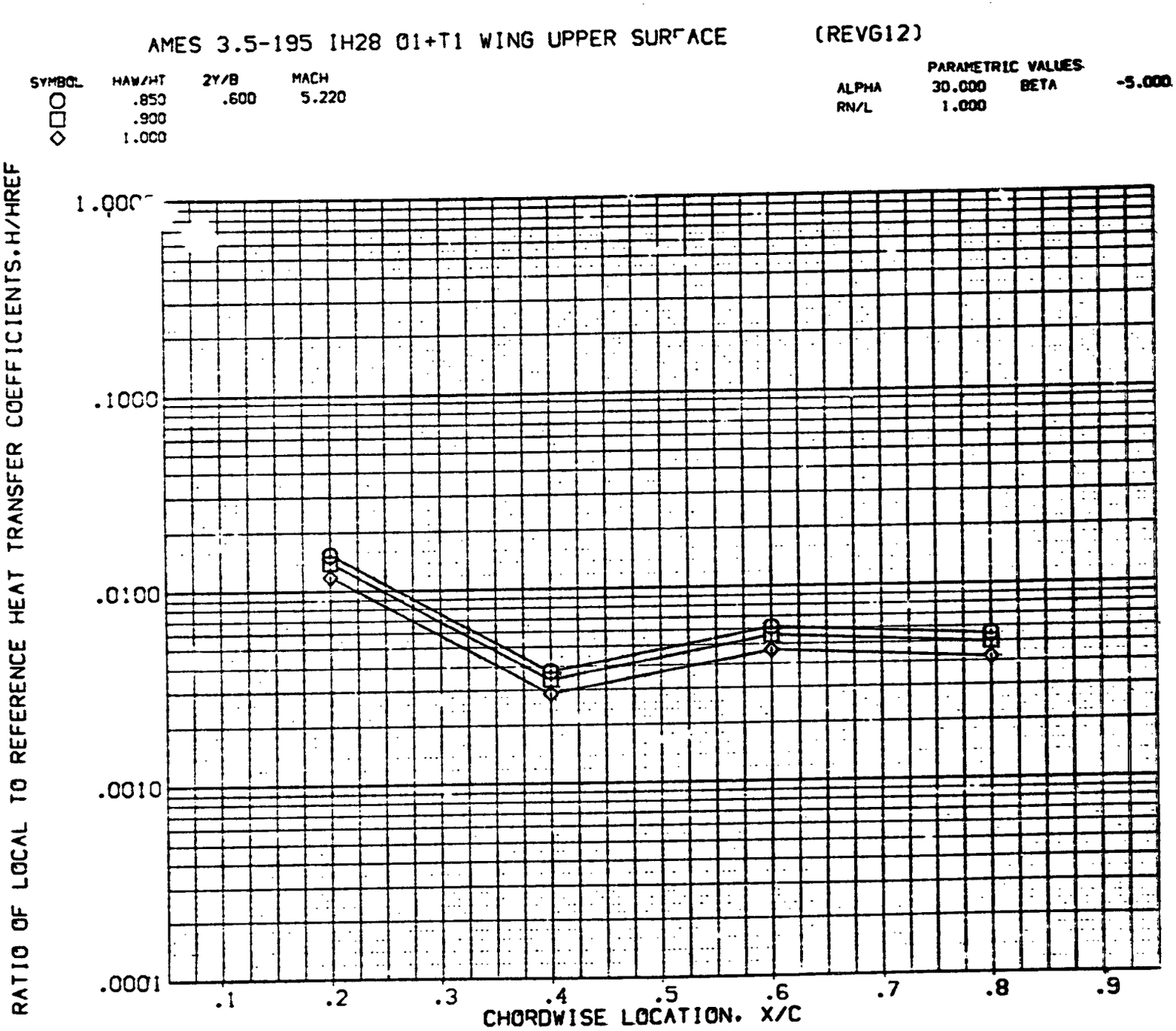

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG12)

SYMBOL	HAW/HT	2Y/B	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

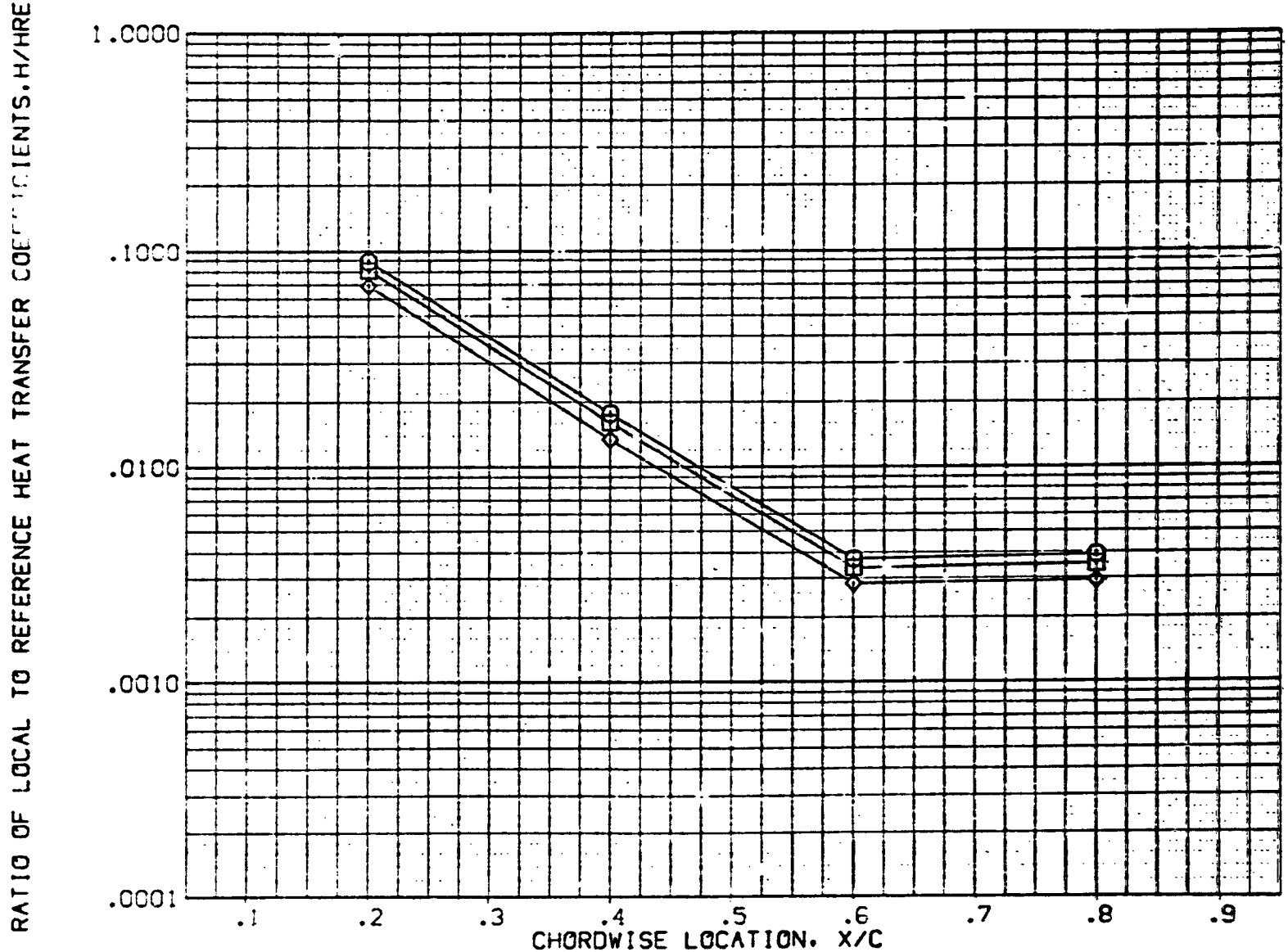

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

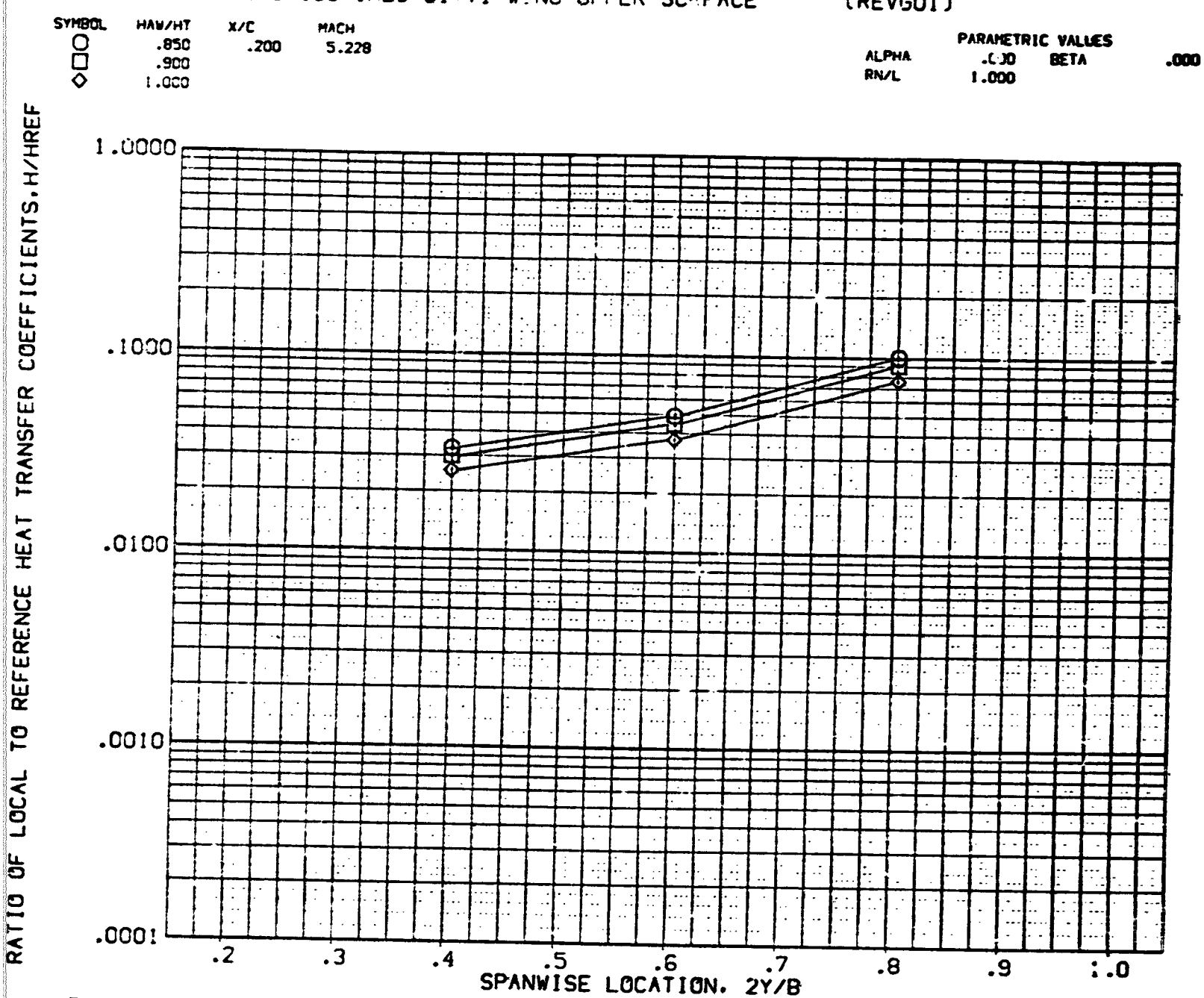

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG01)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.228
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

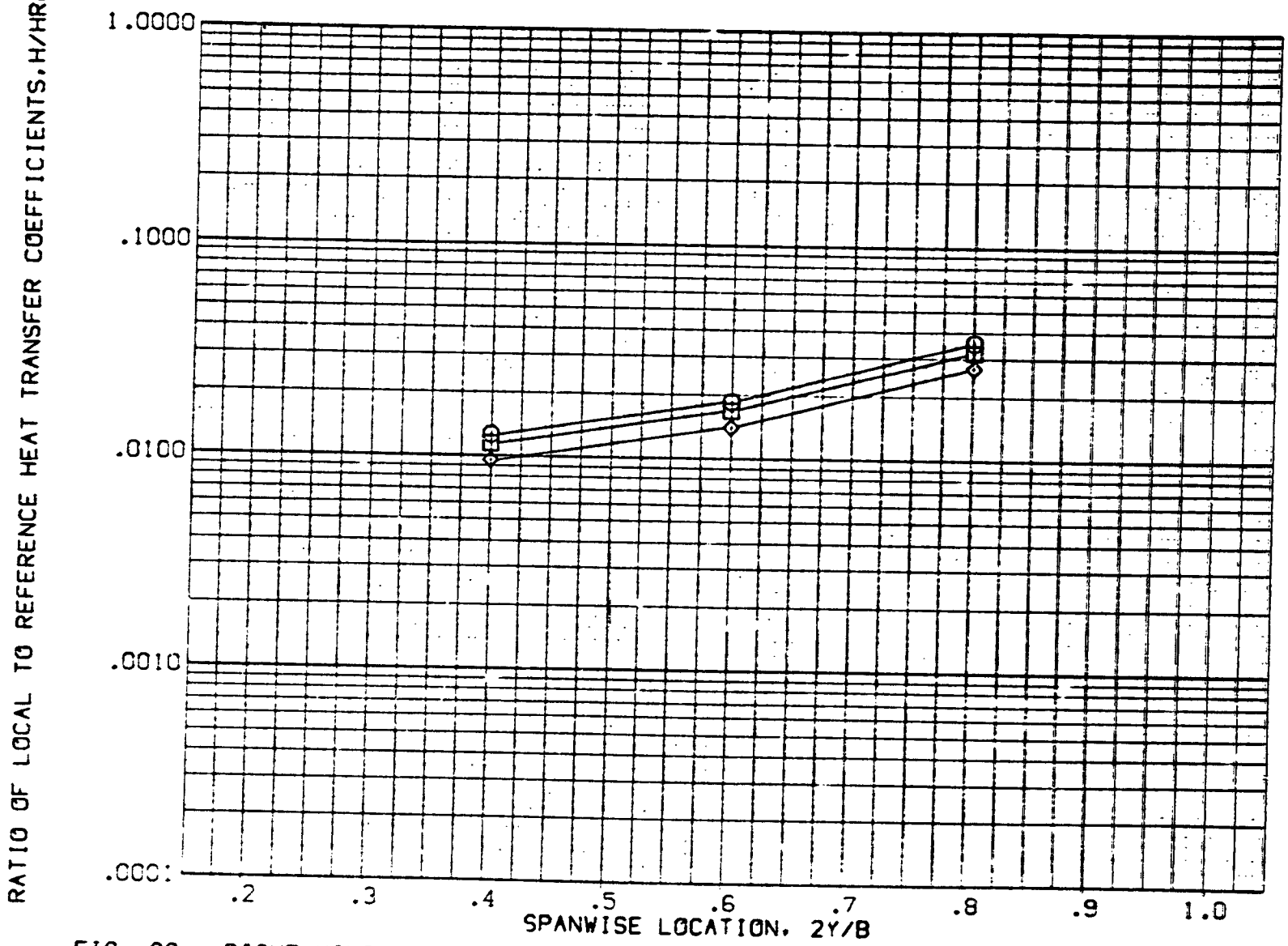

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

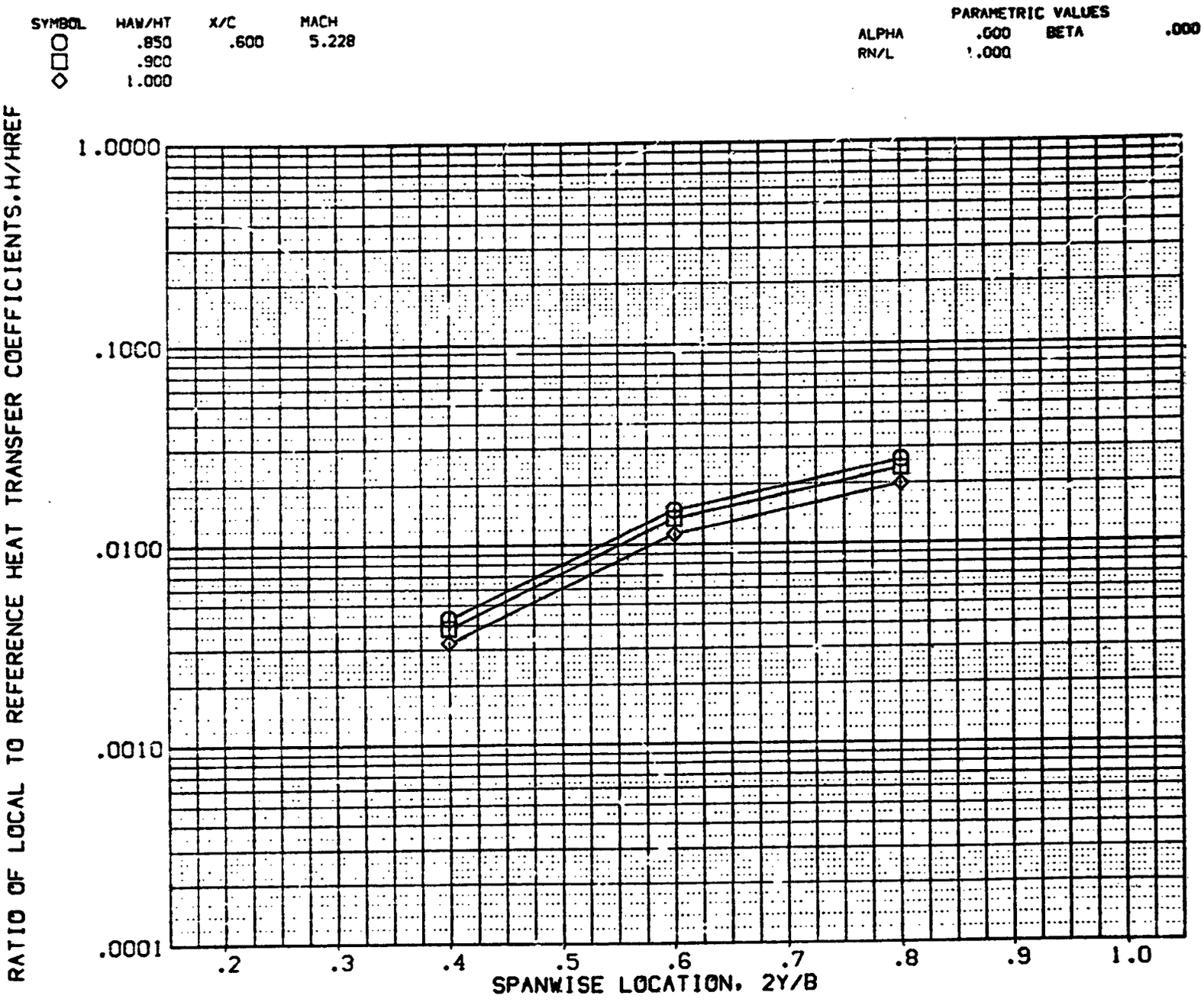

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

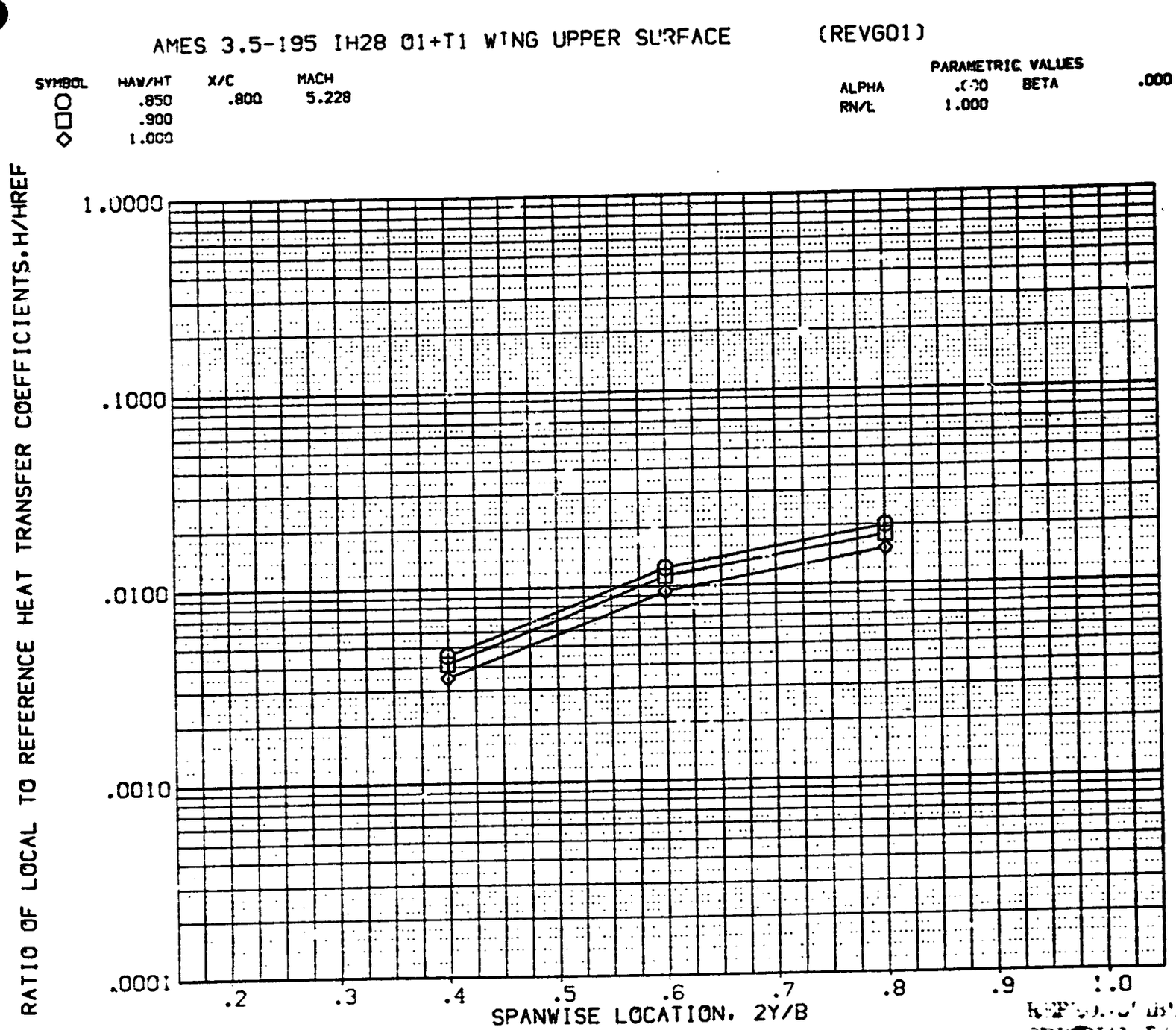

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

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AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG02)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

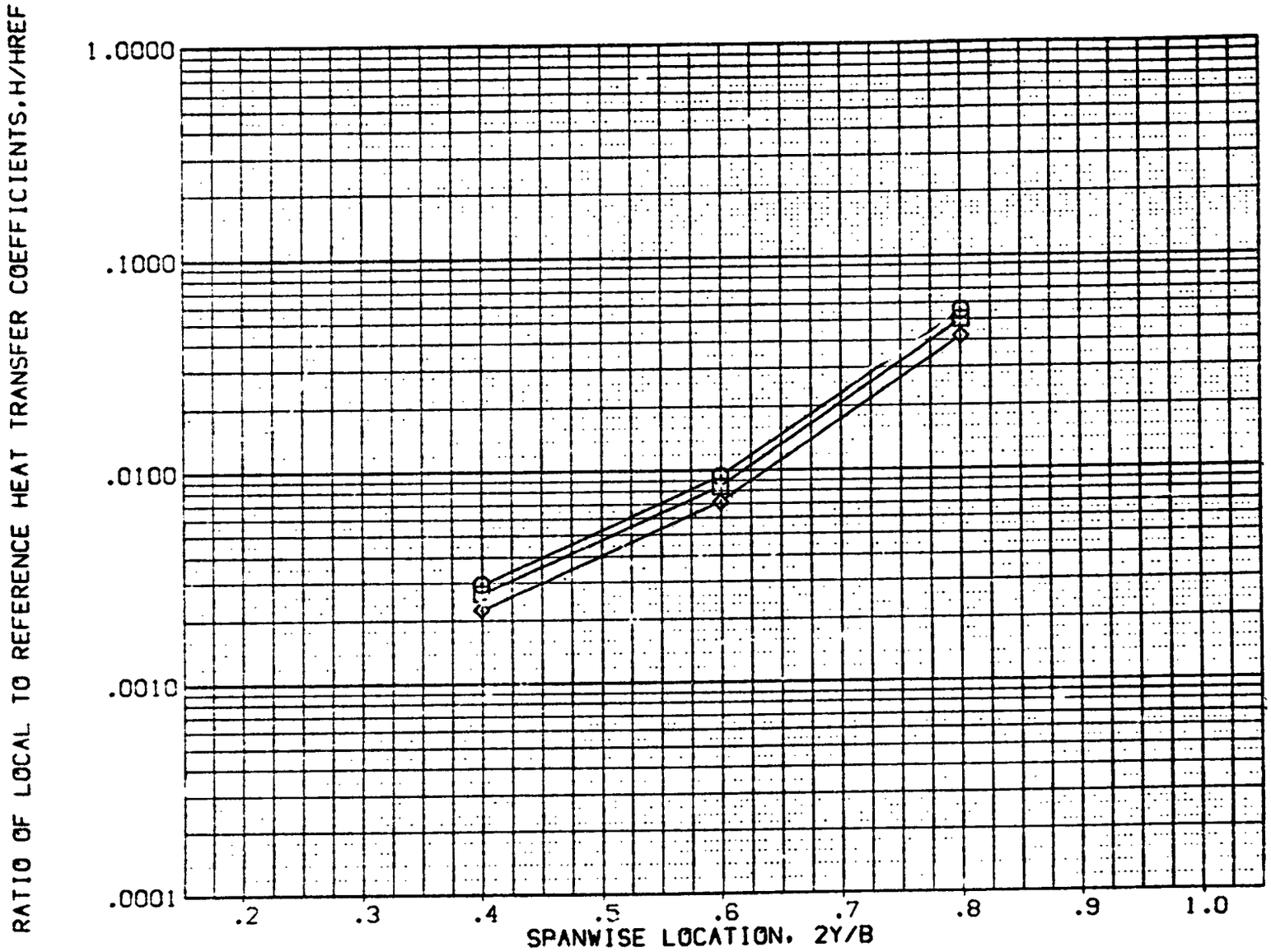

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

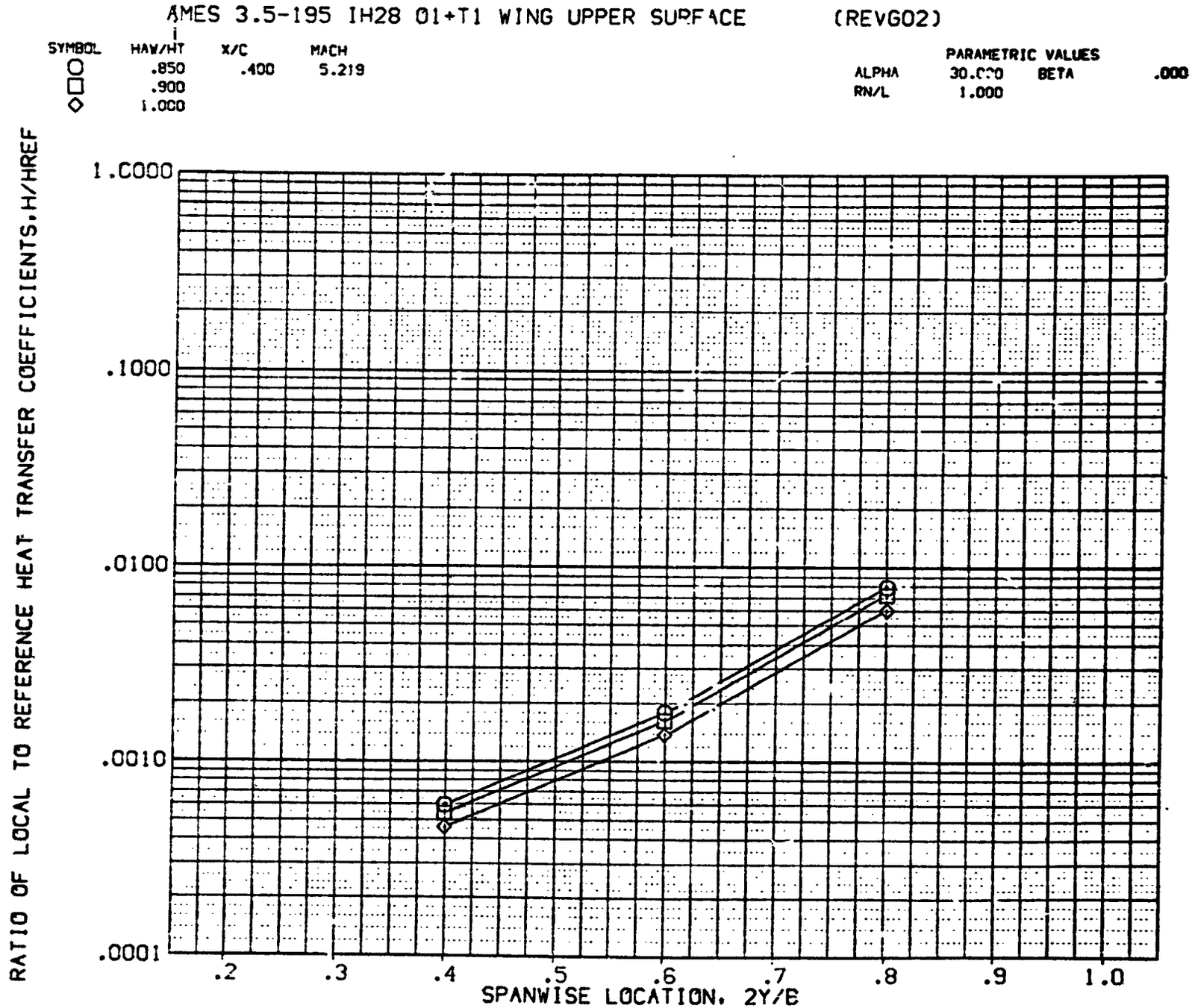

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

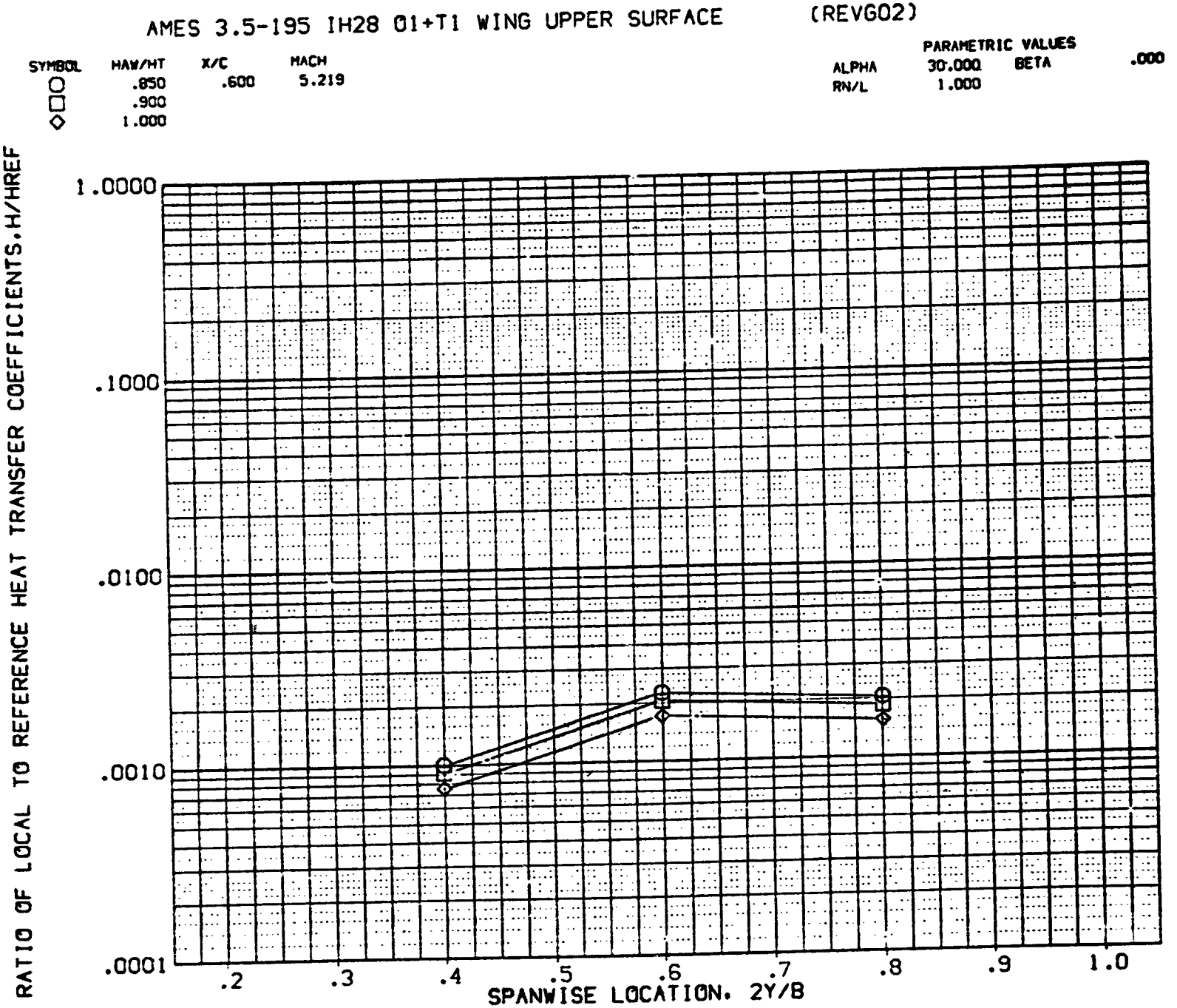

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG02)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

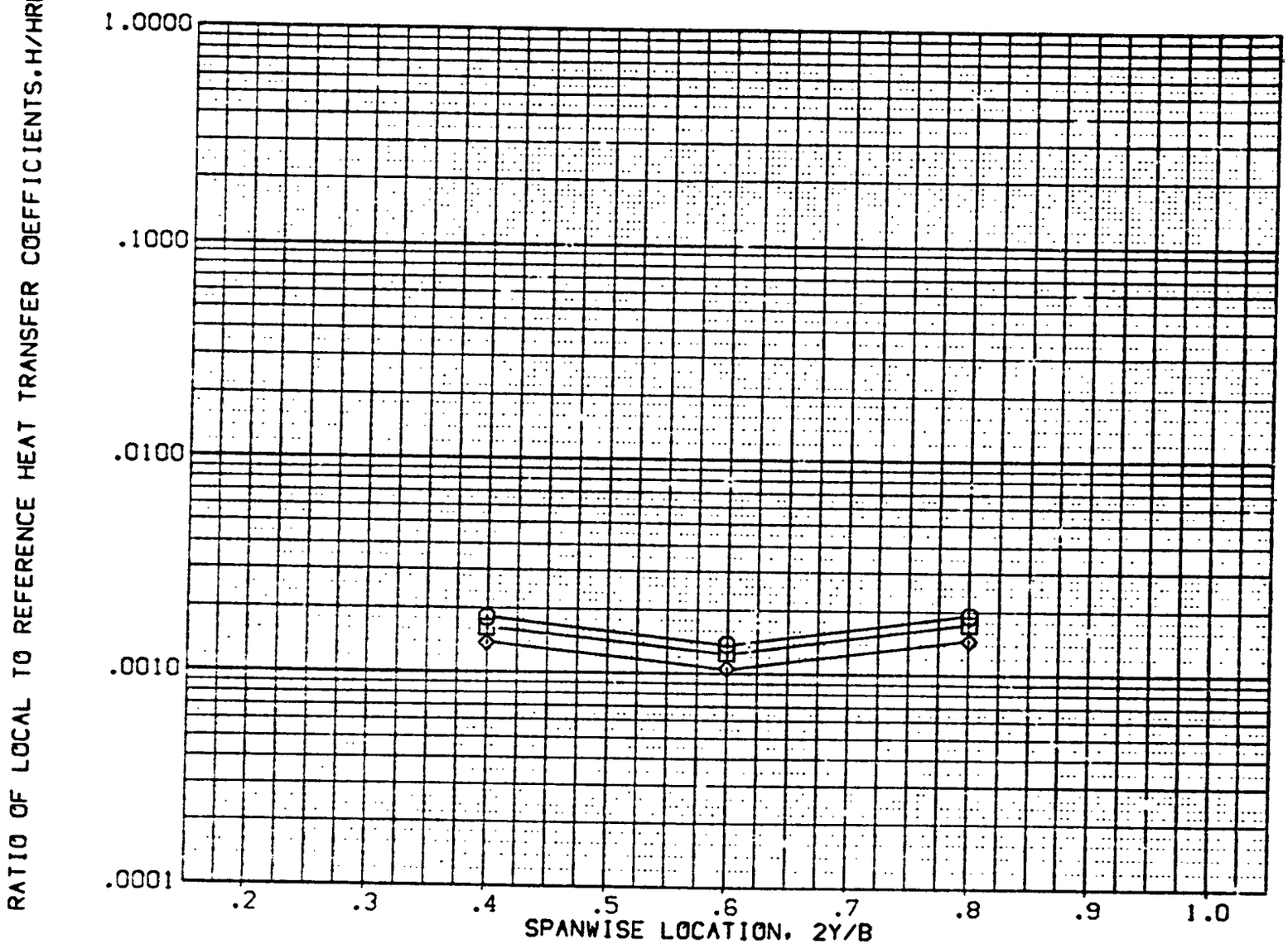

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

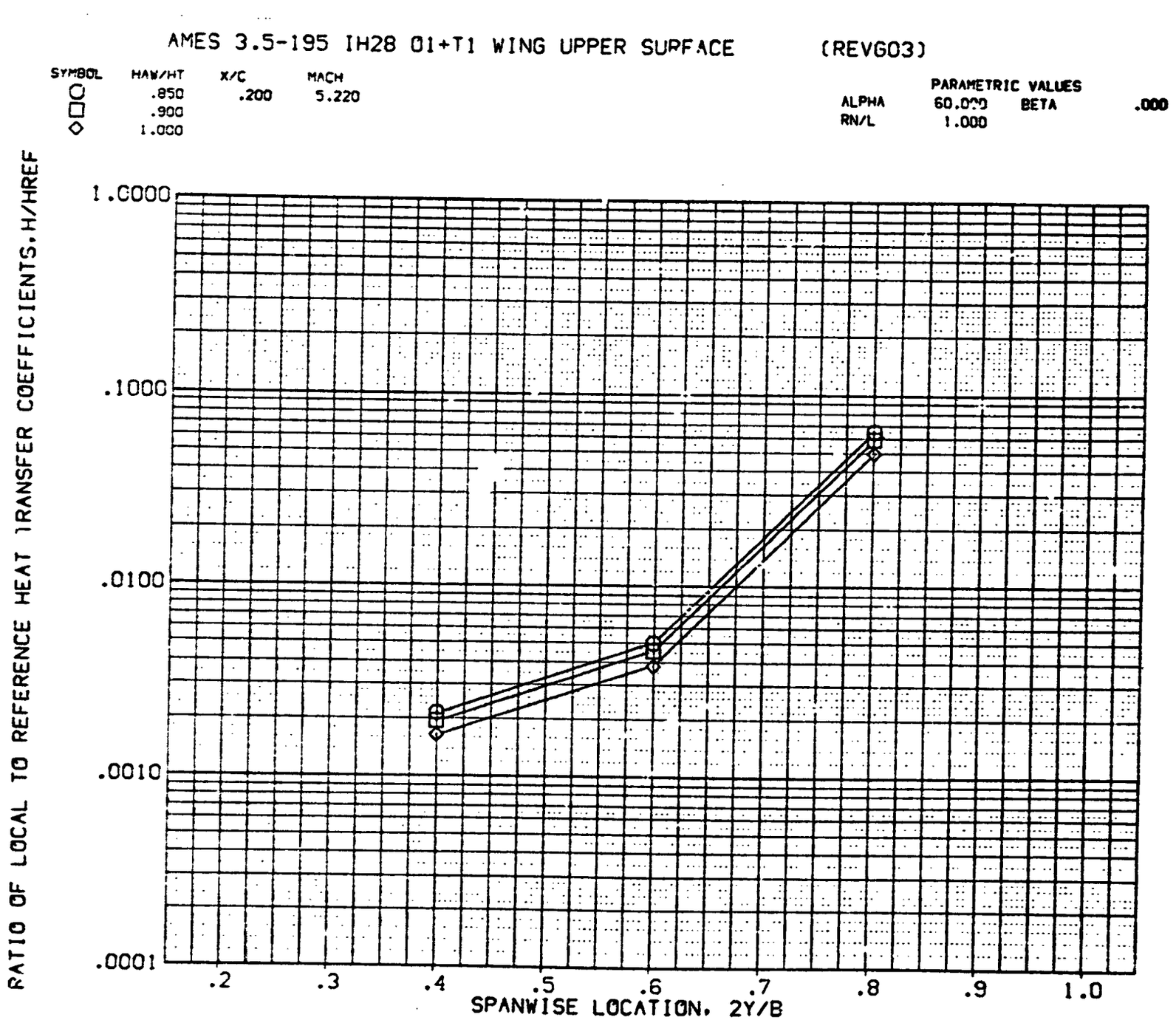

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG03)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

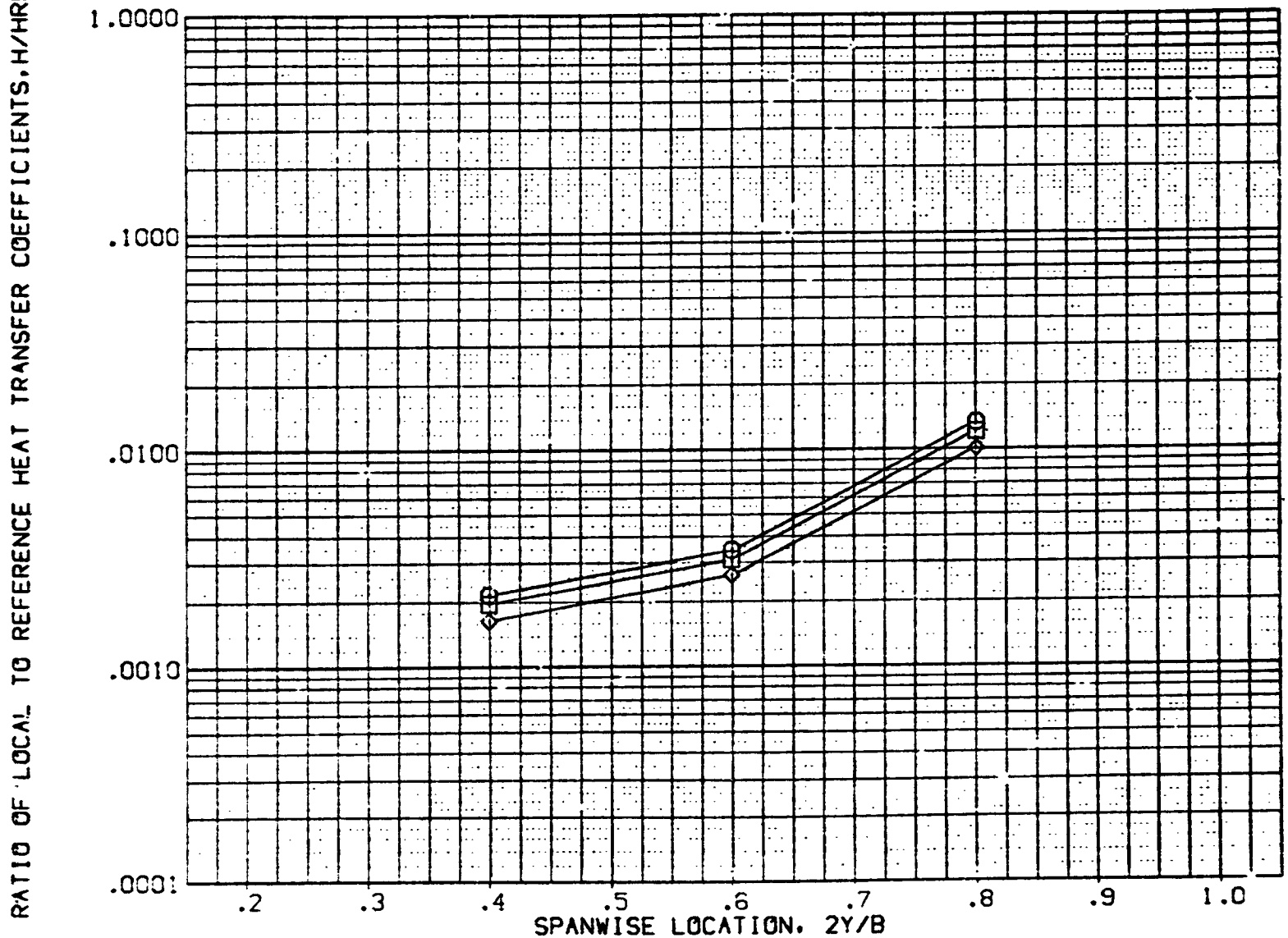

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

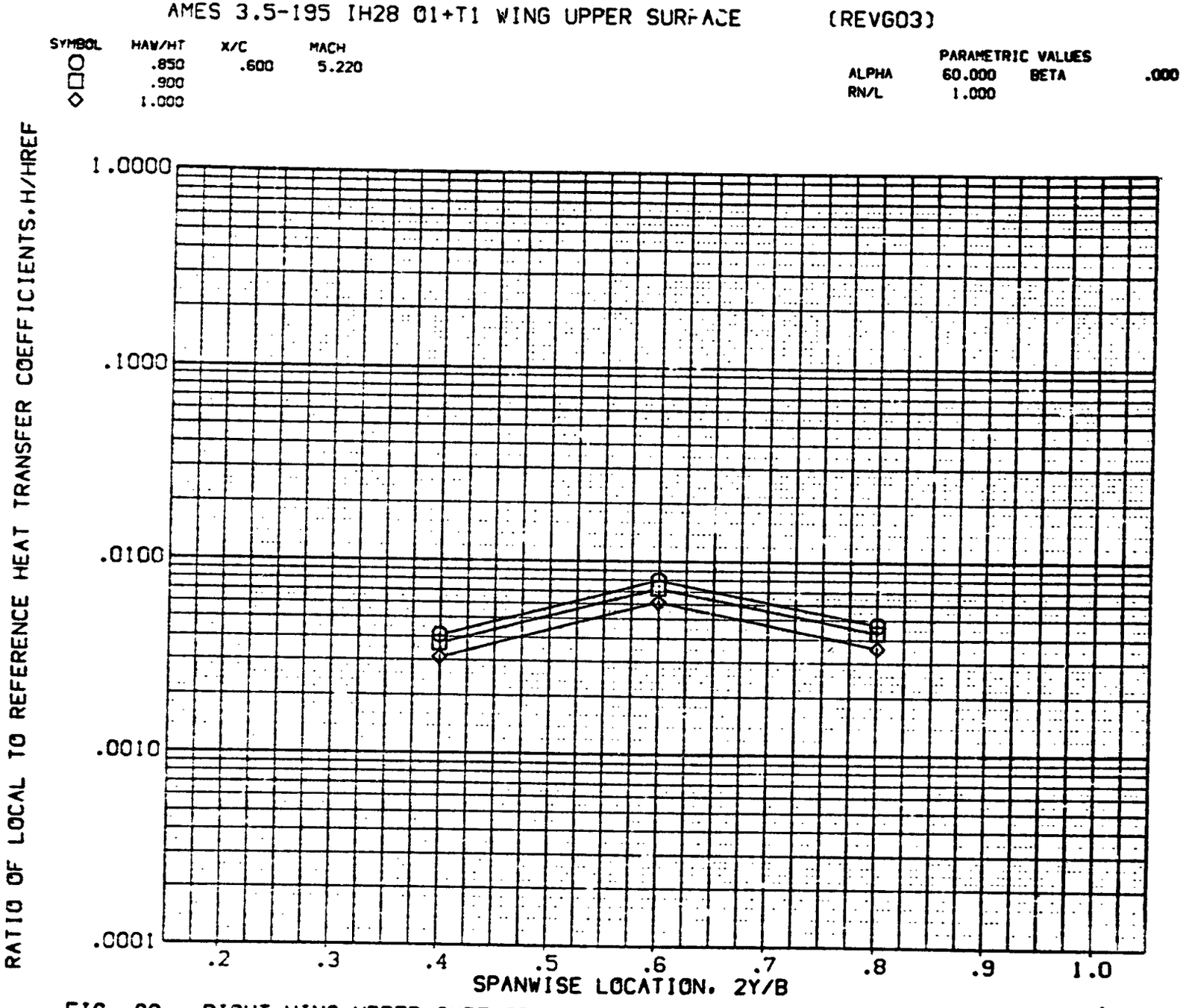

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG03)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.00	BETA	.000
RN/L	1.000		

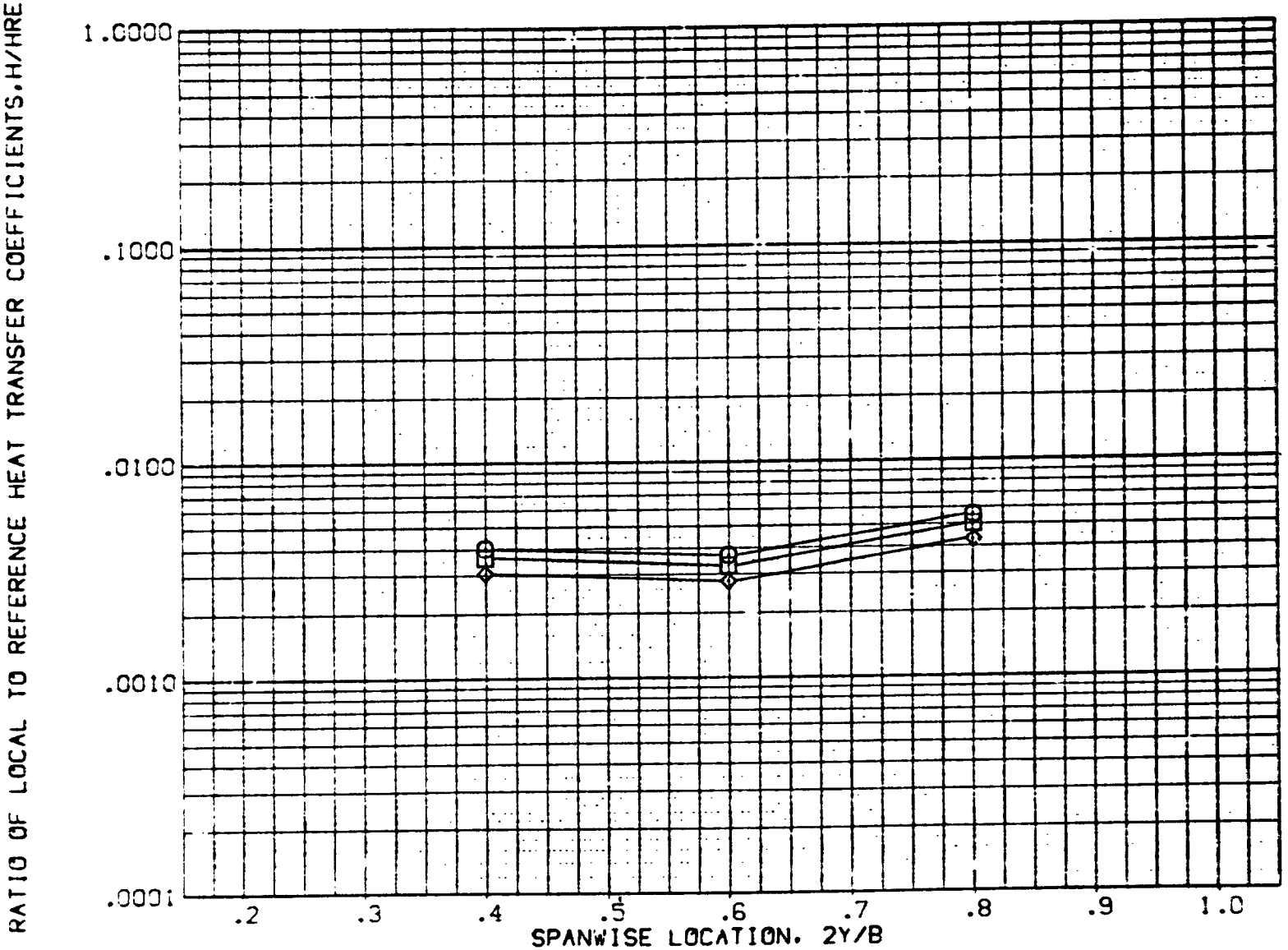

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 C1+T1 WING UPPER SURFACE (REVG04)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

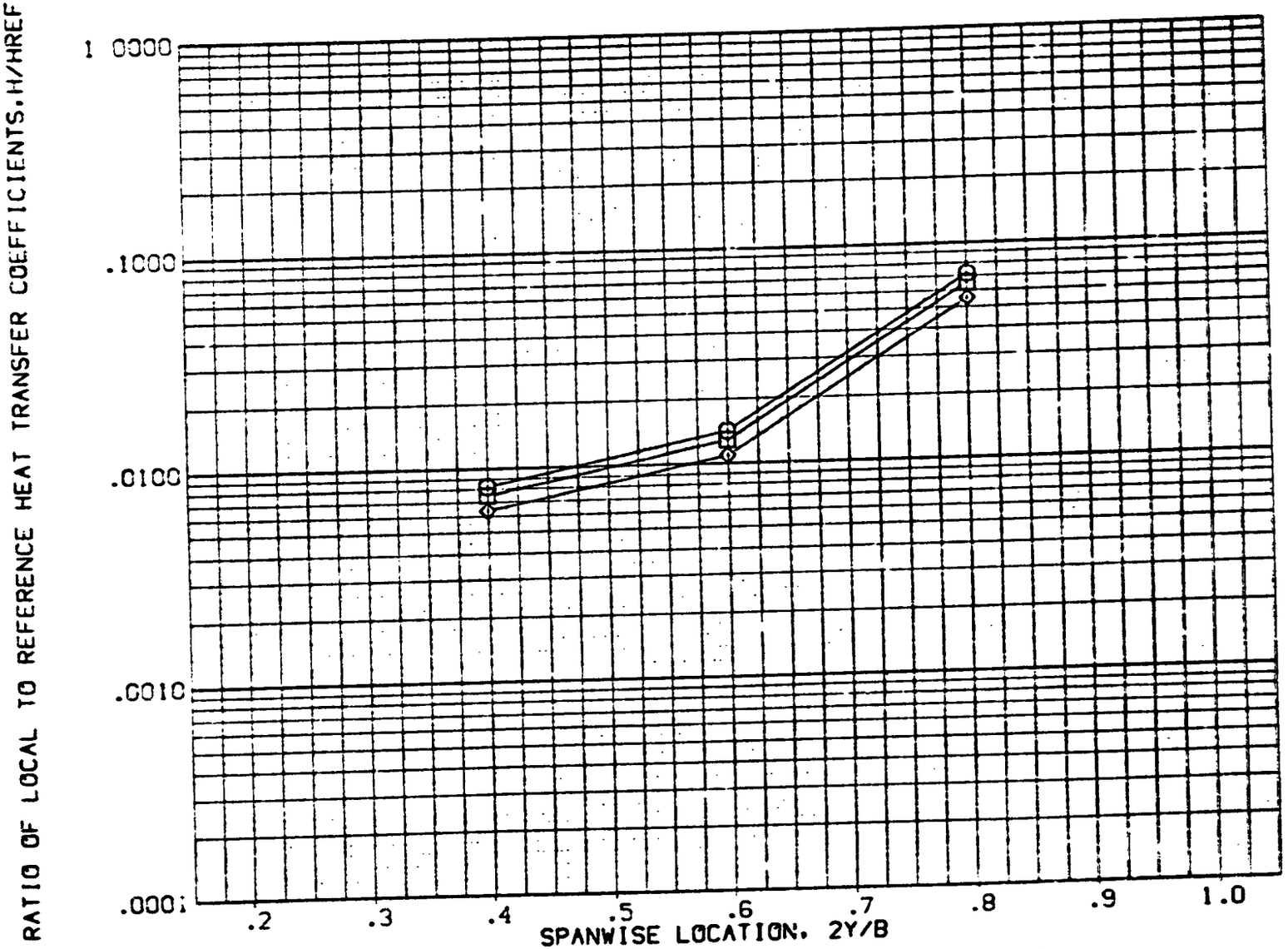

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG04)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.0 0	BETA	.000
RN/L	1.000		

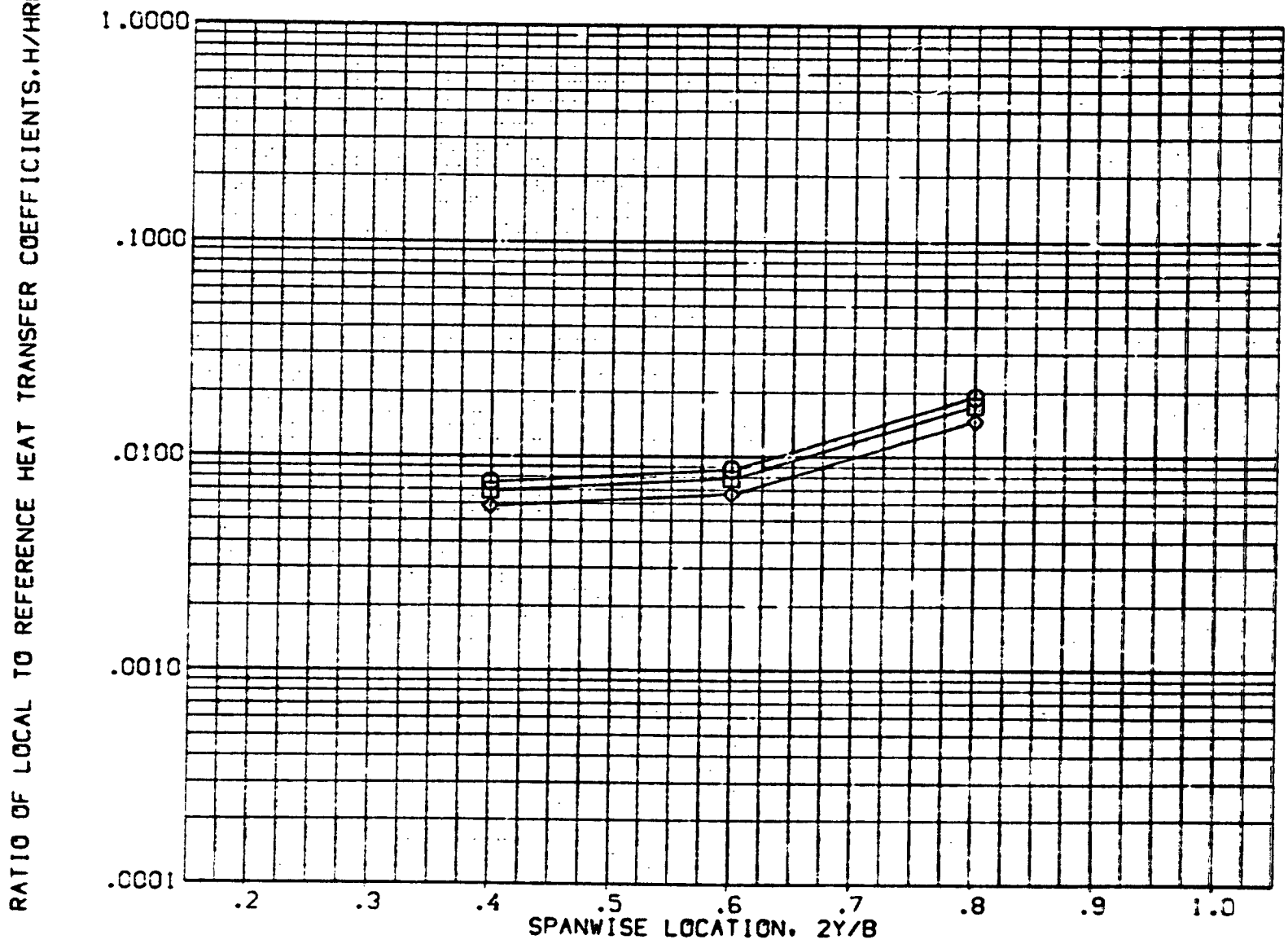

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG04)

SYMBOL	HAW/HT	X/C	MACH
○	.650	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

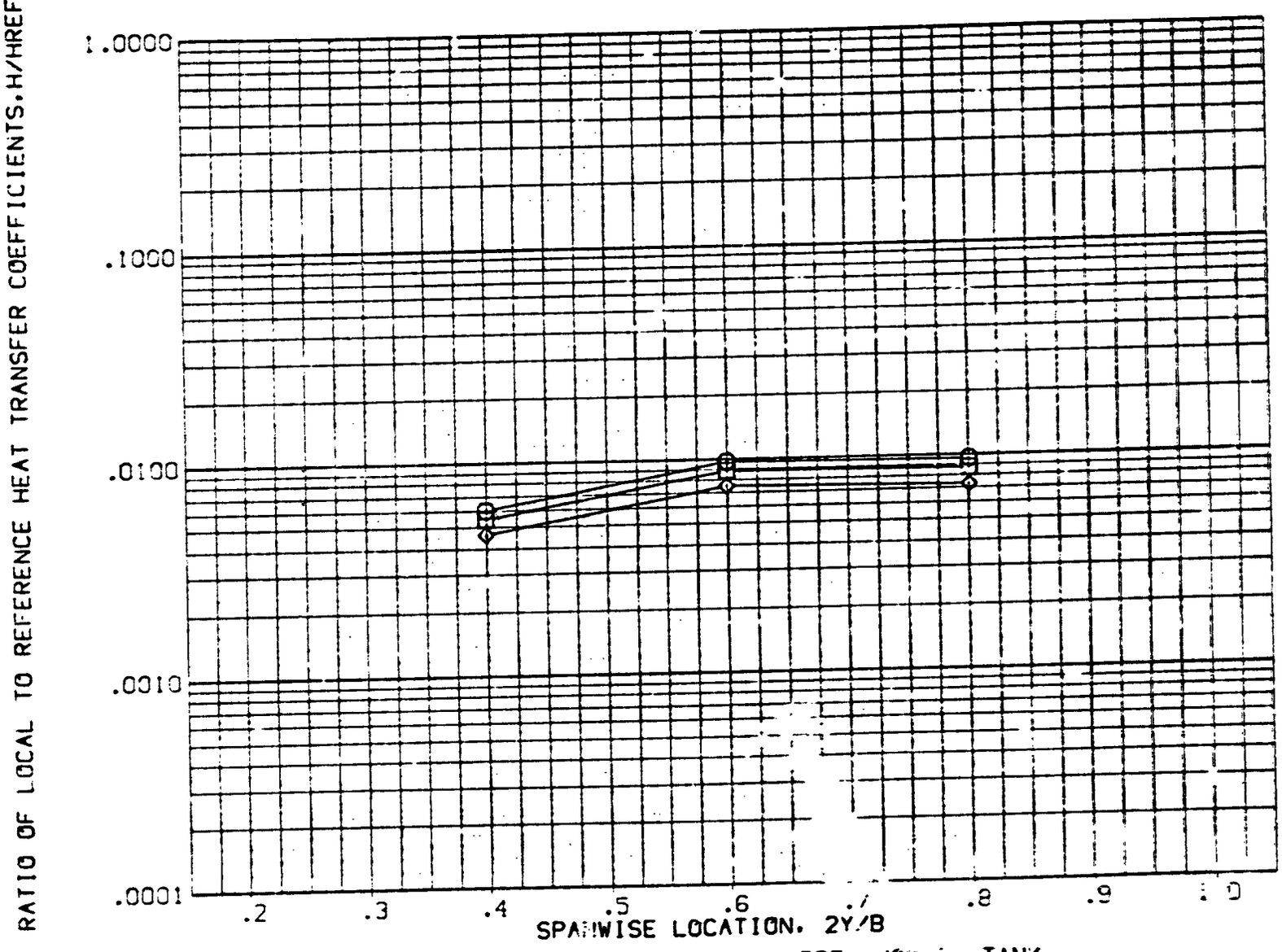

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG04)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

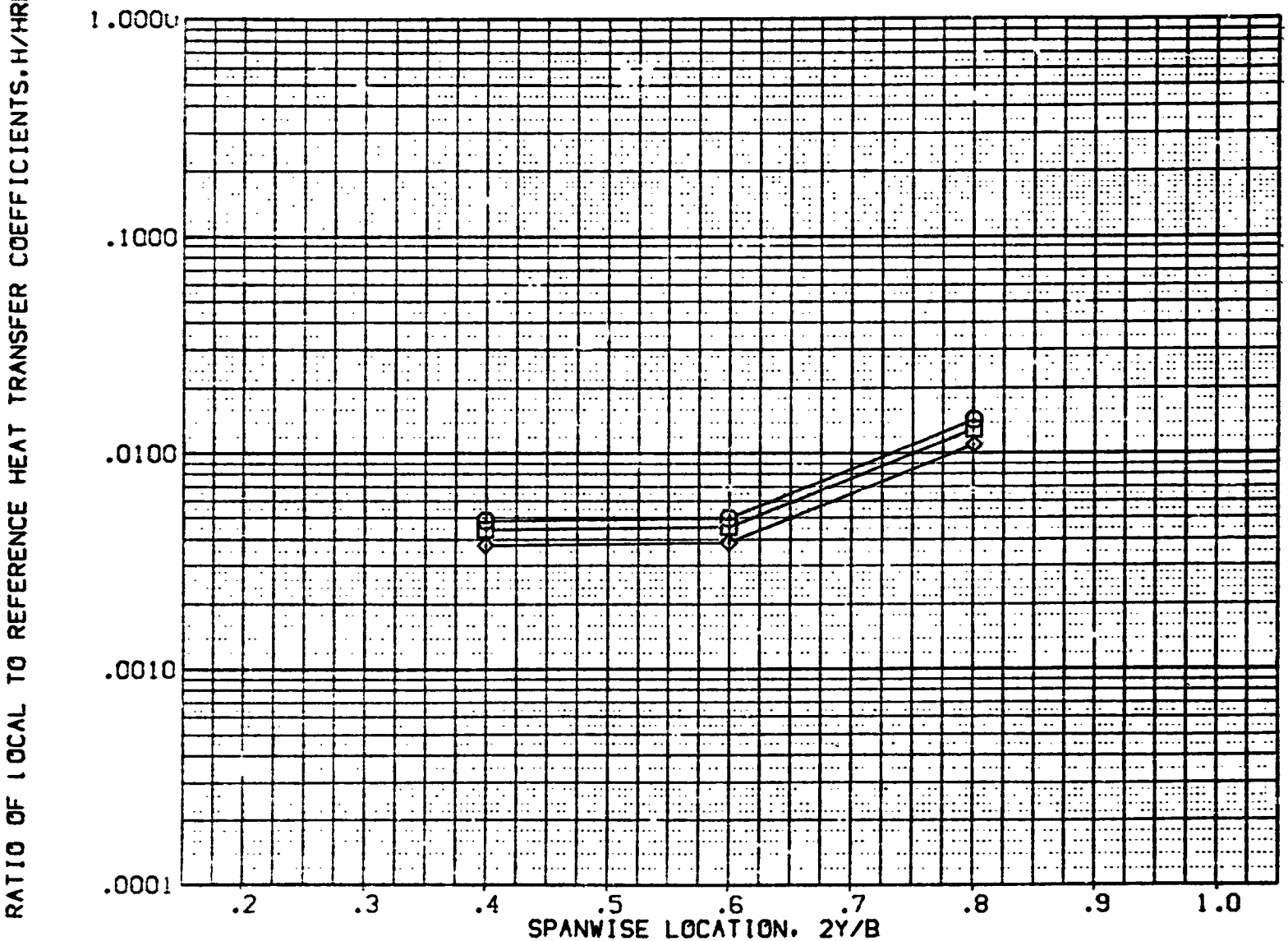

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REV605)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.0u0		

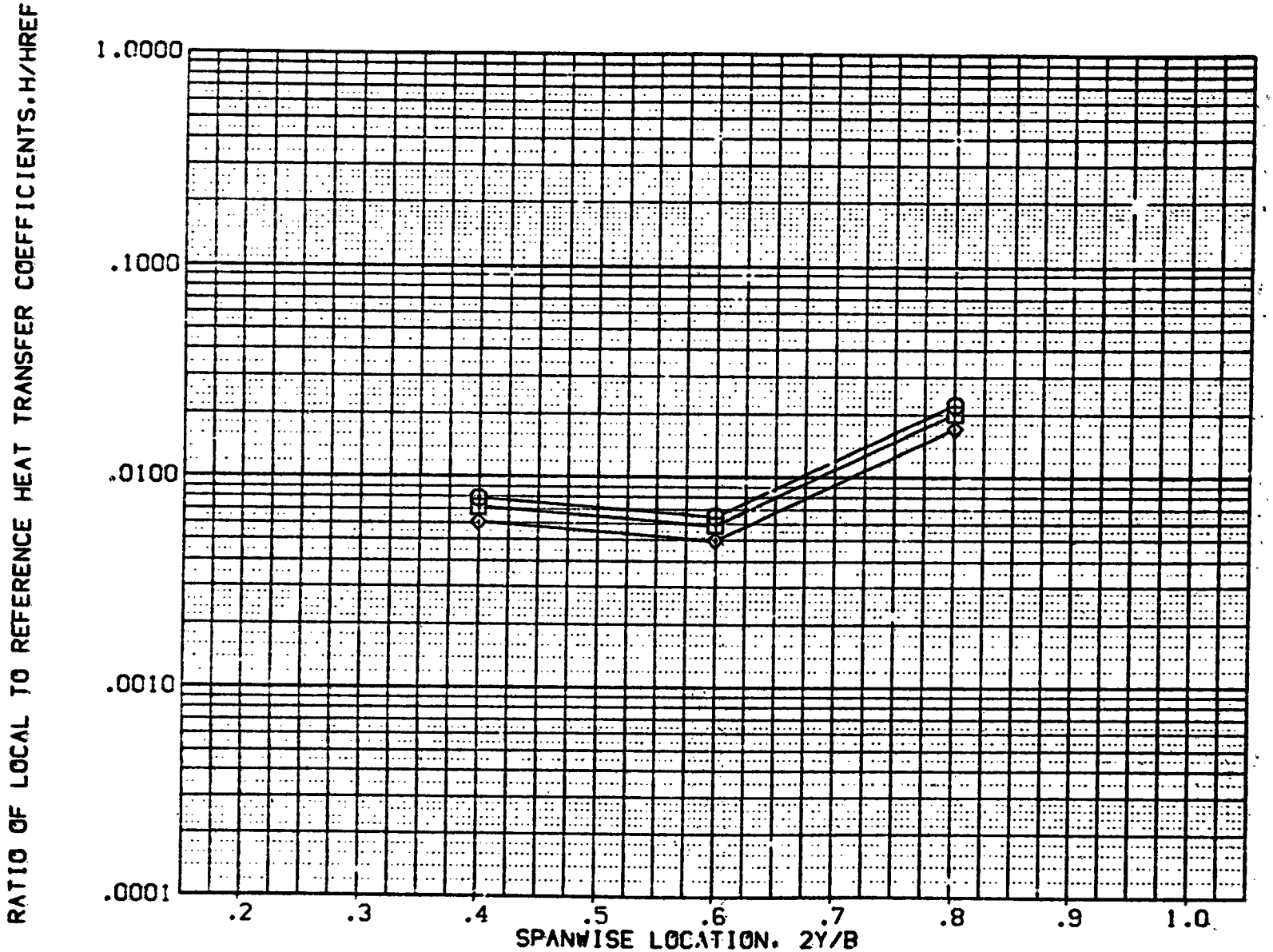

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG05)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

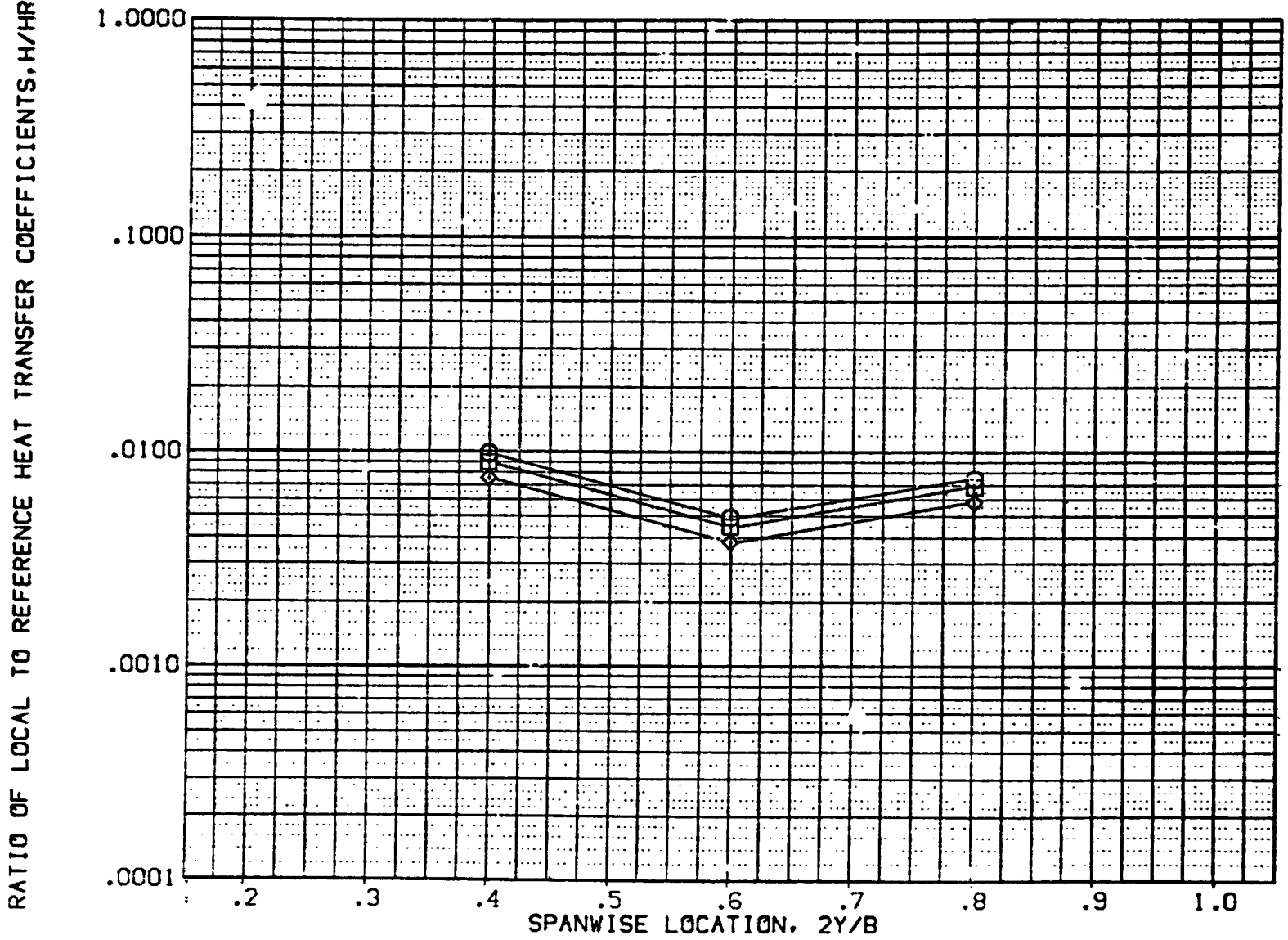

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG05)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

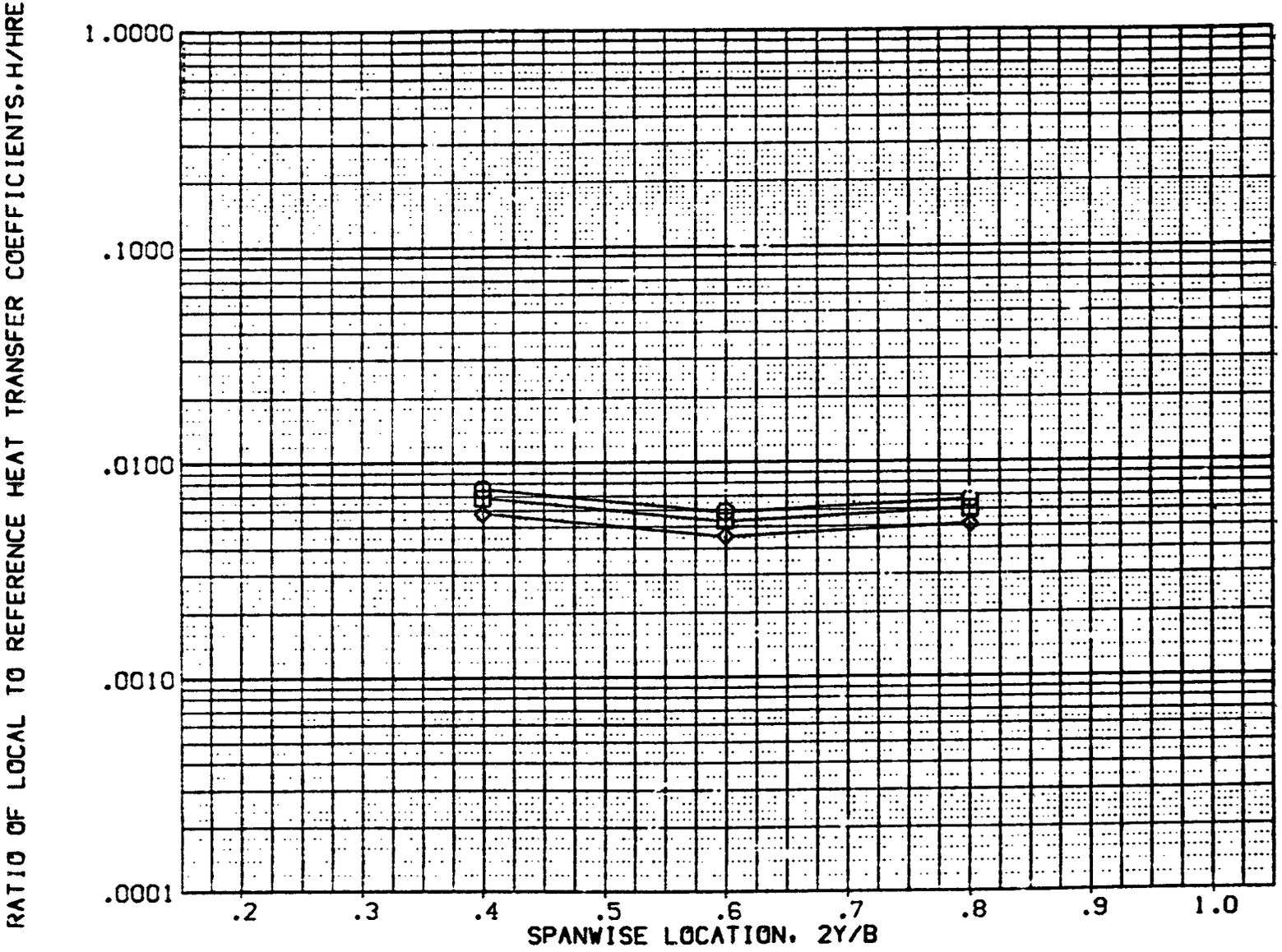

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

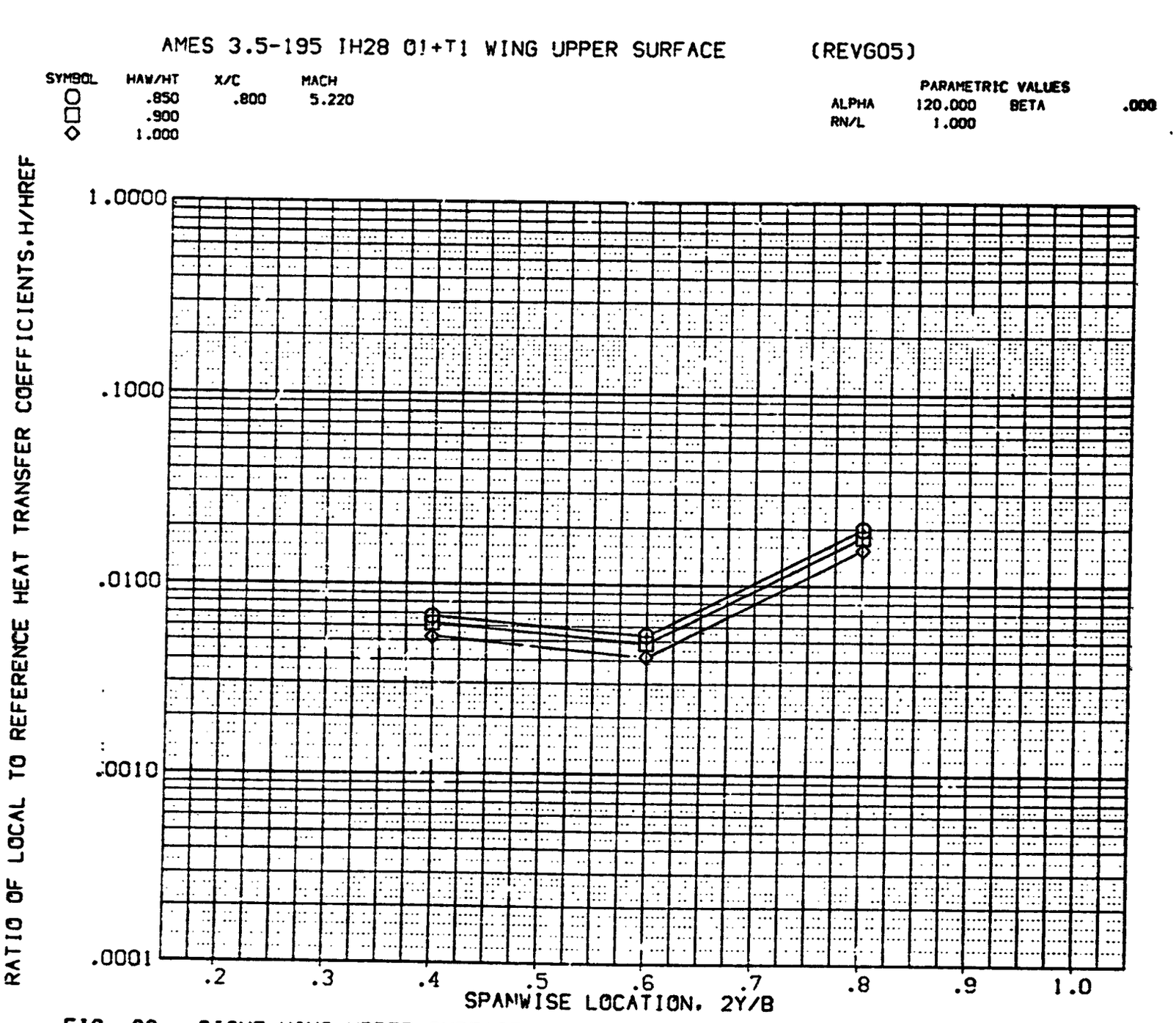

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG06)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

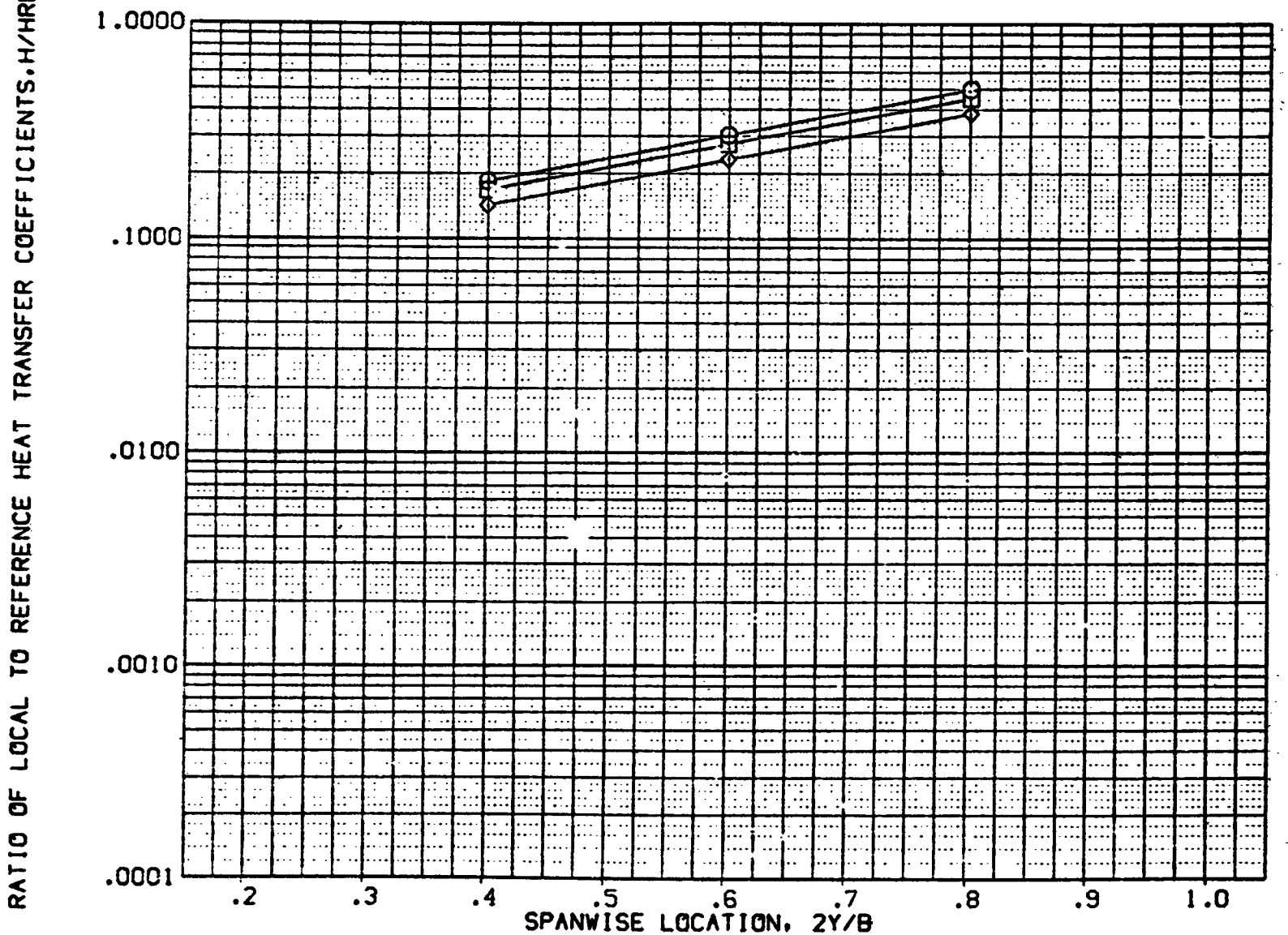

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG06)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -120.C_J BETA .000

RN/L 1.000

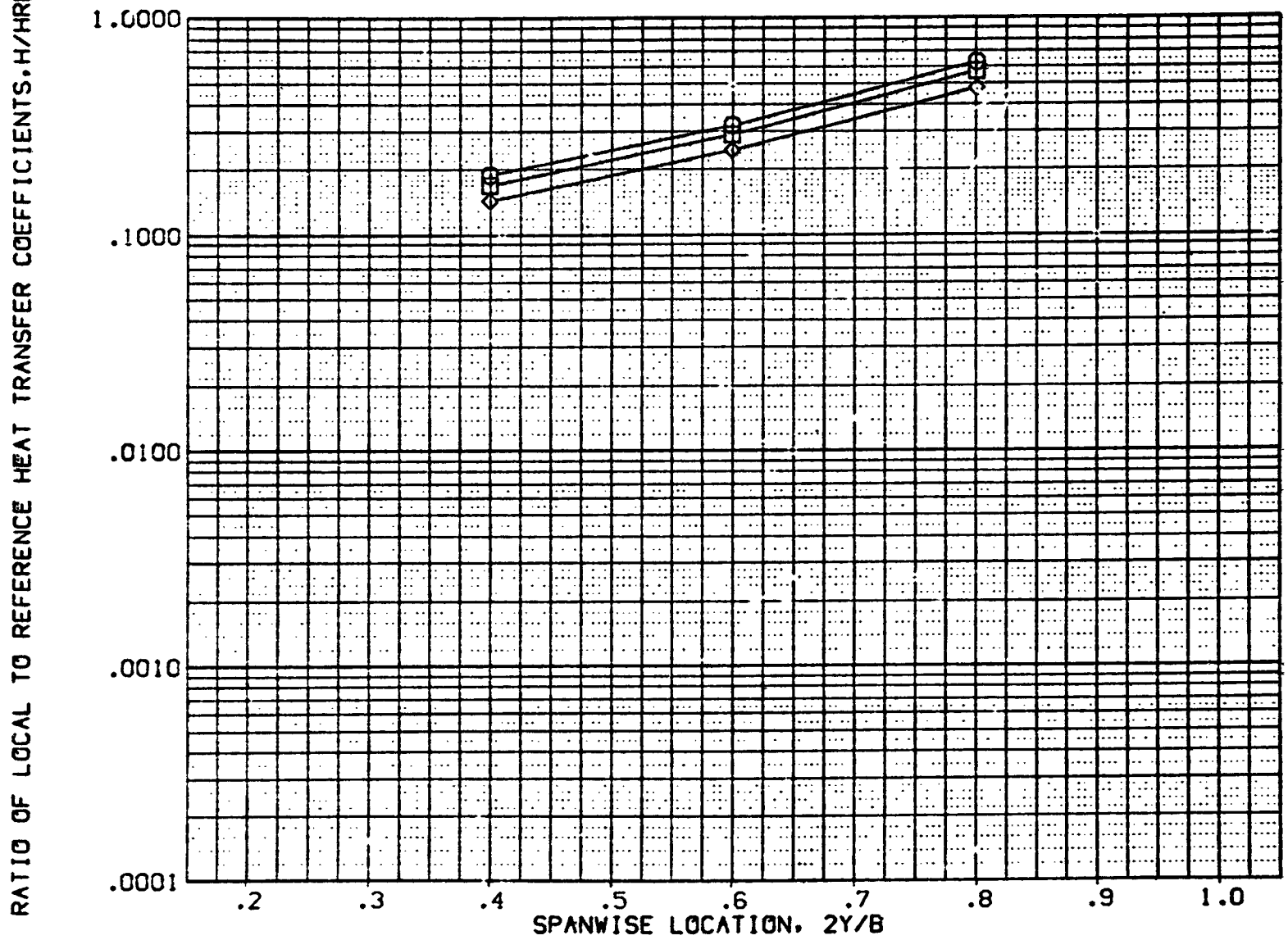

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG06)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

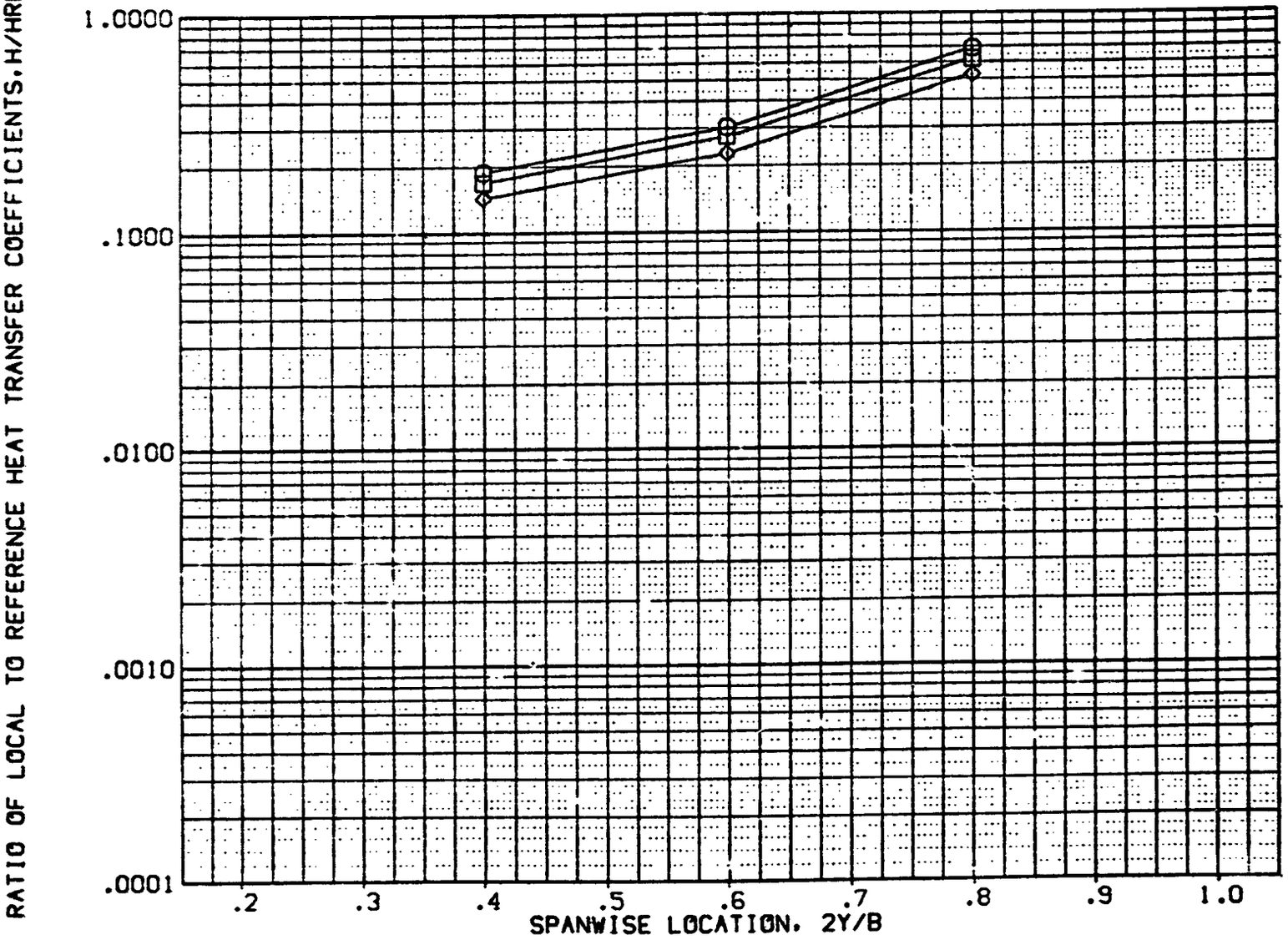

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

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AMES 3.5-195 IH28 01+T1 WING UPPER SUR.'ACE (REVG06)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

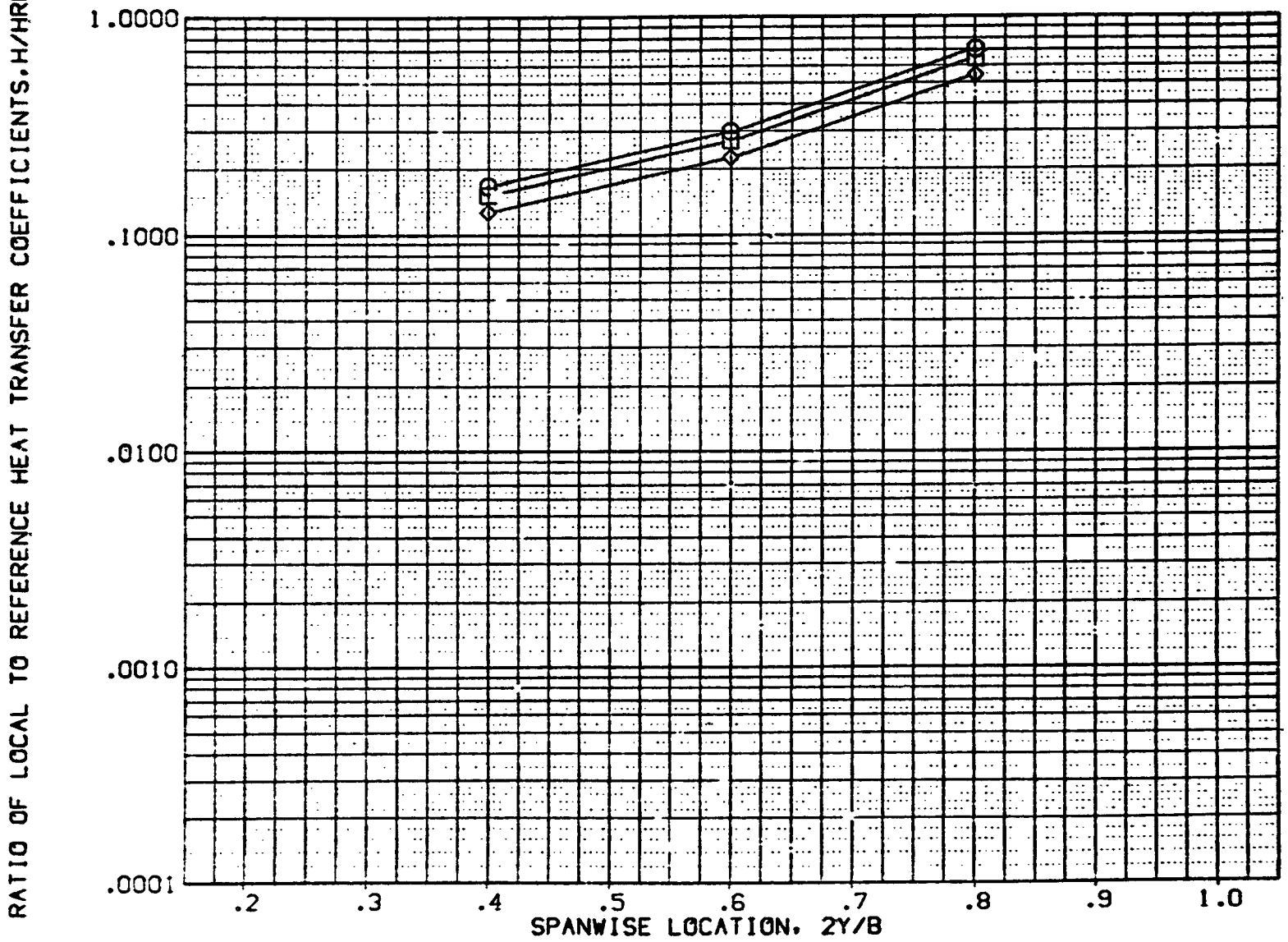

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

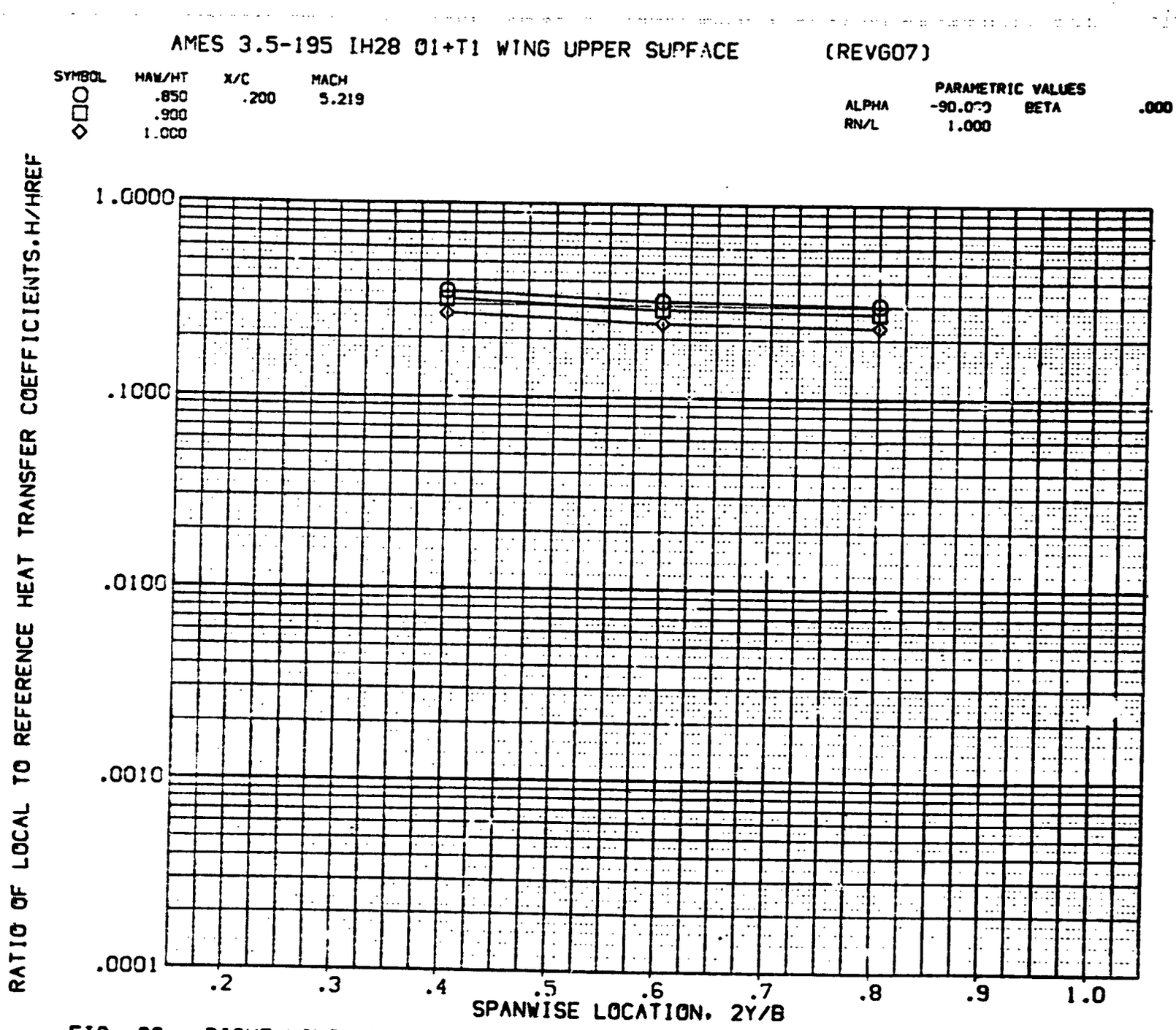

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG07)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

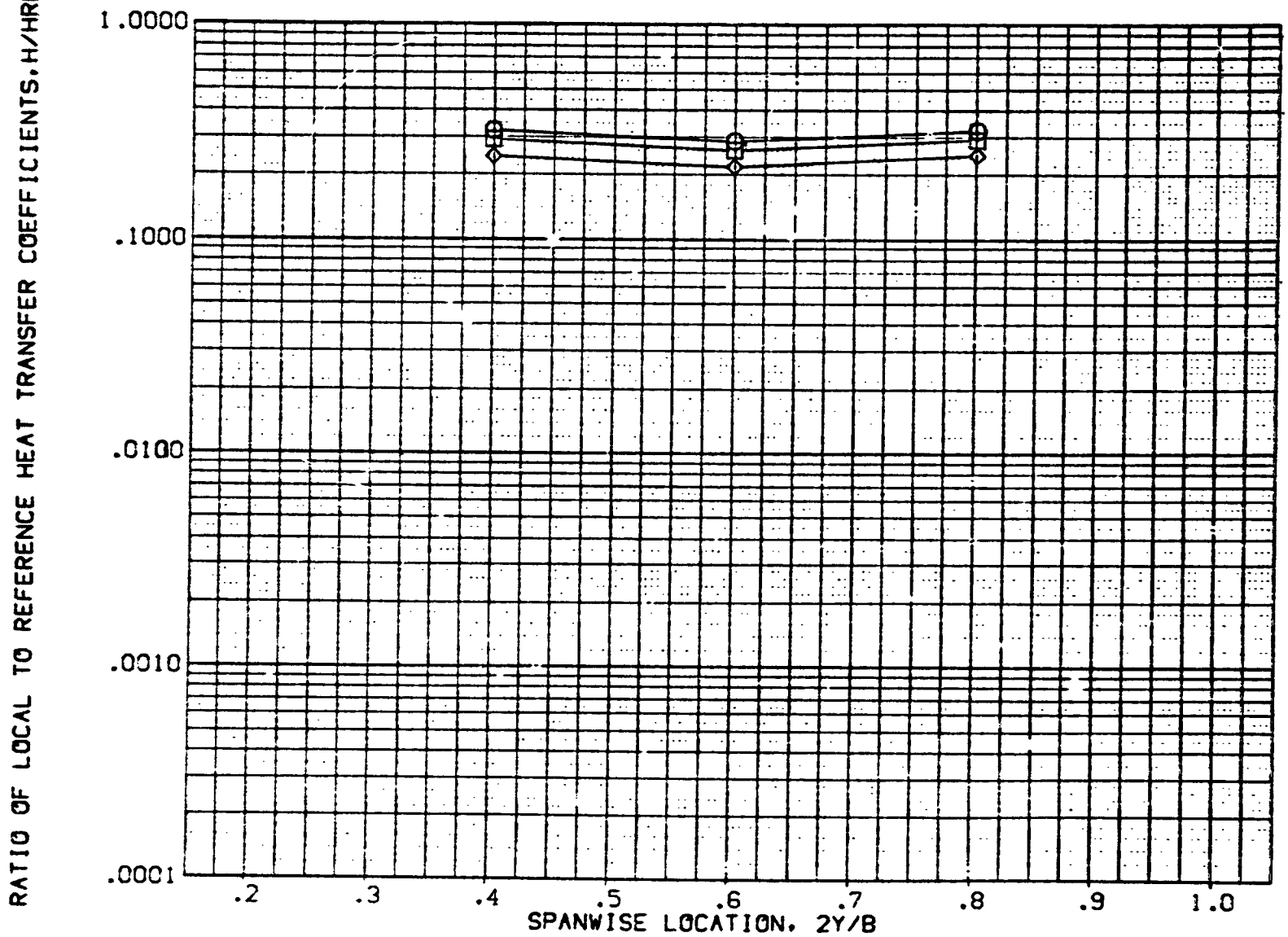

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG07)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -90.000 BETA .000

RN/L 1.000

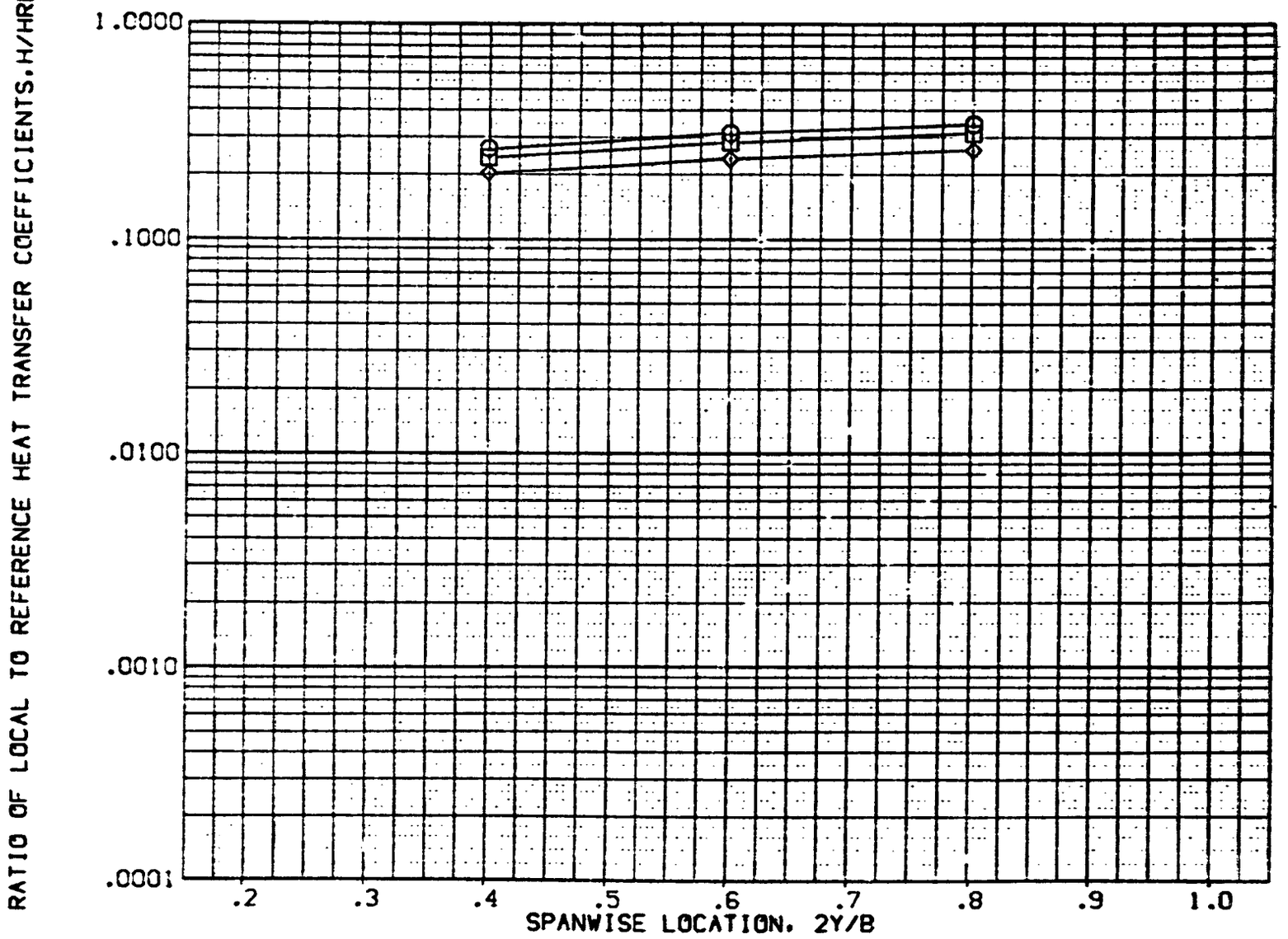

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

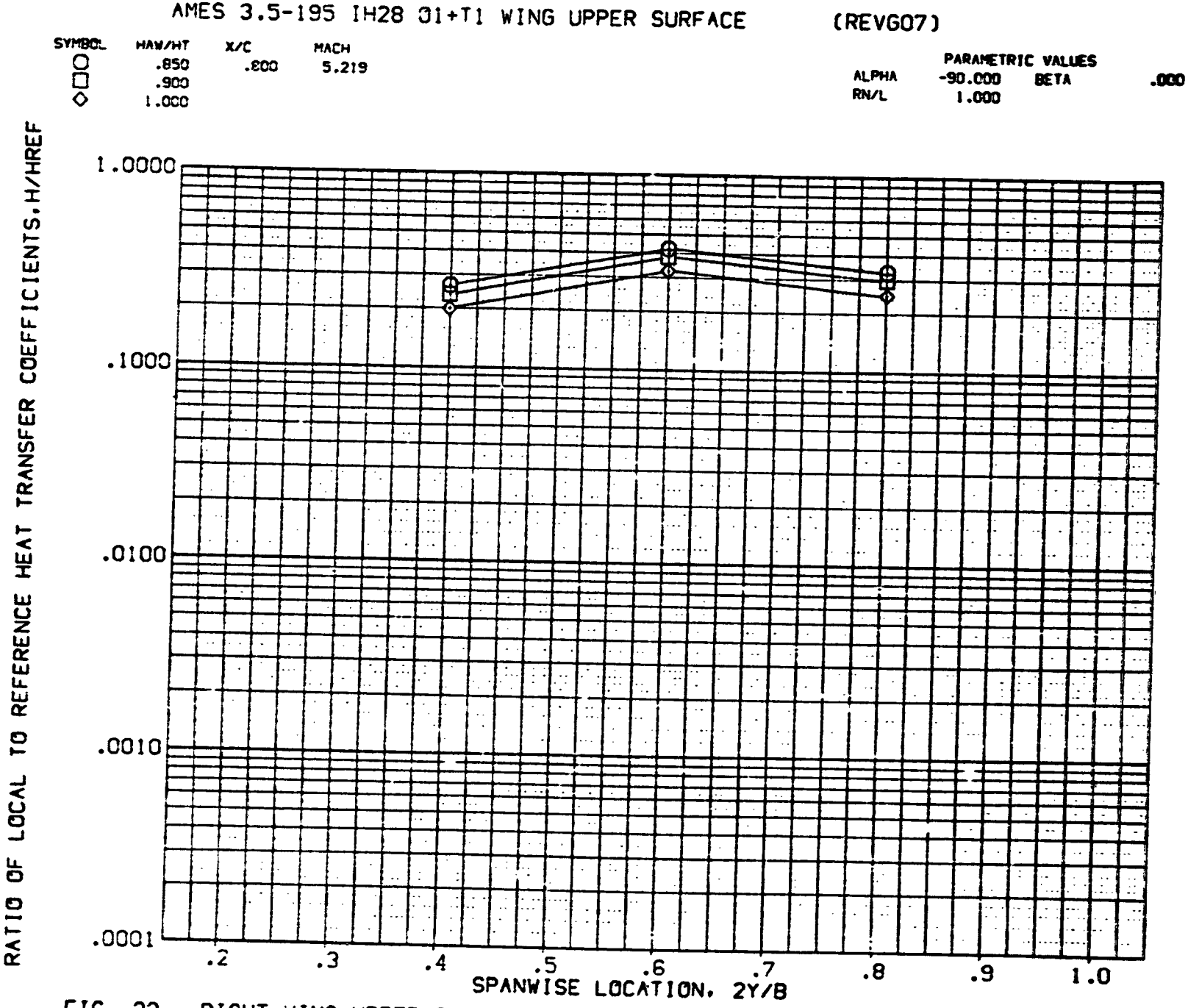

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

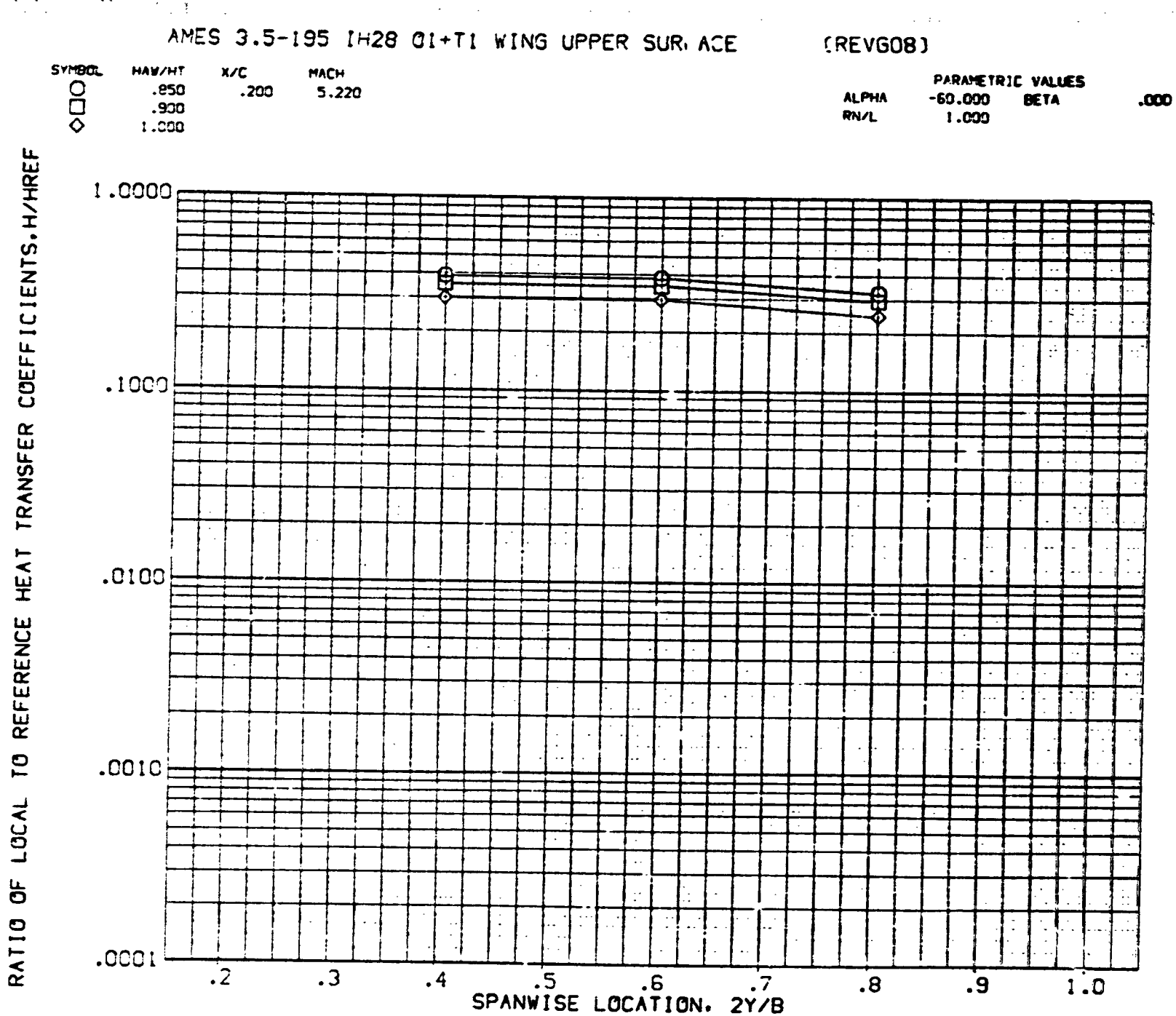

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

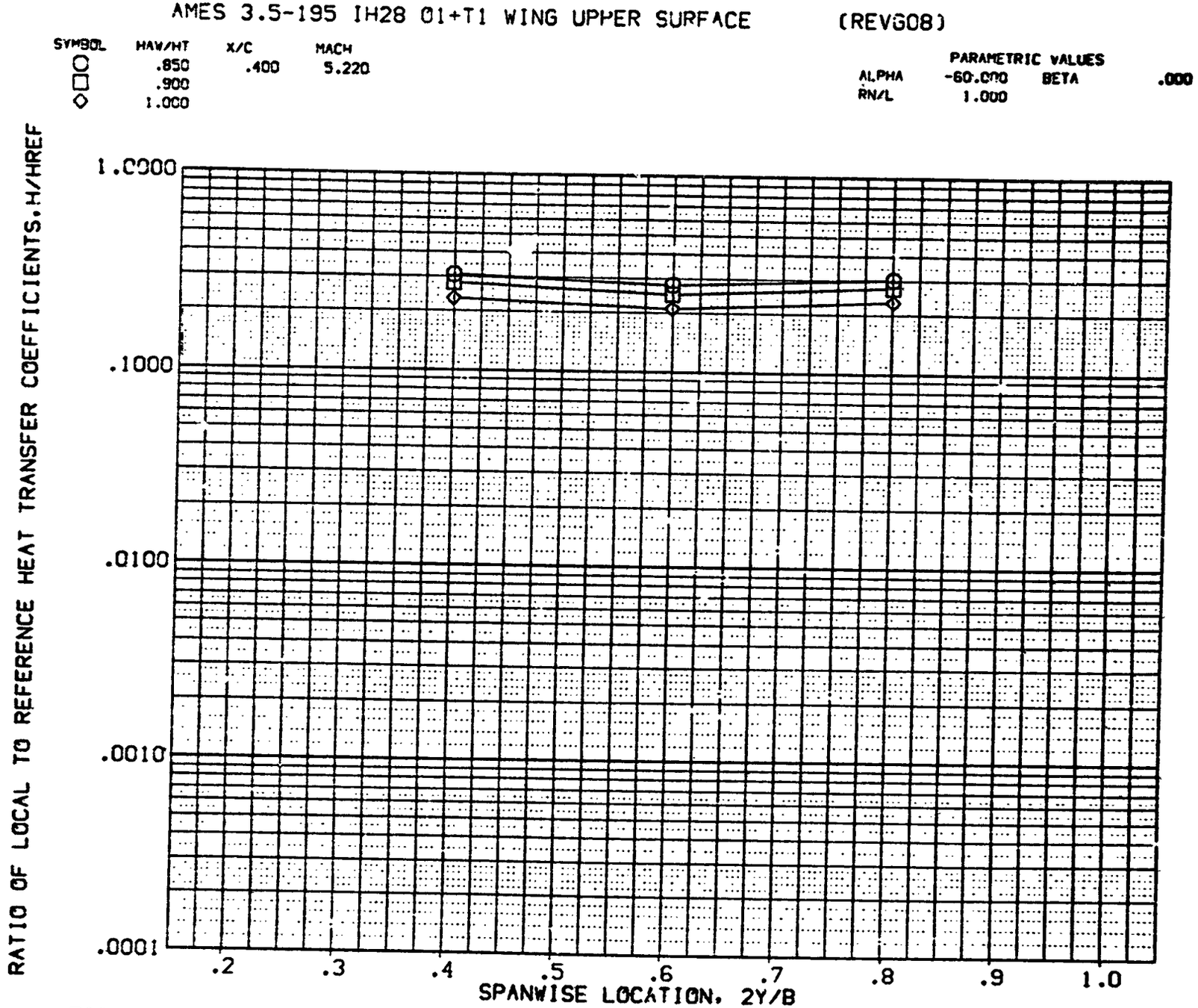

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG08)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

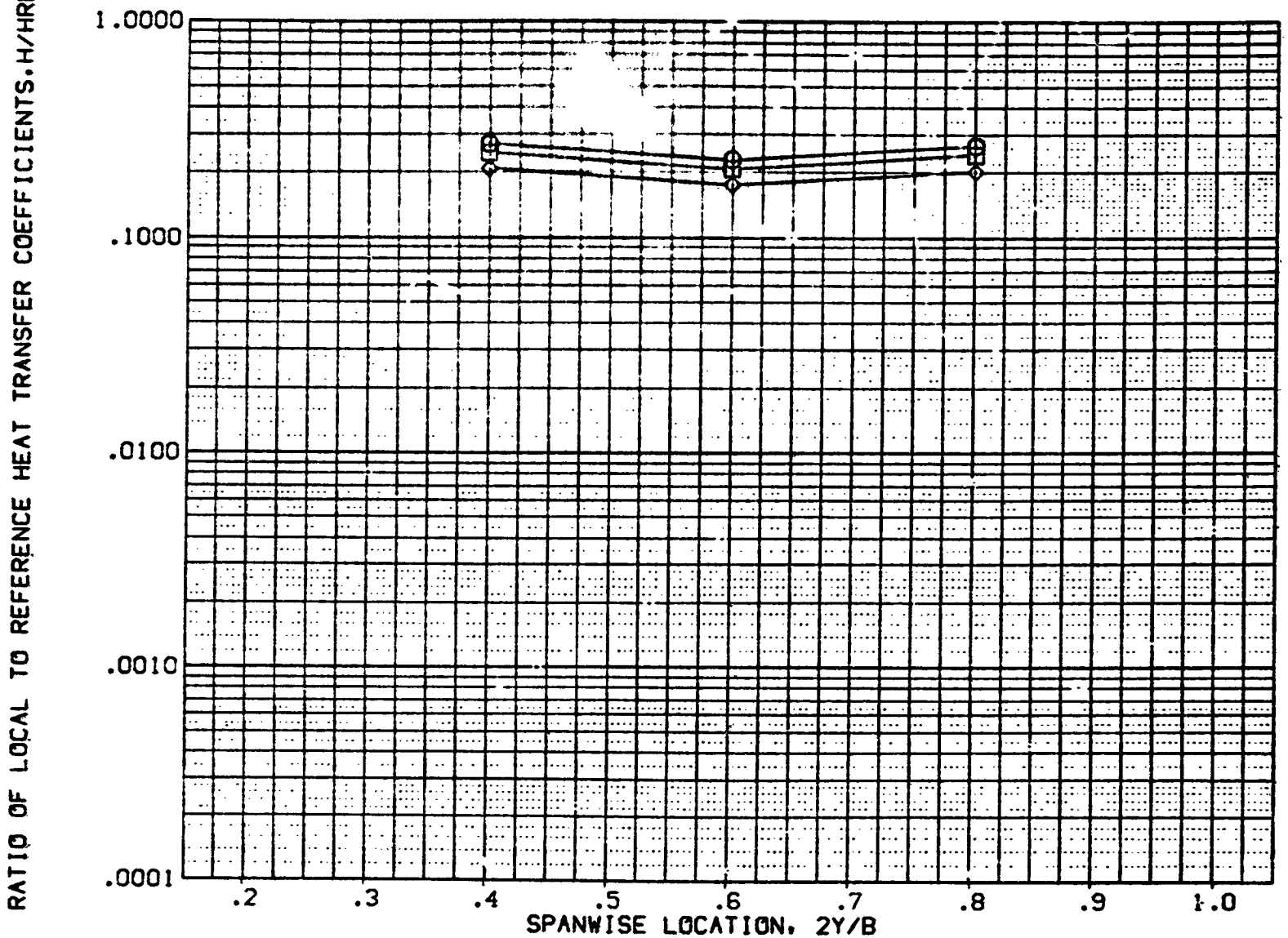

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

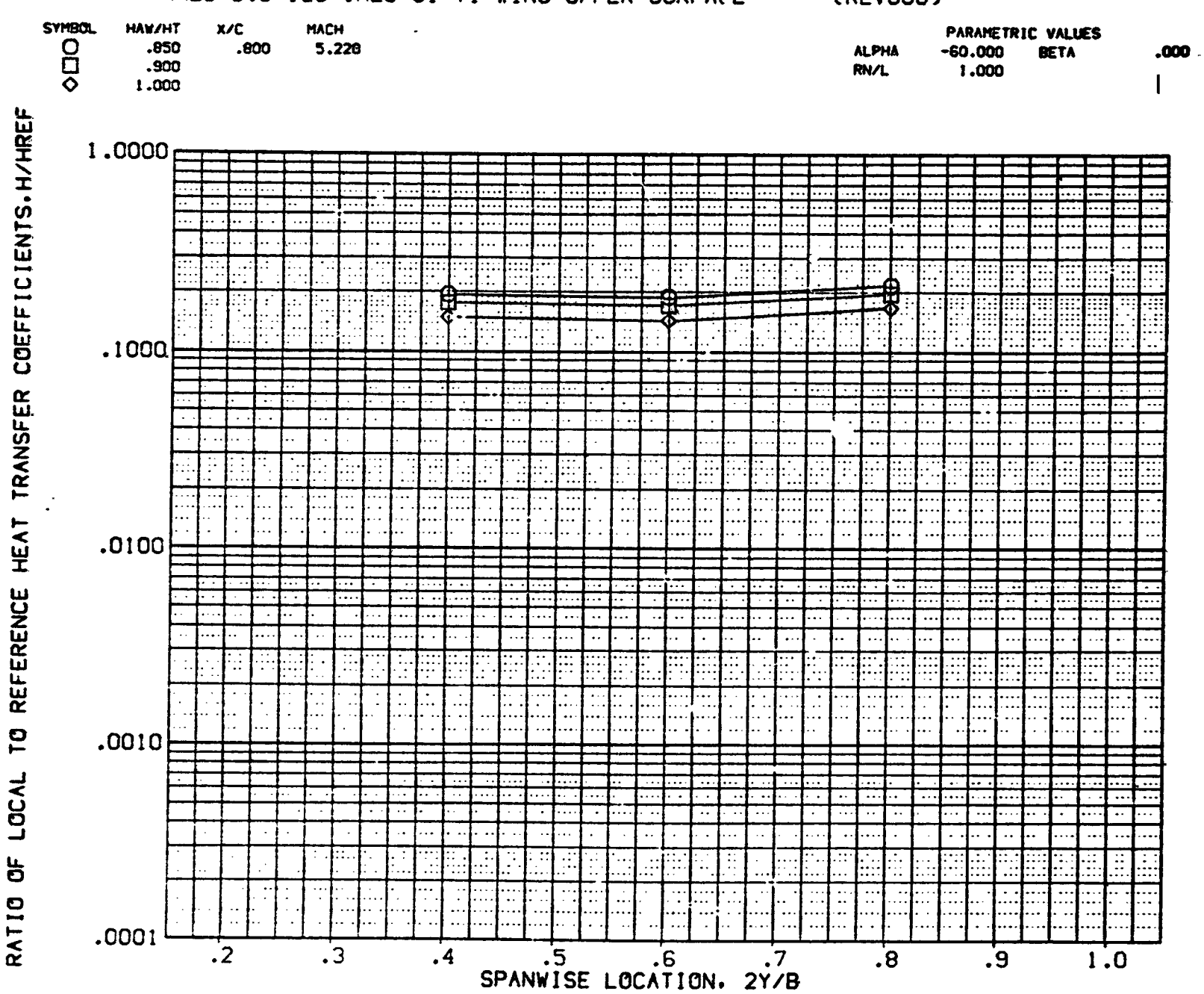

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

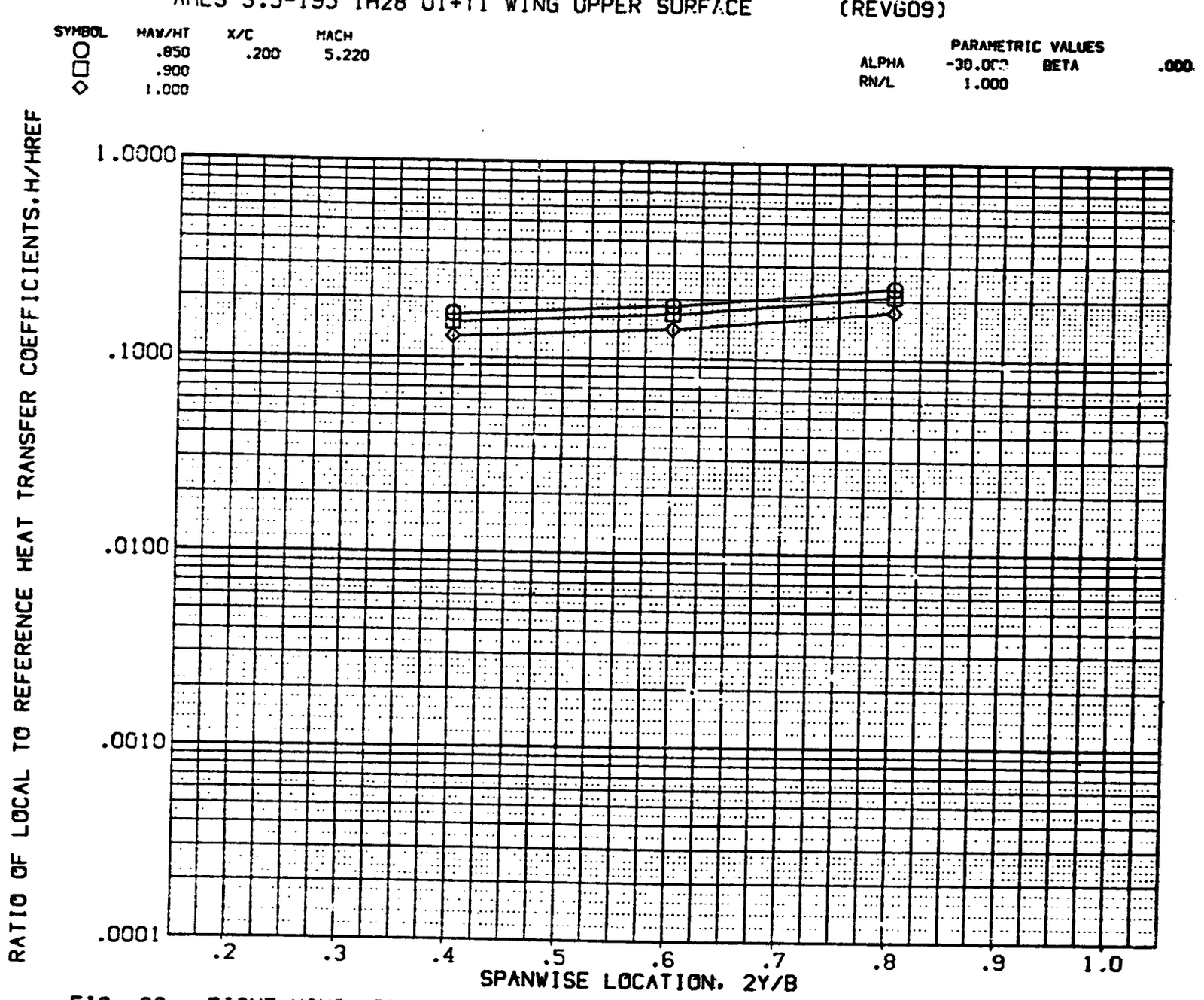

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG09)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.400	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA -30.000 BETA .000

RN/L 1.000

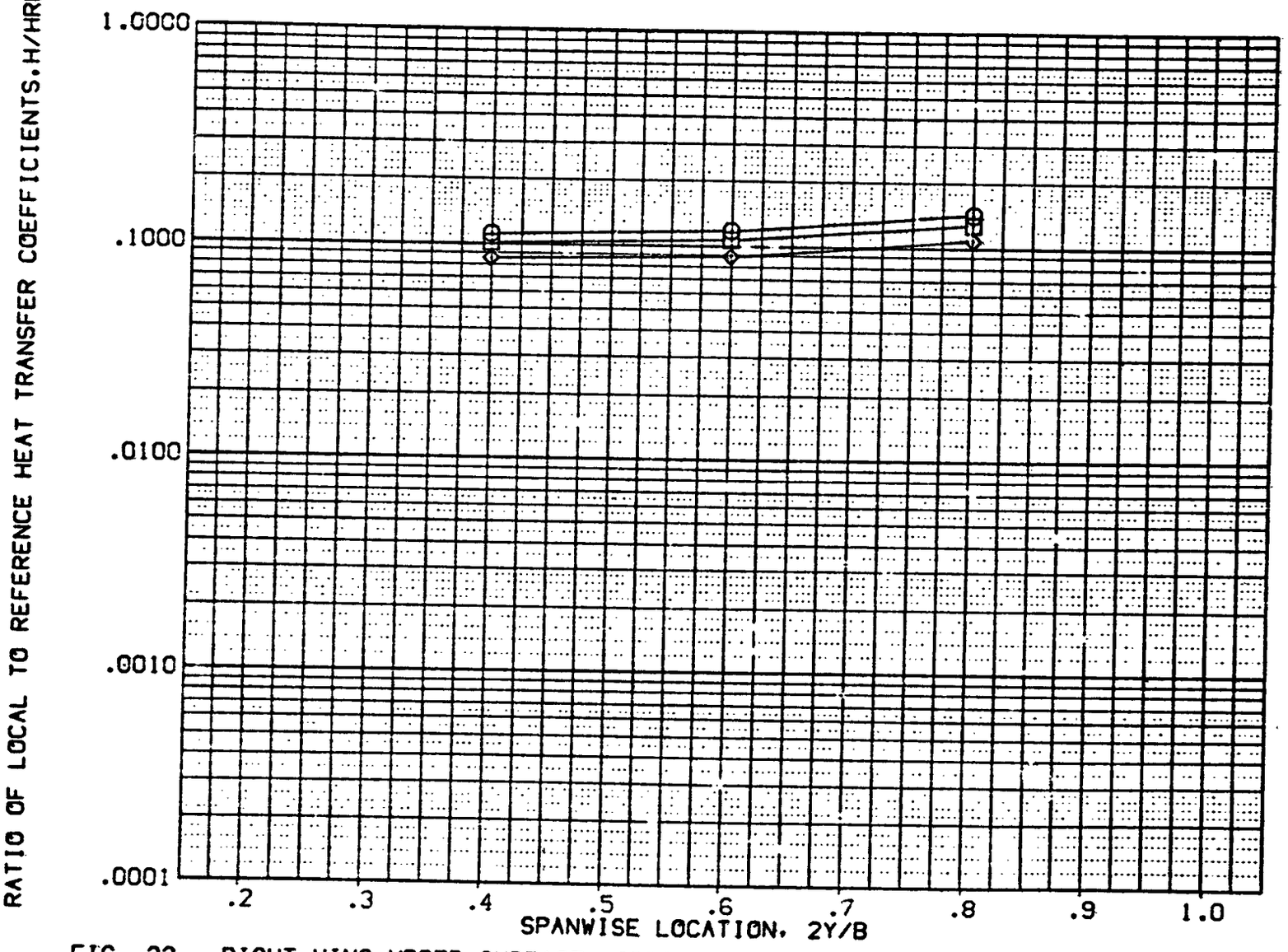

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG09)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.0[illegible]	BETA	.000
RN/L	1.009		

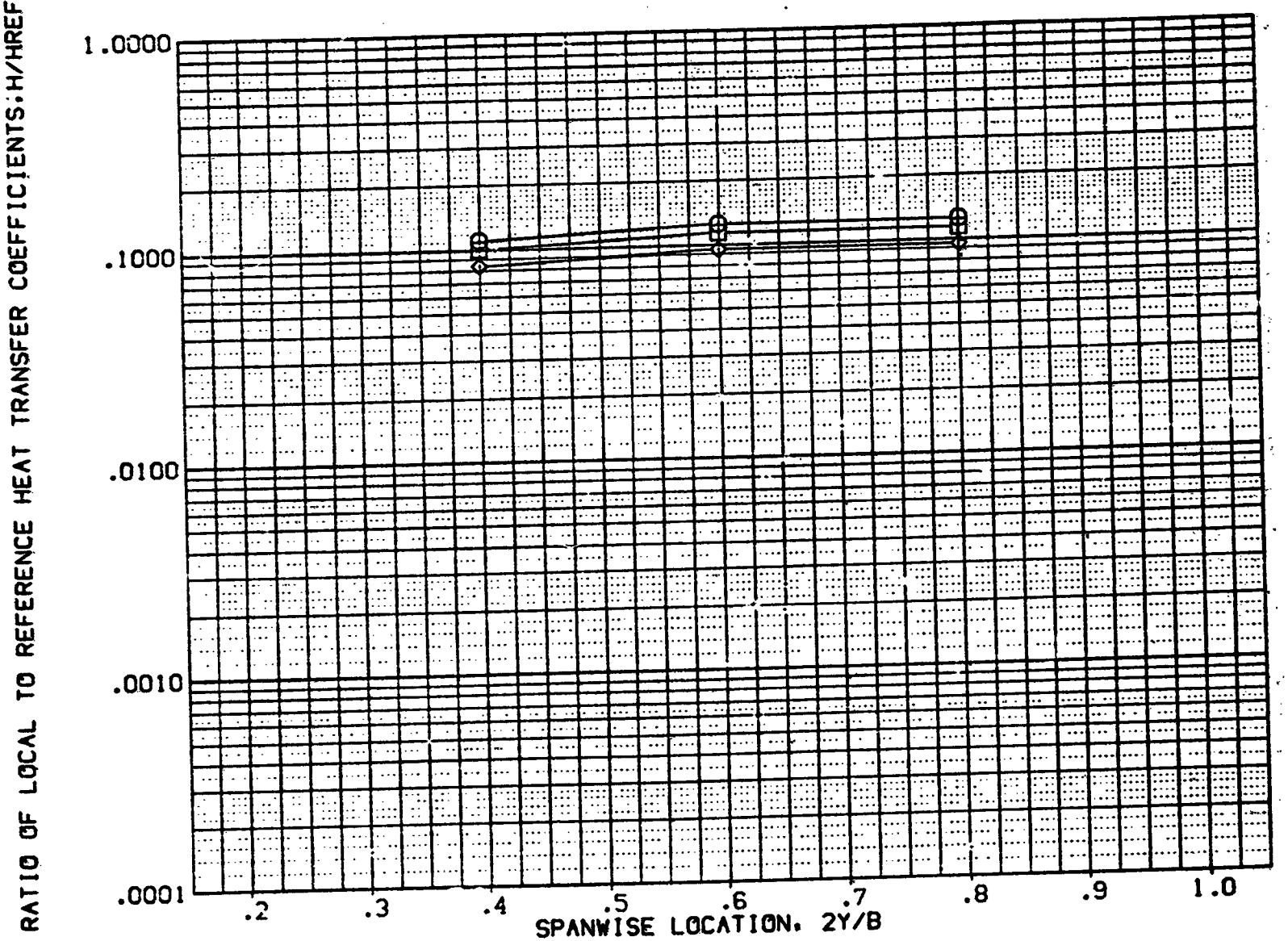

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG09)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

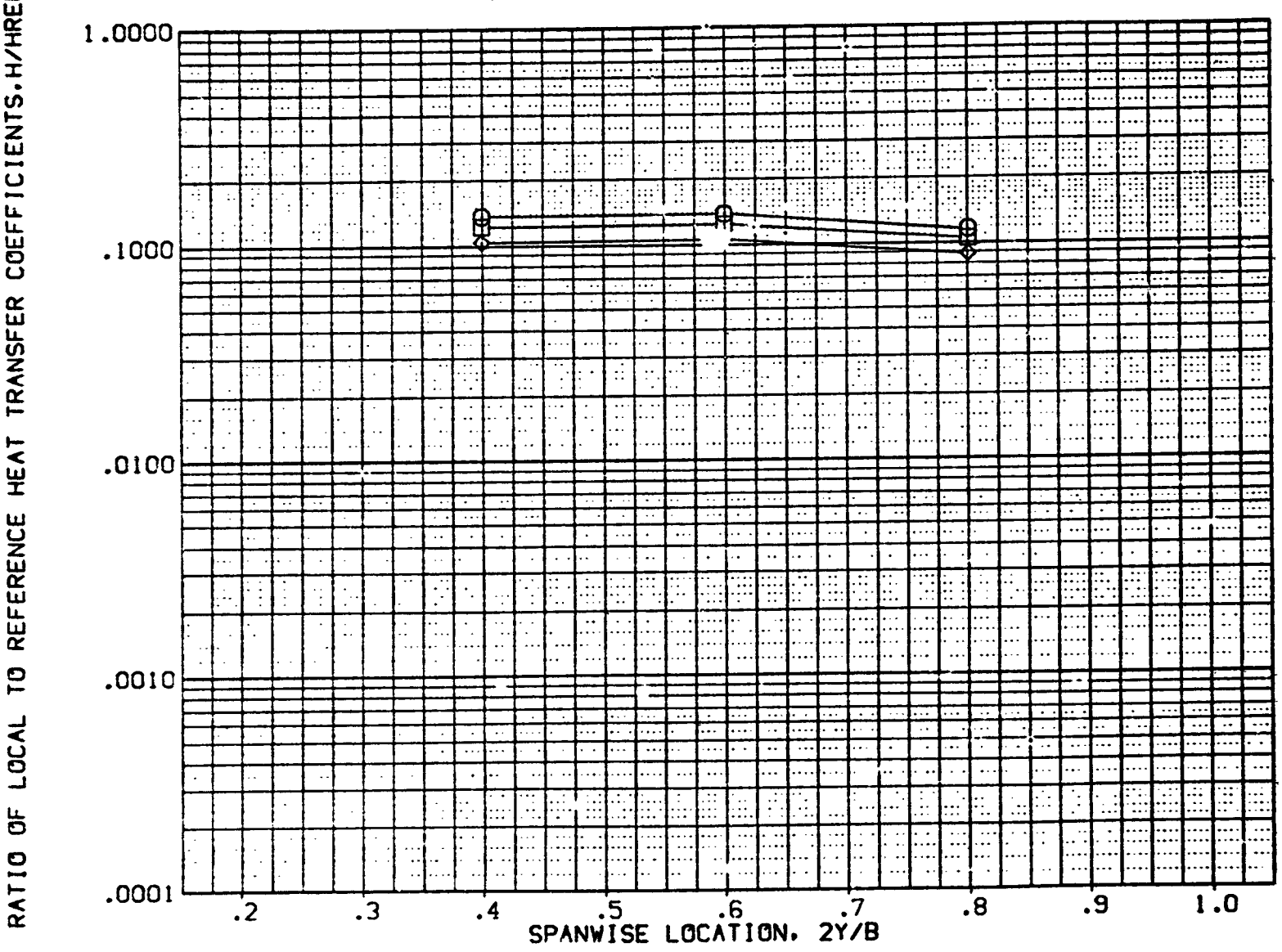

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

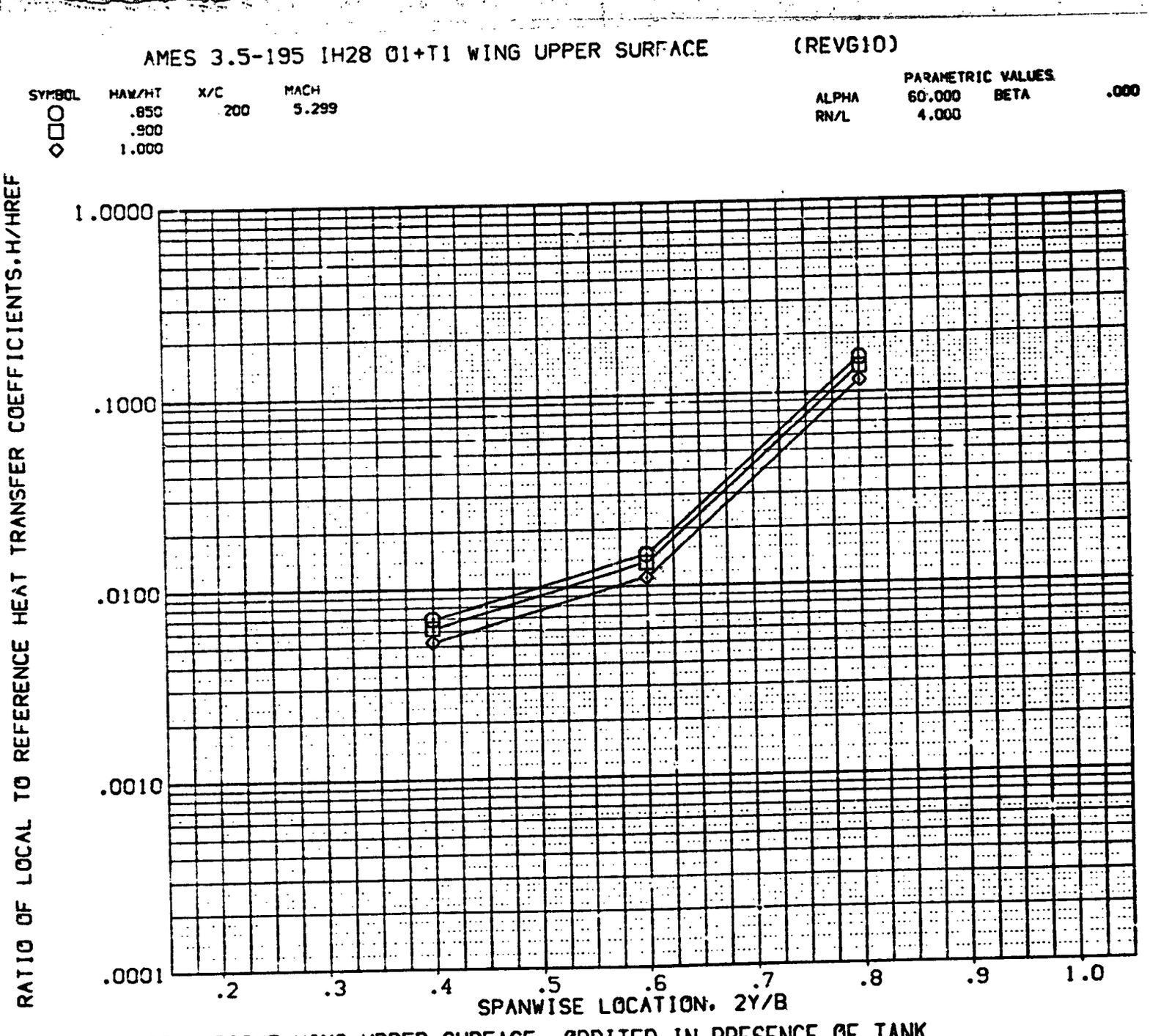

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

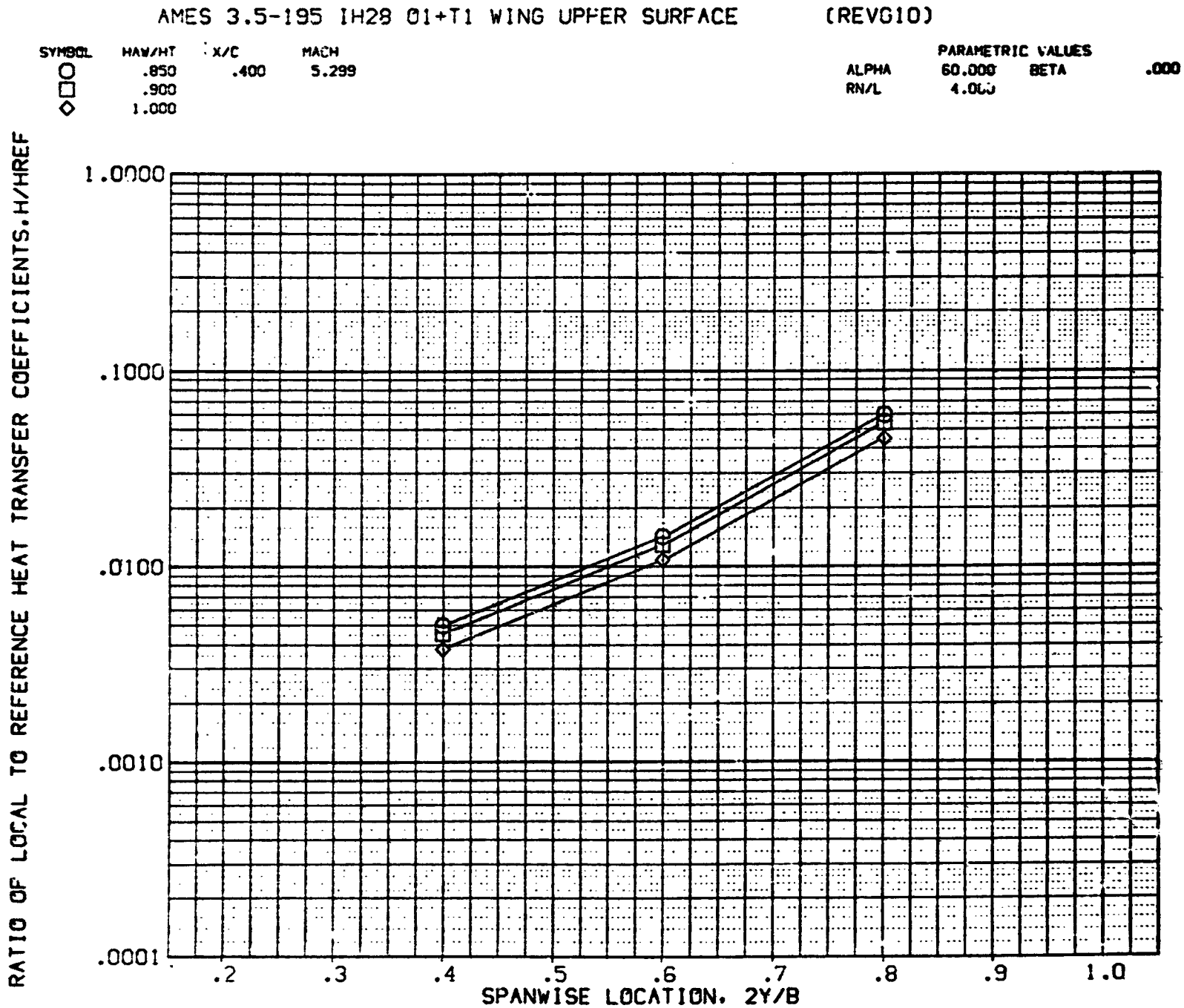

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG10)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.299
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	4.000		

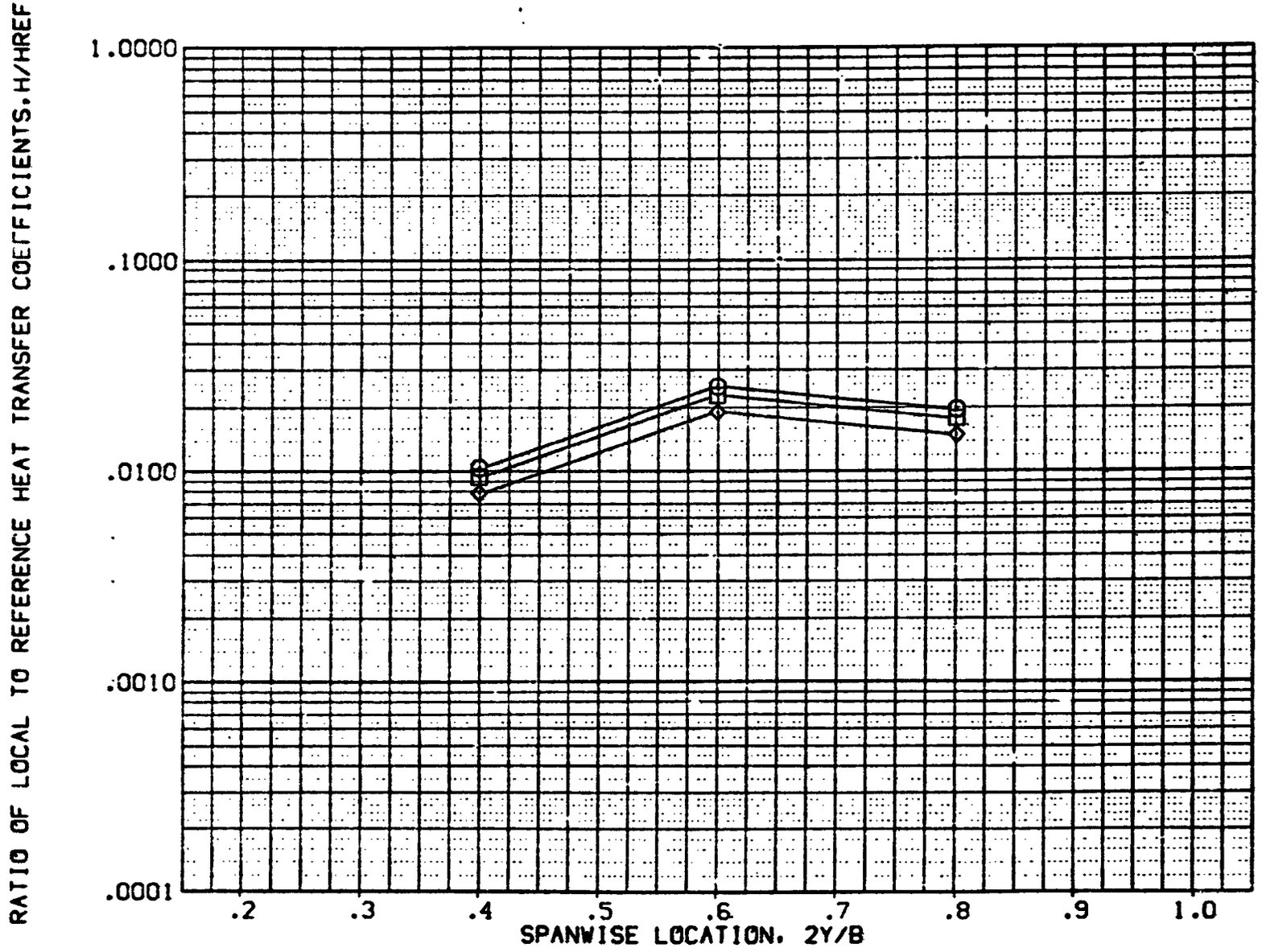

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

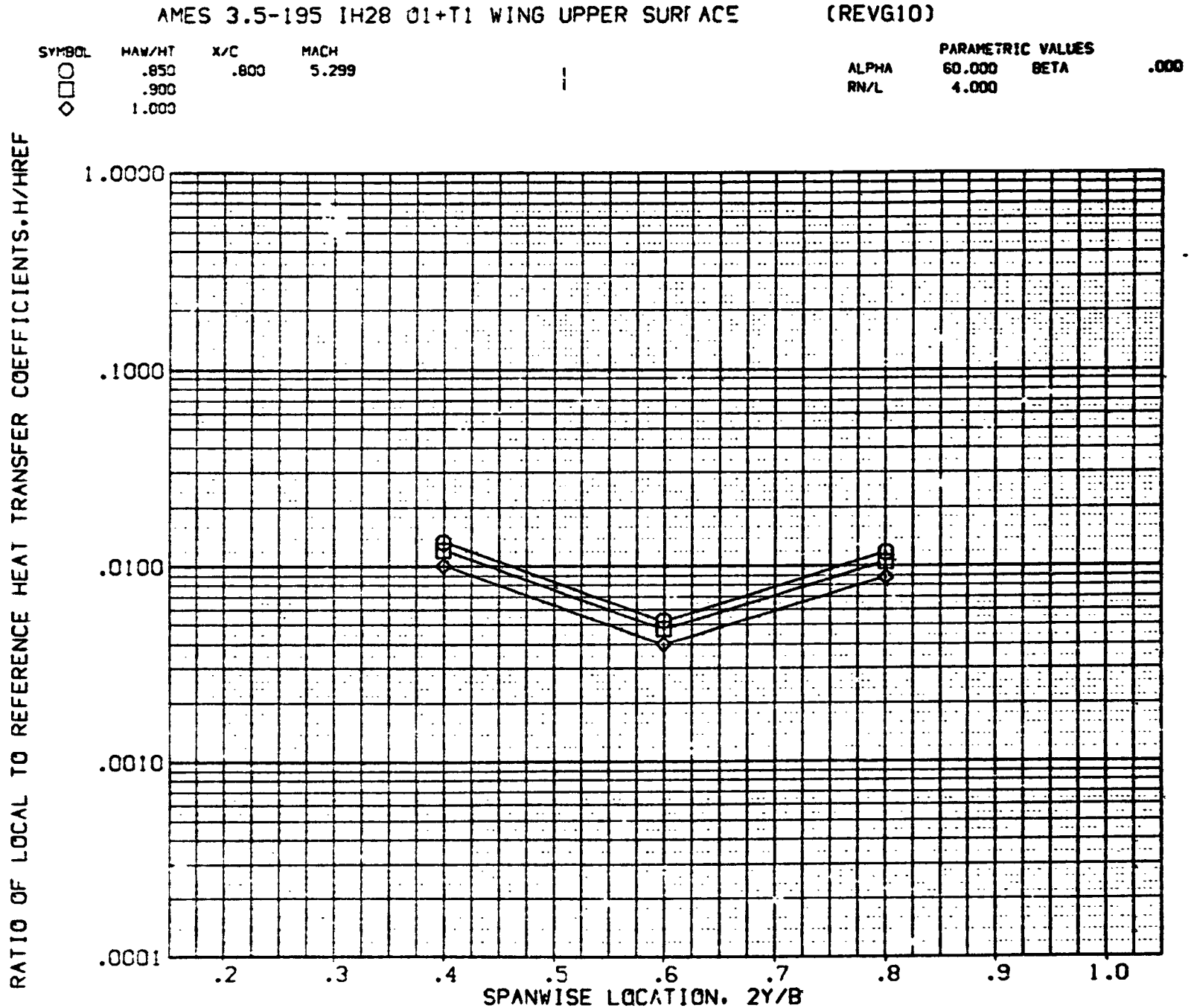

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG11)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.300
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	4.000		

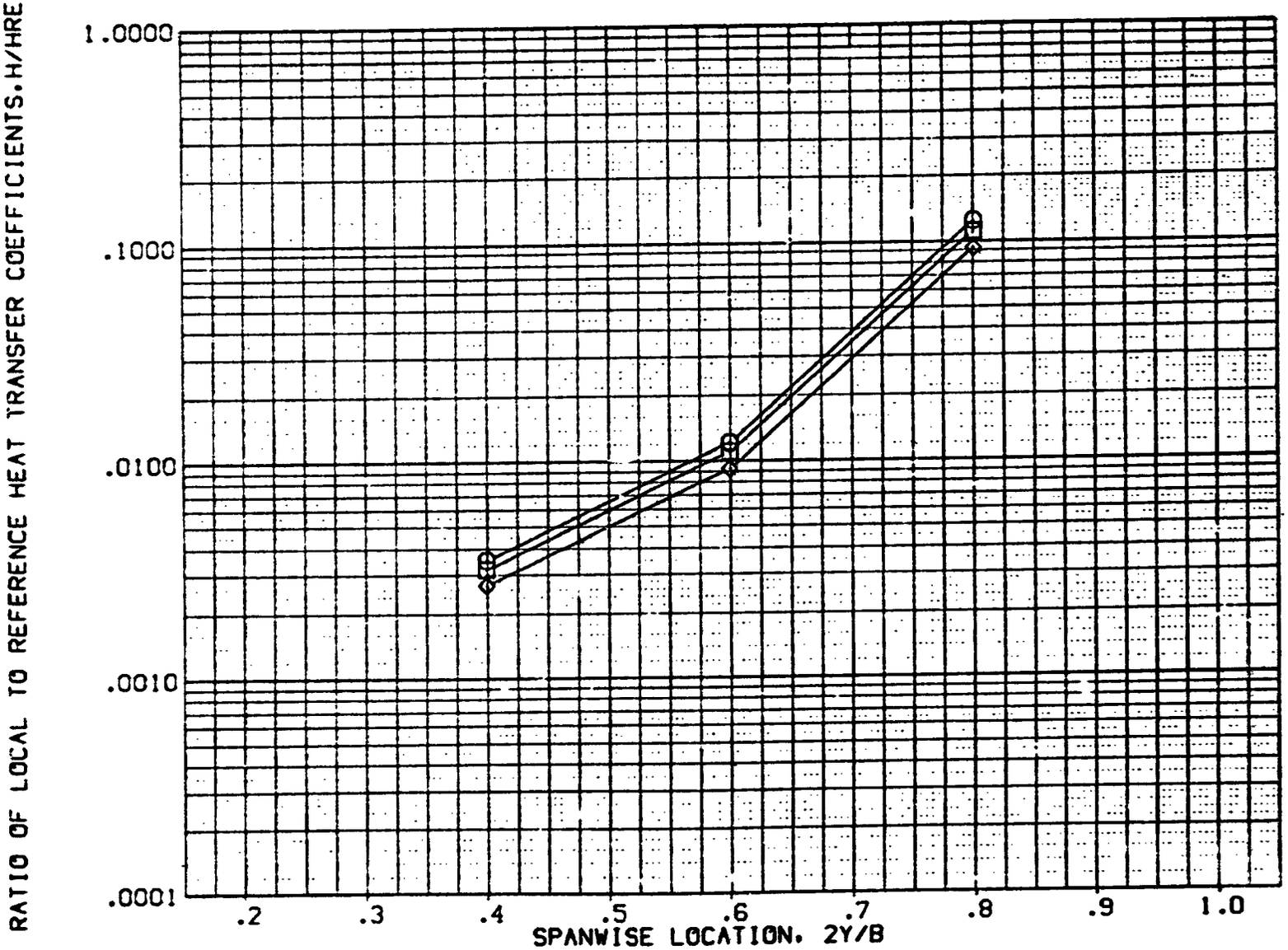

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

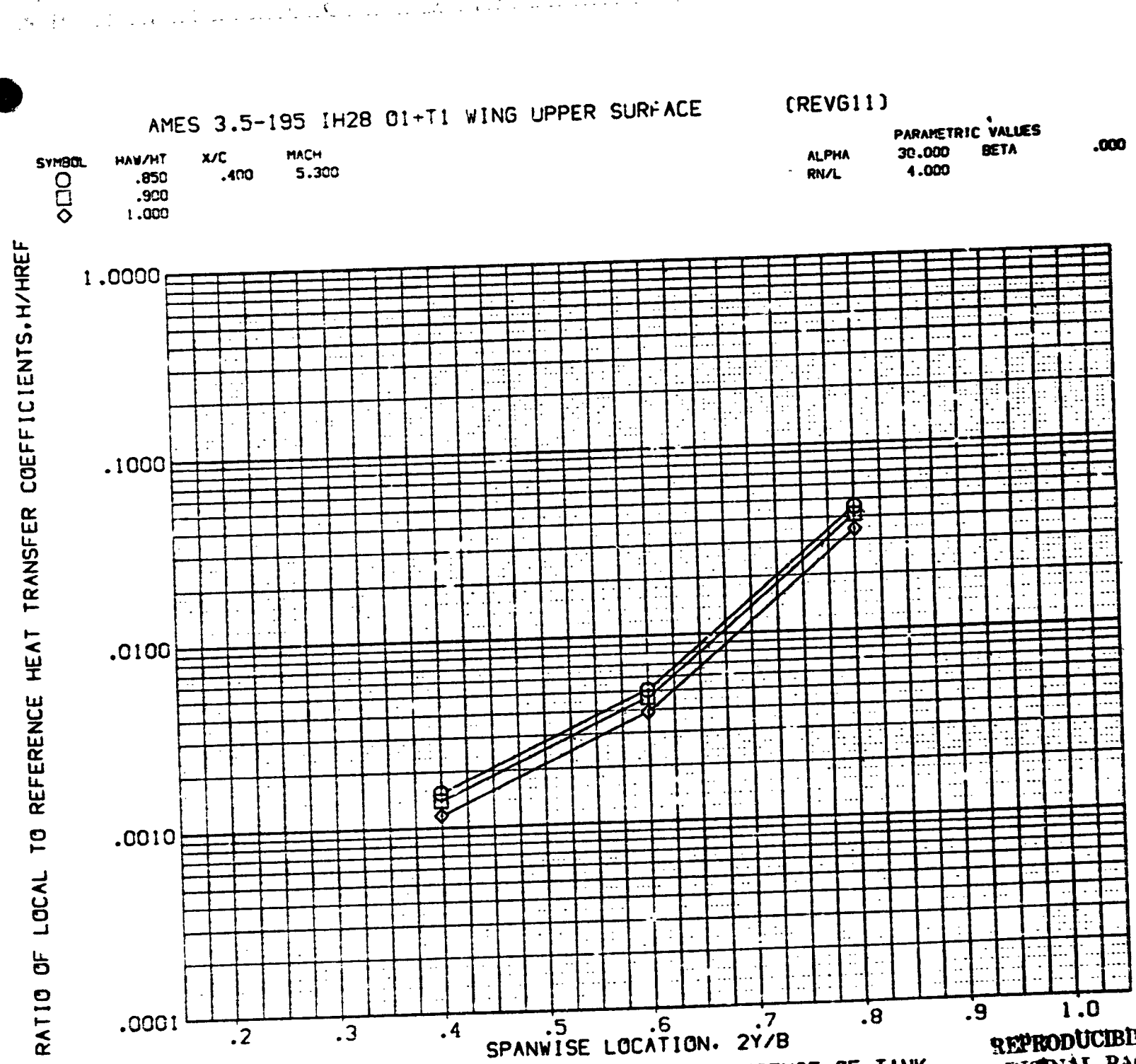

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

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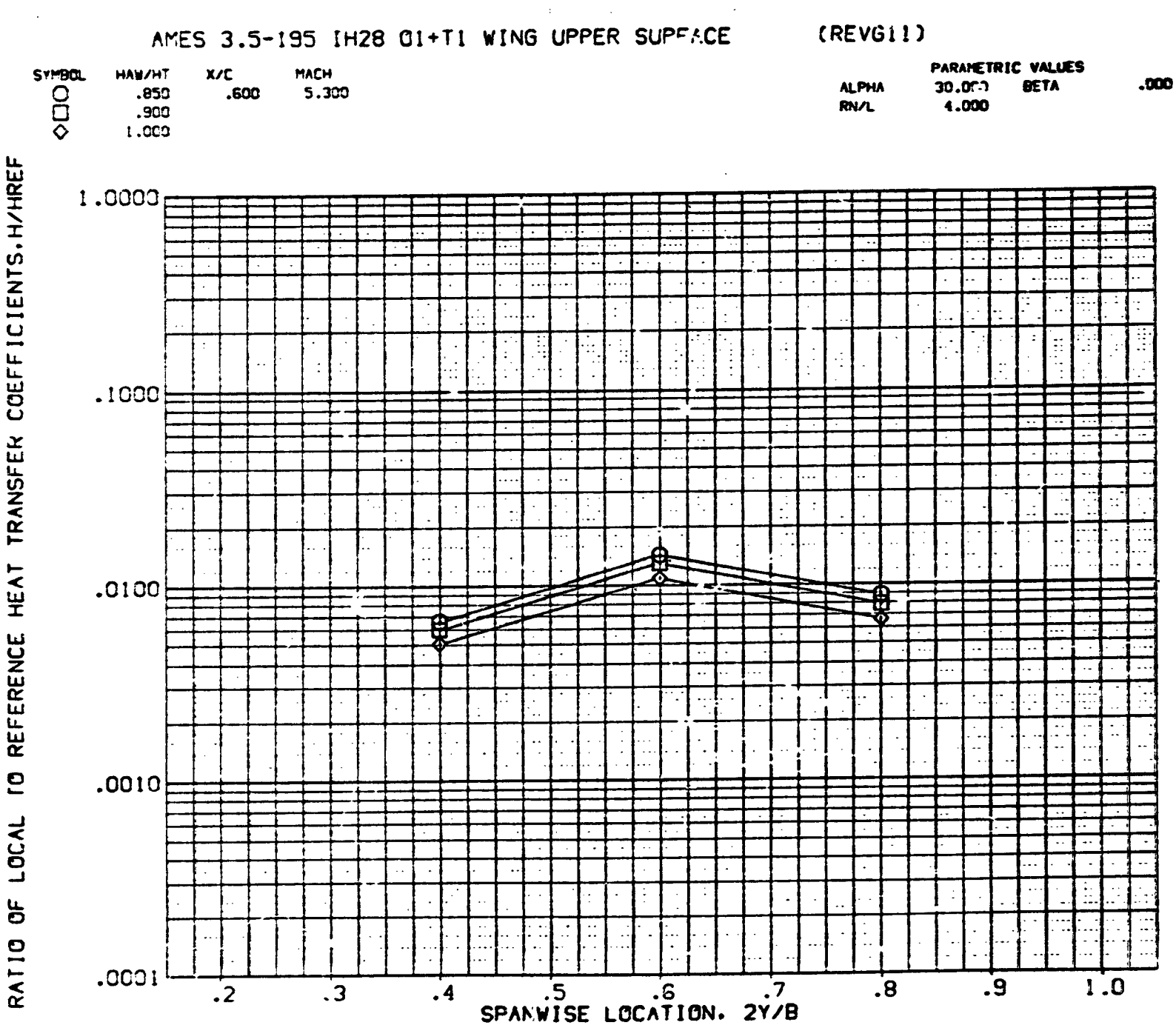

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG11)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.300
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	4.000		

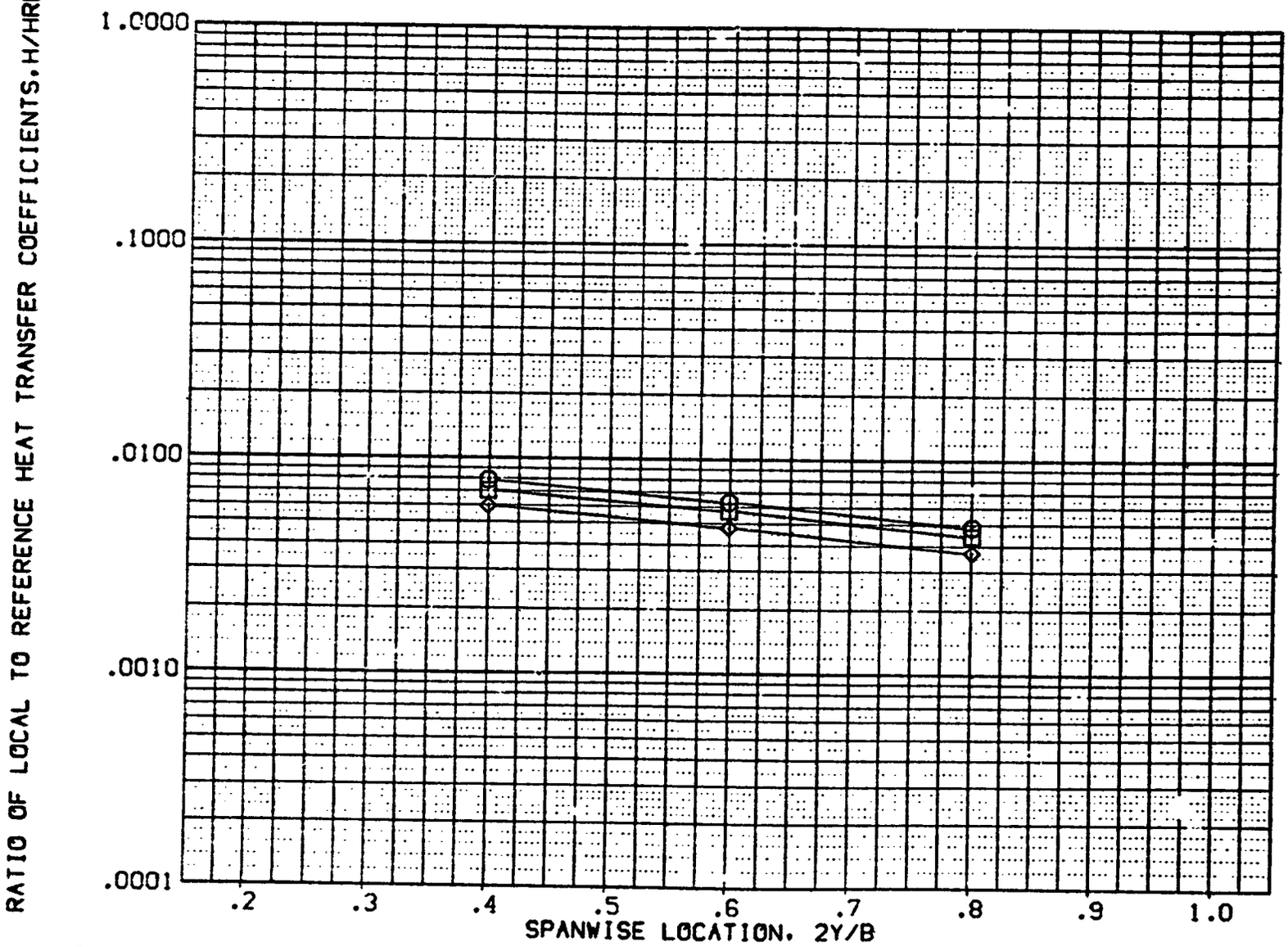

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG12)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.200	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

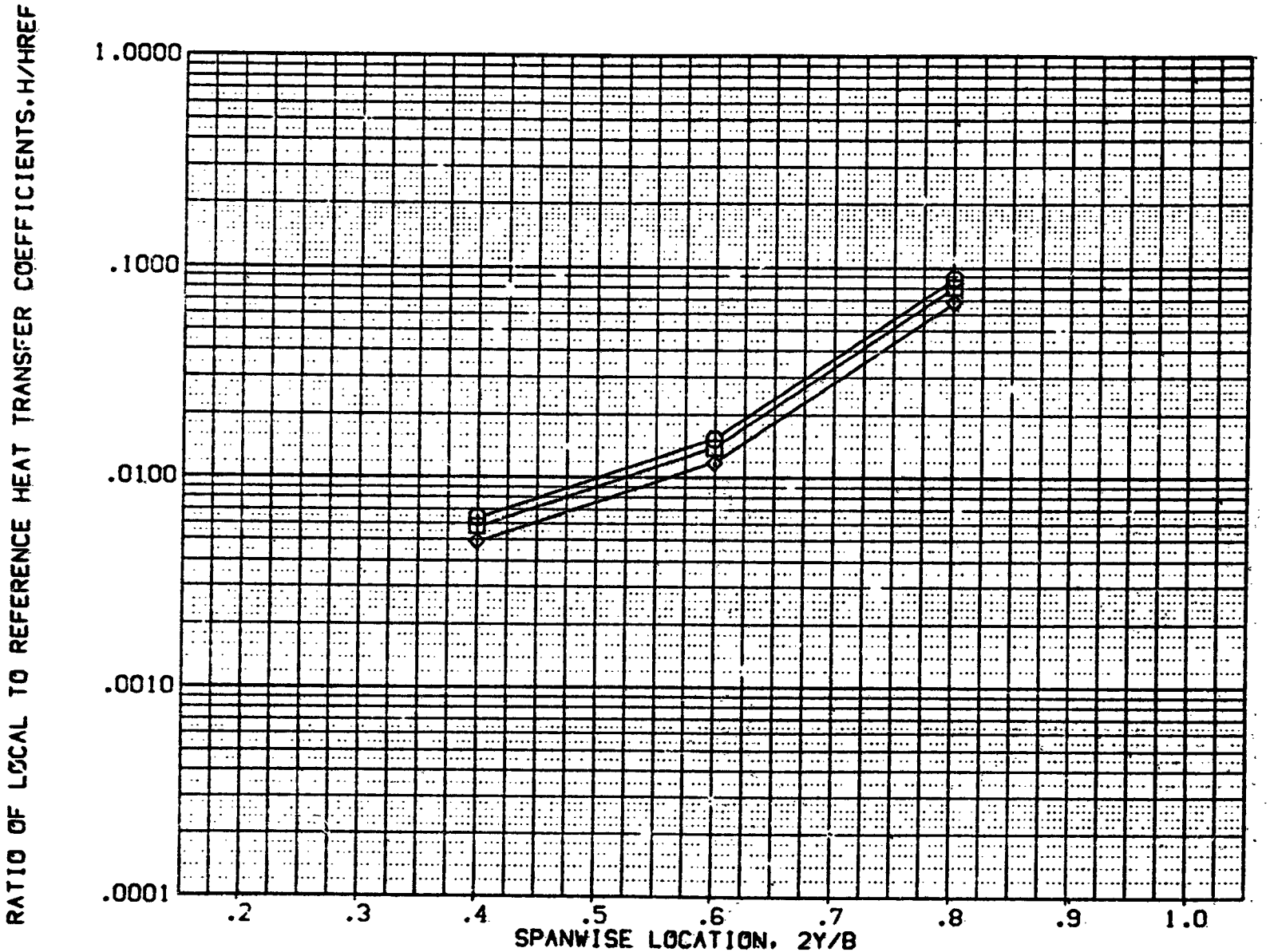

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

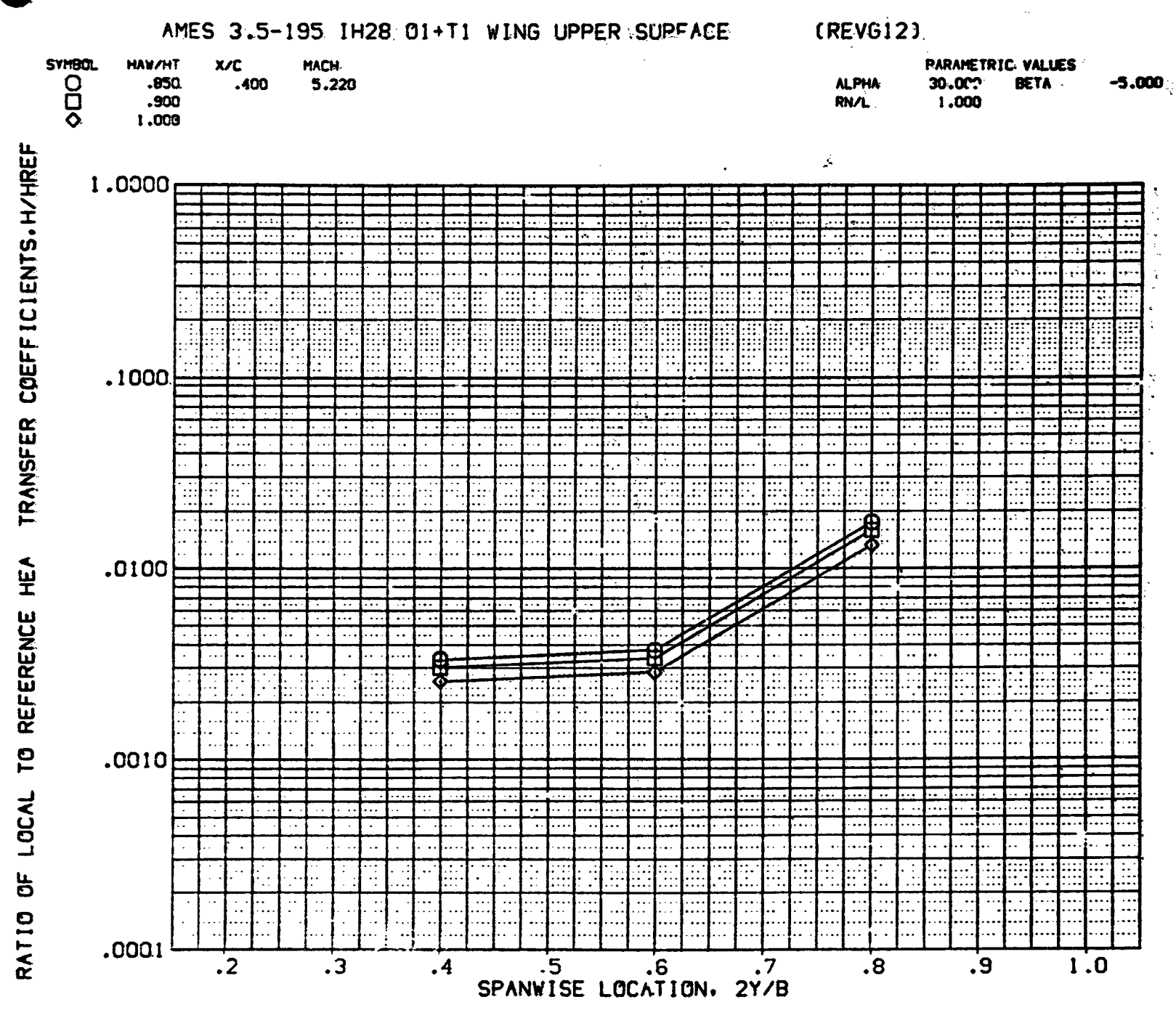

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG12)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.600	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

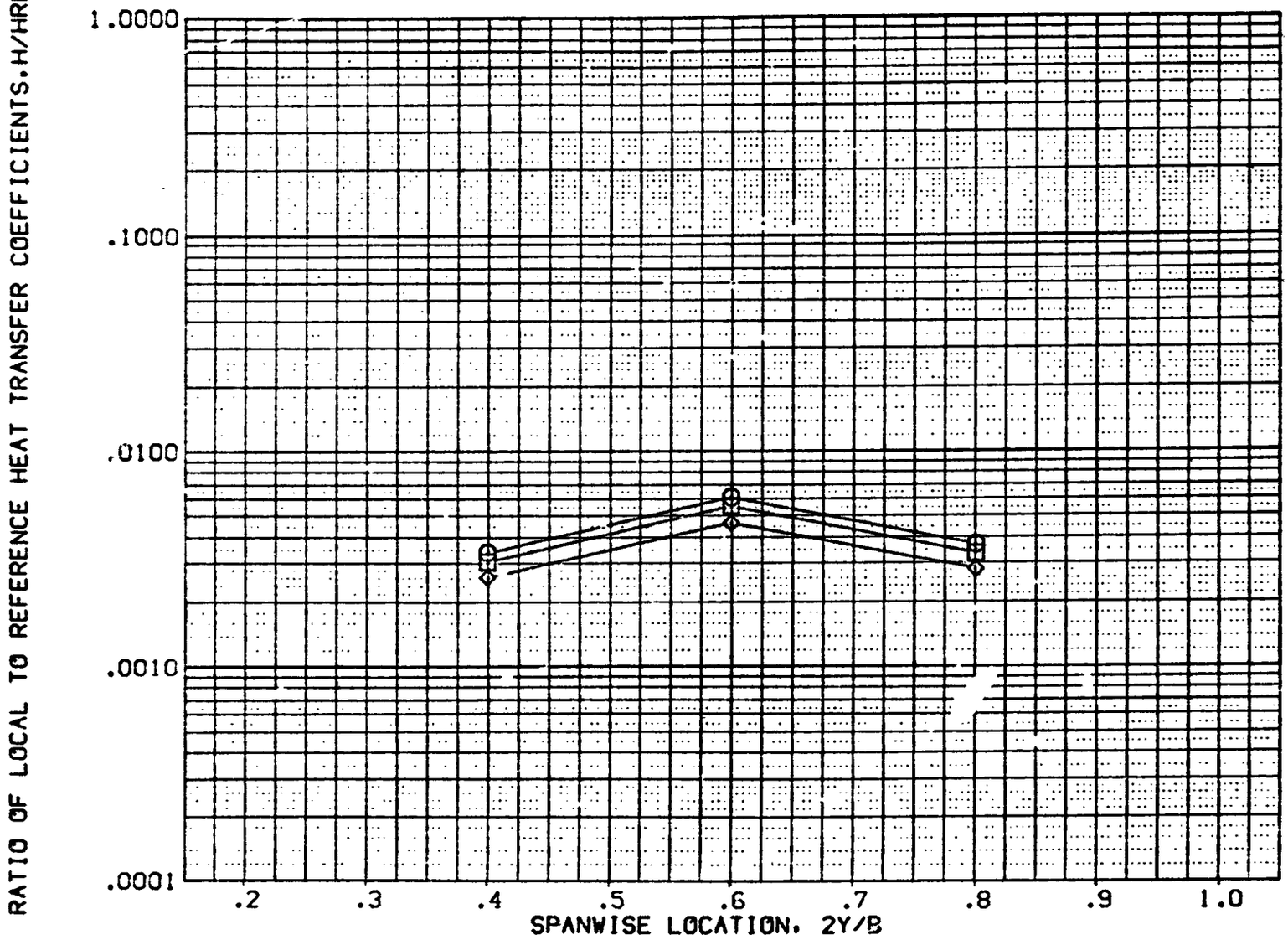

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (REVG12)

SYMBOL	HAW/HT	X/C	MACH
○	.850	.800	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

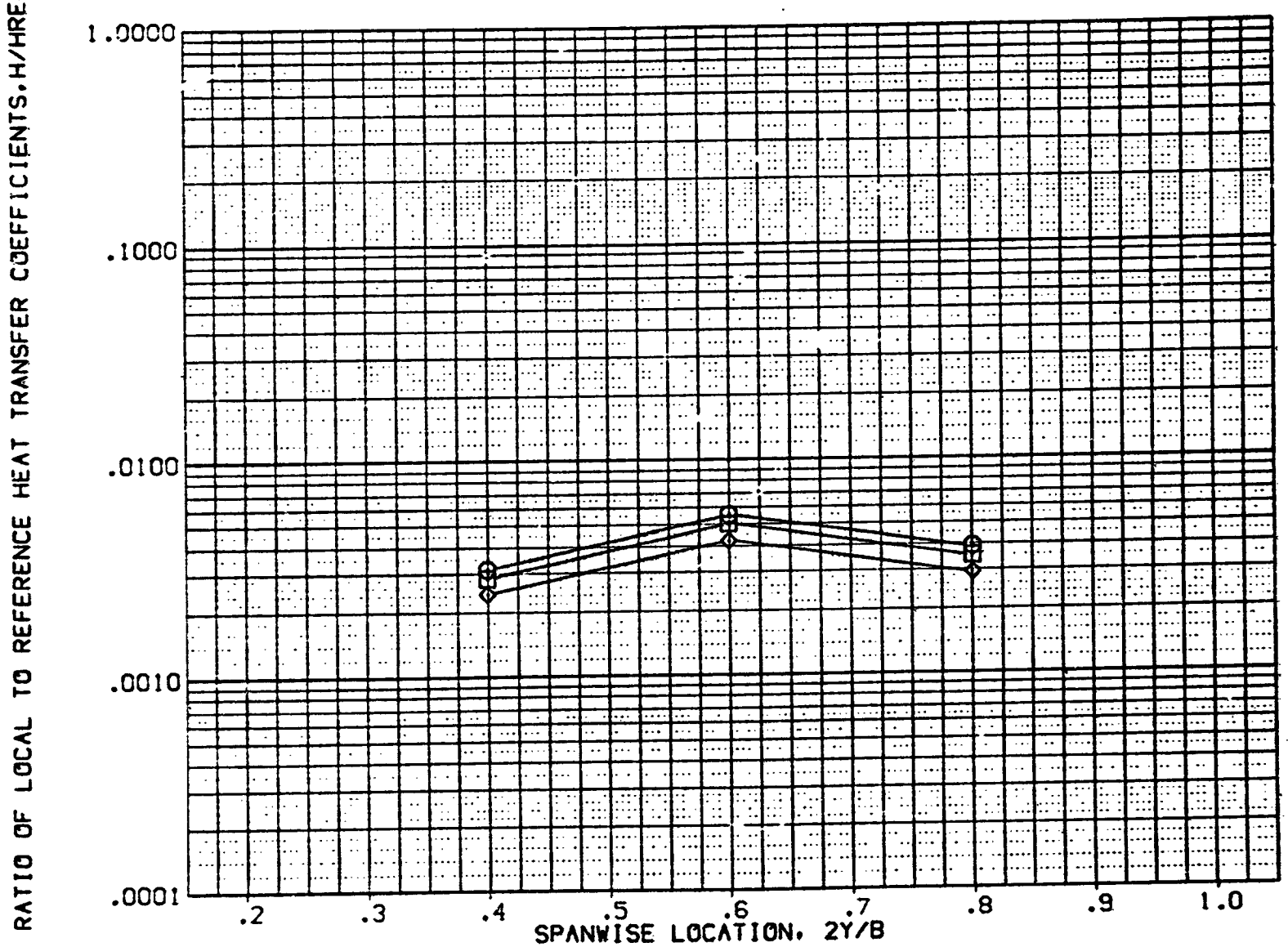

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVGO1)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVGO2)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVGO3)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVGO4)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	90.000	.000	1.000
(REVGO5)	▷	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	120.000	.000	1.000

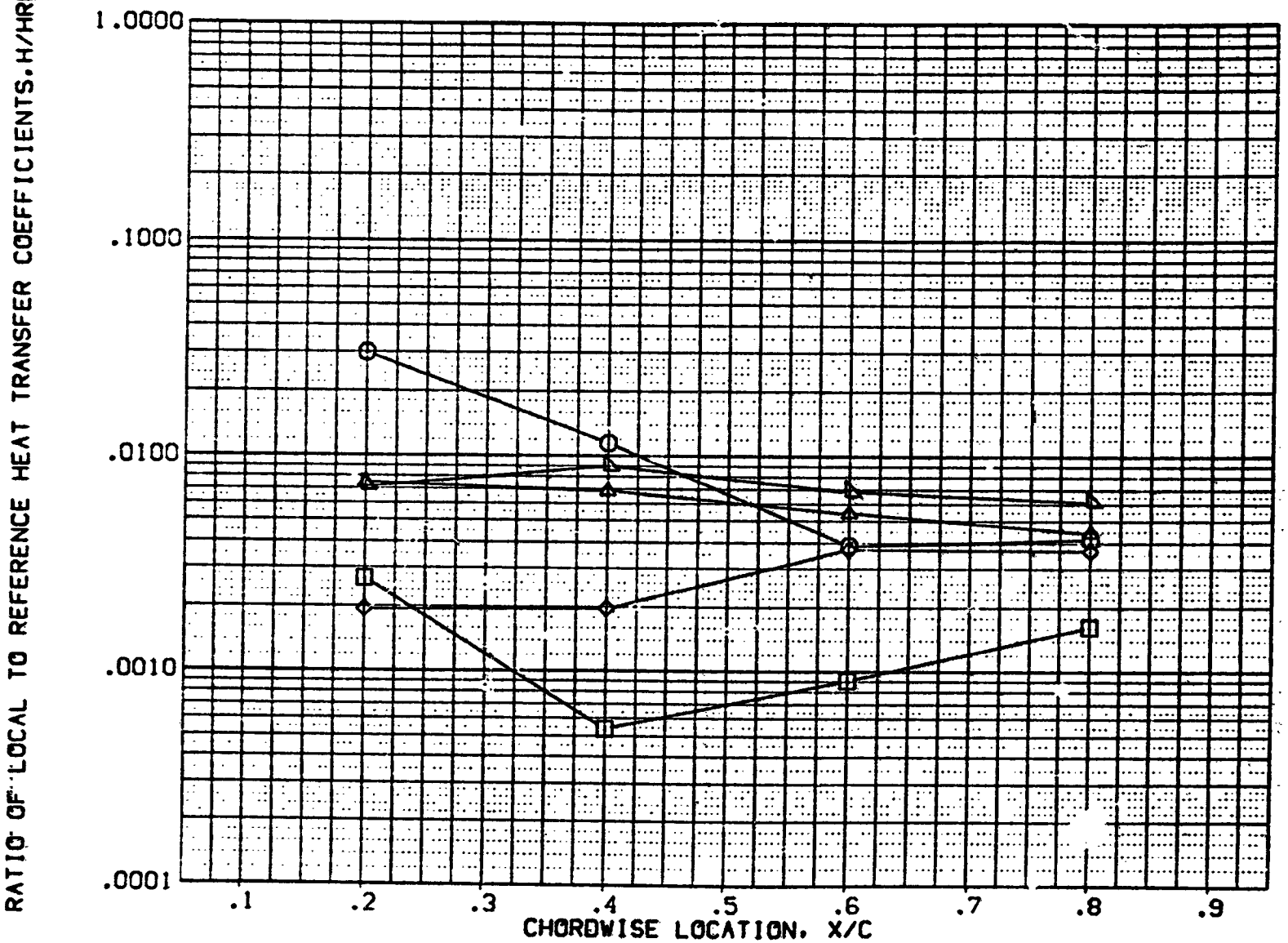

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG02)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG03)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG04)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	90.000	.000	1.000
(REVG05)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	120.000	.000	1.000

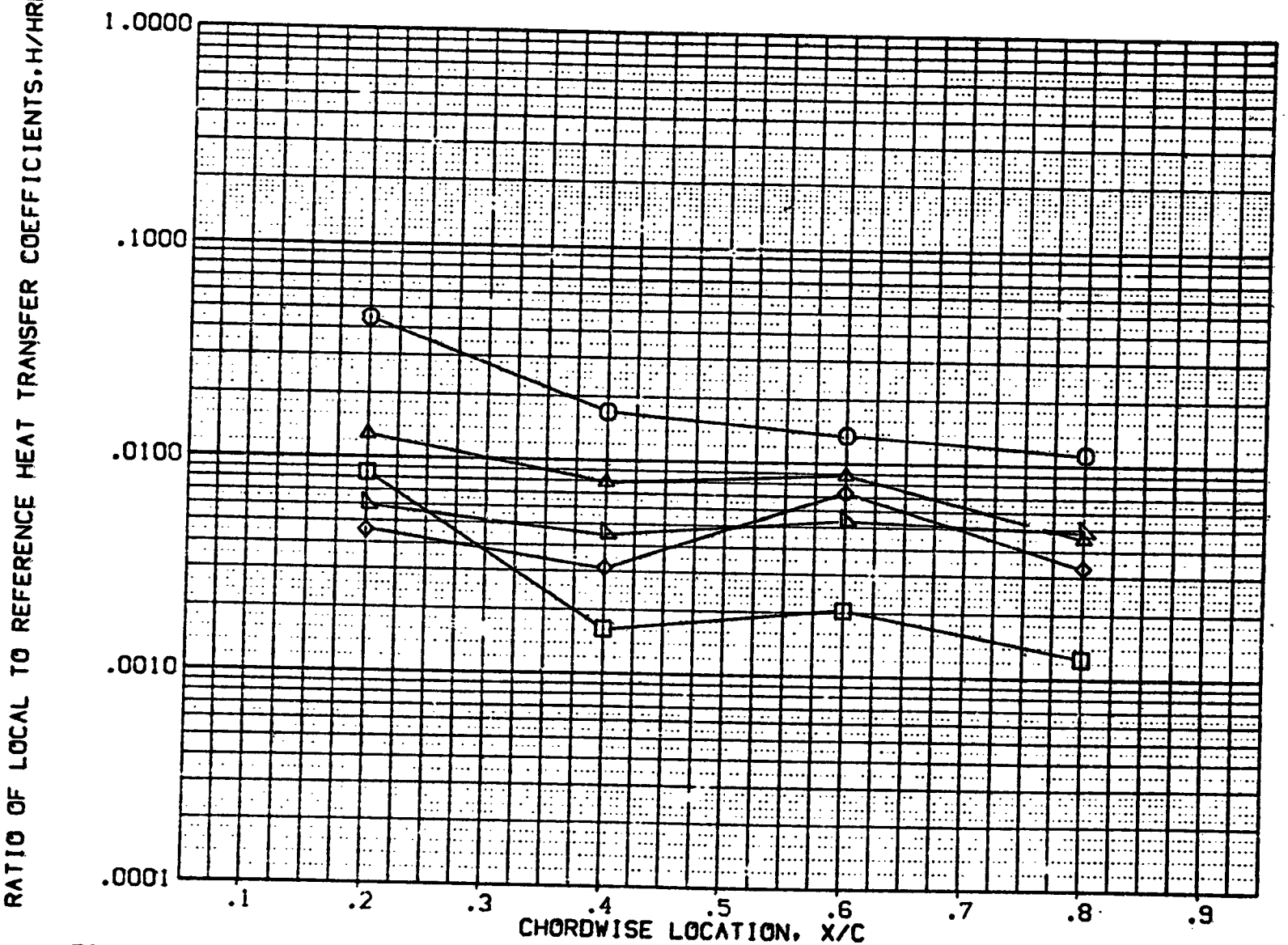

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG02)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG03)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG04)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	90.000	.000	1.000
(REVG05)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	120.000	.000	1.000

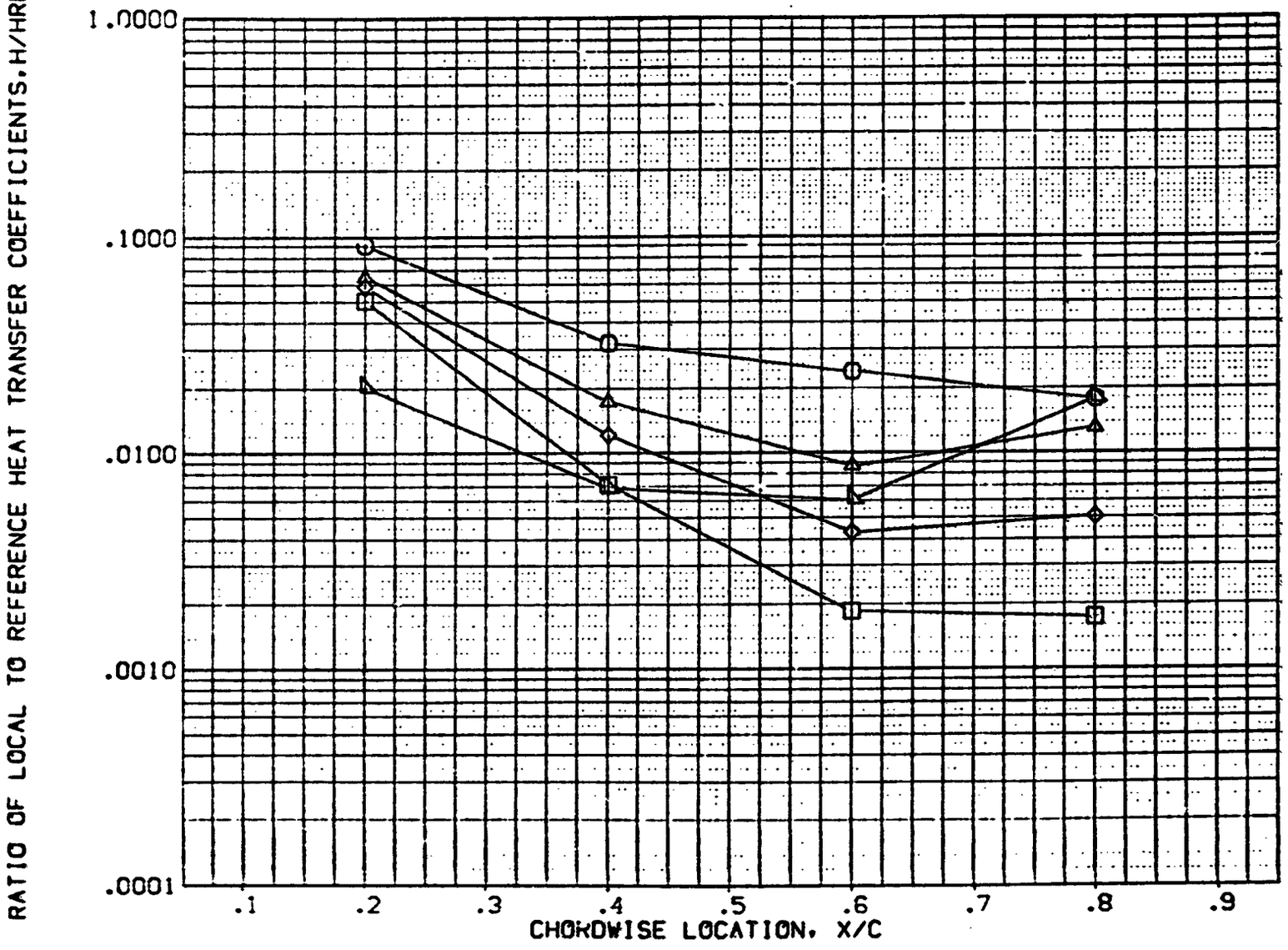

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG09)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(REVG08)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(REVG07)	▷	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(REVG06)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

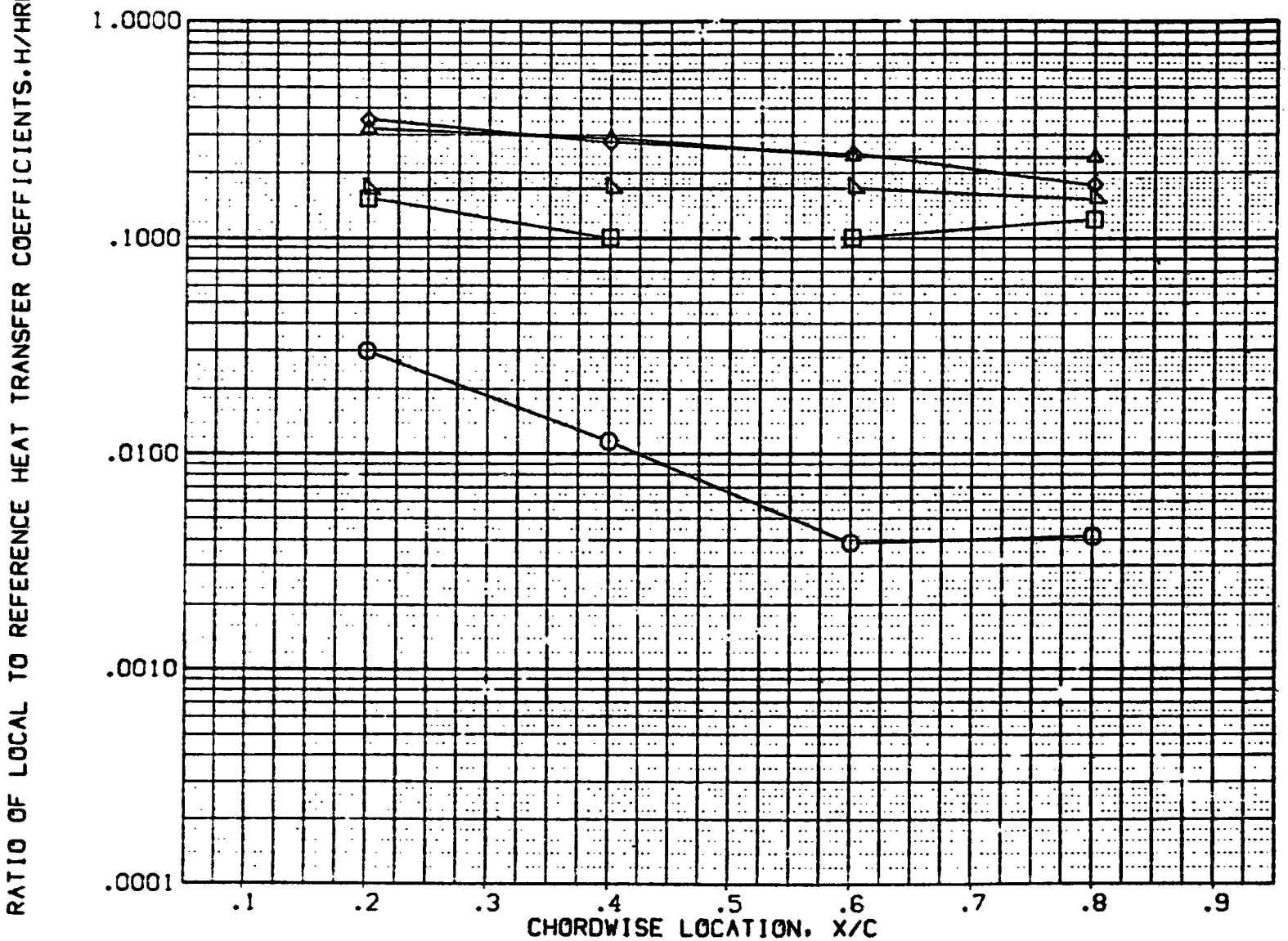

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG09)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(REVG08)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(REVG07)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(REVG06)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

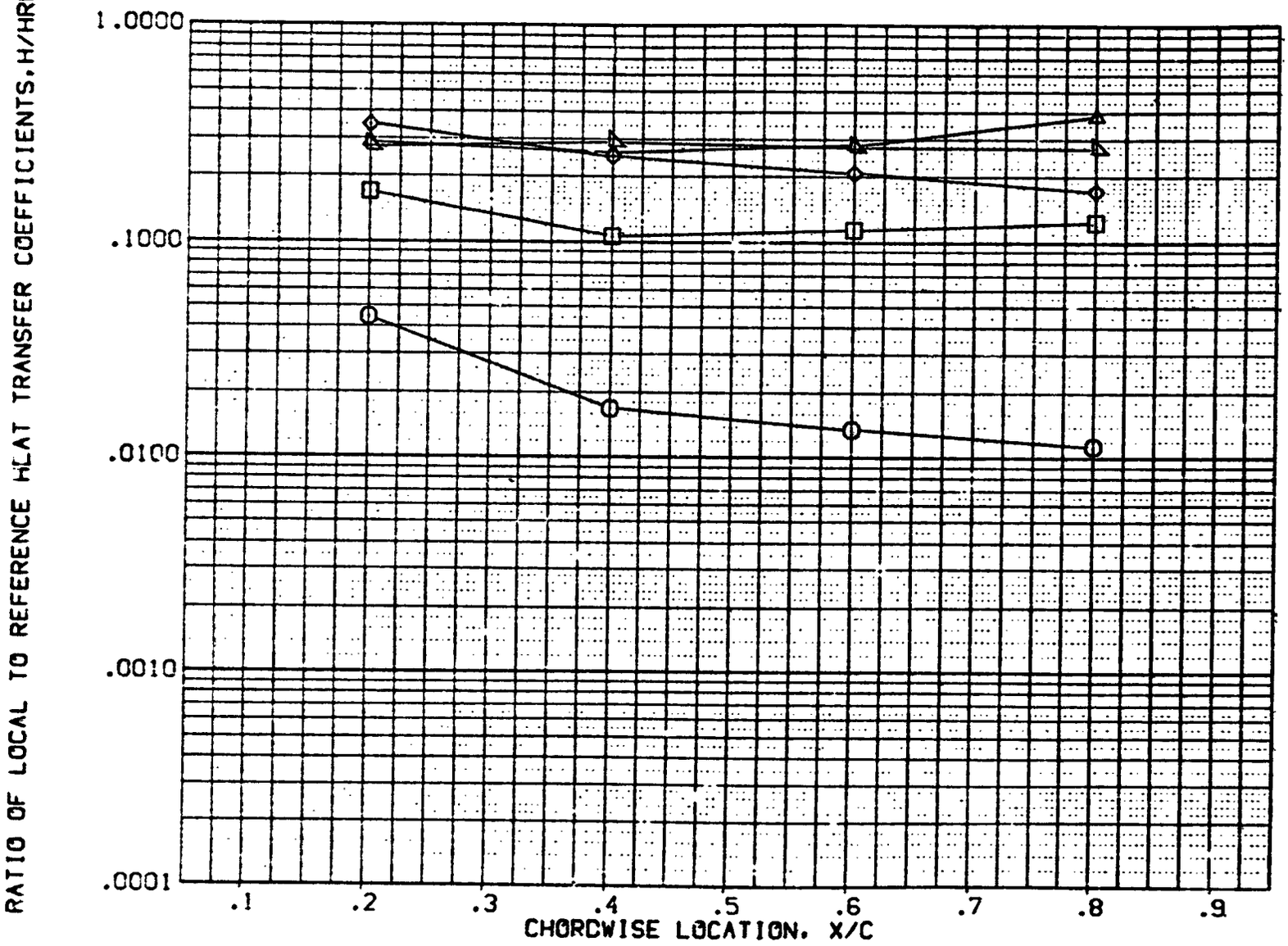

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG09)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(REVG08)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(REVG07)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(REVG06)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

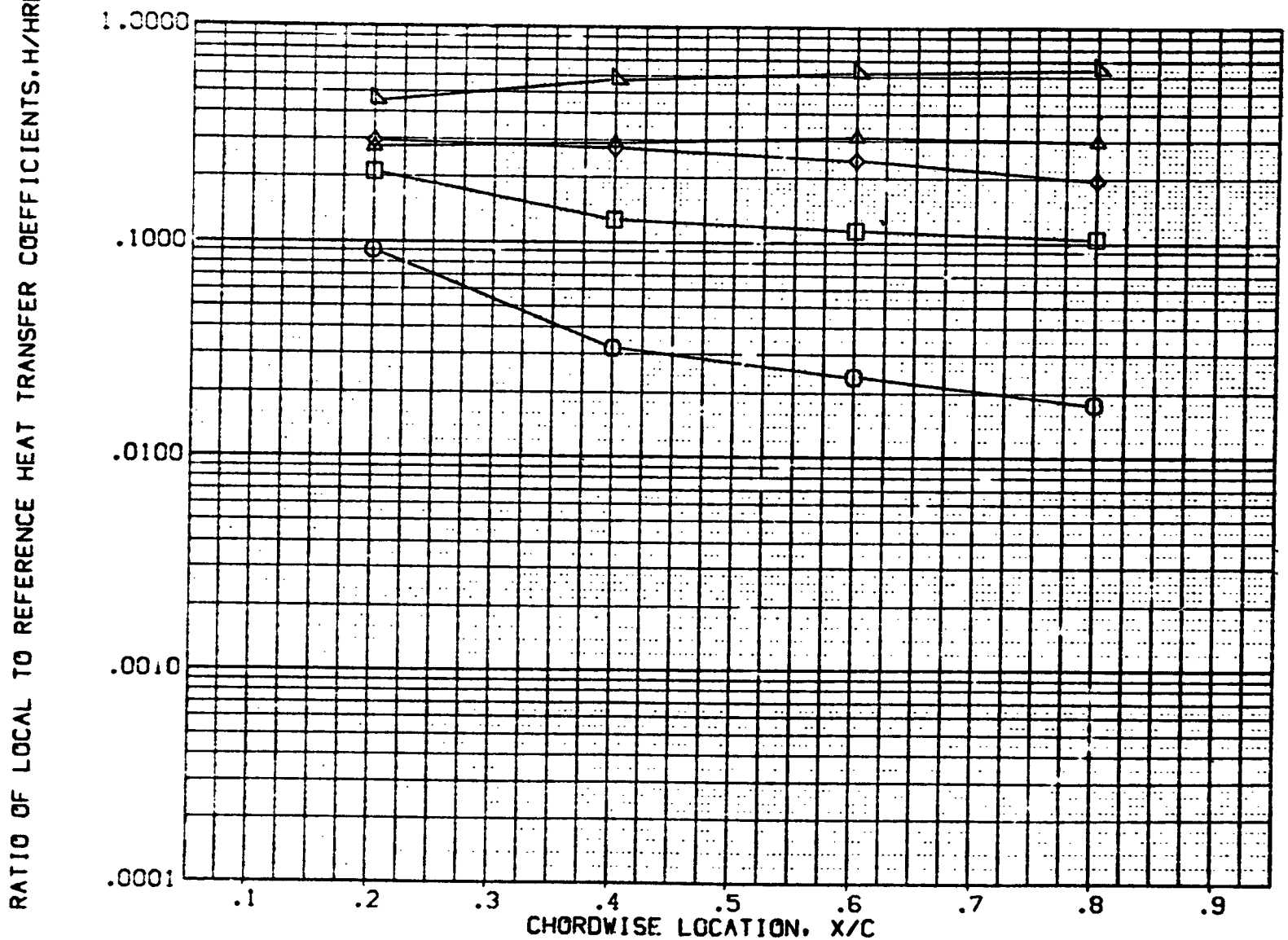

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .800

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	AMES 3.5-195 IH28 OI+TI WING UPPER SURFACE	30.000	.000	1.000
(REVG11)	AMES 3.5-195 IH28 OI+TI WING UPPER SURFACE	30.000	.000	4.000
(REVG03)	AMES 3.5-195 IH28 OI+TI WING UPPER SURFACE	60.000	.000	1.000
(REVG10)	AMES 3.5-195 IH28 OI+TI WING UPPER SURFACE	60.000	.000	4.000

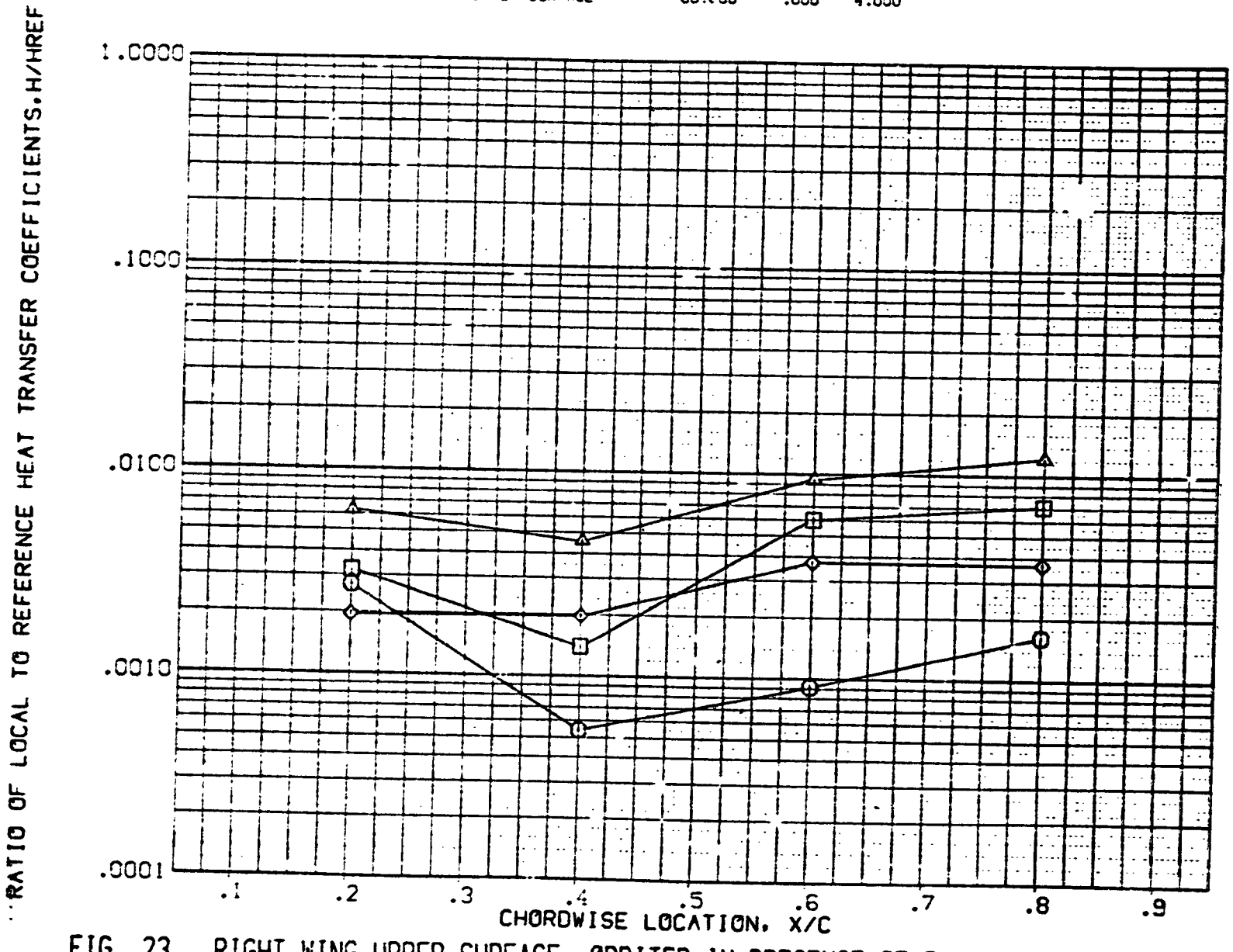

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG11)	⊠	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	4.000
(REVG03)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG10)	⊠	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	4.000

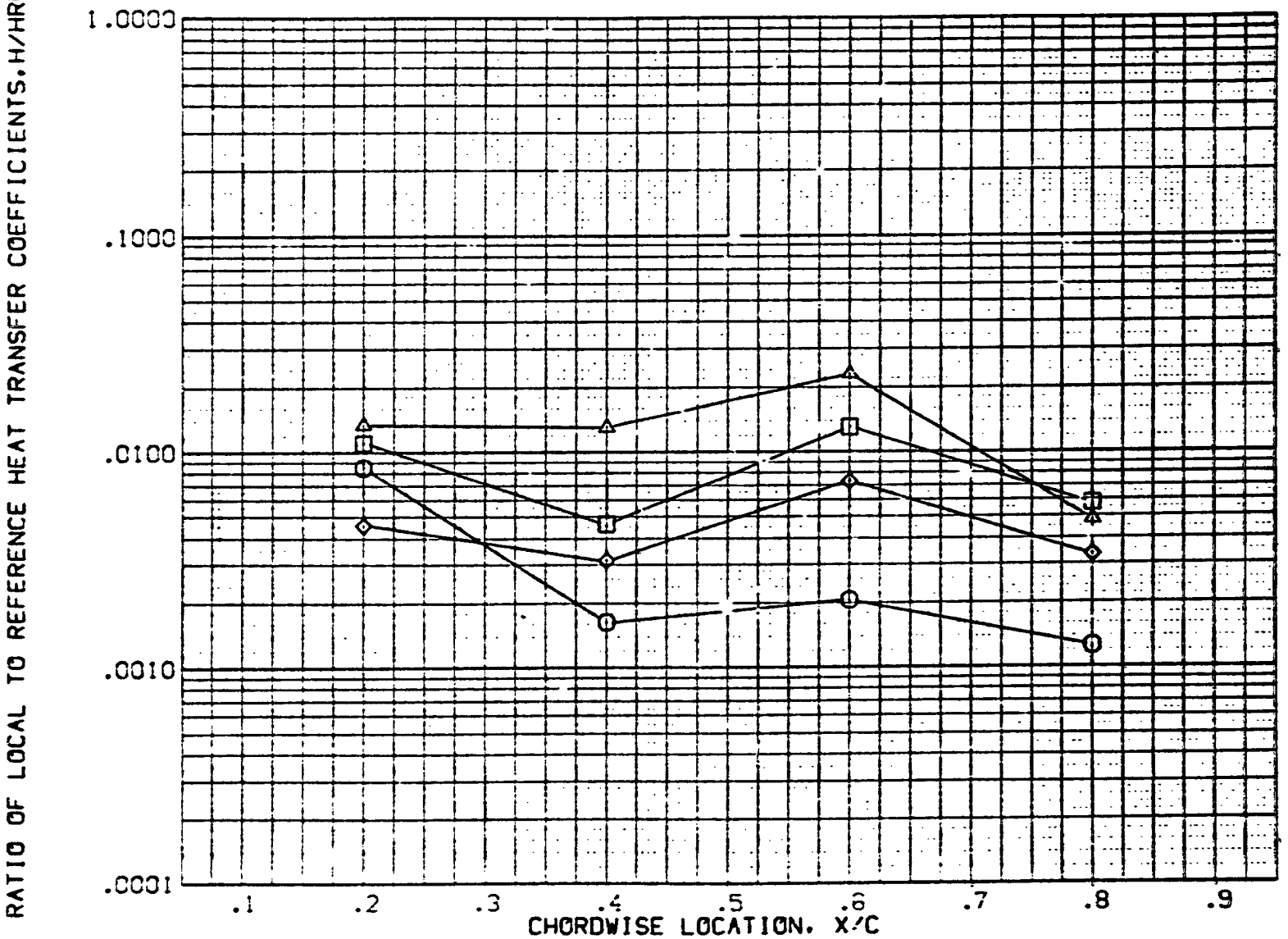

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG11)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	4.000
(REVG03)	⋈	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG10)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	4.000

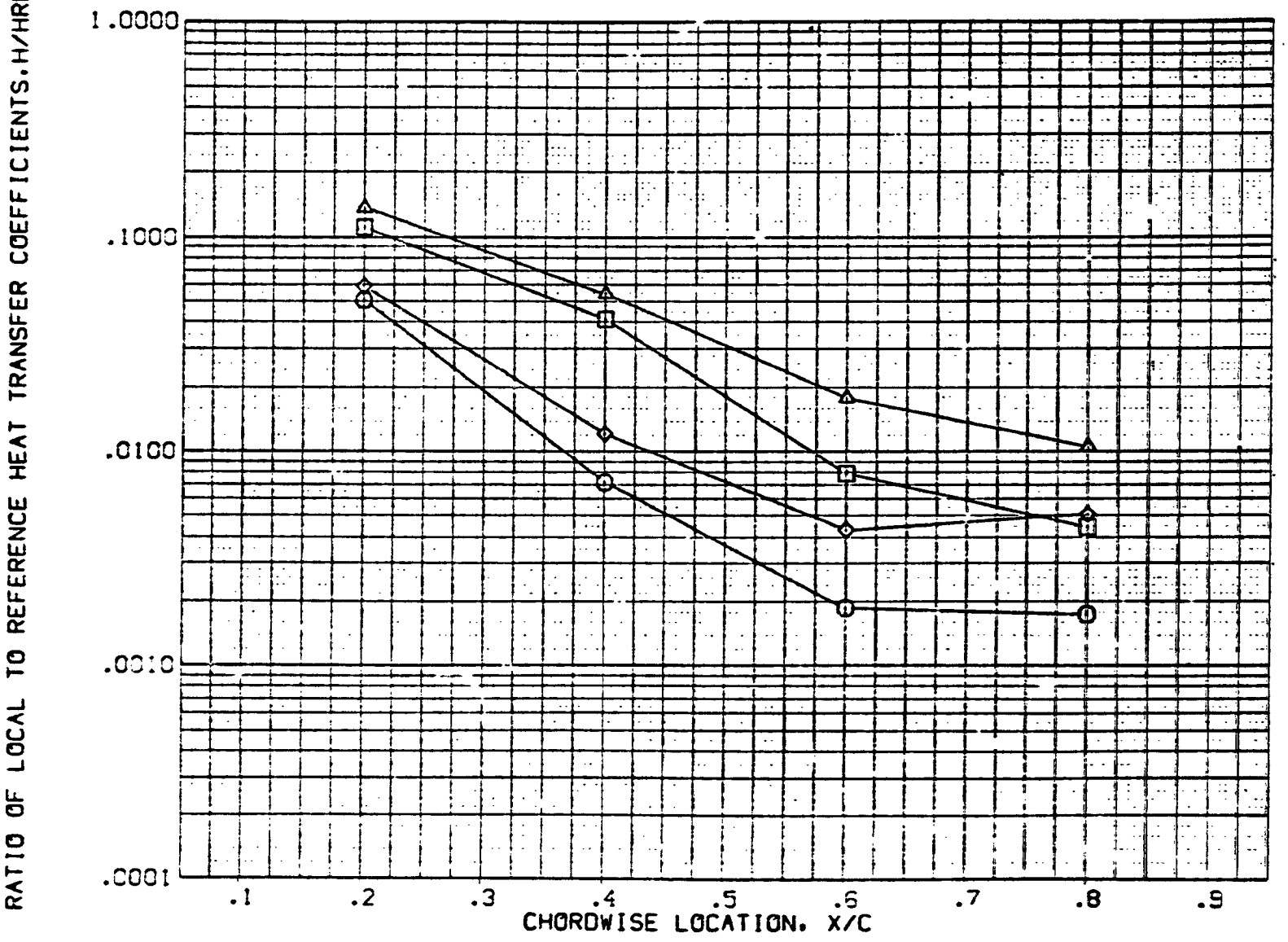

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(REVG12)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	-5.000	1.000

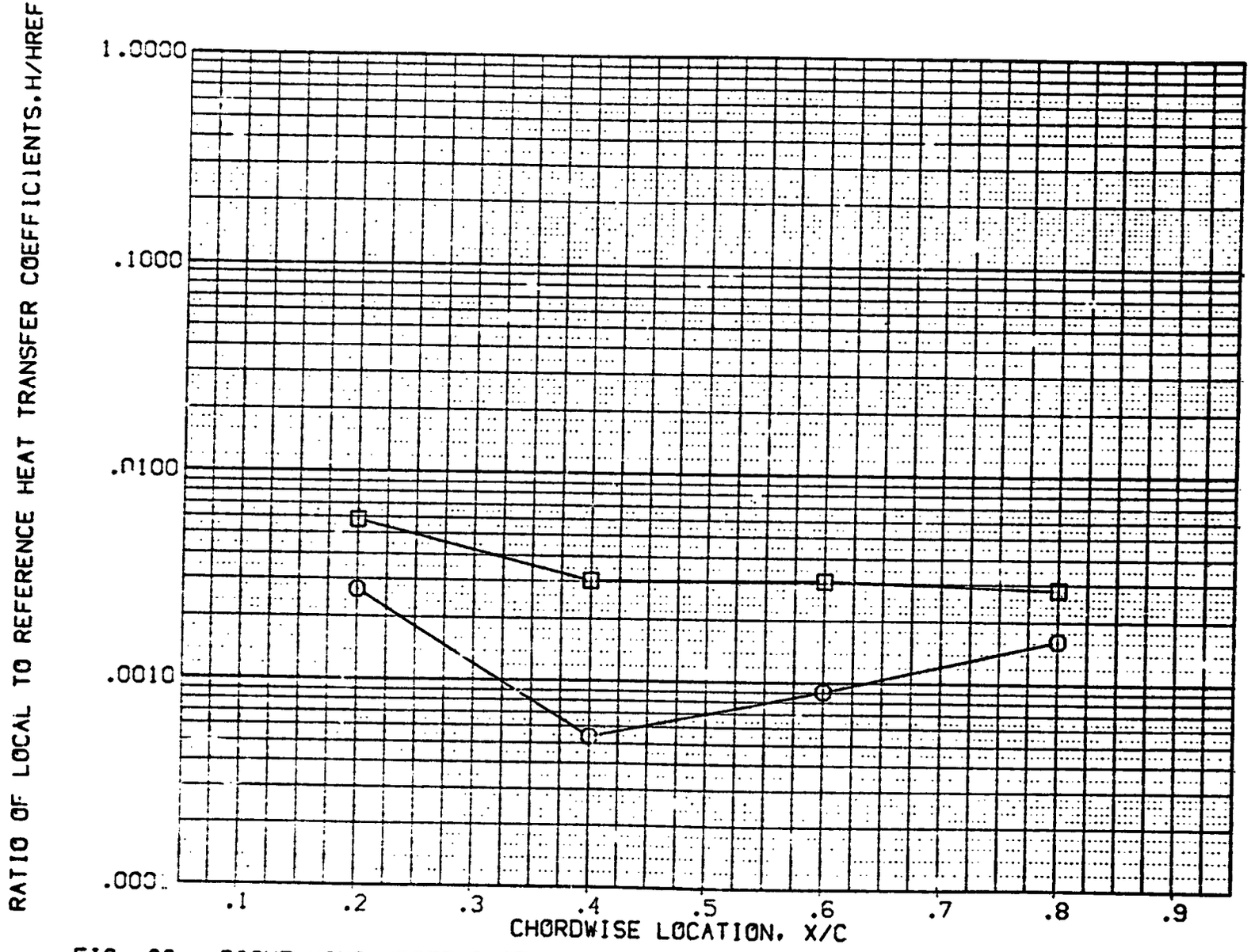

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .400

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	AMES 3.5-195 IH28 OI+TI WING UPPER SURFACE	30.000	.000	1.000
(REVG12)	AMES 3.5-195 IH28 OI+TI WING :IPPER SURFACE	30.000	-5.000	1.000

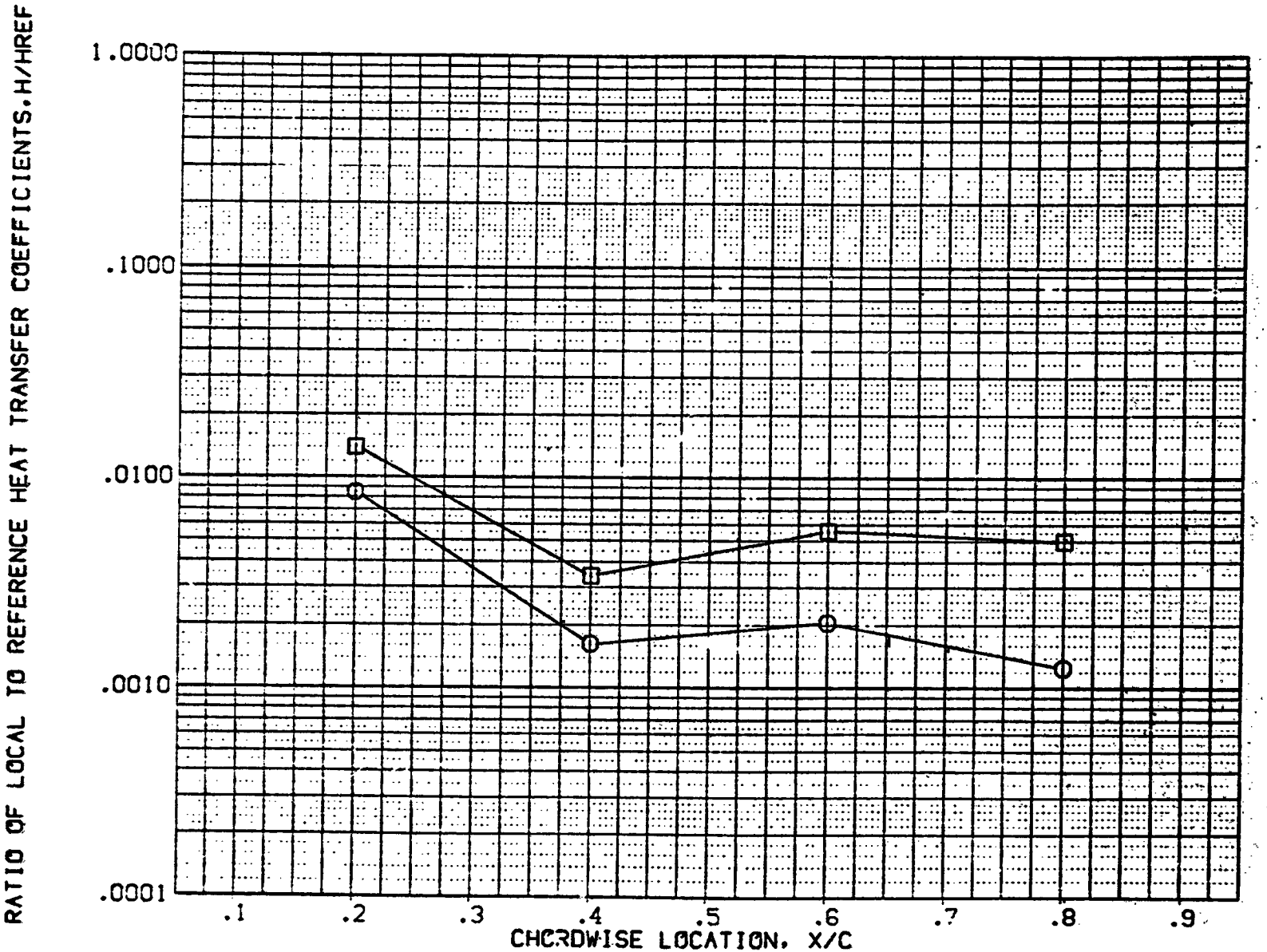

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 2Y/B = .600

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ALP.-A	BETA	RN/L
(REVG02)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(REVG12)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	-5.000	1.000

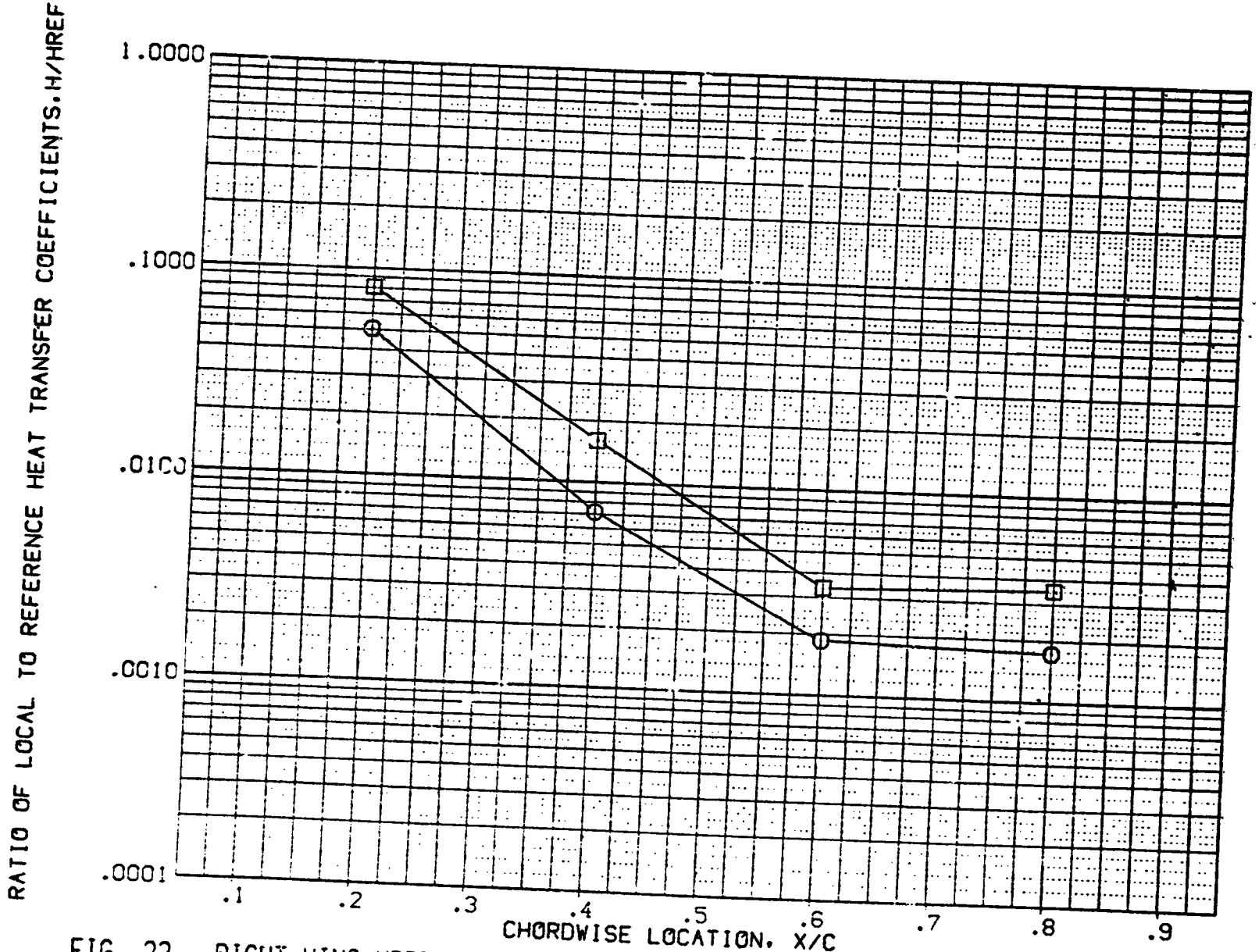

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAM/HT= .900 2Y/B = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVC01)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVC02)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG03)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG04)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	90.000	.000	1.000
(REVG05)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	120.000	.000	1.000

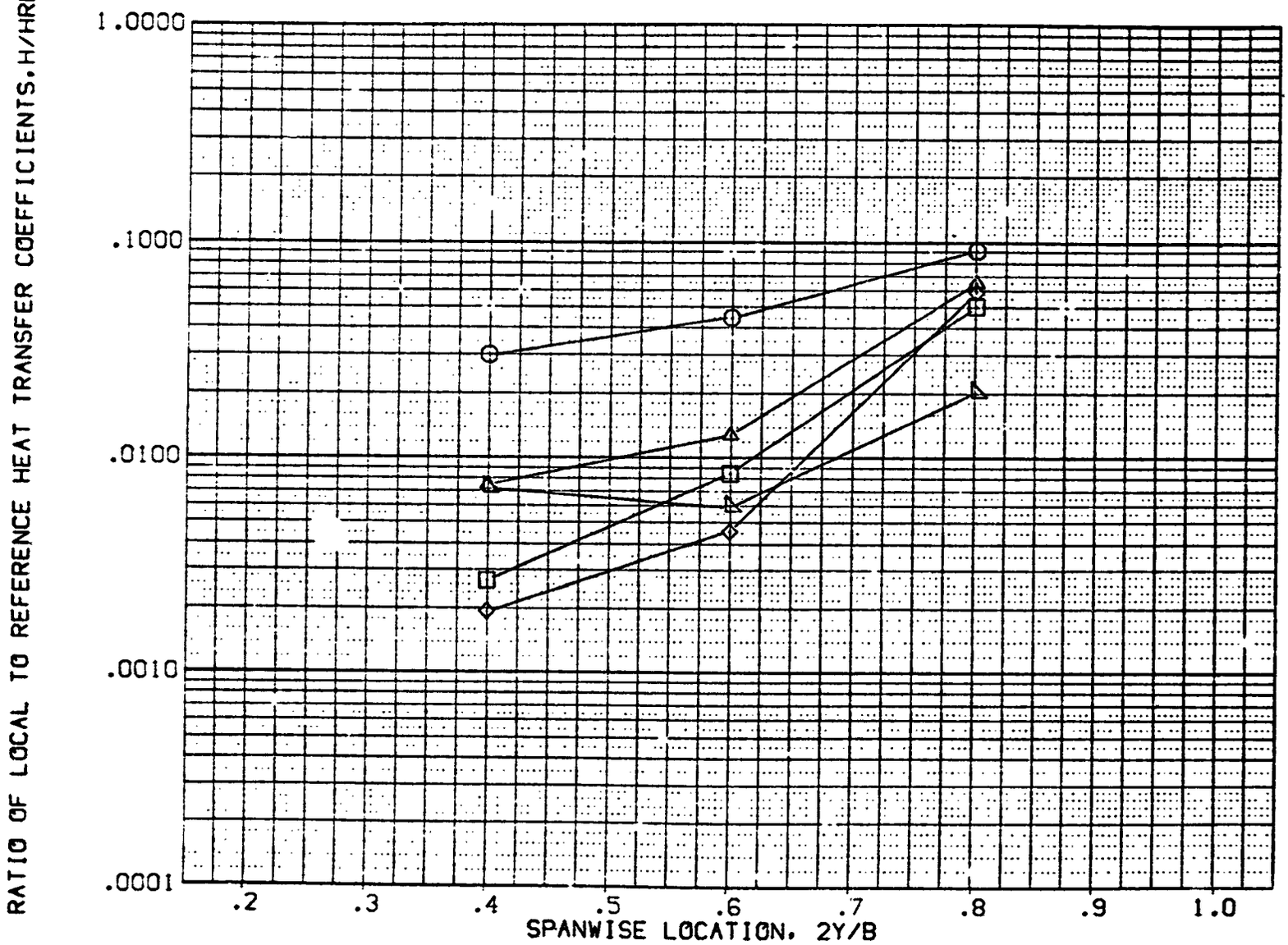

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .200

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	.000	.000	1.000
(REVG02)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(REVG03)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	1.000
(REVG04)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	90.000	.000	1.000
(REVG05)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	120.000	.000	1.000

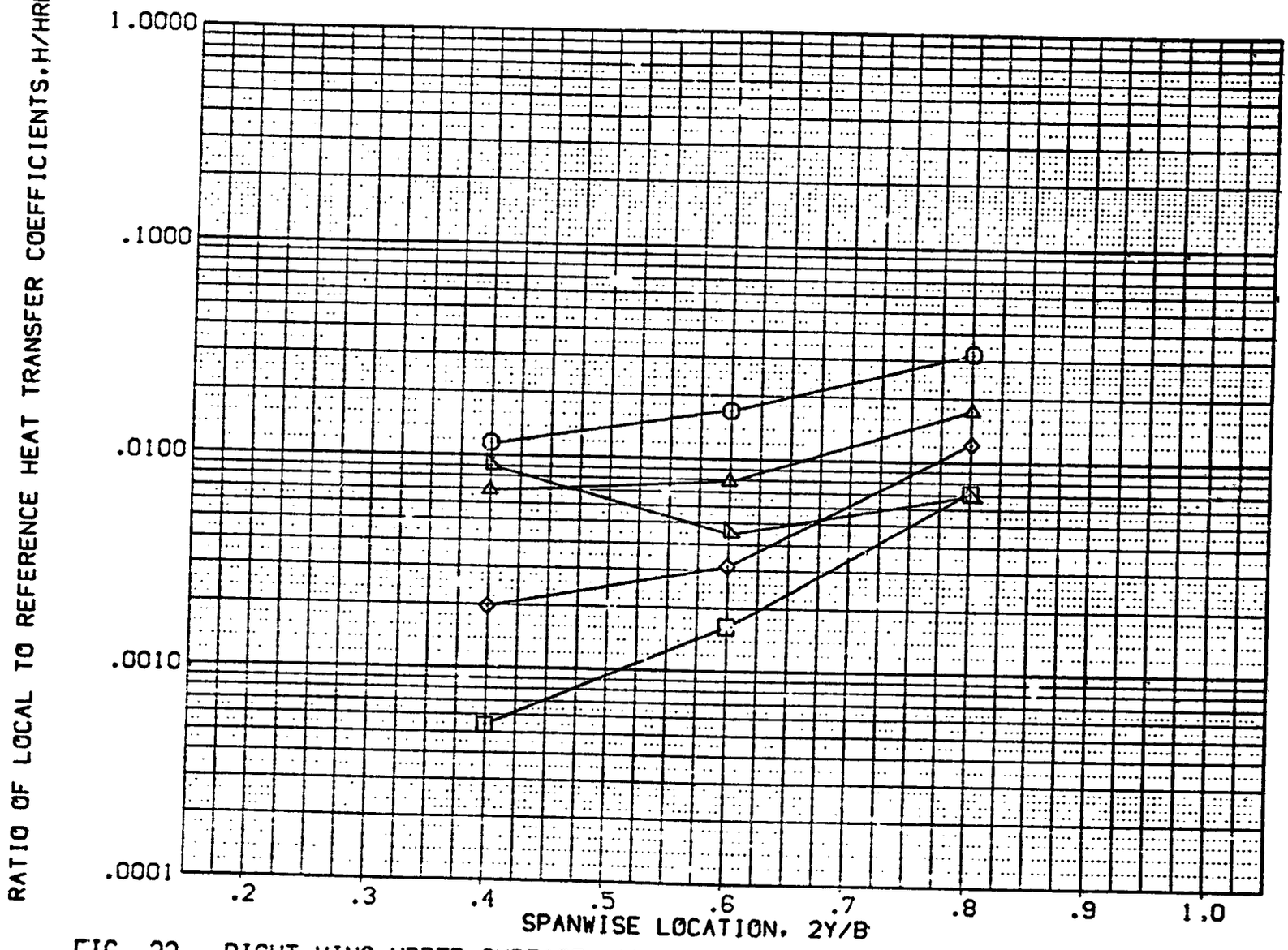

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG02)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG03)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG04)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	90.000	.000	1.000
(REVG05)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	120.000	.000	1.000

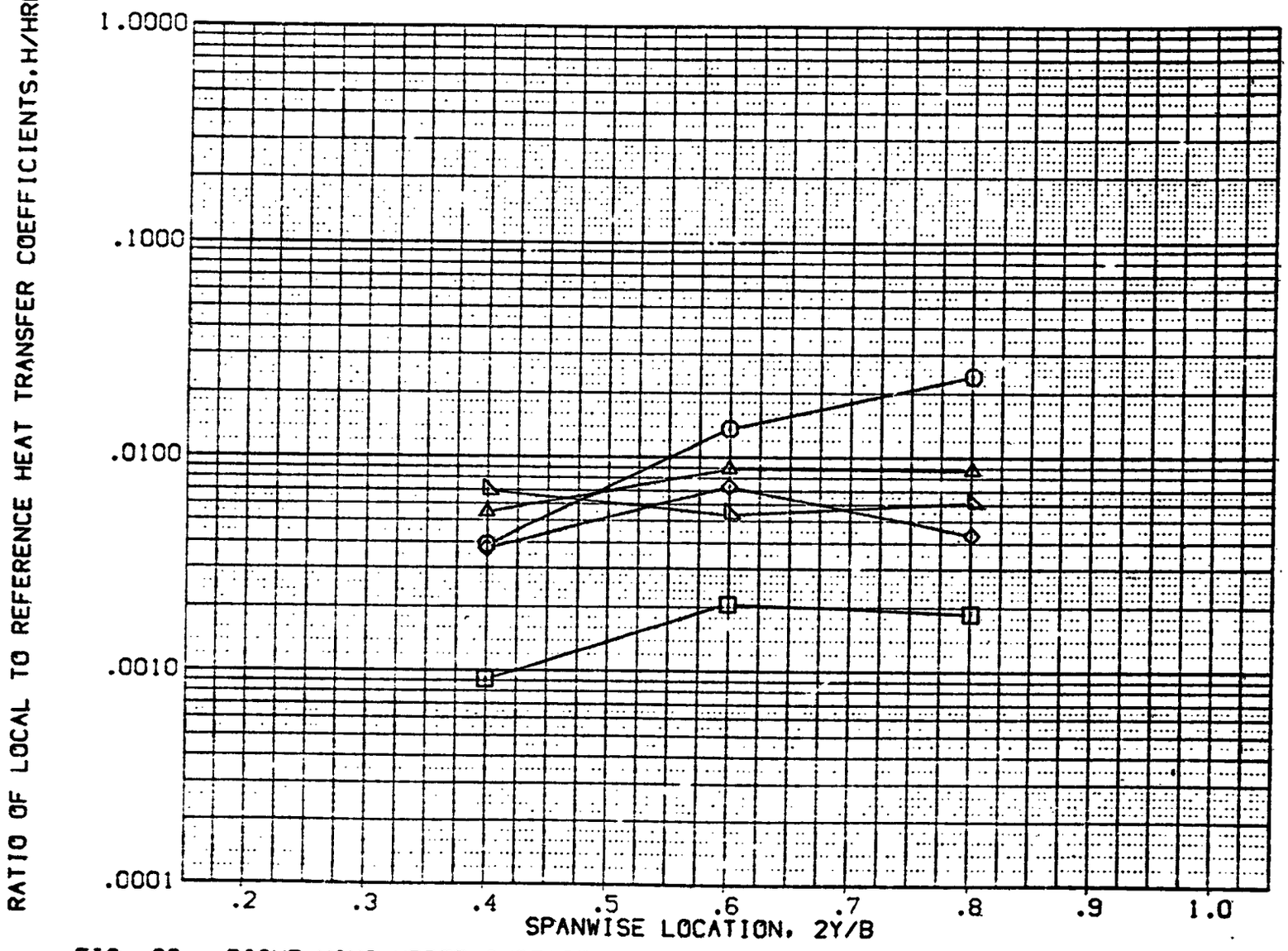

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVGO1)	□	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	.000	.000	1.000
(REVGO2)	◇	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVGO3)	△	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVGO4)	○	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	90.000	.000	1.000
(REVGO5)	▽	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	120.000	.000	1.000

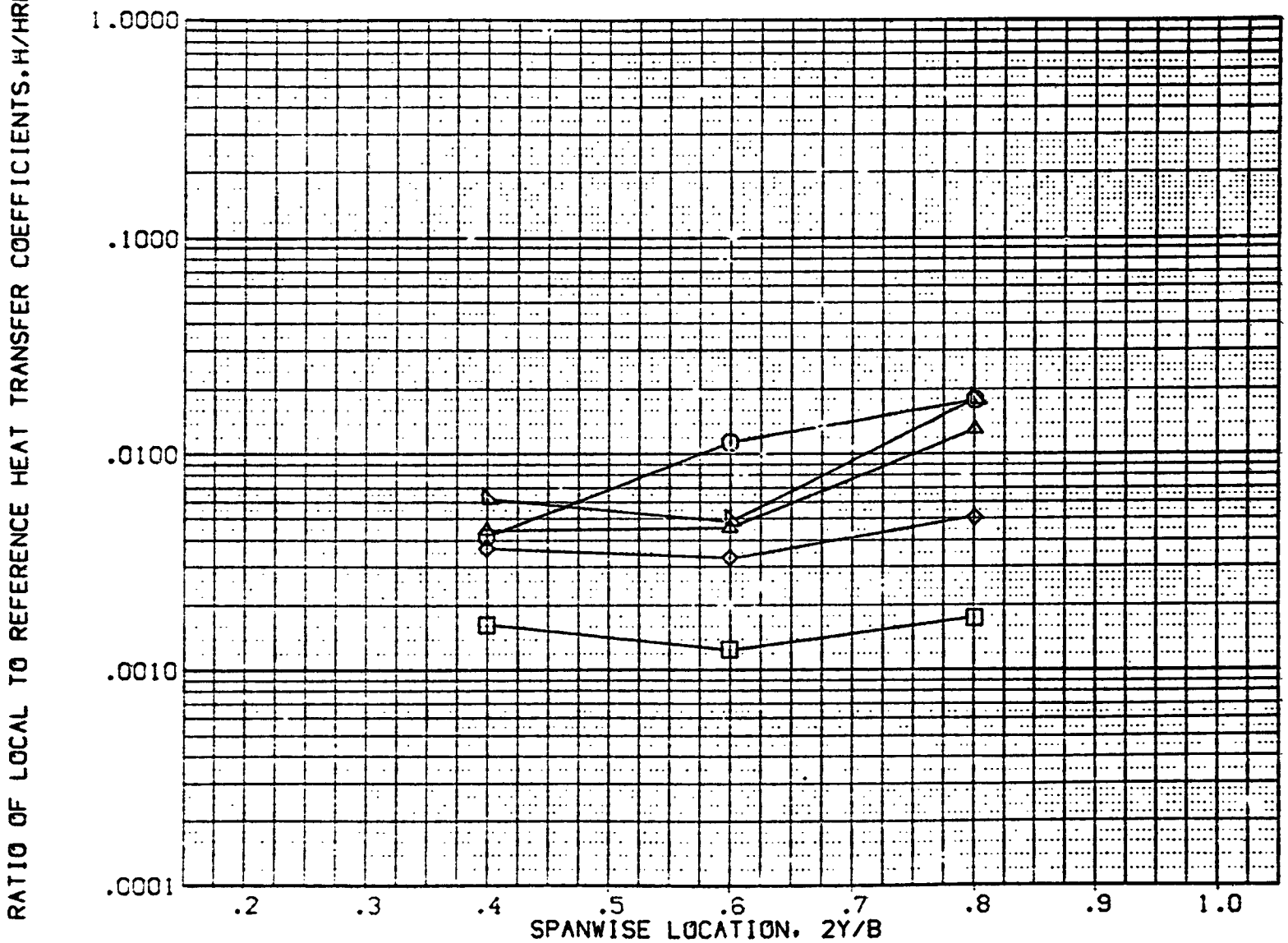

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .800

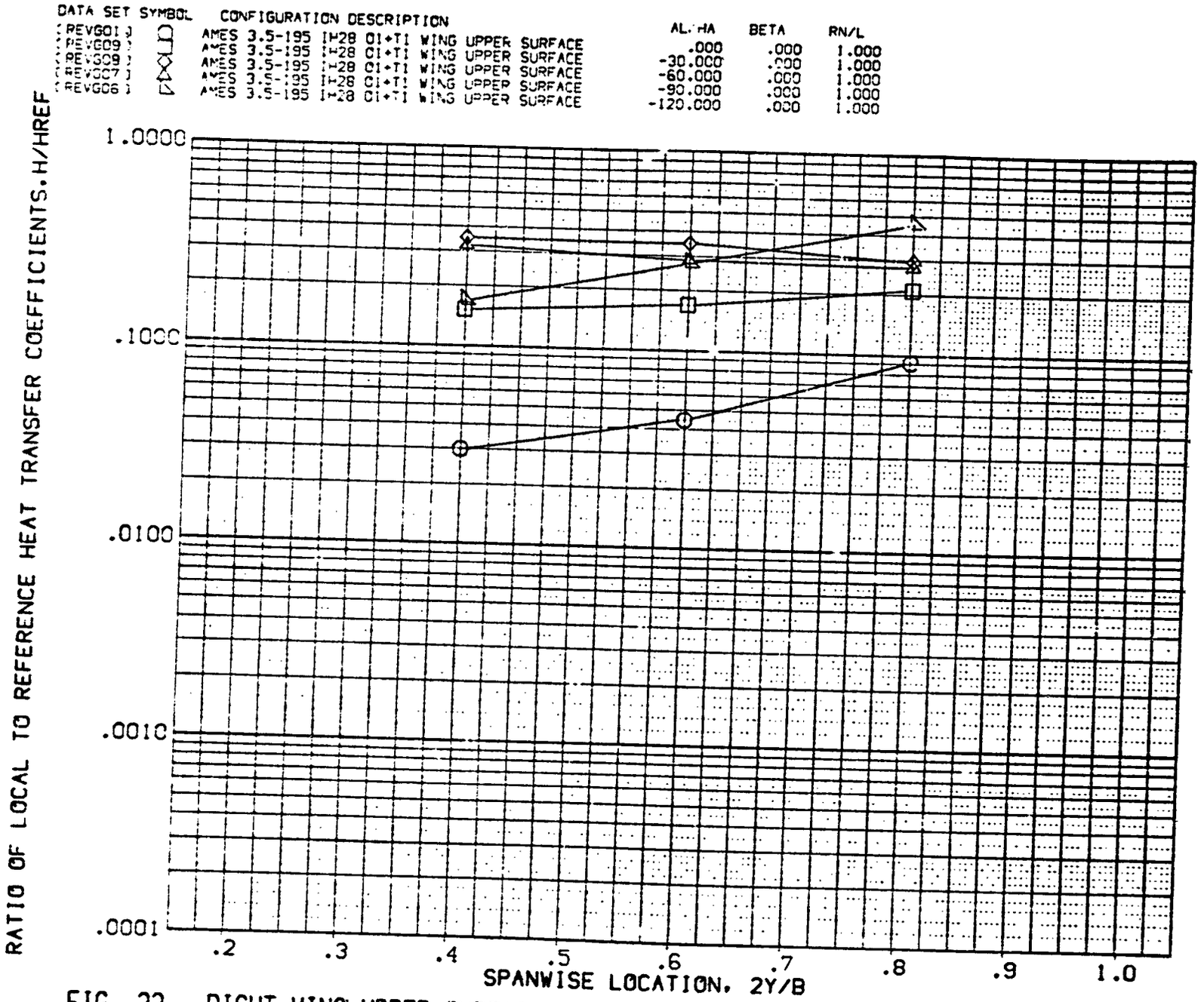

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = 200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG01)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG09)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(REVG08)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(REVG07)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(REVG06)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

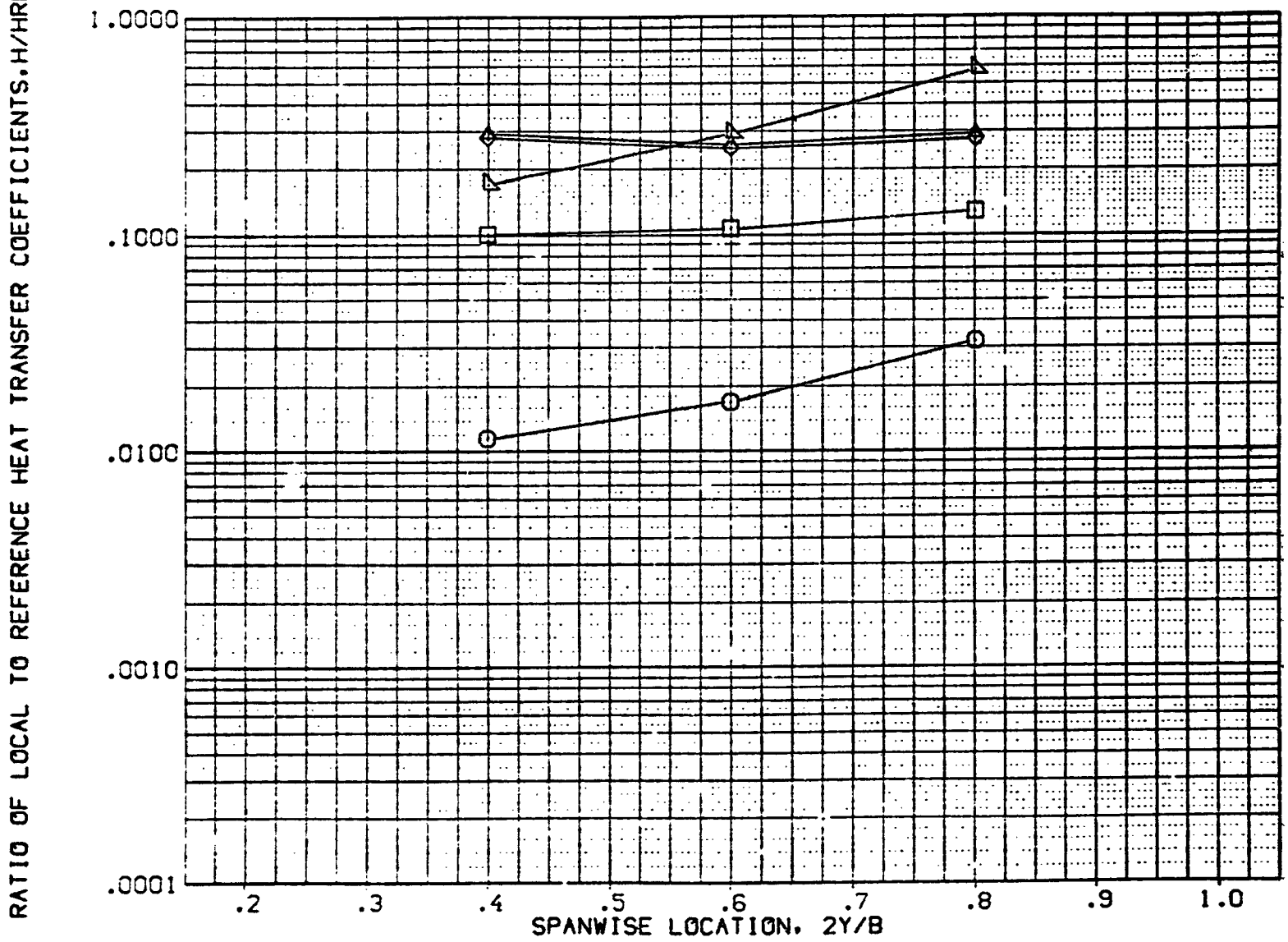

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVGD1)	□	AMES 3.5-195 IH28 D1+T1 WING UPPER SURFACE	.000	.000	1.000
(REVGD9)	△	AMES 3.5-195 IH28 D1+T1 WING UPPER SURFACE	-30.000	.000	1.000
(REVGD8)	◇	AMES 3.5-195 IH28 D1+T1 WING UPPER SURFACE	-60.000	.000	1.000
(REVGD7)	▽	AMES 3.5-195 IH28 D1+T1 WING UPPER SURFACE	-90.000	.000	1.000
(REVGD6)	○	AMES 3.5-195 IH28 D1+T1 WING UPPER SURFACE	-120.000	.000	1.000

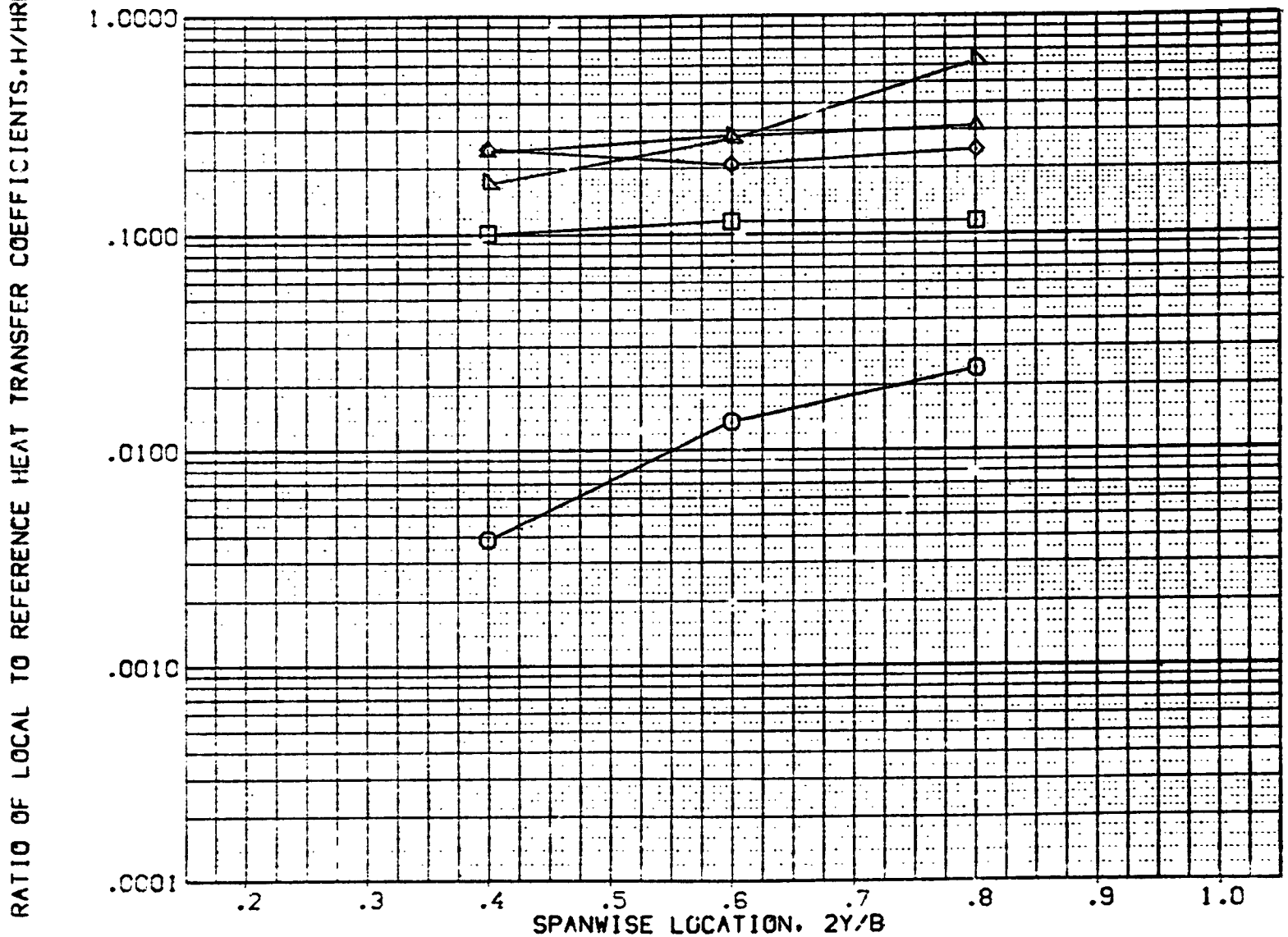

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALF-IA	BETA	RN/L
(REVG01)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(REVG09)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(REVG08)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(REVG07)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(REVG06)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

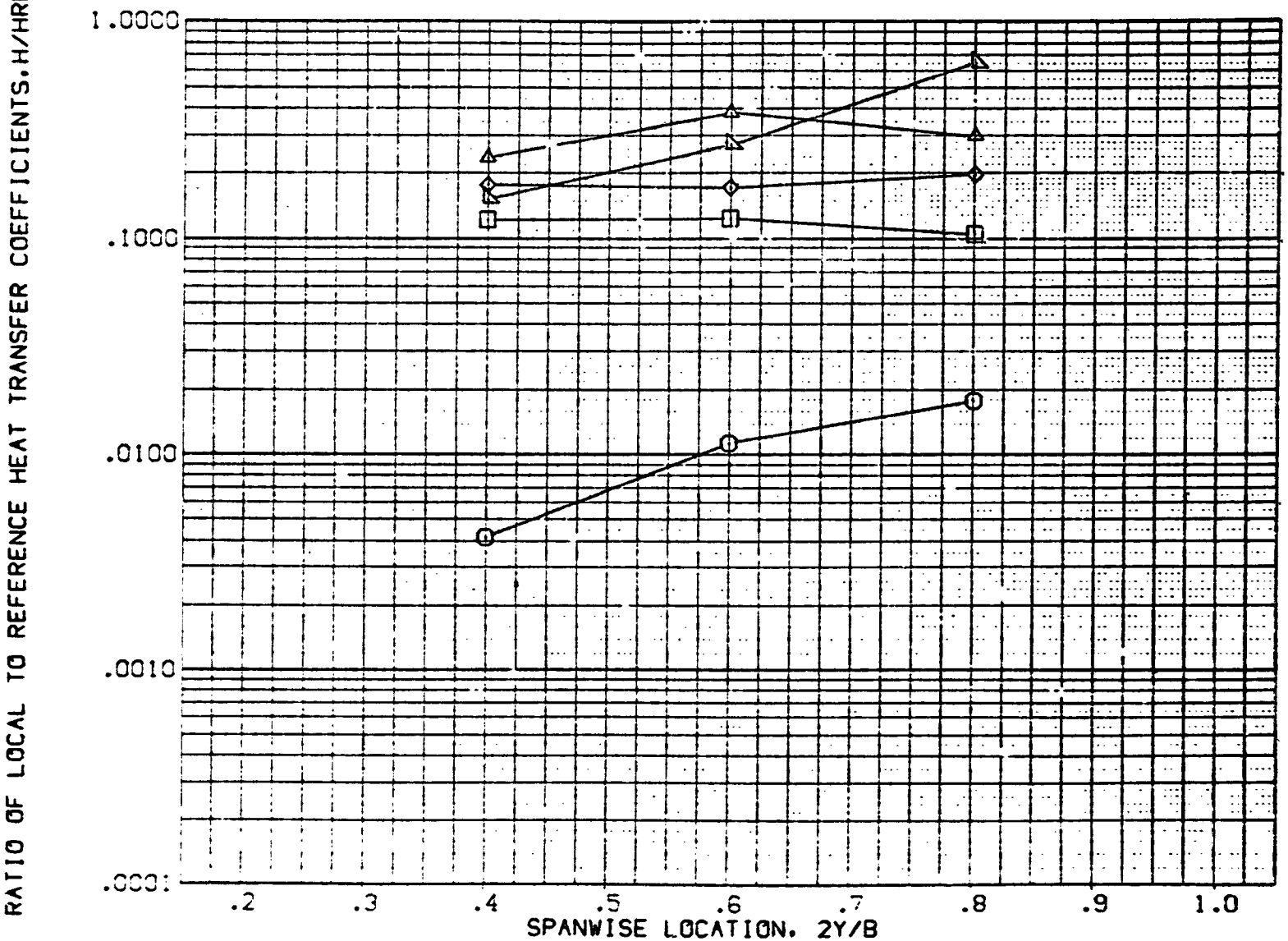

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 MAX/MT= .900 X/C = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REV002)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(REV001)	△	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	4.000
(REV003)	◇	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	1.000
(REV010)	○	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	4.000

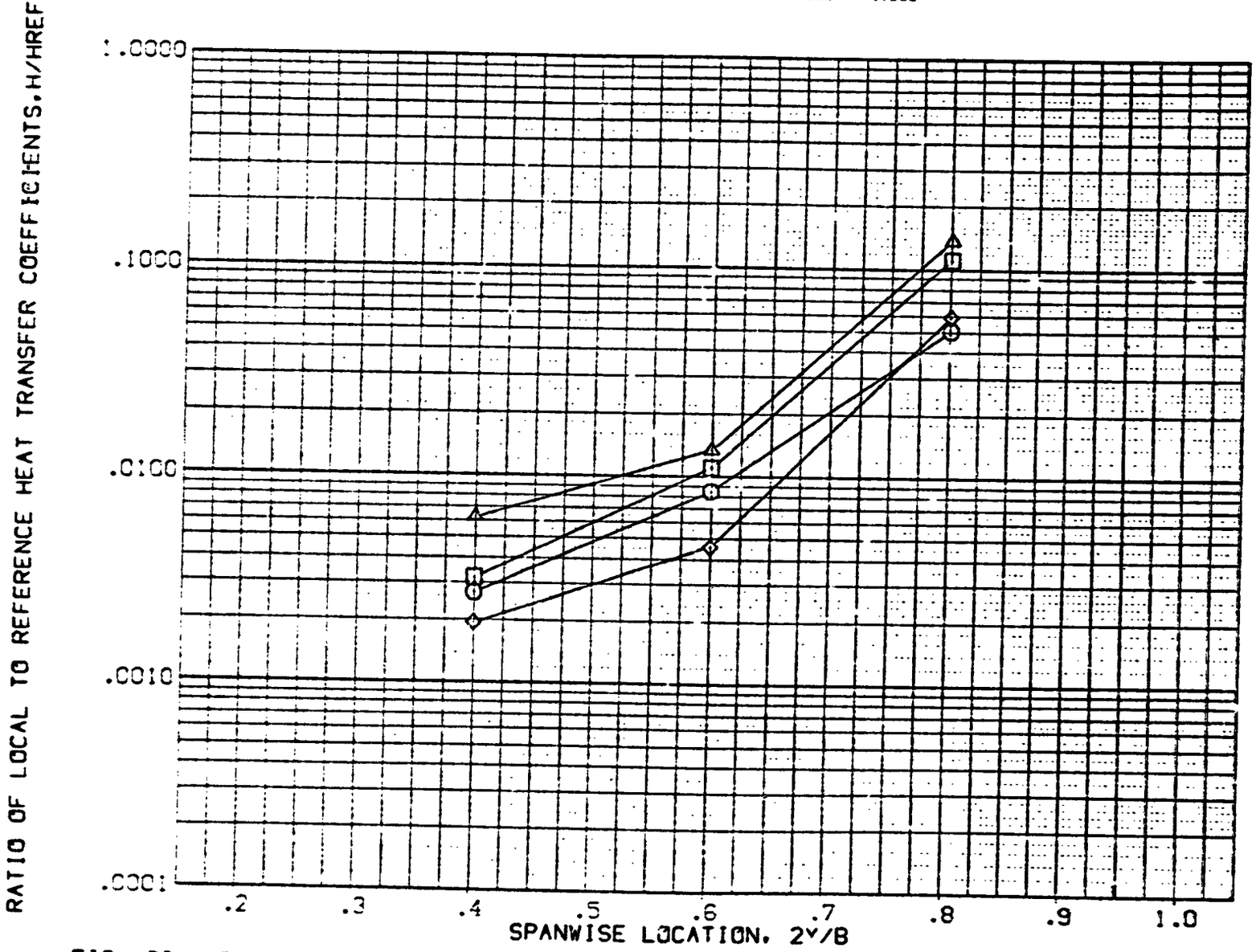

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAN/HT= .900 X/C = 200

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	◇	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(REVG11)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	4.000
(REVG03)	△	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	1.000
(REVG10)	○	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	4.000

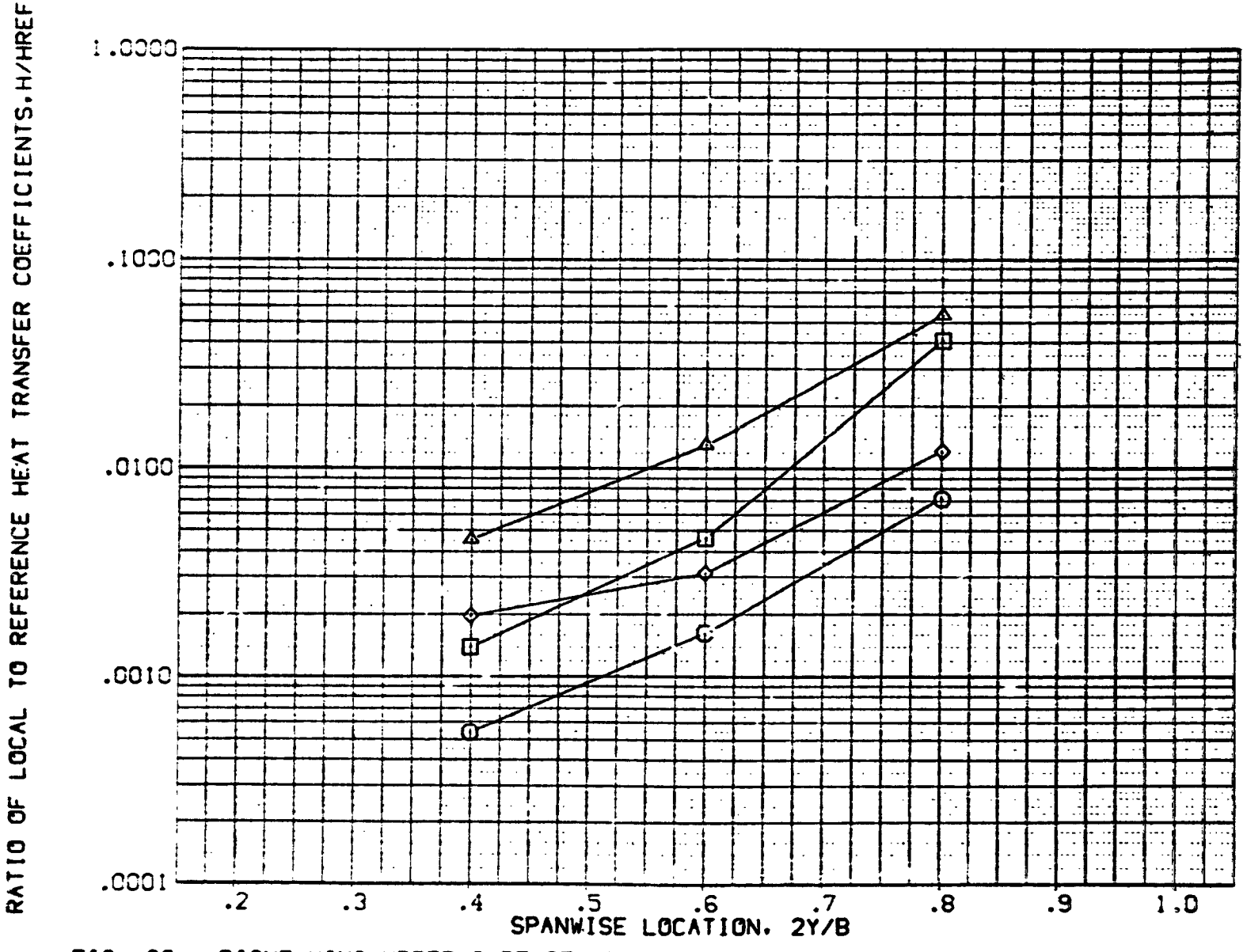

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	○	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG11)	□	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	30.000	.000	4.000
(REVG03)	◇	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG10)	△	AMES 3.5-195 IH28 O1+T1 WING UPPER SURFACE	60.000	.000	4.000

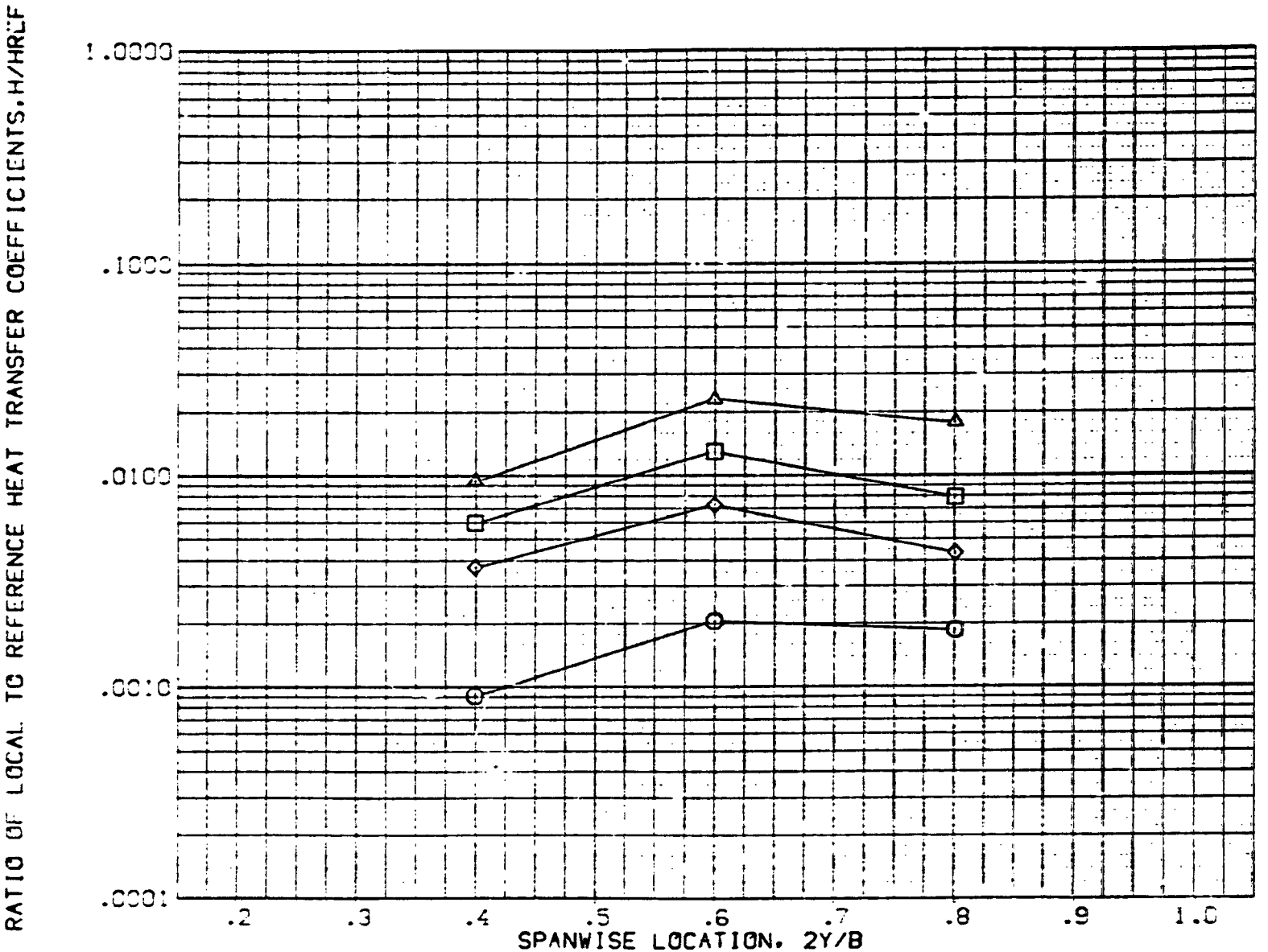

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .600

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG11)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	4.000
(REVG03)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(REVG10)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	4.000

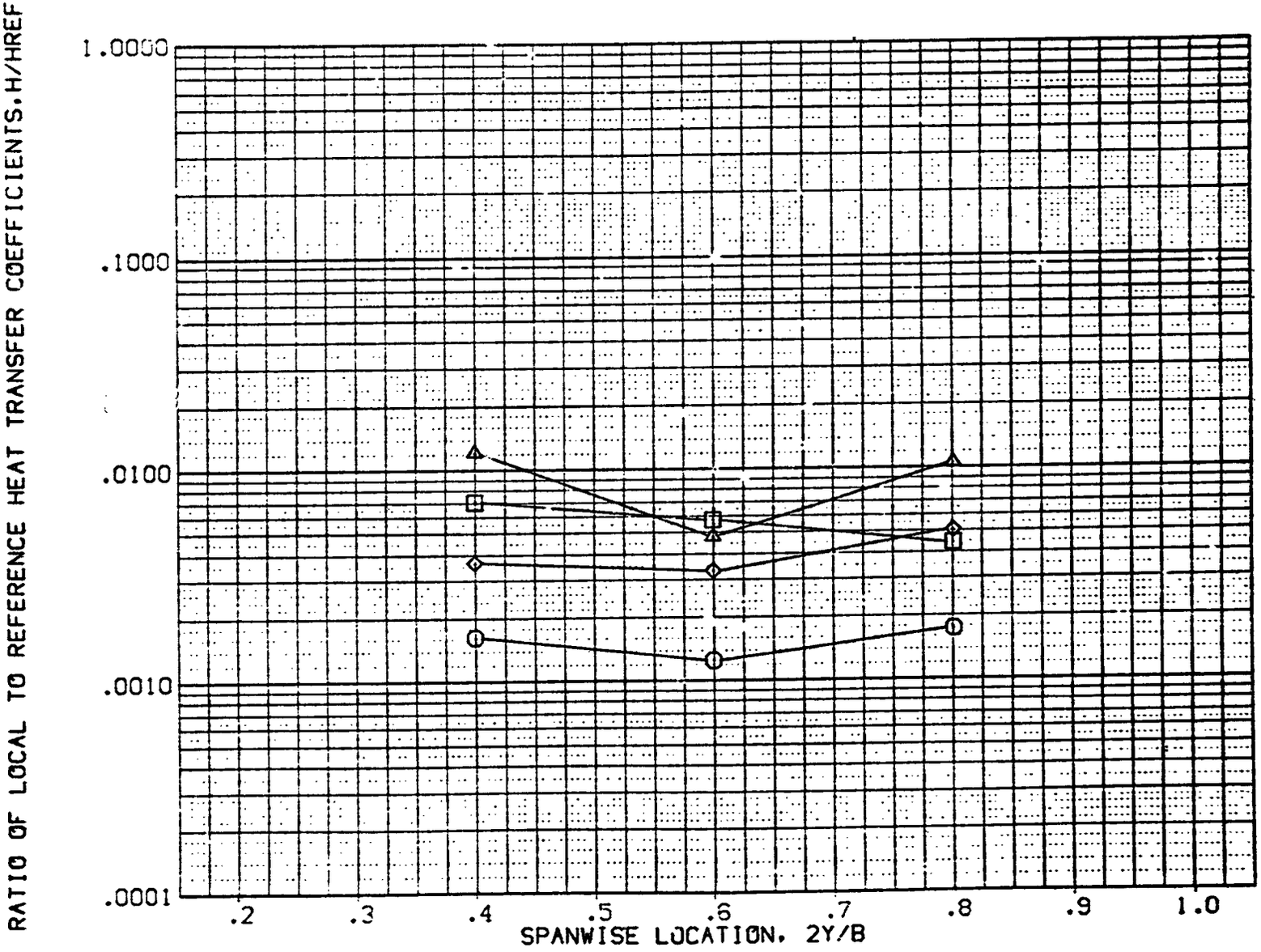

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .900

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02) □	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REV=12) ⊟	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	-5.000	1.000

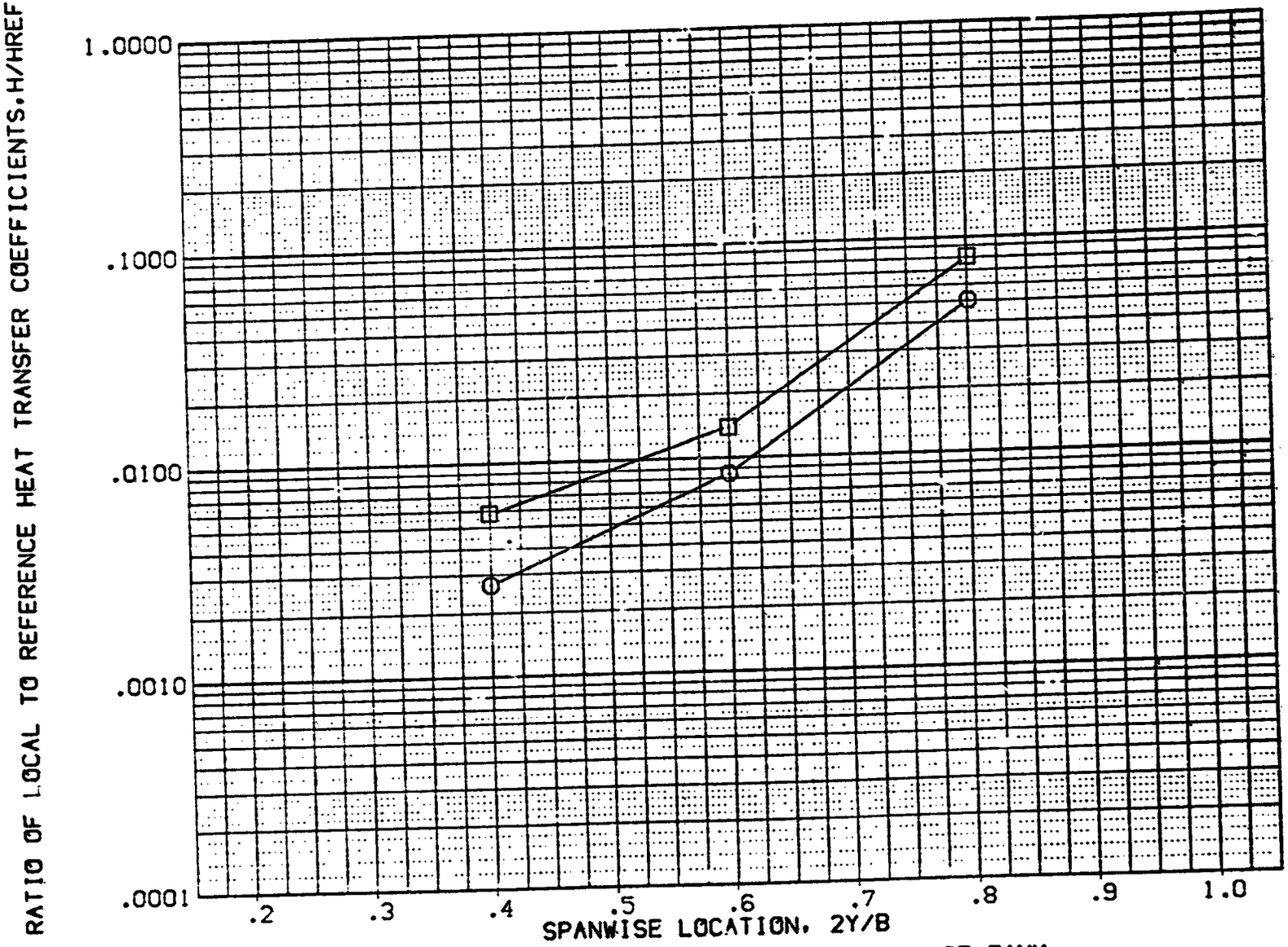

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG12)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	-5.000	1.000

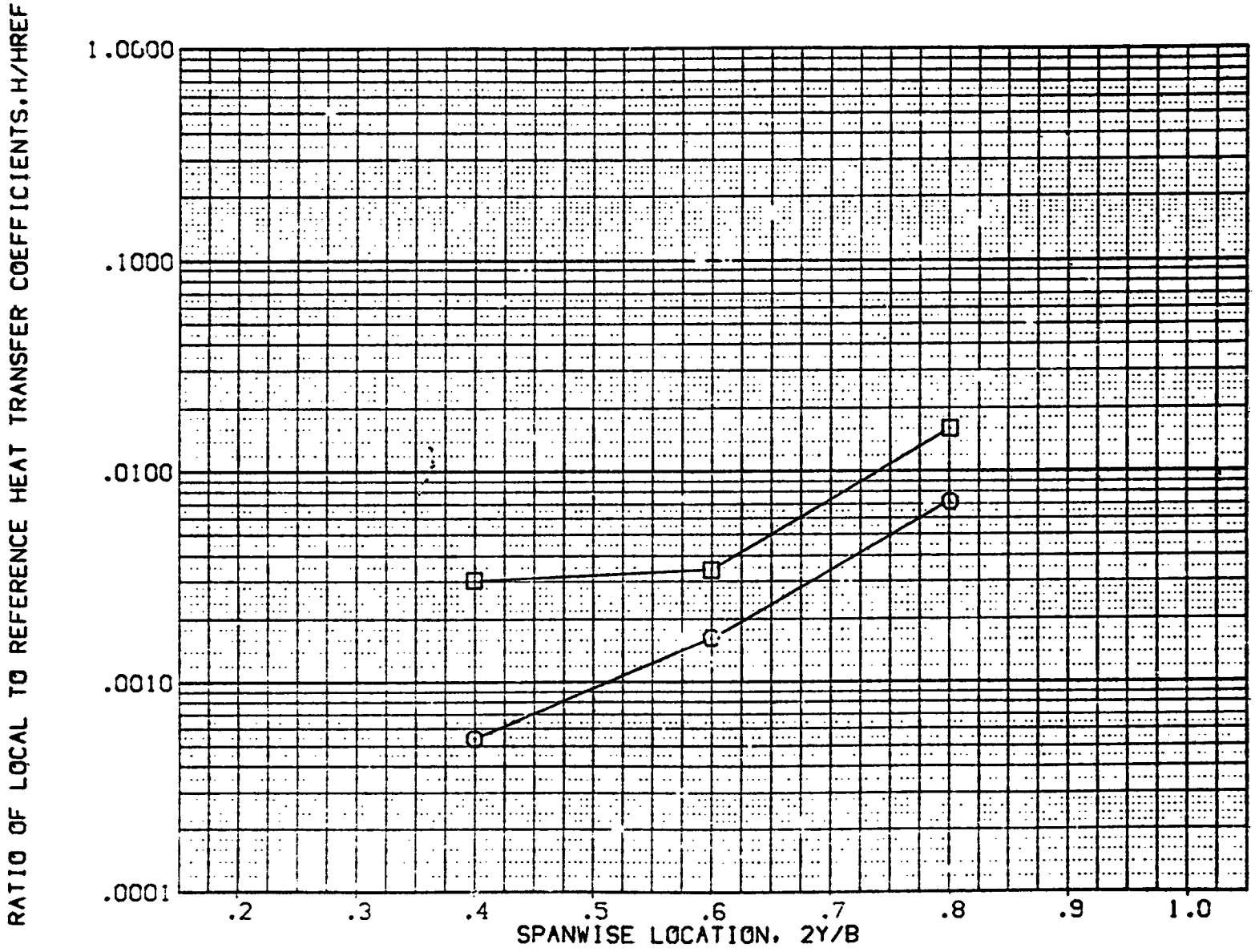

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .400

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(REVG12)	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	-5.000	1.000

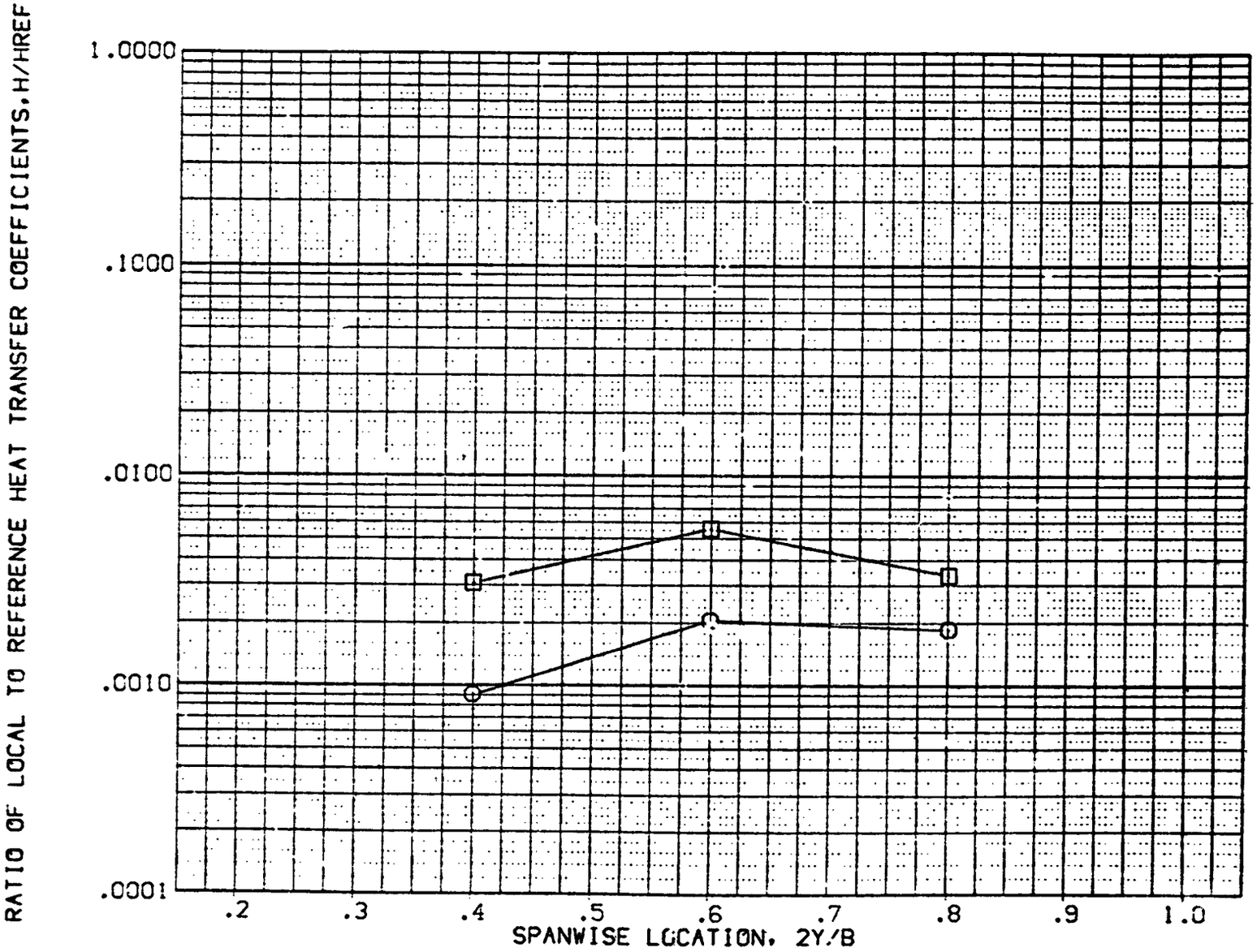

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .300

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(REVG02)	AMES 3.5-195 IH28 OI+TI WING UPPER SURFACE	30.000	.000	1.000
(REVG12)	AMES 3.5-195 IH28 OI+TI WING UPPER SURFACE	30.000	-5.000	1.000

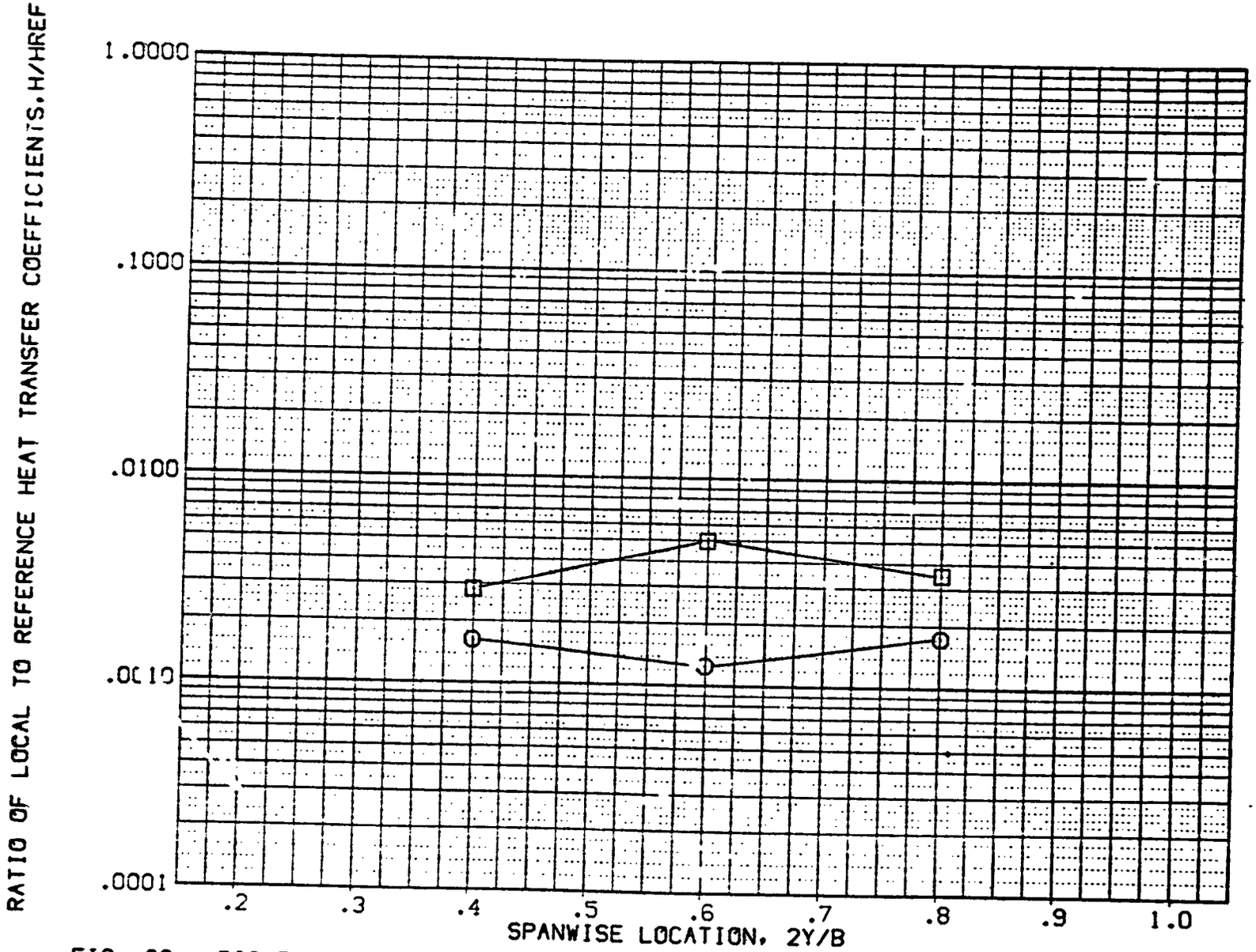

FIG. 23 RIGHT WING UPPER SURFACE, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 X/C = .800

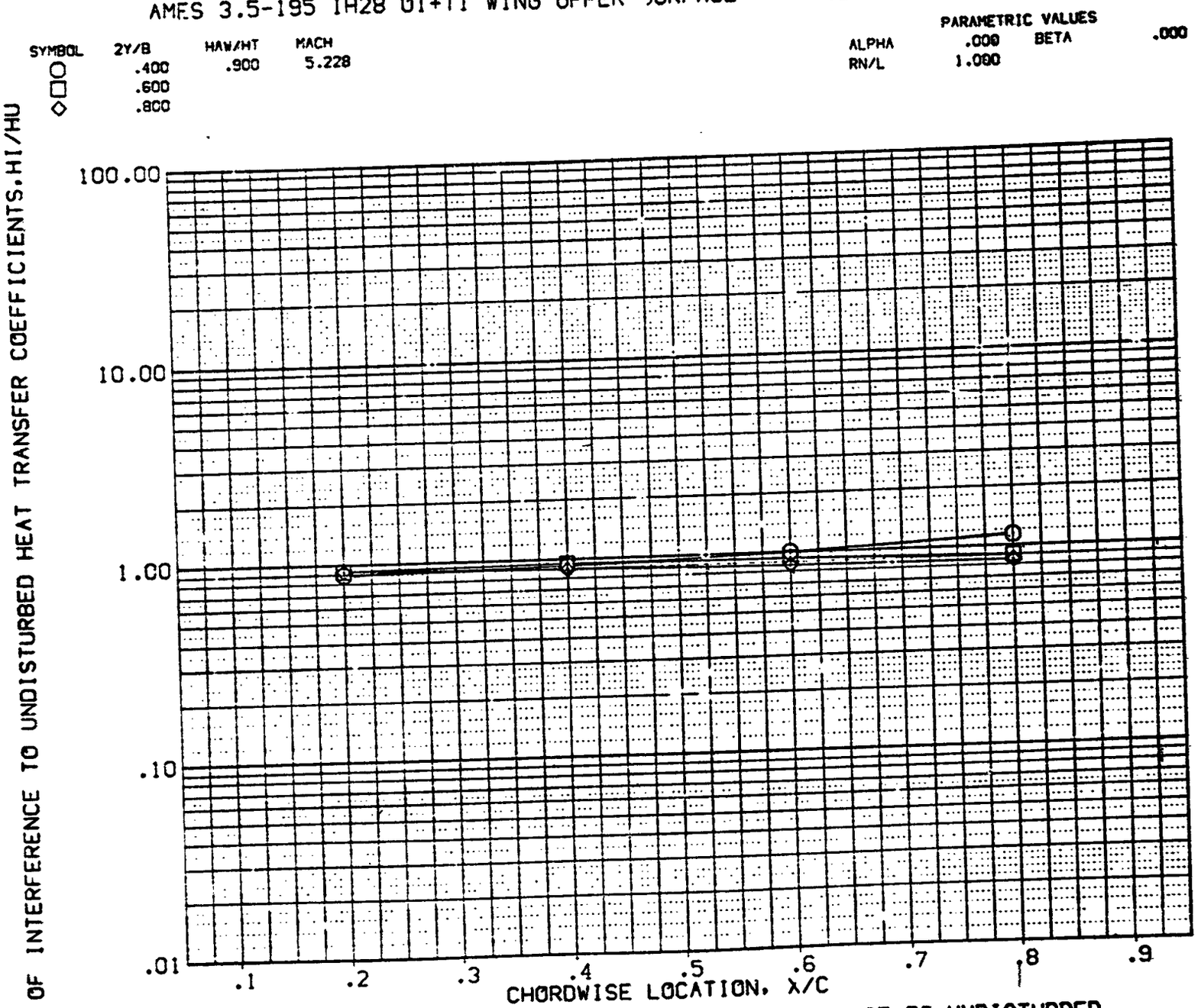

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

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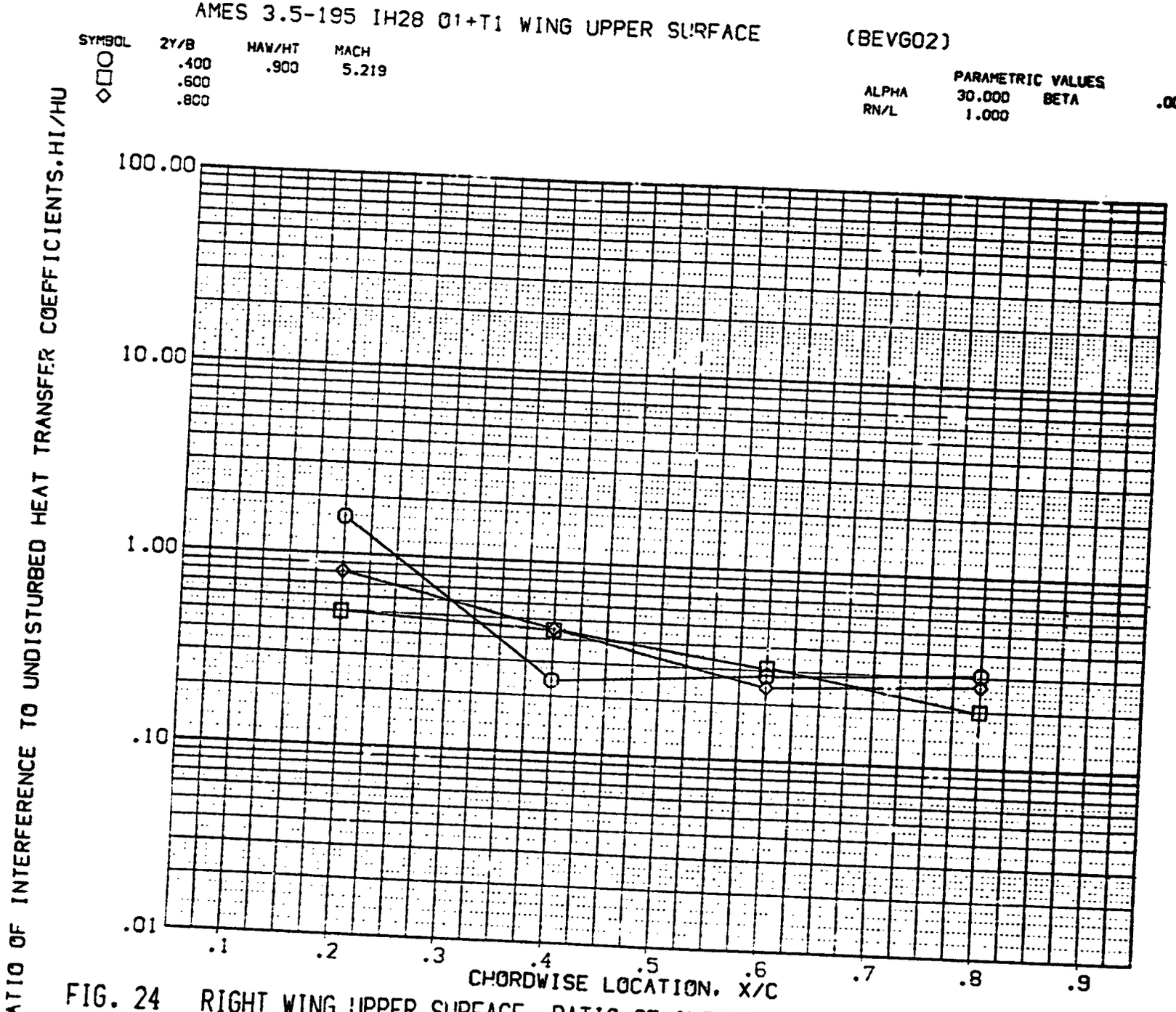

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG03)

SYMBOL	ZY/B	HAW/HT	MACH
○	.400	.900	5.220
□	.600		
◇	.800		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

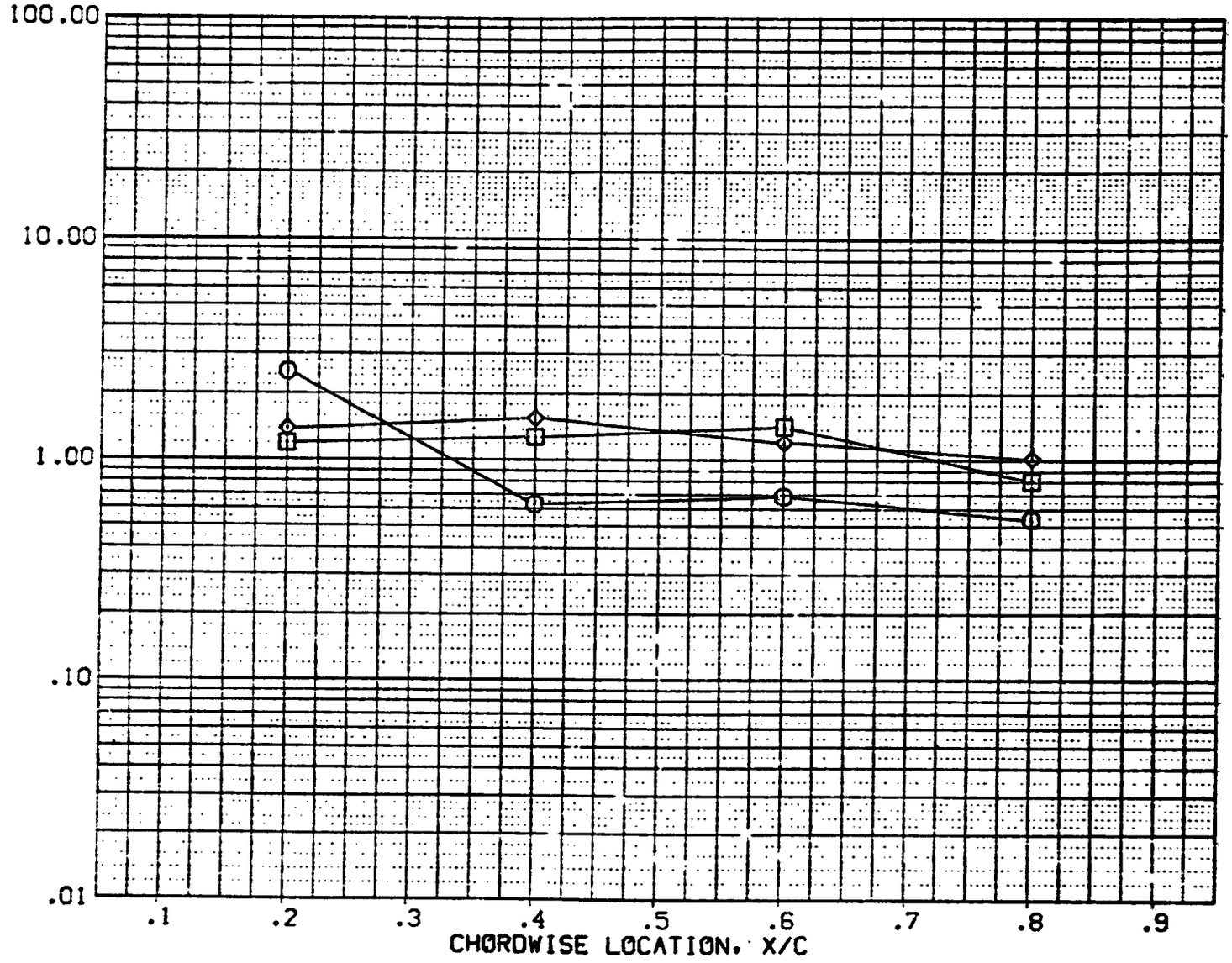

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

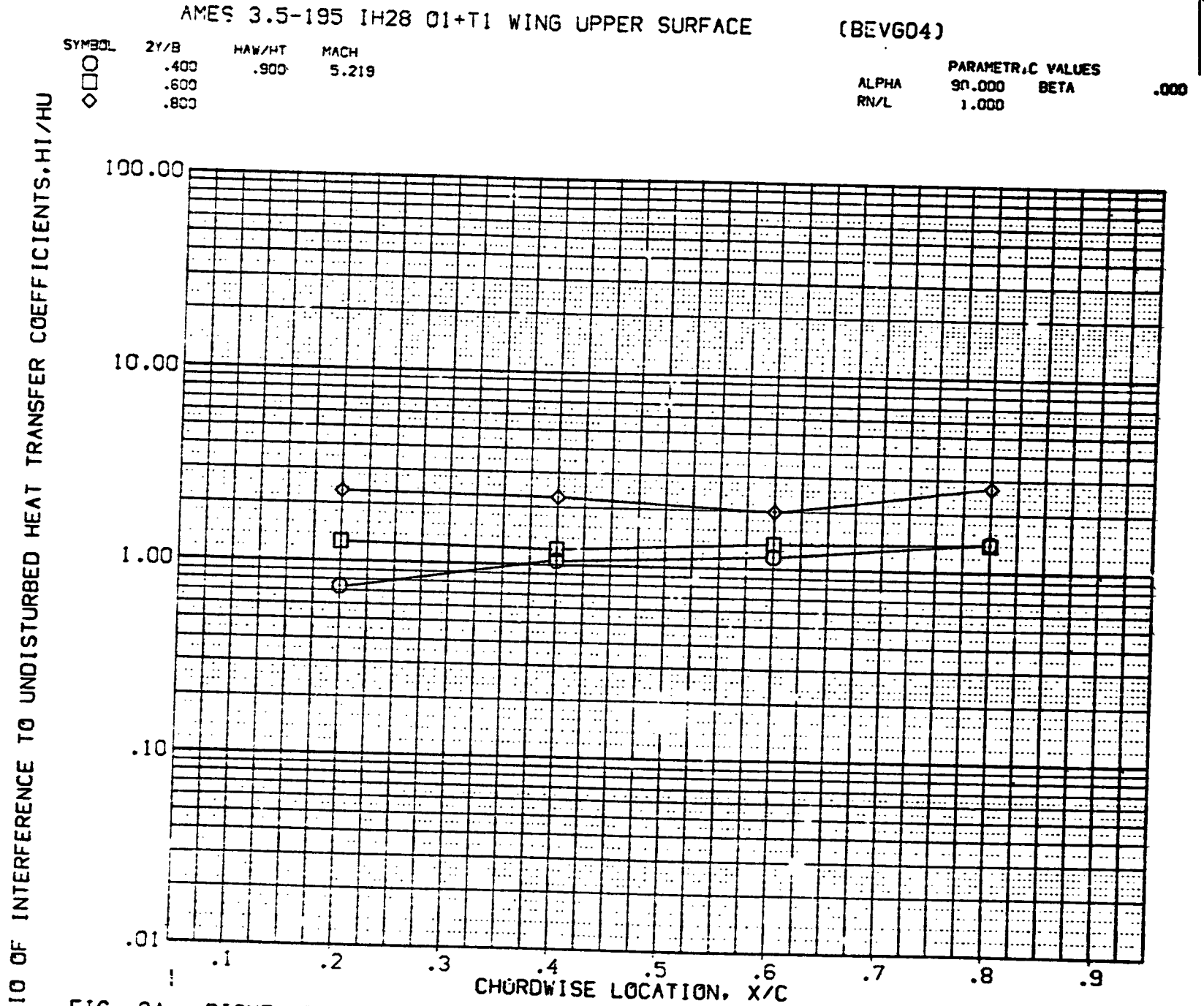

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

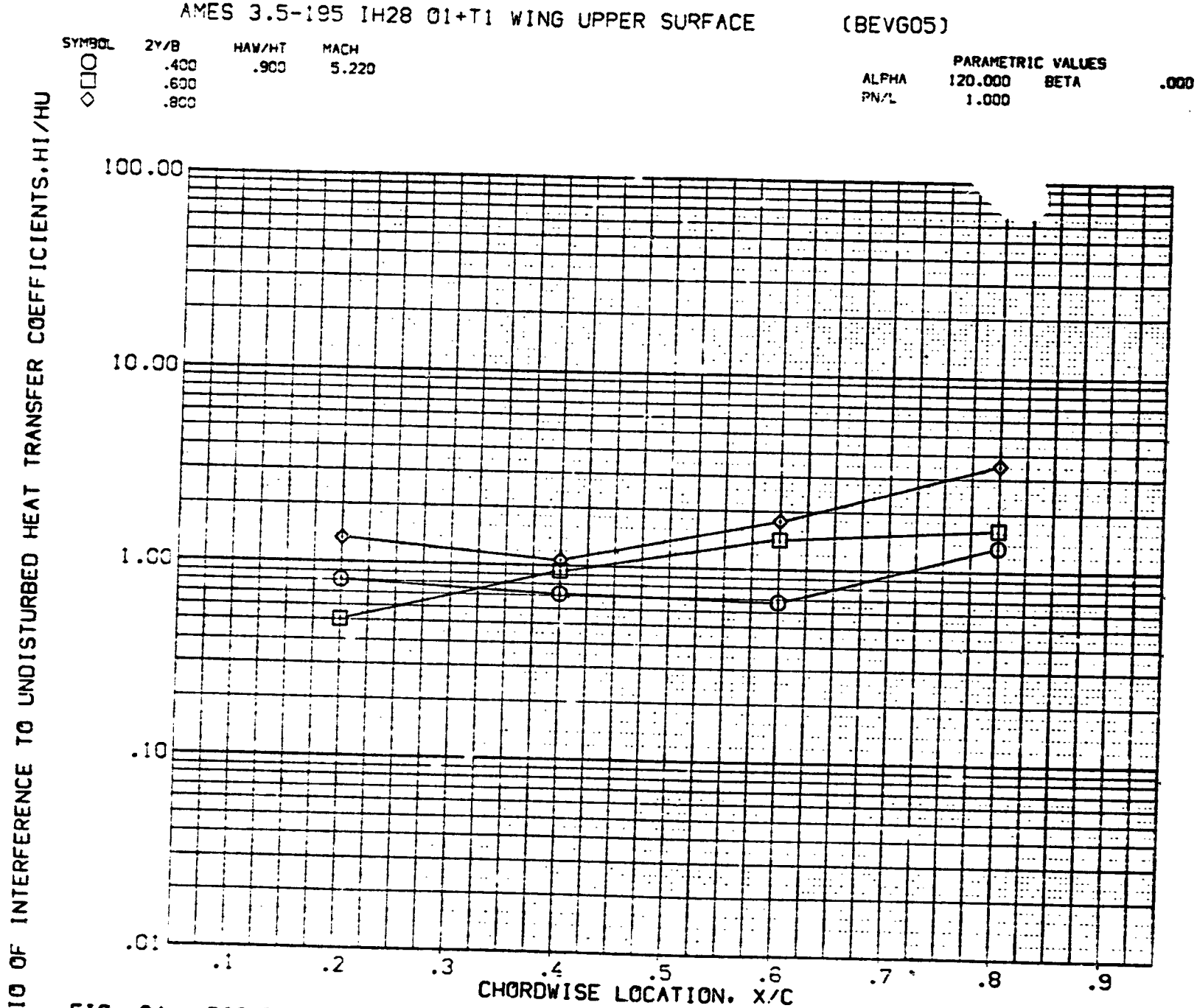

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG06)

SYMBOL	2Y/B	HAW/HT	MACH
◇□○	.400	.900	5.220
	.600		
	.800		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

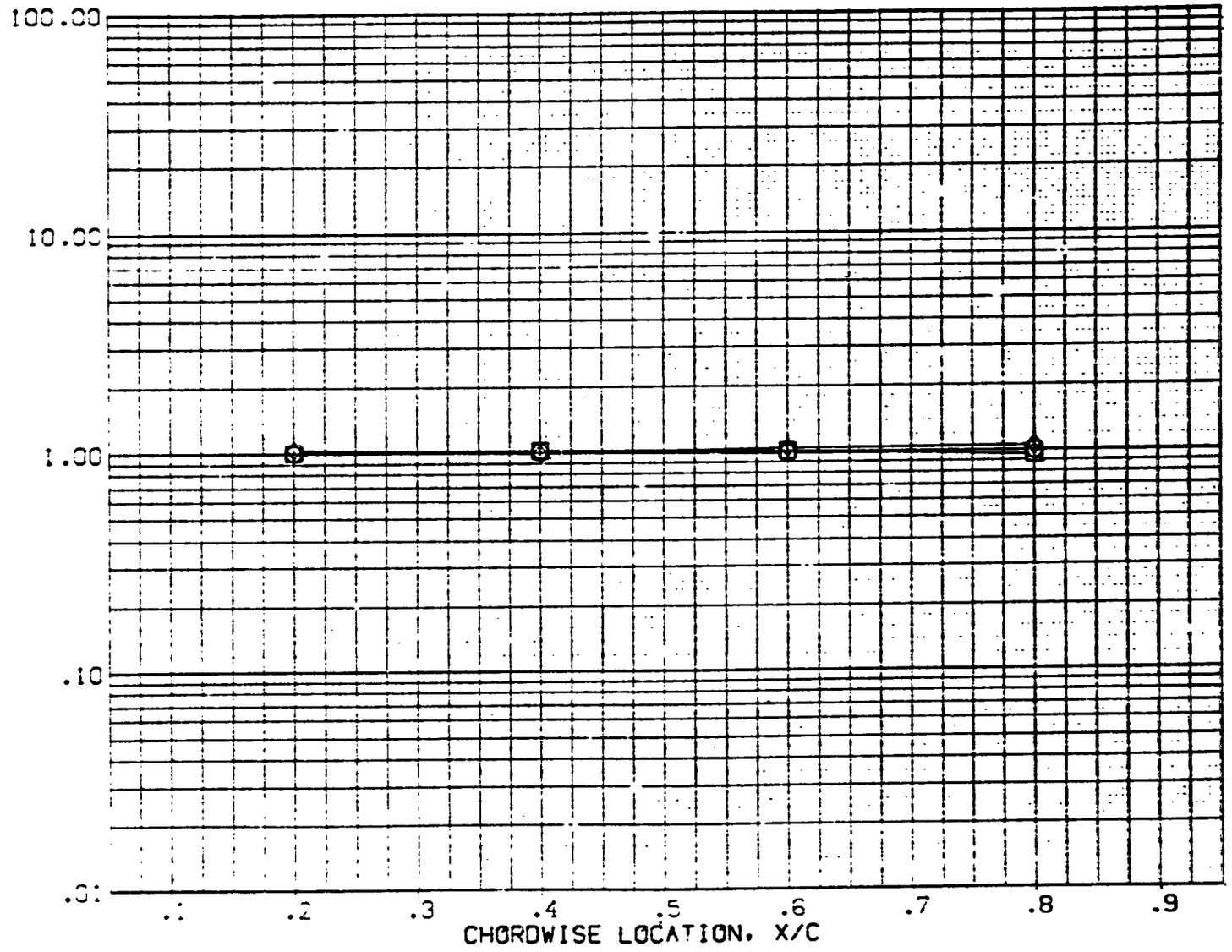

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE (BEVG07)

SYMBOL	2Y/B	HAW/HT	MACH
◇□○	.400	.900	5.219
	.600		
	.800		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

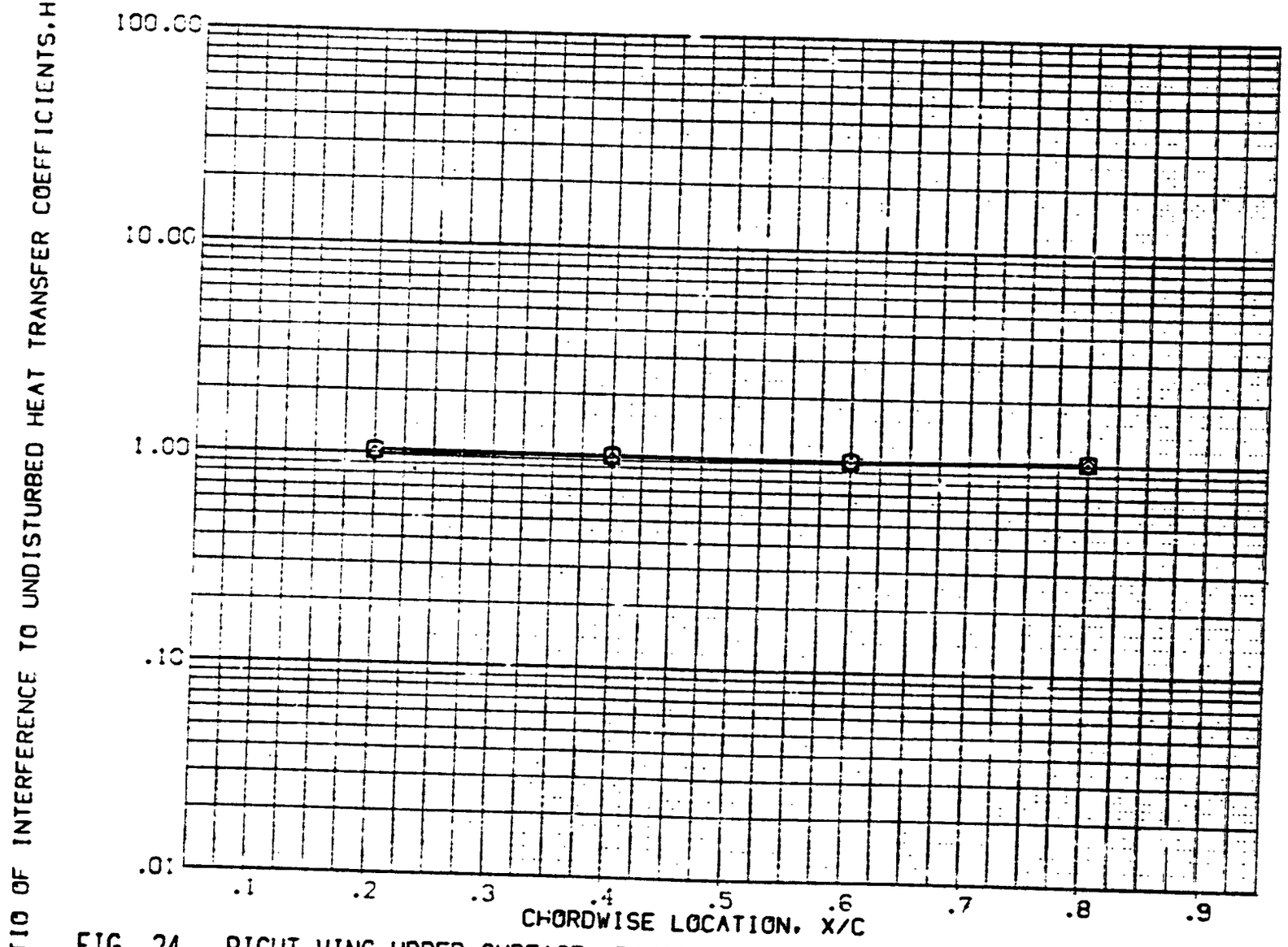

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 C1+T1 WING UPPER SURFACE (BEVG08)

SYMBOL	ZY/B	HAW/HT	MACH
◇□○	.400	.900	5.220
	.600		
	.800		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

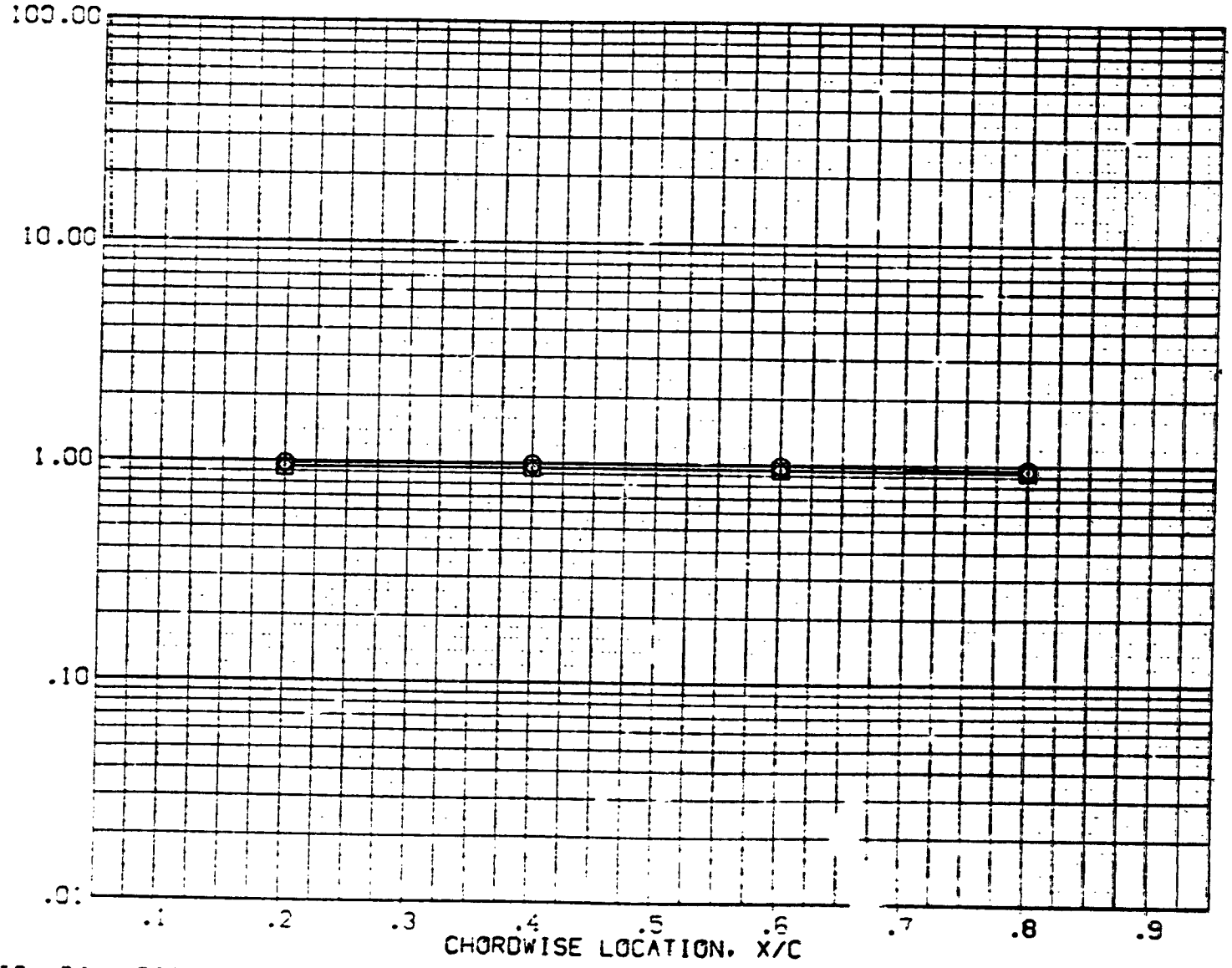

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

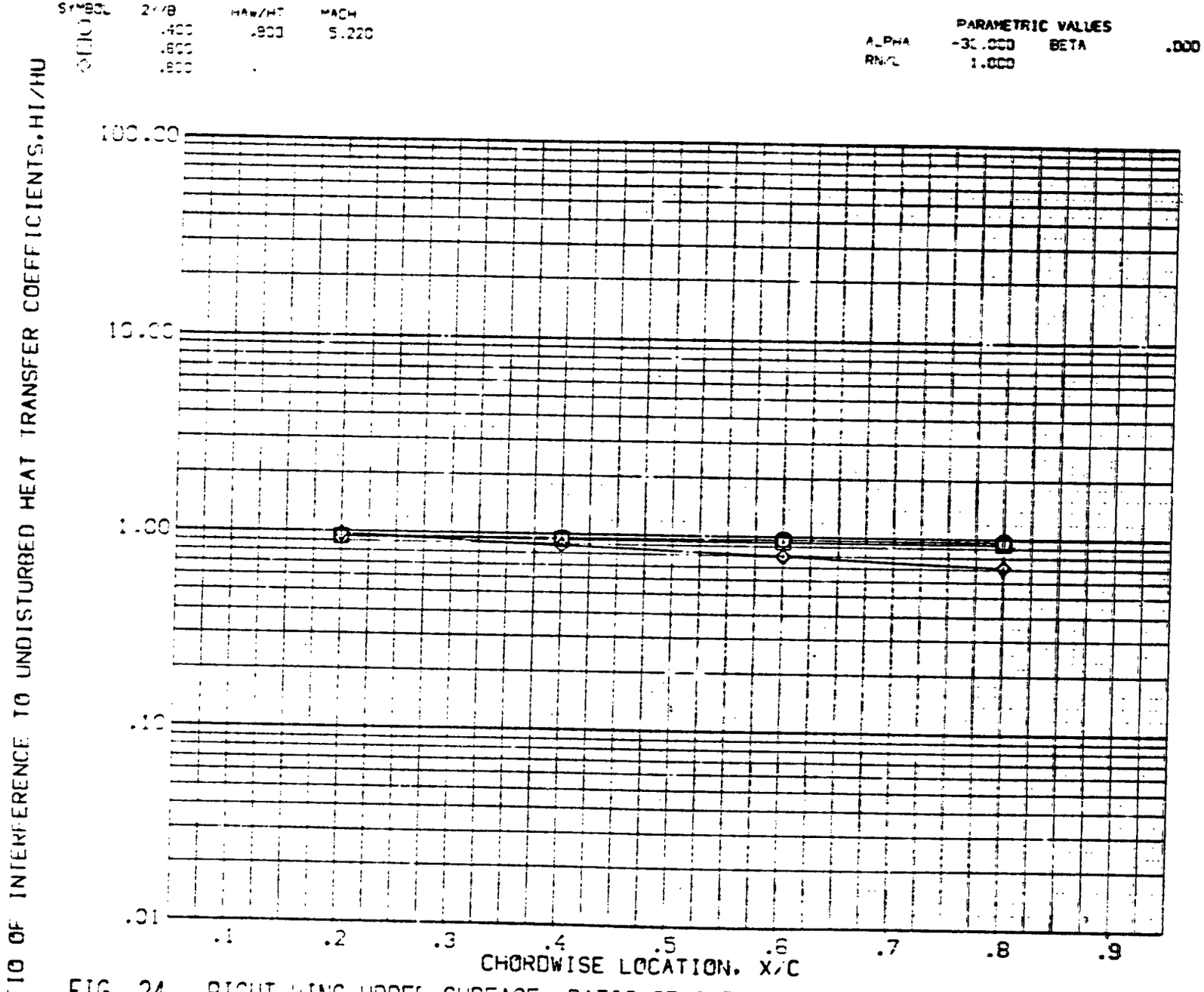

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

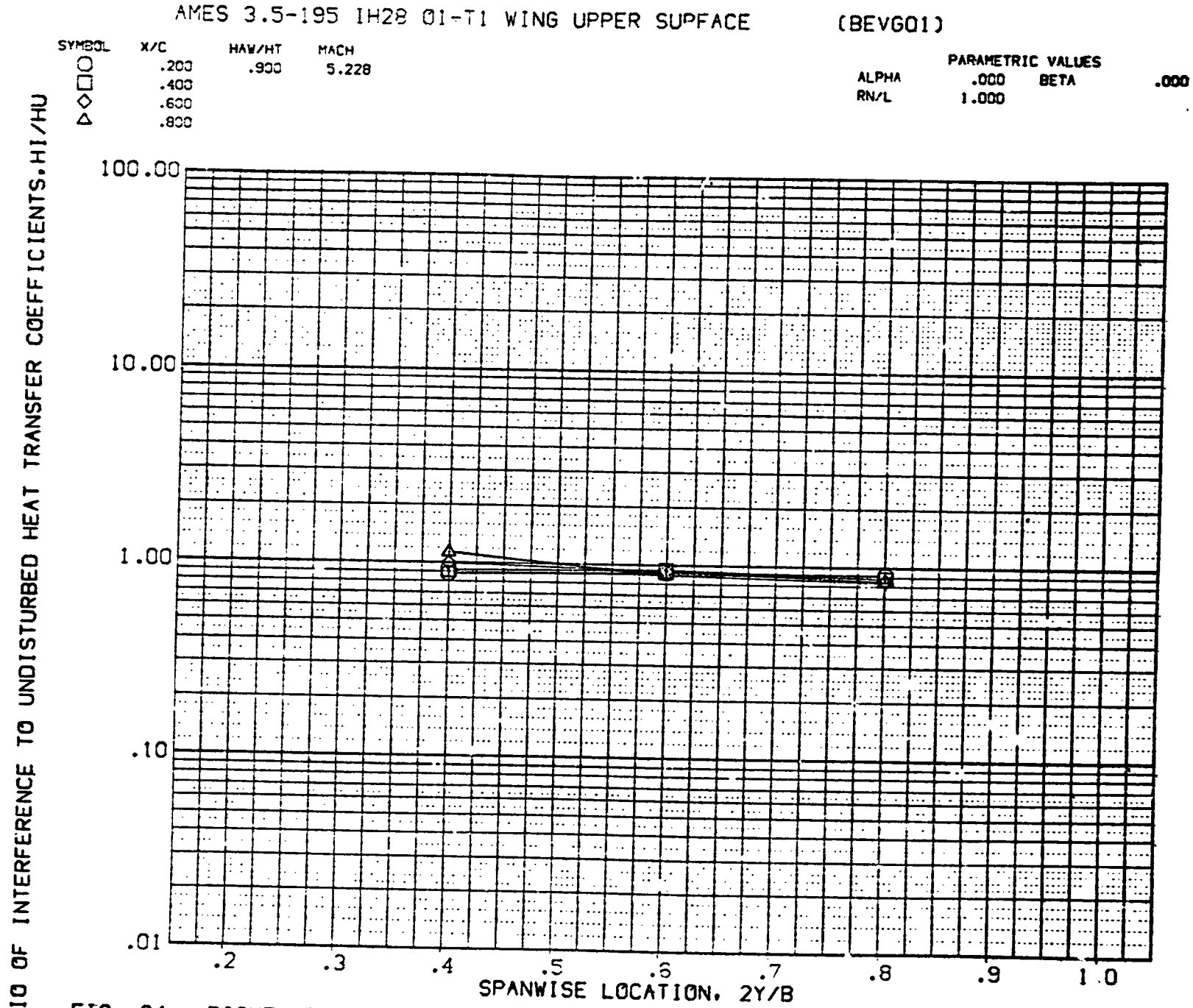

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

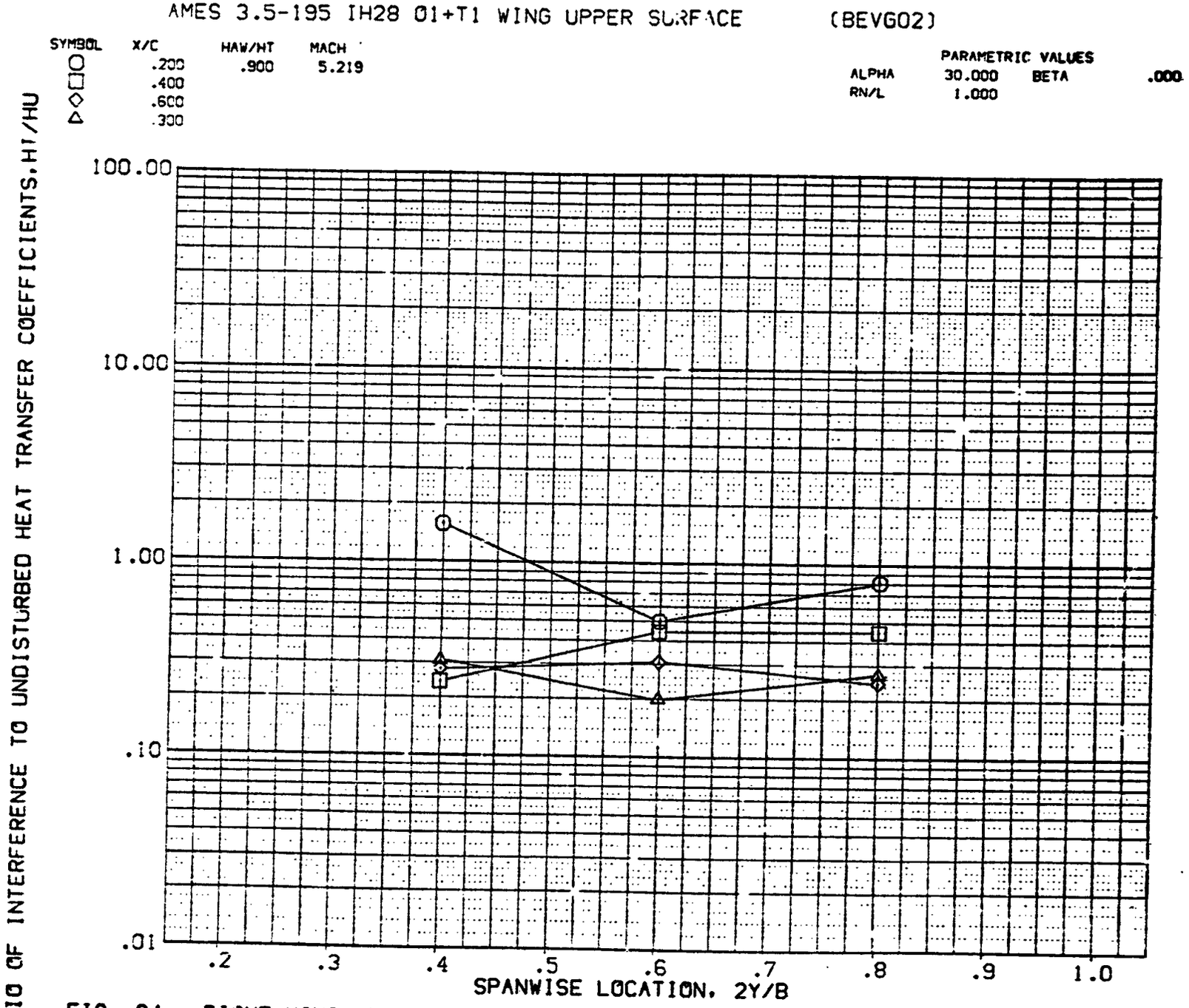

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

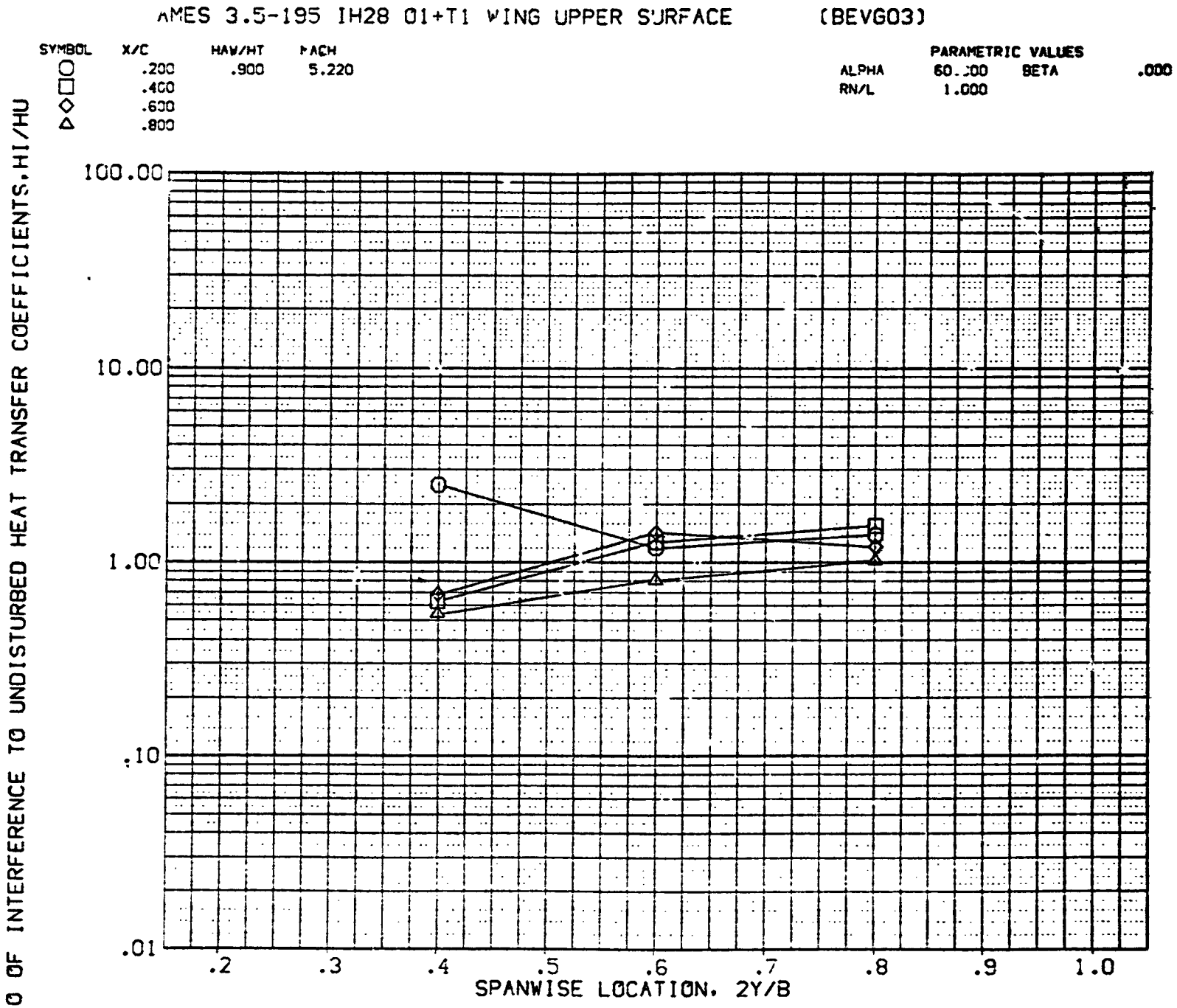

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

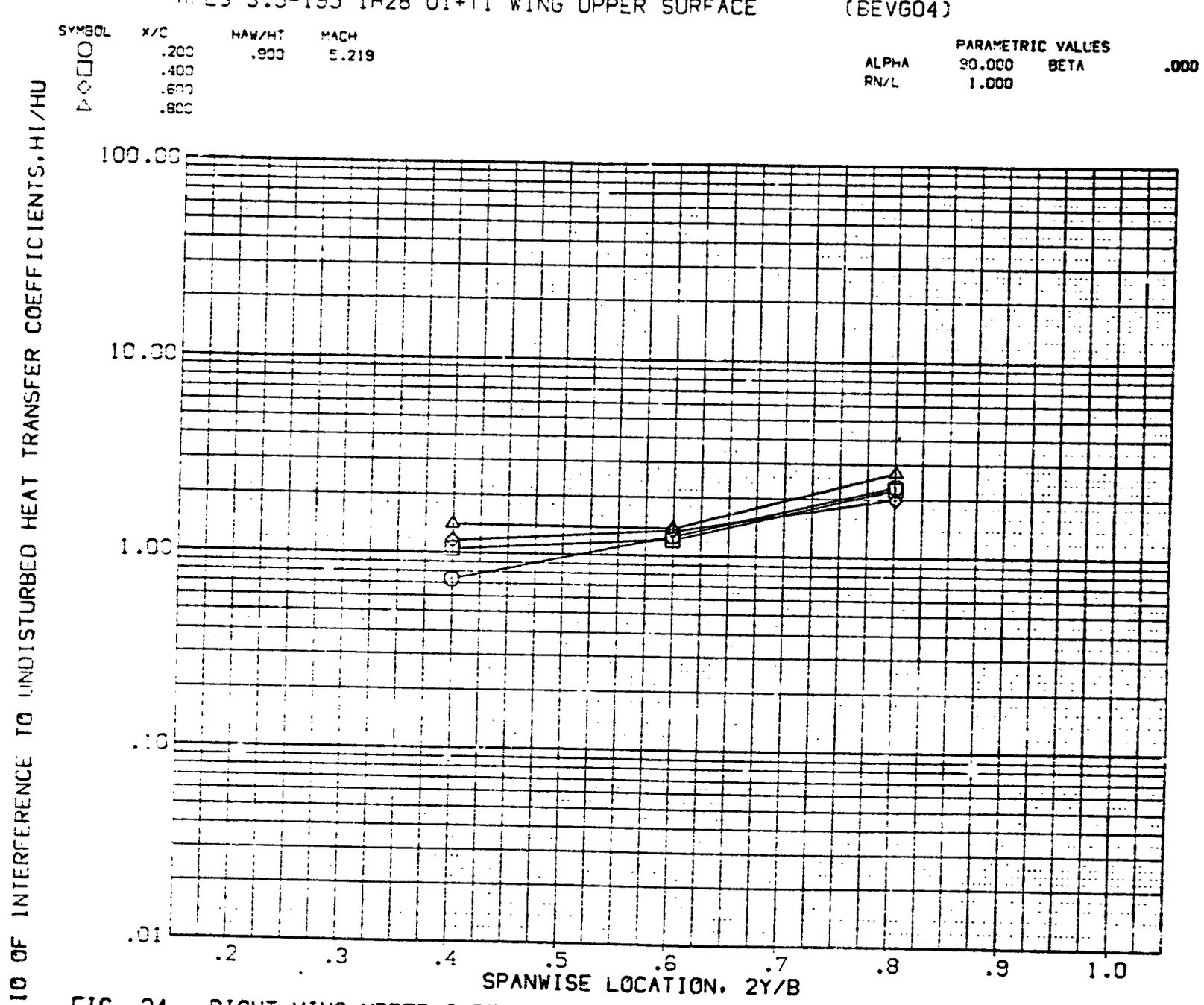

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

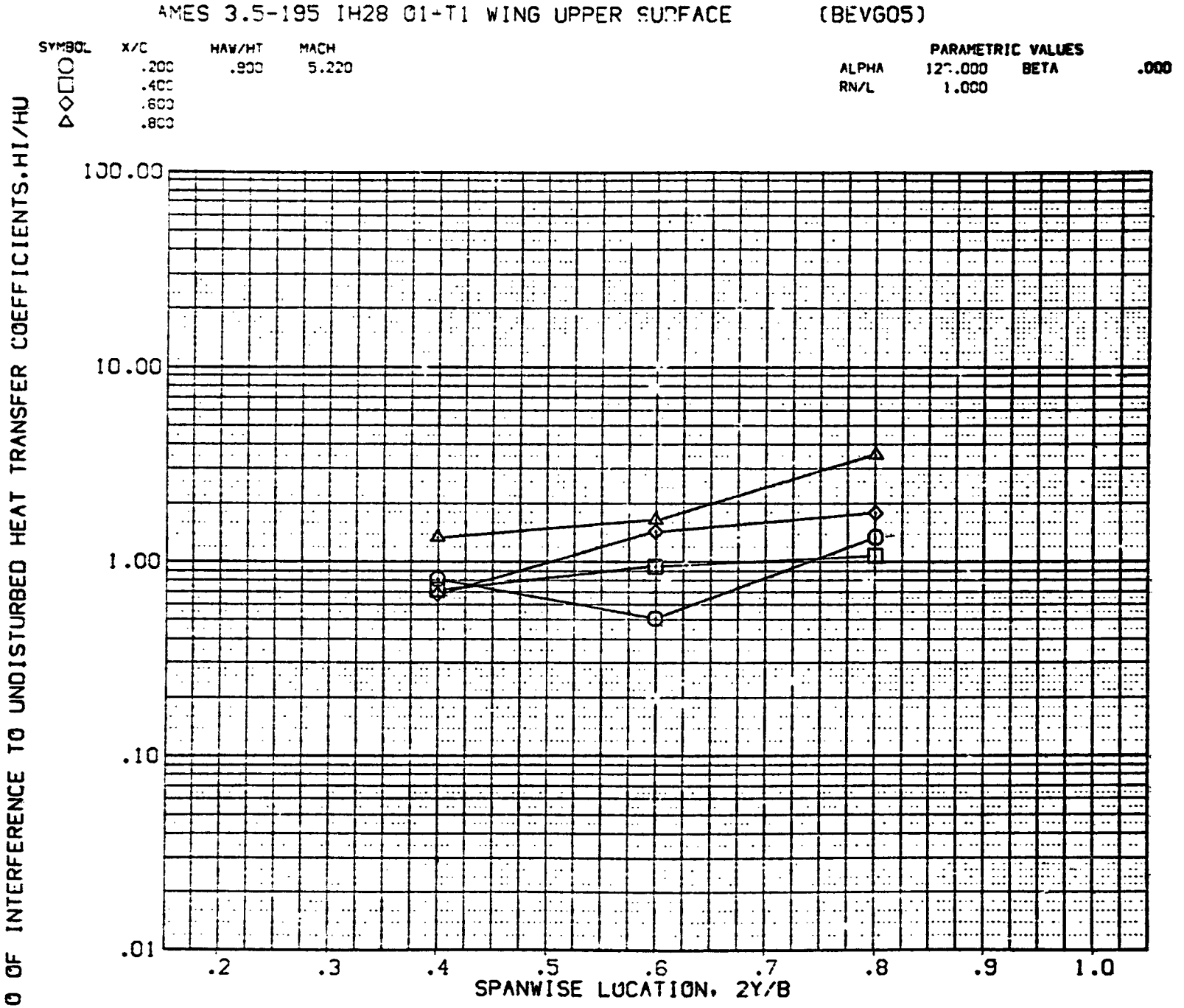

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

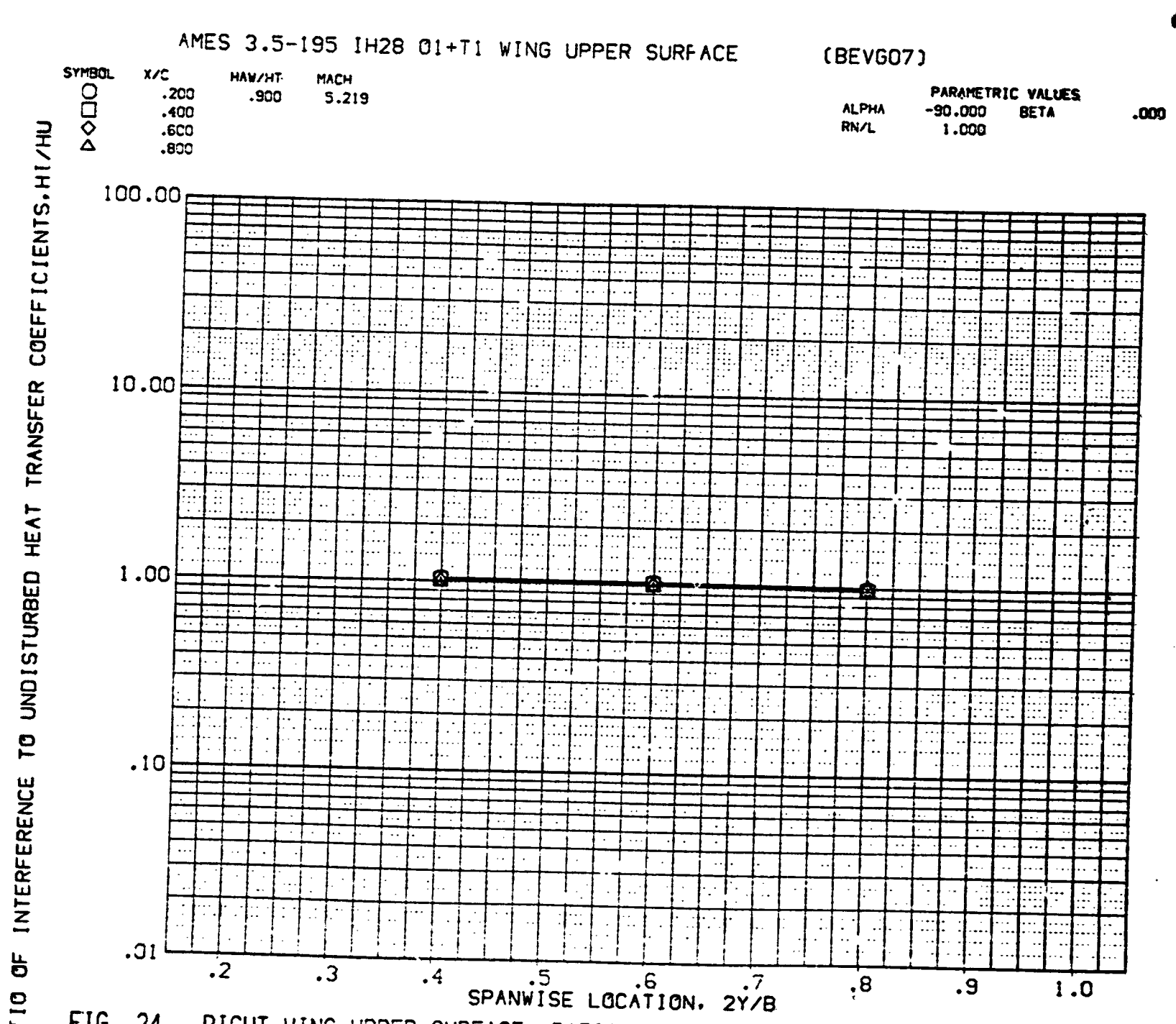

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

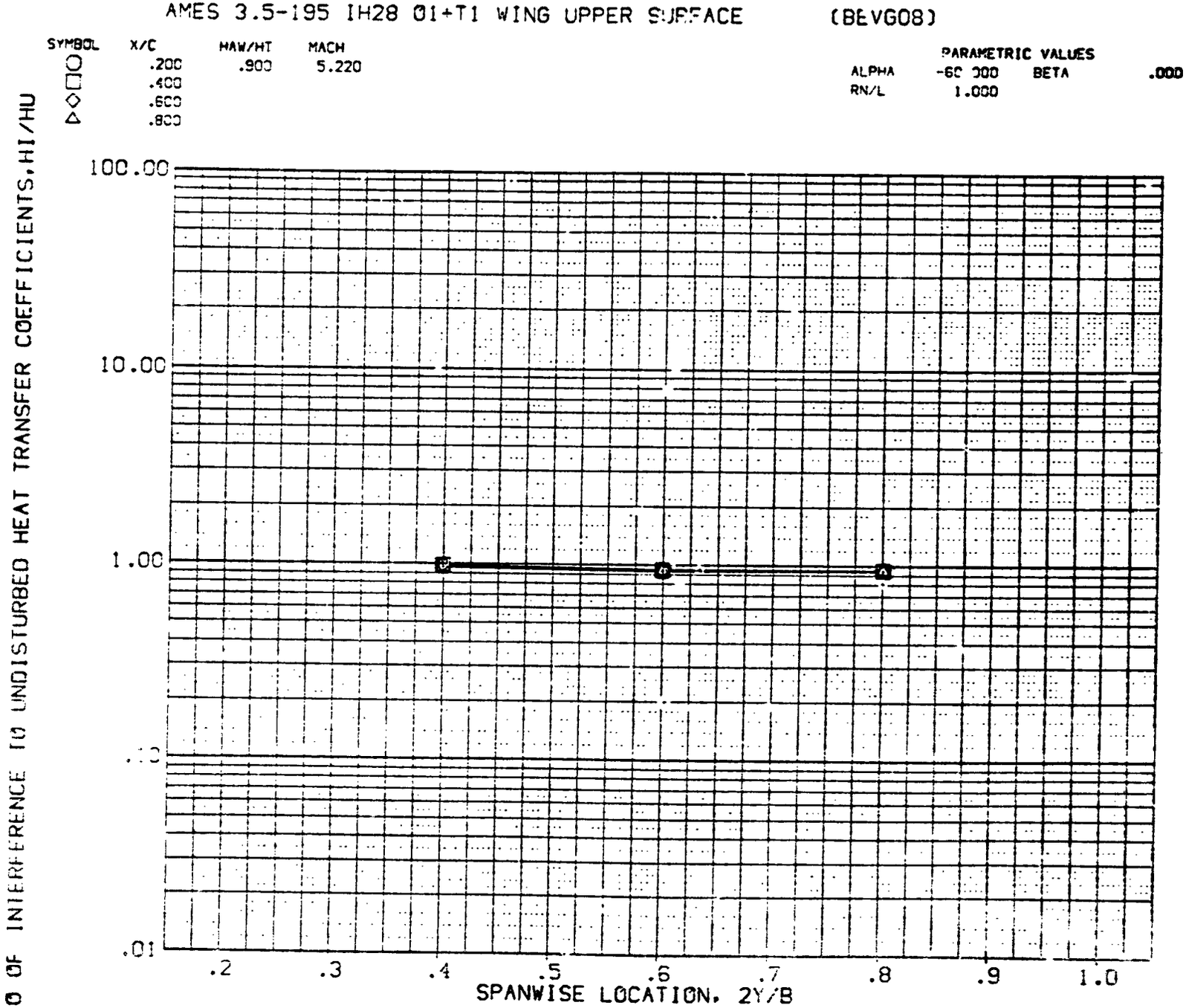

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

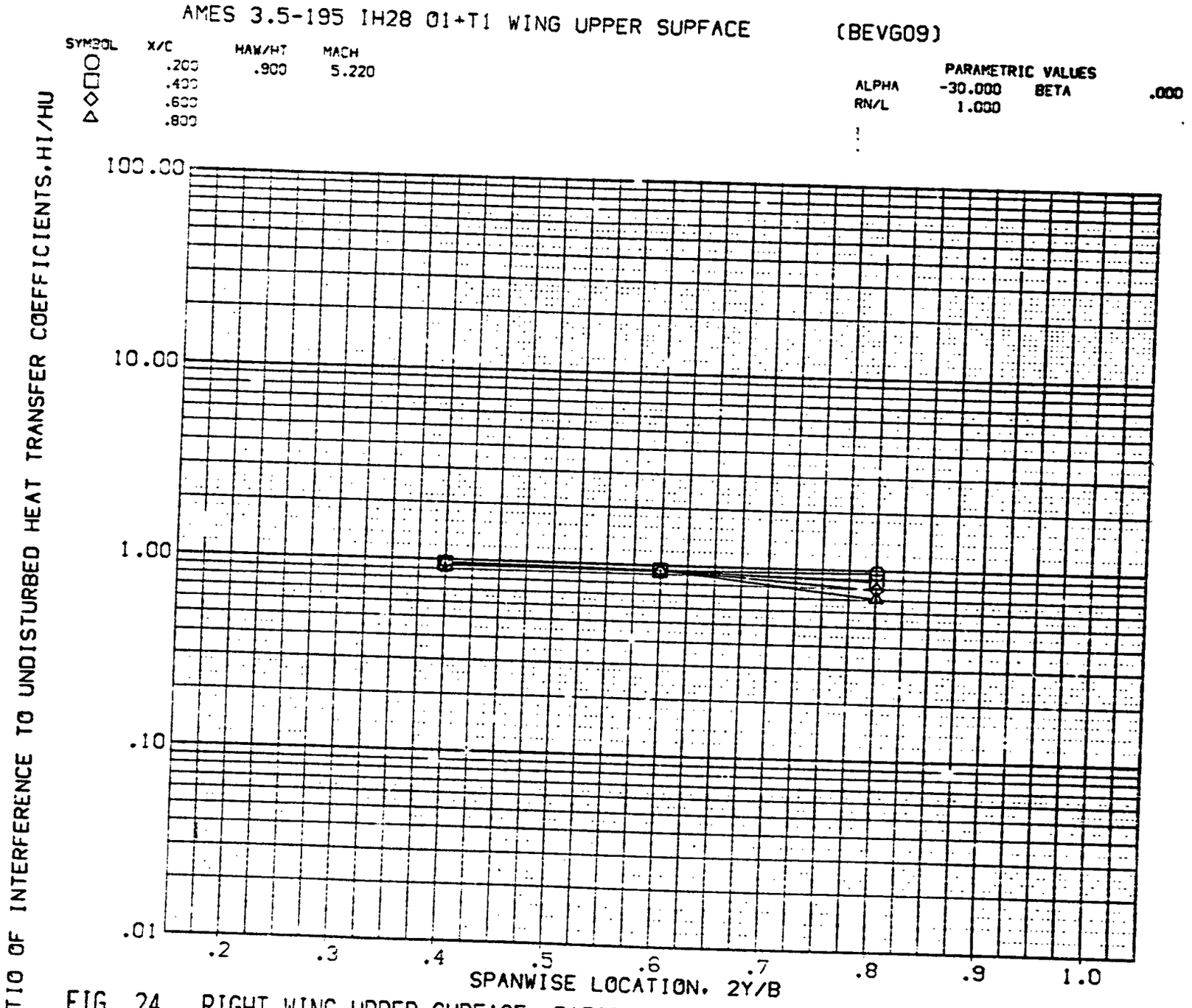

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	.000	.000	1.000
(BEVG02)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(BEVG03)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	1.000
(BEVG04)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	90.000	.000	1.000
(BEVG05)	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	120.000	000	1.000

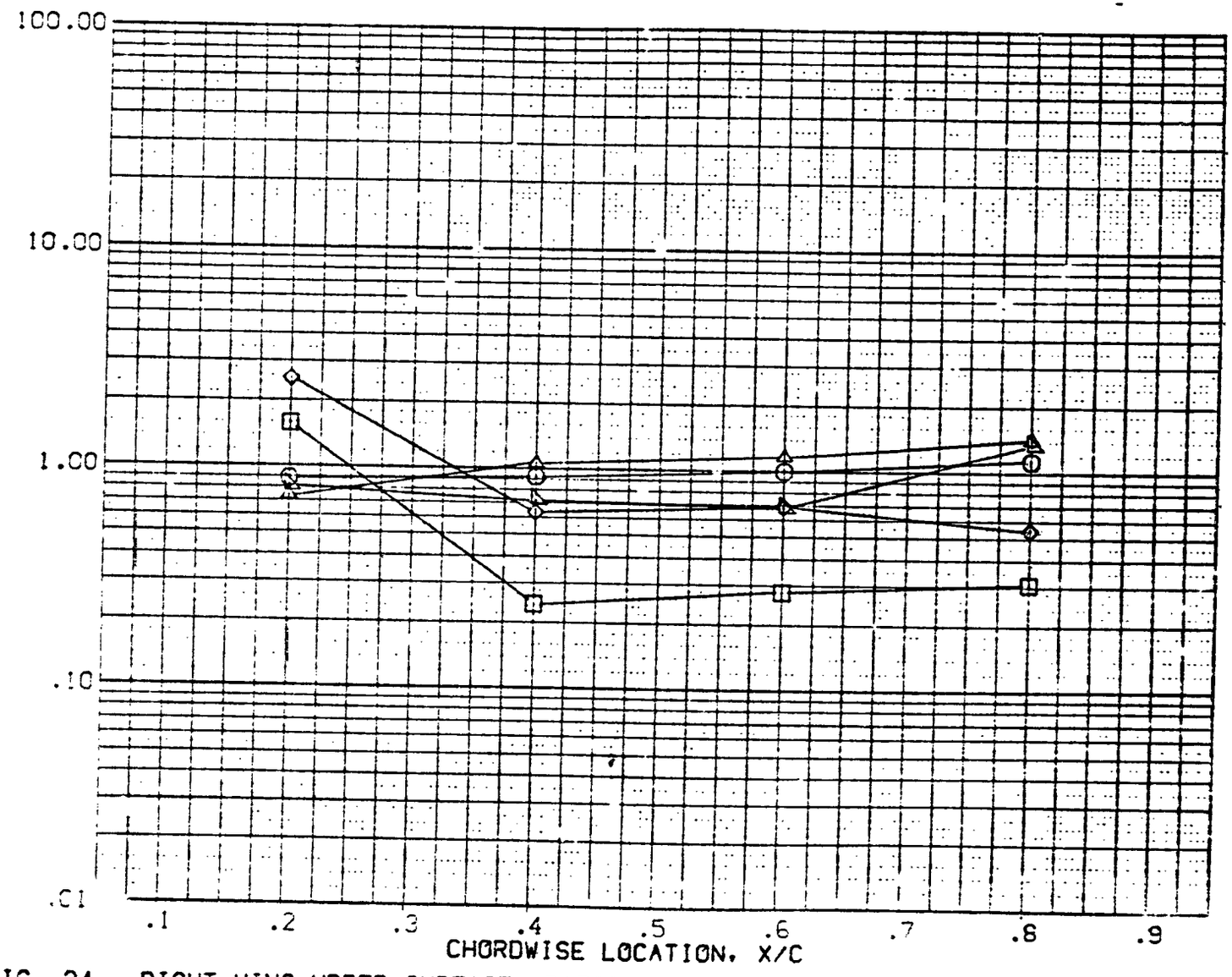

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= . .900 2Y/B = .400

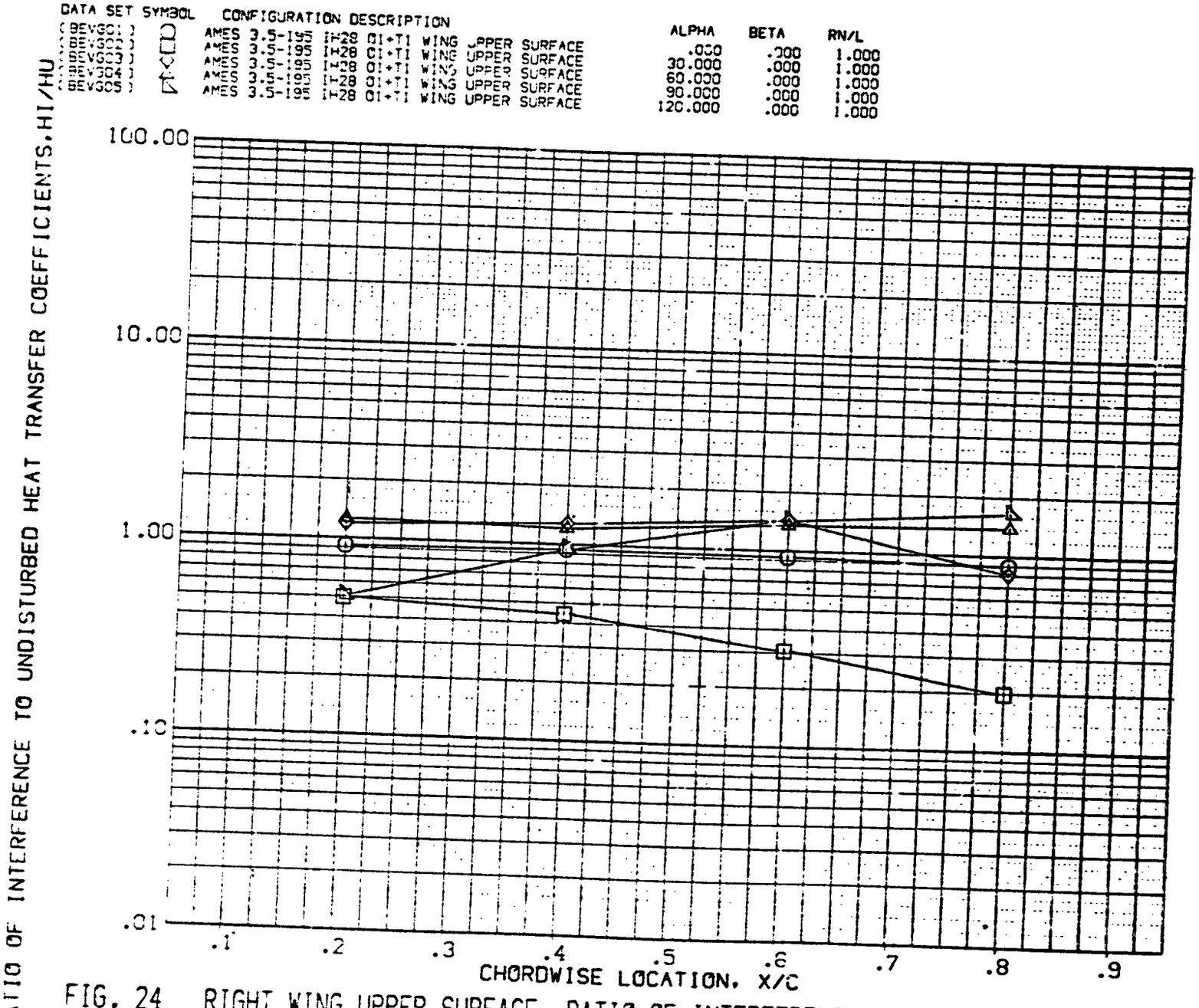

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .800 2Y/B = .600

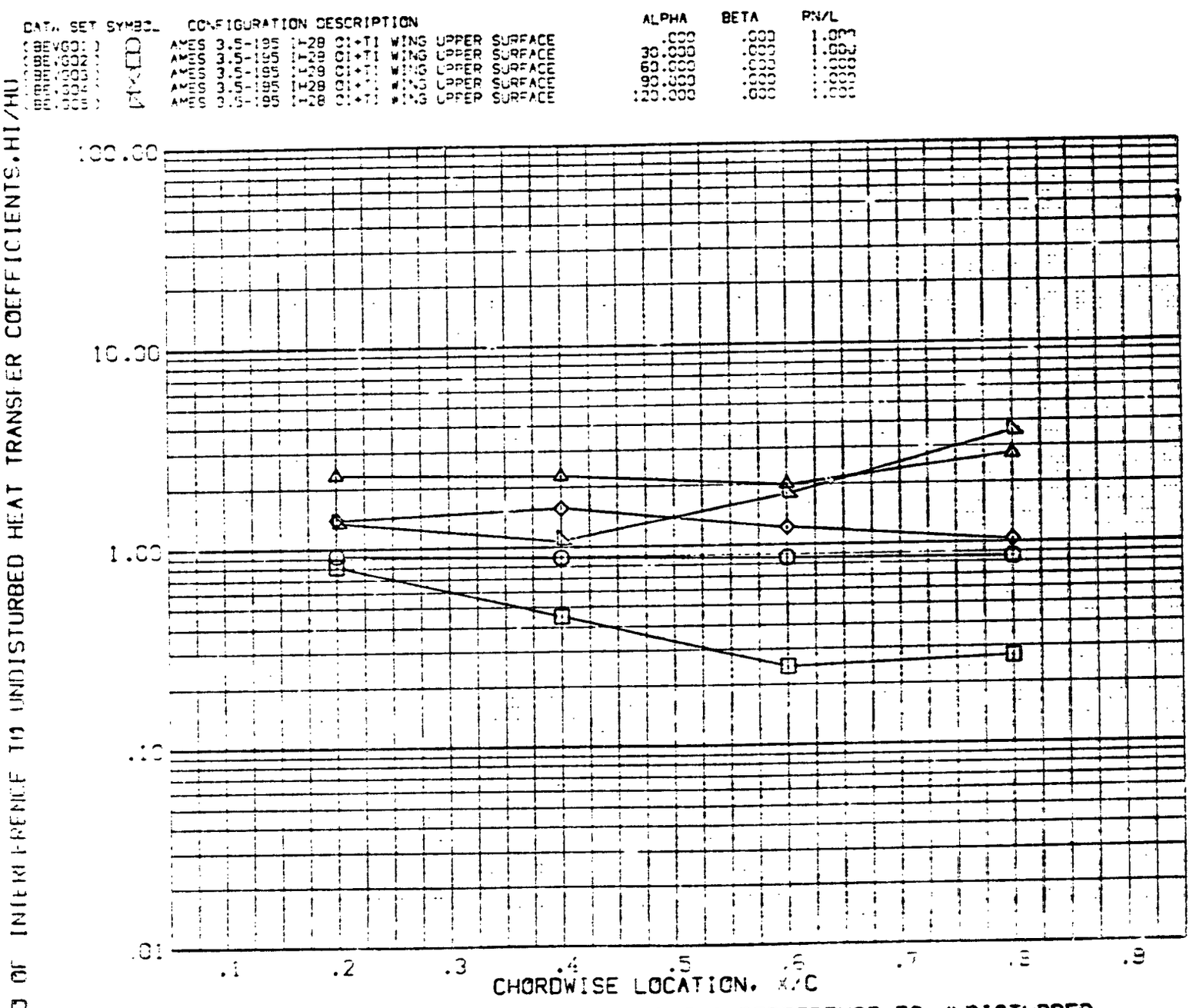

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HA/HT= .900 2Y/B = .800

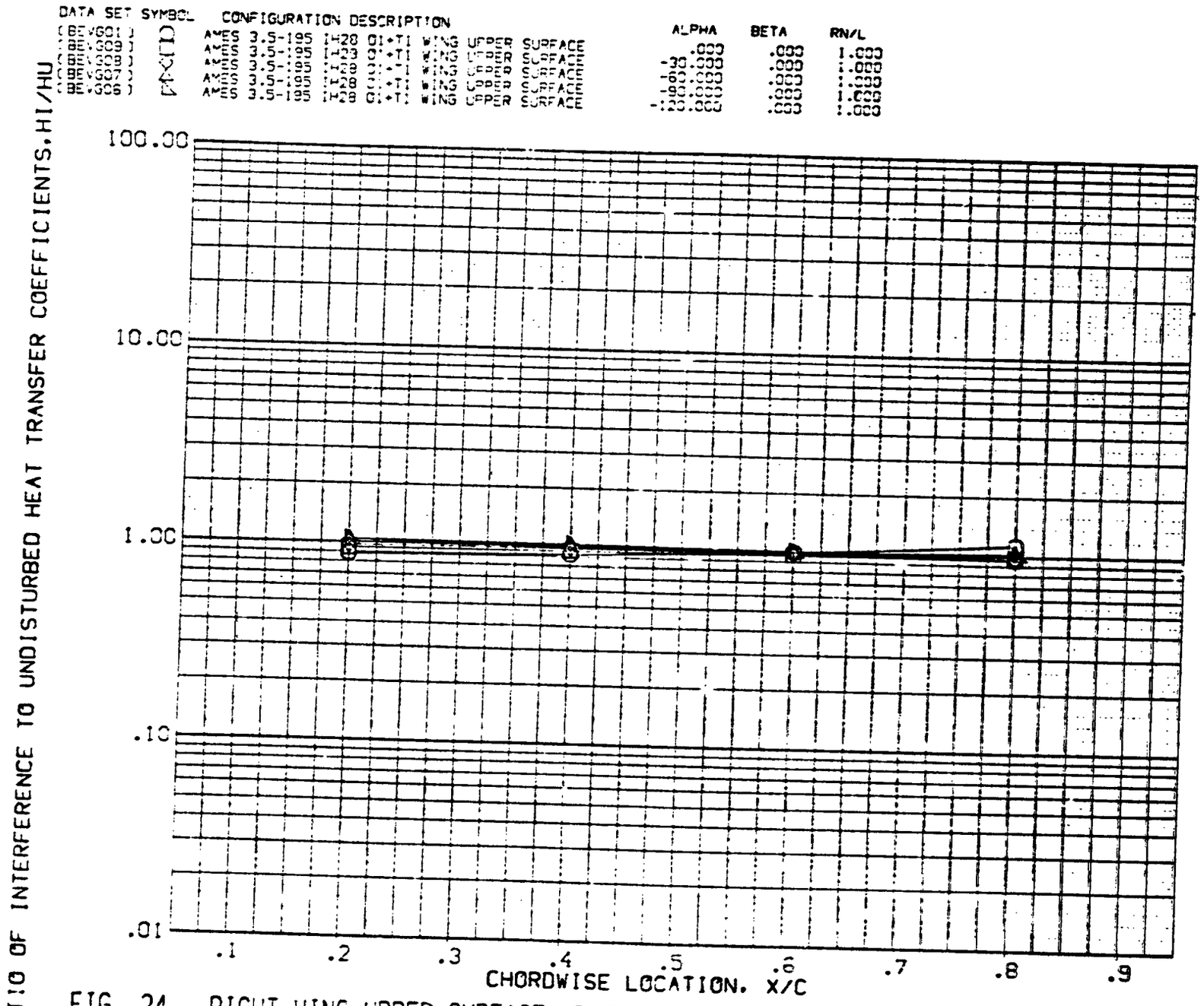

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HA/HT= .800 2Y/B = .400

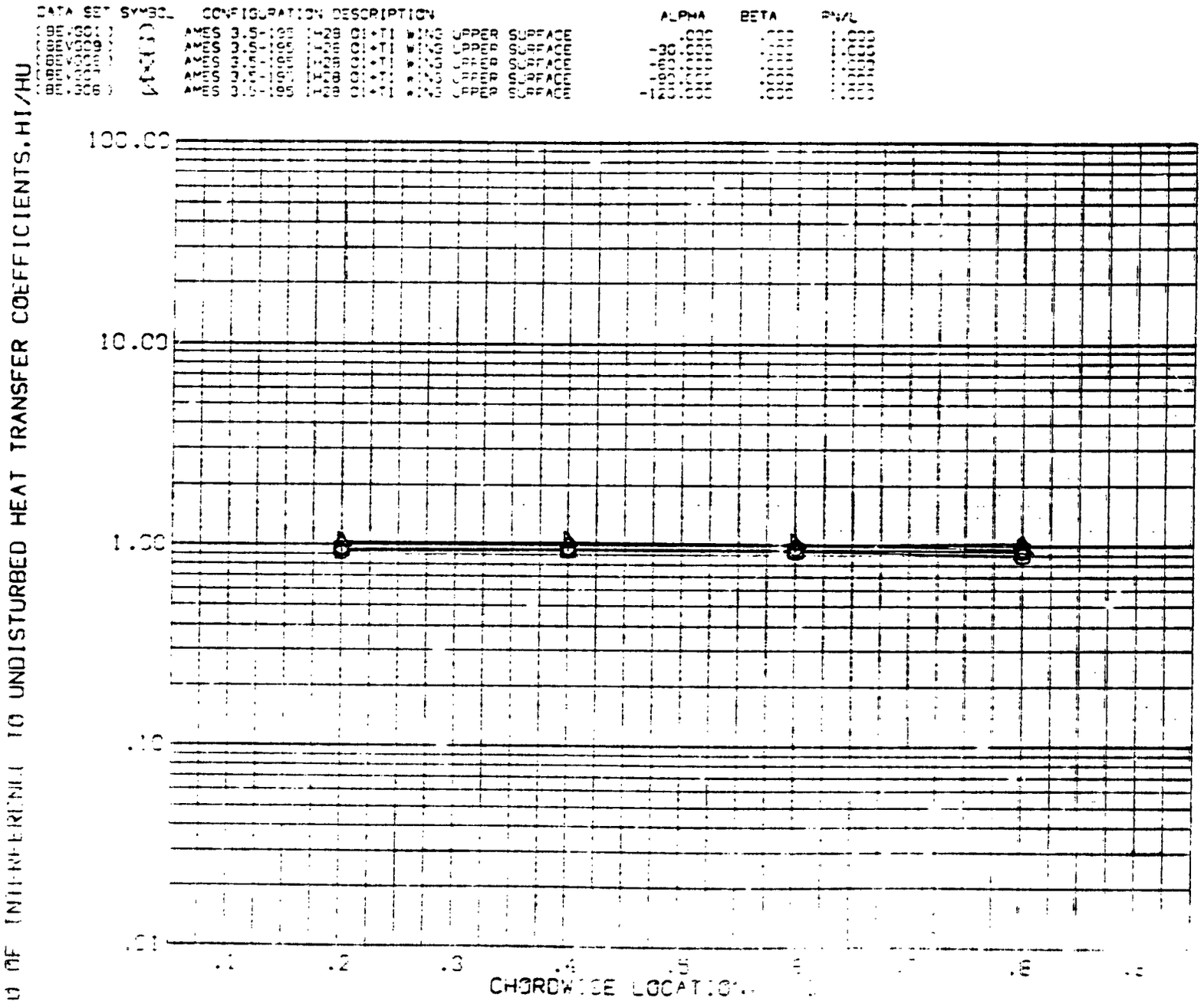

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 ALPHA = .000 Z/B = .800 PAGE 1130

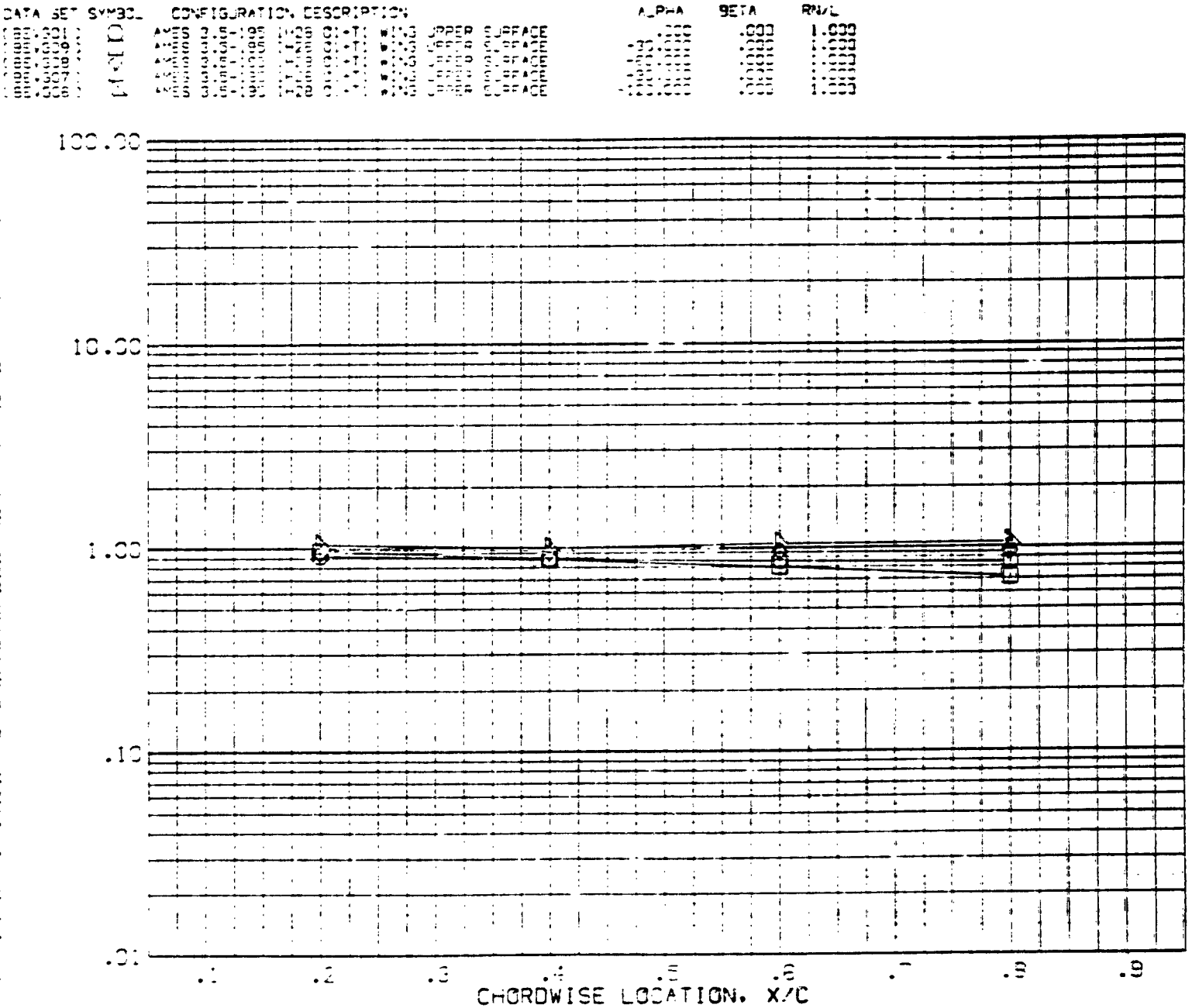

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

DATA SE	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	.000	.000	1.000
(BEVG02)	◇	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(BEVG03)	△	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	1.000
(BEVG04)	⊞	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	90.000	.000	1.000
(BEVG05)	⊠	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	120.000	.000	1.000

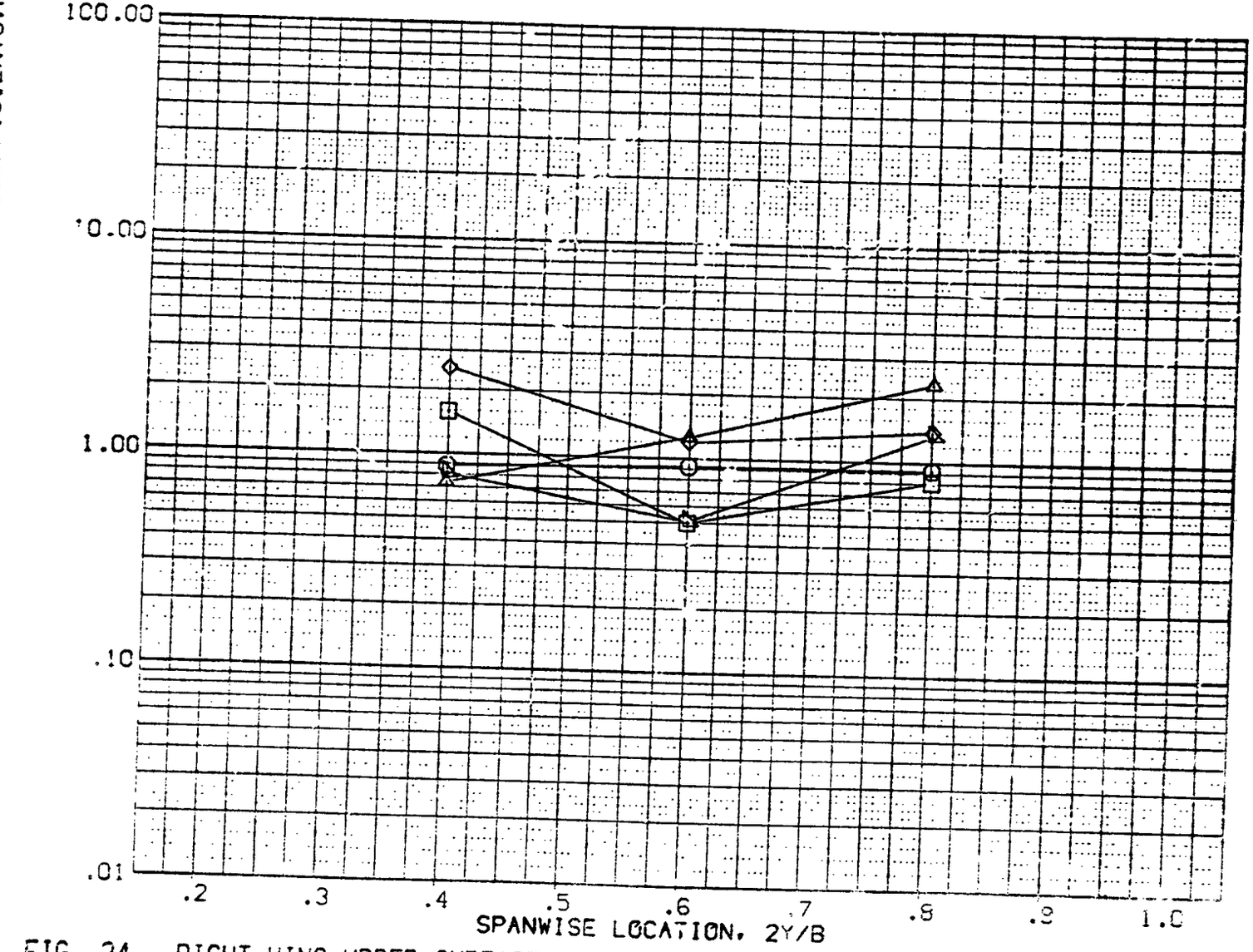

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 X/C = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(BEVG02)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	30.000	.000	1.000
(BEVG03)	▷	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	60.000	.000	1.000
(BEVG04)	○	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	90.000	.000	1.000
(BEVG05)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	120.000	.000	1.000

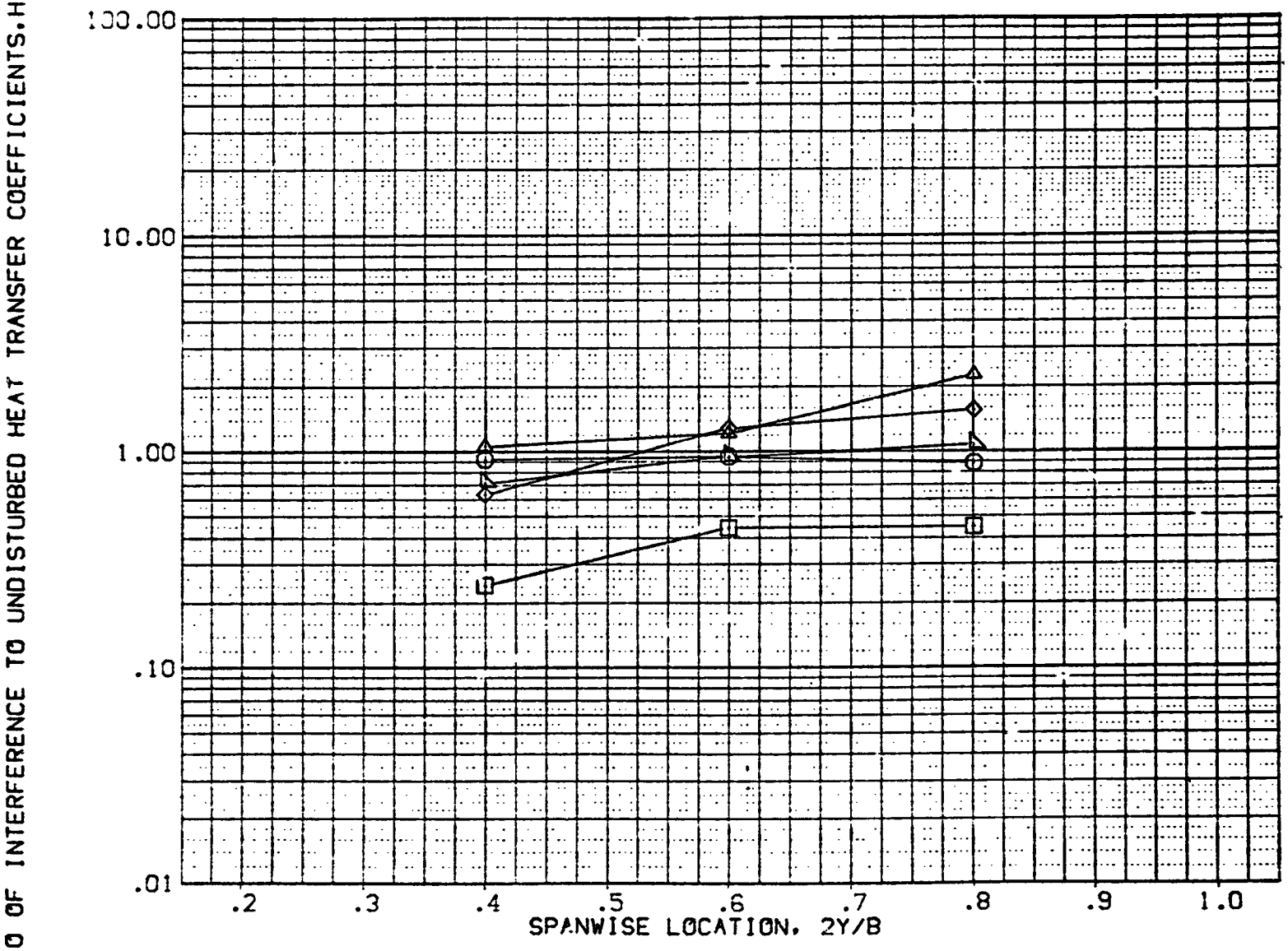

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 X/C = .100

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)	□	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	.000	.000	1.000
(BEVG02)	○	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	30.000	.000	1.000
(BEVG03)	△	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	60.000	.000	1.000
(BEVG04)	◇	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	90.000	.000	1.000
(BEVG05)	▽	AMES 3.5-195 IH28 01+TI WING UPPER SURFACE	120.000	.000	1.000

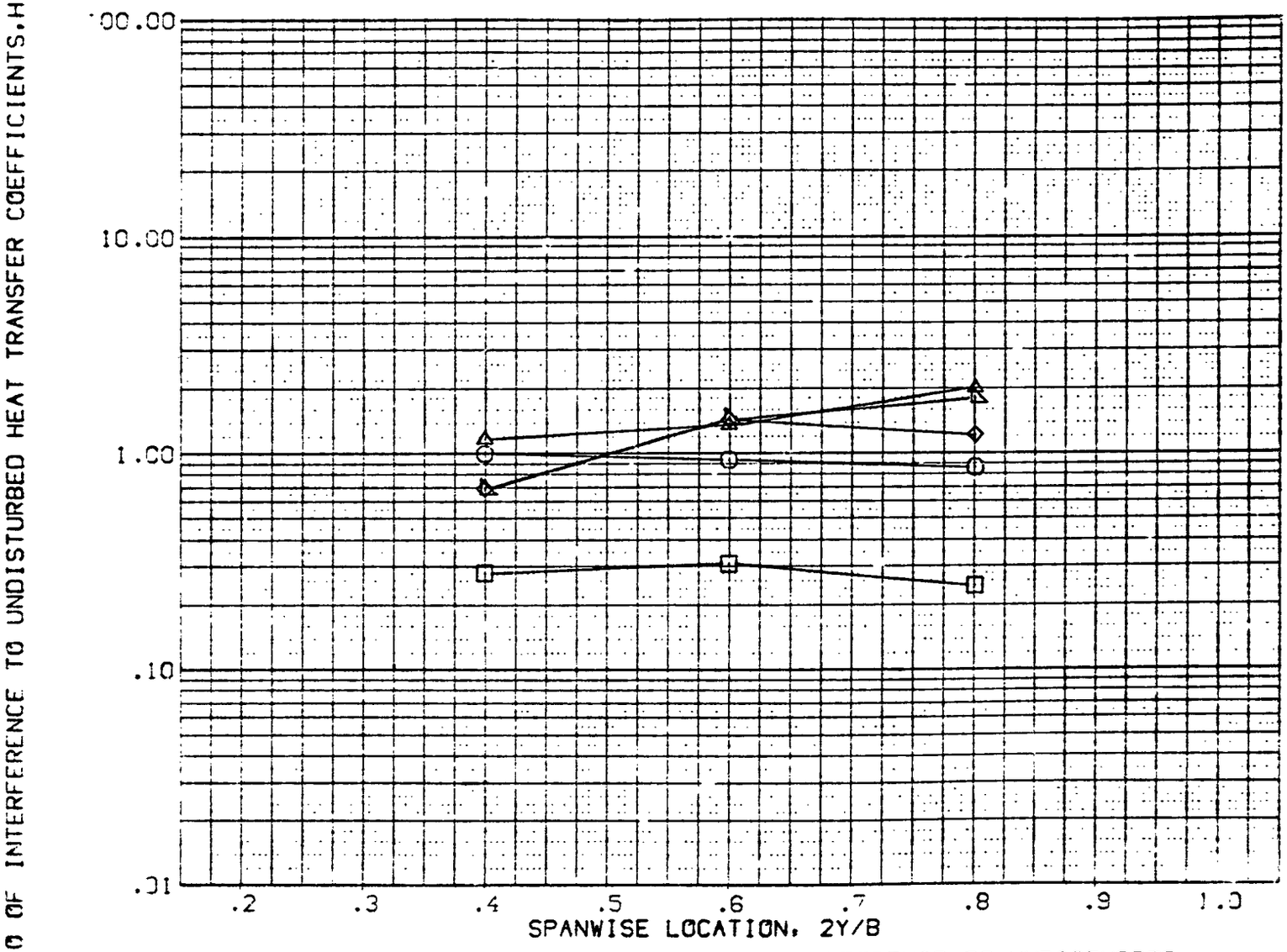

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 X/C = .600

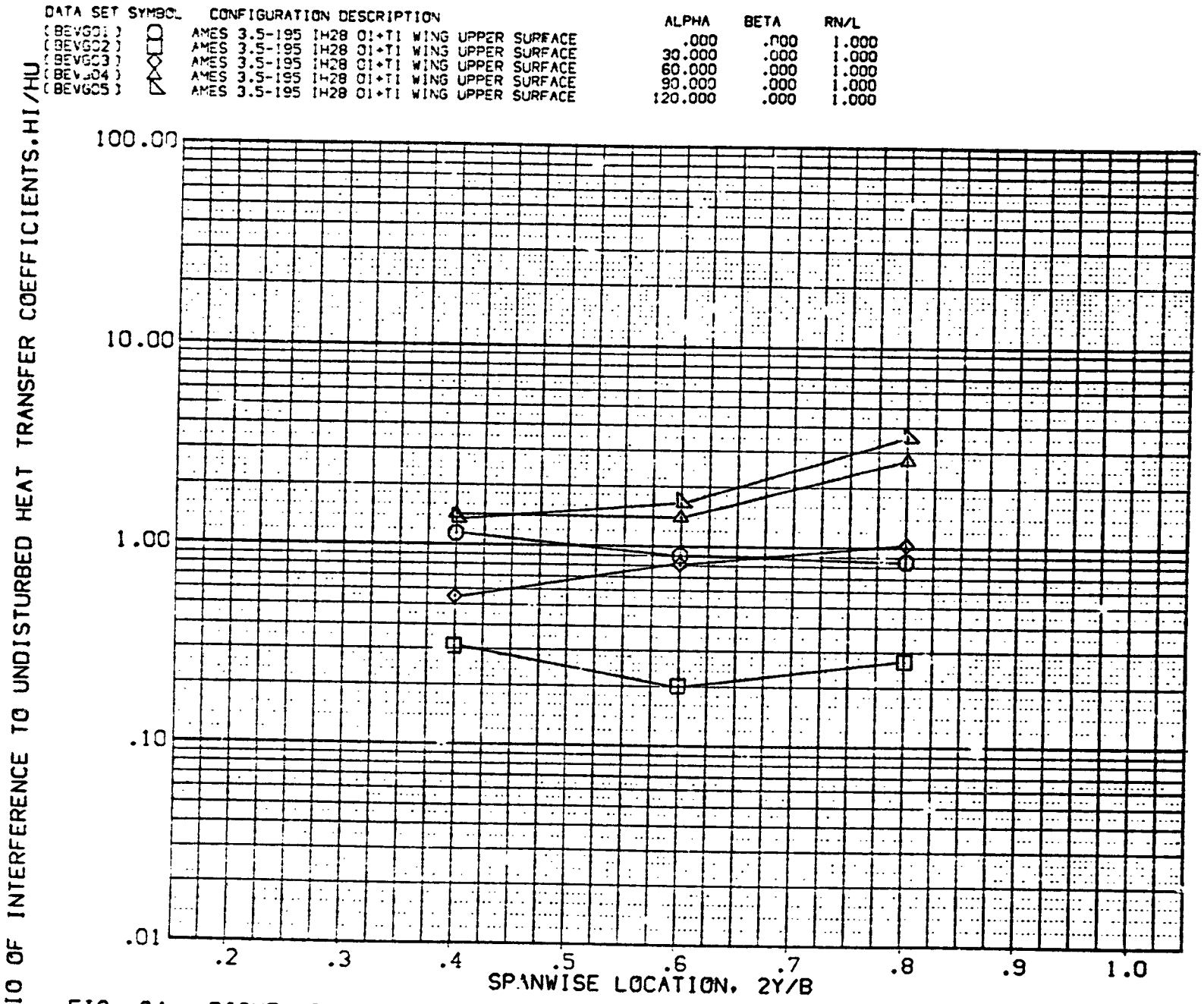

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .300 X/C = .800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)	□	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(BEVG09)	◇	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(BEVG08)	△	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(BEVG07)	▽	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(BEVG06)	⊲	AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

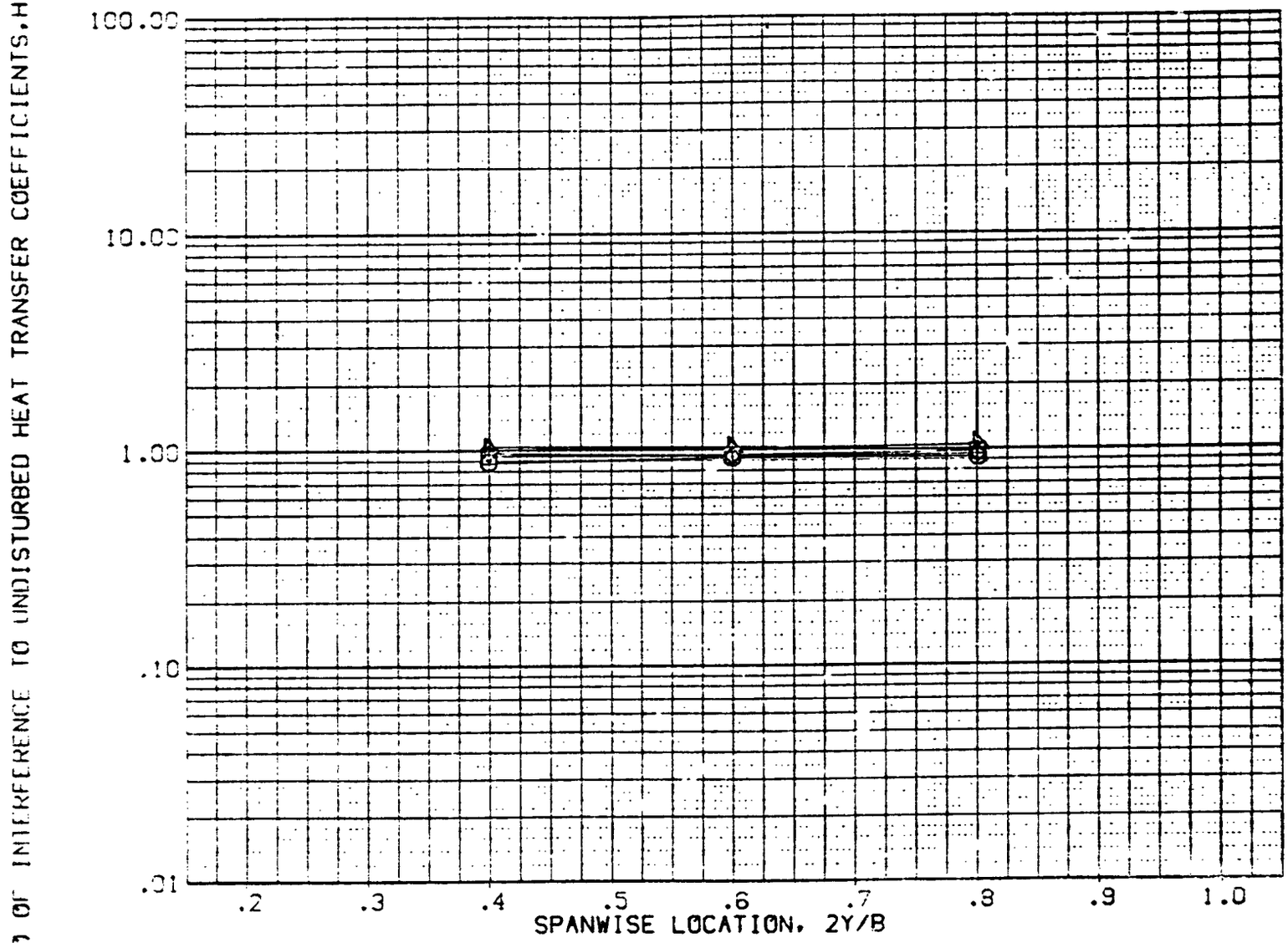

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 X/C = .200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(BEVG09)		AMES 3.5-195 IH28 01+T1 W..3 UPPER SURFACE	-30.000	.000	1.000
(BEVG08)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(BEVG07)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(BEVG06)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

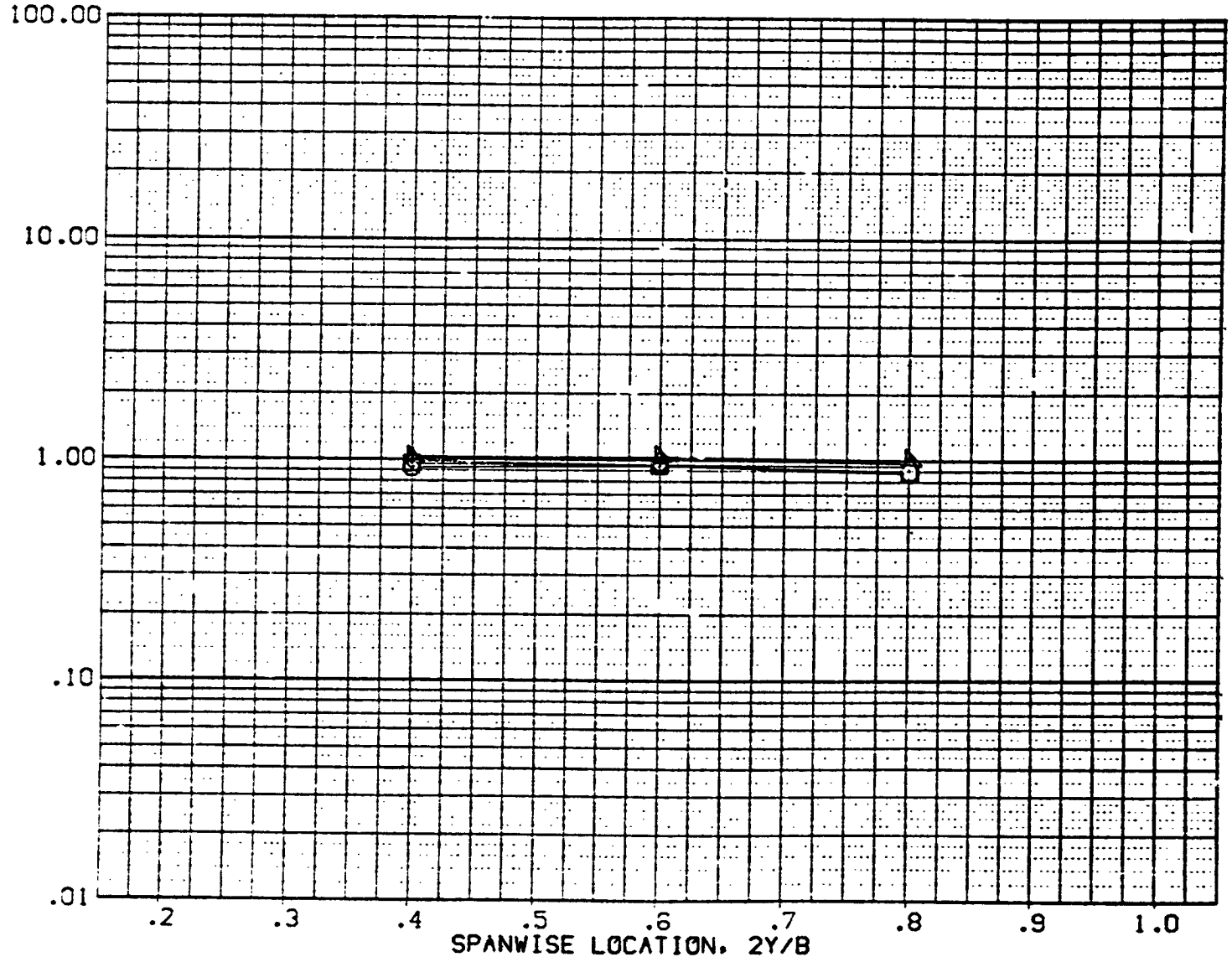

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 X/C = .400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(BEVG09)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(BEVG08)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(BEVG07)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(BEVG06)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

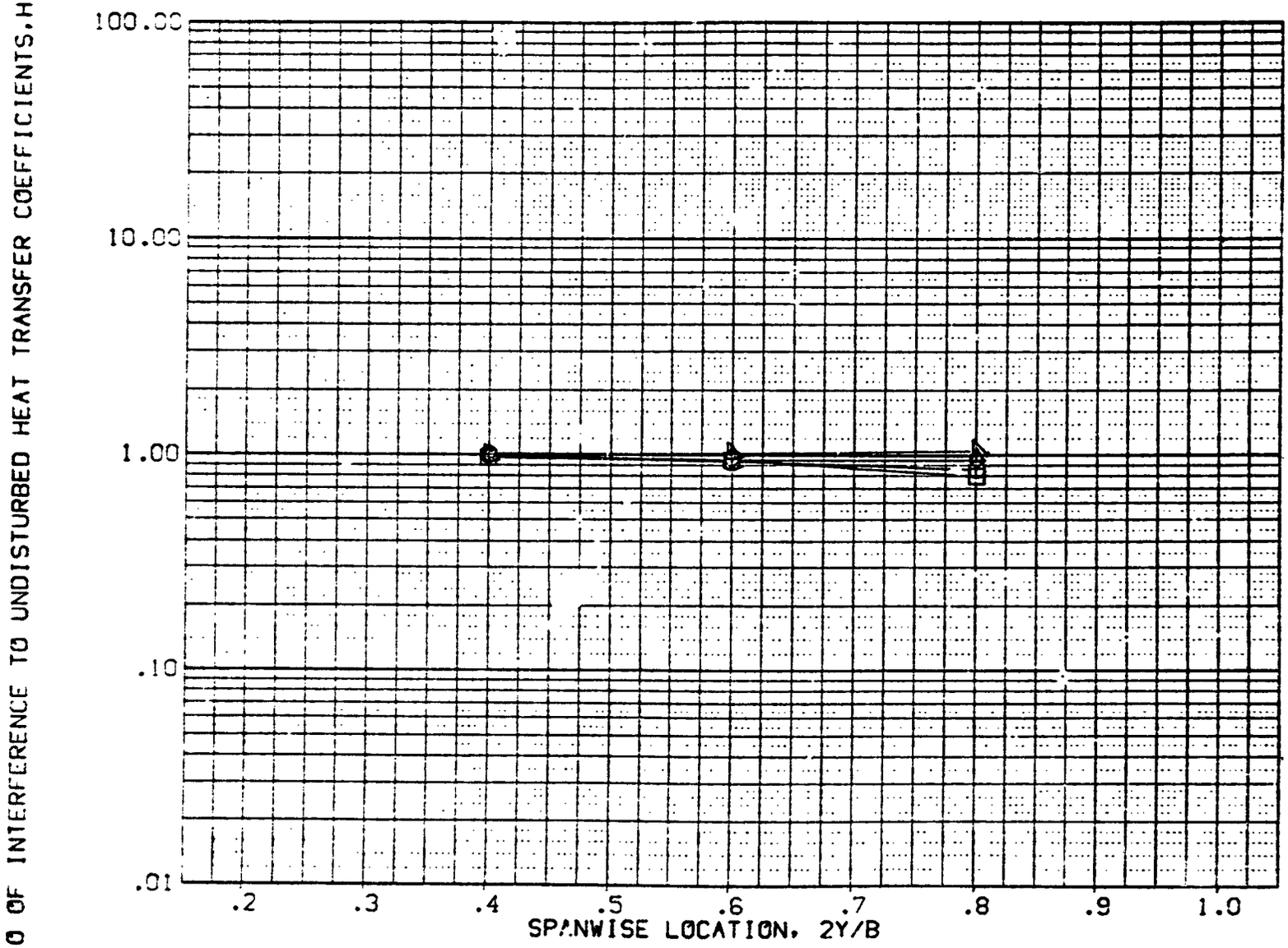

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .300 X/C = .300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVG01)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	.000	.000	1.000
(BEVG09)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-30.000	.000	1.000
(BEVG08)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-60.000	.000	1.000
(BEVG07)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-90.000	.000	1.000
(BEVG06)		AMES 3.5-195 IH28 01+T1 WING UPPER SURFACE	-120.000	.000	1.000

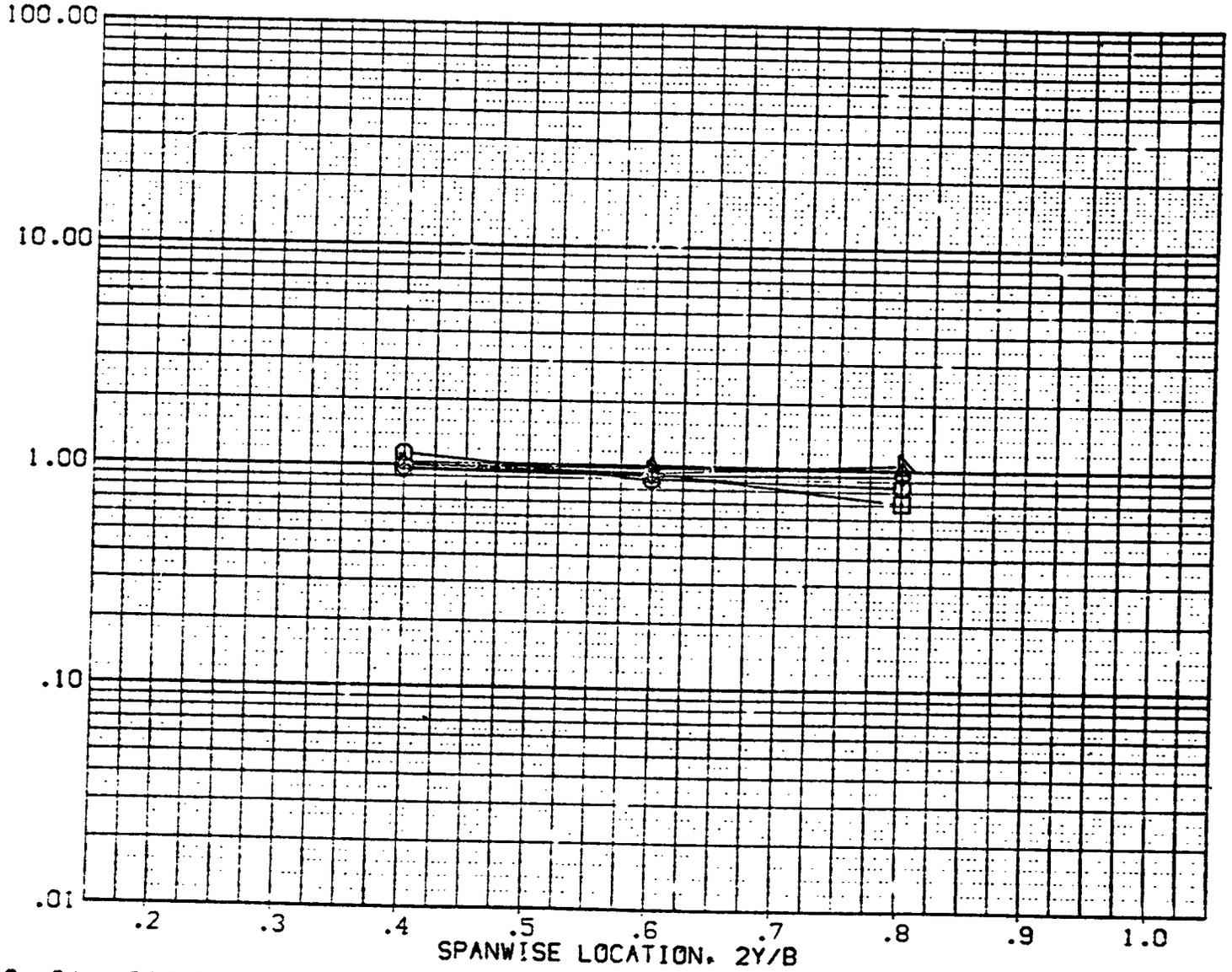

FIG. 24 RIGHT WING UPPER SURFACE, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 X/C = .800

AMES 3.5-135 IH28 01 VERTICAL TAIL (KEVH19)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	.00	BETA	.000
RN/L	1.000		

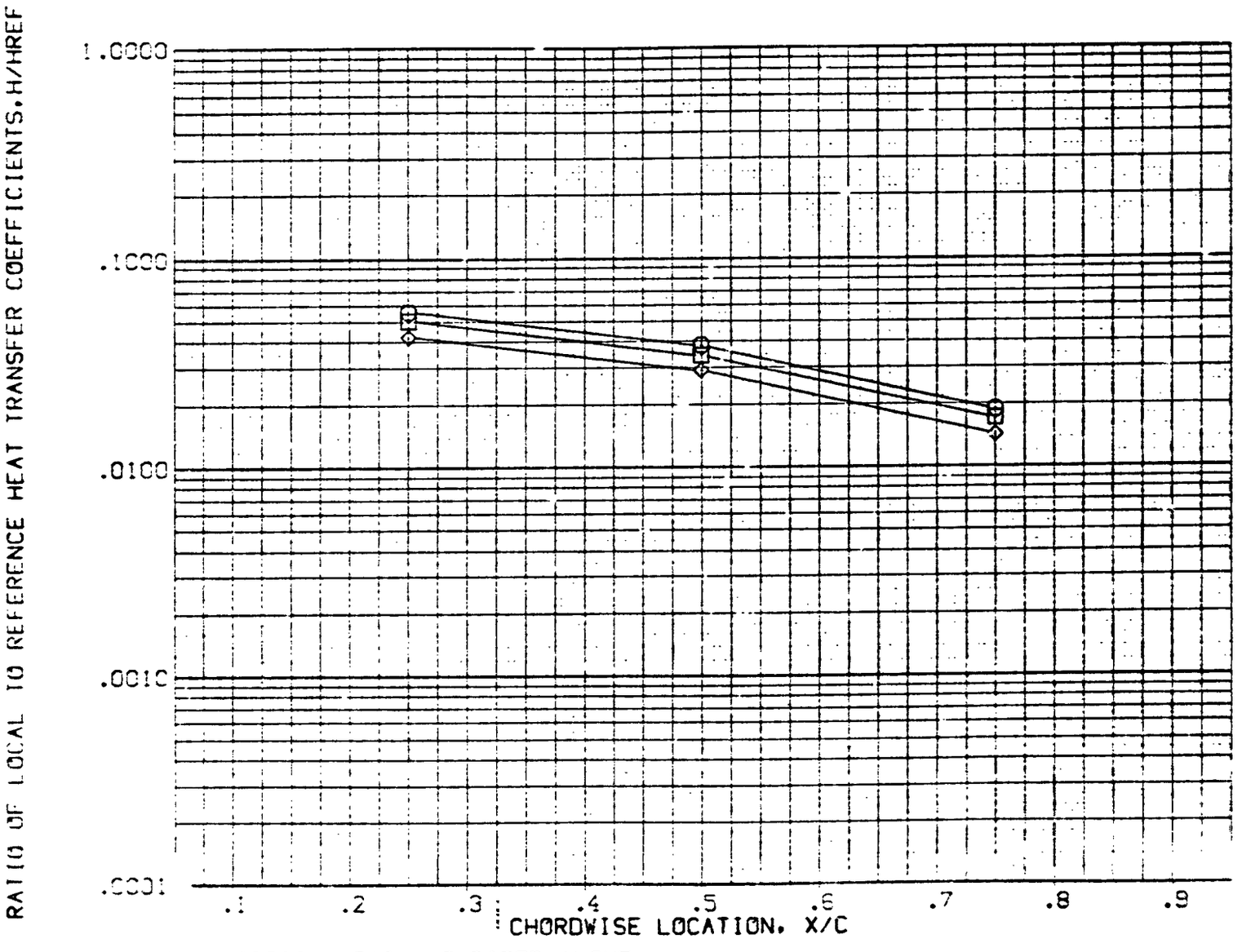

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-:95 IH28 01 VERTICAL TAIL (KEVH19)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA .000 BETA .000

RN/L 1.000

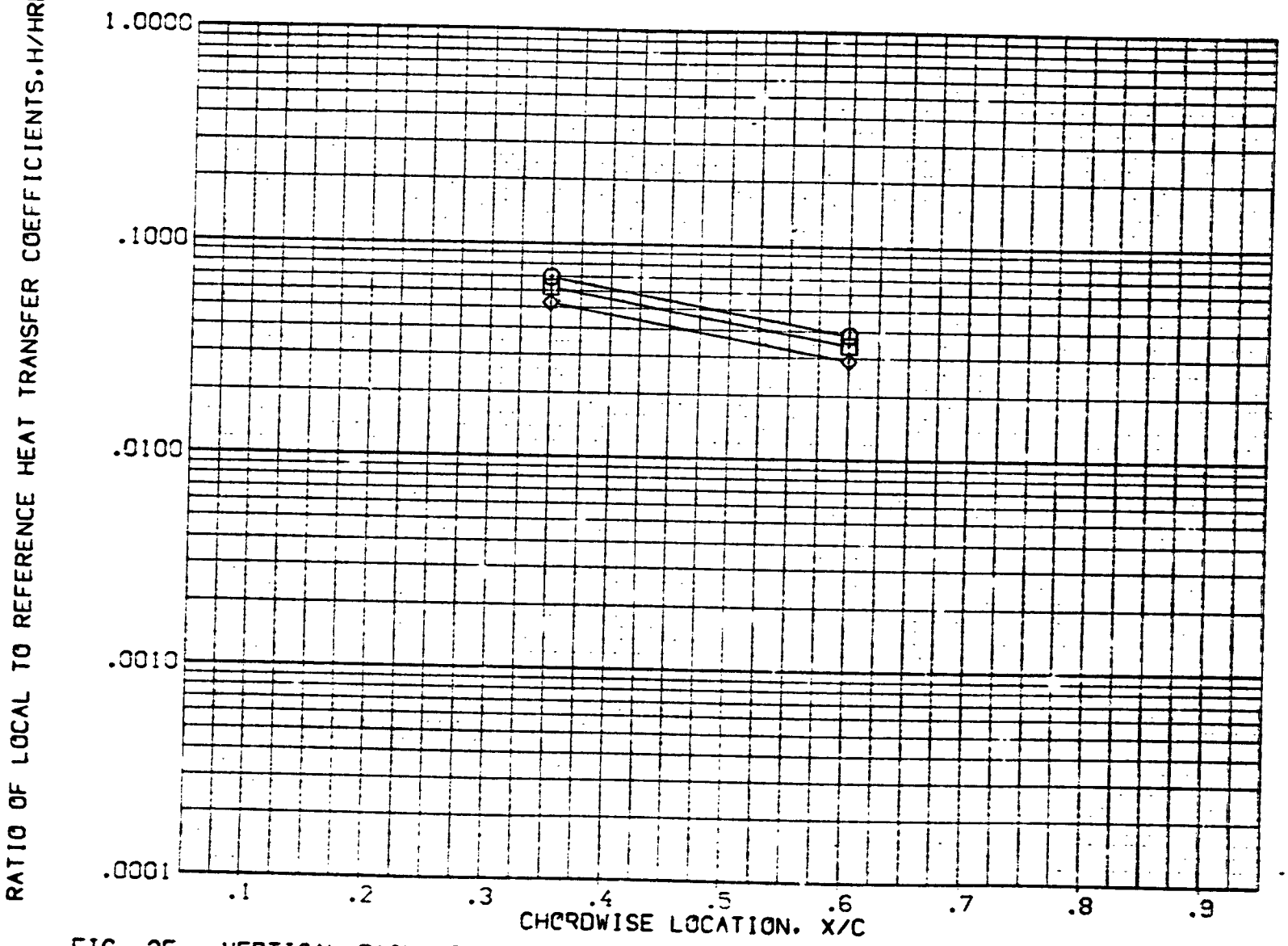

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH20)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	[illegible].000	BETA	.000
RN/L	1.000		

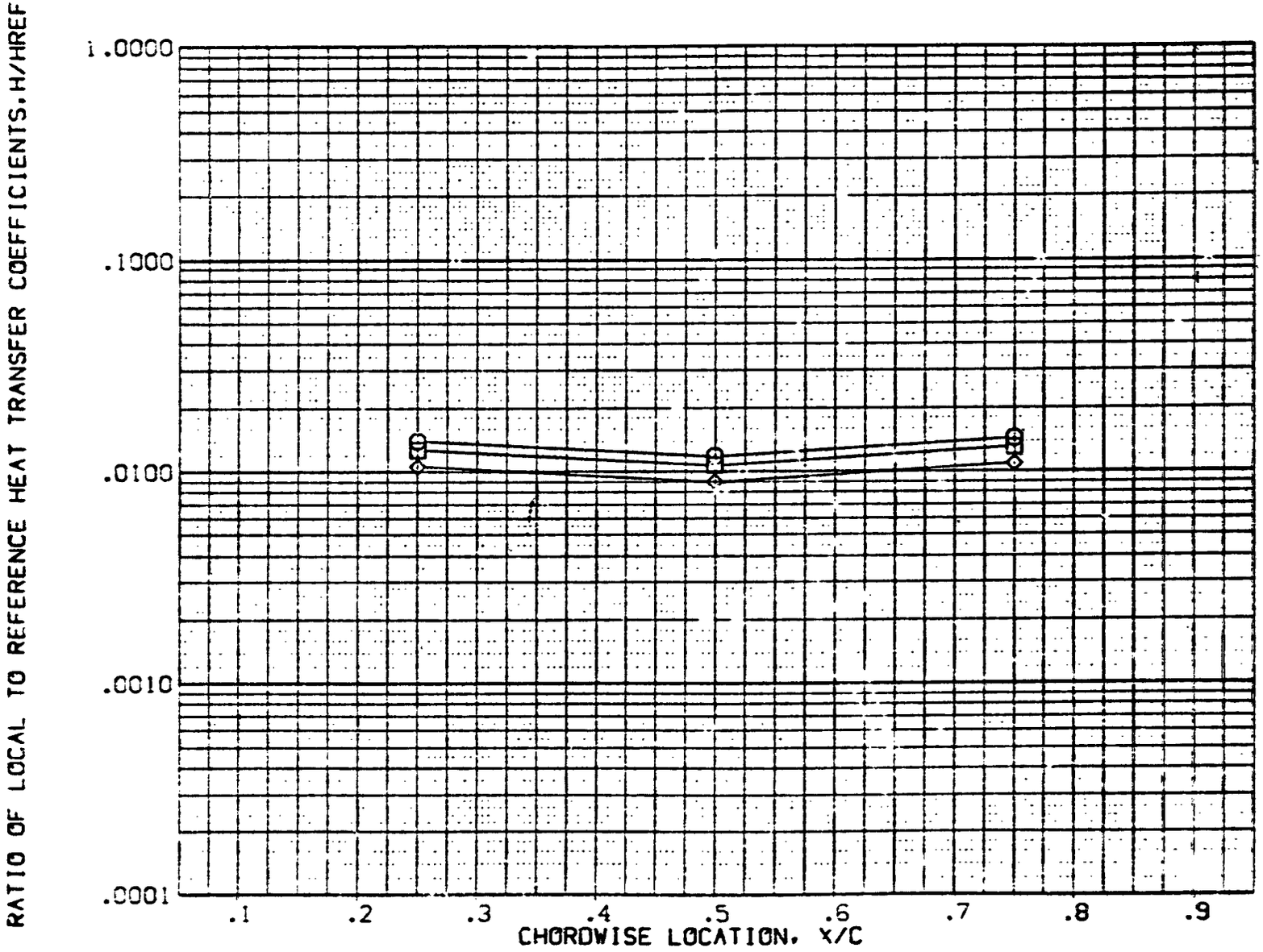

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 0' VERTICAL TAIL (KEVH20)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

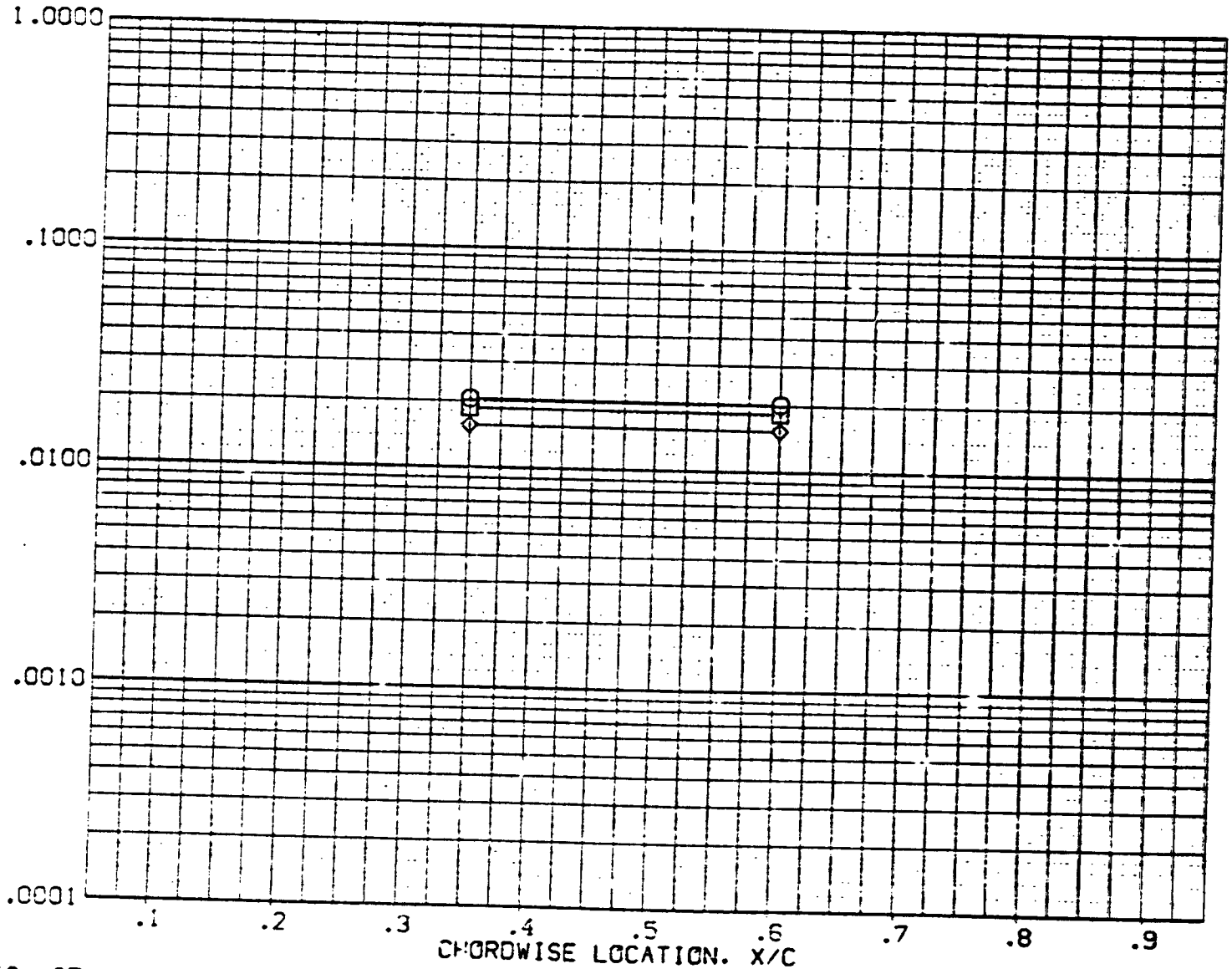

FIG. 25 VERTICAL TAIL, ORBITER ALONE

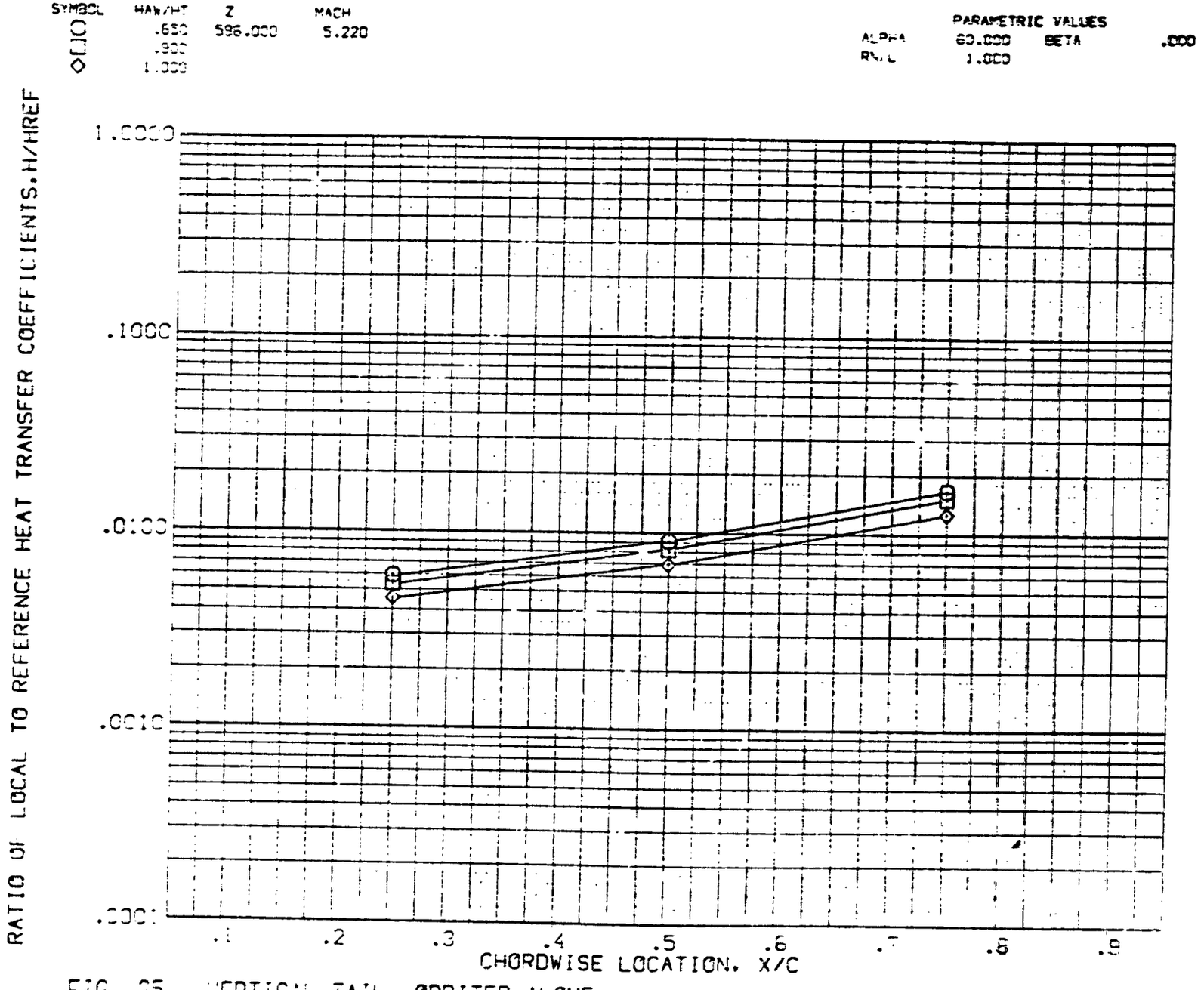

FIG. 25 VERTICAL TAIL, ORBITER ALONE

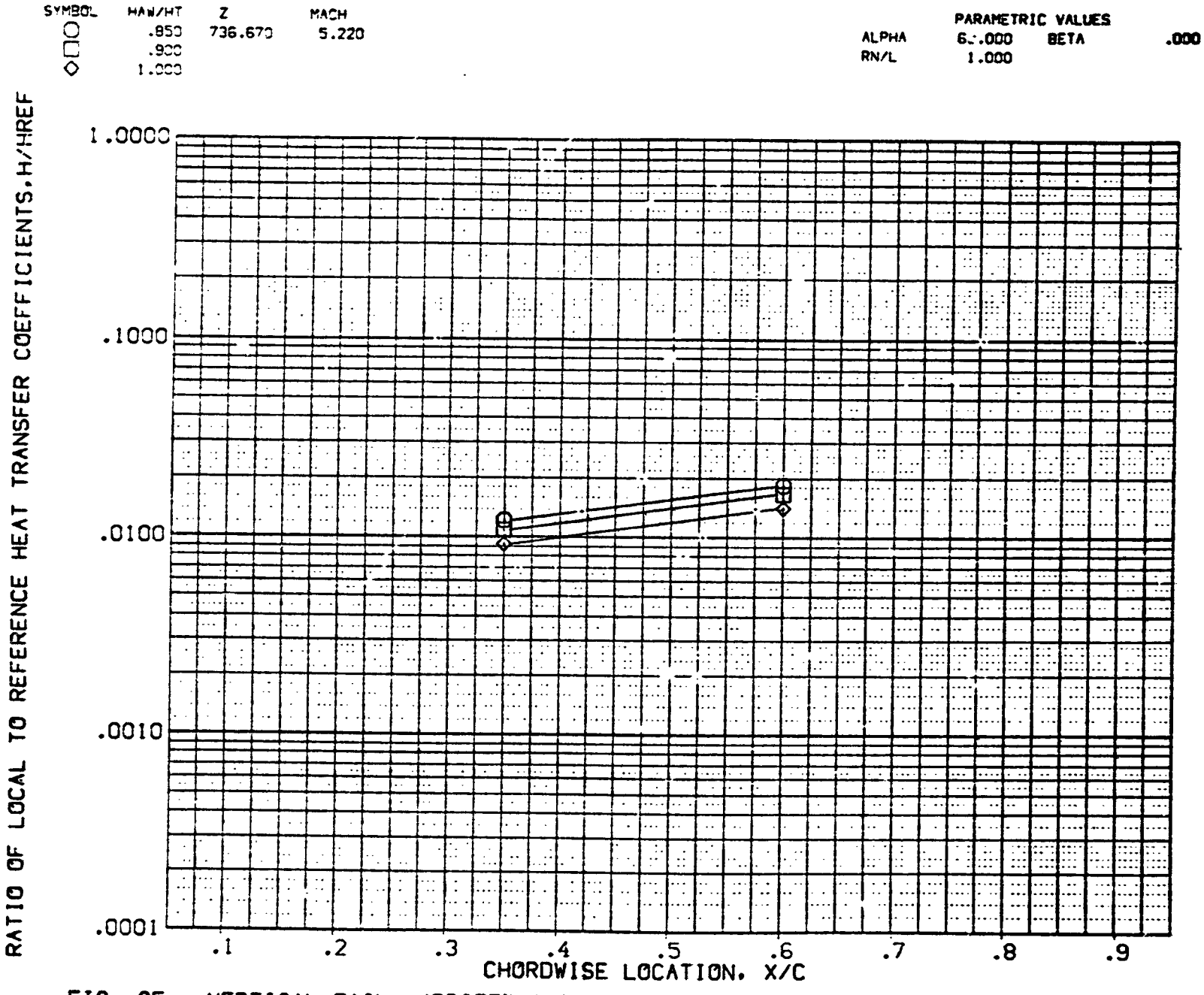

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH22)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

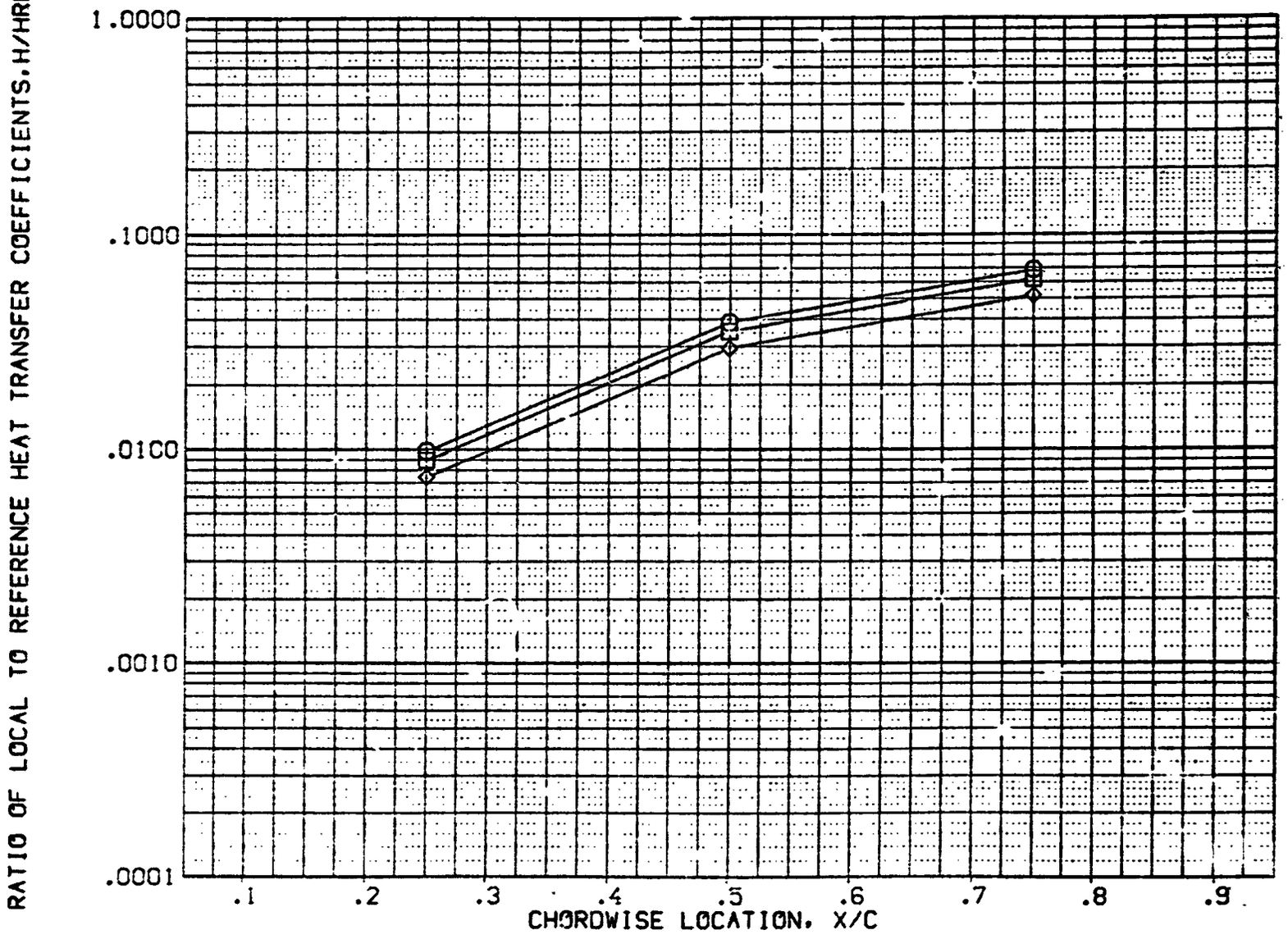

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH22)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

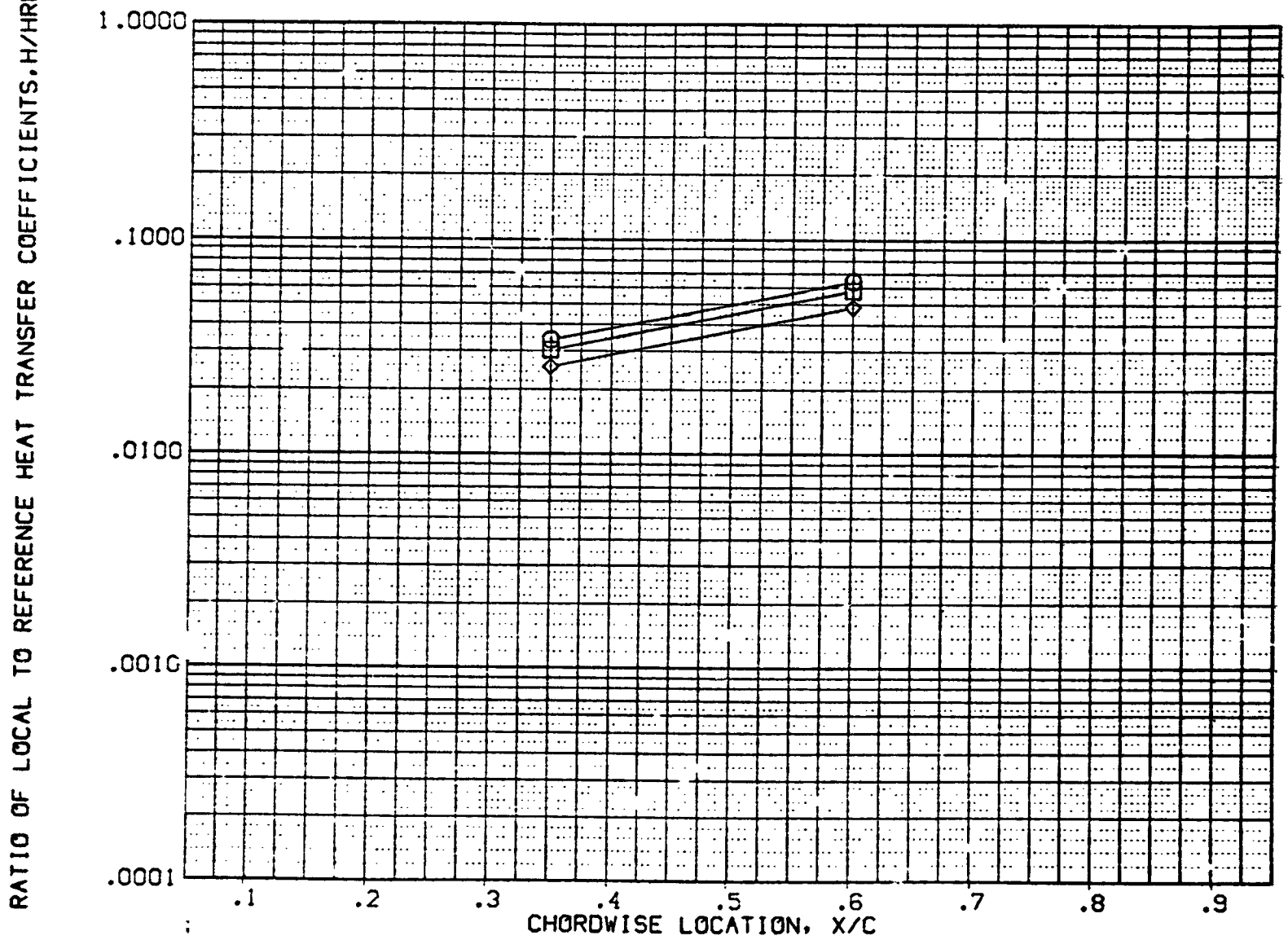

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KE 'H23)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

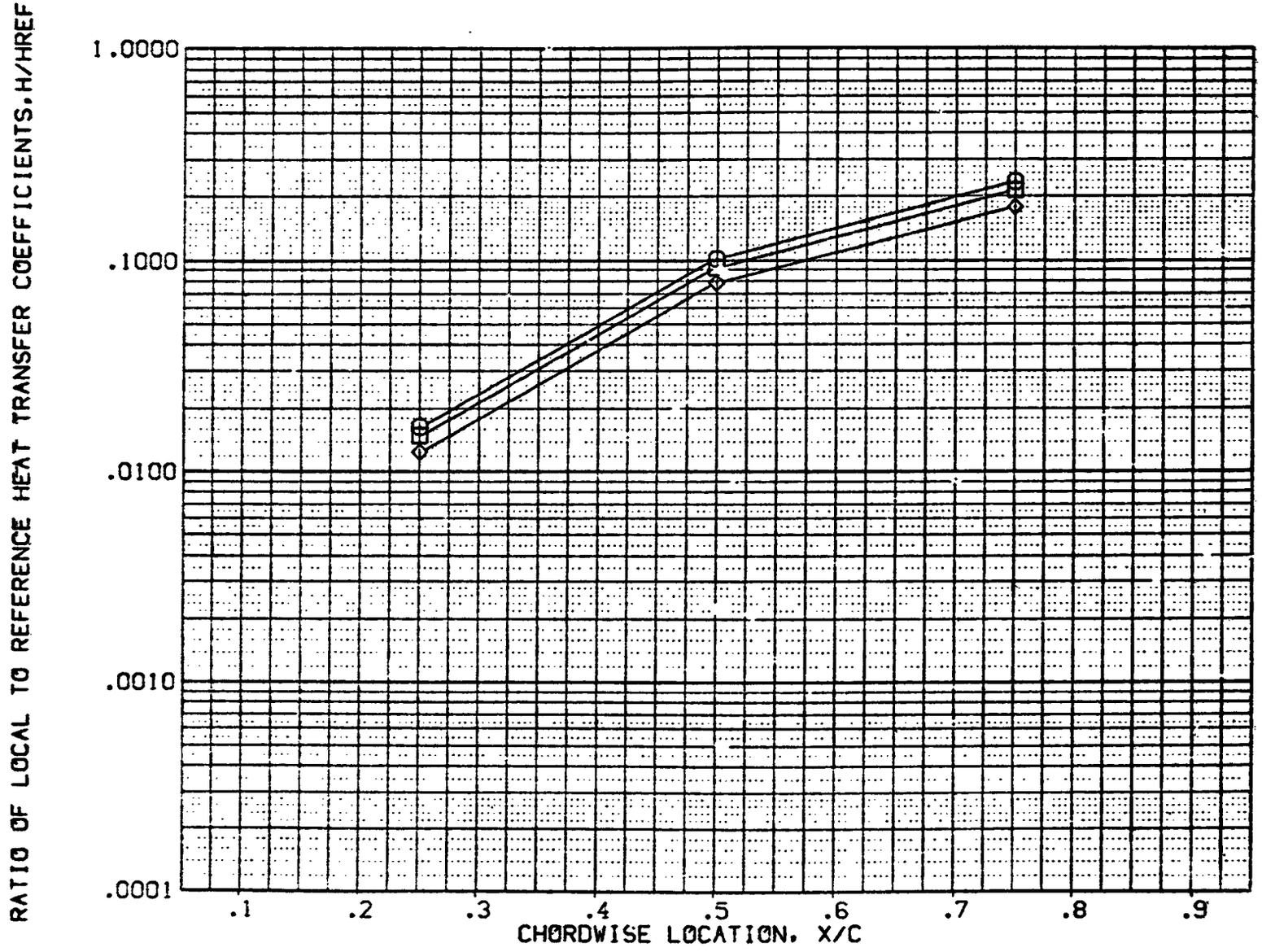

FIG. 25 VERTICAL TAIL, ORBITER ALONE

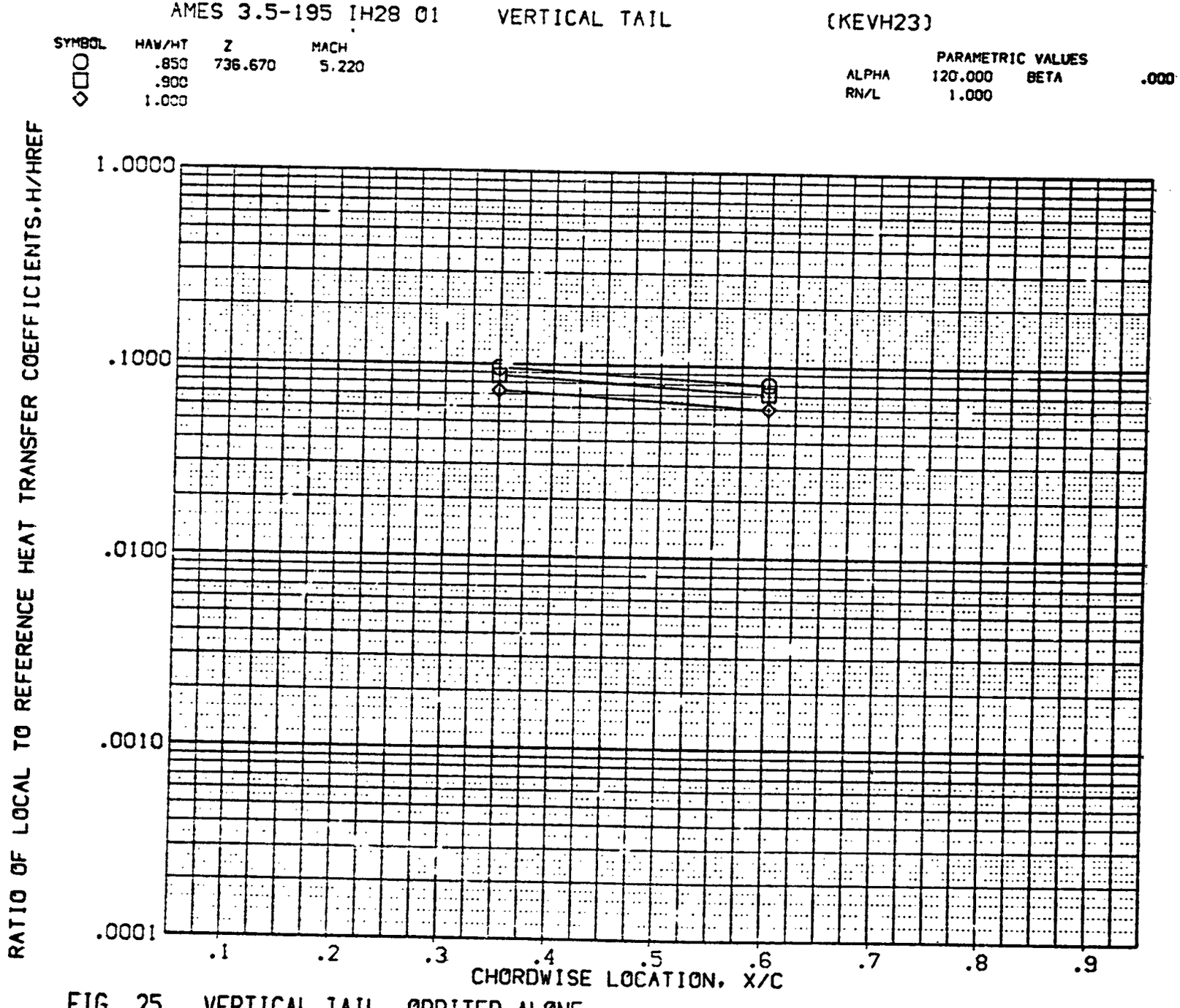

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL [KEVH24]

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.00	BETA	.000
RN/L	1.000		

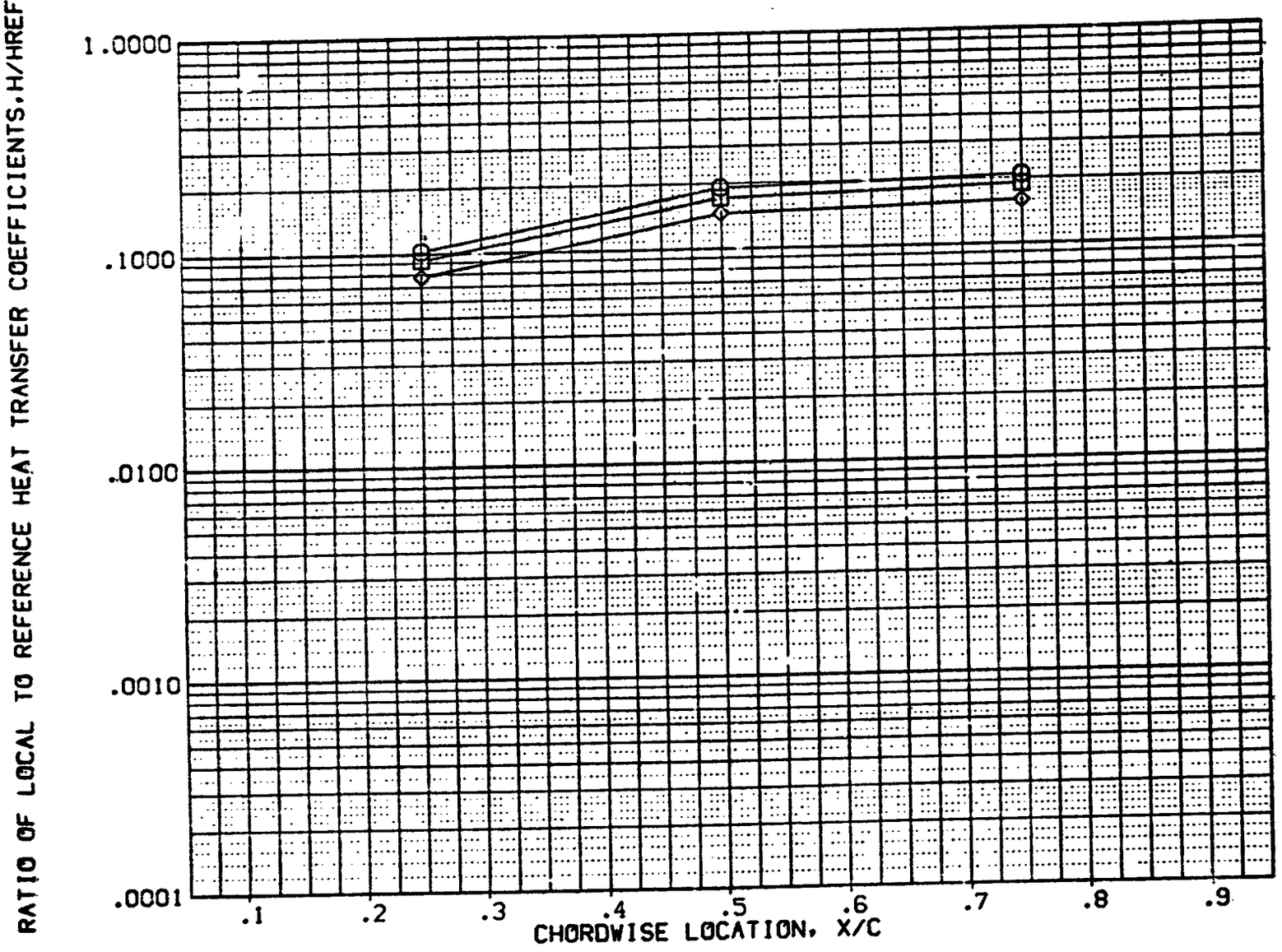

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH24)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

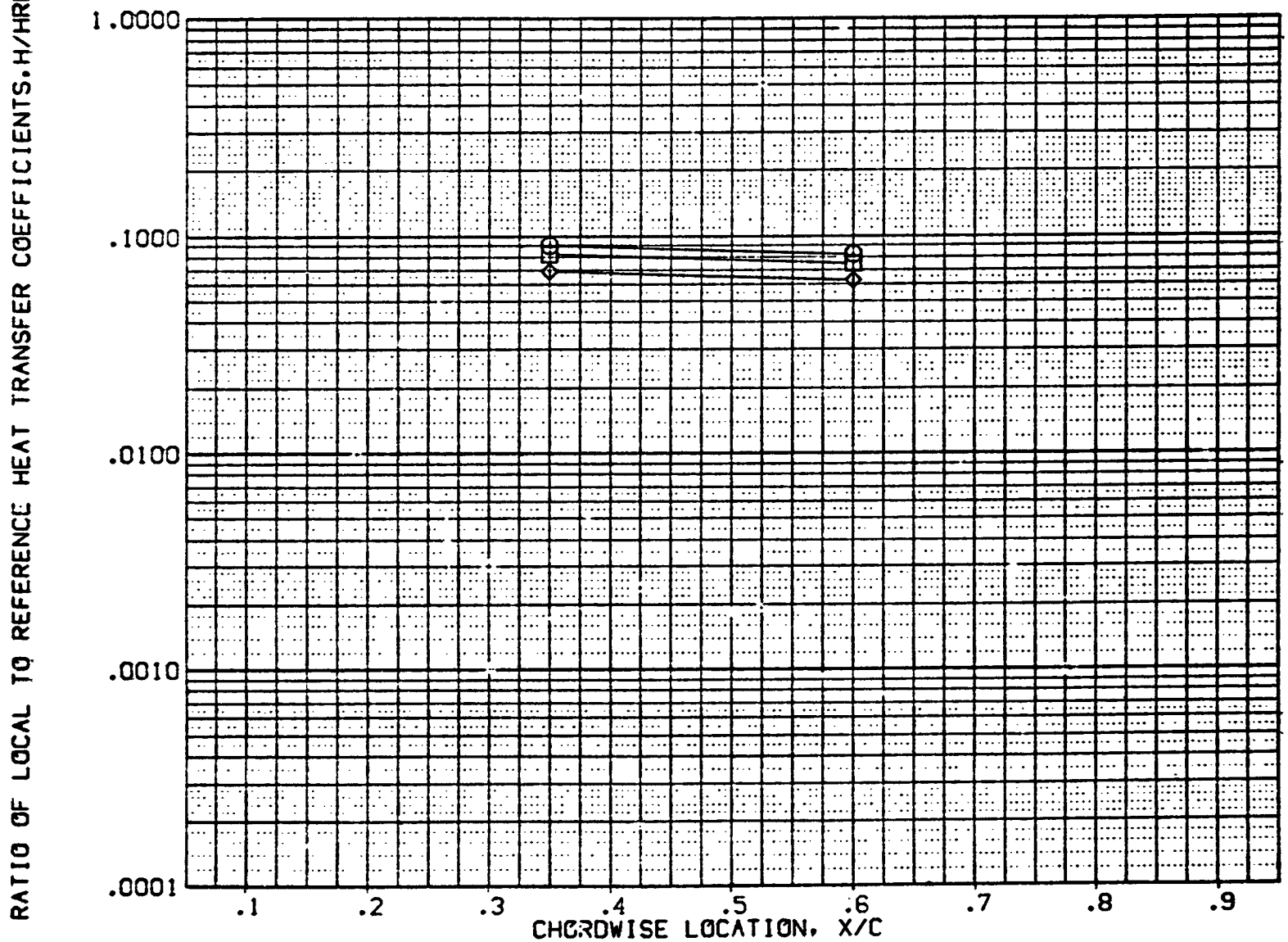

FIG. 25 VERTICAL TAIL, ORBITER ALONE

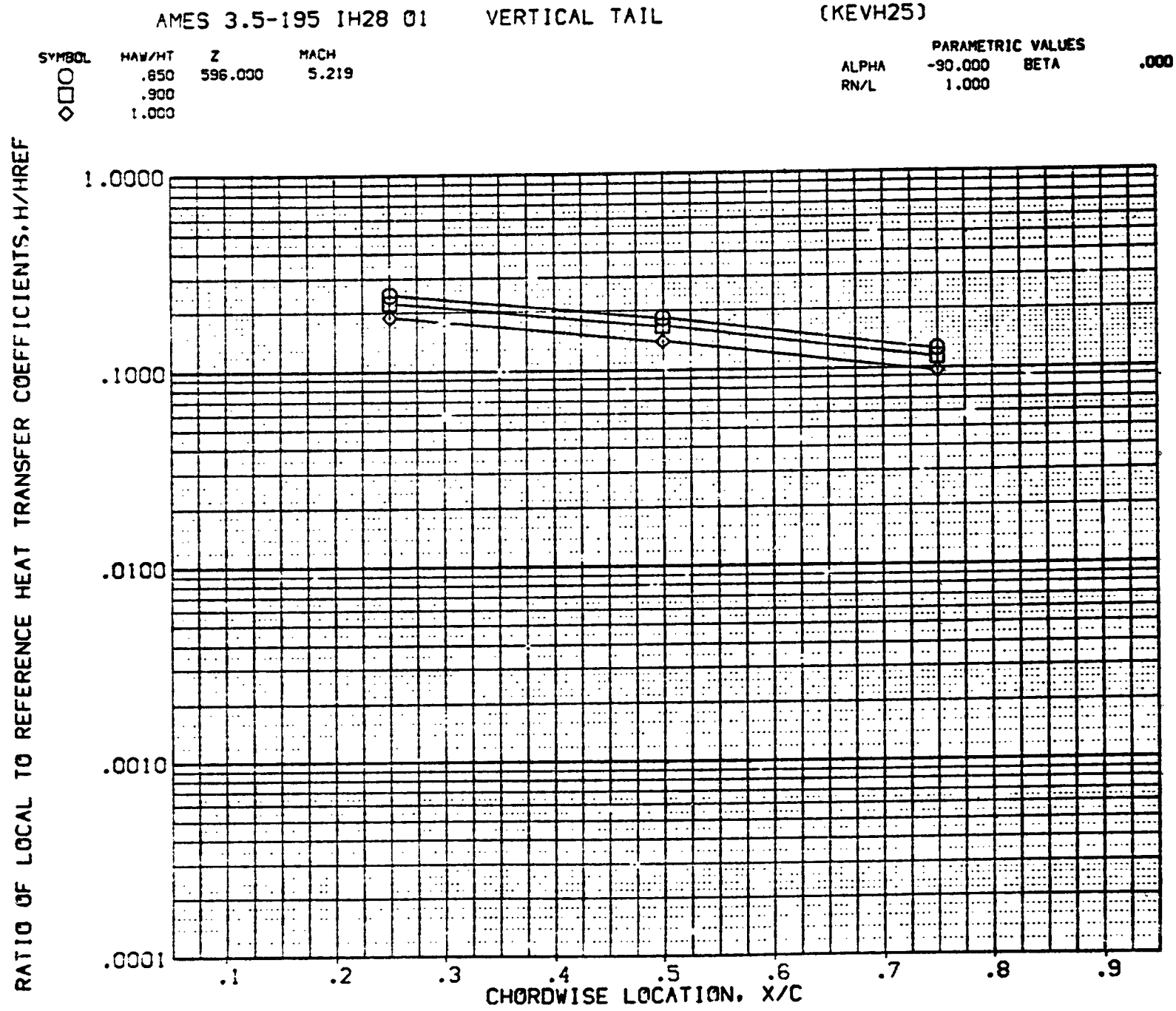

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH25)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

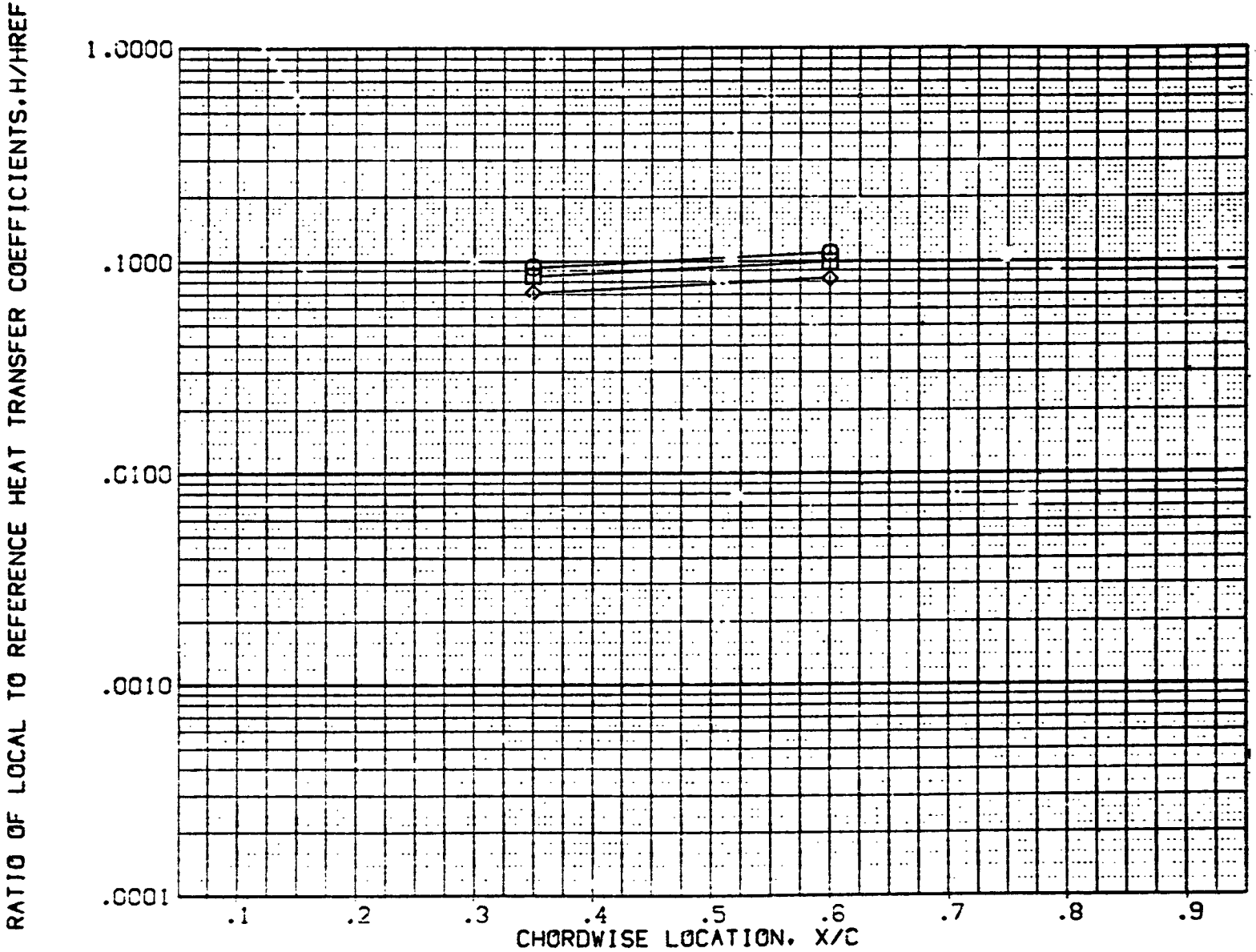

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH26)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

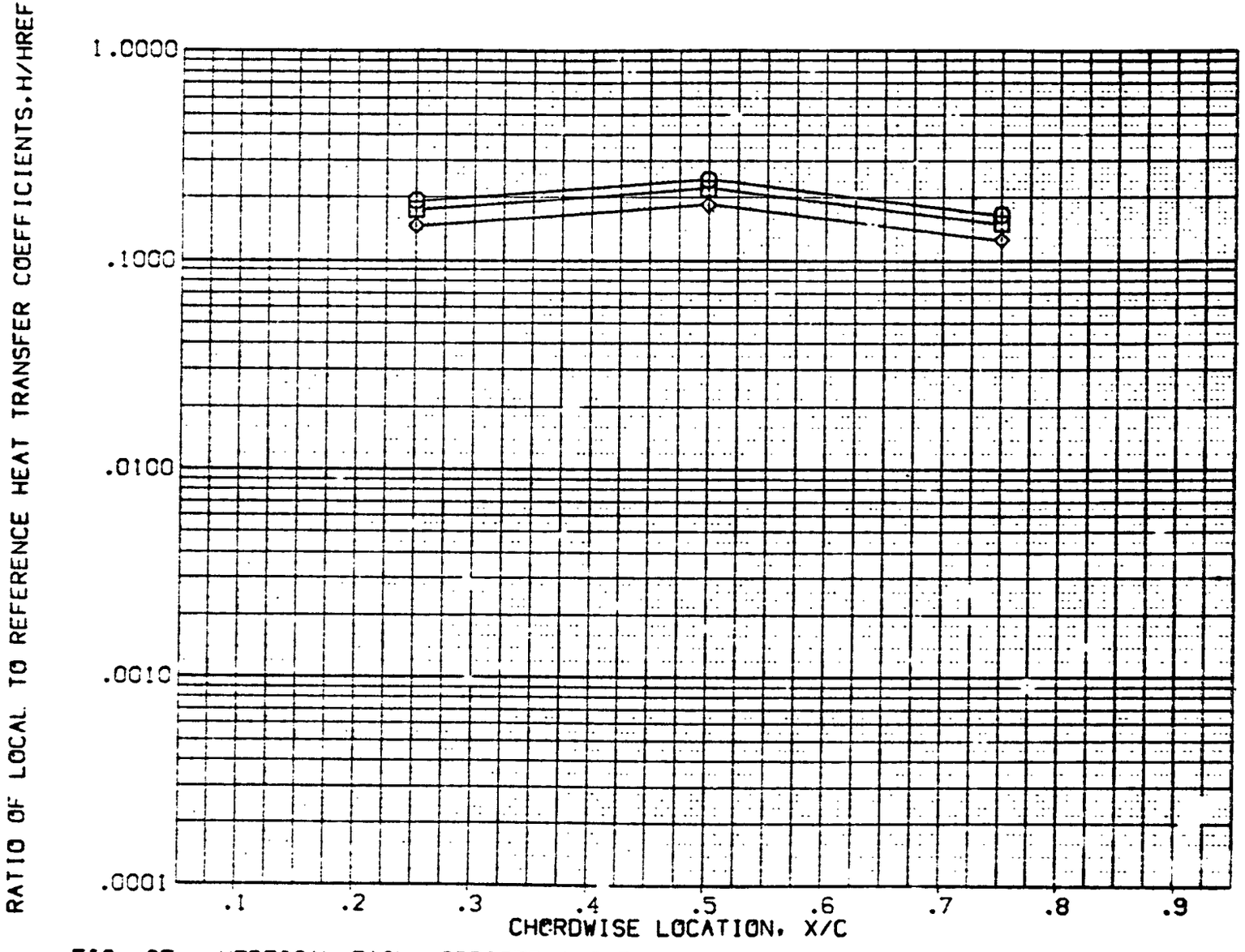

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH26)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

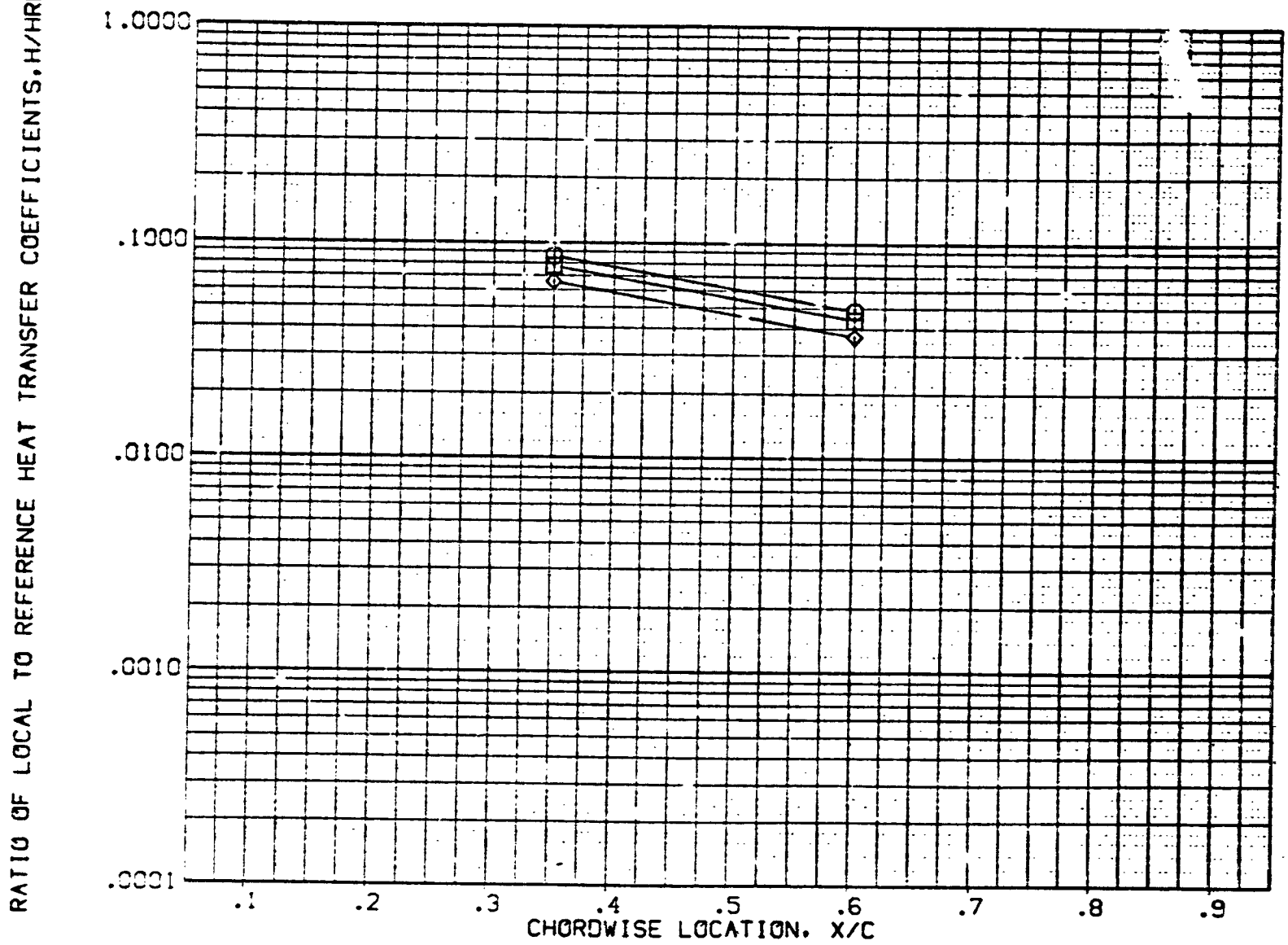

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 IH28 01 VERTICAL TAIL (KEVH27)

SYMBOL	HAW/H*	Z	MACH
○	.950	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

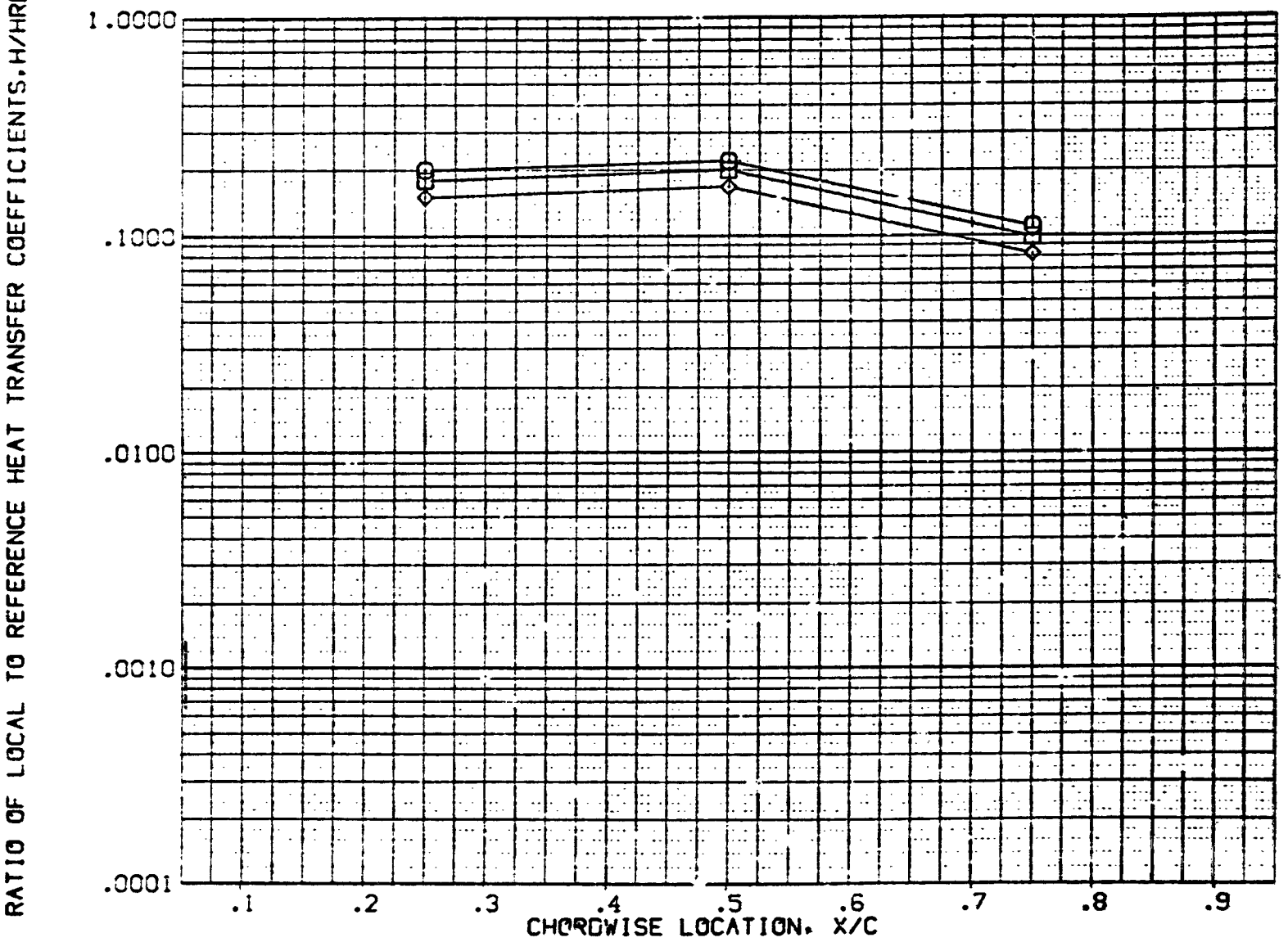

FIG. 25 VERTICAL TAIL, ORBITER ALONE

AMES 3.5-195 iH28 01 VERTICAL TAIL (KEVH27)

SYMBOL	HAW/HT	Z	MACH
○	.650	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

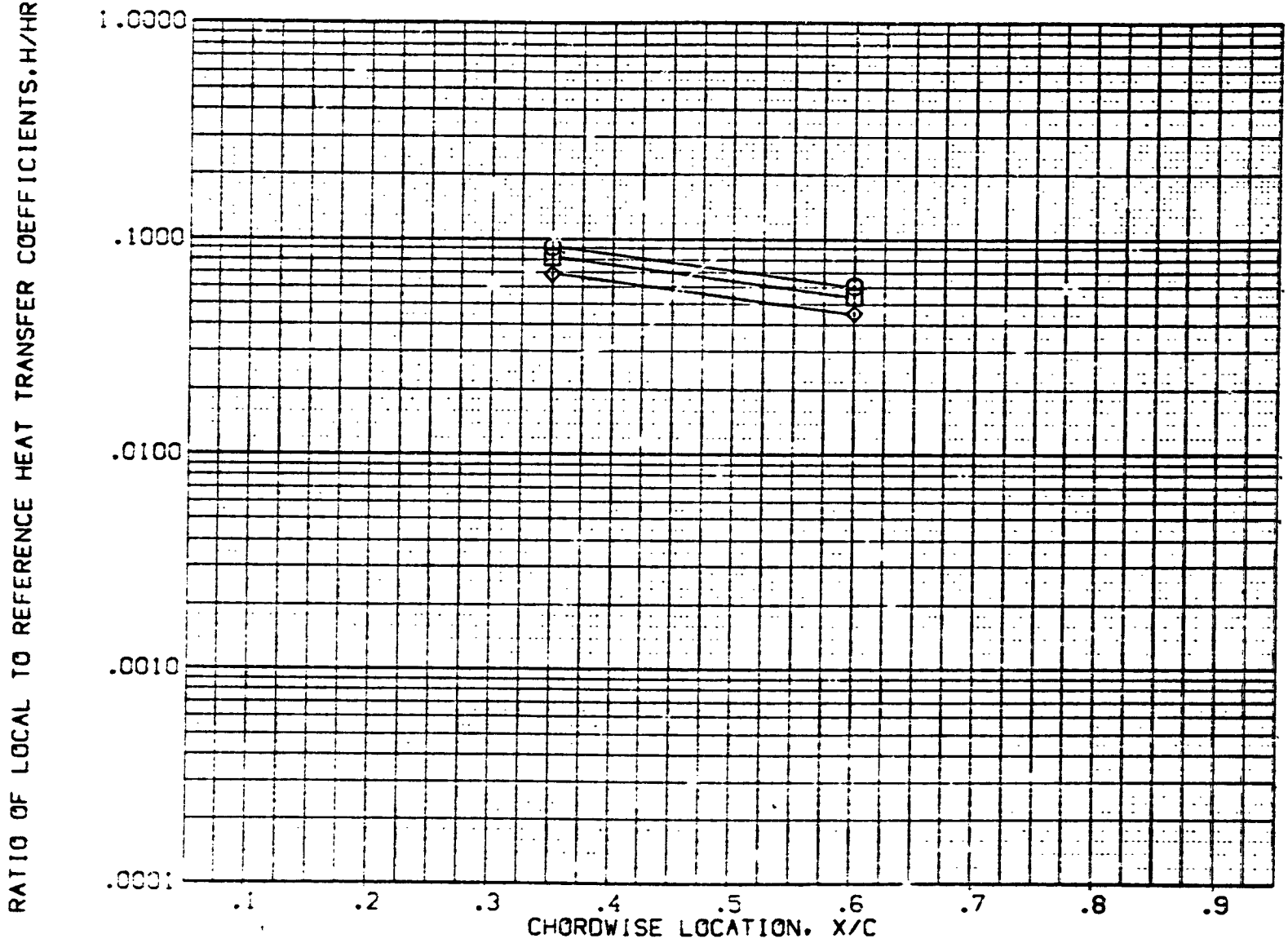

FIG. 25 VERTICAL TAIL, ORBITER ALONE

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(FEL-H19)		AMES 3.5-195 IH28 01	VERTICAL TAIL	.000	.000	1.000
(FEL-H20)		AMES 3.5-195 IH28 01	VERTICAL TAIL	30.000	.000	1.000
(FEL-H21)		AMES 3.5-195 IH28 01	VERTICAL TAIL	60.000	.000	1.000
(FEL-H22)		AMES 3.5-195 IH28 01	VERTICAL TAIL	90.000	.000	1.000
(FEL-H23)		AMES 3.5-195 IH28 01	VERTICAL TAIL	120.000	.000	1.000

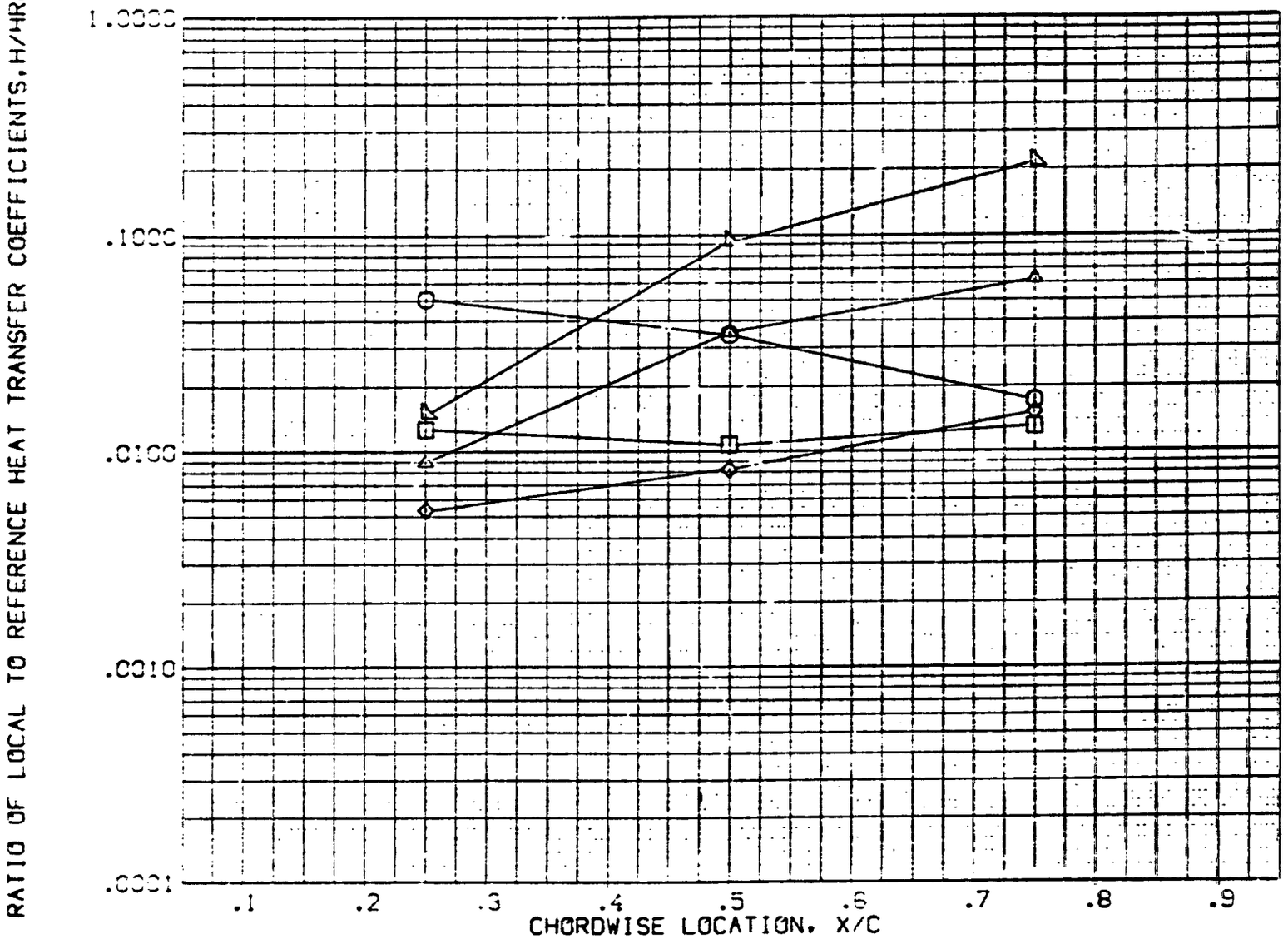

FIG. 25 VERTICAL TAIL, ORBITER ALONE

MACH = 5.300 HAA/HT= .900 Z = 596.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(KEVH19)		AMES 3.5-195 IH28 01	VERTICAL TAIL	.000	.000	1.000
(KEVH20)		AMES 3.5-195 IH28 01	VERTICAL TAIL	30.000	.000	1.000
(KEVH21)		AMES 3.5-195 IH28 01	VERTICAL TAIL	60.000	.000	1.000
(KEVH22)		AMES 3.5-195 IH28 01	VERTICAL TAIL	90.000	.000	1.000
(KEVH23)		AMES 3.5-195 IH28 01	VERTICAL TAIL	120.000	.000	1.000

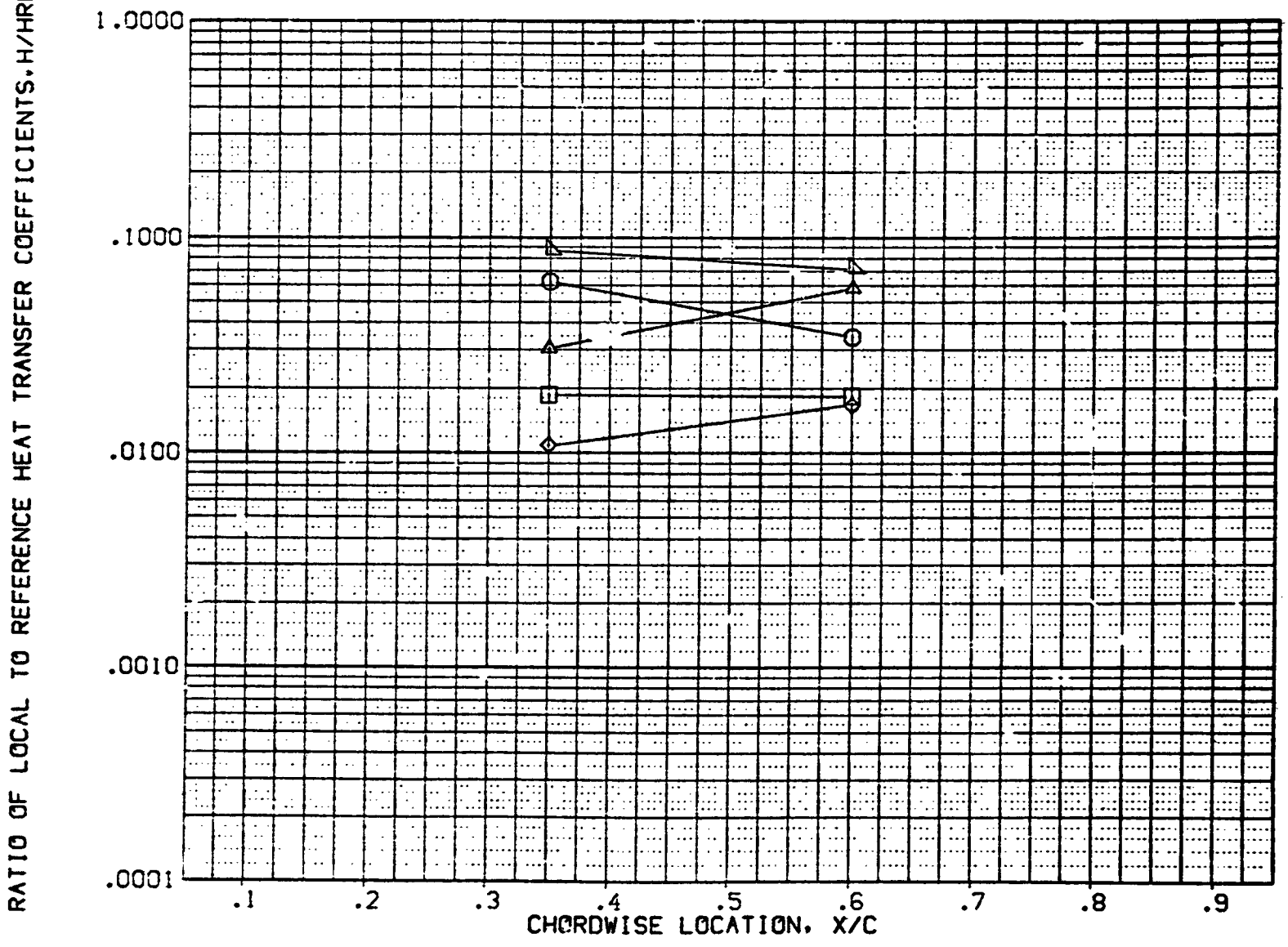

FIG. 25 VERTICAL TAIL, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 Z = 736.370

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(KEVH19)	□	AMES 3.5-195 IH28 01	VERTICAL TAIL	.000	.000	1.000
(KEVH27)	◇	AMES 3.5-195 IH28 01	VERTICAL TAIL	-30.000	.000	1.000
(KEVH26)	△	AMES 3.5-195 IH28 01	VERTICAL TAIL	-60.000	.000	1.000
(KEVH25)	○	AMES 3.5-195 IH28 01	VERTICAL TAIL	-90.000	.000	1.000
(KEVH24)	▷	AMES 3.5-195 IH28 01	VERTICAL TAIL	-120.000	.000	1.000

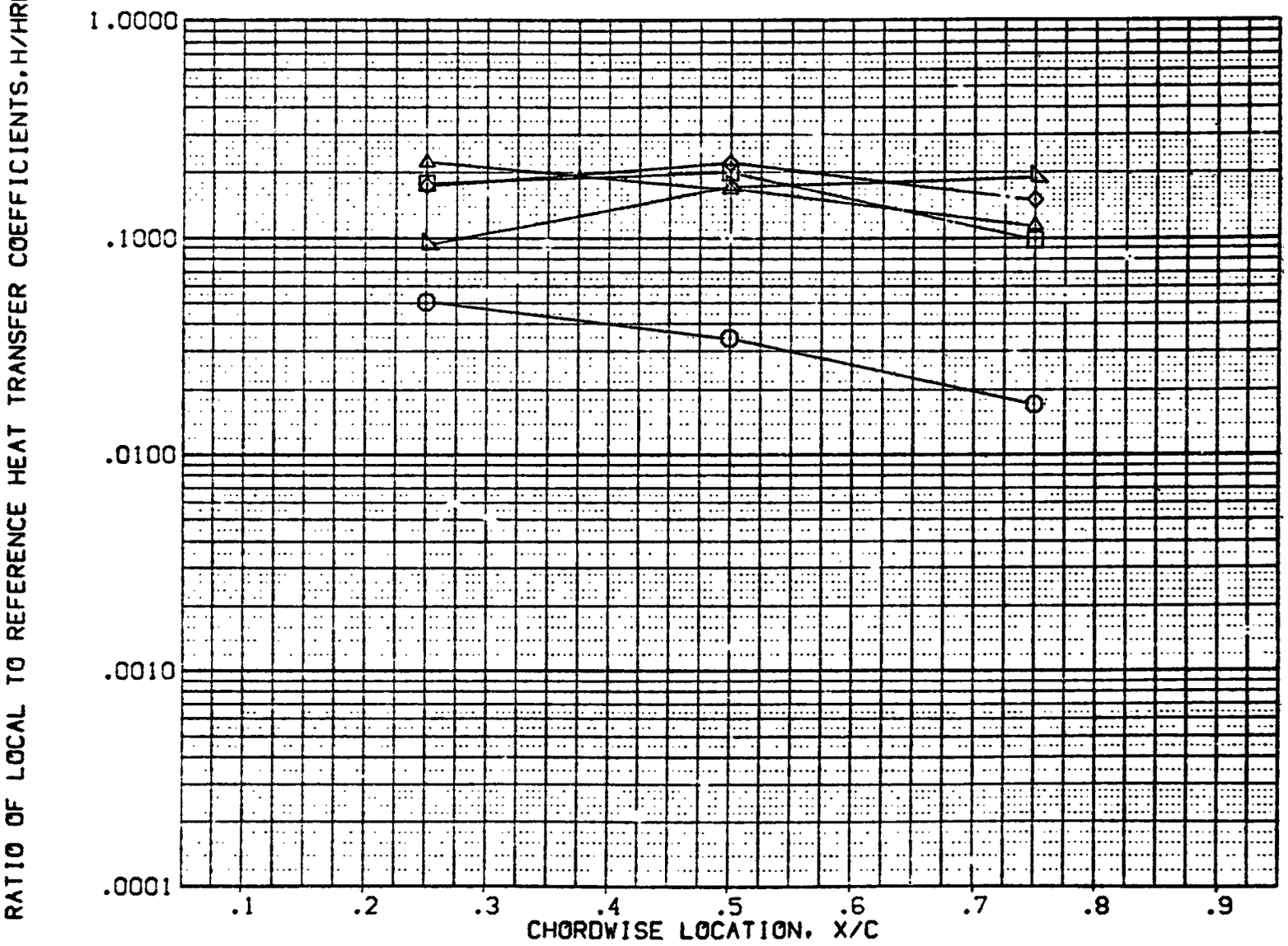

FIG. 25 VERTICAL TAIL, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 Z = 596.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		ALPHA	BETA	RN/L
(KEVH19)	○	AMES 3.5-195 IH28 01	VERTICAL TAIL	.000	.000	1.000
(KEVH27)	□	AMES 3.5-195 IH28 01	VERTICAL TAIL	-30.000	.000	1.000
(KEVH26)	◇	AMES 3.5-195 IH28 01	VERTICAL TAIL	-60.000	.000	1.000
(KEVH25)	△	AMES 3.5-195 IH28 01	VERTICAL TAIL	-90.000	.000	1.000
(KEVH24)	▽	AMES 3.5-195 IH28 01	VERTICAL TAIL	-120.000	.000	1.000

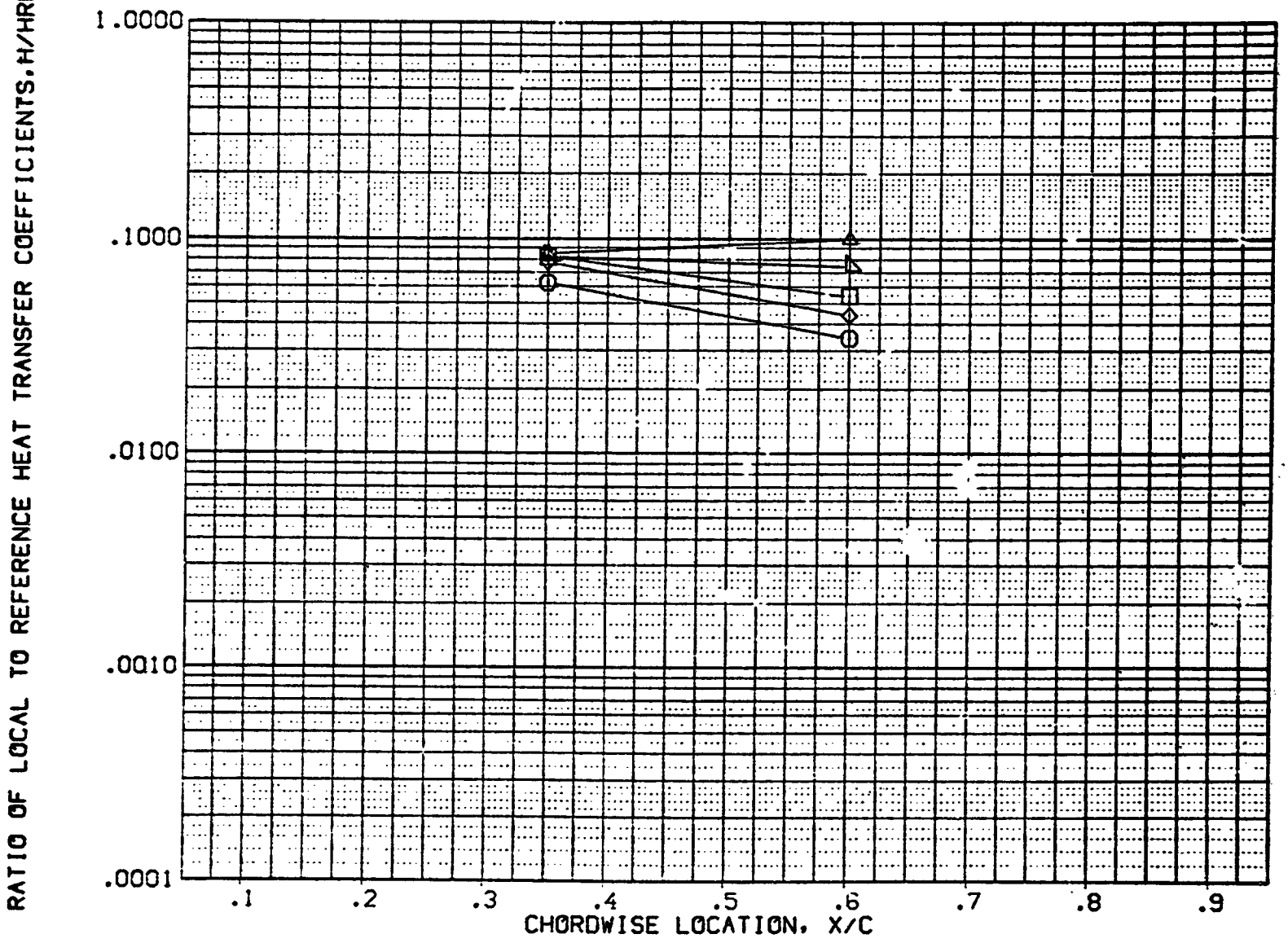

FIG. 25 VERTICAL TAIL, ORBITER ALONE

MACH = 5.300 HAW/HT= .900 Z = 736.670

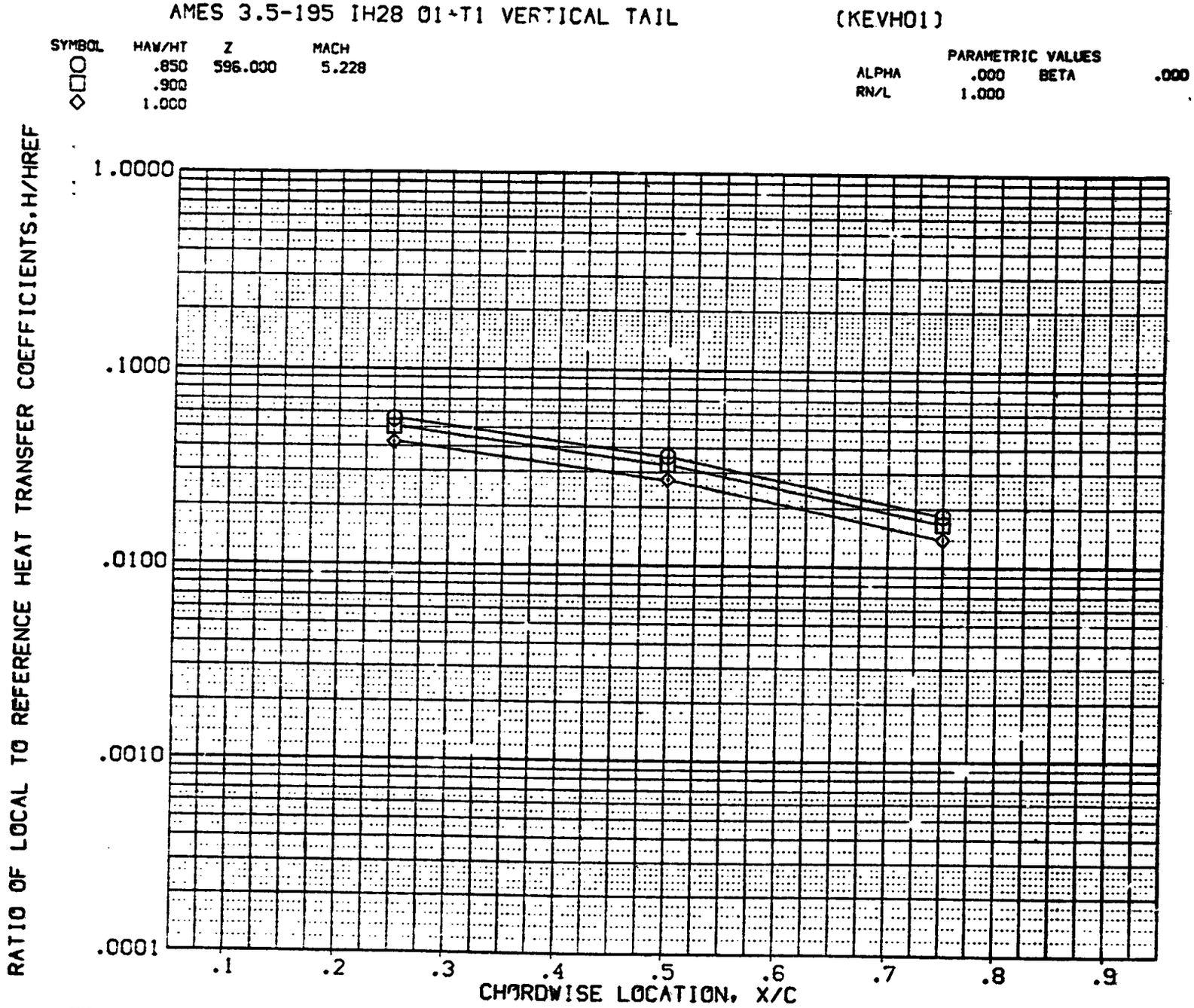

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH01)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.228
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA ..:30 BETA .000

RN/L 1.000

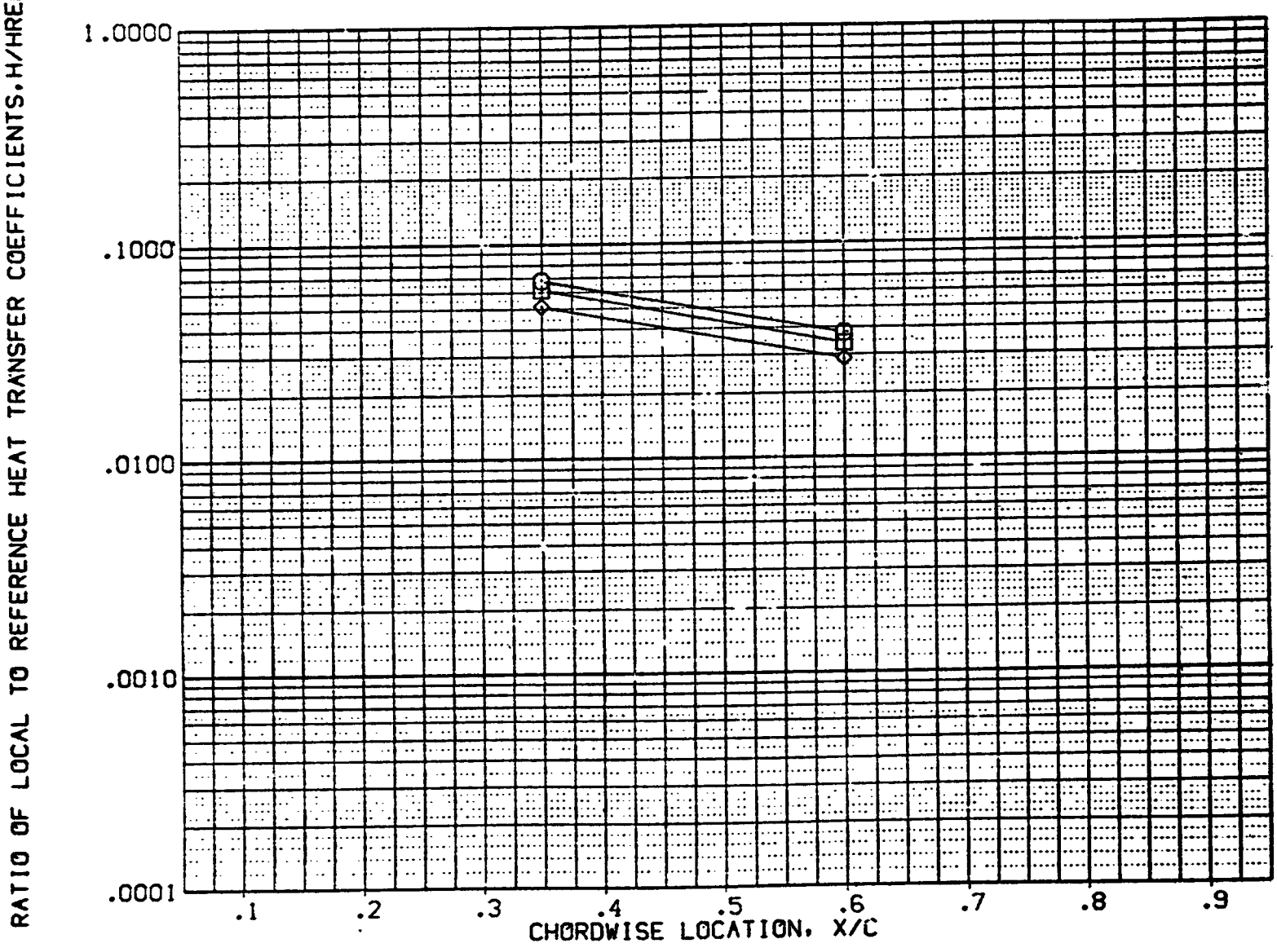

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

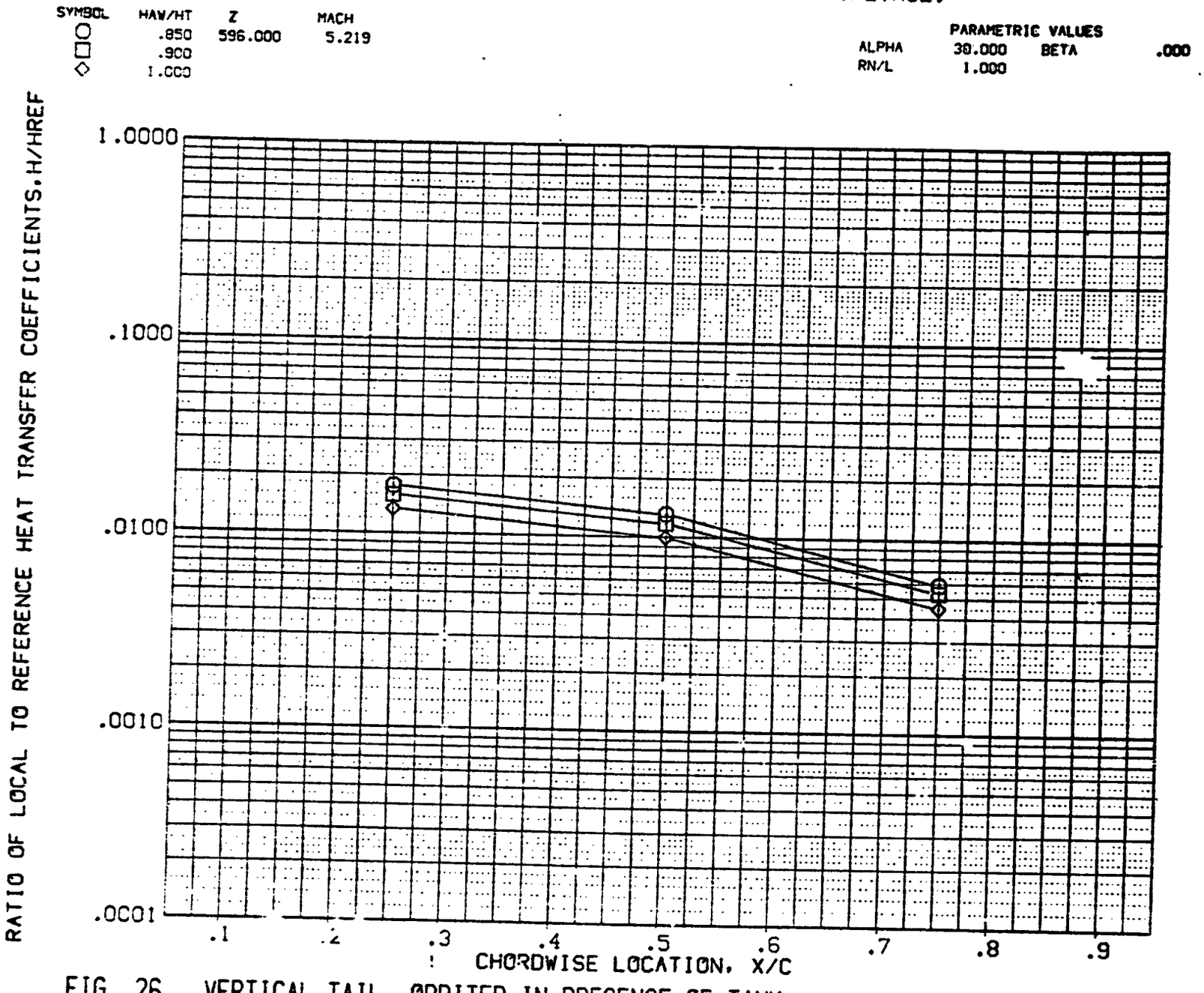

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH02)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

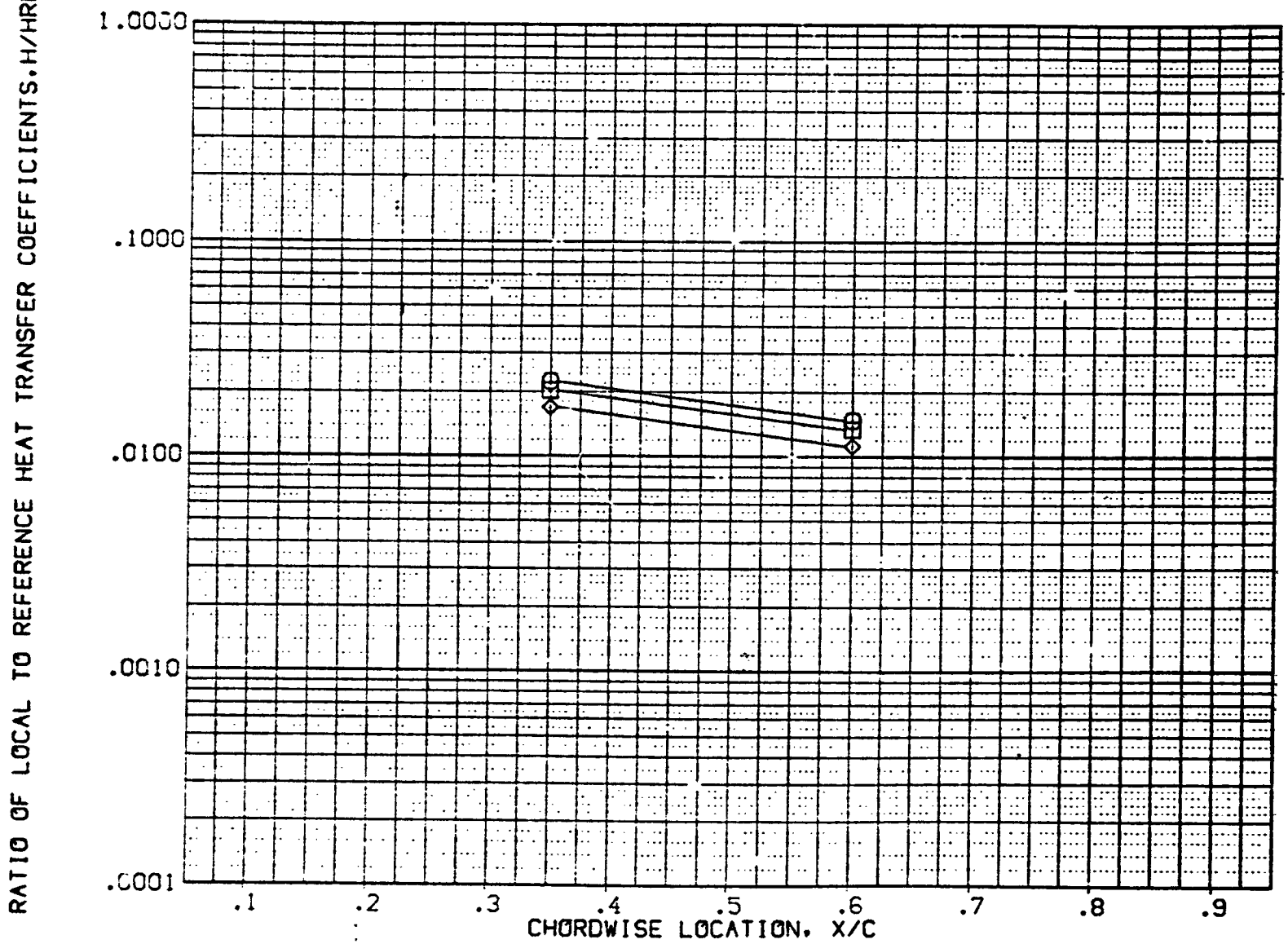

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL. (KEVH03)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

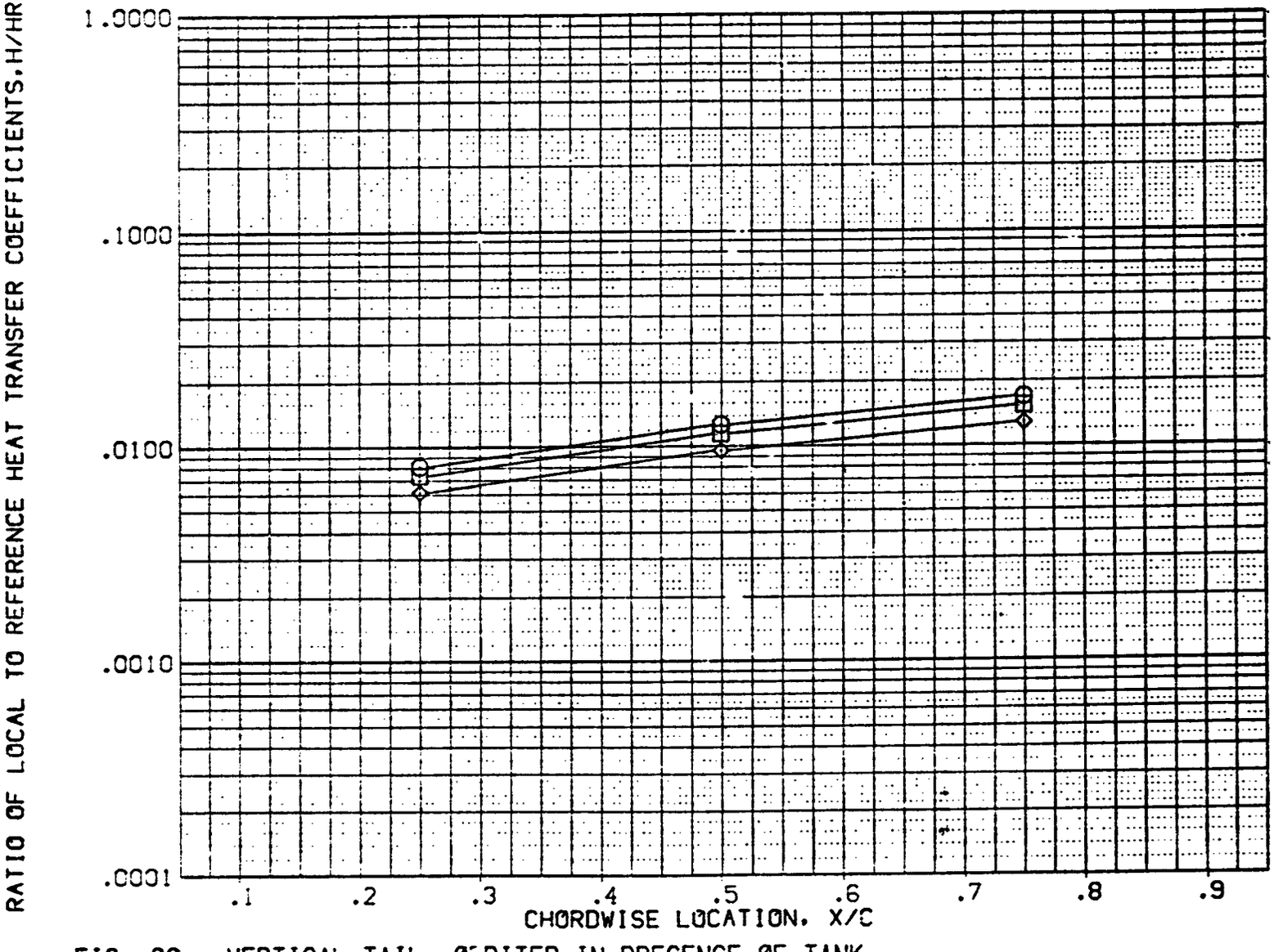

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH03)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

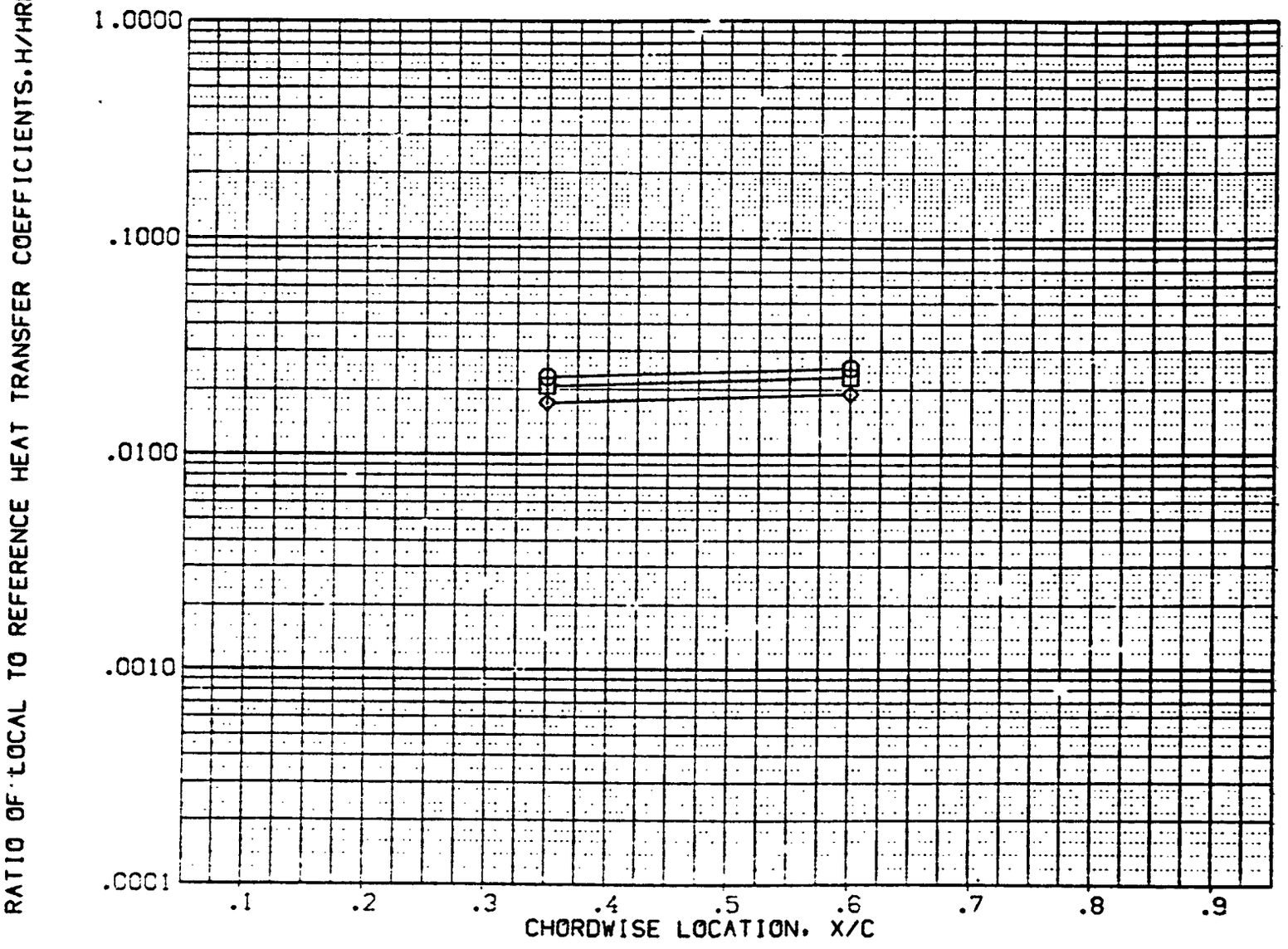

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

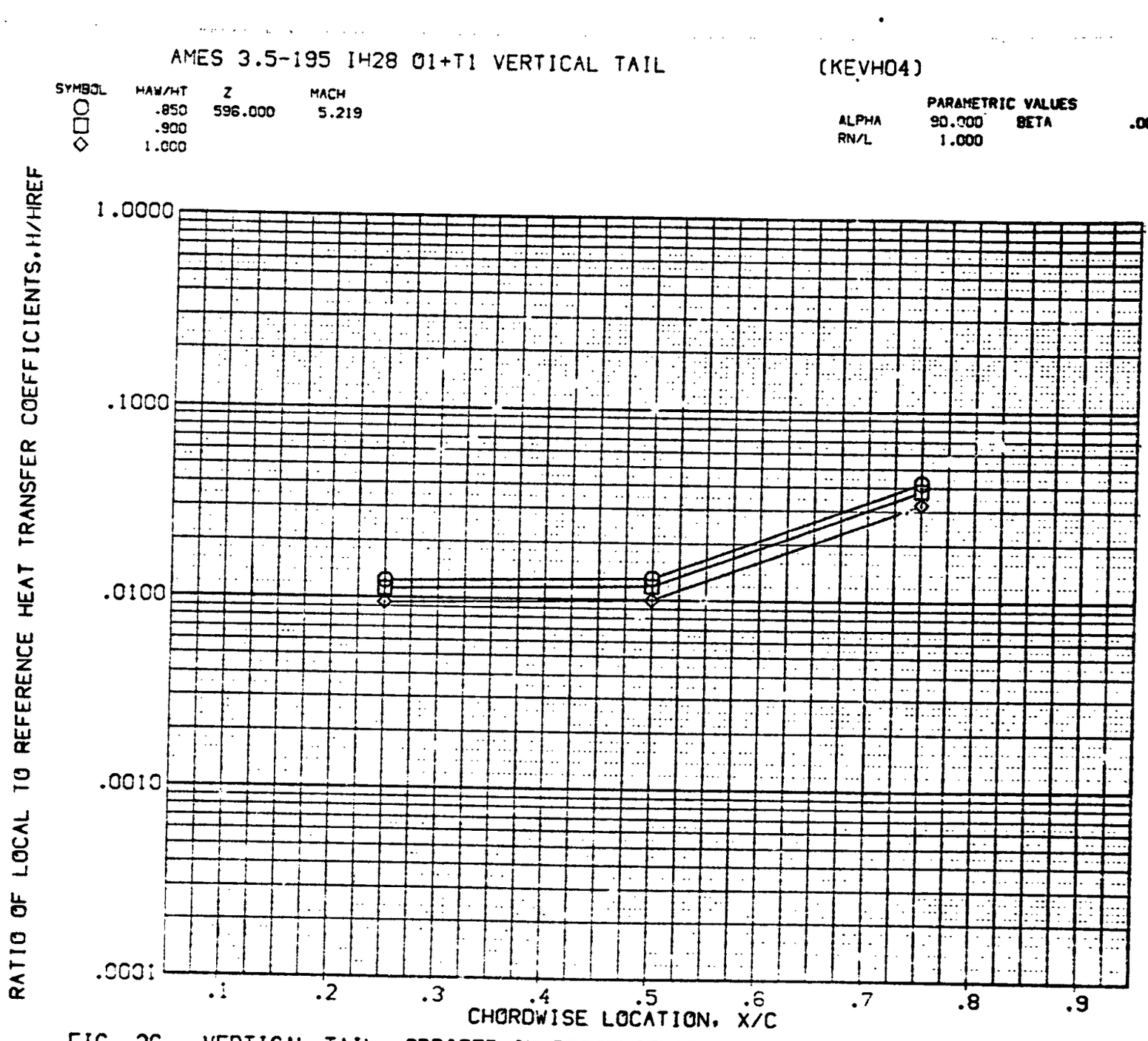

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

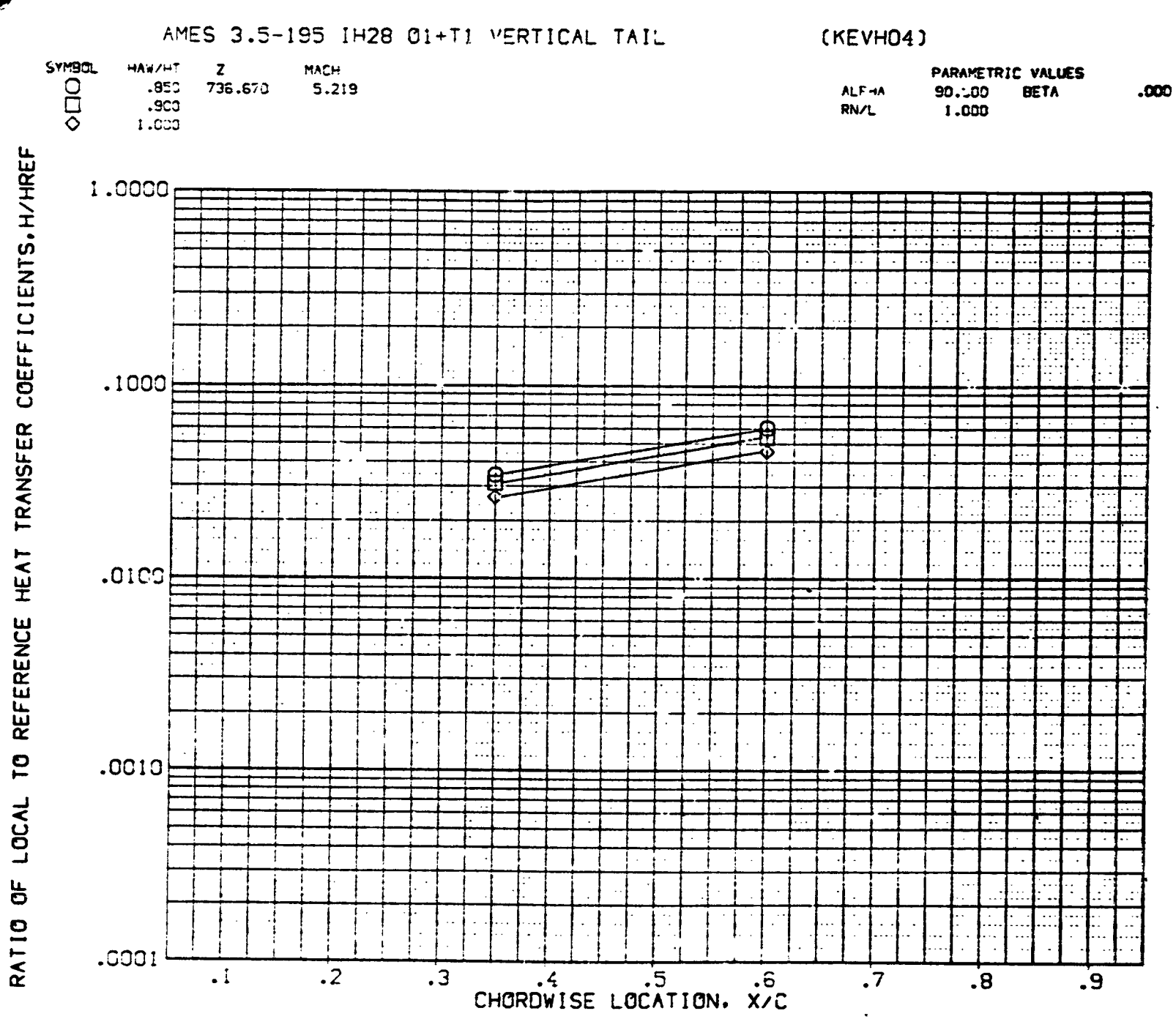

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH05)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.000	BETA	.000
RN/L	1.000		

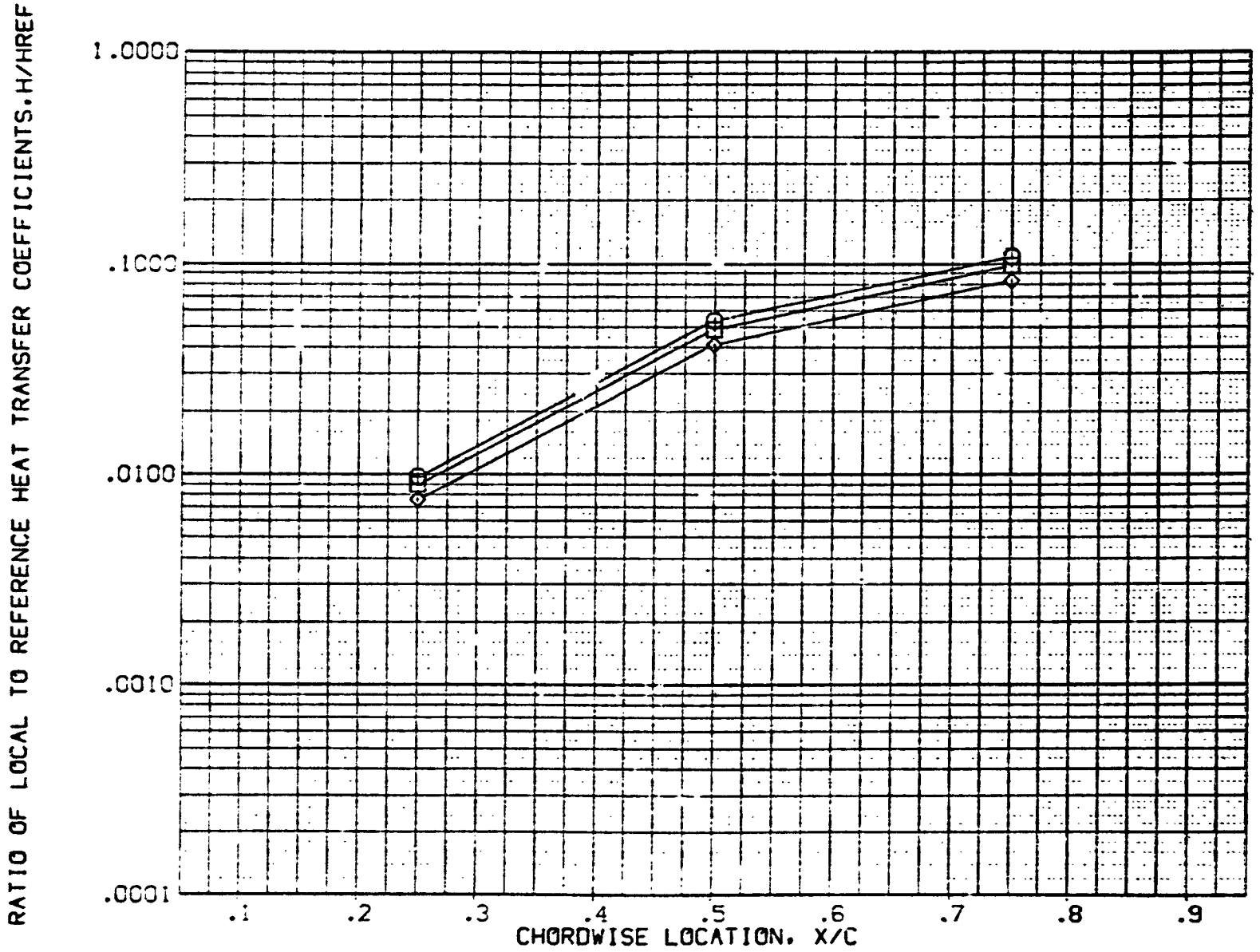

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH05)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	120.00	BETA	.000
RN/L	1.000		

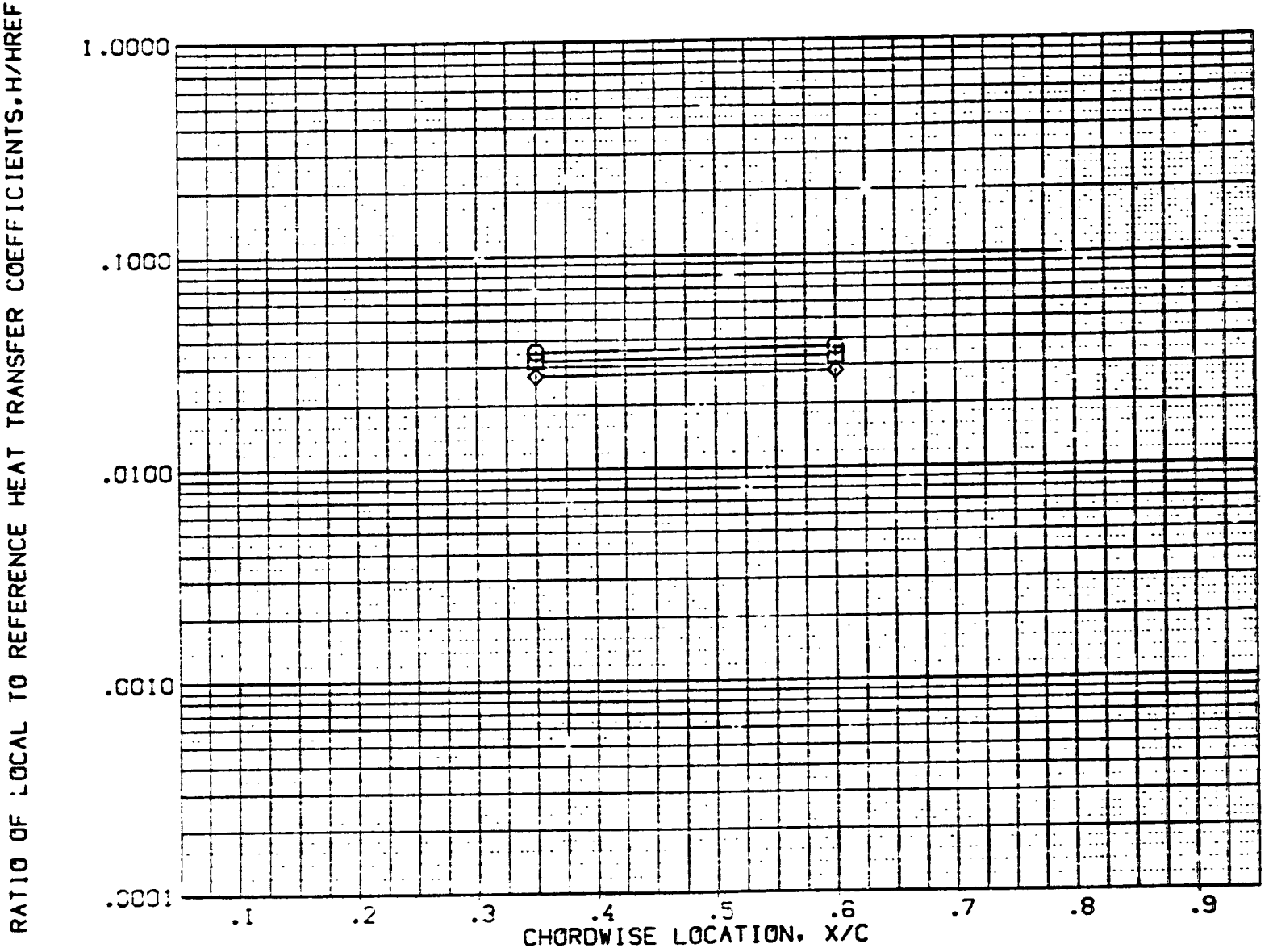

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-:95 IH28 01+TI VERTICAL TAIL (KEVH06)

SYMBOL	HA#/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

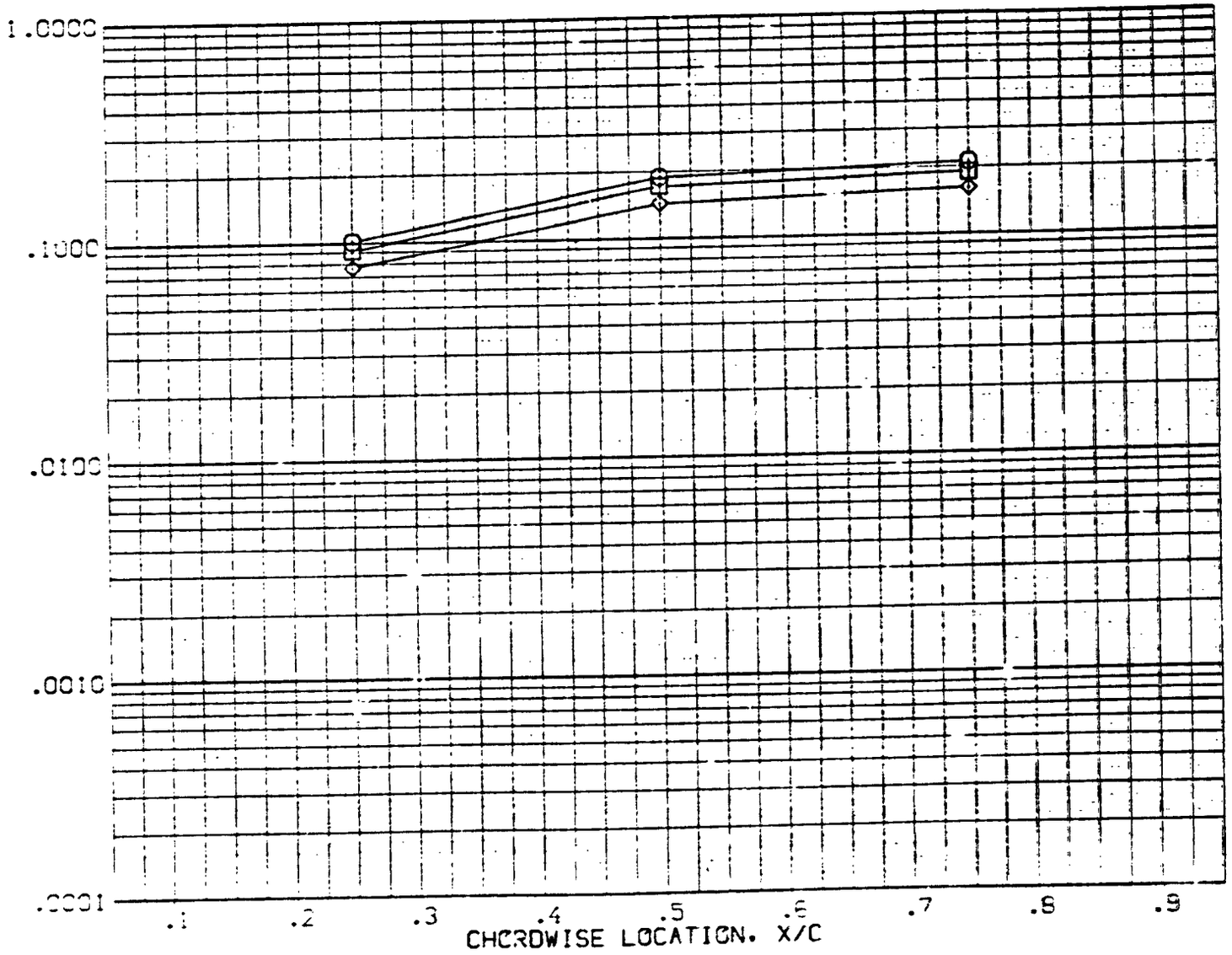

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH06)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

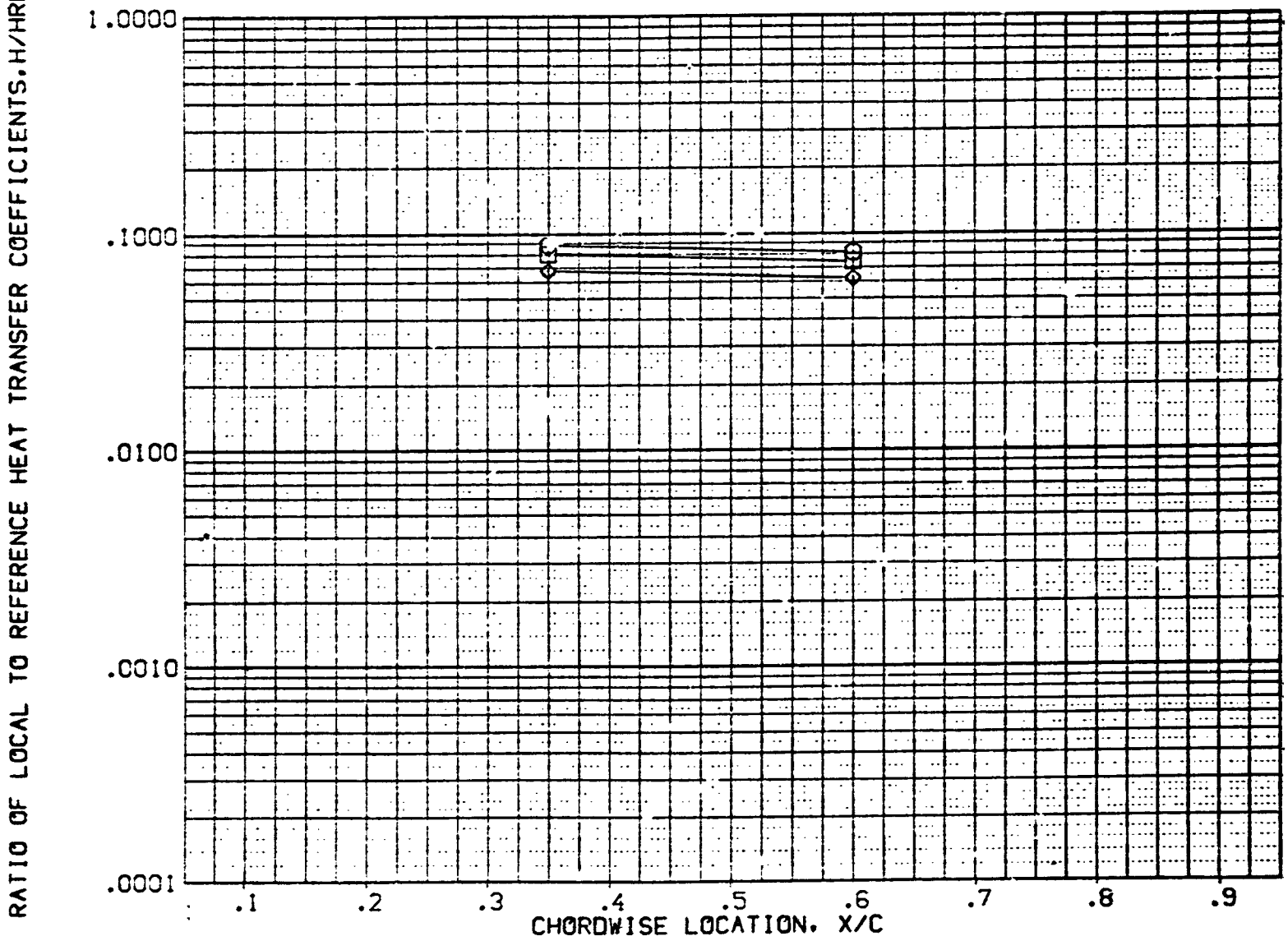

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL. (KEVH07)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

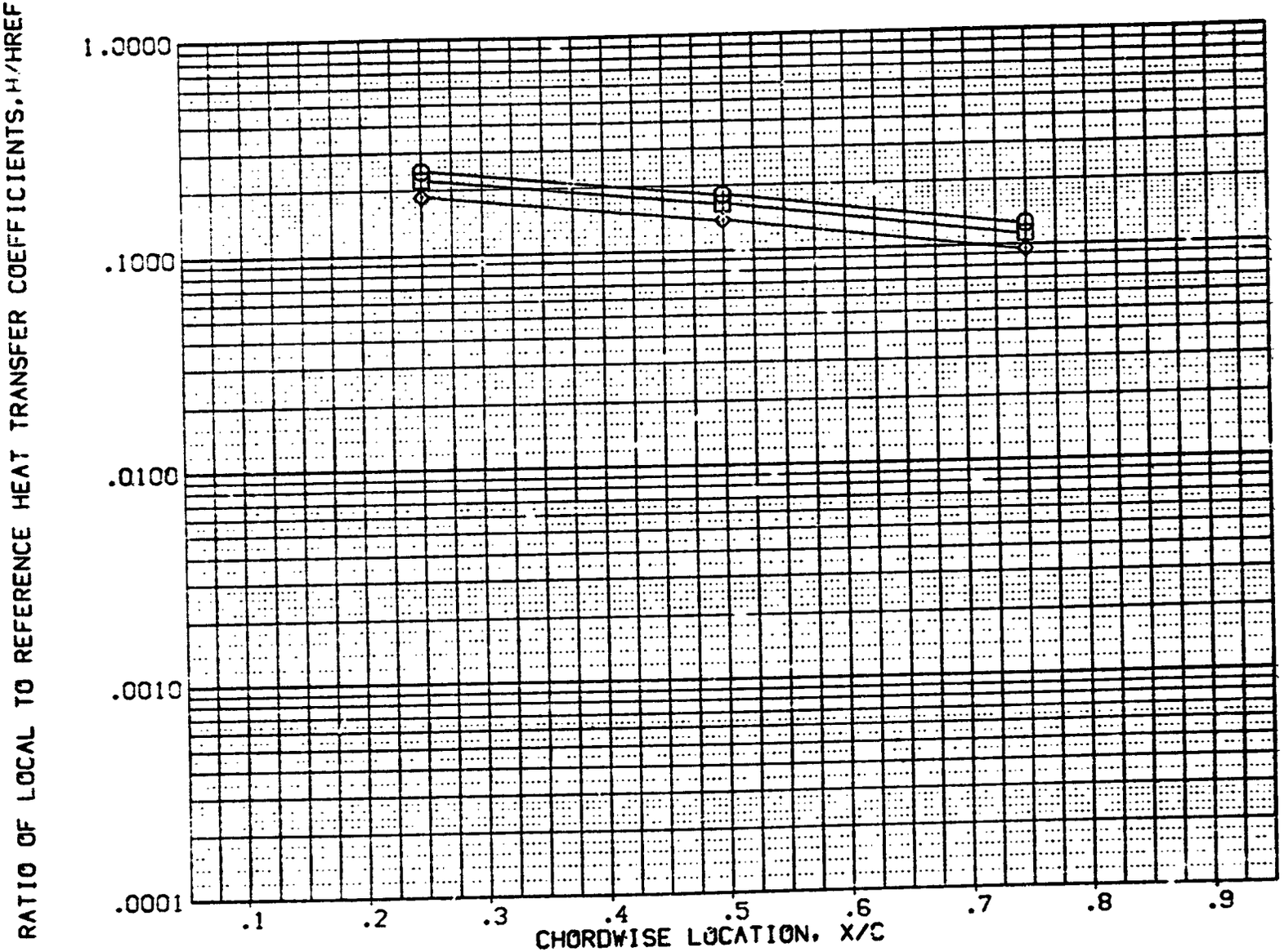

FIG. 28 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH07)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.219
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-90.000	BETA	.000
RN/L	1.000		

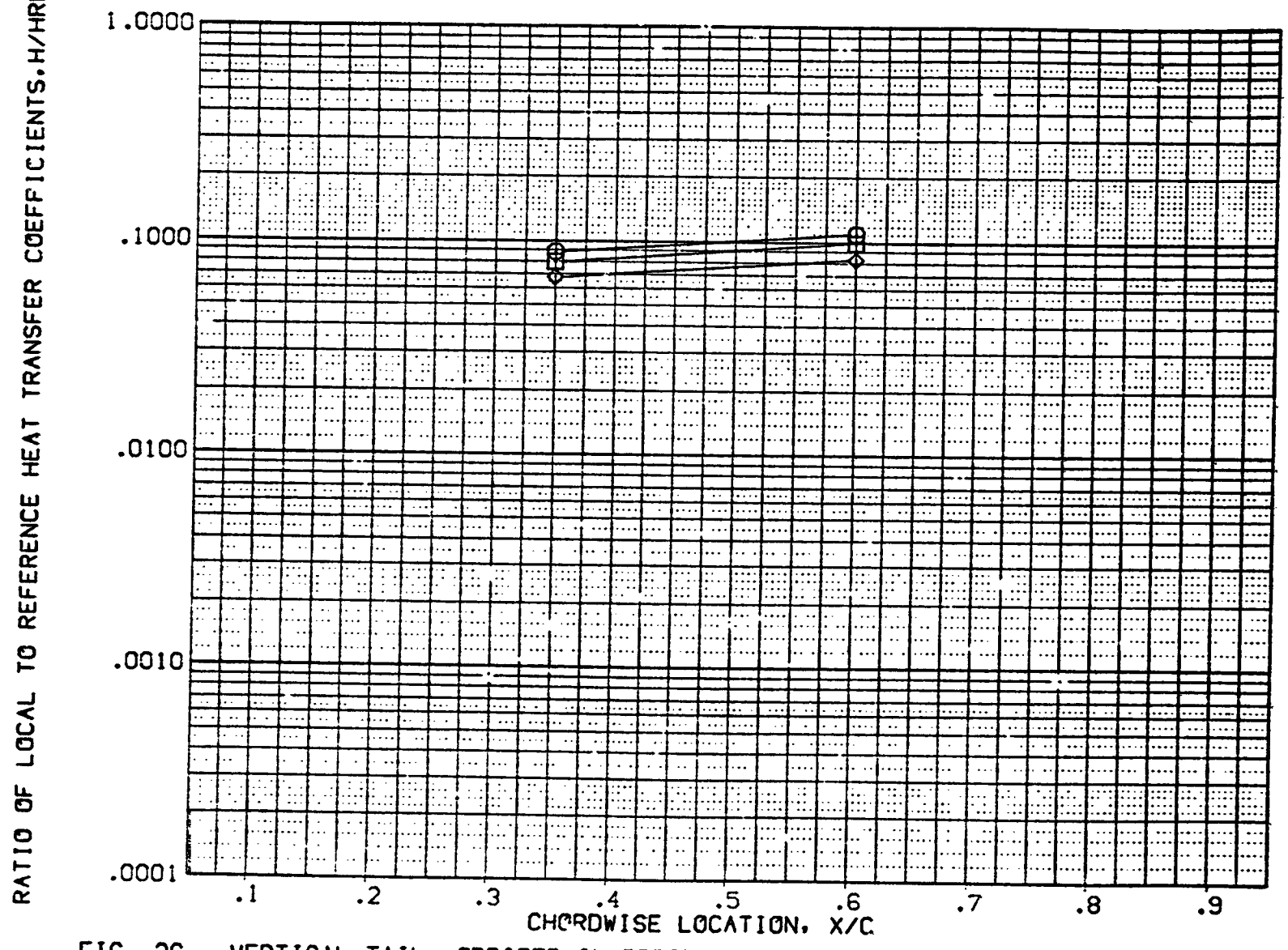

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH08)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

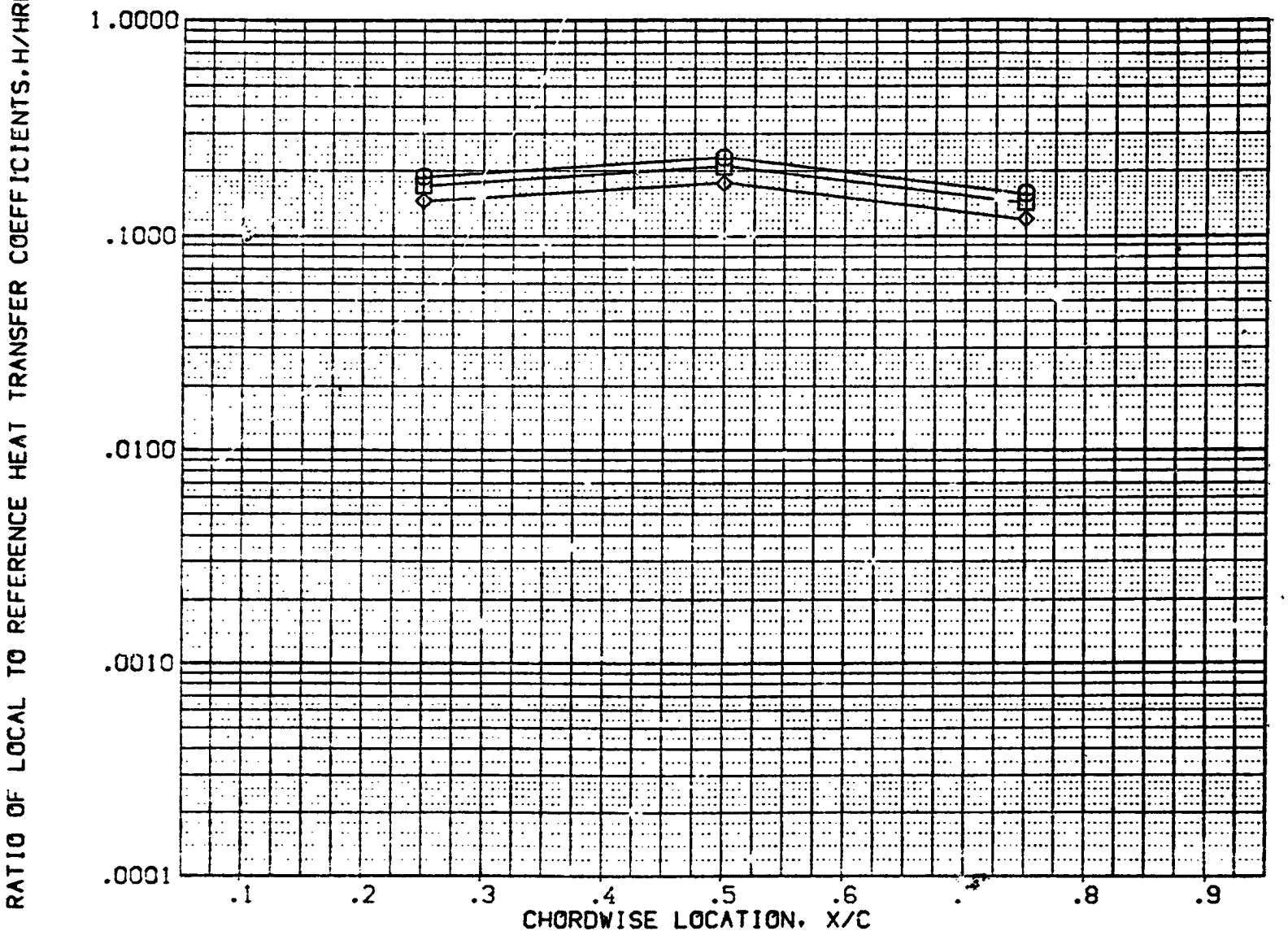

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH08)

SYMBOL	HAV/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

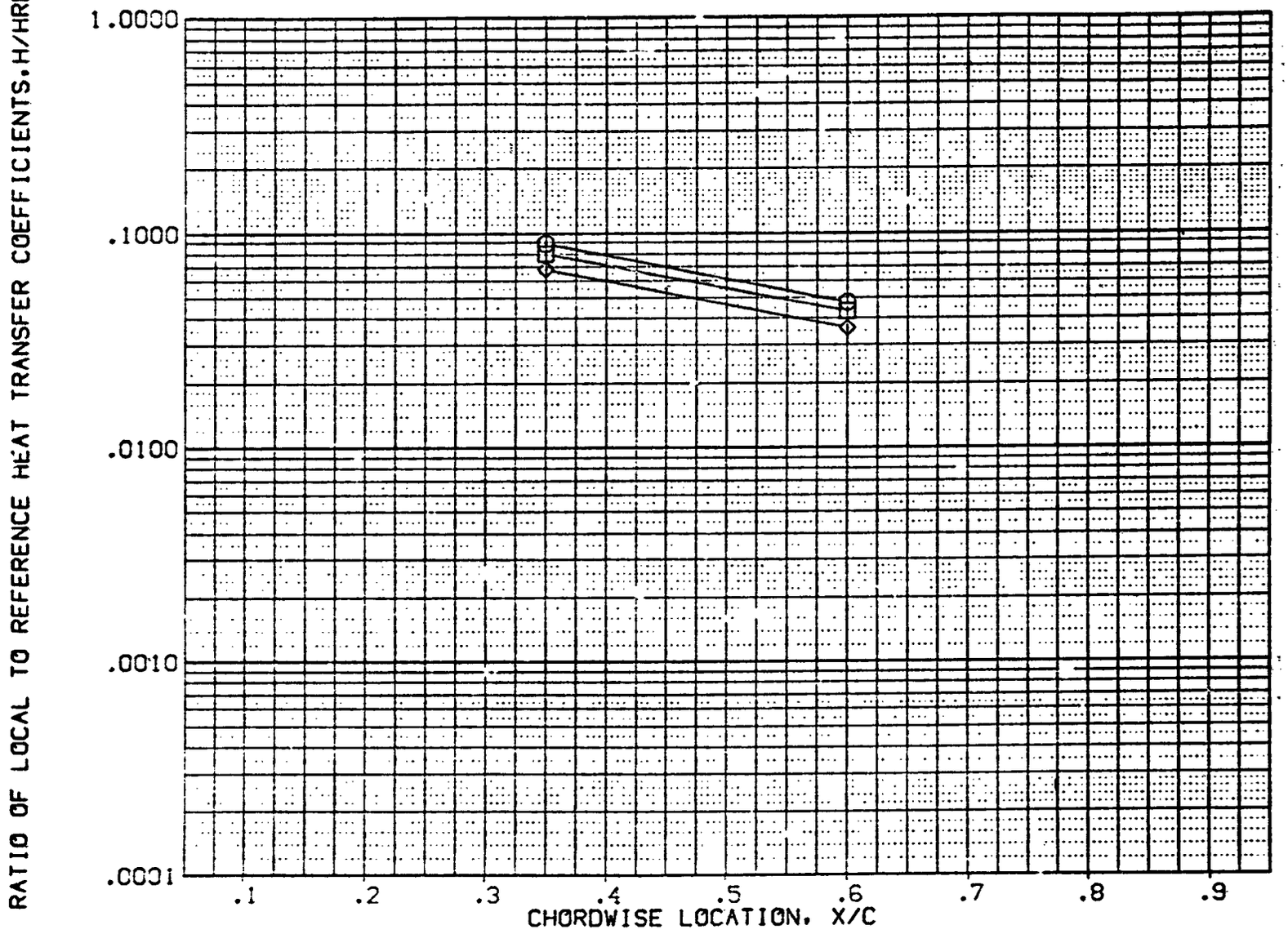

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH09)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

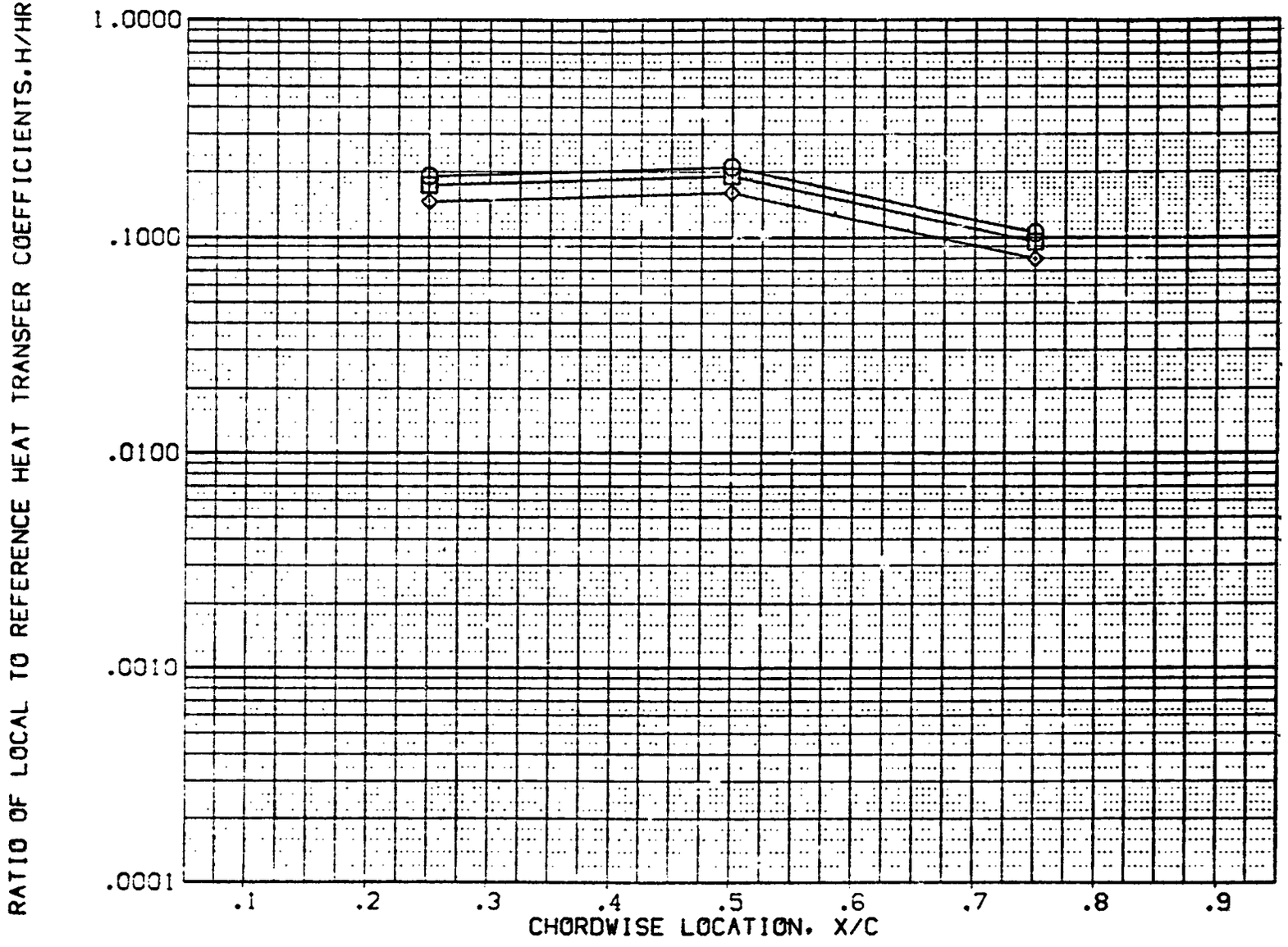

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH09)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

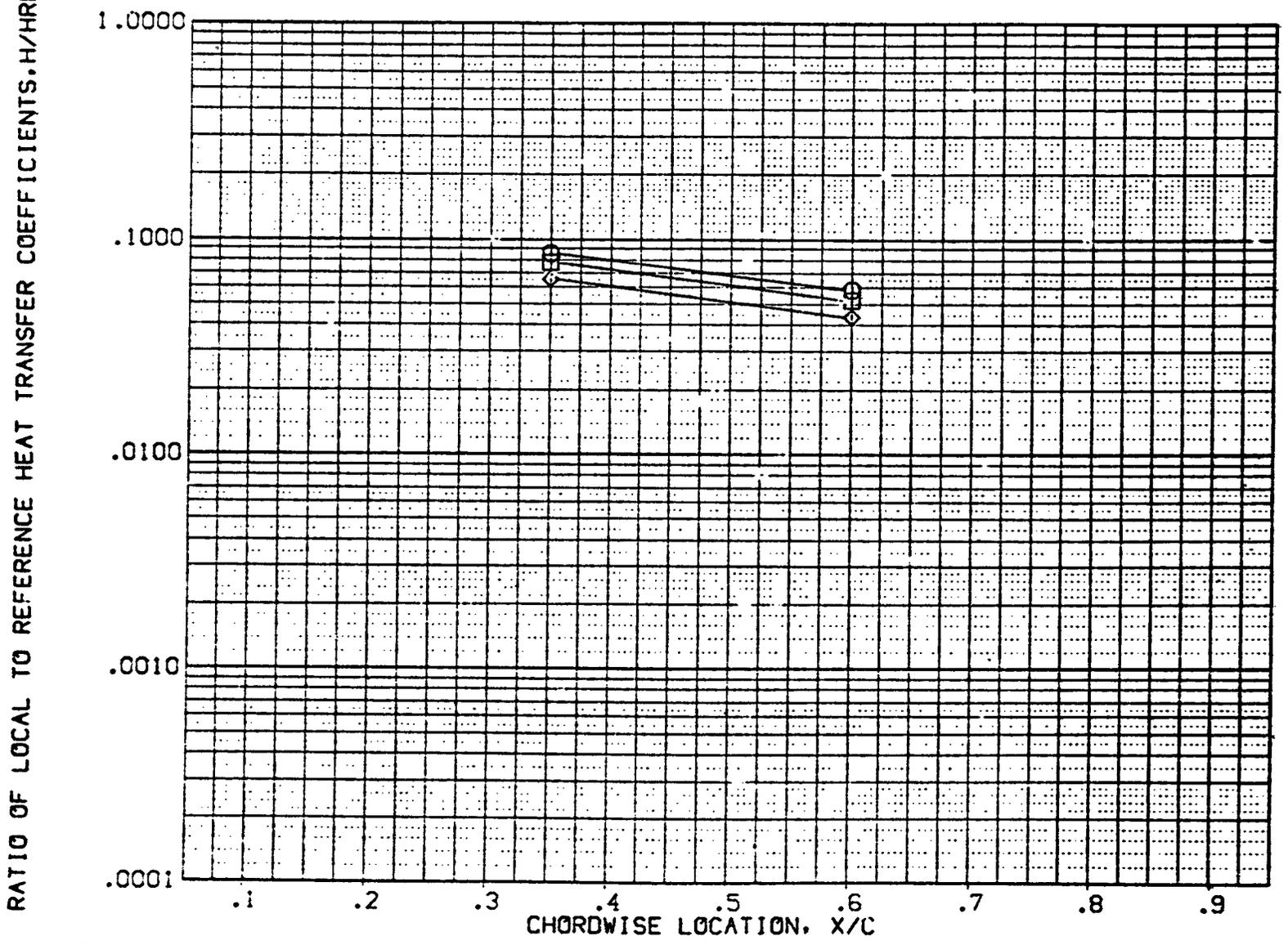

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH10)

SYMBOL	HAW/HT	Z	MACH
○	.850	596.000	5.299
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	4.000		

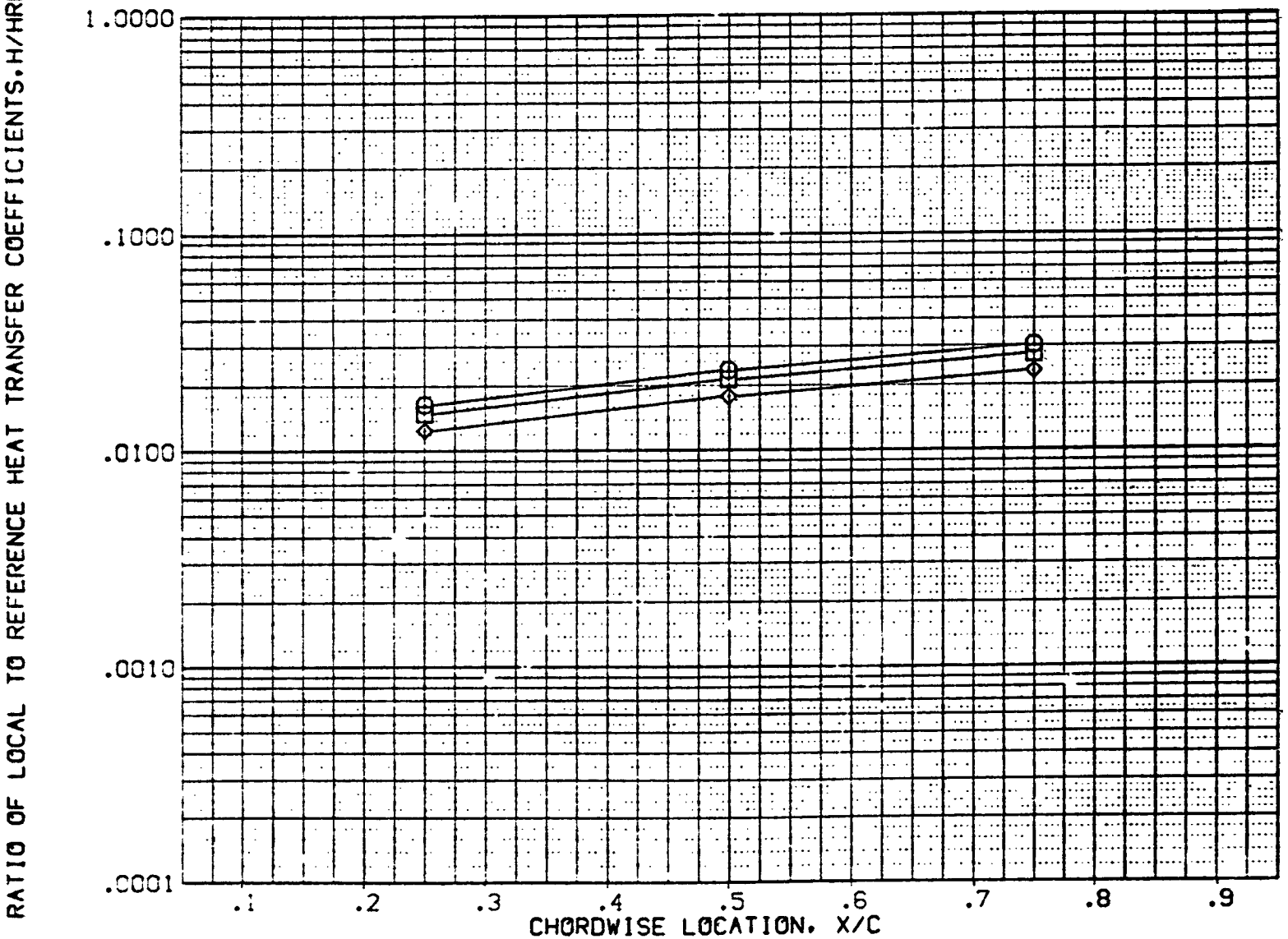

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH10)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.299
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	4.000		

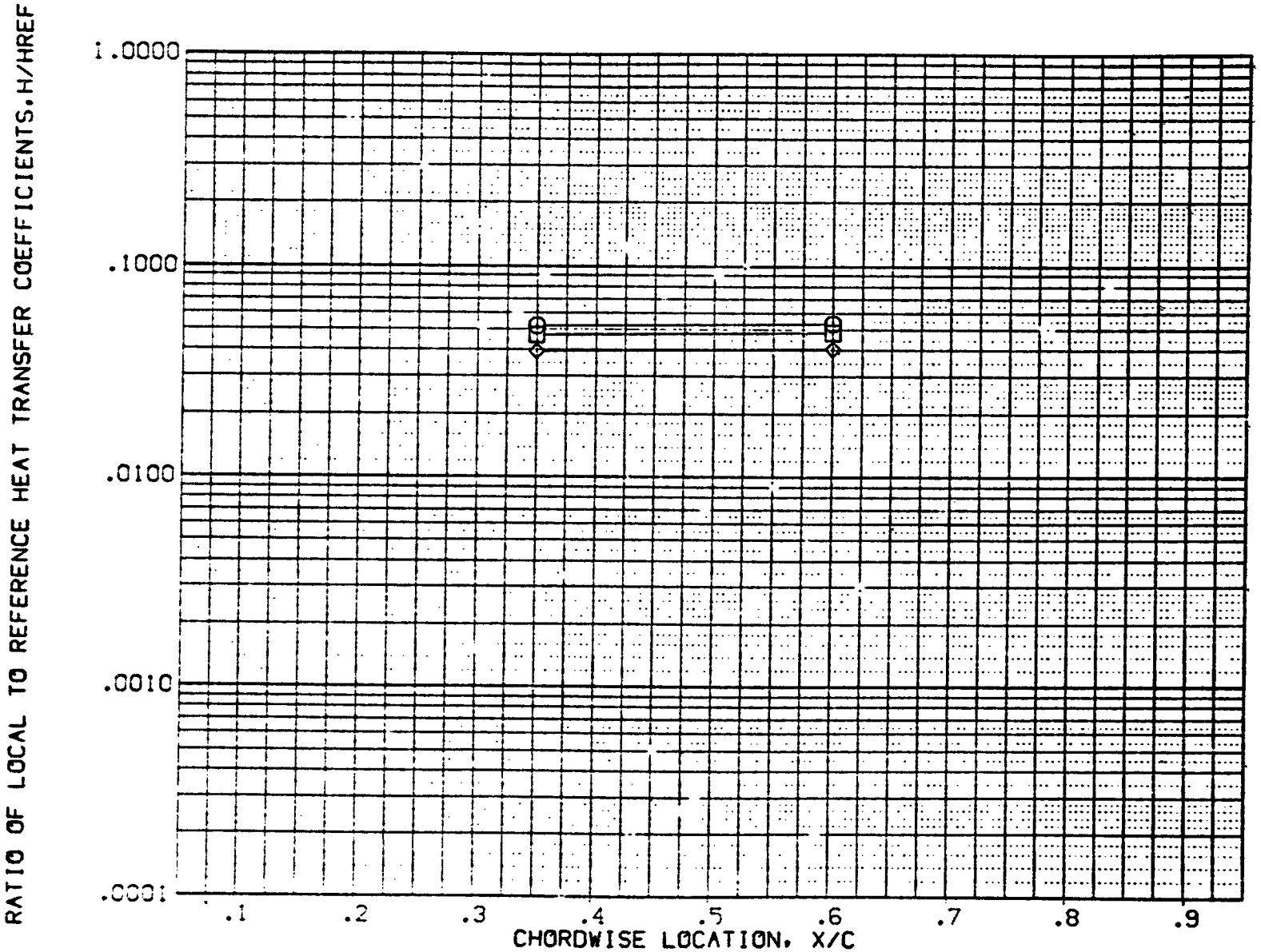

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH11)

SYMBOL	HAW/HT	Z	MACH
□	.850	596.000	5.300
○	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	4.000		

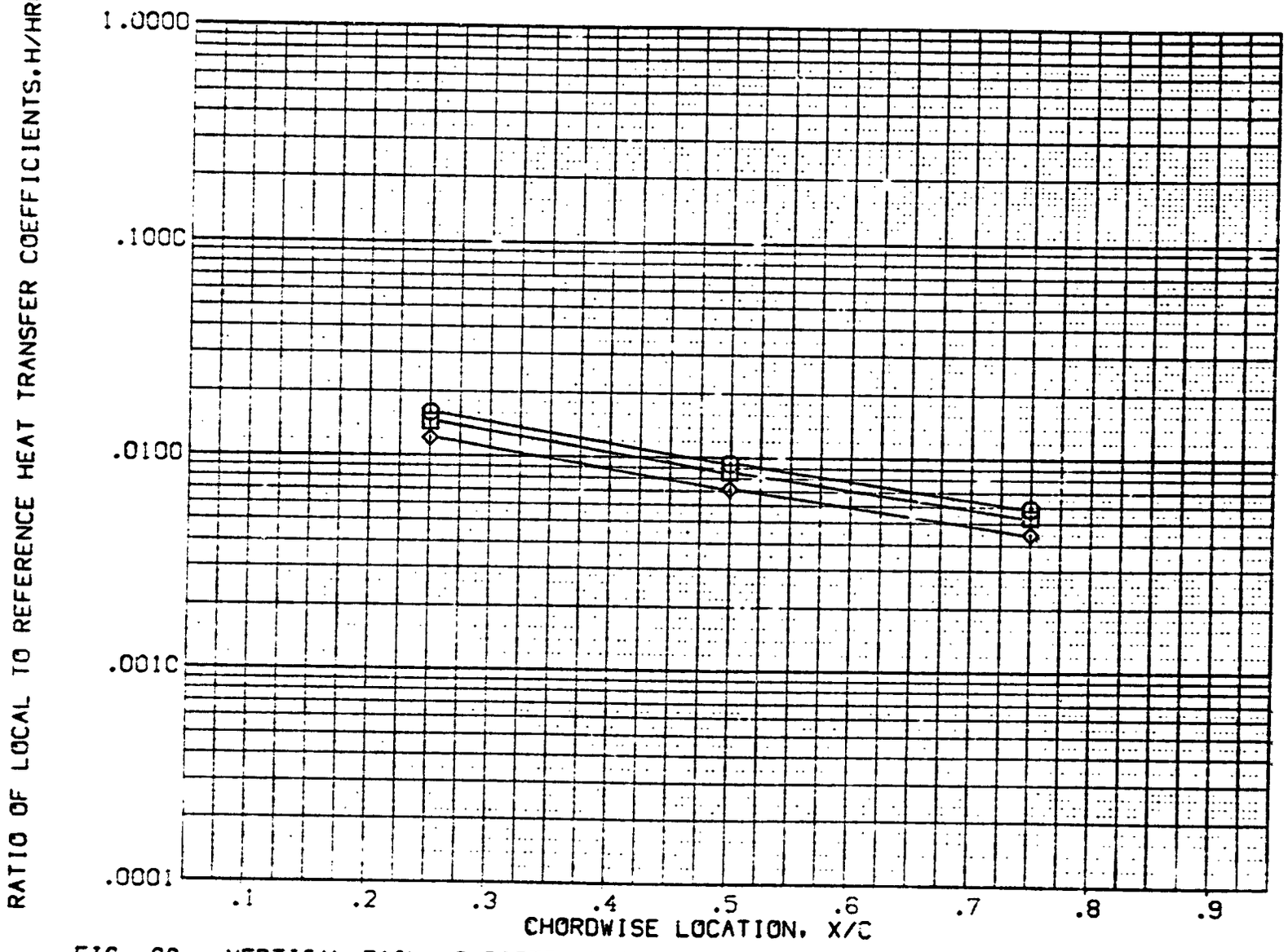

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH11)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.300
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	4.000		

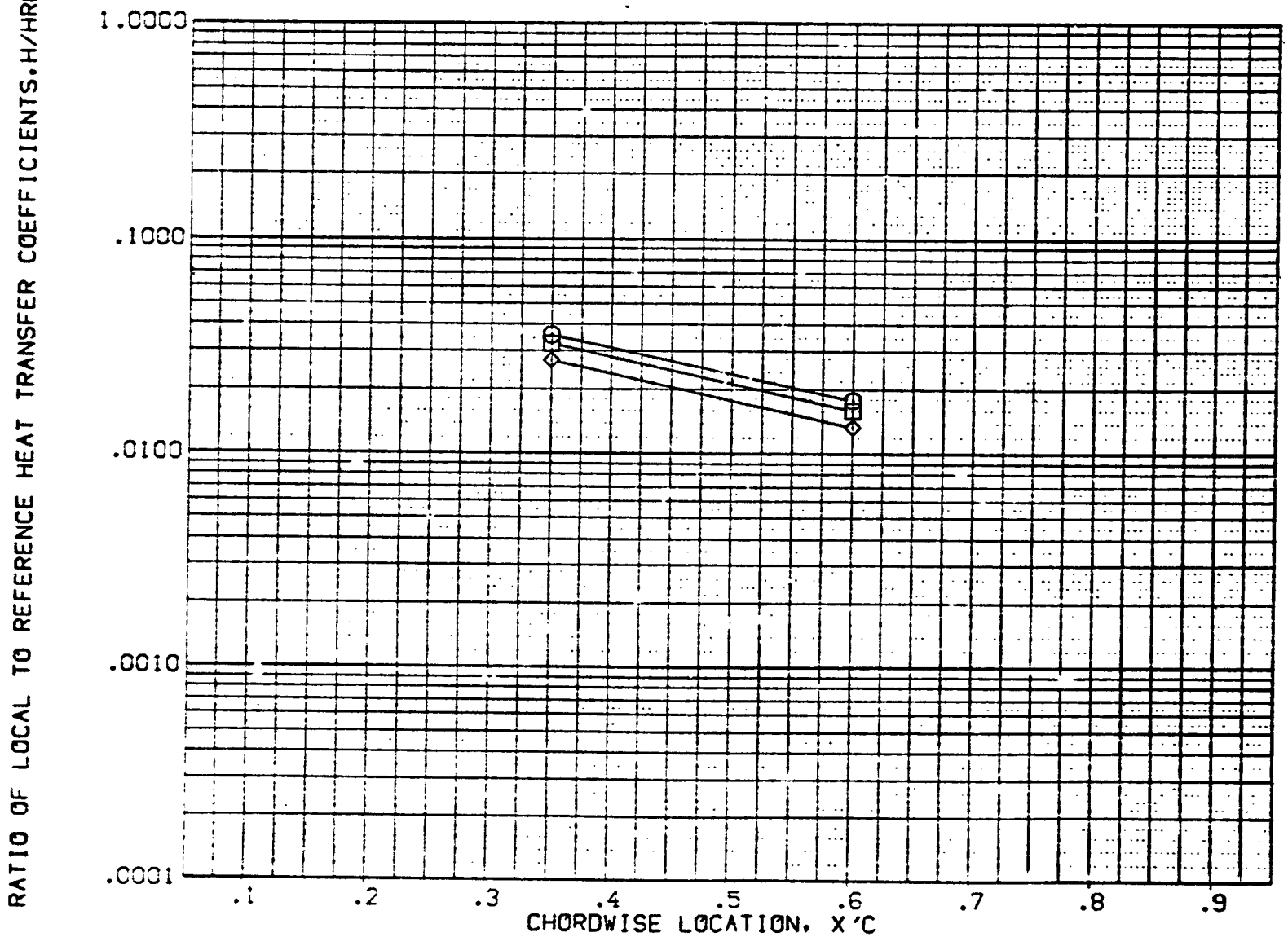

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH12)

SYMBOL	HAW/HT	Z	MACH
◇□○	.850	596.000	5.220
	.900		
	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

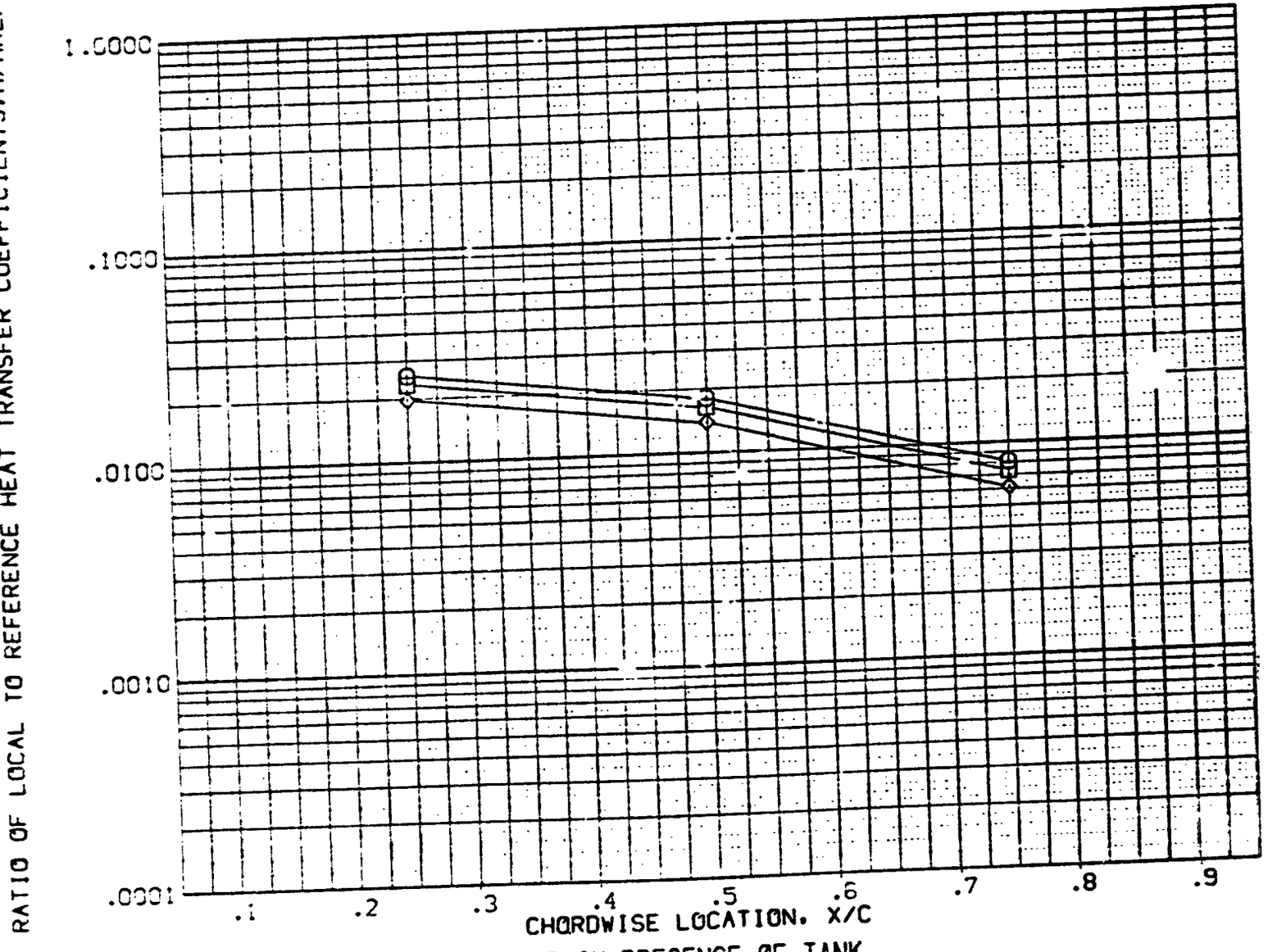

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

REPRODUCIBILITY OF
ORIGINAL PAGE IS

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (KEVH12)

SYMBOL	HAW/HT	Z	MACH
○	.850	736.670	5.220
□	.900		
◇	1.000		

PARAMETRIC VALUES

ALPHA	30.000	BETA	-5.000
RN/L	1.000		

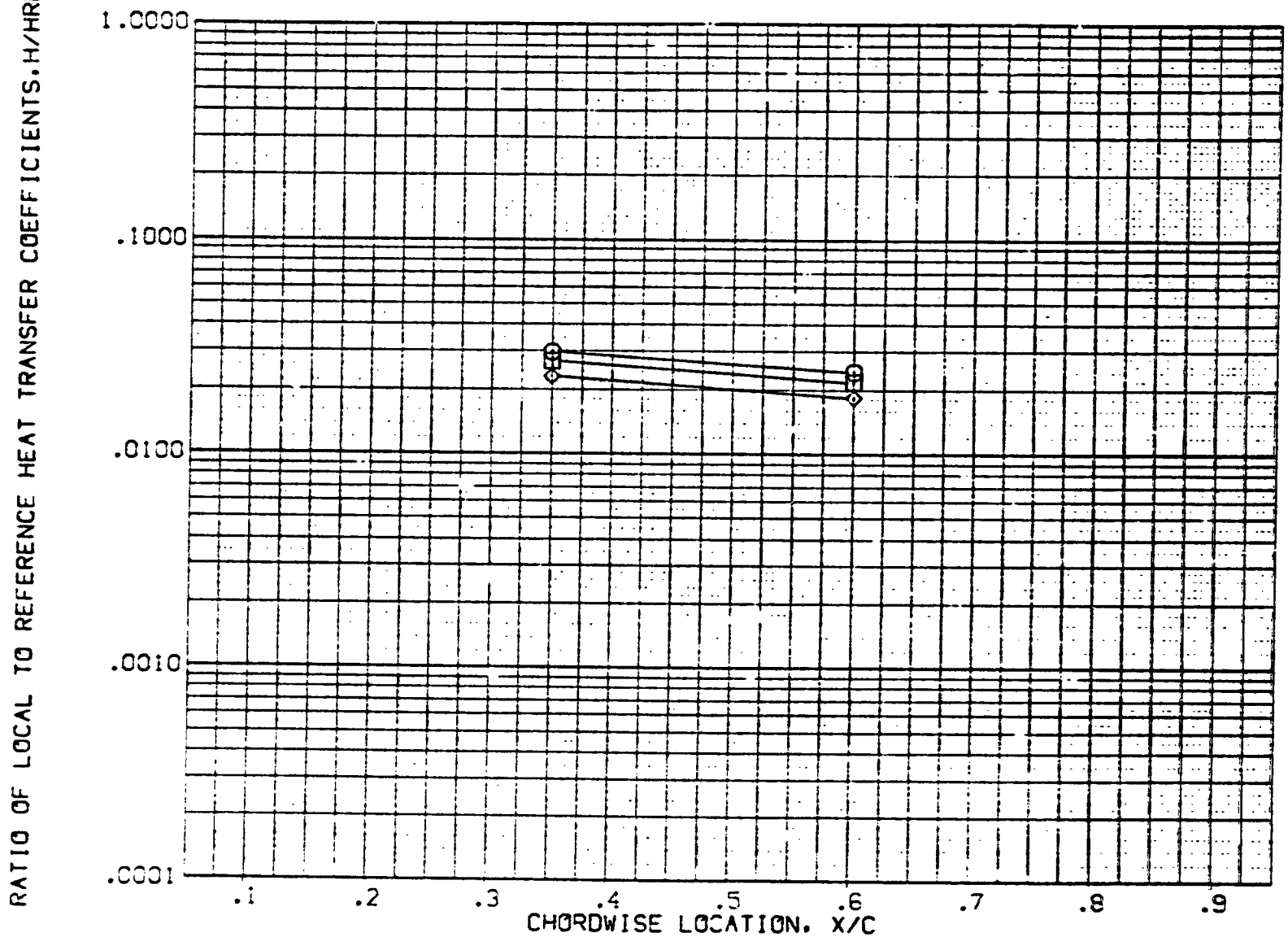

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

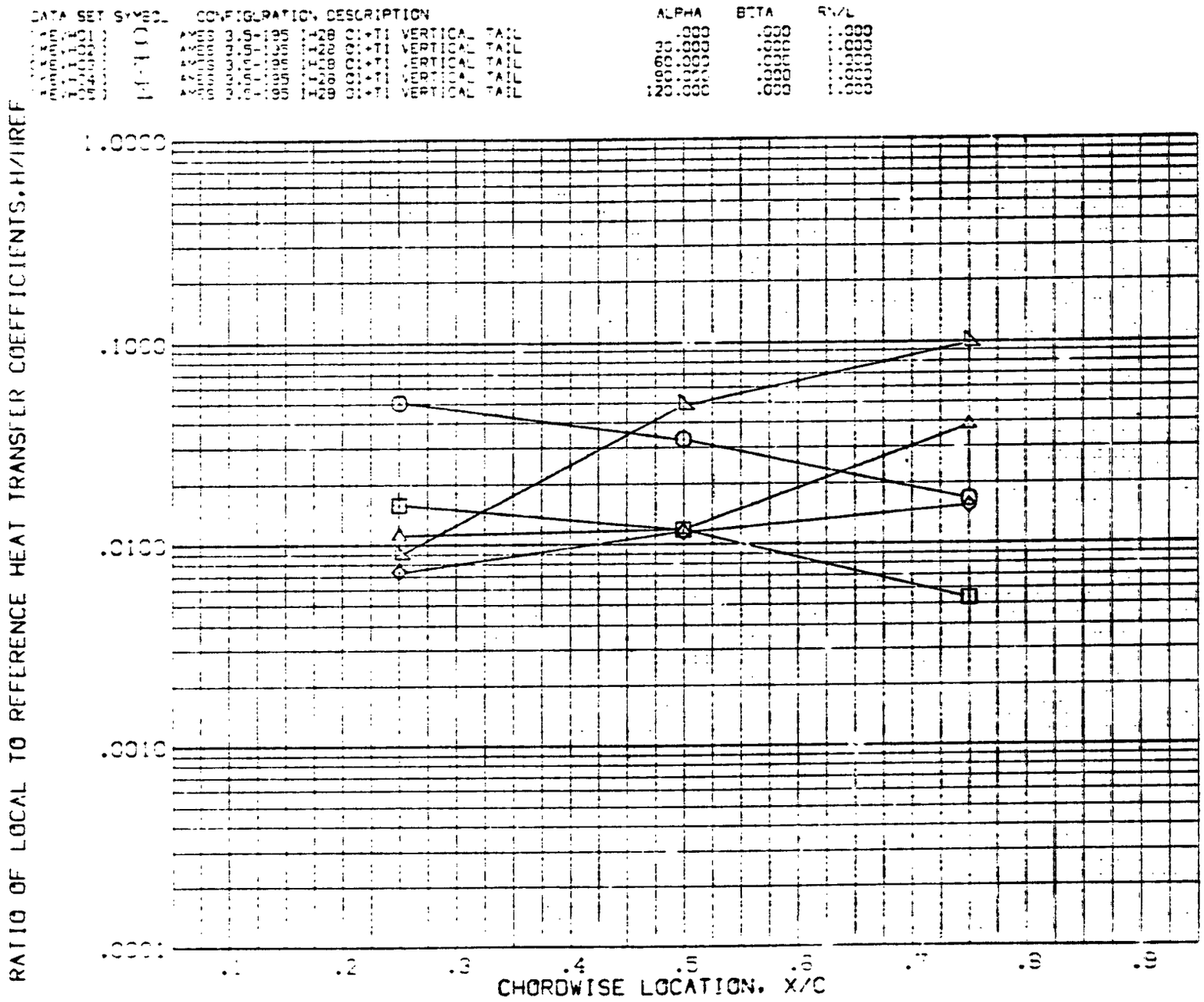

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 PAMB= .900 Z = 596.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEVH01)	□	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	.000	.000	1.000
(KEVH02)	△	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	30.000	.000	1.000
(KEVH03)	◇	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	60.000	.000	1.000
(KEVH04)	○	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	90.000	.000	1.000
(KEVH05)	▽	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	120.000	.000	1.000

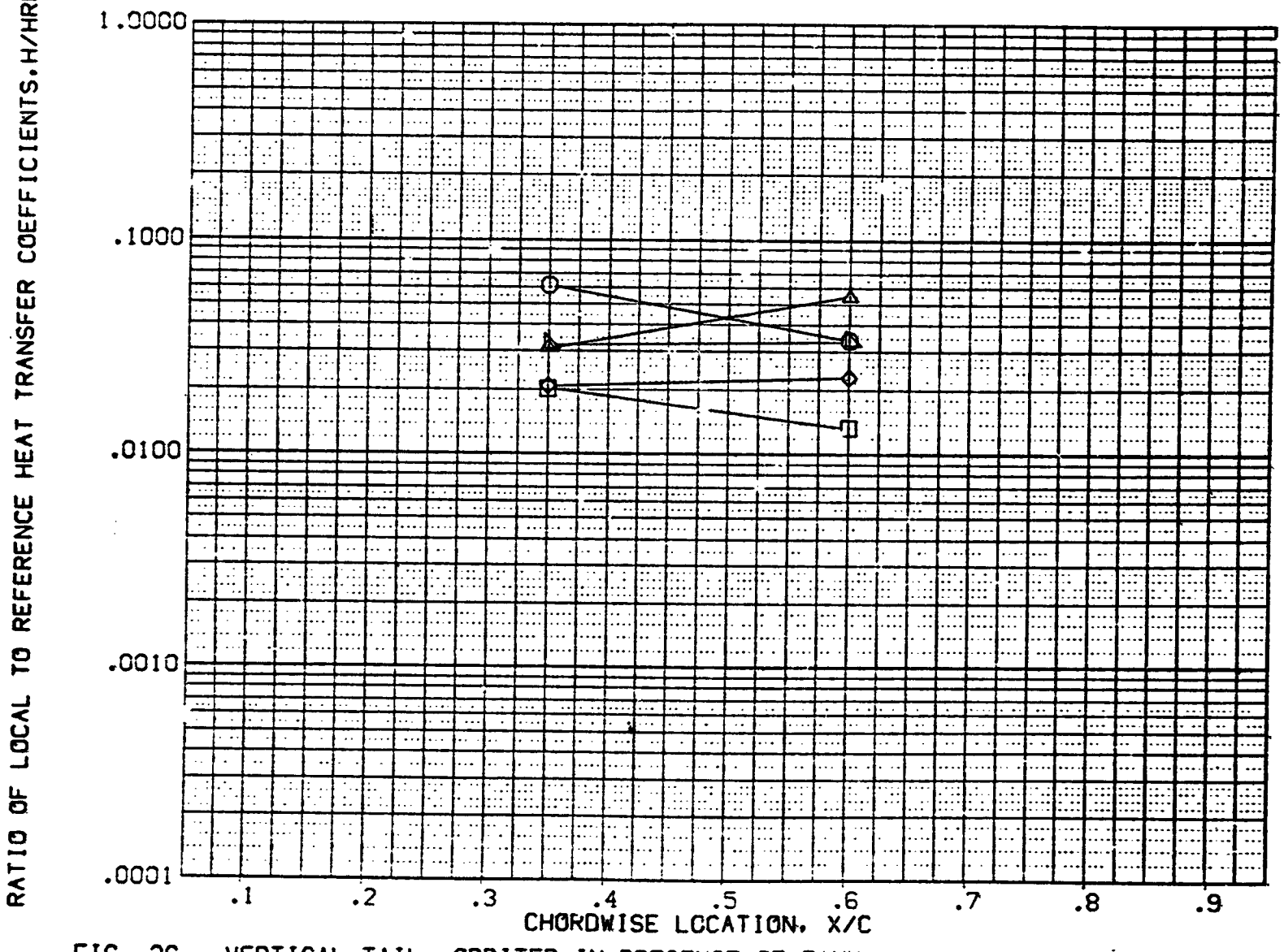

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 Z = 736 670

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPH	BETA	RN/L
(KEVH01)	□	AMES 3.5-195 IH28 01+TI VERTICAL TAIL	.000	.000	1.000
(KEVH09)	◇	AMES 3.5-195 IH28 01+TI VERTICAL TAIL	-30.000	.000	1.000
(KEVH08)	△	AMES 3.5-195 IH28 01+TI VERTICAL TAIL	-60.000	.000	1.000
(KEVH07)	▷	AMES 3.5-195 IH28 01+TI VERTICAL TAIL	-90.000	.000	1.000
(KEVH06)	○	AMES 3.5-195 IH28 01+TI VERTICAL TAIL	-120.000	.000	1.000

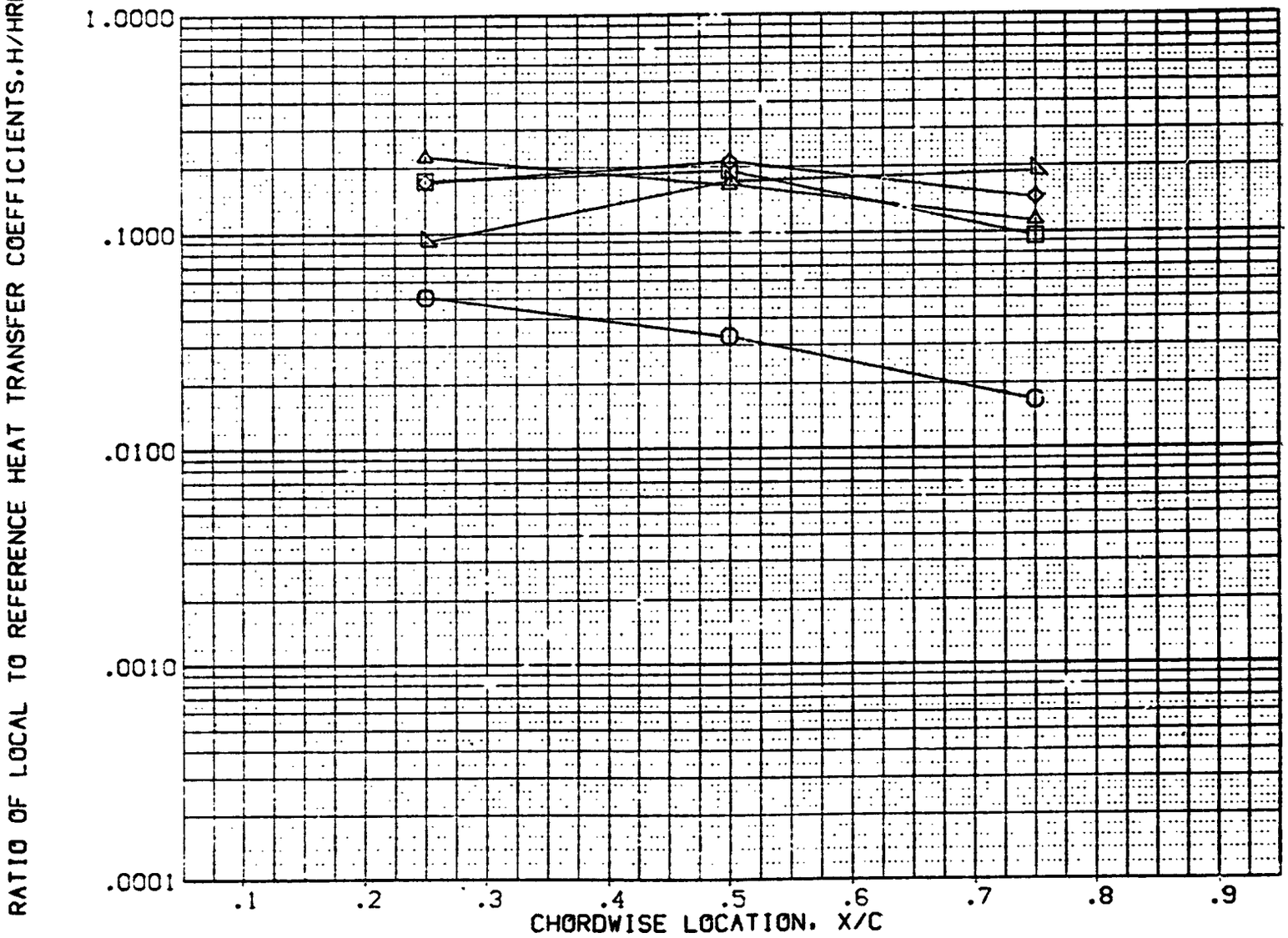

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 Z = 596.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEVH01)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	.000	.000	1.000
(KEVH09)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-30.000	.000	1.000
(KEVH08)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-60.000	.000	1.000
(KEVH07)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-90.000	.000	1.000
(KEVH06)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-120.000	.000	1.000

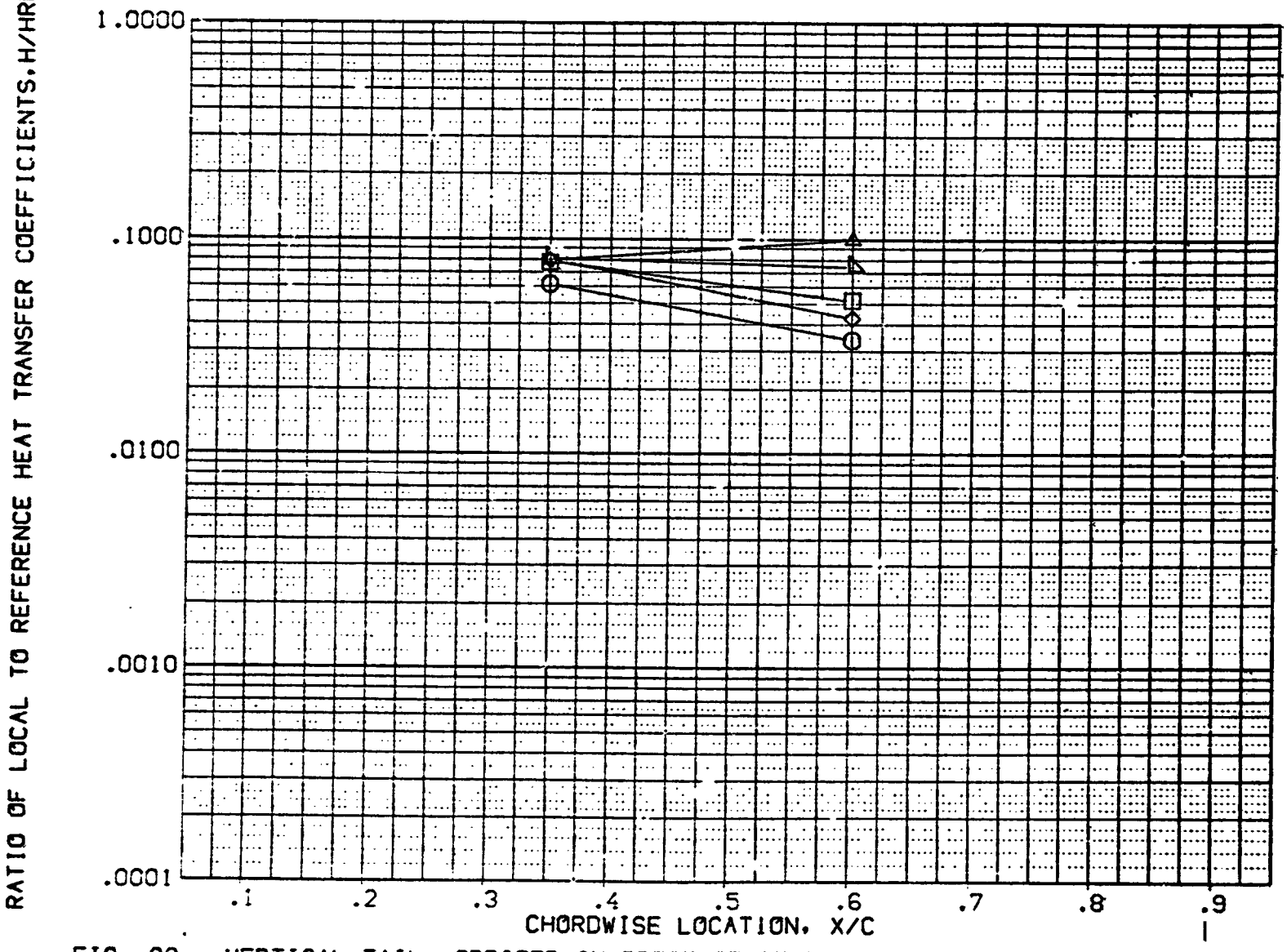

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .300 Z = 736.670

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEVH02)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	30.000	.000	1.000
(KEVH11)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	30.000	.000	4.000
(KEVH03)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	60.000	.000	1.000
(KEVH10)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	60.000	.000	4.000

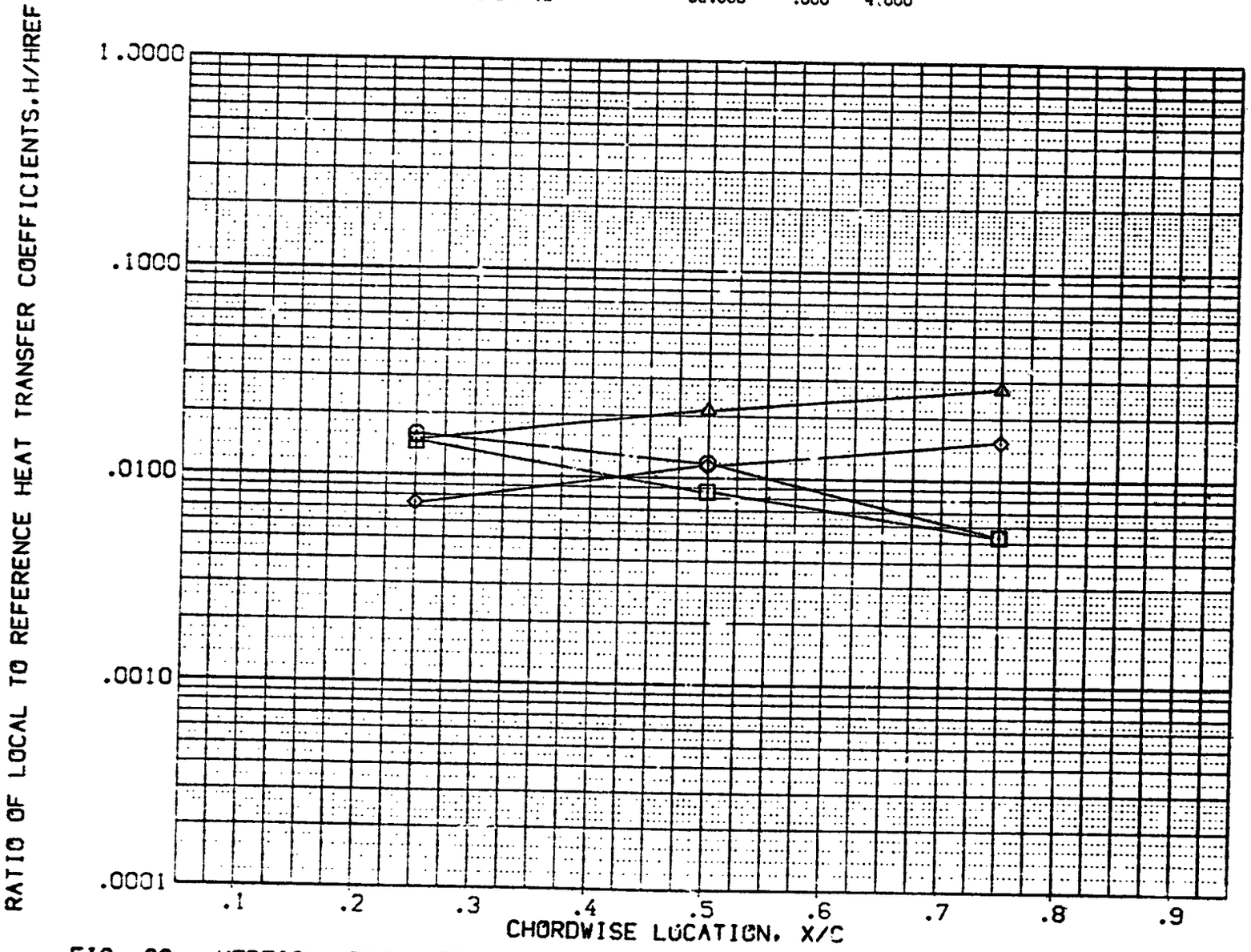

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 Z = 596 000

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEVH02)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	30.000	.000	1.000
(KEVH11)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	30.000	.000	4.000
(KEVH03)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	60.000	.000	1.000
(KEVH10)	AMES 3.5-195 IH28 OI+TI VERTICAL TAIL	60.000	.000	4.000

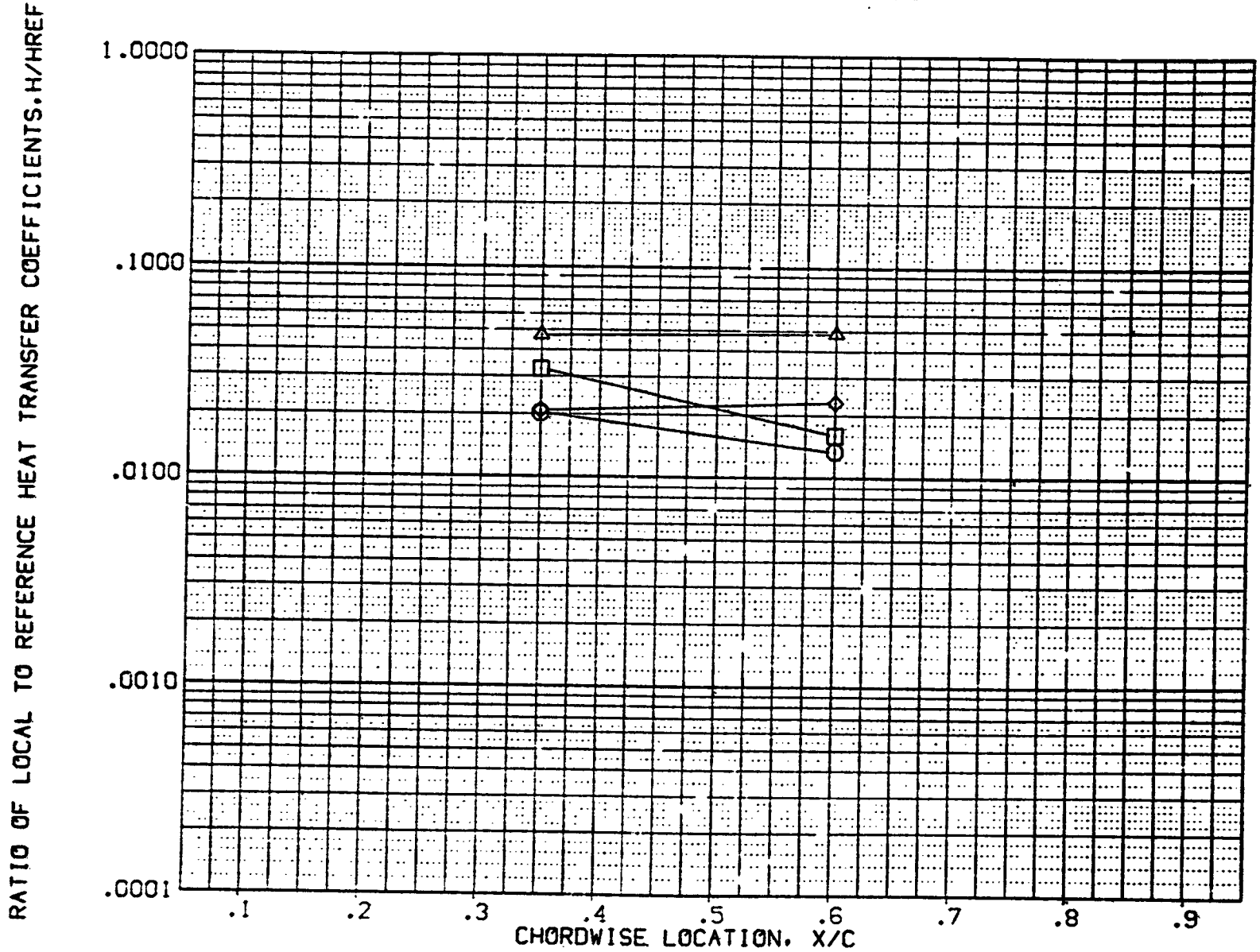

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 Z = 736.670

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEVH02)	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	30.000	.000	1.000
(KEVH12)	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	30.000	-5.000	1.000

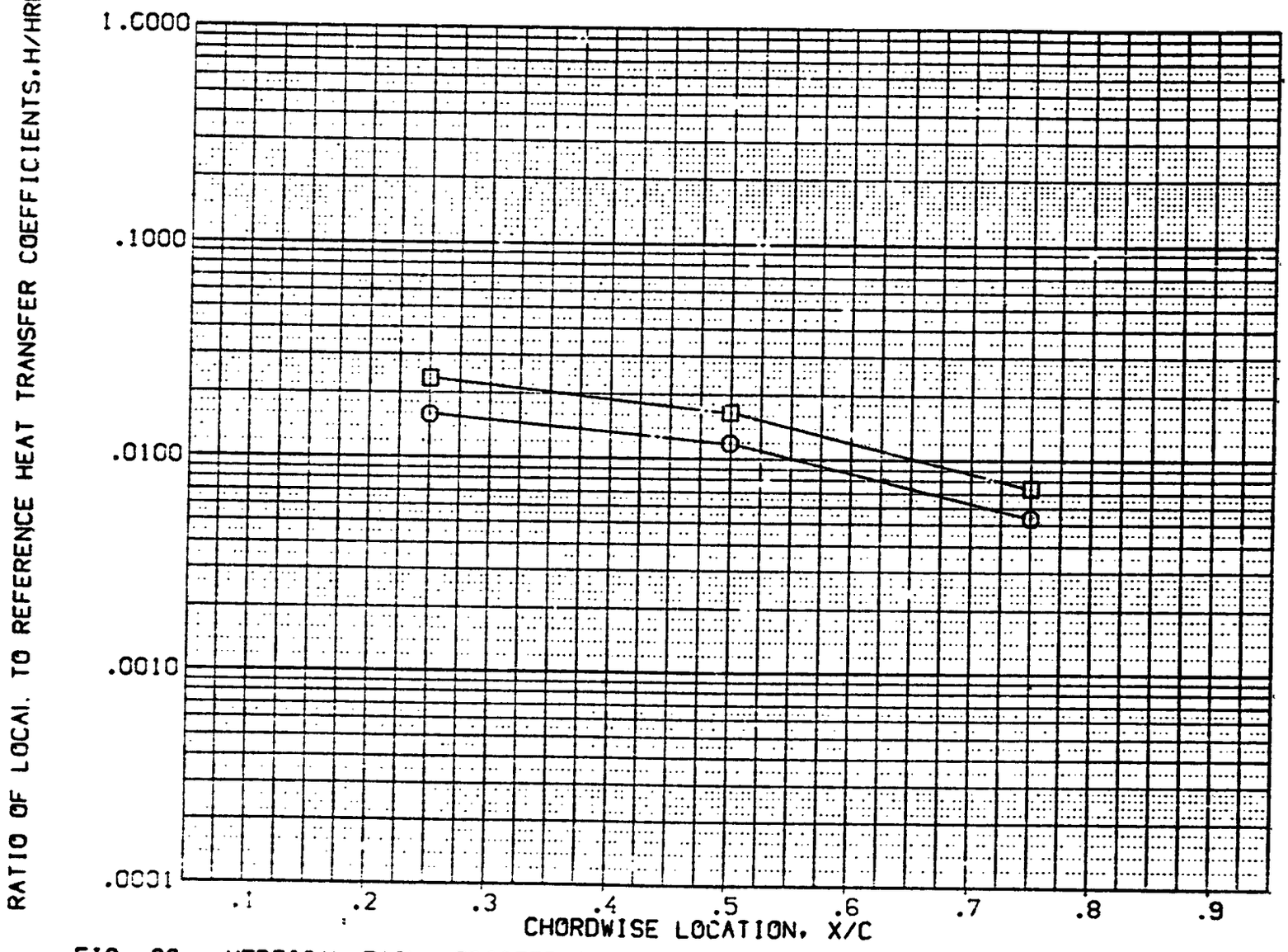

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 Z = 596 000

DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(KEVH02)	○	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	30.000	.000	1.000
(KEVH12)	□	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	30.000	-5.000	1.000

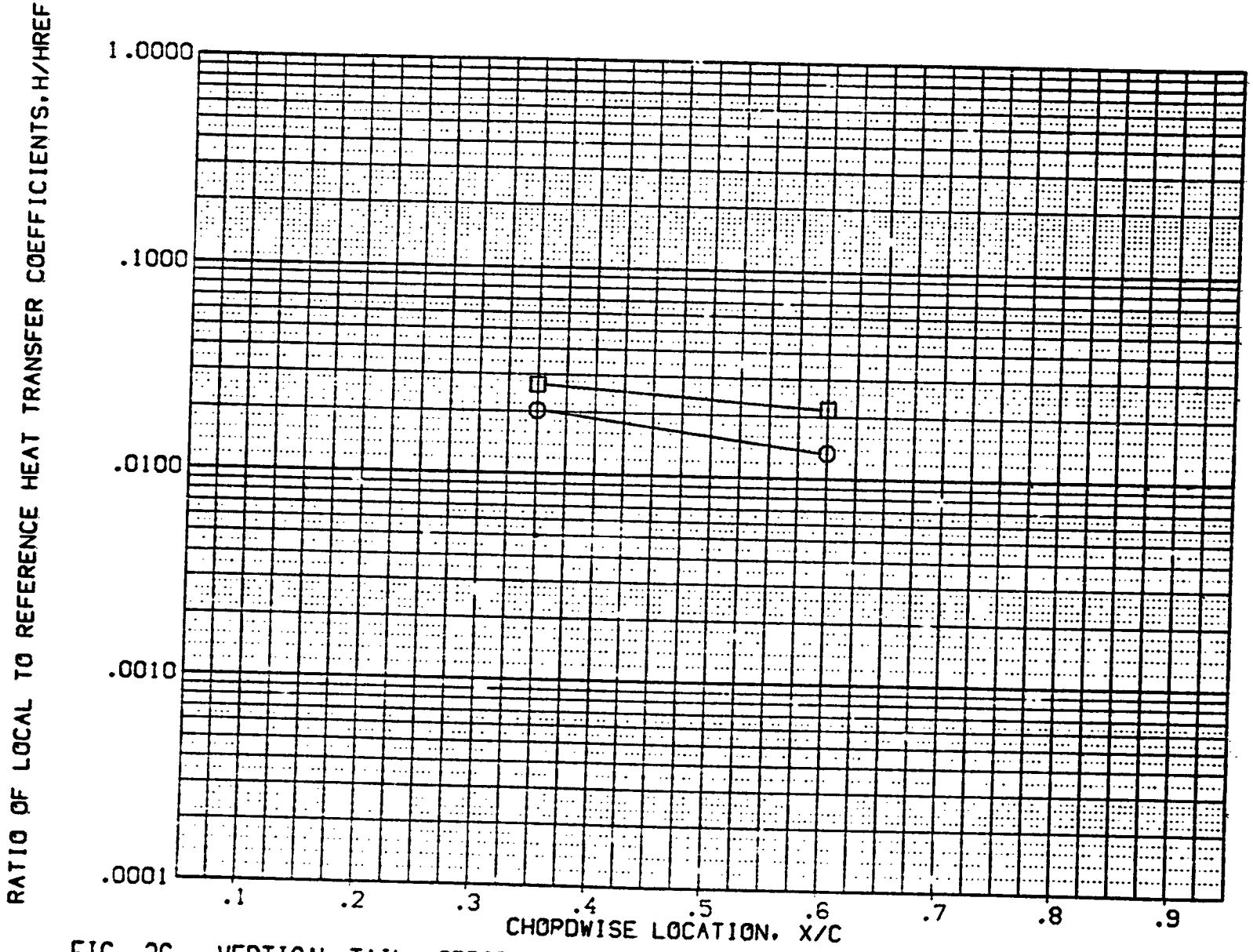

FIG. 26 VERTICAL TAIL, ORBITER IN PRESENCE OF TANK

MACH = 5.300 HAW/HT= .900 Z = 736.670

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (BEVH01)

SYMBOL	Z	HAW/HT	MACH
○	596.000	.900	5.228
□	735.670		

PARAMETRIC VALUES

ALPHA	.000	BETA	.000
RN/L	1.000		

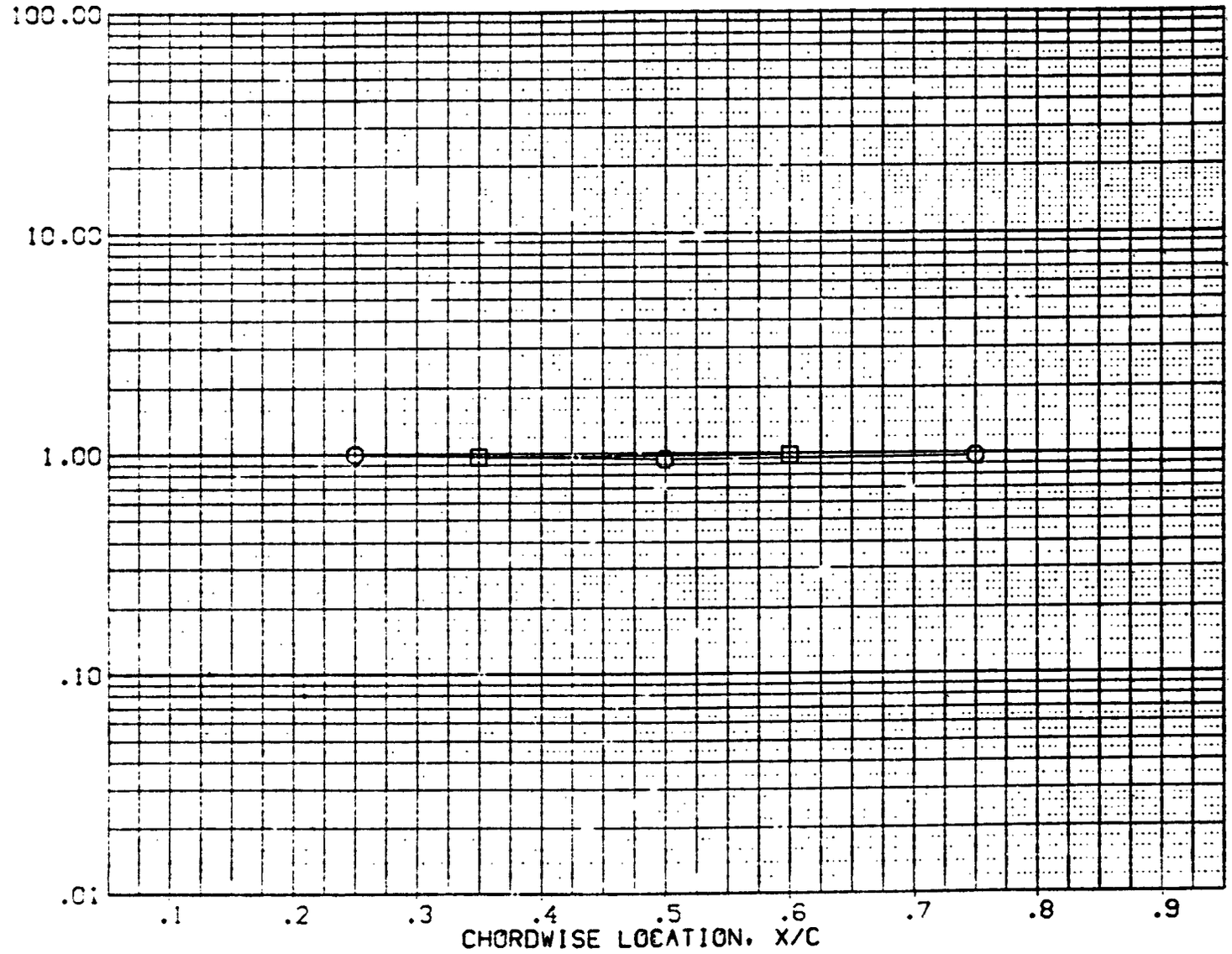

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (BEVH02)

SYMBOL	Z	HAW/HT	MACH
○	596.000	.900	5.219
□	736.670		

PARAMETRIC VALUES

ALPHA	30.000	BETA	.000
RN/L	1.000		

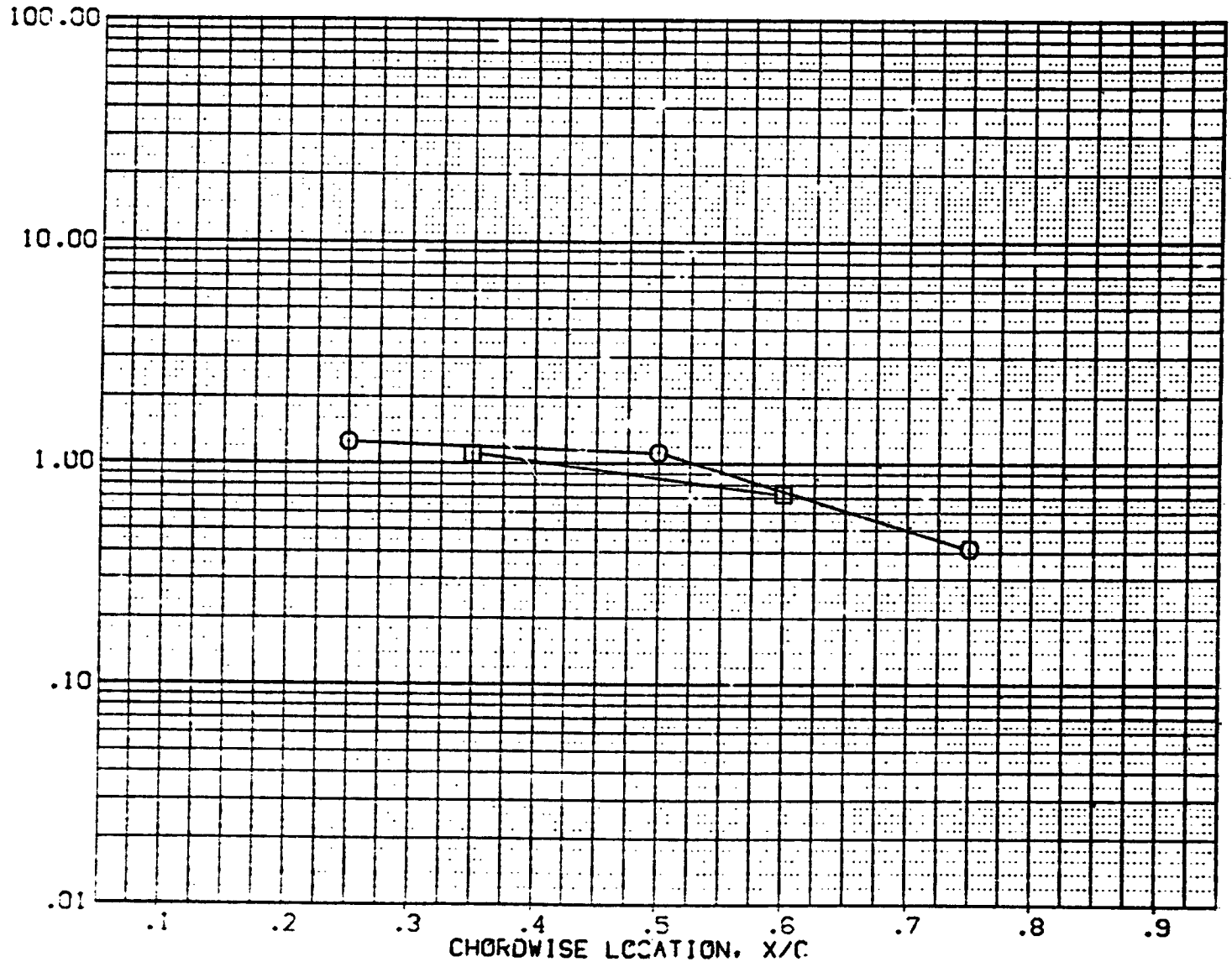

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (BEVH03)

SYMBOL	Z	HAW/HT	MACH
○	596.000	.900	5.220
□	736.670		

PARAMETRIC VALUES

ALPHA	60.000	BETA	.000
RN/L	1.000		

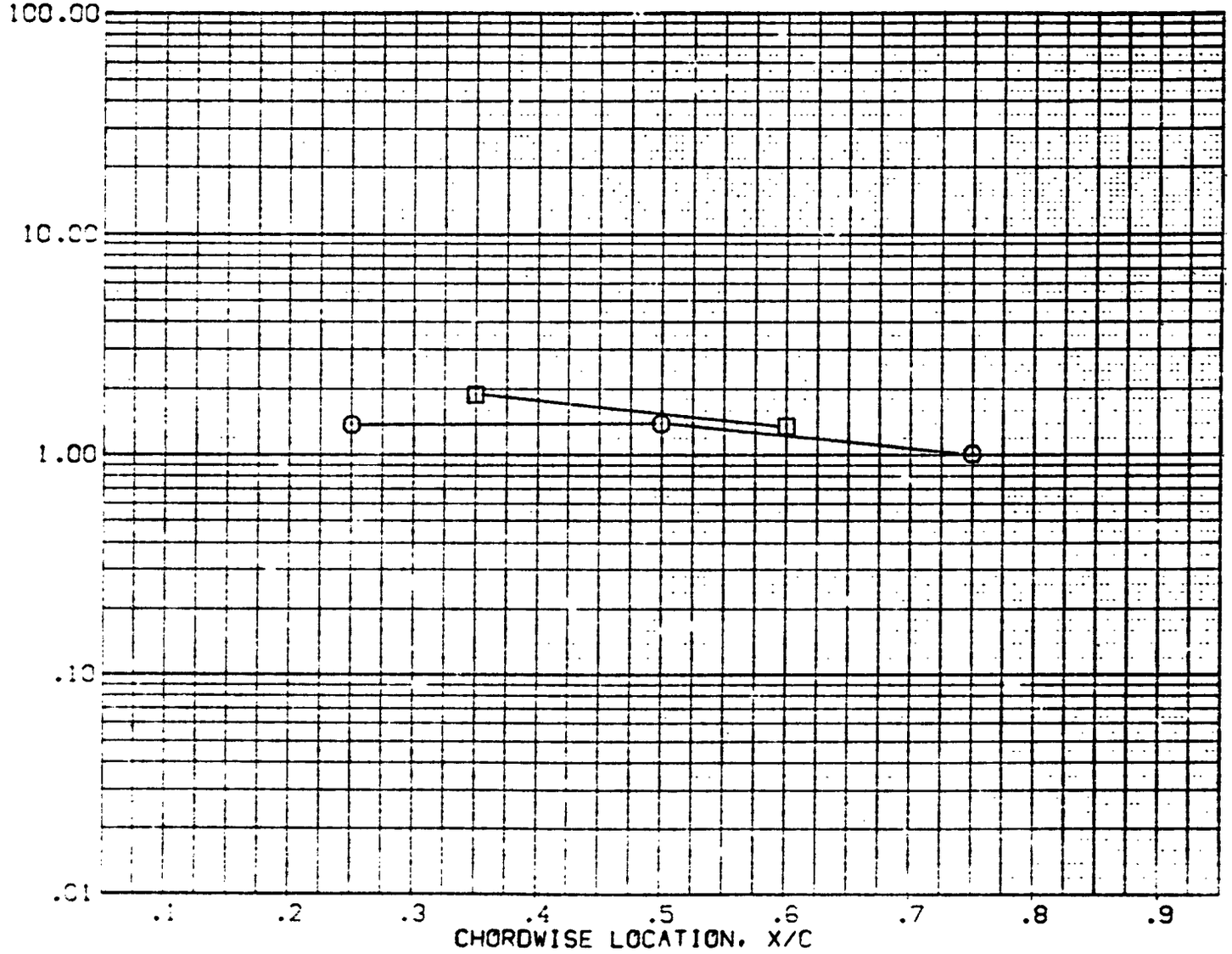

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

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AMES 3.5-:95 IH28 01+T1 VERTICAL TAIL (BEVHC4)

SYMBOL	Z	HAW/HT	MACH
LIO	596.000	.900	5.219
	736.670		

PARAMETRIC VALUES

ALPHA	90.000	BETA	.000
RN/L	1.000		

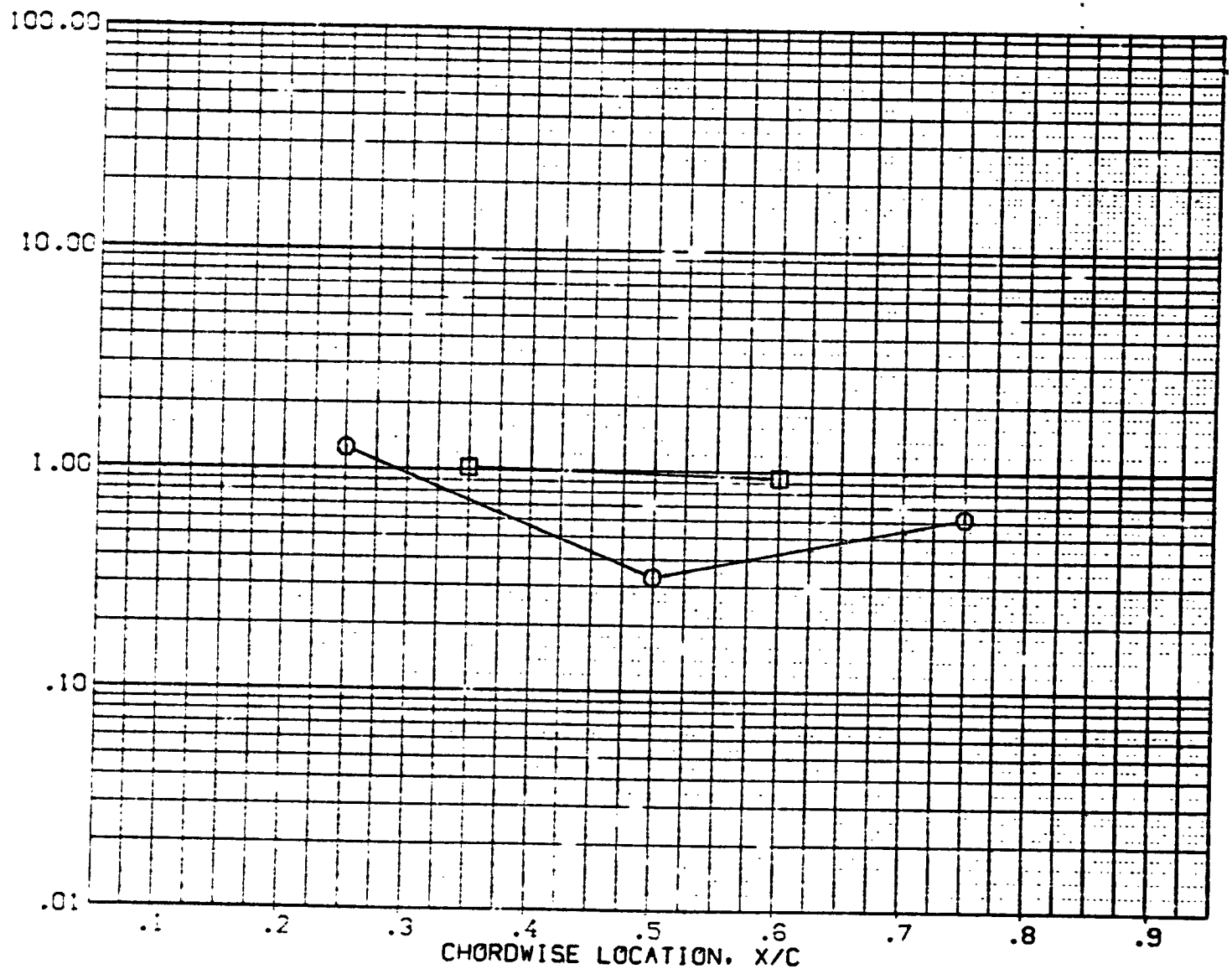

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (BEVH05)

SYMBOL	Z	HAW/HT	MACH
○	596.000	.900	5.220
□	736.670		

PARAMETRIC VALUES

ALPHA 120.300 BETA .000

RN/L *.000

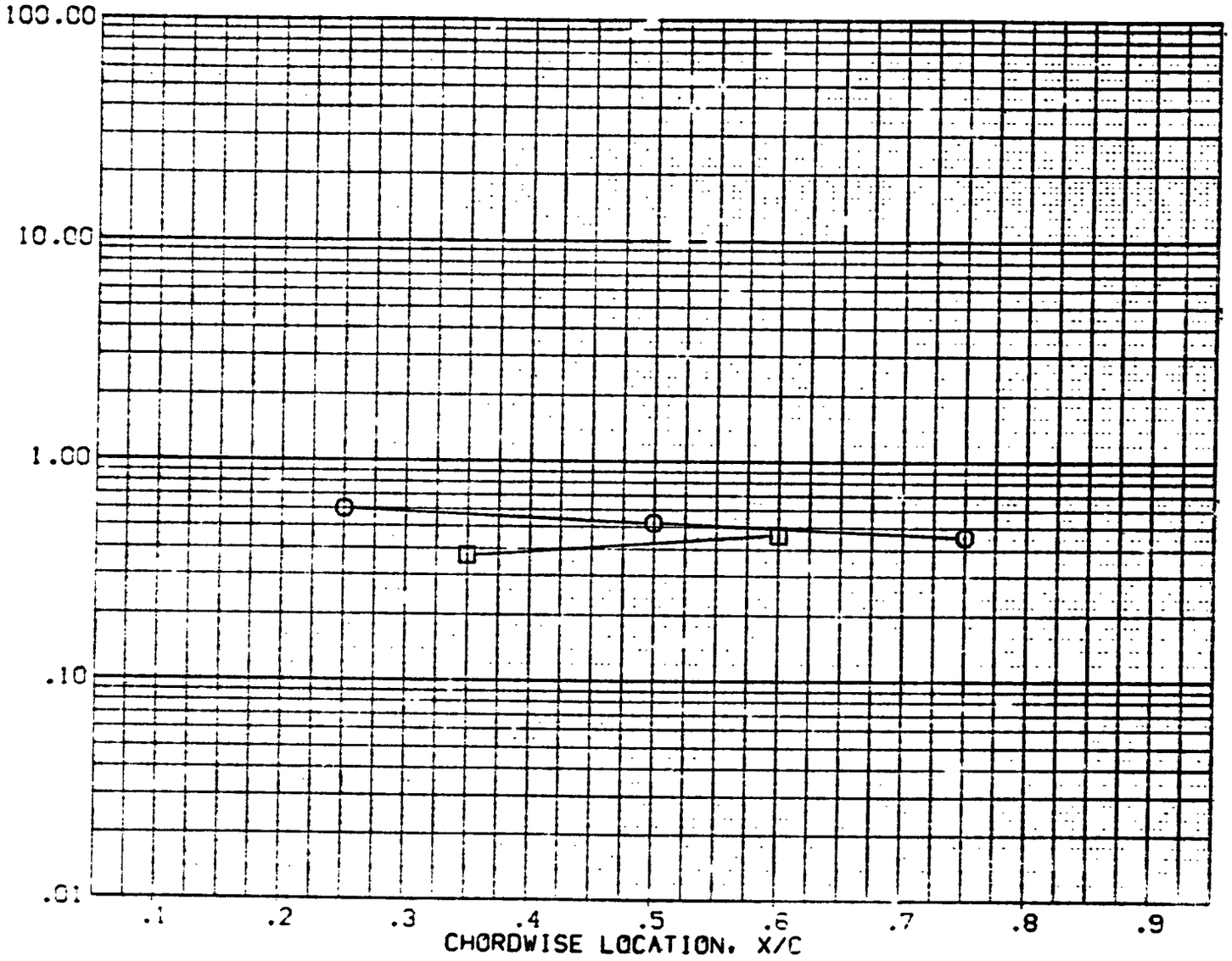

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (BEVH06)

SYMBOL	Z	HAW/HT	MACH
□	595.000	.900	5.220
○	736.670		

PARAMETRIC VALUES

ALPHA	-120.000	BETA	.000
RN/L	1.000		

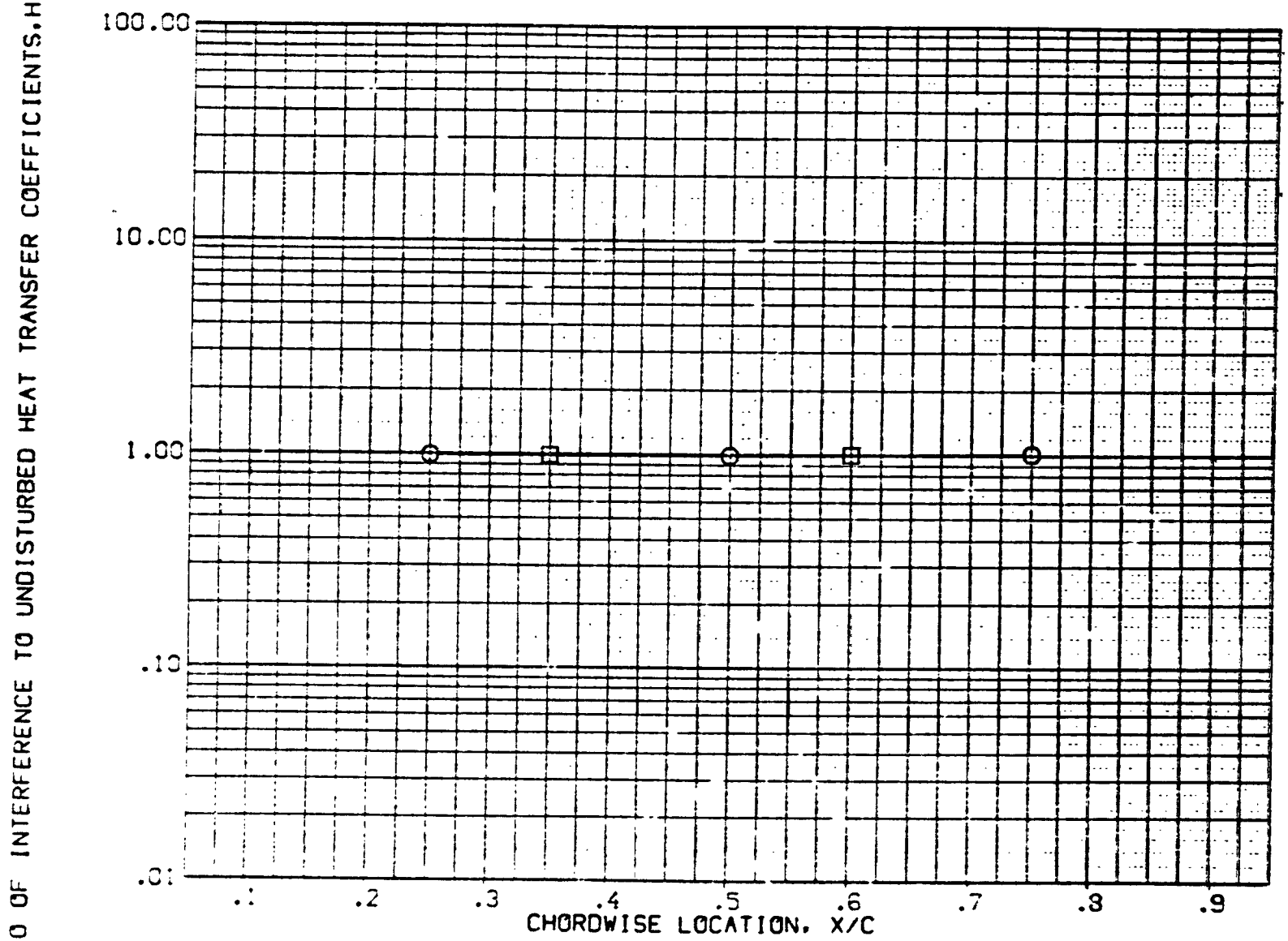

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

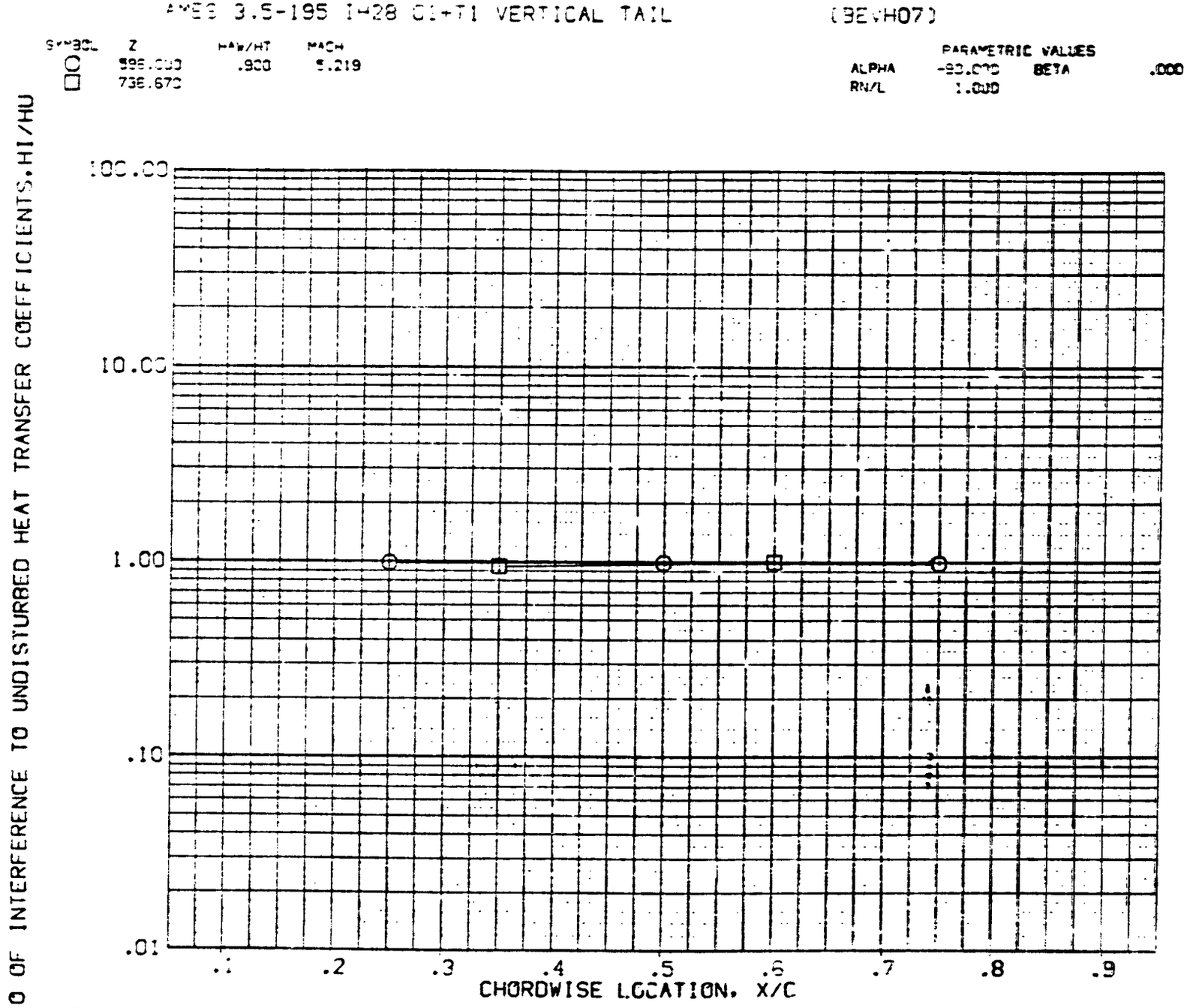

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERT'CAL TAIL (BEVH08)

SYMBOL	Z	HAW/HT	MACH
○	596.000	.900	5.220
□	736.670		

PARAMETRIC VALUES

ALPHA	-60.000	BETA	.000
RN/L	1.000		

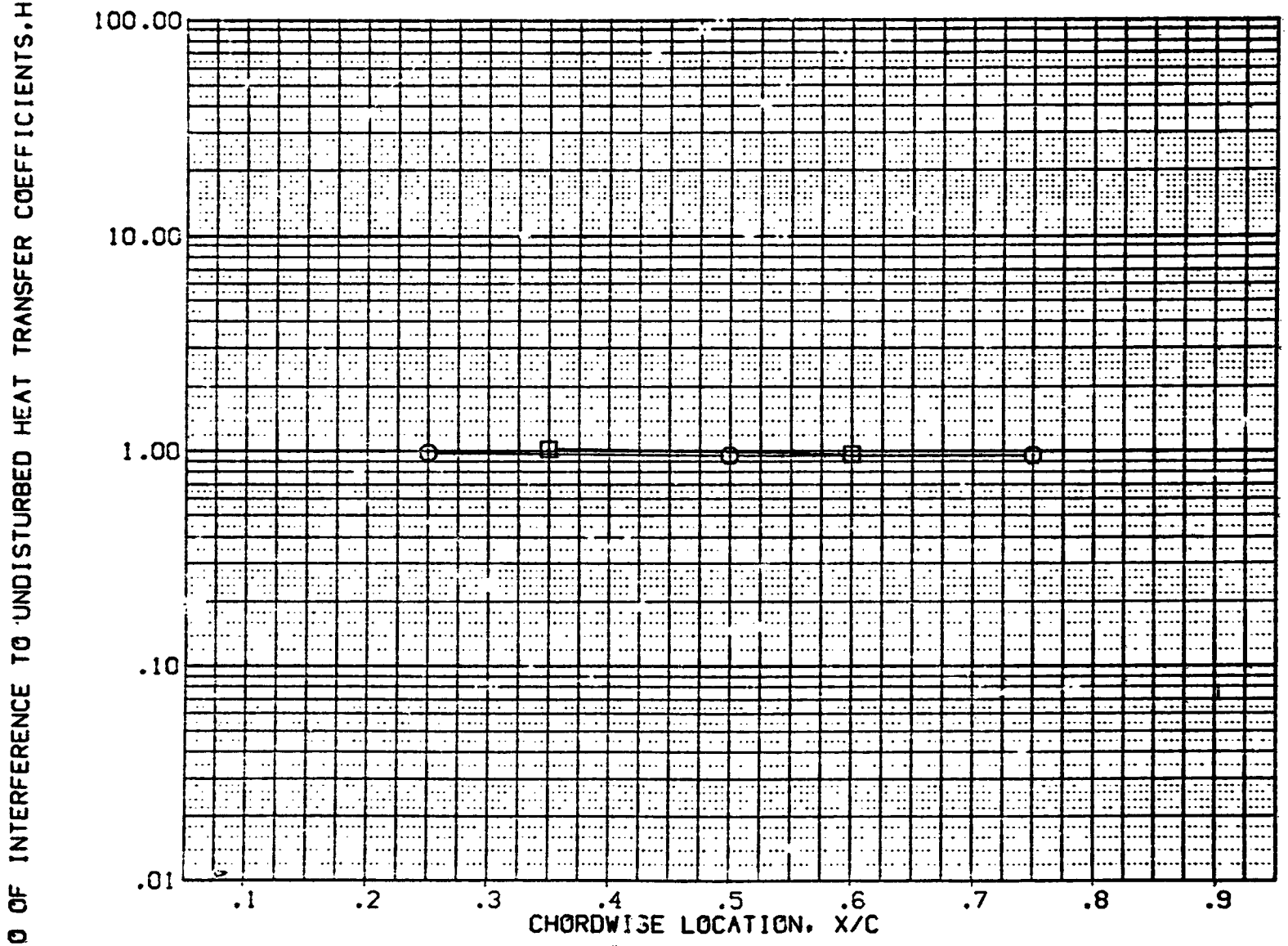

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

AMES 3.5-195 IH28 01+T1 VERTICAL TAIL (BEVH09)

SYMBOL	Z	HAW/HT	MACH
○	596.000	.900	5.220
□	736.670		

PARAMETRIC VALUES

ALPHA	-30.000	BETA	.000
RN/L	1.000		

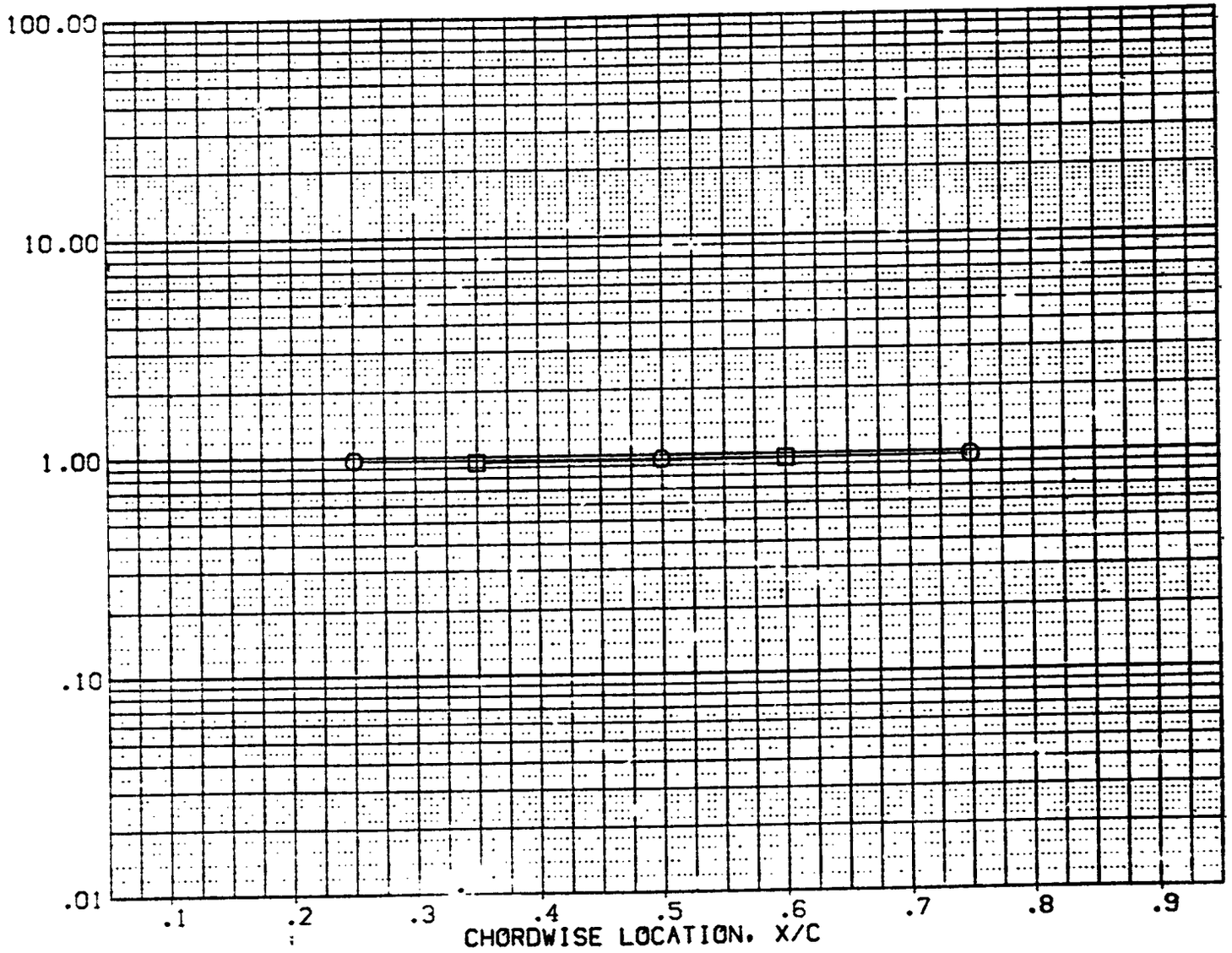

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVH01)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	.000	.000	1.000
(BEVH02)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	30.000	.000	1.000
(BEVH03)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	60.000	.000	1.000
(BEVH04)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	90.000	.000	1.000
(BEVH05)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	120.000	.000	1.000

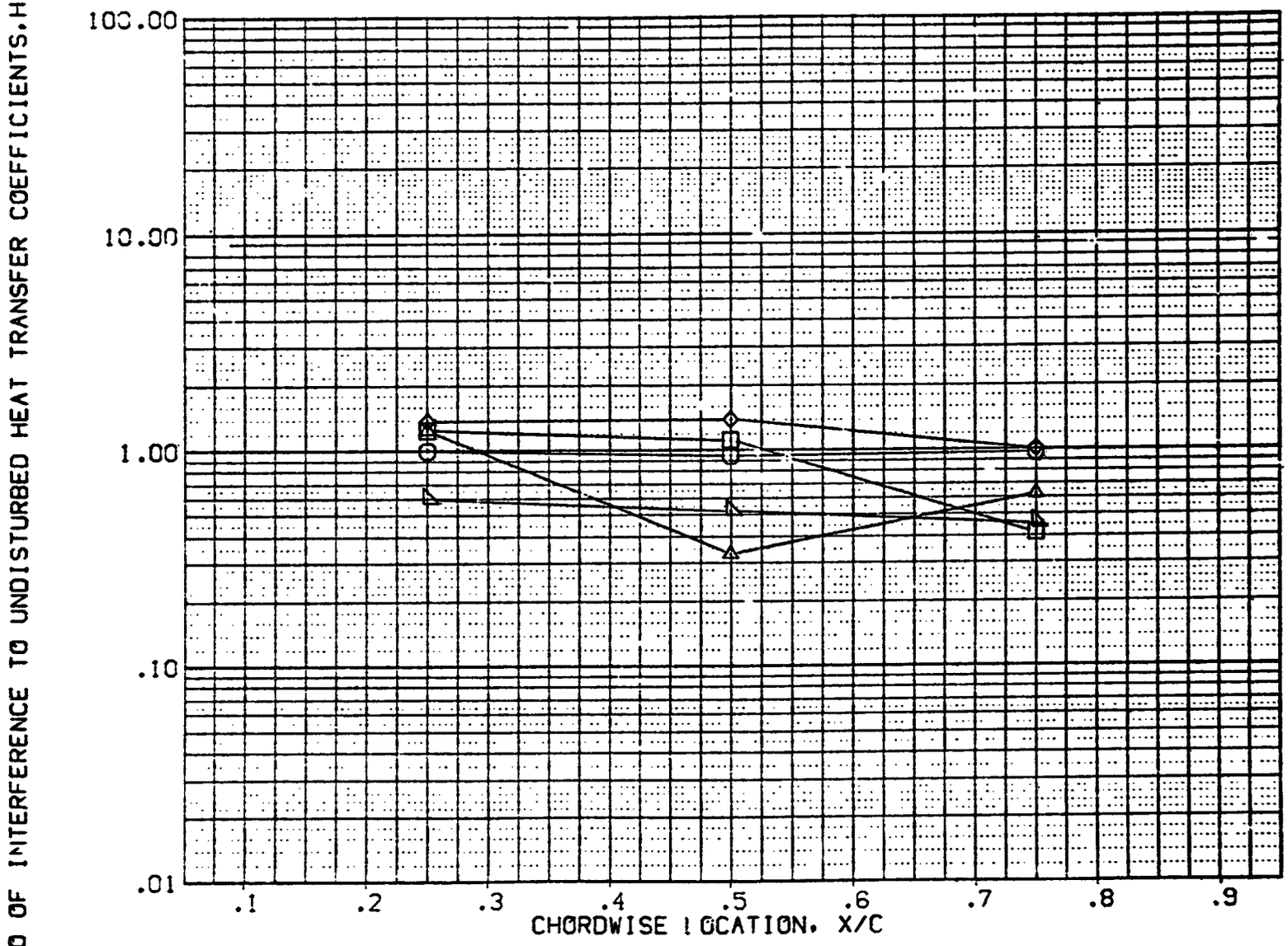

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 Z = 596.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPH	BETA	RN/L
(BEVH01)	□	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	.000	.000	1.000
(BEVH02)	◇	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	30.000	.000	1.000
(BEVH03)	△	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	60.000	.000	1.000
(BEVH04)	○	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	90.000	.000	1.000
(BEVH05)	⊠	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	120.000	.000	1.000

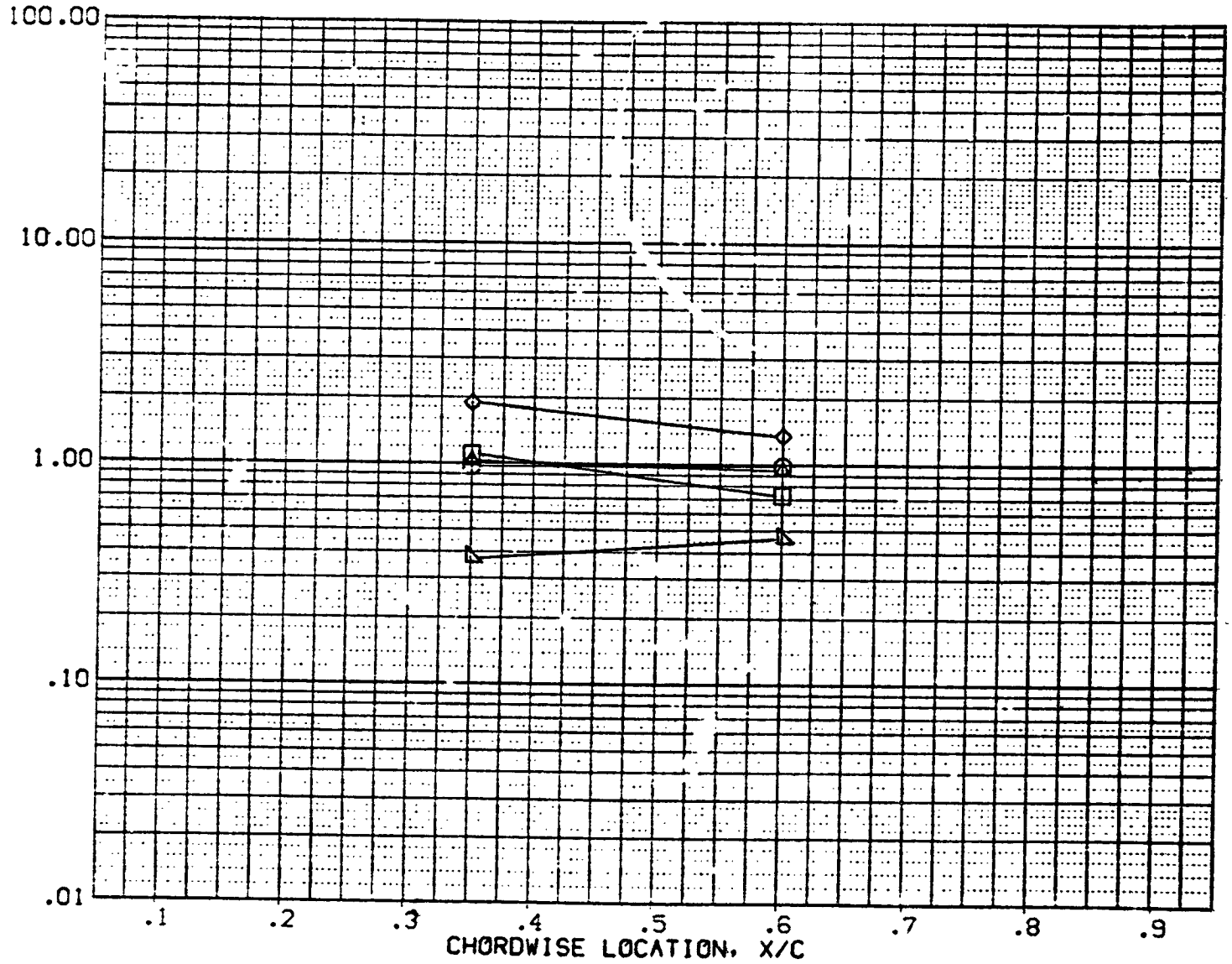

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 Z = 736.670

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVH01)	□	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	.000	.000	1.000
(BEVH09)	⋈	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-30.000	.000	1.000
(BEVH08)	◁	AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-60.000	.000	1.000
(BEVH07)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-90.000	.000	1.000
(BEVH06)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-120.000	.000	1.000

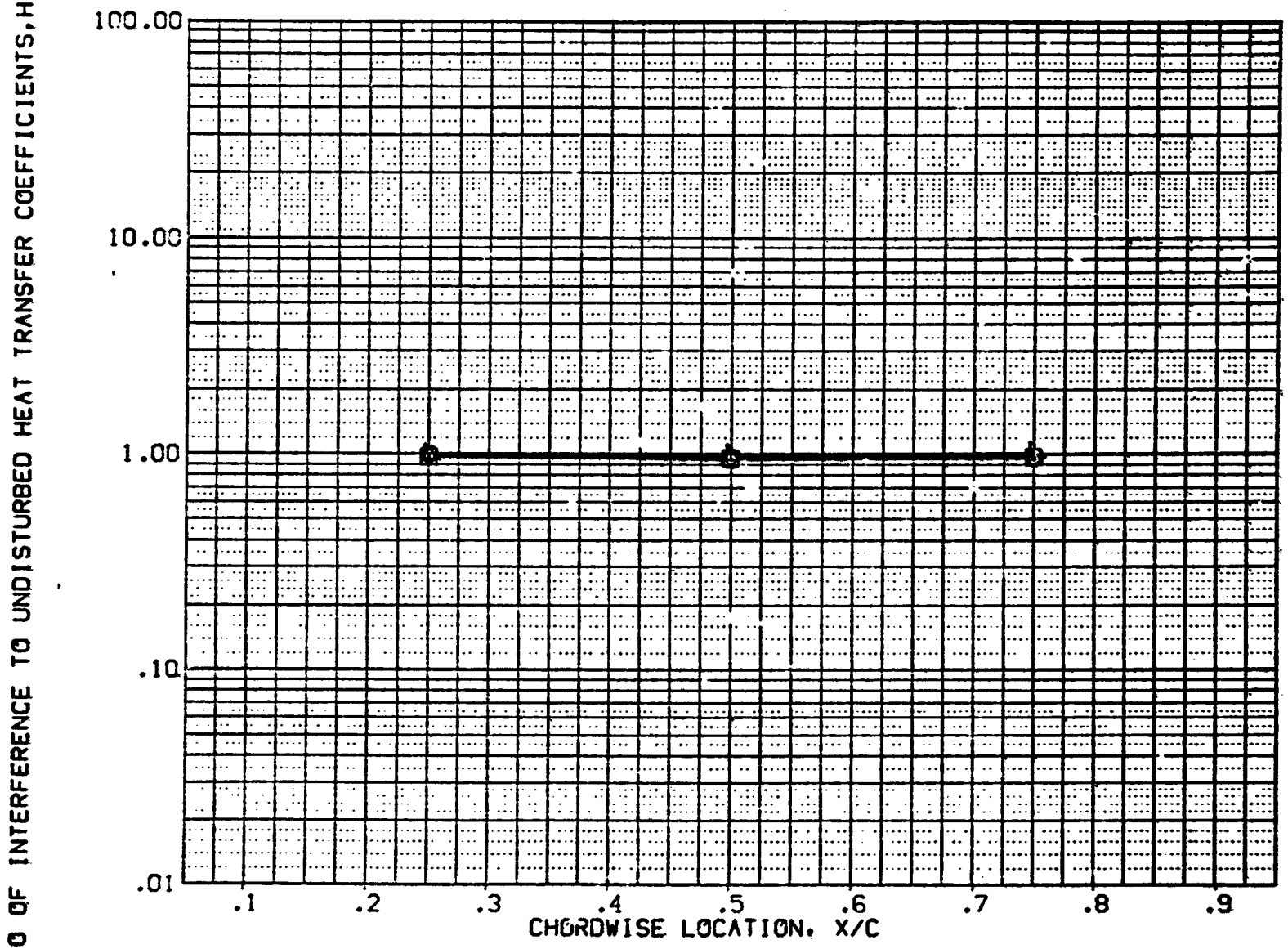

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 Z = 596.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	BETA	RN/L
(BEVH01)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	.000	.000	1.000
(BEVH09)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-30.000	.000	1.000
(BEVH08)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-60.000	.000	1.000
(BEVH07)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-90.000	.000	1.000
(BEVH06)		AMES 3.5-195 IH28 01+T1 VERTICAL TAIL	-120.000	.000	1.000

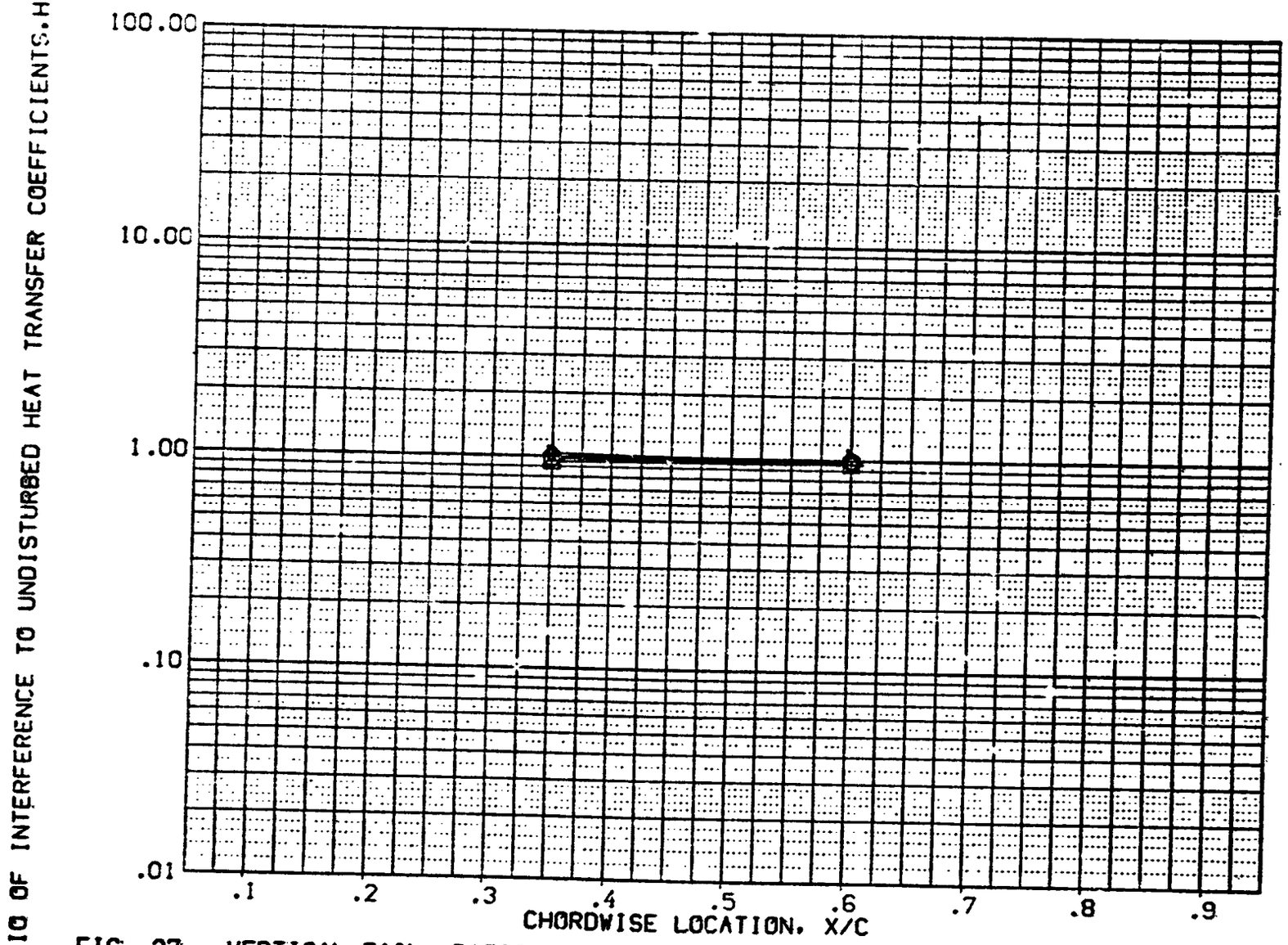

FIG. 27 VERTICAL TAIL, RATIO OF INTERFERENCE TO UNDISTURBED

MACH = 5.300 HAW/HT= .900 Z = 736 670

APPENDIX

TABULATED SOURCE DATA

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

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.23	4.5243E 06	8.8945E 05	0.197	8.90	814.1	0.83812E 06	0.0018	RUN NO. 1
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.23	1.3790E 06	8.8945E 05	0.645	130.77	1465.4	360.41	0.0060	ORB MATED $\alpha = 0°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.376	0.1009	0.1009	0.1201	0.1328	39	42	0.369	0.0204	0.0204	0.0243	0.0268
2	2	C.358	C.0000	0.0000	0.0000	0.0000	40	43	0.370	0.0318	0.0318	0.0378	0.0418
3	3	C.375	0.0233	0.0233	0.0278	C.0307	41	44	0.369	0.0352	0.0352	0.0419	0.0462
4	4	C.358	0.0000	0.0000	0.0000	0.0000	42	45	0.359	0.0000	0.0000	0.0000	C.0000
5	5	C.375	0.0126	0.0126	0.0150	0.0165	43	46	0.374	0.0296	0.0296	0.0353	0.0390
6	6	C.375	0.0102	0.0102	0.0121	0.0134	44	47	0.371	0.0134	0.0134	0.0160	0.0176
7	7	0.374	C.0084	0.0084	0.0100	0.0110	45	48	0.370	0.2503	0.2503	0.2976	0.3285
8	8	C.359	0.0000	0.0000	0.0000	0.0000	46	50	0.371	0.0513	0.0513	0.0610	0.0673
9	9	C.372	0.0135	0.0135	0.0161	0.0177	47	51	0.371	0.0385	0.0385	0.0458	0.0506
10	10	0.373	C.0182	0.0182	0.0216	0.0239	48	53	0.371	0.0138	0.0138	0.0165	C.0182
11	11	C.359	0.0000	0.0000	0.0000	0.0000	49	55	0.371	0.0098	0.0098	0.0117	0.0129
12	12	C.371	0.0080	0.0080	0.0095	0.0105	50	57	0.371	0.0077	0.0077	0.0091	0.0101
13	13	C.370	0.0073	0.0073	0.0086	0.0095	51	59	0.370	0.0045	0.0045	0.0054	0.0059
14	14	0.369	0.0070	0.0070	0.0084	0.0092	52	60	0.374	0.0391	0.0391	0.0466	0.0514
15	15	C.369	0.0039	0.0039	0.0047	0.0052	53	61	0.373	0.0280	0.0280	0.0334	0.0369
16	16	0.369	0.0085	0.0085	0.0100	0.0111	54	65	0.373	0.0144	0.0144	0.0171	C.0189
		C.370	0.0088	0.0088	0.0105	0.0116	55	68	0.372	0.0066	0.0066	0.0078	0.0086
		C.370	C.0102	0.0102	0.0121	0.0133	56	69	0.375	0.0473	0.0473	0.0563	0.0623
19	20	C.371	0.0106	0.0106	0.0126	0.0139	57	70	0.375	0.0302	0.0302	0.0359	0.0397
20	22	0.369	0.0124	0.0124	0.0148	0.0163	58	72	0.359	0.0000	0.0000	0.0000	0.0000
21	24	C.369	0.0099	0.0099	0.0118	0.0130	59	73	0.369	0.0253	0.0253	0.0301	0.0333
22	25	C.370	0.0209	0.0209	0.0248	0.0274	60	74	0.369	0.0096	0.0096	0.0115	0.0126
23	26	C.369	0.0100	0.0100	0.0119	0.0131	61	75	0.369	0.0033	0.0033	0.0039	0.0043
24	27	C.370	0.0064	0.0064	0.0076	0.0084	62	76	0.369	0.0035	0.0035	0.0042	0.0046
25	28	C.370	0.0198	0.0198	0.0236	0.0260	63	77	0.373	0.0375	0.0375	0.0446	0.0493
26	29	0.369	0.0109	0.0109	0.0130	0.0143	64	78	0.372	0.0142	0.0142	0.0169	0.0187
27	30	0.369	0.0081	0.0081	0.0097	0.0107	65	79	0.372	0.0114	0.0114	0.0135	0.0149
28	31	C.369	0.0156	0.0156	0.0186	0.0205	66	80	0.372	0.0095	0.0095	0.0113	0.0125
29	32	C.369	C.0108	0.0108	0.0129	0.0142	67	81	0.376	0.0771	0.0771	0.0918	0.1015
30	34	C.369	0.0088	0.0088	0.0105	0.0116	68	82	0.375	0.0272	0.0272	0.0324	0.0358
31	33	C.369	0.0125	0.0125	0.0149	0.0164	69	83	0.375	0.0200	0.0200	0.0238	0.0263
32	35	C.406	0.0000	0.0000	0.0000	0.0000	70	84	0.375	0.0150	0.0150	0.0179	0.0198
33	36	C.368	0.0203	0.0203	0.0241	0.0267	71	85	0.375	0.0424	0.0424	0.0505	0.0558
34	37	C.369	0.0063	0.0063	0.0075	0.0083	72	86	0.376	0.0276	0.0276	0.0329	0.0364
35	38	C.368	0.0099	0.0099	0.0118	0.0130	73	87	0.378	0.0139	0.0139	0.0165	0.0183
36	39	C.369	0.0132	0.0132	0.0157	0.0173	74	88	0.383	0.0513	0.0513	0.0612	0.0677
37	40	C.371	0.0630	0.0630	0.0749	0.0827	75	89	0.385	0.0287	0.0287	0.0343	0.0380
38	41	C.371	C.0416	0.0416	0.0495	0.0546							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	P1(ATM)	T1(DEG K)	H1(JOULE/KG)	RS(METER)	TEST NO.	195
5.23	4.5243E 06	8.8945E 05	0.197	8.90	814.1	0.83812E 06	0.0018	RUN NO.	1

MACH	RE/FT	REL	LENGTH(FT)	P1(PSI)	T1(DEG R)	H1(BTU/LBM)	RS(FT)
5.23	1.3790E 06	8.8945E 05	0.647	130.77	1465.6	360.41	0.0060

CHAN	T/C	Tw(DEG K)	Tw(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	313.4	564.2	8.345	7.353	82.707	72.876	4.6282E-03	5.1160E-03	0.434
2	2	298.8	537.9	0.000	0.000	0.000	0.000	0.0000	C.C000	0.127
3	3	313.3	564.0	1.929	1.700	82.730	72.896	1.0695E-03	1.1822E-03	0.421
4	4	299.0	538.2	0.000	0.000	0.000	0.000	0.0000	0.0000	1.779
5	5	313.1	563.6	1.040	0.917	82.764	72.926	5.7645E-04	6.3716E-04	0.371
6	6	312.8	563.0	0.842	0.742	82.813	72.969	4.6653E-04	5.1562E-04	C.379
7	7	312.2	562.0	0.696	0.613	82.911	73.056	3.8501E-04	4.2546E-04	0.362
8	8	299.4	539.0	0.000	0.000	0.000	0.000	0.0000	0.0000	0.688
9	9	310.6	559.2	1.122	0.989	83.169	73.283	6.1852E-04	6.8325E-04	0.317
10	10	310.2	558.4	1.514	1.334	83.235	73.341	8.3347E-04	9.2061E-04	0.394
11	11	299.3	538.7	0.000	0.000	0.000	0.000	0.0000	0.0000	1.751
12	12	309.4	556.8	0.664	0.585	83.381	73.470	3.6492E-04	4.0299E-04	0.303
13	13	309.1	556.3	0.606	0.534	83.431	73.514	3.3267E-04	3.6735E-04	0.290
14	14	308.3	554.9	0.588	0.518	83.559	73.626	3.2237E-04	3.5551E-04	0.223
15	15	307.9	554.2	0.329	0.289	83.628	73.688	1.7993E-04	1.9863E-04	0.241
16	16	308.3	554.9	0.706	0.623	83.559	73.627	3.8726E-04	4.2755E-04	0.243
17	17	308.1	554.6	0.736	0.648	83.493	73.569	4.0376E-04	4.4581E-04	0.310
18	18	308.9	556.0	0.848	0.747	83.456	73.537	4.6533E-04	5.1382E-04	0.293
19	20	309.7	557.5	0.882	0.778	83.329	73.424	4.8527E-04	5.3593E-04	0.142
20	22	308.1	554.7	1.038	0.916	83.582	73.648	5.6961E-04	6.2885E-04	C.219
21	24	308.1	555.0	0.828	0.730	83.552	73.620	4.5394E-04	5.0117E-04	0.304
22	25	308.4	555.0	1.744	1.536	83.547	73.617	9.5588E-04	1.0553E-03	0.341
23	26	308.1	554.6	0.834	0.735	83.589	73.654	4.5677E-04	5.0427E-04	0.485
24	27	308.4	555.2	0.536	0.472	83.536	73.607	2.9384E-04	3.2443E-04	C.459
25	28	308.7	555.7	1.654	1.458	83.486	73.565	9.0771E-04	1.0022E-03	0.315
26	29	308.1	554.6	0.911	0.803	83.590	73.655	4.9916E-04	5.5107E-04	0.453
27	30	308.1	554.6	0.679	0.599	83.587	73.652	3.7228E-04	4.1099E-04	0.354
28	31	308.3	555.0	1.306	1.151	83.5517	73.620	7.1581E-04	7.9029E-04	C.309
29	32	308.1	554.6	0.906	0.798	83.583	73.648	4.9647E-04	5.4810E-04	0.482
30	34	308.3	555.0	0.739	0.651	83.551	73.620	4.0532E-04	4.4750E-04	C.307
31	83	307.8	554.1	1.048	0.923	83.631	73.690	5.7391E-04	6.3356E-04	C.354
32	35	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	2.258
33	36	307.1	552.9	1.702	1.500	83.747	73.793	9.3080E-04	1.0274E-03	0.248
34	37	307.6	553.6	0.530	0.467	83.678	73.731	2.8980E-04	3.1990E-04	0.234
35	38	307.2	552.9	0.833	0.734	83.741	73.787	4.5527E-04	5.0251E-04	C.377
36	39	308.0	554.5	1.105	0.974	83.599	73.662	6.0554E-04	6.6851E-04	0.433
37	40	309.5	557.2	5.251	4.627	83.352	73.444	2.8863E-03	3.1876E-03	0.295
38	41	309.6	557.3	3.468	3.056	83.342	73.436	1.9067E-03	2.1058E-03	0.333
39	42	307.7	553.8	1.710	1.506	83.661	73.714	9.3576E-04	1.0330E-03	0.335
40	43	309.0	556.2	2.62	2.31	83.443	73.524	1.4165E-03	1.5646E-03	0.323
41	44	307.8	554.1	2.940	2.590	83.631	73.690	1.6132E-03	1.7808E-03	0.385

42	45	299.5	559.2	0.000	0.000	0.000	0.000	0.0000	0.0000	-0.280
43	46	311.8	561.2	2.459	2.166	82.982	73.119	1.3584E-03	1.5009E-03	0.333
44	47	309.8	557.7	1.119	0.986	83.301	73.399	6.1575E-04	6.8007E-04	0.277
45	48	308.6	555.5	20.906	18.421	83.508	73.582	1.1468E-02	1.2662E-02	0.207
46	50	309.5	557.1	4.275	3.767	83.361	73.453	2.3496E-03	2.5948E-03	0.206
47	51	309.6	557.4	3.210	2.829	83.335	73.429	1.7651E-03	1.9494E-03	0.298
48	53	309.9	557.8	1.153	1.016	83.258	73.397	6.3414E-04	7.0038E-04	0.256
49	55	309.6	557.3	0.821	0.723	83.339	73.433	4.5124E-04	4.9834E-04	0.240
50	57	309.2	556.6	0.640	0.564	83.406	73.492	3.5154E-04	3.8819E-04	0.190
51	59	308.7	555.7	0.377	0.332	83.487	73.563	2.0704E-04	2.2860E-04	0.128
52	60	312.5	562.5	3.241	2.855	82.863	73.013	1.7935E-03	1.9821E-03	0.406
53	61	311.2	560.2	2.330	2.053	83.075	73.200	1.2855E-03	1.[illegible]03E-03	0.282
54	65	311.0	559.9	1.196	1.054	83.105	73.227	6.5951E-04	[illegible]51E-04	0.213
55	68	310.7	559.2	0.545	0.480	83.164	73.279	3.0043E-04	[illegible]87E-04	0.180
56	69	313.3	563.9	3.915	3.450	82.735	72.901	2.1707E-03	2.[illegible]954E-03	0.332
57	70	313.1	563.5	2.497	2.200	82.768	72.930	1.3835E-03	1.5291E-03	0.274
58	72	299.4	538.9	0.000	0.000	0.000	0.000	0.0000	0.0000	-2.073
59	73	308.0	554.4	2.119	1.867	83.607	73.669	1.1608E-03	1.2815E-03	0.292
60	74	307.9	554.3	0.806	0.710	83.618	73.678	4.4148E-04	4.8738E-04	0.288
61	75	307.7	553.8	0.274	0.242	83.661	73.717	1.5008E-04	1.6567E-04	0.289
62	76	307.9	554.2	0.292	0.258	83.624	73.684	1.6012E-04	1.7676E-04	0.337
63	77	311.2	560.1	3.115	2.745	83.083	73.207	1.7188E-03	1.8969E-03	0.375
64	78	310.6	559.1	1.181	1.041	83.177	73.291	6.5076E-04	7.1886E-04	0.287
65	79	310.1	558.1	0.948	0.835	83.265	73.368	5.2150E-04	5.7600E-04	0.274
66	80	310.2	558.4	0.790	0.696	83.235	73.341	4.3473E-04	4.8018E-04	0.281
67	81	313.5	564.4	6.375	5.617	82.690	72.861	3.5363E-03	3.9091E-03	0.428
68	82	312.8	563.0	2.251	1.984	82.813	72.969	1.2467E-03	1.3779E-03	0.326
69	83	312.9	563.1	1.654	1.457	82.805	72.962	9.1589E-04	1.0123E-03	0.278
70	84	312.9	563.2	1.246	1.098	82.800	72.958	6.8999E-04	7.6262E-04	0.280
71	85	312.8	563.0	3.515	3.097	82.817	72.973	1.9466E-03	2.1514E-03	0.379
72	86	314.1	565.4	2.282	2.011	82.593	72.776	1.2676E-03	1.4014E-03	0.262
73	87	315.8	568.4	1.143	1.007	82.319	72.534	6.3728E-04	7.0485E-04	0.290
74	88	319.2	574.6	4.193	3.694	81.758	72.040	2.3562E-03	2.6082E-03	0.425
75	89	321.5	578.7	2.336	2.058	81.383	71.710	1.3198E-03	1.4617E-03	0.325

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.6128E-01 (SLUGS/FT2-SEC)

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TEST NO. 195
RUN AC. 2

RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)		
1.1031E 07	7.1032E 05	0.197	7.22	823.6	0.84851E 06	0.0018	
RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ESTIMATED	
1.1031E 06	7.1032E 05	0.645	106.07	1482.5	364.88	0.0060	α = 0°, β = 0°

	T/C		Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
41	1		0.0035	0.0035	0.4304	0.4767	39	51	0.372	0.0035	0.0035	0.0042	0.0046
42	2		0.2604	0.2604	0.3108	0.3442	40	54	0.369	0.0225	0.0225	0.0267	0.0295
	3		0.2230	0.2230	0.2662	0.2947	41	55	0.367	0.0164	0.0164	0.0195	0.0216
	4		0.1445	0.1445	0.1723	0.1907	42	56	0.368	0.0231	0.0231	0.0275	0.0303
45	5	0.380	0.1232	0.1232	0.1470	0.1626	43	57	0.369	0.0419	0.0419	0.0498	0.0550
	6	0.379		0.0950	0.1132	0.1252	44	58	0.370	0.0204	0.0204	0.0243	0.0268
	7			0.0733	0.0873	0.0966	45	60	0.368	0.0138	0.0138	0.0164	0.0181
	8			0.0541	0.0644	0.0712	46	61	0.368	0.0134	0.0134	0.0160	0.0176
	9			0.0347	0.0413	0.0457	47	62	0.368	0.0164	0.0164	0.0195	0.0216
	10	0.373	0.0264	0.0264	0.0314	0.0347	48	63	0.369	0.0309	0.0309	0.0368	0.0406
	11			0.0199	0.0237	0.0261	49	64	0.370	0.0255	0.0255	0.0303	0.0334
	12			0.0145	0.0172	0.0190	50	65	0.371	0.0111	0.0111	0.0132	0.0146
	13			0.0126	0.0149	0.0165	51	66	0.371	0.0032	0.0032	0.0038	0.0041
	14				0.0097	0.0107	52	67	0.372	0.0039	0.0039	0.0047	0.0052
	15		0.0082	0.0082	0.0083	0.0091	53	68	0.370	0.0057	0.0057	0.0068	0.0075
	16		0.0070	0.0070		0.0087	54	70		0.0154	0.0154	0.0183	0.0202
				0.0073		0.0096							
	17		0.0000	0.0000	0.0000	0.0000	55	71	0.369	0.0138	0.0138	0.0164	0.0181
	18		0.0073	0.0073	0.0067	0.0096	56	72	0.369	0.0204	0.0204	0.0242	0.0268
	20		0.0056	0.0056	0.0066	0.0073	57	73	0.370	0.0254	0.0254	0.0302	0.0333
	21			0.0066	0.0079	0.0087	58	77	0.368	0.0146	0.0146	0.0174	0.0192
				0.0101	0.0120	0.0132	59	78	0.369	0.0130	0.0130	0.0154	0.0170
							60	79	0.369	0.0169	0.0169	0.0201	0.0
	23		0.0062	0.0062	0.0073	0.0081	61	81	0.401	0.0000	0.0000	0.0000	
	24		0.0050	0.0050	0.0059	0.0065	62	84	0.369	0.0136	0.0136	0.0161	0.0178
	25		0.0064	0.0064	0.0076	0.0084	63	85	0.369	0.0123	0.0123	0.0146	0.0161
	26		0.0073	0.0073	0.0087	0.0096							
	27		0.0069	0.0069	0.0083	0.0091	64	86	0.369	0.0126	0.0126	0.0150	0.0165
	28		0.0069	0.0069	0.0082	0.0091	65	90	0.368	0.0136	0.0136	0.0162	0.0179
	29						66	91	0.369	0.0127	0.0127	0.0151	0.0166
	30		0.0071	0.0071	0.0085	0.0094	67	92	0.369	0.0111	0.0111	0.0131	0.0145
	40		0.0554	0.0554	0.0658	0.0727	68	94	0.370	0.0211	0.0211	0.0251	0.0278
	41		0.0000	0.0000	0.0000	0.0000	69	98	0.369	0.0147	0.0147	0.0175	0.0193
31	42		0.0602	0.0602	0.0715	0.0790	70	99	0.369	0.0130	0.0130	0.0155	0.0171
32	43		0.0124	0.0124	0.0147	0.0162	71	100	0.369	0.0098	0.0098	0.0117	0.0129
33	44		0.0039	0.0039	0.0046	0.0051	72	103	0.369	0.0136	0.0136	0.0161	0.0178
34	46		0.0404	0.0404	0.0480	0.0530	73	104	0.369	0.0131	0.0131	0.0156	0.0172
35	47		0.0294	0.0294	0.0349	0.0386	74	105	0.401	0.0000	0.0000	0.0000	0.0000
36	48		0.0448	0.0448	0.0532	0.0588	75	107	0.370	0.0177	0.0177	0.0210	0.0232
37	49		0.0330	0.0330	0.0393	0.0434							
38	50		0.0113	0.0113	0.0134	0.0148							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	2.6131E 06	7.1032E 05 0.197	7.22	823.6	0.14851E 06	0.0018	RUN NO. 2
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	1.1013E 06	7.1032E 05 0.645	106.07	1482.5	364.88	0.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	324.9	584.8	26.855	23.663	74.495	65.640	1.8494E-02	2.0481E-02	0.158
2	2	324.2	583.6	19.424	17.115	74.595	65.728	1.3356E-02	1.4788E-02	0.333
3	3	323.6	582.4	16.659	14.679	74.690	65.812	1.1438E-02	1.2663E-02	0.429
4	4	322.1	579.8	10.820	9.534	74.902	65.999	7.4047E-03	8.1946E-03	0.421
5	5	321.3	578.4	9.246	8.147	75.020	66.103	6.3161E-03	6.9886E-03	0.422
6	6	320.1	576.3	7.141	6.292	75.198	66.260	4.8651E-03	5.3815E-03	0.429
7	7	318.9	574.0	5.526	4.870	75.388	66.427	3.7542E-03	4.1514E-03	0.412
8	8	317.4	571.3	4.089	3.603	75.605	66.619	2.7683E-03	3.0601E-03	0.421
9	9	316.0	568.8	2.633	2.320	75.820	66.808	1.7768E-03	1.9624E-03	0.446
10	10	315.0	567.0	2.005	1.768	75.969	66.939	1.3499E-03	1.4913E-03	0.416
11	11	313.6	564.4	1.515	1.335	76.177	67.122	1.0171E-03	1.1233E-03	0.406
12	12	312.1	561.8	1.108	0.976	76.395	67.314	7.4139E-04	8.1853E-04	0.367
13	13	313.9	564.9	0.957	0.843	76.136	67.086	6.4248E-04	7.0962E-04	0.289
14	18	310.3	558.5	0.626	0.552	76.671	67.557	4.1707E-04	4.6027E-04	0.386
15	25	310.6	559.1	0.533	0.470	76.618	67.511	3.5559E-04	3.9245E-04	0.375
16	26	312.3	562.2	0.556	0.490	76.363	67.287	3.7238E-04	4.1114E-04	0.329
17	27	338.8	609.9	0.000	0.000	72.417	63.809	0.0000	0.0000	*******
18	28	313.8	564.8	0.554	0.488	76.148	67.096	3.7218E-04	4.1106E-04	0.303
19	30	310.9	559.6	0.427	0.376	76.576	67.474	2.8506E-04	3.1464E-04	0.368
20	31	312.5	562.6	0.508	0.447	76.332	67.259	3.3993E-04	3.7534E-04	0.298
21	32	310.8	559.5	0.772	0.680	76.588	67.485	5.1496E-04	5.6837E-04	0.603
22	33	312.0	561.5	0.472	0.416	76.417	67.334	3.1568E-04	3.4851E-04	0.537
23	34	312.6	562.7	0.380	0.335	76.317	67.246	2.5468E-04	2.8121E-04	0.324
24	35	313.4	564.1	0.485	0.428	76.209	67.151	3.2562E-04	3.5960E-04	0.266
25	36	314.0	565.2	0.559	0.493	76.113	67.066	3.7569E-04	4.1496E-04	0.302
26	37	314.5	566.1	0.528	0.465	76.042	67.003	3.5505E-04	3.9221E-04	0.310
27	38	314.6	566.3	0.526	0.464	76.025	66.988	3.5402E-04	3.9108E-04	0.328
28	39	312.9	563.3	0.545	0.480	76.273	67.207	3.6502E-04	4.0308E-04	0.353
29	40	311.1	560.0	4.242	3.738	76.542	67.444	2.8321E-03	3.1260E-03	0.240
30	41	290.1	522.2	0.000	0.000	79.684	70.212	0.0000	0.0000	0.362
31	42	312.1	561.8	4.597	4.051	76.359	67.318	3.0759E-03	3.3959E-03	0.282
32	43	312.7	562.8	0.943	0.831	76.315	67.244	6.3144E-04	6.9723E-04	0.423
33	44	313.4	564.2	0.296	0.260	76.199	67.141	1.9830E-04	2.1900E-04	0.331
34	46	311.5	560.6	3.093	2.726	76.494	67.402	2.0666E-03	2.2813E-03	0.456
35	47	311.5	560.7	2.248	1.981	76.489	67.397	1.5022E-03	1.6582E-03	0.416
36	48	312.2	562.0	3.420	3.014	76.377	67.298	2.2889E-03	2.5271E-03	0.418
37	49	312.6	562.7	2.521	2.221	76.321	67.249	1.6866E-03	1.8645E-03	0.579
38	50	313.2	563.8	0.859	0.757	76.228	67.167	5.7637E-04	6.3651E-04	0.410
39	51	314.0	565.2	0.266	0.234	76.116	67.069	1.7877E-04	1.9745E-04	0.224
47	54	311.5	560.7	1.718	1.514	76.486	67.395	1.1479E-03	1.2671E-03	0.422

41	55	310.2	558.4	1.261	1.111	76.514	67.360	8.4009E-04	9.2710E-04	0.405
42	56	312.3	560.3	1.771	1.560	76.518	67.423	1.1826E-03	1.3054E-03	0.480
43	57	311.9	561.4	3.206	2.825	76.428	67.343	2.1440E-03	2.3670E-03	0.278
44	58	312.3	562.2	1.561	1.375	76.362	67.285	1.0448E-03	1.1535E-03	0.391
45	60	310.8	559.5	1.058	0.932	76.587	67.484	7.0601E-04	7.7923E-04	0.384
46	61	311.0	559.8	1.030	0.907	76.560	67.460	6.8716E-04	7.5846E-04	0.364
47	62	311.3	560.4	1.257	1.108	76.515	67.420	8.3978E-04	9.2698E-04	0.372
48	63	311.8	561.2	2.365	2.084	76.446	67.359	1.5811E-03	1.7454E-03	0.377
49	64	312.4	562.2	1.944	1.713	76.360	67.284	1.3012E-03	1.4367E-03	0.461
50	65	313.0	563.4	0.846	0.745	76.262	67.197	5.6715E-04	6.2629E-04	0.384
51	66	313.5	564.3	0.240	0.212	76.191	67.135	1.6129E-04	1.7812E-04	0.245
52	67	313.9	565.0	0.299	0.264	76.131	67.081	2.0115E-04	2.2217E-04	0.196
53	68	312.6	562.8	0.436	0.384	76.316	67.245	2.9174E-04	3.2213E-04	0.373
54	70	310.3	559.5	1.178	1.038	76.588	67.485	7.8572E-04	8.6721E-04	0.335
55	71	311.-	560.6	1.059	0.933	76.500	67.407	7.0712E-04	7.8057E-04	0.358
56	72	311.-	560.9	1.560	1.374	76.468	67.379	1.0424E-03	1.1507E-03	0.388
57	73	312.2	562.0	1.938	1.708	76.382	67.303	1.2970E-03	1.4320E-03	0.523
58	77	311.1	560.1	1.119	0.986	76.539	67.442	7.4742E-04	8.2500E-04	0.340
59	78	311.7	561.0	0.991	0.873	76.462	67.373	6.6253E-04	7.3139E-04	0.323
60	79	311.6	561.3	1.291	1.137	76.440	67.354	8.6298E-04	9.5270E-04	0.360
61	81	338.7	609.7	0.000	0.000	72.435	63.825	0.0000	0.0000	1.294
62	84	311.5	560.6	1.038	0.915	76.494	67.402	6.9361E-04	7.6566E-04	0.354
63	85	311.6	560.9	0.941	0.829	76.469	67.379	6.2911E-04	6.9449E-04	0.294
64	86	311.5	560.6	0.563	0.848	76.494	67.402	6.4324E-04	7.1006E-04	0.357
65	90	311.2	560.1	1.044	0.919	76.538	67.440	6.9671E-04	7.6903E-04	0.357
66	91	311.9	561.4	0.969	0.854	76.432	67.347	6.4792E-04	7.1529E-04	0.322
67	93	311.6	560.9	0.845	0.745	76.472	67.382	5.6483E-04	6.2352E-04	0.334
68	94	312.5	562.5	1.614	1.422	76.337	67.263	1.0810E-03	1.1936E-03	0.428
69	98	311.5	560.7	1.127	0.993	76.485	67.394	7.5328E-04	8.3154E-04	0.374
70	99	311.8	561.2	0.994	0.876	76.444	67.358	6.6464E-04	7.3374E-04	0.299
71	100	311.8	561.2	0.753	0.663	76.447	67.360	5.0314E-04	5.5545E-04	0.296
72	102	311.4	560.6	1.039	0.915	76.497	67.404	6.9403E-04	7.6612E-04	0.355
73	104	311.8	561.3	1.004	0.884	76.440	67.354	6.7106E-04	7.4083E-04	0.293
74	105	338.8	609.8	0.000	0.000	72.425	63.816	0.0000	0.0000	*******
75	107	312.3	562.1	1.351	1.191	76.373	67.295	9.0444E-04	9.9858E-04	0.335

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.1144E-01 (SLUGS/FT2-SEC)

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TEST NO. 195
RUN NO. 3

PACT	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.2	3.49536 06	6.87761 05	0.197	6.67	815.2	0.83931E 06	0.0018

	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
3.23	1.06523 06	6.87768 05	0.645	100.56	1467.4	360.92	0.0060

ESTIMATED
a = 30°,B = 0°

		M/MO	M/MS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAR	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
	1	0.393	0.4186	0.4186	0.3815	0.4232	39	51	0.377	0.0081	0.0081	0.0097	0.0107
	2	0.391	0.1656	0.1656	0.1863	0.2066	40	54	0.373	0.0074	0.0074	0.0088	0.0097
	3	0.391	0.0943	0.0943	0.1128	0.1251	41	55	0.369	0.0061	0.0061	0.0072	0.0080
		0.386	0.0339	0.0309	0.0370	0.0410	42	56	0.371	0.0063	0.0063	0.0075	0.0083
		0.383	0.0232	0.0232	0.0277	0.0307	43	57	0.372	0.0043	0.0043	0.0051	0.0057
6		0.386	0.0148	0.0148	0.0177	0.0196	44	58	0.374	0.0034	0.0034	0.0041	0.0045
7		0.384	0.0111	0.0111	0.0133	0.0147	45	60	0.369	0.0052	0.0052	0.0062	0.0068
8		0.381	0.0090	0.0090	0.0107	0.0118	46	61	0.370	0.0048	0.0048	0.0057	0.0063
9	9	0.379	0.0072	0.0072	0.0086	0.0095	47	62	0.371	0.0048	0.0048	0.0057	0.0063
	10	0.377	0.0064	0.0064	0.0076	0.0084	48	63	0.372	0.0039	0.0039	0.0046	0.0051
	11	0.375	0.0041	0.0041	0.0048	0.0054	49	64	0.374	0.0033	0.0033	0.0040	0.0044
12	12	0.372	0.0032	0.0032	0.0038	0.0042	50	65	0.376	0.0085	0.0085	0.0101	0.0112
13	13	0.377	0.0137	0.0137	0.0163	0.0180	51	66	0.378	0.0219	0.0219	0.0261	0.0289
	14	0.379	0.0334	0.0334	0.0040	0.0045	52	67	0.379	0.0388	0.0388	0.0462	0.0511
	15	0.380	0.0048	0.0048	0.0057	0.0063	53	68	0.377	0.0643	0.0643	0.0766	0.0847
	16	0.373	0.0032	0.0032	0.0038	0.0042	54	70	0.370	0.0047	0.0047	0.0056	0.0062
	17	0.374	0.0031	0.0031	0.0000	0.0000	55	71	0.371	0.0047	0.0047	0.0056	0.0062
	18	0.377	0.0097	0.0097	0.0116	0.0128	56	72	0.372	0.0038	0.0038	0.0045	0.0049
	19	0.376	0.0074	0.0074	0.0088	0.0098	57	73	0.374	0.0033	0.0033	0.0039	0.0043
20	21	0.377	0.0045	0.0045	0.0053	0.0059	58	77	0.370	0.0047	0.0047	0.0056	0.0062
21		0.377	0.0089	0.0089	0.0105	0.0116	59	78	0.372	0.0051	0.0051	0.0061	0.0067
22		0.378	0.0088	0.0088	0.0105	0.0116	60	79	0.373	0.0041	0.0041	0.0048	0.0054
		0.373	0.0062	0.0062	0.0074	0.0082	61	81	0.405	0.0000	0.0000	0.0000	0.0000
24	25	0.375	0.0036	0.0036	0.0043	0.0048	62	84	0.371	0.0054	0.0054	0.0065	0.0071
25	26	0.377	0.0094	0.0094	0.0112	0.0124	63	85	0.372	0.0063	0.0063	0.0075	0.0082
26	27	0.379	0.0209	0.0209	0.0249	0.0275	64	88	0.373	0.0034	0.0034	0.0041	0.0045
27	28	0.379	0.0351	0.0351	0.0418	0.0463	65	90	0.371	0.0174	0.0174	0.0207	0.0229
28	29	0.376	0.0638	0.0638	0.0759	0.0839	66	91	0.373	0.0126	0.0126	0.0150	0.0166
29	30	0.369	0.0116	0.0116	0.0138	0.0153	67	92	0.373	0.0040	0.0040	0.0047	0.0052
30	41	0.352	0.0000	0.0000	0.0000	0.0000	69	94	0.376	0.0086	0.0086	0.0103	0.0113
31	42	0.372	0.0106	0.0106	0.0126	0.0139	69	98	0.372	0.0269	0.0269	0.0319	0.0353
32	43	0.373	0.0056	0.0066	0.0079	0.0087	70	99	0.373	0.0217	0.0217	0.0258	0.0285
33	44	0.379	0.0040	0.0040	0.0048	0.0053	71	100	0.374	0.0060	0.0060	0.0071	0.0078
34	46	0.370	0.0101	0.0101	0.0119	0.0132	72	103	0.372	0.0355	0.0355	0.0422	0.0467
35	47	0.370	0.0091	0.0091	0.0108	0.0119	73	104	0.374	0.0396	0.0396	0.0471	0.0521
36	48	0.372	0.0093	0.0093	0.0110	0.0122	74	105	0.405	0.0000	0.0000	0.0000	0.0000
37	49	0.373	0.0059	0.0059	0.0070	0.0077	75	107	0.376	0.0076	0.0076	0.0091	0.0100
38	50	0.375	0.0041	0.0041	0.0048	0.0054							

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								TEST NO. 195
MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	RUN NO. 3
5.22	3.4983E 06	6.8776E 05	0.197	6.87	815.2	0.83931E 06	0.0018	
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	1.0663E 06	6.8776E 05	0.645	100.96	1467.4	360.92	0.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	328.6	591.4	22.575	19.892	70.855	62.433	1.6670E-02	1.8454E-02	0.267
2	2	327.7	589.8	11.047	9.734	70.981	62.544	8.1407E-03	5.0257E-03	0.515
3	3	326.9	588.5	6.701	5.905	71.091	62.640	4.9295E-03	5.4668E-03	0.582
4	4	325.1	585.3	2.207	1.945	71.351	62.870	1.6168E-03	1.7922E-03	0.500
5	5	324.1	583.3	1.660	1.463	71.508	63.008	1.2129E-03	1.3441E-03	0.463
6	6	322.4	580.3	1.061	0.935	71.748	63.219	7.7219E-04	8.5537E-04	0.425
7	7	320.7	577.2	0.802	0.707	71.957	63.439	5.8127E-04	6.4361E-04	0.371
8	8	318.5	573.3	0.648	0.571	72.314	63.718	4.6719E-04	5.1762E-04	0.337
9	9	316.5	569.6	0.525	0.462	72.613	63.981	3.7674E-04	4.1671E-04	0.338
10	10	315.0	567.0	0.463	0.408	72.828	64.172	3.3143E-04	3.6646E-04	0.316
11	11	313.1	563.5	0.298	0.262	73.103	64.414	2.1218E-04	2.3450E-04	0.378
12	12	311.2	560.1	0.233	0.206	73.380	64.658	1.6549E-04	1.8282E-04	0.216
13	13	315.4	567.7	0.995	0.876	72.770	64.121	7.1231E-04	7.8767E-04	0.307
14	14	308.3	554.9	0.251	0.221	73.802	65.030	1.7681E-04	1.9518E-04	0.221
15	25	308.4	555.1	0.352	0.310	73.786	65.015	2.4807E-04	2.7386E-04	0.245
16	26	311.7	561.0	0.235	0.207	73.306	64.592	1.6683E-04	1.8432E-04	0.334
17	27	338.8	609.9	0.000	0.000	69.366	61.120	0.0000	0.0000	0.184
18	28	314.6	566.3	0.708	0.623	72.877	64.215	5.0584E-04	5.5925E-04	0.342
19	30	308.7	555.6	0.472	0.415	73.744	64.978	3.3258E-04	3.6718E-04	0.361
20	31	311.9	561.4	0.329	0.290	73.273	64.563	2.3353E-04	2.5802E-04	0.389
21	32	316.5	555.3	0.654	0.577	73.773	65.004	4.6133E-04	5.0930E-04	0.370
22	33	316.5	558.9	0.646	0.570	73.475	64.742	4.5777E-04	5.0562E-04	0.398
23	34	312.0	561.5	0.454	0.400	73.266	64.558	3.2284E-04	3.5670E-04	0.403
24	35	313.5	564.3	0.264	0.233	73.043	64.361	1.8848E-04	2.0833E-04	0.347
25	36	314.2	566.7	0.687	0.605	72.849	64.190	4.9124E-04	5.4314E-04	0.325
26	37	316.4	569.4	1.516	1.336	72.627	63.995	1.0880E-03	1.2034E-03	0.355
27	38	317.1	570.8	2.545	2.242	72.518	63.898	1.8256E-03	2.0240E-03	0.362
28	39	314.6	566.3	4.648	4.094	72.879	64.216	3.3214E-03	3.6722E-03	0.384
29	40	308.7	555.7	0.858	0.756	73.737	64.972	6.0551E-04	6.6851E-04	0.269
30	41	293.8	528.9	0.000	0.000	75.907	66.885	0.0000	0.0000	0.229
31	42	310.5	558.9	0.776	0.684	73.481	64.747	5.4935E-04	6.0676E-04	0.430
32	43	311.9	561.5	0.485	0.427	73.272	64.563	3.4441E-04	3.8053E-04	0.416
33	44	313.5	564.3	0.292	0.257	73.040	64.358	2.0758E-04	2.2988E-04	0.252
34	46	309.2	556.5	0.741	0.653	73.669	64.913	5.2292E-04	5.7738E-04	0.304
35	47	309.3	556.7	0.669	0.589	73.658	64.902	4.7221E-04	5.2141E-04	0.347
36	48	310.6	559.2	0.681	0.600	73.458	64.727	4.8212E-04	5.3252E-04	0.428
37	49	311.9	561.4	0.429	0.378	73.281	64.570	3.0481E-04	3.3678E-04	0.393
38	50	313.3	564.0	0.297	0.262	73.069	64.384	2.1102E-04	2.3411E-04	0.138
39	51	315.0	567.0	0.590	0.520	72.821	64.165	4.2247E-04	4.6713E-04	0.304
40	54	309.2	556.5	0.546	0.481	73.664	64.908	3.8583E-04	4.2603E-04	0.363
41	55	307.9	554.3	0.449	0.396	73.850	65.072	3.1606E-04	3.4898E-04	0.421

42	96	305.8	551.6	0.464	0.409	73.584	64.837	3.2823E-04	3.6247E-04	0.507
43	97	311.2	560.2	0.314	0.278	73.377	64.655	2.2405E-04	2.4751E-04	0.411
44	98	312.4	562.4	0.250	0.220	73.197	64.497	1.7754E-04	1.9619E-04	0.276
45	80	308.6	555.6	0.384	0.338	73.748	64.982	2.7054E-04	2.9868E-04	0.351
46	81	309.0	556.2	0.356	0.314	73.699	64.939	2.5154E-04	2.7773E-04	0.380
47	82	309.9	557.8	0.350	0.309	73.569	64.824	2.4776E-04	2.7362E-04	0.286
48	83	311.1	560.0	0.283	0.250	73.387	64.664	2.0089E-04	2.2192E-04	0.431
49	84	312.5	562.5	0.243	0.214	73.189	64.489	1.7307E-04	1.9125E-04	0.320
50	85	314.0	565.3	0.620	0.547	72.964	64.291	4.4298E-04	4.8968E-04	0.330
51	66	315.6	568.0	1.593	1.404	72.741	64.095	1.1412E-03	1.2620E-03	0.358
52	67	316.9	570.4	2.814	2.480	72.551	63.927	2.0222E-03	2.2370E-03	0.361
53	68	315.4	567.6	4.677	4.121	72.773	64.123	3.3493E-03	3.7036E-03	0.375
54	70	308.9	556.0	0.346	0.305	73.710	64.949	2.4430E-04	2.6973E-04	0.336
55	71	310.2	558.4	0.347	0.306	73.517	64.779	2.4587E-04	2.7155E-04	0.370
56	72	311.1	559.9	0.276	0.244	73.355	64.671	1.9599E-04	2.1650E-04	0.388
57	73	312.4	562.3	0.240	0.212	73.204	64.503	1.7091E-04	1.8885E-04	0.337
58	77	309.4	557.0	0.348	0.307	73.634	64.881	2.4611E-04	2.7177E-04	0.206
59	78	310.7	559.2	0.374	0.330	73.457	64.725	2.6527E-04	2.9300E-04	0.254
60	79	311.5	560.6	0.300	0.264	73.339	64.622	2.1305E-04	2.3537E-04	0.412
61	81	338.7	609.7	0.000	0.000	69.382	61.135	0.0000	0.0000	1.069
62	84	309.9	557.8	0.399	0.352	73.565	64.821	2.8226E-04	3.1172E-04	0.250
63	85	310.9	559.6	0.461	0.406	73.421	64.694	3.2660E-04	3.6076E-04	0.208
64	86	311.3	560.3	0.250	0.221	73.363	64.643	1.7767E-04	1.9628E-04	0.331
65	90	310.1	558.1	1.282	1.130	73.543	64.802	9.0714E-04	1.0018E-03	0.455
66	91	311.6	560.9	0.924	0.814	73.321	64.605	6.5576E-04	7.2448E-04	0.327
67	92	312.0	561.5	0.291	0.257	73.266	64.557	2.0688E-04	2.2858E-04	0.379
68	94	313.9	565.1	0.629	0.554	72.977	64.303	4.4862E-04	4.9551E-04	0.374
69	98	310.6	559.1	1.973	1.738	73.464	64.732	1.3974E-03	1.5435E-03	0.360
70	99	311.9	561.5	1.589	1.400	73.272	64.563	1.1291E-03	1.2475E-03	0.310
71	100	312.5	562.6	0.436	0.384	73.182	64.484	3.1037E-04	3.4297E-04	0.421
72	103	310.9	559.6	2.607	2.297	73.420	64.693	1.8483E-03	2.0416E-03	0.440
73	104	312.3	562.1	2.899	2.555	73.222	64.519	2.0615E-03	2.2779E-03	0.383
74	105	339.8	605.5	0.000	0.000	69.368	61.123	0.0000	0.0000	0.440
75	107	313.8	564.8	0.557	0.491	72.959	64.322	3.9760E-04	4.3949E-04	0.409

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0276E-01 (SLUGS/FT2-SEC)

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MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.18256 06	6.2567E 05	0.197	6.79	858.6	0.88710E 06	0.0018	RUN NO. 4
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET MATED
5.22	9.70038 05	6.2567E 05	0.645	99.88	1545.6	381.47	0.0060	α = 60°, β = 0°

CHAN	T/C	Hw/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	Hw/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.377	0.1839	0.1839	0.2191	0.2422	39	51	0.365	0.0145	0.0145	0.0172	0.0190
2	2	0.376	0.0716	0.0716	0.0852	0.0942	40	54	0.360	0.0107	0.0107	0.0127	0.0140
3	3	0.375	0.0359	0.0359	0.0427	0.0472	41	55	0.359	0.0111	0.0111	0.0132	0.0145
4	4	0.374	0.0117	0.0117	0.0140	0.0154	42	56	0.361	0.0116	0.0116	0.0138	0.0152
5	5	0.374	0.0111	0.0111	0.0132	0.0146	43	57	0.362	0.0092	0.0092	0.0109	0.0120
6	6	0.372	0.0069	0.0069	0.0105	0.0116	44	58	0.363	0.0065	0.0065	0.0077	0.0085
7	7	0.371	0.0079	0.0079	0.0094	0.0104	45	60	0.360	0.0116	0.0116	0.0137	0.0151
8	8	0.370	0.0073	0.0073	0.0087	0.0096	46	61	0.360	0.0121	0.0121	0.0143	0.0158
9	9	0.368	0.0069	0.0069	0.0081	0.0090	47	62	0.361	0.0196	0.0196	0.0233	0.0256
10	10	0.366	0.0074	0.0074	0.0088	0.0097	48	63	0.362	0.0110	0.0110	0.0130	0.0144
11	11	0.365	0.0094	0.0094	0.0112	0.0124	49	64	0.363	0.0077	0.0077	0.0092	0.0101
12	12	0.363	0.0105	0.0105	0.0125	0.0138	50	65	0.364	0.0156	0.0156	0.0185	0.0204
13	13	0.364	0.0147	0.0147	0.0174	0.0192	51	66	0.365	0.0396	0.0396	0.0471	0.0519
14	18	0.359	0.0064	0.0064	0.0075	0.0083	52	67	0.366	0.0703	0.0703	0.0834	0.0921
15	25	0.359	0.0040	0.0040	0.0047	0.0052	53	68	0.365	0.1181	0.1181	0.1402	0.1546
16	26	0.363	0.0046	0.0046	0.0054	0.0060	54	70	0.360	0.0174	0.0174	0.0206	0.0227
17	27	0.364	0.0033	0.0033	0.0040	0.0044	55	71	0.361	0.0273	0.0273	0.0324	0.0357
18	28	0.365	0.0146	0.0146	0.0173	0.0191	56	72	0.362	0.0136	0.0136	0.0162	0.0178
19	30	0.359	0.0035	0.0035	0.0042	0.0046	57	73	0.363	0.0106	0.0106	0.0126	0.0139
20	31	0.363	0.0055	0.0055	0.0065	0.0072	58	77	0.360	0.0303	0.0303	0.0360	0.0396
21	32	0.359	0.0033	0.0033	0.0039	0.0043	59	78	0.362	0.0438	0.0438	0.0519	0.0573
22	33	0.361	0.0036	0.0036	0.0043	0.0048	60	79	0.362	0.0191	0.0191	0.0227	0.0250
23	34	0.363	0.0062	0.0062	0.0074	0.0081	61	81	0.364	0.0152	0.0152	0.0181	0.0199
24	35	0.364	0.0042	0.0042	0.0050	0.0055	62	84	0.361	0.0435	0.0435	0.0516	0.0569
25	36	0.365	0.0150	0.0150	0.0178	0.0196	63	85	0.362	0.0633	0.0633	0.0751	0.0828
26	37	0.365	0.0358	0.0358	0.0473	0.0522	64	86	0.362	0.0301	0.0301	0.0357	0.0393
27	38	0.366	0.0719	0.0719	0.0854	0.0942	65	90	0.361	0.0607	0.0607	0.0720	0.0793
28	39	0.364	0.1344	0.1344	0.1595	0.1760	66	91	0.363	0.0878	0.0878	0.1041	0.1148
29	40	0.359	0.0044	0.0044	0.0052	0.0057	67	92	0.363	0.0473	0.0473	0.0561	0.0618
30	41	0.360	0.0067	0.0067	0.0080	0.0088	68	94	0.364	0.0258	0.0258	0.0306	0.0338
31	42	0.361	0.0053	0.0053	0.0063	0.0069	69	98	0.361	0.0747	0.0747	0.0886	0.0977
32	43	0.363	0.0058	0.0058	0.0069	0.0076	70	99	0.363	0.1277	0.1277	0.1515	0.1671
33	44	0.364	0.0047	0.0047	0.0056	0.0062	71	100	0.364	0.0855	0.0855	0.1014	0.1118
34	46	0.360	0.0084	0.0084	0.0100	0.0110	72	103	0.362	0.0752	0.0752	0.0892	0.0983
35	47	0.360	0.0099	0.0099	0.0117	0.0129	73	104	0.364	0.1214	0.1214	0.1441	0.1589
36	48	0.362	0.0077	0.0077	0.0091	0.0101	74	105	0.364	0.1228	0.1228	0.1457	0.1607
37	49	0.363	0.0084	0.0084	0.0099	0.0109	75	107	0.365	0.0470	0.0470	0.0558	0.0616
38	50	0.364	0.0062	0.0062	0.0074	0.0081							

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MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.1825E 06	6.2567E 05	0.197	6.79	858.6	0.88710E 06	0.0018	RUN NO.	4

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	9.7603E 05	6.2567E 05	0.645	99.88	1545.6	381.47	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	332.9	599.2	14.101	12.425	76.668	67.555	9.9713E-03	1.1025E-02	0.484
2	2	332.0	597.7	5.494	4.841	76.792	67.664	3.8783E-03	4.2873E-03	0.758
3	3	331.3	596.4	2.757	2.429	76.895	67.755	1.9429E-03	2.1475E-03	C.809
4	4	330.5	594.8	0.903	0.796	77.022	67.867	6.3502E-04	7.0208E-04	0.331
5	5	330.1	594.1	0.858	0.756	77.079	67.917	6.0274E-04	6.6602E-04	C.396
6	6	329.9	592.0	0.684	0.603	77.248	68.066	4.7960E-04	5.2981E-04	C.279
7	7	327.6	589.6	0.613	0.540	77.441	68.236	4.2852E-04	4.7324E-04	0.275
8	8	326.4	587.5	0.566	0.499	77.612	68.386	3.9457E-04	4.3563E-04	0.321
9	9	324.8	584.6	0.534	0.470	77.847	68.594	3.7102E-04	4.0949E-04	0.393
10	10	323.7	582.6	0.579	0.510	78.010	68.737	4.0126E-04	4.4275E-04	0.398
11	11	322.1	579.8	0.738	0.651	78.233	68.934	5.1016E-04	5.6273E-04	0.465
12	12	320.3	576.6	0.825	0.727	78.492	69.162	5.6820E-04	6.2649E-04	0.476
13	13	321.7	579.0	1.149	1.013	78.301	68.994	7.9350E-04	8.7516E-04	0.374
14	14	316.9	570.4	0.503	0.443	78.991	69.602	3.4390E-04	3.7890E-04	0.487
15	25	316.9	570.3	0.315	0.278	78.999	69.608	2.1553E-04	2.3741E-04	0.493
16	26	320.3	576.5	0.359	0.316	78.503	69.171	2.4678E-04	2.7209E-04	0.378
17	27	321.5	578.8	0.261	0.230	78.316	69.007	1.8033E-04	1.9889E-04	C.490
18	28	322.0	579.6	1.143	1.007	78.253	68.951	7.8933E-04	8.7063E-04	0.436
19	30	317.1	570.8	0.277	0.244	78.963	69.577	1.8916E-04	2.0842E-04	0.451
20	31	320.3	576.6	0.431	0.380	78.495	69.164	2.9690E-04	3.2737E-04	0.353
21	32	317.2	570.9	0.261	0.230	78.953	69.568	1.7815E-04	1.9629E-04	0.472
22	33	319.0	574.2	0.286	0.252	78.690	69.336	1.9659E-04	2.1670E-04	0.464
23	34	320.2	576.4	0.487	0.429	78.510	69.178	3.3515E-04	3.6953E-04	0.460
24	35	321.1	578.1	0.332	0.292	78.375	69.059	2.2863E-04	2.5213E-04	0.526
25	36	322.1	579.8	1.170	1.031	78.230	68.932	8.0869E-04	8.9201E-04	C.439
26	37	322.7	580.9	3.114	2.744	78.147	68.858	2.1545E-03	2.3768E-03	0.427
27	38	323.2	581.7	5.614	4.947	78.080	68.799	3.8884E-03	4.2900E-03	0.425
28	39	321.8	579.2	10.525	9.274	78.285	68.980	7.2672E-03	8.0154E-03	0.433
29	40	317.4	571.4	0.345	0.304	78.913	69.533	2.3626E-04	2.6034E-04	0.395
30	41	317.7	571.8	0.530	0.467	78.879	69.503	3.6253E-04	3.9950E-04	C.466
31	42	319.2	574.5	0.415	0.366	78.662	69.312	2.8509E-04	3.1426E-04	C.389
32	43	320.5	576.9	0.454	0.400	78.472	69.145	3.1269E-04	3.4478E-04	0.507
33	44	321.2	578.1	0.370	0.326	78.369	69.054	2.5508E-04	2.8130E-04	0.528
34	46	317.7	571.9	0.663	0.585	78.874	69.498	4.5424E-04	5.0057E-04	0.474
35	47	317.9	572.2	0.780	0.687	78.846	69.474	5.3414E-04	5.8864E-04	0.440
36	48	319.4	575.0	0.606	0.534	78.622	69.277	4.1613E-04	4.5873E-04	0.386
37	49	320.4	576.8	0.656	0.578	78.476	69.148	4.5142E-04	4.9775E-04	0.448
38	50	321.3	578.3	0.487	0.429	78.359	69.045	3.3578E-04	3.7031E-04	0.507
39	51	322.2	580.0	1.136	1.001	78.220	68.923	7.8489E-04	8.6578E-04	0.437
40	54	318.2	572.7	0.843	0.743	78.809	69.441	5.7763E-04	6.3660E-04	0.463
41	55	317.3	571.2	0.877	0.773	78.929	69.548	6.0022E-04	6.6138E-04	0.456

42	56	319.0	574.2	0.916	0.807	78.650	69.337	6.2684E-04	6.5315E-04	C.450
43	57	320.1	576.2	0.721	0.635	78.529	69.194	4.9611E-04	5.1699E-04	C.439
44	58	320.8	577.4	0.512	0.451	78.425	69.103	3.5300E-04	3.8925E-04	0.426
45	60	317.7	571.8	0.913	0.805	78.882	69.506	6.2514E-04	6.8888E-04	C.389
46	61	317.9	572.1	0.952	0.839	78.853	69.480	6.5189E-04	7.1839E-04	0.382
47	62	318.8	573.9	1.545	1.361	78.711	69.355	1.0602E-03	1.1686E-03	C.475
48	63	319.8	575.6	0.863	0.761	78.572	69.233	5.9359E-04	6.5441E-04	C.452
49	64	320.6	577.2	0.606	0.534	78.447	69.123	4.1780E-04	4.6070E-04	0.338
50	65	321.5	578.7	1.220	1.075	78.325	69.015	8.4206E-04	9.2868E-04	C.430
51	66	322.4	580.3	3.100	2.731	78.195	68.901	2.1433E-03	2.3642E-03	0.427
52	67	323.2	581.7	5.488	4.836	78.083	68.801	3.8006E-03	4.1932E-03	0.403
53	68	322.3	580.2	9.236	8.138	78.202	68.907	6.3850E-03	7.0432E-03	0.412
54	70	317.9	572.3	1.371	1.208	78.841	69.470	9.3912E-04	1.0349E-03	0.365
55	71	319.2	574.5	2.147	1.892	78.659	69.309	1.4745E-03	1.6254E-03	C.473
56	72	319.8	575.7	1.072	0.945	78.567	69.228	7.3718E-04	8.1272E-04	C.453
57	73	320.9	577.7	0.835	0.736	78.407	69.087	5.7547E-04	6.3459E-04	0.386
58	77	318.1	572.5	2.391	2.107	78.823	69.454	1.6385E-03	1.8057E-03	C.413
59	78	319.5	575.0	3.444	3.035	78.621	69.275	2.3667E-03	2.6091E-03	0.487
60	79	320.1	576.1	1.503	1.325	78.534	69.199	1.0344E-03	1.1405E-03	C.447
61	81	321.3	578.3	1.192	1.051	78.353	69.039	8.2258E-04	9.0716E-04	C.475
62	84	318.6	573.5	3.427	3.020	78.743	69.384	2.3507E-03	2.5909E-03	0.478
63	85	319.7	575.5	4.974	4.383	78.578	69.238	3.4202E-03	3.7706E-03	0.467
64	86	319.9	575.8	2.362	2.082	78.556	69.219	1.6249E-03	1.7914E-03	0.468
65	90	318.6	573.9	4.778	4.210	78.714	69.357	3.2791E-03	3.6143E-03	0.491
66	91	320.3	576.5	6.888	6.069	78.498	69.168	4.7417E-03	5.2281E-03	C.469
67	92	320.7	577.3	3.708	3.267	78.432	69.110	2.5550E-03	2.8174E-03	C.429
	94	321.9	579.4	2.021	1.781	78.269	68.965	1.3960E-03	1.5397E-03	0.367
69	98	319.2	574.6	5.877	5.179	78.657	69.308	4.0364E-03	4.4494E-03	0.494
70	99	320.7	577.3	10.017	8.826	78.434	69.111	6.9015E-03	7.6102E-03	C.439
71	100	321.2	578.1	6.699	5.902	78.368	69.053	4.6199E-03	5.0948E-03	0.408
72	103	319.7	575.5	5.912	5.209	78.585	69.244	4.0643E-03	4.4807E-03	0.533
73	104	321.4	578.4	9.513	8.382	78.344	69.032	6.5629E-03	7.2379E-03	0.445
74	105	321.5	578.6	9.618	8.475	78.329	69.019	6.6368E-03	7.3156E-03	0.404
75	107	322.5	580.6	3.677	3.240	78.173	68.881	2.5433E-03	2.8055E-03	0.315

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9408E-01 (SLUGS/FT2-SEC)

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 5

MACH	RE/METER	PEL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	
5.22	1.4221E 06	6.7277E 05	0.197	6.88	827.5	0.85277E 06	0.0018	
MACH	RE/FT	PEL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	ORB MATED
5.22	1.0431E 06	6.7277E 05	0.645	101.17	1489.5	366.71	0.0060	α = 60°, β = 0°

AN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.366	0.0071	0.0071	0.0085	0.0094	39	42	0.360	0.0020	0.0020	0.0023	0.0026
2	2	0.366	0.0069	0.0069	0.0082	0.0090	40	43	0.362	0.0068	0.0068	0.0080	0.0088
3	3	0.367	0.0068	0.0068	0.0081	0.0090	41	44	0.360	0.0068	0.0068	0.0081	0.0089
4	4	0.367	0.0067	0.0067	0.0080	0.0098	42	45	0.364	0.0076	0.0076	0.0090	0.0100
5	5	0.367	0.0072	0.0072	0.0085	0.0094	43	46	0.364	0.0119	0.0119	0.0141	0.0155
6	6	0.366	0.0076	0.0076	0.0090	0.0100	44	47	0.351	0.0000	0.0000	0.0000	0.0000
7	7	0.366	0.0085	0.0085	0.0100	0.0111	45	48	0.360	0.0092	0.0092	0.0109	0.0120
8	8	0.365	0.0093	0.0093	0.0110	0.0121	46	50	0.362	0.1852	0.1852	0.2196	0.2421
9	9	0.364	0.0112	0.0112	0.0133	0.0146	47	51	0.363	0.1814	0.1814	0.2151	0.2372
10	10	0.364	0.0136	0.0136	0.0161	0.0178	48	53	0.363	0.1323	0.1323	0.1570	0.1731
11	11	0.363	0.0233	0.0233	0.0277	0.0305	49	55	0.363	0.1117	0.1117	0.1325	0.1461
12	12	0.362	0.0358	0.0358	0.0424	0.0468	50	57	0.363	0.0873	0.0873	0.1035	0.1142
13	13	0.362	0.0788	0.0788	0.0935	0.1031	51	59	0.363	0.0681	0.0681	0.0808	0.0891
14	14	0.361	0.1583	0.1583	0.1877	0.2070	52	60	0.365	0.1534	0.1534	0.1820	0.2008
15	15	0.362	0.0410	0.0410	0.0486	0.0536	53	61	0.365	0.1616	0.1616	0.1918	0.2116
16	16	0.361	0.0182	0.0182	0.0216	0.0238	54	65	0.366	0.1260	0.1260	0.1496	0.1650
17	17	0.361	0.0296	0.0296	0.0351	0.0387	55	68	0.367	0.0836	0.0836	0.0992	0.1095
18	18	0.362	0.0439	0.0439	0.0521	0.0574	56	69	0.368	0.2078	0.2078	0.2468	0.2724
19	20	0.363	0.0792	0.0792	0.0940	0.1036	57	70	0.369	0.1706	0.1706	0.2027	0.2238
20	22	0.362	0.0989	0.0989	0.1173	0.1293	58	72	0.369	0.1299	0.1299	0.1543	0.1704
21	24	0.361	0.0181	0.0181	0.0215	0.0236	59	73	0.360	0.0016	0.0016	0.0019	0.0021
22	25	0.361	0.0180	0.0180	0.0214	0.0236	60	74	0.361	0.0017	0.0017	0.0020	0.0022
23	26	0.359	0.0000	0.0000	0.0000	0.0000	61	75	0.360	0.0031	0.0031	0.0037	0.0041
24	27	0.361	0.0142	0.0142	0.0168	0.0185	62	76	0.361	0.0031	0.0031	0.0037	0.0041
25	28	0.361	0.0260	0.0260	0.0308	0.0340	63	77	0.364	0.0038	0.0038	0.0045	0.0050
26	29	0.361	0.0046	0.0046	0.0055	0.0060	64	78	0.364	0.0027	0.0027	0.0032	0.0035
27	30	0.361	0.0111	0.0111	0.0131	0.0145	65	79	0.365	0.0062	0.0062	0.0073	0.0081
28	31	0.361	0.0315	0.0315	0.0373	0.0411	66	80	0.365	0.0028	0.0028	0.0033	0.0037
29	32	0.361	0.0047	0.0047	0.0056	0.0061	67	81	0.368	0.0499	0.0499	0.0593	0.0654
30	34	0.361	0.0268	0.0268	0.0318	0.0350	68	82	0.368	0.0101	0.0101	0.0120	0.0133
31	33	0.360	0.0059	0.0059	0.0070	0.0077	69	83	0.369	0.0036	0.0036	0.0043	0.0048
32	35	0.360	0.0035	0.0035	0.0041	0.0045	70	84	0.369	0.0043	0.0043	0.0051	0.0056
33	36	0.359	0.0016	0.0016	0.0019	0.0021	71	85	0.366	0.0062	0.0062	0.0074	0.0081
34	37	0.399	0.0000	0.0000	0.0000	0.0000	72	86	0.369	0.0096	0.0096	0.0114	0.0126
35	38	0.360	0.0029	0.0029	0.0035	0.0038	73	87	0.371	0.0128	0.0128	0.0152	0.0168
36	39	0.360	0.0028	0.0028	0.0033	0.0036	74	88	0.376	0.0173	0.0173	0.0206	0.0228
37	40	0.362	0.0082	0.0082	0.0097	0.0107	75	89	0.380	0.0190	0.0190	0.0227	0.0251
38	41	0.362	0.0054	0.0054	0.0064	0.0071							

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MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.4221E 06	6.7277E 05	0.197	6.88	827.5	0.85277E 06	0.0018	RUN NO.	5
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	1.0431E 06	6.7277E 05	0.645	101.17	1489.5	366.71	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	310.9	559.6	0.539	0.475	75.434	66.468	3.7434E-04	4.1302E-04	0.257
2	2	310.8	559.5	0.518	0.457	75.445	66.477	3.6011E-04	3.9732E-04	0.349
3	3	311.2	560.2	0.516	0.454	75.398	66.427	3.5868E-04	3.9577E-04	0.415
4	4	311.4	560.6	0.505	0.445	75.358	66.401	3.5132E-04	3.8767E-04	0.413
5	5	311.3	560.4	0.542	0.477	75.373	66.414	3.7699E-04	4.1599E-04	0.423
6	6	311.0	559.8	0.573	0.505	75.419	66.454	3.9846E-04	4.3965E-04	0.432
7	7	310.6	559.1	0.638	0.563	75.479	66.507	4.4347E-04	4.8927E-04	0.441
8	8	309.8	557.7	0.701	0.618	75.590	66.605	4.8636E-04	5.3649E-04	0.445
9	9	309.1	556.3	0.847	0.746	75.703	66.705	5.8623E-04	6.4654E-04	0.455
10	10	308.7	555.7	1.031	0.908	75.755	66.750	7.1318E-04	7.8649E-04	0.458
11	11	307.8	554.1	1.771	1.561	75.882	66.862	1.2229E-03	1.3483E-03	0.434
12	12	307.6	553.7	2.715	2.392	75.915	66.891	1.8773E-03	2.0653E-03	0.442
13	13	307.7	553.9	5.984	5.273	75.899	66.877	4.1304E-03	4.5539E-03	0.434
14	14	306.8	552.3	12.038	10.607	76.026	66.990	8.2938E-03	9.1425E-03	0.384
15	15	307.4	553.2	3.114	2.744	75.953	66.925	2.1478E-03	2.3678E-03	0.578
16	16	306.4	551.5	1.386	1.221	76.091	67.046	9.5411E-04	1.0516E-03	-0.531
17	17	306.8	552.2	2.252	1.984	76.038	67.000	1.5512E-03	1.7099E-03	-0.168
18	18	307.3	553.1	3.336	2.939	75.963	66.934	2.3002E-03	2.5359E-03	0.242
19	20	308.4	555.0	6.005	5.291	75.807	66.796	4.1505E-03	4.5767E-03	0.268
20	22	307.6	553.6	7.508	6.616	75.921	66.897	5.1807E-03	5.7118E-03	0.299
21	24	306.1	551.1	1.378	1.214	76.130	67.081	9.4793E-04	1.0448E-03	0.210
22	25	306.4	551.5	1.373	1.210	76.093	67.049	9.4500E-04	1.0416E-03	0.275
23	26	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	306.7	552.1	1.078	0.950	76.047	67.008	7.4220E-04	8.1812E-04	0.288
25	28	306.8	552.2	1.978	1.742	76.034	66.996	1.3622E-03	1.5016E-03	0.312
26	29	306.3	551.4	0.351	0.309	76.101	67.056	2.4148E-04	2.6616E-04	0.320
27	30	306.4	551.5	0.844	0.743	76.096	67.051	5.8070E-04	6.4006E-04	0.430
28	31	306.6	551.8	2.394	2.109	76.069	67.027	1.6483E-03	1.8168E-03	0.315
29	32	306.3	551.4	0.357	0.315	76.104	67.058	2.4585E-04	2.7098E-04	0.410
30	34	306.4	551.5	2.041	1.798	76.093	67.049	1.4044E-03	1.5480E-03	0.350
31	33	305.9	550.7	0.449	0.395	76.158	67.106	3.0843E-04	3.3992E-04	0.439
32	35	305.6	550.1	0.265	0.234	76.209	67.150	1.8228E-04	2.0088E-04	0.305
33	36	305.2	549.3	0.120	0.106	76.271	67.205	8.2229E-05	9.0610E-05	0.354
34	37	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
35	38	305.5	549.9	0.224	0.197	76.220	67.160	1.5396E-04	1.6966E-04	0.293
36	39	305.8	550.4	0.212	0.187	76.187	67.131	1.4563E-04	1.6049E-04	0.212
37	40	307.0	552.6	0.622	0.548	76.007	66.973	4.2853E-04	4.7240E-04	-0.142
38	41	307.4	553.3	0.413	0.364	75.950	66.923	2.8488E-04	3.1406E-04	0.344
39	42	305.7	550.2	0.150	0.132	76.198	67.141	1.0305E-04	1.1356E-04	0.287
40	43	307.0	552.6	0.513	0.452	76.009	66.974	3.5357E-04	3.8977E-04	0.214
41	44	306.1	550.9	0.520	0.458	76.142	67.091	3.5741E-04	3.9392E-04	0.380

42	45	308.7	555.7	0.578	0.509	75.750	66.746	3.9953E-04	4.4060E-04	0.227
43	46	309.0	556.2	0.899	0.792	75.712	66.713	6.2250E-04	6.8654E-04	0.158
44	47	298.3	537.0	0.000	0.000	0.000	0.000	0.0000	0.0000	0.000
45	48	305.7	550.2	0.698	0.615	76.197	67.140	4.7980E-04	5.2876E-04	0.271
46	50	307.8	554.0	14.054	12.383	75.894	66.873	9.7013E-03	1.0696E-02	0.236
47	51	307.8	554.1	13.762	12.126	75.884	66.864	9.5016E-03	1.0476E-02	0.314
48	53	308.5	555.3	10.029	8.837	75.785	66.777	6.9346E-03	7.6471E-03	0.331
49	55	308.5	555.3	8.464	7.458	75.787	66.778	5.8521E-03	6.4533E-03	0.327
50	57	308.6	555.4	6.614	5.828	75.780	66.773	4.5736E-03	5.0435E-03	0.334
51	59	308.6	555.4	5.160	4.547	75.778	66.770	3.5685E-03	3.9352E-03	0.317
52	60	309.7	557.4	11.599	10.220	75.616	66.628	8.0404E-03	8.8688E-03	0.179
53	61	310.0	558.1	12.212	10.761	75.561	66.580	8.4726E-03	9.3463E-03	0.284
54	65	310.8	559.4	9.506	8.376	75.450	66.481	6.6063E-03	7.2889E-03	0.279
55	68	311.3	560.4	6.299	5.550	75.375	66.416	4.3821E-03	4.8354E-03	0.204
56	69	312.6	562.6	15.621	13.764	75.190	66.252	1.0898E-02	1.2029E-02	0.243
57	70	313.0	563.4	12.818	11.295	75.131	66.201	8.9511E-03	9.8808E-03	0.257
58	72	313.7	564.7	9.742	8.584	75.025	66.107	6.8142E-03	7.5232E-03	0.243
59	73	306.0	550.8	0.125	0.110	76.151	67.099	8.5904E-05	9.4676E-05	0.152
60	74	306.1	551.1	0.126	0.111	76.130	67.081	8.6686E-05	9.5542E-05	0.299
61	75	306.1	550.9	0.239	0.210	76.142	67.091	1.6411E-04	1.8087E-04	0.309
62	76	306.8	552.2	0.236	0.208	76.036	66.998	1.6263E-04	1.7927E-04	0.281
63	77	309.3	556.7	0.290	0.255	75.675	66.680	2.0067E-04	2.2132E-04	0.449
64	78	309.5	557.1	0.201	0.177	75.642	66.651	1.3930E-04	1.5364E-04	0.418
65	79	309.6	557.3	0.466	0.410	75.620	66.631	3.2279E-04	3.5604E-04	0.337
66	80	310.3	558.5	0.213	0.187	75.524	66.547	1.4770E-04	1.6294E-04	0.400
67	81	312.6	562.8	3.752	3.306	75.181	66.245	2.6177E-03	2.8894E-03	0.551
68	82	312.5	562.4	0.763	0.672	75.209	66.269	5.3203E-04	5.8722E-04	0.531
69	83	312.9	563.2	0.272	0.240	75.145	66.213	1.9006E-04	2.0980E-04	0.405
70	84	313.3	563.9	0.323	0.285	75.087	66.162	2.2588E-04	2.4935E-04	0.465
71	85	311.0	559.8	0.468	0.413	75.419	66.455	3.2554E-04	3.5919E-04	0.443
72	86	313.0	563.3	0.722	0.636	75.134	66.203	5.0401E-04	5.5636E-04	0.326
73	87	315.4	567.7	0.957	0.843	74.780	65.891	6.7204E-04	7.4226E-04	0.396
74	88	319.2	574.6	1.286	1.133	74.226	65.403	9.1035E-04	1.0064E-03	0.333
75	89	322.4	580.4	1.403	1.237	73.753	64.986	1.0010E-03	1.1074E-03	0.356

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0126E-01 (SLUGS/FT2-SEC)

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 61

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.30	1.2593E 07	2.4758E 06	0.197	27.56	851.7	0.87947E 06	0.0018

MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.30	3.8384E 06	2.4758E 06	0.6455	405.12	1533.1	378.19	0.0060

ORB MATED
α = 60°, β = 0°

CHAN	T/C	FW/HT	C/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.372	0.0037	0.0037	0.0044	0.0048
2	2	0.372	0.0022	0.0022	0.0027	0.0029
3	3	0.374	0.0055	0.0055	0.0066	0.0073
4	4	0.375	0.0053	0.0053	0.0063	0.0070
5	5	0.374	0.0052	0.0052	0.0061	0.0068
6	6	0.374	0.0064	0.0064	0.0076	0.0084
7	7	0.373	0.0071	0.0071	0.0085	0.0093
8	8	0.371	0.0079	0.0079	0.0094	0.0104
9	9	0.369	0.0108	0.0108	0.0128	0.0141
10	10	0.368	0.0143	0.0143	0.0170	0.0187
11	11	0.367	0.0250	0.0250	0.0297	0.0328
12	12	0.366	0.0428	0.0428	0.0508	0.0561
13	13	0.366	0.0981	0.0981	0.1164	0.1285
14	14	0.365	0.1900	0.1900	0.2255	0.2488
15	15	0.368	0.0966	0.0966	0.1147	0.1266
16	16	0.364	0.0270	0.0270	0.0320	0.0353
17	17	0.360	0.0411	0.0411	0.0487	0.0537
18	18	0.363	0.0123	0.0123	0.0145	0.0160
19	20	0.371	0.0613	0.0613	0.0729	0.0805
20	22	0.387	0.0000	0.0000	0.0000	0.0000
21	24	0.364	0.0414	0.0414	0.0492	0.0542
22	25	0.364	0.0385	0.0385	0.0457	0.0504
23	26	0.360	0.0000	0.0000	0.0000	0.0000
24	27	0.365	0.0405	0.0405	0.0480	0.0530
25	28	0.366	0.0510	0.0510	0.0606	0.0669
26	29	0.364	0.0080	0.0080	0.0095	0.0105
27	30	0.364	0.0286	0.0286	0.0339	0.0374
28	31	0.387	0.0000	0.0000	0.0000	0.0000
29	32	0.365	0.0066	0.0066	0.0078	0.0086
30	34	0.365	0.0565	0.0565	0.0671	0.0740
31	33	0.363	0.0136	0.0136	0.0161	0.0178
32	35	0.364	0.0037	0.0037	0.0044	0.0049
33	36	0.361	0.0057	0.0057	0.0067	0.0074
34	37	0.362	0.0167	0.0167	0.0198	0.0218
35	38	0.363	0.0040	0.0040	0.0048	0.0052
36	39	0.364	0.0063	0.0063	0.0074	0.0082
37	40	0.368	0.0183	0.0183	0.0218	0.0240
38	41	0.369	0.0115	0.0115	0.0136	0.0151
39	42	0.363	0.0048	0.0048	0.0057	0.0063
40	43	0.367	0.0197	0.0197	0.0234	0.0258
41	44	0.365	0.0102	0.0102	0.0121	0.0134
42	45	0.370	0.0058	0.0058	0.0069	0.0076
43	46	0.370	0.0058	0.0098	0.0117	0.0129
44	47	0.367	0.0097	0.0097	0.0115	0.0127
45	48	0.362	0.0167	0.0167	0.0198	0.0218
46	50	0.371	0.2230	0.2230	0.2652	0.2929
47	51	0.372	0.2222	0.2222	0.2642	0.2919
48	53	0.374	0.1555	0.1555	0.1850	0.2044
49	55	0.375	0.1406	0.1406	0.1673	0.1849
50	57	0.375	0.1235	0.1235	0.1470	0.1625
51	59	0.375	0.1082	0.1082	0.1288	0.1423
52	60	0.378	0.1394	0.1394	0.1662	0.1838
53	61	0.378	0.1540	0.1540	0.1835	0.2029
54	65	0.381	0.1381	0.1381	0.1647	0.1823
55	68	0.382	0.1219	0.1219	0.1454	0.1609
56	69	0.385	0.2505	0.2505	0.2990	0.3312
57	70	0.386	0.2021	0.2021	0.2414	0.2674
58	72	0.387	0.1511	0.1511	0.1806	0.2001
59	73	0.366	0.0053	0.0053	0.0063	0.0070
60	74	0.366	0.0038	0.0038	0.0045	0.0050
61	75	0.366	0.0079	0.0079	0.0094	0.0104
62	76	0.369	0.0102	0.0102	0.0121	0.0134
63	77	0.376	0.0112	0.0112	0.0134	0.0148
64	78	0.376	0.0109	0.0109	0.0129	0.0143
65	79	0.376	0.0191	0.0191	0.0228	0.0252
66	80	0.379	0.0040	0.0040	0.0048	0.0053
67	81	0.384	0.1152	0.1152	0.1375	0.1523
68	82	0.383	0.0453	0.0453	0.0541	0.0599
69	83	0.364	0.0149	0.0149	0.0177	0.0196
70	84	0.385	0.0089	0.0089	0.0106	0.0117
71	85	0.377	0.0125	0.0125	0.0149	0.0164
72	86	0.380	0.0178	0.0178	0.0213	0.0235
73	87	0.386	0.0232	0.0232	0.0277	0.0307
74	88	0.392	0.0395	0.0395	0.0473	0.0525
75	89	0.399	0.0405	0.0405	0.0486	0.0540

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 6

MACH 5.30	RE/METER 1.2593E 07	REL 2.4758E 06	LENGTH(METER) 0.197	PT(ATM) 27.56	TT(DEG K) 851.7	HT(JOULE/KG) 0.87947E 06	RS(METER) 0.0018				
MACH 5.30	RE/FT 3.8384E 06	REL 2.4758E 06	LENGTH(FT) 0.645	PT(PSI) 405.12	TT(DEG K) 1533.1	HT(BTU/LBM) 378.19	RS(FT) 0.0060				

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	325.3	585.6	0.552	0.487	149.965	132.139	1.0163E-04	1.1225E-04	0.499
2	2	326.0	586.7	0.336	0.296	149.780	131.977	6.1946E-05	6.8429E-05	0.392
3	3	327.2	588.9	0.826	0.728	149.439	131.676	1.5263E-04	1.6865E-04	0.630
4	4	327.5	590.3	0.790	0.696	149.220	131.483	1.4632E-04	1.6170E-04	0.541
5	5	327.9	590.2	0.771	0.679	149.236	131.497	1.4267E-04	1.5767E-04	0.364
6	6	327.3	589.2	0.956	0.843	149.394	131.636	1.7679E-04	1.9535E-04	0.661
7	7	326.2	587.2	1.064	0.937	149.705	131.911	1.9616E-04	2.1670E-04	0.506
8	8	325.0	585.1	1.189	1.047	150.043	132.208	2.1863E-04	2.4146E-04	0.441
9	9	322.9	581.2	1.620	1.428	150.646	132.739	2.9673E-04	3.2755E-04	0.523
10	10	322.2	579.9	2.153	1.898	150.851	132.920	3.9371E-04	4.3455E-04	0.608
11	11	321.0	577.8	3.785	3.335	151.186	133.215	6.9030E-04	7.6170E-04	0.444
12	12	320.9	577.6	6.470	5.701	151.227	133.251	1.1795E-03	1.3015E-03	0.501
13	13	320.9	577.6	14.829	13.066	151.224	133.249	2.7035E-03	2.9831E-03	0.456
14	14	319.8	575.7	28.789	25.367	151.527	133.516	5.2365E-03	5.7766E-03	0.484
15	15	321.8	579.3	14.576	12.843	150.960	133.016	2.6626E-03	2.9385E-03	0.637
16	16	318.8	573.8	4.098	3.611	151.828	133.781	7.4366E-04	8.2017E-04	-0.601
17	17	315.2	567.3	6.280	5.533	152.841	134.674	1.1311E-03	1.2465E-03	-0.044
18	18	302.5	544.5	1.925	1.696	156.445	137.849	3.3760E-04	3.7106E-04	0.382
19	20	324.8	584.6	9.208	8.114	150.121	132.277	1.6928E-03	1.8695E-03	0.210
20	22	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
21	24	318.4	573.1	6.296	5.548	151.924	133.866	1.1418E-03	1.2592E-03	0.341
22	25	318.7	573.7	5.850	5.155	151.838	133.790	1.0616E-03	1.1708E-03	0.450
23	26	297.4	535.3	0.000	0.000	0.000	0.000	0.0000	0.0000	4.415
24	27	319.8	575.2	6.134	5.404	151.594	133.575	1.1151E-03	1.2300E-03	0.267
25	28	320.9	577.6	7.718	6.800	151.223	133.248	1.4070E-03	1.5525E-03	0.482
26	29	318.7	573.7	1.219	1.074	151.831	133.784	2.2127E-04	2.4403E-04	0.473
27	30	319.0	574.1	4.338	3.823	151.767	133.727	7.8773E-04	8.6881E-04	0.497
28	31	338.8	609.8	0.000	0.000	0.000	0.000	0.0000	0.0000	1.297
29	32	319.3	574.8	0.995	0.877	151.669	133.641	1.8085E-04	1.5948E-04	0.458
30	34	319.3	574.7	8.574	7.555	151.682	133.652	1.5578E-03	1.7183E-03	0.373
31	33	318.0	572.4	2.065	1.820	152.038	133.966	3.7427E-04	4.1271E-04	0.606
32	35	318.6	573.5	0.565	0.498	151.864	133.813	1.0251E-04	1.1305E-04	0.321
33	36	316.2	569.1	0.867	0.764	152.567	134.432	1.5647E-04	1.7247E-04	0.572
34	37	317.2	570.9	2.540	2.238	152.274	134.174	4.5943E-04	5.0652E-04	0.346
35	38	317.9	572.1	0.609	0.537	152.082	134.005	1.1035E-04	1.2168E-04	0.475
36	39	318.3	573.0	0.952	0.839	151.952	133.891	1.7263E-04	1.5037E-04	0.283
37	40	321.9	579.4	2.769	2.440	150.942	133.000	5.0592E-04	5.5835E-04	0.089
38	41	323.2	581.7	1.728	1.522	150.568	132.671	3.1656E-04	3.4947E-04	0.570
39	42	317.9	572.3	0.729	0.642	152.061	133.986	1.3205E-04	1.4561E-04	0.323
40	43	321.4	578.5	2.973	2.620	151.073	133.115	5.4269E-04	5.9887E-04	0.475
41	44	319.1	574.4	1.645	1.365	151.499	133.4[illegible]	[illegible]	[illegible]	[illegible]

42	45	323.8	562.9	0.875	0.771	150.381	132.506	1.6058E-04	1.7730E-04	-0.496
43	46	324.4	583.9	1.473	1.298	150.235	132.377	2.7055E-04	2.9876E-04	-0.498
44	47	320.9	577.7	1.465	1.291	151.206	133.233	2.6715E-04	2.9478E-04	-0.199
45	48	317.1	570.7	2.537	2.235	152.30E	134.204	4.5872E-04	5.0572E-04	0.342
46	50	325.1	585.3	33.453	29.477	150.012	132.181	6.1552E-03	6.7981E-03	0.237
47	51	325.8	586.4	33.286	29.330	149.830	132.021	6.1329E-03	6.7745E-03	0.346
48	53	327.4	589.3	23.221	20.461	149.370	131.615	4.2936E-03	4.7445E-03	0.369
49	55	328.0	590.4	20.974	18.481	149.211	131.475	3.8828E-03	4.2911E-03	0.336
50	57	328.3	590.9	18.420	16.231	149.126	131.400	3.4122E-03	3.7713E-03	0.356
51	59	328.0	590.4	16.142	14.223	149.204	131.469	2.9883E-03	3.3026E-03	0.370
52	60	331.3	596.4	20.674	18.216	148.266	130.642	3.8551E-03	4.2638E-03	0.077
53	61	331.2	596.2	22.831	20.117	148.294	130.667	4.2565E-03	4.7076E-03	0.224
54	65	333.5	600.3	20.389	17.965	147.643	130.093	3.8204E-03	4.2276E-03	0.268
55	68	334.6	602.4	17.954	15.820	147.320	129.809	3.3726E-03	3.7332E-03	0.352
56	69	336.7	606.1	36.749	32.381	146.728	129.288	6.9351E-03	7.6801E-03	0.232
57	70	337.6	608.0	29.592	26.075	146.430	129.024	5.5977E-03	6.2006E-03	0.282
58	72	338.8	609.8	22.087	19.461	146.153	128.781	4.1870E-03	4.6360E-03	0.268
59	73	320.1	576.3	0.804	0.708	151.434	133.433	1.4631E-04	1.6142E-04	0.444
60	74	320.6	577.1	0.579	0.511	151.300	133.316	1.0557E-04	1.1648E-04	0.518
61	75	320.7	577.2	1.198	1.056	151.276	133.297	2.1832E-04	2.4088E-04	0.358
62	76	322.9	581.2	1.537	1.355	150.653	132.746	2.8151E-04	3.1075E-04	0.446
63	77	329.1	592.4	1.670	1.471	148.892	131.194	3.0938E-04	3.4256E-04	0.500
64	78	329.0	592.2	1.619	1.427	148.923	131.222	3.0044E-04	3.3212E-04	0.686
65	79	329.4	592.9	2.843	2.505	148.811	131.123	5.2793E-04	5.8364E-04	0.356
66	80	331.4	596.6	0.600	0.528	148.226	130.607	1.1183E-04	1.2369E-04	0.542
67	81	336.0	604.7	16.931	14.918	146.945	129.482	3.1896E-03	3.5316E-03	0.336
68	82	335.5	603.9	6.665	5.873	147.071	129.590	1.2545E-03	1.3889E-03	0.624
69	83	336.3	605.4	2.181	1.921	146.842	129.388	4.1116E-04	4.5529E-04	0.552
70	84	337.5	607.5	1.298	1.143	146.507	129.092	2.4531E-04	2.7172E-04	0.672
71	85	329.7	593.5	1.857	1.636	148.718	131.041	3.4511E-04	3.8156E-04	0.540
72	86	333.1	599.5	2.636	2.323	147.767	130.203	4.9342E-04	5.4595E-04	0.502
73	87	337.8	608.0	3.396	2.992	146.429	129.024	6.4236E-04	7.1155E-04	0.579
74	88	343.0	618.5	5.723	5.043	144.789	127.579	1.0967E-03	1.2165E-03	0.543
75	89	349.5	629.0	5.800	5.110	143.132	126.119	1.1263E-03	1.2512E-03	0.534

FREE-STREAM DENSITY-VELOCITY PRODUCT = 7.4444E-01 (SLUGS/FT2-SEC)

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	TEST NO. 195
5.22	3.3145E 06	6.5163E 05	0.197	6.61	923.4	0.84829E 06	0.0018	RUN NO. 7
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	
5.22	1.0103E 06	6.5163E 05	0.645	97.16	1492.1	364.78	0.0060	

ORIENTATED
a = 30°, B = 0°

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.371	0.0349	0.0349	0.0415	0.0458	39	42	0.365	0.0017	0.0017	0.0020	0.0022
2	2	0.371	0.0195	0.0195	0.0220	0.0243	40	43	0.366	0.0063	0.0063	0.0074	0.0082
3	3	0.371	0.0145	0.0145	0.0172	0.0190	41	44	0.365	0.0094	0.0094	0.0112	0.0123
4	4	0.371	0.0126	0.0126	0.0150	0.0166	42	45	0.370	0.0139	0.0139	0.0165	0.0182
5	5	0.371	0.0118	0.0118	0.0140	0.0155	43	46	0.370	0.0125	0.0125	0.0149	0.0164
6	6	0.370	0.0106	0.0106	0.0126	0.0139	44	47	0.368	0.0070	0.0070	0.0084	0.0092
7	7	0.370	0.0099	0.0099	0.0117	0.0129	45	48	0.366	0.0038	0.0038	0.0045	0.0097
8	8	0.369	0.0093	0.0093	0.0111	0.0122	46	50	0.369	0.1637	0.1637	0.1945	0.2147
9	9	0.369	0.0079	0.0079	0.0093	0.0103	47	51	0.369	0.1403	0.1403	0.1667	0.1840
10	10	0.367	0.0064	0.0064	0.0076	0.0084	48	53	0.369	0.0905	0.0905	0.1076	0.1187
11	11	0.367	0.0059	0.0059	0.0070	0.0077	49	55	0.369	0.0755	0.0755	0.0897	0.0990
12	12	0.401	0.0000	0.0000	0.0000	0.0000	50	57	0.368	0.0551	0.0551	0.0773	0.0853
13	13	0.366	0.0106	0.0106	0.0125	0.0138	51	59	0.368	0.0461	0.0461	0.0547	0.0604
14	14	0.365	0.0457	0.0457	0.0543	0.0599	52	60	0.371	0.0984	0.0984	0.1169	0.1292
15	15	0.365	0.0234	0.0234	0.0277	0.0306	53	61	0.371	0.0865	0.0865	0.1029	0.1136
16	16	0.366	0.0042	0.0042	0.0050	0.0055	54	65	0.371	0.0516	0.0516	0.0614	0.0678
17	17	0.365	0.0040	0.0040	0.0047	0.0052	55	68	0.371	0.0342	0.0342	0.0407	0.0449
18	18	0.367	0.0014	0.0014	0.0016	0.0018	56	69	0.374	0.1558	0.1558	0.1854	0.2048
19	20	0.369	0.0126	0.0126	0.0150	0.0165	57	70	0.374	0.0985	0.0985	0.1173	0.1296
20	22	0.355	0.0000	0.0000	0.0000	0.0000	58	72	0.374	0.0649	0.0649	0.0773	0.0854
21	24	0.364	0.0184	0.0184	0.0195	0.0215	59	73	0.365	0.0023	0.0023	0.0027	0.0030
22	26	0.366	0.0251	0.0251	0.0268	0.0329	60	74	0.365	0.0005	0.0005	0.0006	0.0006
23	27	0.365	0.0000	0.0000	0.0000	0.0000	61	75	0.365	0.0008	0.0008	0.0009	0.0010
24	28	0.367	0.0079	0.0079	0.0094	0.0104	62	76	0.366	0.0014	0.0014	0.0016	0.0015
25	29	0.366	0.0102	0.0102	0.0121	0.0133	63	77	0.370	0.0072	0.0072	0.0085	0.0094
26	30	0.366	0.0115	0.0115	0.0137	0.0151	64	78	0.369	0.0014	0.0014	0.0016	0.0018
27	31	0.366	0.0048	0.0048	0.0057	0.0063	65	79	0.369	0.0017	0.0017	0.0021	0.0023
28	32	0.365	0.0000	0.0000	0.0000	0.0000	66	80	0.370	0.0011	0.0011	0.0013	0.0014
29	34	0.366	0.0142	0.0142	0.0168	0.0186	67	81	0.373	0.0426	0.0426	0.0507	0.0560
30	36	0.365	0.0045	0.0045	0.0053	0.0059	68	82	0.373	0.0060	0.0060	0.0072	0.0079
31	38	0.365	0.0015	0.0015	0.0018	0.0020	69	83	0.373	0.0016	0.0016	0.0019	0.0021
32	35	0.365	0.0136	0.0136	0.0162	0.0178	70	84	0.373	0.0015	0.0015	0.0017	0.0019
33	37	0.364	0.0002	0.0002	0.0003	0.0003	71	85	0.371	0.0133	0.0133	0.0158	0.0175
34	39	0.365	0.0021	0.0021	0.0025	0.0027	72	86	0.373	0.0100	0.0100	0.0119	0.0131
35	40	0.366	0.0113	0.0113	0.0134	0.0148	73	87	0.375	0.0045	0.0045	0.0053	0.0059
36	33	0.365	0.0021	0.0021	0.0025	0.0028	74	88	0.380	0.0170	0.0170	0.0202	0.0224
37	30	0.367	0.0098	0.0098	0.0116	0.0128	75	89	0.383	0.0112	0.0112	0.0133	0.0148
38	41	0.367	0.0193	0.0193	0.0229	0.0253							

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MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.3145E 06	6.5163E 05	0.197	6.61	823.4	0.84829E 06	0.0018	RUN NO. 7

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0103E 06	6.5163E 05	0.645	97.16	1482.1	364.78	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.950)	TIME(SEC)
1	1	313.6	564.4	2.543	2.241	72.943	64.272	1.9607E-03	2.0551E-03	0.397
2	2	313.3	563.9	1.350	1.190	72.983	64.308	9.8738E-04	1.0903E-03	0.416
3	3	313.4	564.2	1.058	0.933	72.961	64.289	7.7420E-04	8.5503E-04	0.479
4	4	313.3	564.0	0.923	0.813	72.972	64.299	6.7495E-04	7.4530E-04	0.442
5	5	313.1	563.7	0.860	0.758	73.001	64.324	6.2946E-04	6.9403E-04	0.429
6	6	312.9	563.1	0.773	0.681	73.043	64.360	5.6490E-04	6.2388E-04	0.417
7	7	312.4	562.3	0.721	0.635	73.109	64.419	5.2627E-04	5.8107E-04	0.419
8	8	311.6	561.0	0.681	0.600	73.215	64.512	4.9613E-04	5.4770E-04	0.427
9	9	311.0	559.9	0.576	0.507	73.306	64.593	4.1972E-04	4.6217E-04	0.414
10	10	310.4	558.7	0.469	0.413	73.396	64.672	3.4054E-04	3.7583E-04	0.411
11	11	309.6	557.3	0.433	0.382	73.509	64.772	3.1412E-04	3.4661E-04	0.407
12	12	338.7	609.7	0.000	0.000	0.000	0.000	0.0000	0.0000	2.613
13	13	309.5	557.1	0.776	0.684	73.524	64.785	5.6292E-04	6.2113E-04	0.431
14	14	308.6	555.5	3.368	2.968	73.652	64.897	2.4376E-03	2.6880E-03	0.414
15	15	308.5	555.4	1.720	1.516	73.660	64.904	1.2449E-03	1.3733E-03	0.464
16	16	309.5	557.0	0.308	0.271	73.526	64.796	2.2320E-04	2.4628E-04	-1.067
17	17	307.8	554.2	0.293	0.258	73.755	64.998	2.1151E-04	2.3328E-04	-1.085
18	18	301.4	542.5	0.103	0.090	74.680	65.803	7.3124E-05	8.0538E-05	-0.307
19	20	311.4	560.4	0.924	0.814	73.257	64.549	6.7248E-04	7.4233E-04	0.103
20	22	299.4	539.0	0.000	0.000	0.000	0.000	0.0000	0.0000	0.832
21	24	309.2	556.6	1.209	1.065	73.562	64.918	8.7424E-04	9.6672E-04	0.364
22	25	309.3	556.7	1.847	1.628	73.553	64.910	1.3396E-03	1.4772E-03	0.358
23	26	299.7	539.4	0.000	0.000	0.000	0.000	0.0000	0.0000	0.485
24	27	309.6	557.3	0.584	0.515	73.507	64.869	4.2379E-04	4.6762E-04	0.055
25	28	309.8	557.6	0.748	0.659	73.479	64.845	5.4290E-04	5.9907E-04	0.314
26	29	309.8	557.8	0.849	0.748	73.621	64.970	6.1491E-04	6.7829E-04	0.438
27	30	309.1	556.4	0.356	0.314	73.577	64.932	2.5778E-04	2.8441E-04	0.185
28	31	299.4	539.0	0.000	0.000	0.000	0.000	0.0000	0.0000	1.241
29	32	308.7	555.7	1.043	0.919	73.635	64.983	7.5625E-04	8.3319E-04	0.442
30	34	309.1	556.3	0.331	0.292	73.595	64.939	2.3955E-04	2.6463E-04	-0.149
31	33	309.3	555.0	0.110	0.097	73.699	64.930	7.9841E-05	8.8073E-05	-0.164
32	35	309.1	554.5	1.003	0.884	73.727	64.963	7.2529E-04	8.0003E-04	0.459
33	36	307.5	553.5	0.017	0.015	73.809	65.035	1.2445E-05	1.3728E-05	-1.374
34	37	307.9	554.3	0.153	0.134	73.744	64.978	1.1029E-04	1.2164E-04	-0.158
35	38	307.7	553.9	0.836	0.736	73.782	65.012	6.0349E-04	6.6561E-04	0.421
36	39	309.2	554.8	0.156	0.137	73.707	64.946	1.1252E-04	1.2412E-04	0.292
37	40	309.7	557.4	0.718	0.633	73.497	64.761	5.2087E-04	5.7475E-04	-0.018
38	41	310.0	558.0	1.418	1.250	73.450	64.719	1.0290E-03	1.1352E-03	0.400
39	42	308.0	554.5	0.124	0.109	73.732	64.968	8.9542E-05	9.8785E-05	0.187
40	43	309.4	557.0	0.460	0.405	73.532	64.792	3.3334E-04	3.6780E-04	0.005
41	44	309.5	557.3	0.694	0.611	73.663	64.907	5.0193E-04	5.5370E-04	0.372

42	46	312.5	560.6	1.015	0.894	73.097	64.400	7.4072E-04	8.1795E-04	D.188
43	46	312.7	562.8	0.915	0.806	73.071	64.385	6.6780E-04	7.3735E-04	D.202
44	47	310.6	559.1	0.516	0.455	73.363	64.642	3.7501E-04	4.1389E-04	D.263
45	49	309.9	556.1	6.167	5.434	73.604	64.855	4.4657E-03	4.9265E-03	D.330
46	50	311.4	560.5	11.090	10.565	73.252	64.545	8.7309E-03	9.6379E-03	D.182
47	51	311.5	560.7	10.275	9.053	73.240	64.534	7.4830E-03	8.2605E-03	D.258
48	53	311.9	561.4	6.623	5.836	73.181	64.483	4.9280E-03	5.3301E-03	D.305
49	55	311.6	560.9	5.528	4.871	73.227	64.523	4.0267E-03	4.4451E-03	D.314
50	57	311.1	560.0	4.768	4.202	73.289	64.577	3.4702E-03	3.8304E-03	D.305
51	59	310.4	558.1	3.378	2.977	73.364	64.643	2.4557E-03	2.7104E-03	D.277
52	60	313.4	564.0	7.177	6.324	72.972	64.298	5.2499E-03	5.7968E-03	D.217
53	61	313.4	564.1	6.314	5.564	72.963	64.291	4.6185E-03	5.1007E-03	D.325
54	64	313.4	564.1	3.765	3.317	72.965	64.292	2.7538E-03	3.0413E-03	D.283
55	65	313.2	563.9	2.497	2.200	72.990	64.314	1.8256E-03	2.0161E-03	D.235
56	67	315.7	568.3	11.313	9.969	72.631	63.998	8.3135E-03	9.1918E-03	D.280
57	70	315.0	567.6	7.154	6.304	72.612	63.981	5.2417E-03	5.7914E-03	D.294
58	72	315.7	568.3	4.715	4.155	72.632	63.999	3.4469E-03	3.8080E-03	D.278
59	73	313.6	564.5	0.168	0.148	73.150	64.435	1.2132E-04	1.3399E-04	D.309
60	74	312.1	561.2	0.034	0.030	73.670	64.913	2.4329E-05	2.6997E-05	-0.327
61	75	312.3	562.0	0.056	0.050	73.693	64.933	4.0379E-05	4.5003E-05	-0.083
62	76	309.0	556.2	0.101	0.089	73.594	64.846	7.3393E-05	8.0971E-05	D.165
63	77	312.1	561.8	0.525	0.462	73.145	64.451	3.9257E-04	4.3239E-04	D.412
64	78	311.9	561.4	0.100	0.088	73.192	64.494	7.2992E-05	8.0584E-05	D.235
65	79	311.6	561.0	0.126	0.111	73.215	64.513	9.2051E-05	1.0162E-04	D.291
66	80	312.3	562.2	0.077	0.068	73.119	64.428	5.6242E-05	6.2058E-05	D.304
67	81	315.3	567.6	3.096	2.728	72.699	64.049	2.2745E-03	2.5131E-03	D.453
68	82	314.9	566.7	0.439	0.387	72.762	64.113	3.2213E-04	3.5587E-04	D.442
69	83	315.1	567.1	0.113	0.100	72.729	64.083	8.3306E-05	9.2038E-05	D.207
70	84	315.3	567.5	0.106	0.093	72.699	64.059	7.7631E-05	8.5772E-05	D.208
71	85	313.2	563.8	0.972	0.856	72.903	64.239	7.1054E-04	7.8488E-04	D.423
72	86	315.0	567.0	0.723	0.639	72.735	64.090	5.3226E-04	5.8808E-04	D.441
73	87	316.7	570.1	0.326	0.287	72.484	63.873	2.3866E-04	2.6372E-04	D.340
74	88	317.9	572.5	1.220	1.075	71.902	63.365	8.9714E-04	1.0034E-03	D.447
75	89	323.6	582.4	0.900	0.705	71.515	63.015	5.9862E-04	6.6272E-04	D.340

SYSTEM DENSITY-VELOCITY PRODUCT = 1.94055E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA *** TEST NO. 345

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	RUN NO.
5.22	3.1502E 06	6.1932E 05	0.197	6.80	864.5	0.89355E 06	0.0018	8

MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(PT)	ORB MATED
5.22	9.6019E 05	6.1932E 05	0.645	99.96	1556.1	384.25	0.0060	$\alpha = 30°$, $\beta = -5°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.354	0.0068	0.0068	0.0080	0.0088	39	42	0.348	0.0127	0.0127	0.0150	0.0165
2	2	0.354	0.0057	0.0057	0.0067	0.0074	40	43	0.350	0.0396	0.0396	0.0468	0.0515
3	3	0.354	0.0061	0.0061	0.0072	0.0079	41	44	0.348	0.0087	0.0087	0.0102	0.0113
4	4	0.354	0.0064	0.0064	0.0076	0.0084	42	45	0.353	0.0666	0.0666	0.0788	0.0868
5	5	0.354	0.0060	0.0060	0.0071	0.0078	43	46	0.354	0.0607	0.0607	0.0718	0.0791
6	6	0.353	0.0087	0.0087	0.0079	0.0087	44	47	0.351	0.0256	0.0256	0.0302	0.0332
7	7	0.353	0.0069	0.0069	0.0081	0.0090	45	48	0.348	0.0156	0.0156	0.0184	0.0202
8	8	0.352	0.0068	0.0063	0.0081	0.0089	46	50	0.352	0.1260	0.1260	0.1490	0.1640
9	9	0.351	0.0071	0.0071	0.0084	0.0092	47	51	0.352	0.1125	0.1125	0.1330	0.1464
10	10	0.350	0.0074	0.0074	0.0088	0.0097	48	53	0.353	0.0691	0.0691	0.0817	0.0899
11	11	0.349	0.0067	0.0067	0.0079	0.0087	49	55	0.352	0.0566	0.0566	0.0669	0.0736
12	12	0.381	0.0000	0.0000	0.0000	0.0000	50	57	0.351	0.0570	0.0570	0.0674	0.0741
13	13	0.349	0.0088	0.0088	0.0104	0.0114	51	59	0.351	0.0431	0.0431	0.0509	0.0560
14	14	0.348	0.0177	0.0177	0.0209	0.0230	52	60	0.354	0.1255	0.1255	0.1485	0.1634
15	15	0.348	0.0048	0.0048	0.0057	0.0063	53	61	0.354	0.1073	0.1073	0.1269	0.1397
16	16	0.349	0.0804	0.0804	0.0950	0.1045	54	65	0.354	0.0690	0.0690	0.0816	0.0898
17	17	0.347	0.0711	0.0711	0.0840	0.0923	55	68	0.354	0.0448	0.0448	0.0530	0.0583
18	18	0.339	0.0143	0.0143	0.0168	0.0184	56	69	0.357	0.1939	0.1939	0.2296	0.2528
19	20	0.352	0.0574	0.0574	0.0679	0.0747	57	70	0.357	0.1156	0.1156	0.1368	0.1507
20	22	0.336	0.0000	0.0000	0.0000	0.0000	58	72	0.357	0.0705	0.0705	0.0834	0.0919
21	24	0.349	0.0312	0.0312	0.0368	0.0405	59	73	0.348	0.0050	0.0050	0.0059	0.0065
22	25	0.349	0.0188	0.0188	0.0222	0.0244	60	74	0.348	0.0026	0.0026	0.0031	0.0034
23	26	0.336	0.0000	0.0000	0.0000	0.0000	61	75	0.347	0.0026	0.0026	0.0031	0.0034
24	27	0.349	0.0552	0.0552	0.0652	0.0718	62	76	0.348	0.0024	0.0024	0.0028	0.0031
25	28	0.350	0.0296	0.0296	0.0349	0.0384	63	77	0.352	0.0117	0.0117	0.0139	0.0153
26	29	0.348	0.0070	0.0070	0.0083	0.0091	64	78	0.352	0.0029	0.0029	0.0034	0.0038
27	30	0.349	0.0339	0.0339	0.0366	0.0402	65	79	0.351	0.0047	0.0047	0.0056	0.0061
28	31	0.336	0.0000	0.0000	0.0000	0.0000	66	80	0.352	0.0042	0.0042	0.0050	0.0055
29	32	0.348	0.0048	0.0048	0.0057	0.0063	67	81	0.356	0.0684	0.0684	0.0810	0.0892
30	34	0.349	0.0546	0.0547	0.0646	0.0710	68	82	0.356	0.0134	0.0134	0.0159	0.0175
31	33	0.348	0.0152	0.0152	0.0180	0.0198	69	83	0.356	0.0029	0.0029	0.0034	0.0037
32	35	0.347	0.0061	0.0061	0.0073	0.0080	70	84	0.356	0.0030	0.0030	0.0035	0.0039
33	36	0.347	0.0077	0.0077	0.0091	0.0100	71	85	0.354	0.0197	0.0197	0.0233	0.0256
34	37	0.347	0.0270	0.0270	0.0319	0.0350	72	86	0.356	0.0138	0.0138	0.0164	0.0180
35	38	0.347	0.0086	0.0086	0.0102	0.0112	73	87	0.358	0.0062	0.0062	0.0074	0.0081
36	39	0.348	0.0153	0.0153	0.0181	0.0199	74	88	0.363	0.0228	0.0228	0.0271	0.0298
37	40	0.350	0.0799	0.0799	0.0945	0.1039	75	89	0.367	0.0183	0.0183	0.0217	0.0240
38	41	0.350	0.0243	0.0243	0.0287	0.0315							

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MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.1502E 06	6.1932E 05	0.197	6.80	864.5	0.89355E 06	0.0018	RUN NO. 8

MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	9.6019E 05	6.1932E 05	0.645	99.96	1556.1	384.25	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.950)	TIME(SEC)
1	1	314.9	566.9	0.545	0.480	80.233	70.696	3.6796E-04	4.0506E-04	0.174
2	2	314.6	566.3	0.455	0.401	80.274	70.732	3.0700E-04	3.3793E-04	0.330
3	3	314.9	566.9	0.486	0.428	80.228	70.692	3.2797E-04	3.6103E-04	0.309
4	4	314.9	566.9	0.516	0.455	80.232	70.695	3.4832E-04	3.8343E-04	0.293
5	5	314.8	566.7	0.483	0.426	80.247	70.708	3.2615E-04	3.5902E-04	0.288
6	6	314.4	566.0	0.539	0.475	80.303	70.758	3.6347E-04	4.0006E-04	0.314
7	7	313.9	565.0	0.553	0.487	80.382	70.927	3.7237E-04	4.0981E-04	0.366
8	8	313.0	563.5	0.549	0.484	80.507	70.937	3.6907E-04	4.0612E-04	0.397
9	9	312.1	561.8	0.572	0.504	80.638	71.053	3.8403E-04	4.2249E-04	0.466
10	10	311.4	560.6	0.601	0.530	80.739	71.142	4.0303E-04	4.4334E-04	0.456
11	11	310.6	559.0	0.542	0.478	80.865	71.253	3.6267E-04	3.9887E-04	0.354
12	12	338.7	609.7	0.000	0.000	0.000	0.000	0.0000	0.0000	2.802
13	13	310.5	558.9	0.712	0.628	80.879	71.265	4.7650E-04	5.2405E-04	0.402
14	14	309.5	557.1	1.432	1.262	81.020	71.389	9.5601E-04	1.0512E-03	0.383
15	15	309.6	557.3	0.392	0.346	81.010	71.381	2.6198E-04	2.8807E-04	0.412
16	16	310.8	559.5	6.502	5.729	80.832	71.224	4.3519E-03	4.7865E-03	0.174
17	17	309.0	556.3	5.767	5.082	81.090	71.452	3.8461E-03	4.2287E-03	0.172
18	18	301.6	542.9	1.171	1.032	82.173	72.406	7.6961E-04	8.4492E-04	0.356
19	20	312.9	563.3	4.626	4.076	80.521	70.950	3.1096E-03	3.4216E-03	0.310
20	22	299.2	538.5	0.000	0.000	0.000	0.000	0.0000	0.0000	1.991
21	24	310.2	558.3	2.521	2.222	80.927	71.307	1.6853E-03	1.8534E-03	0.426
22	25	310.2	558.3	1.517	1.337	80.926	71.307	1.0143E-03	1.1154E-03	0.312
23	26	299.3	538.7	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	310.9	559.6	4.462	3.932	80.820	71.214	2.9872E-03	3.2856E-03	0.273
25	28	311.2	560.2	2.389	2.105	80.775	71.173	1.6001E-03	1.7600E-03	0.421
26	29	309.4	557.0	0.567	0.499	81.032	71.400	3.7833E-04	4.1600E-04	0.289
27	30	310.4	558.8	2.503	2.205	80.886	71.271	1.6738E-03	1.8408E-03	0.376
28	31	299.2	538.5	0.000	0.000	0.000	0.000	0.0000	0.0000	-0.588
29	32	309.5	557.0	0.390	0.344	81.027	71.396	2.6063E-04	2.8658E-04	0.325
30	34	310.5	558.9	4.420	3.895	80.879	71.265	2.9565E-03	3.2515E-03	0.302
31	33	309.6	557.3	1.232	1.086	81.009	71.380	8.2271E-04	9.0466E-04	0.407
32	35	308.9	555.9	0.499	0.439	81.115	71.474	3.3240E-04	3.6546E-04	0.486
33	36	308.4	555.1	0.626	0.552	81.184	71.534	4.1702E-04	4.5845E-04	0.337
34	37	309.1	556.3	2.187	1.927	81.084	71.446	1.4588E-03	1.6040E-03	0.362
35	38	308.4	555.2	0.699	0.616	81.175	71.527	4.6548E-04	5.1173E-04	0.367
36	39	309.5	557.0	1.243	1.095	81.027	71.395	8.2976E-04	9.1238E-04	0.494
37	40	311.4	560.5	6.455	5.688	80.747	71.149	4.3259E-03	4.7585E-03	0.298
38	41	311.7	561.1	1.958	1.725	80.701	71.108	1.3126E-03	1.4440E-03	0.513
39	42	309.3	556.7	1.027	0.905	81.054	71.419	6.8533E-04	7.5354E-04	0.389
40	43	311.0	559.8	3.203	2.822	80.800	71.195	2.1447E-03	2.3590E-03	0.315
41	44	309.8	557.6	0.703	0.619	80.982	71.356	4.6930E-04	5.1606E-04	0.457

42	45	314.4	566.0	5.352	4.715	80.302	70.757	3.6087E-03	3.9721E-03	0.201
43	46	314.4	566.6	4.872	4.293	80.250	70.711	3.2875E-03	3.6188E-03	0.215
44	47	312.2	561.9	2.060	1.815	80.630	71.046	1.3829E-03	1.5214E-03	0.245
45	48	309.4	556.9	1.261	1.111	81.040	71.407	8.4182E-04	9.2562E-04	0.215
46	50	313.3	564.0	10.138	8.933	80.466	70.902	6.8204E-03	7.5054E-03	0.137
47	51	313.5	564.2	9.050	7.974	80.444	70.882	6.0902E-03	6.7021E-03	0.260
48	53	313.6	564.5	5.553	4.893	80.422	70.863	3.7383E-03	4.1140E-03	0.310
49	55	313.1	563.6	4.553	4.012	80.497	70.929	3.0621E-03	3.3695E-03	0.333
50	57	312.6	562.7	4.591	4.045	80.568	70.991	3.0840E-03	3.3933E-03	0.332
51	59	312.0	561.6	3.472	3.060	80.659	71.071	2.3298E-03	2.5631E-03	0.282
52	60	315.2	567.3	10.062	8.866	80.194	70.662	6.7951E-03	7.4805E-03	0.223
53	61	314.8	566.6	8.611	7.588	80.251	70.712	5.8109E-03	6.3964E-03	0.322
54	65	314.8	566.6	5.534	4.877	80.251	70.712	3.7346E-03	4.1110E-03	0.295
55	68	314.7	566.4	3.593	3.166	80.269	70.727	2.4239E-03	2.6680E-03	0.196
56	69	317.6	571.7	15.478	13.638	79.842	70.351	1.0505E-02	1.1571E-02	0.381
57	70	317.7	571.8	9.224	8.128	79.829	70.340	6.2620E-03	6.8972E-03	0.104
58	72	317.5	571.5	5.627	4.958	79.856	70.364	3.8187E-03	4.2058E-03	0.257
59	73	319.6	557.3	0.403	0.355	81.008	71.379	2.6931E-04	2.9613E-04	0.349
60	74	316.4	556.9	0.211	0.186	81.041	71.408	1.4057E-04	1.5456E-04	0.155
61	75	319.2	556.5	0.214	0.189	81.073	71.436	1.4303E-04	1.5727E-04	0.312
62	76	310.0	558.1	0.195	0.172	80.945	71.323	1.3040E-04	1.4340E-04	0.074
63	77	313.6	564.4	0.944	0.832	80.427	70.867	6.3548E-04	6.9935E-04	0.451
64	78	313.1	563.6	0.232	0.205	80.494	70.926	1.5613E-04	1.7181E-04	0.326
65	79	312.6	562.7	0.380	0.335	80.568	70.992	2.5551E-04	2.8114E-04	0.372
66	80	313.5	564.3	0.340	0.300	80.441	70.880	2.2887E-04	2.5187E-04	0.334
67	81	317.0	570.6	5.467	4.817	79.930	70.429	3.7058E-03	4.0811E-03	0.629
68	82	316.3	569.4	1.073	0.946	80.026	70.514	7.2647E-04	7.9994E-04	0.508
69	83	316.7	570.0	0.229	0.202	79.978	70.472	1.5510E-04	1.7080E-04	0.382
70	84	316.9	570.5	0.236	0.208	79.941	70.438	1.6001E-04	1.7621E-04	0.360
71	85	315.0	567.0	1.580	1.392	80.221	70.686	1.0664E-03	1.1740E-03	0.372
72	86	316.9	570.4	1.106	0.974	79.947	70.444	7.4944E-04	8.2532E-04	0.338
73	87	318.7	573.7	0.495	0.436	79.679	70.208	3.3664E-04	3.7087E-04	0.334
74	88	323.3	581.9	1.803	1.588	79.013	69.621	1.2382E-03	1.3654E-03	0.351
75	89	326.3	587.4	1.438	1.267	78.570	69.231	9.9400E-04	1.0969E-03	0.314

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9339E-01 (SLUGS/FT2-SEC)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	P(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.2977E 06	6.4835E 05	0.197	6.63	827.2	0.85244E 06	0.0018	RUN NO. 9
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET MATED
5.22	1.0052E 06	6.4835E 05	0.645	97.40	1488.9	366.57	0.0060	$\alpha = 30°$, $\beta = -5°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.3[illegible]	0.3105	0.3105	0.3702	0.4096	39	51	0.373	0.0138	0.0138	0.0164	0.0181
2	[illegible]	0.3[illegible]	0.0424	0.0424	0.0505	0.0555	40	54	0.369	0.0095	0.0095	0.0113	0.0125
3	3	0.379	0.0973	0.0973	0.1160	0.1283	41	55	0.368	0.0107	0.0107	0.0127	0.0140
[illegible]	[illegible]	[illegible]	[illegible]316	0.0316	0.0377	0.0416	42	56	0.369	0.0066	0.0066	0.0079	0.0087
5	6	0.376	0.0220	0.0220	0.0262	0.0289	43	57	0.370	0.0029	0.0029	0.0034	0.0038
6	6	0.375	0.0146	0.0146	0.0174	0.0193	44	58	0.371	0.0046	0.0046	0.0055	0.0060
7	7	0.374	0.0109	0.0109	0.0130	0.0144	45	60	0.368	0.0128	0.0128	0.0152	0.0168
8	8	0.373	0.0086	0.0086	0.0103	0.0114	46	61	0.369	0.0151	0.0151	0.0180	0.0198
9	9	0.372	0.0073	0.0073	0.0087	0.0096	47	62	0.369	0.0092	0.0092	0.0109	0.0120
10	10	0.371	0.0066	0.0066	0.0079	0.0087	48	63	0.370	0.0034	0.0034	0.0041	0.0045
11	11	0.370	0.0055	0.0055	0.0065	0.0072	49	64	0.371	0.0044	0.0044	0.0053	0.0058
12	12	0.268	0.0000	0.0000	0.0000	0.0000	50	65	0.372	0.0145	0.0145	0.0172	0.0190
13	13	0.370	0.0188	0.0188	0.0223	0.0247	51	66	0.373	0.0314	0.0314	0.0374	0.0413
14	14	0.368	0.0032	0.0032	0.0038	0.0042	52	67	0.374	0.0499	0.0499	0.0594	0.0657
25	25	0.368	0.0067	0.0067	0.0080	0.0088	53	68	0.374	0.0674	0.0674	0.0802	0.0886
[illegible]	[illegible]	0.370	0.0017	0.0017	0.0021	0.0022	54	70	0.369	0.0178	0.0178	0.0212	0.0234
[illegible]	[illegible]	[illegible]	[illegible]054	0.0054	[illegible]064	[illegible]071	55	1	0.370	0.0120	0.0120	0.0143	0.0157
1	28	0.372	0.0142	0.0142	0.0168	0.0186	56	72	0.370	0.0041	0.0041	0.0049	0.0054
10	30	0.368	0.0075	0.0075	0.0089	0.0098	57	73	0.371	0.0041	0.0041	0.0049	0.0054
20	31	0.370	0.0018	0.0018	0.0021	0.0023	58	77	0.369	0.0252	0.0252	0.0299	0.0330
21	32	0.369	0.0066	0.0066	0.0078	0.0087	59	78	0.370	0.0193	0.0193	0.0230	0.0254
22	33	0.370	0.0021	0.0021	0.0025	0.0027	60	79	0.370	0.0051	0.0051	0.0061	0.0067
23	34	0.370	0.0021	0.0021	0.0025	0.0027	61	81	0.372	0.0135	0.0135	0.0160	0.0177
24	35	0.371	0.0053	0.0053	0.0063	0.0070	62	84	0.369	0.0278	0.0278	0.0330	0.0365
25	36	0.372	0.0142	0.0142	0.0169	0.0187	63	85	0.370	0.0286	0.0286	0.0340	0.0376
26	37	0.374	0.0285	0.0285	0.0339	0.0374	64	86	0.370	0.0065	0.0065	0.0077	0.0085
27	38	0.374	0.0441	0.0441	0.0525	0.0580	65	90	0.370	0.0275	0.0275	0.0327	0.0361
28	39	0.373	0.0653	0.0653	0.0777	0.0858	66	91	0.371	0.0364	0.0364	0.0433	0.0478
29	40	0.369	0.0068	0.0068	0.0081	0.0089	67	92	0.371	0.0075	0.0075	0.0089	0.0098
30	41	0.369	0.0074	0.0074	0.0088	0.0097	68	94	0.375	0.0145	0.0145	0.0172	0.0190
31	42	0.370	0.0029	0.0029	0.0035	0.0038	69	98	0.1370	0.0292	0.0292	0.0347	0.0383
32	43	0.370	0.0022	0.0022	0.0026	0.0028	70	99	0.371	0.0396	0.0396	0.0471	0.0521
33	44	0.372	0.0047	0.0047	0.0056	0.0062	71	100	0.371	0.0092	0.0092	0.0110	0.0121
34	46	0.369	0.0077	0.0077	0.0092	0.0102	72	103	0.370	0.0259	0.0259	0.0308	0.0340
35	47	0.369	0.0091	0.0091	0.0108	0.0119	73	104	0.371	0.0489	0.0489	0.0581	0.0642
36	48	0.370	0.0043	0.0043	0.0051	0.0056	74	105	0.371	0.0121	0.0121	0.0143	0.0158
37	49	0.371	0.0027	0.0027	0.0032	0.0035	75	107	0.372	0.0128	0.0128	0.0152	0.0168
38	50	0.372	0.0050	0.0050	0.0060	0.0066							

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MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.2979E 06	6.4835E 05	0.197	6.63	827.2	0.85244E 06	0.0018	RUN NO.	9
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	1.0052E 06	6.4835E 05	0.645	97.40	1488.9	366.57	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	322.9	581.3	22.438	19.771	72.275	63.684	1.6637E-02	1.8409E-02	0.235
2	2	322.2	580.0	3.068	2.703	72.374	63.771	2.2713E-03	2.5127E-03	0.491
3	3	321.6	578.8	7.054	6.216	72.467	63.854	5.2147E-03	5.7682E-03	0.560
4	4	320.3	576.5	2.296	2.023	72.656	64.020	1.6925E-03	1.8715E-03	0.477
5	5	319.5	575.0	1.598	1.408	72.769	64.119	1.1759E-03	1.3001E-03	0.442
6	6	318.5	573.3	1.067	0.940	72.906	64.240	7.9349E-04	8.6601E-04	0.400
7	7	317.5	571.5	0.798	0.703	73.048	64.365	5.8420E-04	6.4558E-04	0.365
8	8	316.4	569.6	0.633	0.557	73.202	64.501	4.6221E-04	5.1064E-04	0.346
9	9	315.7	568.2	0.534	0.471	73.310	64.596	3.8972E-04	4.3048E-04	0.373
10	10	314.8	566.6	0.487	0.429	73.436	64.707	3.5425E-04	3.9122E-04	0.300
11	11	313.8	564.9	0.405	0.357	73.573	64.828	2.9443E-04	3.2508E-04	0.264
12	12	221.2	398.2	0.000	0.000	86.940	76.606	0.0000	0.0000	0.155
13	13	314.4	565.9	1.381	1.217	73.496	64.760	1.0043E-03	1.1091E-03	0.294
14	13	312.0	561.5	0.235	0.207	73.843	65.066	1.6968E-04	1.8726E-04	0.226
15	25	312.2	562.0	0.498	0.439	73.808	65.035	3.6043E-04	3.9780E-04	0.340
16	26	314.0	565.2	0.128	0.113	73.553	64.810	9.3308E-05	1.0303E-04	0.193
17	27	315.0	567.1	0.397	0.350	73.404	64.679	2.8934E-04	3.1955E-04	0.269
18	28	315.8	568.4	1.038	0.915	73.294	64.582	7.5757E-04	8.3683E-04	0.311
19	30	312.5	562.6	0.551	0.486	73.761	64.993	3.9925E-04	4.4069E-04	0.325
20	31	314.2	565.6	0.130	0.114	73.521	64.782	9.4324E-05	1.0415E-04	0.169
21	32	312.4	562.4	0.487	0.429	73.778	65.008	3.5254E-04	3.8912E-04	0.309
22	33	313.7	564.6	0.154	0.135	73.601	64.852	1.1151E-04	1.2312E-04	0.305
23	34	314.3	565.8	0.154	0.135	73.507	64.770	1.1169E-04	1.2334E-04	0.229
24	35	315.2	567.3	0.391	0.344	73.380	64.658	2.8470E-04	3.1445E-04	0.284
25	36	316.1	569.0	1.043	0.919	73.247	64.540	7.6126E-04	8.4056E-04	0.315
	37	317.1	570.9	2.080	1.833	73.101	64.412	1.5227E-03	1.6825E-03	0.337
7	38	317.6	571.7	3.222	2.839	73.035	64.354	2.3607E-03	2.6088E-03	0.347
28	39	316.2	569.1	4.782	4.213	73.237	64.532	3.4921E-03	3.8579E-03	0.360
29	40	312.6	562.7	0.501	0.441	73.748	64.982	3.6279E-04	4.0045E-04	0.277
30	41	312.8	563.1	0.547	0.482	73.721	64.959	3.9681E-04	4.3802E-04	0.282
31	42	313.8	564.8	0.214	0.188	73.584	64.838	1.5522E-04	1.7137E-04	0.306
32	43	314.4	566.0	0.158	0.139	73.487	64.752	1.1510E-04	1.2710E-04	0.228
33	44	315.3	567.6	0.344	0.303	73.363	64.643	2.5057E-04	2.7675E-04	0.315
34	46	312.9	563.3	0.571	0.503	73.705	64.944	4.1412E-04	4.5714E-04	0.314
35	47	313.1	563.6	0.668	0.588	73.680	64.922	4.8433E-04	5.3467E-04	0.325
36	48	314.0	565.3	0.315	0.278	73.547	64.804	2.2903E-04	2.5289E-04	0.314
37	49	314.5	566.1	0.197	0.173	73.476	64.742	1.4326E-04	1.5820E-04	0.285
38	50	315.3	567.6	0.370	0.326	73.363	64.643	2.6965E-04	2.9782E-04	0.348
39	51	316.5	569.7	1.008	0.888	73.151	64.491	7.3695E-04	8.1418E-04	0.346
40	54	313.2	563.8	0.703	0.619	73.664	64.908	5.0995E-04	5.6296E-04	0.300
41	55	312.5	562.6	0.787	0.694	73.760	64.992	5.7042E-04	6.2962E-04	0.321

42	55	313.5	564.3	0.487	0.429	73.623	64.872	3.5332E-04	3.5008E-04	0.397
43	57	314.3	565.7	0.213	0.187	73.509	64.771	1.5465E-04	1.7076E-04	0.260
44	58	314.8	566.6	0.337	0.297	73.436	64.707	2.4570E-04	2.7134E-04	0.326
45	60	312.7	562.9	0.944	0.832	73.736	64.971	6.8394E-04	7.5455E-04	0.359
46	61	313.0	563.4	1.114	0.982	73.655	64.935	8.0801E-04	8.9197E-04	0.383
47	62	313.5	564.3	0.675	0.595	73.623	64.872	4.8983E-04	5.4078E-04	0.433
48	63	314.0	565.3	0.251	0.221	73.546	64.804	1.8233E-04	2.0133E-04	0.317
49	64	314.7	566.5	0.326	0.287	73.449	64.718	2.3694E-04	2.6167E-04	0.341
50	65	315.8	568.5	1.060	0.934	73.292	64.580	7.7370E-04	8.5464E-04	0.333
51	66	316.9	570.4	2.298	2.025	73.137	64.444	1.6807E-03	1.8570E-03	0.351
52	67	317.4	571.8	3.645	3.212	73.030	64.349	2.6709E-03	2.9516E-03	0.351
53	68	317.2	571.0	4.927	4.341	73.092	64.404	3.6062E-03	3.9848E-03	0.357
54	70	313.1	563.6	1.315	1.159	73.681	64.923	9.5361E-04	1.0527E-03	0.425
55	71	313.9	564.9	0.883	0.778	73.574	64.829	6.4150E-04	7.0829E-04	0.413
56	72	314.0	565.3	0.305	0.268	73.547	64.804	2.2147E-04	2.4455E-04	0.401
57	73	314.8	566.6	0.301	0.265	73.444	64.714	2.1914E-04	2.4201E-04	0.366
58	77	315.8	568.3	1.855	1.635	73.663	64.907	1.3459E-03	1.4858E-03	0.435
59	78	315.2	567.2	1.421	1.252	73.549	64.807	1.0329E-03	1.1405E-03	0.429
60	79	315.2	567.6	0.375	0.330	73.519	64.781	2.7249E-04	3.0089E-04	0.415
61	81	314.5	565.9	0.688	0.871	73.337	64.620	7.2045E-04	7.9577E-04	0.323
62	84	313.6	564.5	2.047	1.803	73.609	64.860	1.4860E-03	1.6406E-03	0.441
63	85	314.2	565.6	2.105	1.855	73.522	64.783	1.5308E-03	1.6903E-03	0.407
64	86	314.1	565.5	0.475	0.419	73.580	64.790	3.4545E-04	3.8145E-04	0.450
65	89	313.8	564.9	2.025	1.784	73.574	64.829	1.4712E-03	1.6244E-03	0.412
66	91	314.9	566.7	2.674	2.356	73.428	64.700	1.9470E-03	2.1502E-03	0.397
67	92	314.5	566.0	0.549	0.483	73.482	64.713	3.9944E-04	4.4112E-04	0.385
68	97	314.1	565.4	2.148	1.892	73.528	64.797	1.5612E-03	1.7239E-03	0.403
69	99	315.0	567.1	2.910	2.564	73.403	64.678	2.1196E-03	2.3409E-03	0.360
71	100	315.2	567.3	0.677	0.597	73.385	64.662	4.9364E-04	5.4520E-04	0.394
72	103	314.1	565.4	1.904	1.677	73.534	64.793	1.3839E-03	1.5281E-03	0.402
73	104	315.3	567.5	3.585	3.159	73.369	64.648	2.6129E-03	2.8959E-03	0.304
74	105	315.2	567.4	0.885	0.780	73.379	64.657	6.4512E-04	7.1251E-04	0.400
75	107	315.9	568.6	0.936	0.824	73.282	64.571	6.8286E-04	7.5431E-04	0.294

PACE-STA... DENSITY-VELOCITY PRODUCT = 1.9395E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.30	1.3346E 07	2.6238E 06	0.197	27.93	828.3	0.85367E 06	0.0018	RUN NO. 10

MACH	RE/F	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET MATED
5.30	4.0679E 06	2.6238E 06	0.645	410.60	1490.9	1367.10	0.0060	$\alpha = 30°$, $\beta = 0°$

	T/C	H#/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	H#/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.417	0.3422	0.3422	0.4130	0.4607	39	51	0.392	0.0108	0.0108	0.0129	0.0143
2	2	0.414	0.1615	0.1615	0.1948	0.2172	40	54	0.372	0.0166	0.0166	0.0197	0.0218
3	3	0.425	0.0835	0.0965	0.1188	0.1324	41	55	0.370	0.0144	0.0144	0.0172	0.0190
4	4	0.410	0.0315	0.0315	0.0380	0.0423	42	56	0.377	0.0144	0.0144	0.0171	0.0189
5	5	0.428	0.0234	0.0234	0.0281	0.0313	43	57	0.381	0.0106	0.0106	0.0127	0.0140
6	6	0.405	0.0151	0.0151	0.0182	0.0202	44	58	0.386	0.0111	0.0111	0.0133	0.0147
7	7	0.409	0.0131	0.0131	0.0158	0.0176	45	60	0.371	0.0128	0.0128	0.0153	0.0169
8	8	0.393	0.0133	0.0133	0.0160	0.0177	46	61	0.370	0.0110	0.0110	0.0131	0.0145
9	9	0.393	0.0134	0.0134	0.0160	0.0177	47	62	0.401	0.0000	0.0000	0.0000	0.0000
10	10	0.393	0.0117	0.0117	0.0139	0.0155	48	63	0.382	0.0096	0.0096	0.0114	0.0127
11	11	0.378	0.0088	0.0086	0.0105	0.0116	49	64	0.387	0.0097	0.0097	0.0115	0.0128
12	12	0.397	0.0000	0.0000	0.0000	0.0000	50	65	0.392	0.0117	0.0117	0.0140	0.0155
13	13	0.393	0.0142	0.0142	0.0170	0.0188	51	66	0.397	0.0396	0.0396	0.0475	0.0527
14	14	0.371	0.0099	0.0099	0.0117	0.0130	52	67	0.401	0.0827	0.0827	0.0993	0.1103
15	15	0.372	0.0094	0.0094	0.0111	0.0123	53	68	0.390	0.1619	0.1619	0.1937	0.2147
16	16	0.383	0.0051	0.0051	0.0061	0.0068	54	70	0.369	0.0102	0.0102	0.0121	0.0134
			0.0033	0.0033	0.0039	0.0043	55	71	0.371	0.0094	0.0094	0.0112	0.0123
			0.0098	0.0098	0.0117	0.0129	56	72	0.381	0.0090	0.0090	0.0107	0.0119
	20	0.381	0.0106	0.0106	0.0126	0.0139	57	73	0.386	0.0086	0.0086	0.0102	0.0113
	21	0.383	0.0076	0.0076	0.0090	0.0100	58	77	0.374	0.0147	0.0147	0.0175	0.0193
21	22	0.371	0.0101	0.0101	0.0120	0.0133	59	78	0.380	0.0125	0.0125	0.0149	0.0165
	23	0.378	0.0153	0.0153	0.0182	0.0202	60	79	0.383	0.0090	0.0090	0.0108	0.0119
	24	0.378	0.0093	0.0093	0.0111	0.0123	61	81	0.390	0.0104	0.0104	0.0125	0.0138
	25	0.377	0.0051	0.0051	0.0061	0.0068	62	84	0.375	0.0127	0.0127	0.0151	0.0167
25	26	0.391	0.0094	0.0094	0.0113	0.0125	63	85	0.382	0.0131	0.0131	0.0156	0.0173
	27	0.390	0.0228	0.0228	0.0273	0.0303	64	86	0.384	0.0091	0.0091	0.0109	0.0121
27	28	0.356	0.0517	0.0517	0.0620	0.0689	65	90	0.372	0.0255	0.0255	0.0304	0.0335
28	29	0.366	0.1421	0.1421	0.1699	0.1883	66	91	0.380	0.0280	0.0280	0.0334	0.0370
29	40	0.371	0.0111	0.0111	0.0132	0.0146	67	92	0.384	0.0125	0.0125	0.0149	0.0165
	41	0.383	0.0123	0.0123	0.0147	0.0162	68	94	0.392	0.0097	0.0097	0.0117	0.0129
1	42	0.377	0.0194	0.0194	0.0231	0.0255	69	98	0.376	0.0454	0.0454	0.0540	0.0597
32 A	42	0.383	0.0123	0.0123	0.0146	0.0162	70	99	0.386	0.0434	0.0434	0.0519	0.0575
33	44	0.367	0.0097	0.0097	0.0116	0.0128	71	100	0.389	0.0147	0.0147	0.0176	0.0195
34	46	0.372	0.0152	0.0152	0.0180	0.0199	72	103	0.378	0.0560	0.0560	0.0667	0.0738
35	47	0.372	0.0172	0.0172	0.0204	0.0226	73	104	0.386	0.0610	0.0610	0.0729	0.0807
36	48	0.379	0.0200	0.0200	0.0239	0.0264	74	105	0.389	0.0232	0.0232	0.0277	0.0307
37	49	0.383	0.0147	0.0147	0.0176	0.0194	75	107	0.393	0.0100	0.0100	0.0120	0.0133
38	50	0.387	0.0131	0.0131	0.0156	0.0173							

PRECEDING PAGE BLANK NOT FILMED

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA *** TEST NO. 195

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	RUN NO. 10
5.30	1.3346E 07	2.6238E 06	0.197	27.53	828.3	0.85367E 06	0.0018	
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.30	4.0679E 06	2.6238E 06	0.645	410.60	1490.9	367.10	0.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(C.850)	TIME(SEC)
1	1	354.3	637.7	46.345	40.836	135.427	119.330	9.3264E-03	1.0403E-02	0.426
2	2	352.7	634.8	21.947	19.338	135.893	119.740	4.3989E-03	4.5044E-03	0.671
3	3	351.7	633.0	13.414	11.820	136.170	119.984	2.6623E-03	2.9897E-03	0.737
4	4	348.7	627.6	4.320	3.807	137.019	120.732	8.5770E-04	9.5522E-04	0.682
5	5	347.1	624.7	3.212	2.831	137.478	121.137	6.3527E-04	7.0718E-04	0.636
6	6	344.3	619.8	2.088	1.840	138.256	121.823	4.1022E-04	4.5632E-04	0.568
7	7	341.6	614.9	1.828	1.611	139.025	122.500	3.5684E-04	3.5866E-04	0.478
8	8	338.3	608.9	1.864	1.643	139.973	123.335	3.6104E-04	4.0098E-04	0.485
9	9	334.0	601.3	1.886	1.662	141.175	124.395	3.6166E-04	4.0123E-04	0.615
10	10	331.1	596.1	1.656	1.459	141.994	125.116	3.1549E-04	3.4975E-04	0.447
11	11	327.3	589.2	1.252	1.103	143.078	126.071	2.3645E-04	2.6188E-04	0.435
12	12	338.7	609.7	0.000	0.000	0.000	0.000	0.0000	C.0000	2.307
13	13	331.2	596.2	2.017	1.777	141.975	125.099	3.8433E-04	4.2608E-04	0.425
14	18	316.2	569.2	1.442	1.271	146.238	128.855	2.6565E-04	2.9344E-04	0.499
15	25	316.3	569.4	1.368	1.205	146.214	128.835	2.5201E-04	2.7838E-04	0.422
16	26	325.2	585.3	0.735	0.648	143.693	126.613	1.3813E-04	1.5291E-04	0.810
17	27	328.8	591.8	0.461	0.406	142.660	125.703	8.7278E-05	9.6700E-05	0.710
18	28	332.9	599.2	1.380	1.216	141.495	124.676	2.6390E-04	2.9269E-04	0.486
19	30	316.2	569.1	1.550	1.366	146.262	128.876	2.8538E-04	3.1523E-04	0.416
20	31	325.6	586.2	1.088	0.958	143.560	126.495	2.0460E-04	2.2651E-04	0.543
21	32	315.3	567.5	1.481	1.305	146.517	129.102	2.7218E-04	3.0059E-04	0.297
22	33	321.0	577.7	2.218	1.955	144.893	127.671	4.1269E-04	4.5659E-04	0.624
23	34	325.1	585.2	1.341	1.182	143.705	126.623	2.5200E-04	2.7895E-04	0.549
24	35	328.5	591.3	0.730	0.643	142.744	125.777	1.3822E-04	1.5313E-04	0.573
25	36	332.6	598.7	1.333	1.174	141.577	124.748	2.5477E-04	2.8254E-04	0.435
26	37	336.6	605.9	3.199	2.818	140.450	123.756	6.1708E-04	6.8503E-04	0.468
27	38	338.6	609.5	7.230	6.370	139.872	123.247	1.4014E-03	1.5565E-03	C.600
28	39	330.2	594.3	20.212	17.810	142.265	125.355	3.8420E-03	4.2582E-03	0.731
29	40	315.7	568.3	1.625	1.432	146.379	128.980	2.9866E-04	3.3011E-04	0.324
30	41	316.4	569.5	1.802	1.588	146.188	128.811	3.3200E-04	3.6074E-04	0.366
31	42	320.8	577.4	2.808	2.474	144.947	127.718	5.2234E-04	5.7761E-04	0.684
32	43	325.3	585.6	1.762	1.553	143.648	126.573	3.3130E-04	3.6676E-04	0.575
33	44	328.8	591.9	1.381	1.217	142.652	125.696	2.6172E-04	2.8997E-04	0.647
34	46	316.1	569.0	2.217	1.953	146.279	128.892	4.0809E-04	4.5077E-04	C.489
35	47	316.4	569.5	2.509	2.211	146.201	128.823	4.6228E-04	5.1066E-04	0.501
36	48	322.0	579.6	2.899	2.554	144.595	127.412	5.4076E-04	5.9816E-04	0.533
37	49	325.6	586.1	2.112	1.861	143.570	126.504	3.9726E-04	4.3980E-04	0.575
38	50	329.1	592.4	1.665	1.643	142.573	125.626	3.5356E-04	3.9176E-04	0.623
39	51	333.5	600.3	1.524	1.342	141.321	124.523	2.9183E-04	3.2372E-04	0.532
40	54	316.0	568.8	2.424	2.136	146.314	128.922	4.4615E-04	4.9279E-04	0.506
41	55	314.4	566.0	2.119	1.867	146.749	129.305	3.8873E-04	4.2922E-04	0.506

PRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

42	56	320.7	577.2	2.085	1.837	144.980	127.747	3.6776E-04	4.2879E-04	0.535
43	57	324.2	583.6	1.529	1.347	143.961	126.849	2.8670E-04	3.1730E-04	0.530
44	58	327.7	589.9	1.593	1.404	142.973	125.979	3.0105E-04	3.3345E-04	0.601
45	60	315.6	568.1	1.880	1.657	146.420	129.016	3.4579E-04	3.8151E-04	0.486
46	61	314.4	565.9	1.617	1.425	146.758	129.314	2.9667E-04	3.2756E-04	0.626
47	62	340.7	613.3	0.000	0.000	0.000	0.000	0.0000	0.0000	0.579
48	63	324.8	584.6	1.380	1.216	143.806	126.712	2.5930E-04	2.8668E-04	0.637
49	64	328.8	591.8	1.379	1.215	142.664	125.706	2.6119E-04	2.8939E-04	0.648
50	66	333.5	600.3	1.648	1.452	141.319	124.521	3.1567E-04	3.5016E-04	0.608
51	66	337.8	608.1	5.545	4.886	140.093	123.441	1.0729E-03	1.1915E-03	0.658
52	67	340.6	613.0	11.522	10.153	139.315	122.755	2.2436E-03	2.4935E-03	0.678
53	68	331.2	596.2	22.991	20.258	141.966	125.091	4.3607E-03	4.8566E-03	0.732
54	70	313.5	564.4	1.502	1.323	147.006	129.532	2.7492E-04	3.0349E-04	0.484
55	71	320.0	576.0	1.361	1.199	145.171	127.915	2.5275E-04	2.7944E-04	0.414
56	72	323.7	582.7	1.296	1.142	144.095	126.971	2.4269E-04	2.6856E-04	0.588
57	73	327.8	590.0	1.225	1.080	142.952	125.960	2.3162E-04	2.5655E-04	0.602
58	77	317.7	571.9	2.140	1.885	145.818	128.485	3.9533E-04	4.3684E-04	0.617
59	78	323.3	582.0	1.808	1.593	144.220	127.078	3.3632E-04	3.7434E-04	0.474
60	79	325.6	586.1	1.294	1.140	143.570	126.504	2.4331E-04	2.6937E-04	0.577
61	81	331.9	597.4	1.480	1.304	141.790	124.936	2.8248E-04	3.1321E-04	0.636
62	84	319.1	574.4	1.847	1.627	145.412	128.128	3.4229E-04	3.7836E-04	0.424
63	85	324.4	583.9	1.881	1.657	143.924	126.816	3.5273E-04	3.9038E-04	0.304
64	86	326.5	587.7	1.310	1.155	143.312	126.277	2.4699E-04	2.7350E-04	0.563
65	87	316.2	569.1	3.735	3.291	146.256	128.871	6.8772E-04	7.5965E-04	0.656
66	91	323.1	581.6	4.042	3.562	144.274	127.125	7.5606E-04	8.3652E-04	0.543
67	92	326.5	587.7	1.788	1.576	143.311	126.277	3.3702E-04	3.7328E-04	0.599
68	94	333.2	599.8	1.377	1.214	141.604	124.596	2.6364E-04	2.9243E-04	0.596
69	98	319.8	575.7	6.586	5.803	145.210	127.950	1.2226E-03	1.3515E-03	0.579
70	99	327.7	589.9	6.211	5.473	142.974	125.980	1.1739E-03	1.3002E-03	0.439
71	100	330.8	595.5	2.095	1.846	142.086	125.197	3.9869E-04	4.4218E-04	0.578
72	103	321.3	578.3	8.105	7.142	144.808	127.596	1.5096E-03	1.6695E-03	0.556
73	104	328.0	590.3	8.717	7.680	142.857	125.912	1.6464E-03	1.8260E-03	0.485
74	105	330.8	595.4	3.295	2.903	142.105	125.214	6.2708E-04	6.9511E-04	0.559
75	107	334.4	601.8	1.409	1.241	141.082	124.312	2.7037E-04	2.9997E-04	0.553

FREE-STREAM DENSITY-VELOCITY PRODUCT = 7.6729E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)		TEST NO. 195
5.00	1.3326E 07	2.6198E 06	0.197	28.01	830.5	0.85608E 06	0.0010		RUN NO. 11
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.00	4.0617E 06	2.6198E 06	0.645	411.80	1494.9	368.13	0.0060		OBSERVATED (α = 30°, β = 0°

CHAN	T/C	HN/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HN/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.373	0.0311	0.0311	0.0370	0.0409	39	42	0.362	0.0041	0.0041	0.0049	0.0053
2	2	0.377	0.0129	0.0129	0.0153	0.0170	40	43	0.368	0.0164	0.0164	0.0195	0.0215
3	3	0.373	0.0115	0.0115	0.0138	0.0152	41	44	0.366	0.0119	0.0119	0.0142	0.0156
4	4	0.373	0.0138	0.0138	0.0164	0.0181	42	45	0.377	0.0619	0.0619	0.0737	0.0815
5	5	0.375	0.0169	0.0169	0.0201	0.0222	43	46	0.376	0.0367	0.0367	0.0437	0.0483
6	6	0.376	0.0186	0.0186	0.0221	0.0245	44	47	0.370	0.0164	0.0164	0.0195	0.0216
7	7	0.375	0.0209	0.0209	0.0248	0.0275	45	48	0.363	0.0924	0.0924	0.1096	0.1209
8	8	0.373	0.0211	0.0211	0.0251	0.0278	46	50	0.377	0.1640	0.1640	0.1954	0.2160
9	9	0.367	0.0194	0.0194	0.0230	0.0254	47	51	0.378	0.1618	0.1618	0.1928	0.2132
10	10	0.367	0.0153	0.0153	0.0181	0.0200	48	53	0.379	0.1310	0.1310	0.1561	0.1727
11	11	0.368	0.0122	0.0122	0.0145	0.0160	49	55	0.378	0.1217	0.1217	0.1450	0.1604
12	12	0.365	0.0143	0.0143	0.0169	0.0187	50	57	0.376	0.1031	0.1031	0.1228	0.1358
13	13	0.364	0.0269	0.0269	0.0320	0.0353	51	59	0.374	0.0703	0.0703	0.0837	0.0925
14	14	0.364	0.0682	0.0682	0.0809	0.0893	52	60	0.384	0.1106	0.1106	0.1320	0.1462
15	15	0.364	0.0317	0.0317	0.0376	0.0415	53	61	0.381	0.0994	0.0994	0.1186	0.1313
	16	0.367	0.0097	0.0097	0.0115	0.0127	54	65	0.380	0.1252	0.1252	0.1493	0.1652
		0.369	0.0150	0.0150	0.0178	0.0197	55	66	0.366	0.0791	0.0791	0.0943	0.1043
	18	0.372	0.0170	0.0170	0.0202	0.0223	56	69	0.387	0.1806	0.1806	0.2159	0.2392
	20	0.375	0.0225	0.0225	0.0268	0.0296	57	70	0.387	0.1358	0.1358	0.1623	0.1798
23	22	0.369	0.0275	0.0275	0.0327	0.0361	58	72	0.387	0.0990	0.0990	0.1193	0.1311
21	24	0.365	0.0356	0.0356	0.0423	0.0466	59	73	0.367	0.0027	0.0027	0.0032	0.0035
22	25	0.364	0.0325	0.0325	0.0385	0.0425	60	74	0.367	0.0012	0.0012	0.0014	0.0015
24	26	0.393	0.0000	0.0000	0.0000	0.0000	61	75	0.364	0.0051	0.0051	0.0060	0.0067
26	27	0.367	0.0208	0.0208	0.0247	0.0272	62	76	0.368	0.0060	0.0060	0.0071	0.0079
25	28	0.369	0.0269	0.0269	0.0319	0.0353	63	77	0.378	0.0092	0.0092	0.0110	0.0121
26	29	0.367	0.0194	0.0194	0.0230	0.0254	64	78	0.377	0.0039	0.0039	0.0046	0.0051
27	30	0.367	0.0115	0.0115	0.0137	0.0151	65	79	0.376	0.0109	0.0109	0.0129	0.0143
28	31	0.369	0.0220	0.0220	0.0261	0.0288	66	80	0.377	0.0048	0.0048	0.0057	0.0064
29	32	0.363	0.0150	0.0150	0.0177	0.0196	67	81	0.385	0.0933	0.0933	0.1114	0.1234
30	34	0.369	0.0140	0.0140	0.0166	0.0184	68	82	0.383	0.0346	0.0346	0.0412	0.0457
31	33	0.366	0.0060	0.0060	0.0072	0.0079	69	83	0.384	0.0066	0.0066	0.0079	0.0088
32	35	0.362	0.0094	0.0094	0.0111	0.0122	70	84	0.385	0.0037	0.0037	0.0044	0.0049
33	36	0.361	0.0021	.0021	0.0024	0.0027	71	85	0.378	0.0121	0.0121	0.0144	0.0159
34	37	0.363	0.0067	0.0067	0.0079	0.0087	72	86	0.381	0.0072	0.0072	0.0085	0.0095
35	38	0.359	0.0138	0.0138	0.0164	0.0181	73	87	0.384	0.0045	0.0045	0.0054	0.0059
36	39	0.364	0.0053	0.0053	0.0063	0.0070	74	88	0.393	0.0272	0.0272	0.0326	0.0361
37	40	0.370	0.0295	0.0295	0.0351	0.0388	75	89	0.398	0.0134	0.0134	0.0161	0.0178
38	41	0.370	0.0231	0.0231	0.0275	0.0304							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	TEST NO.	195
5.30	1.3326E 07	2.6198E 06	0.197	28.01	830.5	0.35608E 06	0.0018	RUN NO.	11

MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.30	4.0617E 06	2.6198E 06	0.645	411.80	1494.9	368.13	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	TT(0.850)	TIME(SEC)
1	1	321.8	579.2	4.520	3.983	145.534	128.235	8.3794E-04	9.2642E-04	0.601
2	2	321.1	578.0	1.878	1.654	145.720	128.399	3.4756E-04	3.8428E-04	0.564
3	3	322.0	579.5	1.680	1.480	145.485	128.192	3.1160E-04	3.4459E-04	0.568
4	4	321.9	579.4	2.004	1.766	145.508	128.212	3.7154E-04	4.1086E-04	0.561
5	5	321.8	579.2	2.453	2.162	145.531	128.233	4.5482E-04	5.0296E-04	0.537
6	6	320.4	576.7	2.713	2.390	145.926	128.580	5.0139E-04	5.5427E-04	0.556
7	7	319.9	574.0	3.055	2.692	146.352	128.956	5.6265E-04	6.2177E-04	0.565
8	8	317.0	570.6	3.105	2.736	146.899	129.438	5.6958E-04	6.2915E-04	0.566
9	9	312.9	563.2	2.872	2.530	148.068	130.468	5.2196E-04	5.7601E-04	0.800
10	10	312.7	562.9	2.259	1.991	148.125	130.518	4.1042E-04	4.5290E-04	0.543
11	11	311.4	560.6	1.810	1.595	148.486	130.836	3.2793E-04	3.6177E-04	0.488
12	12	311.2	560.2	2.120	1.868	148.546	130.889	3.8398E-04	4.2347E-04	0.614
13	13	312.1	561.8	3.994	3.520	148.293	130.666	7.2475E-04	7.9964E-04	0.536
14	14	310.4	558.8	10.147	8.941	148.774	131.090	1.8344E-03	2.0232E-03	0.483
15	15	310.0	557.9	4.725	4.163	148.908	131.209	8.5325E-04	9.4097E-04	0.573
16	16	313.0	563.3	1.436	1.265	148.049	130.451	2.6097E-04	2.8800E-04	0.568
17	17	314.4	565.9	2.217	1.953	147.650	130.100	4.0427E-04	4.4627E-04	0.179
18	18	316.8	570.2	2.498	2.201	146.941	129.475	4.5803E-04	5.0591E-04	0.019
19	20	319.6	575.2	3.289	2.898	146.161	128.788	6.0664E-04	6.7049E-04	0.213
20	22	314.6	566.3	4.061	3.578	147.572	130.031	7.4091E-04	8.1795E-04	0.283
21	24	311.1	559.9	5.294	4.664	148.590	130.928	9.5832E-04	1.0571E-03	0.437
22	25	310.0	558.0	4.833	4.258	149.900	131.201	8.7280E-04	9.6253E-04	0.454
23	26	333.8	600.9	0.000	0.000	140.677	123.955	0.0000	0.0000	*******
24	27	313.2	563.7	3.074	2.709	147.992	130.401	5.5912E-04	6.1704E-04	0.247
25	28	314.0	565.2	3.972	3.500	147.761	130.198	7.2362E-04	7.9874E-04	0.430
26	29	308.3	554.9	2.904	2.559	149.386	131.629	5.2248E-04	5.7598E-04	0.486
27	30	313.2	563.8	1.708	1.505	147.969	130.381	3.1071E-04	3.4291E-04	0.255
28	31	314.5	566.2	3.245	2.859	147.601	130.056	5.9197E-04	6.5351E-04	0.327
29	32	309.8	557.6	2.228	1.963	148.966	131.259	4.0224E-04	4.4357E-04	0.486
30	34	314.4	566.0	2.066	1.821	147.627	130.079	3.7687E-04	4.1603E-04	0.140
31	33	311.9	561.4	0.897	0.790	148.356	130.722	1.6261E-04	1.7940E-04	0.402
32	35	308.8	555.8	1.397	1.231	149.246	131.506	2.5155E-04	2.7733E-04	0.552
33	36	307.4	553.3	0.307	0.271	149.649	131.860	5.5178E-05	6.0815E-05	0.237
34	37	309.5	557.1	0.995	0.877	149.038	131.323	1.7955E-04	1.9799E-04	0.059
35	38	306.2	551.1	2.076	1.829	149.989	132.161	3.7188E-04	4.0976E-04	0.545
36	39	310.1	558.2	0.794	0.699	148.866	131.171	1.4339E-04	1.5814E-04	0.348
37	40	315.4	567.7	4.353	3.836	147.364	129.847	7.9550E-04	8.7836E-04	0.758
38	41	315.7	568.3	3.409	3.003	147.267	129.762	6.2340E-04	6.8839E-04	0.498
39	42	308.7	555.7	0.608	0.535	149.266	131.524	1.0944E-04	1.2066E-04	0.307
40	43	313.3	563.9	2.430	2.141	147.964	130.376	4.4203E-04	4.8783E-04	0.292
41	44	311.7	561.0	1.772	1.562	149.414	130.773	3.2130E-04	3.5447E-04	0.675

42	45	321.5	578.7	9.011	7.940	145.616	128.307	1.6693E-03	1.8459E-03	0.374
43	46	321.9	579.3	5.337	4.702	145.511	128.215	9.8952E-04	1.0943E-03	0.436
44	47	315.4	567.7	2.422	2.134	147.353	129.838	4.4258E-04	4.8869E-04	0.407
45	43	309.4	556.9	13.769	12.132	149.068	131.349	2.4835E-03	2.7384E-03	0.321
46	50	321.1	578.0	23.901	21.060	145.717	128.396	4.4245E-03	4.8919E-03	0.218
47	51	322.5	580.5	23.509	20.715	145.330	128.055	4.3652E-03	4.8279E-03	0.349
48	53	323.2	581.8	19.010	16.751	145.126	127.876	3.5355E-03	3.9110E-03	0.424
49	55	322.1	579.7	17.706	15.601	145.454	128.165	3.2844E-03	3.6322E-03	0.381
50	57	320.6	577.1	15.041	13.253	145.871	128.532	2.7810E-03	3.0744E-03	0.383
51	59	319.9	574.1	10.288	9.065	146.344	128.949	1.8952E-03	2.0943E-03	0.338
52	60	327.1	588.8	15.930	14.037	144.011	126.893	2.9890E-03	3.3095E-03	0.240
53	61	324.9	584.8	14.385	12.675	144.647	127.453	2.6854E-03	2.9718E-03	0.349
54	65	324.2	583.6	18.137	15.981	144.833	127.617	3.3809E-03	3.7409E-03	0.298
55	69	324.1	583.3	11.458	10.096	144.877	127.656	2.1351E-03	2.3624E-03	0.227
56	69	330.0	594.0	25.866	22.791	143.184	126.165	4.8855E-03	5.4132E-03	0.405
57	70	330.2	5.4.4	19.438	17.127	143.135	126.121	3.6722E-03	4.0698E-03	0.272
58	72	329.8	593.6	14.182	12.496	143.260	126.232	2.6769E-03	2.9659E-03	0.378
59	73	313.1	563.5	0.399	0.351	148.022	130.427	7.5492E-05	8.3301E-05	0.334
60	74	312.9	563.2	0.173	0.152	149.067	130.467	3.1456E-05	3.4713E-05	0.222
61	75	310.2	558.3	0.757	0.667	148.844	131.152	1.3677E-04	1.5094E-04	0.622
62	76	313.9	565.0	0.886	0.781	147.779	130.214	1.6145E-04	1.7821E-04	0.334
63	77	327.3	580.1	1.338	1.179	145.386	128.105	2.4839E-04	2.7470E-04	0.514
64	78	321.6	578.9	0.562	0.495	145.575	128.271	1.0421E-04	1.1523E-04	0.581
65	79	320.3	576.6	1.586	1.398	145.951	128.603	2.9314E-04	3.2405E-04	0.305
66	80	321.5	578.7	0.703	0.619	145.620	128.311	1.3019E-04	1.4398E-04	0.477
67	81	328.4	591.1	13.396	11.804	143.642	126.568	2.5210E-03	2.7922E-03	0.392
68	82	326.7	588.0	4.981	4.389	144.134	127.002	9.[illegible]E-04	1.0337E-03	0.784
69	83	327.5	589.5	0.957	0.843	143.902	126.797	1.7965E-04	1.9894E-04	0.557
70	84	328.4	591.2	0.532	0.469	143.637	126.564	1.0017E-04	1.1095E-04	0.607
71	85	322.2	579.9	1.759	1.550	145.417	128.132	3.2642E-04	3.6100E-04	0.508
72	86	324.7	584.5	1.737	0.914	144.691	127.493	1.9345E-04	2.1410E-04	0.377
73	87	327.3	589.1	0.647	0.570	143.962	126.850	1.2144E-04	1.3447E-04	0.476
74	90	334.7	602.4	3.859	3.400	141.855	124.994	7.3673E-04	8.1726E-04	0.565
75	89	339.4	611.0	1.882	1.659	140.502	123.801	3.6394E-04	4.0358E-04	0.448

EFFC-STREAM DENSITY-VELOCITY PRODUCT = 7.6805E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	TEST NO. 195
5.30	1.1950E 07	2.3493E 06	0.197	28.02	888.1	0.913745 06	0.0018	RUN NO. 12
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	ET MATED
5.30	3.6423E 06	2.3493E 06	0.645	411.91	1598.6	395.51	0.0060	$\alpha = 60°, \phi = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.[illegible]	0.1836	0.1836	0.2179	0.2404	39	51	0.349	0.0175	0.0178	0.0210	0.0231
2	2	0.[illegible]	0.0696	0.0696	0.0826	0.0911	40	54	0.343	0.0173	0.0173	0.0204	0.0224
3	3	0.[illegible]	0.0357	0.0357	0.0423	0.0466	41	55	0.343	0.0128	0.0128	0.0201	0.0249
4	4	0.[illegible]	0.0136	0.0136	0.0161	0.0178	42	56	0.345	0.0129	0.0128	0.0151	0.0166
5	5	0.[illegible]	0.0134	0.0134	0.0159	0.0175	43	57	0.347	0.0130	0.0130	0.0153	0.0169
6	6	0.[illegible]	0.0124	0.0124	0.0147	0.0162	44	58	0.348	0.0095	0.0095	0.0112	0.0123
7	7	0.[illegible]	0.0128	0.0128	0.0151	0.0167	45	60	0.344	0.0207	0.0207	0.0245	0.0269
8	8	0.[illegible]	0.0134	0.0134	0.0159	0.0174	46	61	0.345	0.0214	0.0214	0.0253	0.0278
9	9	0.348	0.0070	0.0070	0.0083	0.0090	47	62	0.346	0.0285	0.0285	0.0337	0.0370
10	10	0.349	0.0107	0.0103	0.0121	0.0134	48	63	0.349	0.0161	0.0161	0.0190	0.0209
11	11	0.348	0.0086	0.0086	0.0101	0.0111	49	64	0.349	0.0112	0.0112	0.0133	0.0146
12	12	0.348	0.0070	0.0070	0.0083	0.0091	50	65	0.351	0.0230	0.0230	0.0272	0.0299
13	13	0.370	0.0000	0.0000	0.0000	0.0000	51	66	0.353	0.0667	0.0667	0.0789	0.0869
14	14	0.343	0.0096	0.0096	0.0114	0.0125	52	67	0.357	0.1343	0.1343	0.1586	0.1748
15	15	0.343	0.0044	0.0044	0.0052	0.0057	53	68	0.358	0.2278	0.2278	0.2698	0.2972
16	16	0.346	0.0047	0.0047	0.0055	0.0061	54	70	0.346	0.0097	0.0097	0.0114	0.0126
17	17	0.348	0.0023	0.0023	0.0027	0.0030	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	29	0.350	0.0146	0.0146	0.0173	0.0191	56	72	0.348	0.0198	0.0198	0.0234	0.0258
19	30	0.342	0.0011	0.0011	0.0012	0.0014	57	73	0.350	0.0118	0.0118	0.0140	0.0154
20	31	0.347	0.0032	0.0032	0.0038	0.0041	58	77	0.347	0.0429	0.0429	0.0506	0.0557
21	32	0.341	0.0041	0.0041	0.0048	0.0052	59	78	0.348	0.0274	0.0274	0.0323	0.0356
22	33	0.344	0.0058	0.0058	0.0069	0.0076	60	79	0.350	0.0244	0.0244	0.0288	0.0317
23	34	0.347	0.0085	0.0085	0.0100	0.0110	61	81	0.351	0.0[illegible]	0.0[illegible]	0.0[illegible]	0.0[illegible]
24	35	0.348	0.0058	0.0058	0.0069	0.0076	62	84	0.348	0.0619	0.0619	0.0732	0.0806
25	36	0.349	0.0154	0.0154	0.0182	0.0200	63	85	0.349	0.1129	0.1129	0.1327	0.1459
26	37	0.352	0.0441	0.0441	0.0522	0.0574	64	86	0.350	0.0962	0.0962	0.1138	0.1271
27	38	0.355	0.0801	0.0801	0.0948	0.1044	65	90	0.347	0.0867	0.0867	0.1023	0.1125
28	39	0.356	0.1608	0.1608	0.1904	0.2097	66	91	0.350	0.1513	0.1513	0.1787	0.1966
29	40	0.341	0.0072	0.0072	0.0085	0.0094	67	92	0.352	0.0512	0.0512	0.0605	0.0666
30	41	0.342	0.0098	0.0098	0.0115	0.0126	68	94	0.353	0.0188	0.0188	0.0223	0.0245
31	42	0.344	0.0059	0.0059	0.0069	0.0076	69	99	0.349	0.1177	0.1177	0.1391	0.1530
32	43	0.346	0.0069	0.0069	0.0081	0.0089	70	93	0.352	0.2056	0.2056	0.2431	0.2675
33	44	0.348	0.0072	0.0072	0.0085	0.0094	71	1[illegible]	0.354	0.0815	0.0815	0.0965	0.1062
34	46	0.348	0.0122	0.0122	0.0143	0.0158	72	[illegible]	0.351	0.1423	0.1423	0.1682	0.1851
35	47	0.343	0.0149	0.0149	0.0175	0.0193	73	1[illegible]	0.353	0.1558	0.1558	0.1843	0.2029
36	48	0.345	0.0088	0.0088	0.0104	0.0114	74	1[illegible]	0.354	0.1323	0.1323	0.1565	0.1723
37	49	0.347	0.0115	0.0115	0.0135	0.0149	75	107	0.356	0.0285	0.0285	0.0338	0.0372
38	50	0.348	0.0096	0.0096	0.0113	0.0124							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.30	1.1950E 07	2.3493E 06	0.197	28.02	888.1	0.91974E 06	0.0018	RUN NO.	12

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.30	3.6423E 06	2.3493E 06	0.645	411.91	1598.6	395.51	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	333.9	601.0	29.372	25.880	159.961	140.948	5.1643E-03	5.6962E-03	0.514
2	2	332.0	597.	11.176	9.848	160.490	141.413	1.9577E-03	2.1586E-03	0.811
3	3	330.4	594.8	5.742	5.059	160.954	141.822	1.0025E-03	1.1050E-03	0.836
4	4	327.7	589.9	2.205	1.942	161.730	142.506	3.8280E-04	4.2170E-04	0.340
5	5	326.5	587.8	2.173	1.914	162.070	142.806	3.7636E-04	4.1449E-04	0.386
6	6	324.7	584.4	2.019	1.779	162.606	143.278	3.4852E-04	3.8369E-04	0.282
7	7	323.2	581.8	2.087	1.839	163.012	143.635	3.5916E-04	3.9529E-04	0.262
8	8	321.8	579.2	2.192	1.932	163.437	144.010	3.7617E-04	4.1389E-04	0.366
9	9	319.7	575.5	1.140	1.005	164.019	144.523	1.9490E-04	2.1436E-04	0.429
10	10	319.8	575.6	1.686	1.486	164.010	144.515	2.8821E-04	3.1699E-04	0.411
11	11	318.3	572.9	1.411	1.243	164.447	144.900	2.4047E-04	2.6440E-04	0.344
12	12	316.1	569.0	1.160	1.022	165.069	145.448	1.9688E-04	2.1638E-04	0.227
13	13	338.8	609.8	0.000	0.000	158.553	139.707	0.0000	0.0000	1.895
14	18	314.3	565.7	1.596	1.406	165.588	145.905	2.6982E-04	2.9644E-04	0.536
15	25	313.6	564.6	0.731	0.644	165.773	146.069	1.2349E-04	1.3565E-04	0.301
16	26	318.6	573.5	0.771	0.679	164.346	144.811	1.3140E-04	1.4448E-04	-0.371
17	27	319.6	575.2	0.370	0.326	164.071	144.569	6.3134E-05	6.9435E-05	-0.086
18	28	320.2	576.4	2.394	2.109	163.882	144.402	4.0951E-04	4.5044E-04	0.428
19	30	313.5	564.2	0.175	0.154	165.825	146.115	2.9513E-05	3.2419E-05	-0.782
20	31	318.0	572.4	0.523	0.461	164.527	144.970	8.9068E-05	9.7926E-05	-1.043
21	32	312.5	562.5	0.678	0.597	166.104	146.360	1.1420E-04	1.2542E-04	0.307
22	33	315.1	567.2	0.966	0.851	165.351	145.696	1.6361E-04	1.7978E-04	0.528
23	34	317.4	571.3	1.397	1.231	164.697	145.120	2.3762E-04	2.6122E-04	0.482
24	35	318.5	573.3	0.961	0.847	164.378	144.840	1.6381E-04	1.8012E-04	0.570
25	36	319.4	574.9	2.531	2.230	164.119	144.611	4.3228E-04	4.7540E-04	0.421
26	37	322.1	579.8	7.208	6.351	163.345	143.929	1.2375E-03	1.3617E-03	0.404
27	38	325.5	585.9	13.004	11.458	162.365	143.065	2.2480E-03	2.4753E-03	0.362
28	39	326.2	587.2	26.077	22.977	162.159	142.884	4.5145E-03	4.9716E-03	0.394
29	40	312.6	562.7	1.201	1.059	166.066	146.326	2.0245E-04	2.2235E-04	0.568
30	41	313.2	563.8	1.618	1.425	165.891	146.172	2.7292E-04	2.9978E-04	0.482
31	42	314.9	566.9	0.969	0.853	165.400	145.739	1.6397E-04	1.8017E-04	0.163
32	43	316.8	570.3	1.134	1.000	164.859	145.263	1.9275E-04	2.1188E-04	0.523
33	44	319.0	574.2	1.185	1.044	164.230	144.709	2.0226E-04	2.2242E-04	0.499
34	46	314.2	565.6	2.014	1.775	165.607	145.922	3.4055E-04	3.7414E-04	0.529
35	47	314.5	566.0	2.460	2.167	165.540	145.863	4.1599E-04	4.5704E-04	0.483
36	48	315.9	568.7	1.455	1.282	165.112	145.486	2.4688E-04	2.7133E-04	-0.062
37	49	317.3	571.2	1.887	1.663	164.716	145.137	3.2097E-04	3.5285E-04	0.452
38	50	318.5	573.2	1.575	1.388	164.390	144.850	2.6850E-04	2.9523E-04	0.393
39	51	319.7	575.4	2.917	2.570	164.037	144.539	4.9839E-04	5.4814E-04	0.414
40	54	313.7	564.7	2.866	2.525	165.756	146.053	4.8400E-04	5.3170E-04	0.536
41	55	314.0	565.2	3.111	2.741	165.664	145.973	5.2567E-04	5.7750E-04	0.510

42	56	315.8	568.5	2.112	1.861	165.151	145.520	3.5814E-04	3.9359E-04	-0.087
43	57	317.7	571.8	2.138	1.884	164.616	145.049	3.6390E-04	4.0007E-04	0.444
44	58	318.9	574.1	1.555	1.371	164.250	144.727	2.6540E-04	2.9185E-04	0.282
45	60	315.2	567.4	3.430	3.022	165.313	145.663	5.8101E-04	6.3845E-04	0.483
46	61	315.9	568.7	3.536	3.116	165.118	145.491	5.9981E-04	6.5919E-04	0.447
47	62	317.0	570.6	3.867	3.407	164.806	145.216	6.5729E-04	7.2252E-04	0.133
48	63	318.6	573.5	2.650	2.335	164.346	144.811	4.5192E-04	4.9693E-04	0.432
49	64	319.9	575.9	1.841	1.622	163.966	144.477	3.1479E-04	3.4623E-04	0.194
50	65	321.0	577.8	3.760	3.313	163.664	144.210	6.4416E-04	7.0864E-04	0.500
51	66	323.5	582.3	10.870	9.578	162.940	143.572	1.8715E-03	2.0599E-03	0.462
52	67	327.3	589.2	21.811	19.219	161.847	142.609	3.7843E-03	4.1685E-03	0.433
53	68	329.0	590.4	36.820	32.443	161.649	142.435	6.3972E-03	7.0475E-03	0.416
54	70	315.6	568.1	4.736	4.173	165.216	145.578	8.0268E-04	8.8209E-04	0.418
55	71	317.3	571.1	6.277	5.531	164.723	145.143	1.0676E-03	1.1736E-03	0.289
56	72	318.9	574.0	3.221	2.838	164.260	144.735	5.4963E-04	6.0440E-04	0.361
57	73	320.4	576.7	1.939	1.708	163.833	144.359	3.3177E-04	3.6494E-04	0.079
58	77	317.4	571.4	7.061	6.222	164.684	145.109	1.2013E-03	1.3206E-03	0.468
59	78	318.8	573.8	11.081	9.764	164.296	144.767	1.8902E-03	2.0785E-03	0.476
60	79	320.1	576.2	4.000	3.525	163.917	144.433	6.8414E-04	7.5250E-04	0.269
61	81	321.8	579.2	3.344	2.946	163.429	144.003	5.7378E-04	6.3132E-04	0.369
62	84	318.7	573.7	10.176	8.967	164.316	144.785	1.7356E-03	1.9084E-03	0.527
63	85	319.7	575.5	18.419	16.230	164.033	144.535	3.1476E-03	3.4618E-03	0.613
64	86	320.5	577.0	5.932	5.227	163.792	144.323	1.0154E-03	1.1169E-03	0.716
65	90	318.0	572.5	14.257	12.563	164.511	144.957	2.4284E-03	2.6699E-03	0.544
66	91	320.1	576.5	24.780	21.834	163.863	144.386	4.2395E-03	4.6632E-03	0.616
67	92	322.0	579.6	8.366	7.372	163.371	143.952	1.4362E-03	1.5803E-03	0.262
	94	323.4	582.1	3.068	2.703	162.965	143.594	5.2812E-04	5.8127E-04	-0.440
69	98	319.9	575.9	19.304	17.010	163.966	144.477	3.3003E-03	3.6299E-03	0.622
70	99	322.4	580.3	33.562	29.573	163.263	143.857	5.7658E-03	6.3447E-03	0.570
71	103	324.0	583.2	13.275	11.697	162.796	143.446	2.2881E-03	2.5186E-03	0.168
72	103	321.0	577.8	23.292	20.524	163.662	144.209	3.9905E-03	4.3900E-03	0.691
73	104	323.2	581.8	25.405	22.386	163.017	143.640	4.3720E-03	4.8118E-03	0.490
74	105	324.6	584.2	21.512	18.955	162.637	143.305	3.7117E-03	4.0862E-03	0.223
75	107	325.8	586.4	4.629	4.078	162.289	142.998	8.0060E-04	8.8158E-04	-0.682

FREE-STREAM DENSITY-VELOCITY PRODUCT = 7.3556E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.2823E 06	4.3359E 05	0.197	6.88	859.7	0.8871E 06	0.0018	RUN NO. 13
MACH	RE/FT	REL	LENGTH(FT)	PT,PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	1.0231E 05	4.3359E 05	0.645	101.17	1545.7	381.51	0.0060	ET MATED $\alpha = -00°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.379	0.1745	0.1745	0.2090	0.2301	39	51	0.362	0.0361	0.0361	0.0428	0.0472
2	2	0.379	0.2140	0.2140	0.2551	0.2822	40	54	0.357	0.0306	0.0306	0.0362	0.0399
3	3	0.379	0.2440	0.2440	0.2908	0.3216	41	55	0.356	0.0246	0.0246	0.0291	0.0321
4	4	0.378	0.2409	0.2409	0.2871	0.3176	42	56	0.359	0.0455	0.0455	0.0539	0.0593
5	5	0.378	0.2307	0.2307	0.2749	0.3041	43	57	0.361	0.0413	0.0413	0.0490	0.0540
6	6	0.377	0.2225	0.2225	0.2651	0.2931	44	58	0.361	0.0779	0.0779	0.0923	0.1018
7	7	0.377	0.2130	0.2130	0.2537	0.2805	45	60	0.356	0.0205	0.0205	0.0243	0.0267
8	8	0.375	0.1943	0.1943	0.2312	0.2556	46	61	0.357	0.0181	0.0181	0.0215	0.0237
9	9	0.372	0.1632	0.1632	0.1941	0.2144	47	62	0.359	0.0354	0.0354	0.0419	0.0462
10	10	0.370	0.1552	0.1552	0.1845	0.2037	48	63	0.360	0.0293	0.0293	0.0347	0.0383
11	11	0.368	0.1539	0.1539	0.1828	0.2017	49	64	0.361	0.0603	0.0603	0.0715	0.0788
12	12	0.364	0.1437	0.1437	0.1705	0.1880	50	65	0.360	0.0523	0.0523	0.0620	0.0684
13	13	0.361	0.0207	0.0207	0.0246	0.0271	51	66	0.360	0.0197	0.0197	0.0233	0.0257
14	18	0.359	0.1453	0.1453	0.17214	0.1896	52	67	0.359	0.0056	0.0056	0.0066	0.0073
15	25	0.359	0.1628	0.1628	0.1929	0.2125	53	68	0.354	0.0052	0.0052	0.0061	0.0067
16	26	0.362	0.1046	0.1046	0.1240	0.1367	54	70	0.356	0.0166	0.0166	0.0197	0.0217
17	27	0.362	0.0562	0.0562	0.0667	0.0735	55	71	0.358	0.0319	0.0319	0.0378	0.0417
18	28	0.360	0.0226	0.0226	0.0268	0.0296	56	72	0.359	0.0390	0.0390	0.0462	0.0509
19	30	0.359	0.1365	0.1365	0.1617	0.1782	57	73	0.360	0.0536	0.0536	0.0636	0.0701
20	31	0.362	0.1017	0.1017	0.1206	0.1329	58	77	0.355	0.0129	0.0129	0.0153	0.0168
21	32	0.358	0.0897	0.0897	0.1062	0.1170	59	78	0.357	0.0413	0.0413	0.0489	0.0538
22	33	0.361	0.1313	0.1313	0.1556	0.1715	60	79	0.359	0.0511	0.0511	0.0605	0.0667
23	34	0.362	0.1298	0.1298	0.1540	0.1697	61	81	0.360	0.0403	0.0403	0.0478	0.0526
24	35	0.362	0.0607	0.0607	0.0719	0.0793	62	84	0.355	0.0133	0.0133	0.0157	0.0173
25	36	0.361	0.0245	0.0245	0.0291	0.0320	63	85	0.356	0.0317	0.0317	0.0376	0.0414
26	37	0.360	0.0059	0.0059	0.0070	0.0077	64	86	0.357	0.0343	0.0343	0.0407	0.0448
27	38	0.358	0.0032	0.0032	0.0038	0.0042	65	90	0.354	0.0155	0.0155	0.0183	0.0202
28	39	0.352	0.0125	0.0125	0.0148	0.0163	66	91	0.355	0.0234	0.0234	0.0277	0.0305
29	40	0.358	0.0557	0.0557	0.0659	0.0726	67	92	0.356	0.0211	0.0211	0.0250	0.0276
30	41	0.358	0.0331	0.0331	0.0393	0.0432	68	94	0.359	0.0413	0.0413	0.0490	0.0539
31	42	0.361	0.0641	0.0641	0.0760	0.0838	69	98	0.353	0.0194	0.0194	0.0230	0.0253
32	43	0.362	0.1205	0.1205	0.1429	0.1576	70	99	0.355	0.0210	0.0210	0.0248	0.0274
33	44	0.362	0.0905	0.0905	0.1073	0.1183	71	100	0.356	0.0181	0.0181	0.0214	0.0236
34	46	0.358	0.0337	0.0337	0.0399	0.0439	72	103	0.353	0.0194	0.0194	0.0230	0.0253
35	47	0.358	0.0352	0.0352	0.0416	0.0459	73	104	0.354	0.0189	0.0189	0.0224	0.0246
36	48	0.360	0.0414	0.0414	0.0491	0.0541	74	105	0.355	0.0156	0.0156	0.0185	0.0203
37	49	0.361	0.0875	0.0875	0.1038	0.1144	75	107	0.358	0.0166	0.0166	0.0196	0.0216
38	50	0.362	0.0855	0.0855	0.1014	0.1118							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.2228E 06	6.3359E 05	0.197	6.88	858.7	0.86719E 06	0.0018	RUN NO.	13
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	9.8231E 05	6.3359E 05	0.645	101.17	1545.7	381.51	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	334.7	602.4	13.424	11.828	76.907	67.766	9.4088E-03	1.0407E-02	0.558
2	2	334.6	602.3	16.462	14.506	76.915	67.772	1.1537E-02	1.2761E-02	0.401
3	3	334.5	602.0	18.771	16.540	76.938	67.793	1.3150E-02	1.4545E-02	0.454
4	4	334.2	601.5	19.548	16.343	76.980	67.830	1.2986E-02	1.4363E-02	0.539
5	5	333.9	601.0	17.771	15.659	77.020	67.865	1.2435E-02	1.3752E-02	0.553
6	6	333.4	600.1	17.156	15.116	77.098	67.933	1.1990E-02	1.3259E-02	0.555
7	7	332.6	598.6	16.447	14.492	77.214	68.036	1.1475E-02	1.2687E-02	0.543
8	8	330.9	595.7	15.046	13.257	77.454	68.247	1.0460E-02	1.1561E-02	0.551
9	9	328.9	592.1	12.685	11.177	77.747	68.505	8.7813E-03	9.7006E-03	0.571
10	10	327.1	588.8	12.106	10.667	78.013	68.740	8.3480E-03	9.2182E-03	0.542
11	11	324.8	584.6	12.055	10.623	78.352	69.039	8.2719E-03	9.1294E-03	0.540
12	12	321.6	579.0	11.321	9.976	78.811	69.444	7.7165E-03	8.5106E-03	0.495
13	13	319.0	574.1	1.643	1.447	79.206	69.791	1.1132E-03	1.2271E-03	0.457
14	18	317.2	570.9	11.542	10.170	79.464	70.018	7.7938E-03	8.5876E-03	0.534
15	25	316.9	570.4	12.943	11.404	79.509	70.058	8.7338E-03	9.6227E-03	0.556
16	26	319.8	575.6	8.271	7.288	79.083	69.682	5.6152E-03	6.1906E-03	0.530
17	27	319.5	575.1	4.450	3.921	79.126	69.721	3.0191E-03	3.3282E-03	0.517
18	28	318.4	573.2	1.794	1.581	79.283	69.859	1.2147E-03	1.3388E-03	0.539
19	30	316.8	570.3	10.854	9.564	79.519	70.067	7.3234E-03	8.0686E-03	0.559
20	31	319.9	575.9	8.038	7.083	79.060	69.662	5.4592E-03	6.0188E-03	0.538
21	32	316.0	568.9	7.139	6.290	79.630	70.165	4.8091E-03	5.2976E-03	0.598
22	33	319.1	574.3	10.394	9.159	79.189	69.776	7.0462E-03	7.7670E-03	0.519
23	34	319.8	575.7	10.266	9.045	79.078	69.678	6.9702E-03	7.6845E-03	0.505
24	35	319.8	575.6	4.797	4.227	79.085	69.685	3.2568E-03	3.5904E-03	0.562
25	36	318.8	573.9	1.943	1.712	79.224	69.807	1.3165E-03	1.4511E-03	0.540
26	37	317.9	572.2	0.468	0.413	79.364	69.930	3.1677E-04	3.4908E-04	0.516
27	38	316.5	569.7	0.255	0.225	79.562	70.105	1.7210E-04	1.8960E-04	0.601
28	39	311.2	560.1	1.006	0.886	80.343	70.793	6.7072E-04	7.3810E-04	0.597
29	40	316.1	568.9	4.434	3.907	79.627	70.162	2.9867E-03	3.2901E-03	0.615
30	41	316.1	569.0	2.638	2.325	79.622	70.157	1.7776E-03	1.9582E-03	0.618
31	42	318.6	573.5	5.081	4.477	79.252	69.832	3.4412E-03	3.7928E-03	0.515
32	43	319.7	575.5	9.533	8.400	79.091	69.690	6.4714E-03	7.1344E-03	0.498
33	44	319.9	575.9	7.152	6.302	79.063	69.666	4.8572E-03	5.3550E-03	0.498
34	46	316.2	569.2	2.680	2.361	79.607	70.145	1.8059E-03	1.9895E-03	0.533
35	47	316.1	569.0	2.799	2.467	79.617	70.154	1.8861E-03	2.0778E-03	0.499
36	48	318.4	573.1	3.295	2.595	79.287	69.862	2.2238E-03	2.4509E-03	0.613
37	49	319.3	574.8	6.928	6.105	79.153	69.744	4.6991E-03	5.1800E-03	0.457
38	50	319.6	575.3	6.766	5.962	79.105	69.703	4.5923E-03	5.0627E-03	0.510
39	51	319.4	574.8	2.859	2.519	79.146	69.738	1.9391E-03	2.1376E-03	0.526
40	54	315.8	568.4	2.435	2.146	79.673	70.202	1.6396E-03	1.8060E-03	0.490
41	55	314.7	566.5	1.965	1.731	79.922	70.334	1.3200E-03	1.4537E-03	0.480

42	56	317.3	571.2	3.611	3.182	79.444	70.001	2.4389E-03	2.6873E-03	0.579
43	57	318.6	573.5	2.274	2.885	79.253	69.833	2.2173E-03	2.4439E-03	0.445
44	58	318.7	573.7	6.172	5.439	79.236	69.818	4.1813E-03	4.6087E-03	0.469
45	60	314.6	566.3	1.636	1.442	79.844	70.353	1.0988E-03	1.2106E-03	0.453
46	61	315.0	566.9	1.448	1.276	79.790	70.306	9.7318E-04	1.0718E-03	0.427
47	62	316.8	570.3	2.815	2.480	79.514	70.062	1.8994E-03	2.0927E-03	0.517
48	63	318.0	572.5	2.324	2.047	79.338	69.907	1.5719E-03	1.7323E-03	0.377
49	64	318.6	573.4	4.781	4.213	79.263	69.841	3.2375E-03	3.5682E-03	0.469
50	65	318.3	573.0	4.149	3.656	79.295	69.870	2.8085E-03	3.0953E-03	0.502
51	66	317.6	571.7	1.561	1.375	79.400	69.962	1.0550E-03	1.1625E-03	0.563
52	67	317.3	571.2	0.442	0.389	79.443	70.000	2.9854E-04	3.2895E-04	0.666
53	68	312.4	562.4	0.415	0.366	80.160	70.631	2.7750E-04	3.0546E-04	0.517
54	70	314.3	565.7	1.330	1.172	79.888	70.392	8.9259E-04	9.8289E-04	0.326
55	71	316.3	569.3	2.542	2.240	79.595	70.134	1.7134E-03	1.8875E-03	0.554
56	72	317.3	571.2	3.098	2.730	79.443	70.000	2.0926E-03	2.3058E-03	0.475
57	73	318.1	572.5	4.256	3.750	79.336	69.906	2.8788E-03	3.1726E-03	0.427
58	77	313.8	564.8	1.034	0.911	79.964	70.459	6.9313E-04	7.6317E-04	0.205
59	78	315.6	568.1	3.289	2.898	79.691	70.219	2.2138E-03	2.4384E-03	0.601
60	79	316.9	570.4	4.060	3.578	79.510	70.059	2.7399E-03	3.0189E-03	0.553
61	81	317.7	571.8	3.201	2.820	79.394	69.957	2.1633E-03	2.3839E-03	0.486
62	84	313.3	564.0	1.061	0.935	80.026	70.514	7.1066E-04	7.8240E-04	0.282
63	85	314.6	566.3	2.533	2.232	79.840	70.350	1.7013E-03	1.8735E-03	0.584
64	86	315.7	568.3	2.736	2.411	79.681	70.210	1.8417E-03	2.0286E-03	0.544
65	90	312.3	562.2	1.242	1.094	80.173	70.643	8.3011E-04	9.1372E-04	0.320
66	91	314.0	565.2	1.868	1.646	79.930	70.429	1.2531E-03	1.3798E-03	0.551
67	93	314.8	566.6	1.687	1.487	79.816	70.329	1.1336E-03	1.2485E-03	0.507
68	94	316.9	570.4	3.286	2.895	79.508	70.058	2.2172E-03	2.4429E-03	0.459
69	98	311.7	561.1	1.561	1.375	80.267	70.726	1.0421E-03	1.1469E-03	0.370
70	99	313.2	563.7	1.681	1.481	80.054	70.538	1.1254E-03	1.2389E-03	0.549
71	100	314.3	565.7	1.446	1.274	79.892	70.396	9.7072E-04	1.0689E-03	0.549
72	103	311.7	561.1	1.559	1.374	80.262	70.722	1.0407E-03	1.1454E-03	0.448
73	104	313.1	563.5	1.514	1.334	80.065	70.548	1.0133E-03	1.1155E-03	0.508
74	105	313.6	564.5	1.249	1.100	79.988	70.481	8.3696E-04	9.2150E-04	0.593
75	107	316.0	568.8	1.320	1.163	79.641	70.175	8.8913E-04	9.7943E-04	0.328

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9654E-01 (SLUGS/FT2-SEC)

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH 5.23	RE/METER 3.3599E 06	REL 6.6722E 05	LENGTH(METER) 0.197	PT(ATM) 6.92	TT(DEG K) 833.7	HT(JOULE/KG) 0.35955E 06	RS(METER) 0.0018	TEST NO. 195	
5.22	RE/FT 1.0330E 06	REL 6.6722E 05	LENGTH(FT) 0.645	PT(PSI) 101.71	TT(DEG R) 1500.6	HT(BTU/LBM) 369.63	RS(FT) 0.0060	RUN NO. 14	
								ORIENTED $\alpha = -60°$, $\beta = 0°$	

CHAN	T/C	RW/RT	Q/QS	H/HS(1.000)	H/HS(0.950)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.365	0.0460	0.0460	0.0546	0.0602	39	42	0.359	0.1493	0.1493	0.1769	0.1949
2	2	0.365	0.1705	0.1705	0.2023	0.2232	40	43	0.361	0.1631	0.1631	0.1934	0.2131
3	3	0.365	0.2035	0.2035	0.2486	0.2742	41	44	0.361	0.1646	0.1646	0.1951	0.2150
4	4	0.365	0.1611	0.1611	0.1912	0.2109	42	45	0.363	0.0822	0.0822	0.0976	0.1076
5	5	0.364	0.1337	0.1337	0.1586	0.1750	43	46	0.363	0.0938	0.0938	0.1113	0.1227
6	6	0.364	0.1097	0.1097	0.1301	0.1435	44	47	0.360	0.0621	0.0621	0.0736	0.0811
7	7	0.363	0.0904	0.0904	0.1072	0.1182	45	48	0.361	0.2293	0.2293	0.2719	0.2997
8	8	0.362	0.0760	0.0760	0.0902	0.0994	46	50	0.360	0.0421	0.0421	0.0499	0.0550
9	9	0.361	0.0587	0.0587	0.0696	0.0767	47	51	0.360	0.0299	0.0299	0.0355	0.0391
10	10	0.361	0.0452	0.0452	0.0536	0.0591	48	53	0.361	0.0229	0.0229	0.0271	0.0299
11	11	0.360	0.0228	0.0228	0.0271	0.0298	49	55	0.360	0.0170	0.0170	0.0202	0.0223
12	12	0.360	0.0192	0.0192	0.0228	0.0251	50	57	0.360	0.0120	0.0120	0.0142	0.0157
13	13	0.360	0.0361	0.0361	0.0428	0.0472	51	59	0.360	0.0153	0.0153	0.0182	0.0200
14	14	0.358	0.0307	0.0307	0.0364	0.0401	52	60	0.364	0.0082	0.0082	0.0097	0.0107
15	15	0.358	0.0222	0.0222	0.0263	0.0290	53	61	0.363	0.0069	0.0069	0.0082	0.0090
16	16	0.359	0.0613	0.0613	0.0726	0.0800	54	65	0.363	0.0065	0.0065	0.0077	0.0084
17	17	0.359	0.0556	0.0556	0.0659	0.0726	55	68	0.363	0.0130	0.0130	0.0155	0.0170
18	18	0.360	0.0526	0.0526	0.0624	0.0687	56	69	0.365	0.0065	0.0065	0.0077	0.0085
19	20	0.360	0.0325	0.0325	0.0386	0.0425	57	70	0.365	0.0045	0.0045	0.0054	0.0060
20	22	0.359	0.0145	0.0145	0.0172	0.0189	58	72	0.366	0.0105	0.0105	0.0125	0.0137
21	24	0.359	0.0342	0.0342	0.0405	0.0446	59	73	0.360	0.2979	0.2979	0.3531	0.3892
22	25	0.359	0.0352	0.0352	0.0418	0.0460	60	74	0.360	0.2353	0.2353	0.2790	0.3074
23	26	0.396	0.0000	0.0000	0.0000	0.0000	61	75	0.359	0.2094	0.2094	0.2481	0.2734
24	27	0.359	0.0335	0.0335	0.0397	0.0437	62	76	0.360	0.1503	0.1503	0.1781	0.1963
25	28	0.360	0.0342	0.0342	0.0405	0.0446	63	77	0.364	0.2952	0.2952	0.3503	0.3864
26	29	0.361	0.1784	0.1784	0.2115	0.2331	64	78	0.364	0.2126	0.2126	0.2523	0.2782
27	30	0.359	0.0577	0.0577	0.0684	0.0754	65	79	0.364	0.1770	0.1770	0.2100	0.2316
28	31	0.359	0.0419	0.0419	0.0497	0.0548	66	80	0.364	0.1450	0.1450	0.1721	0.1898
29	32	0.361	0.1676	0.1676	0.1988	0.2191	67	81	0.368	0.2489	0.2489	0.2957	0.3264
30	34	0.359	0.0702	0.0702	0.0832	0.0917	68	82	0.368	0.2331	0.2331	0.2769	0.3056
31	33	0.358	0.1071	0.1071	0.1269	0.1398	69	83	0.367	0.2040	0.2040	0.2423	0.2674
32	35	0.360	0.1593	0.1593	0.1888	0.2081	70	84	0.367	0.1672	0.1672	0.1985	0.2191
33	36	0.358	0.1680	0.1690	0.1989	0.2192	71	85	0.366	0.1460	0.1460	0.1733	0.1913
34	37	0.358	0.1150	0.1150	0.1362	0.1500	72	86	0.368	0.1784	0.1784	0.2119	0.2338
35	38	0.360	0.1495	0.1495	0.1772	0.1953	73	87	0.369	0.1209	0.1209	0.1437	0.1587
36	39	0.359	0.1955	0.1955	0.2317	0.2553	74	88	0.375	0.0674	0.0674	0.0803	0.0887
37	40	0.361	0.1445	0.1445	0.1713	0.1888	75	89	0.378	0.0359	0.0359	0.0428	0.0473
38	41	0.363	0.2926	0.2926	0.3471	0.3827							

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MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.3989E 06	6.6822E 05	0.197	6.92	833.7	0.85955E 06	0.0018	RUN NO.	14
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	1.0360E 06	6.6822E 05	0.645	101.71	1500.6	369.63	0.0060		

CHAN.	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	312.8	563.0	3.509	3.092	76.335	67.262	2.4155E-03	2.6647E-03	0.472
2	2	312.2	562.0	13.026	11.477	76.416	67.333	8.9559E-03	9.8789E-03	0.272
3	3	312.2	561.9	16.007	14.104	76.420	67.337	1.1005E-02	1.2139E-02	0.414
4	4	312.0	561.6	12.315	10.951	76.448	67.361	8.4633E-03	9.3350E-03	0.443
5	5	311.6	560.9	10.229	9.013	76.505	67.411	7.0237E-03	7.7464E-03	0.420
6	6	311.2	560.2	8.396	7.398	76.561	67.461	5.7605E-03	6.3528E-03	0.408
7	7	310.8	559.4	6.926	6.103	76.626	67.518	4.7475E-03	5.2351E-03	0.422
8	8	310.0	558.0	5.834	5.141	76.742	67.620	3.9921E-03	4.4013E-03	0.419
9	9	309.2	556.6	4.508	3.972	76.850	67.715	3.0799E-03	3.3950E-03	0.427
10	10	308.8	555.9	3.479	3.066	76.913	67.771	2.3746E-03	2.6173E-03	0.408
11	11	308.3	554.9	1.759	1.550	76.992	67.840	1.1989E-03	1.3213E-03	0.288
12	12	308.1	554.6	1.479	1.303	77.015	67.861	1.0080E-03	1.1108E-03	0.327
13	13	307.8	554.0	2.783	2.452	77.069	67.908	1.8952E-03	2.0884E-03	0.439
14	14	306.8	552.2	2.371	2.089	77.215	68.037	1.6111E-03	1.7749E-03	0.411
15	15	306.8	552.2	1.713	1.509	77.209	68.032	1.1641E-03	1.2825E-03	0.451
16	16	307.2	552.9	4.730	4.167	77.153	67.983	3.2165E-03	3.5440E-03	0.289
17	17	307.6	553.7	4.285	3.776	77.088	67.925	2.9172E-03	3.2146E-03	0.278
18	18	307.9	554.3	4.055	3.573	77.044	67.886	2.7620E-03	3.0438E-03	0.333
19	20	308.4	555.2	2.504	2.206	76.968	67.819	1.7073E-03	1.8816E-03	0.309
20	22	307.4	553.3	1.117	0.984	77.126	67.958	7.6016E-04	8.3759E-04	0.378
21	24	307.2	553.0	2.636	2.323	77.150	67.980	1.7931E-03	1.9757E-03	0.377
22	25	307.5	553.6	2.717	2.394	77.100	67.935	1.8492E-03	2.0376E-03	0.459
23	26	338.8	609.9	0.000	0.000	72.530	63.909	0.0000	0.0000	*******
24	27	307.6	553.6	2.580	2.274	77.097	67.933	1.7563E-03	1.9353E-03	0.371
25	28	307.8	554.0	2.633	2.320	77.063	67.903	1.7933E-03	1.9762E-03	0.374
26	29	309.2	556.5	13.710	12.080	76.864	67.728	9.3640E-03	1.0322E-02	0.398
27	30	307.2	552.9	4.454	3.924	77.151	67.981	3.0291E-03	3.3375E-03	0.407
28	31	307.5	553.4	3.235	2.850	77.112	67.946	2.2013E-03	2.4256E-03	0.400
29	32	309.3	556.8	12.880	11.349	76.837	67.704	8.8006E-03	9.7012E-03	0.390
30	34	307.3	553.1	5.418	4.774	77.137	67.969	3.6855E-03	4.0608E-03	0.375
31	33	306.8	552.2	8.270	7.287	77.212	68.035	5.6194E-03	6.1910E-03	0.363
32	35	308.5	555.3	12.257	10.800	76.959	67.811	8.3602E-03	9.2141E-03	0.385
33	36	306.4	551.5	12.978	11.435	77.266	68.092	8.8112E-03	9.7068E-03	0.332
34	37	306.7	552.0	8.878	7.823	77.229	68.049	6.0313E-03	6.6447E-03	0.340
35	38	308.0	554.3	11.518	10.149	77.039	67.882	7.8467E-03	8.6471E-03	0.337
36	39	307.5	553.4	15.077	13.284	77.110	67.944	1.0260E-02	1.1305E-02	0.417
37	40	309.2	556.5	11.107	9.786	76.864	67.727	7.5859E-03	8.3620E-03	0.486
38	41	310.4	558.7	22.440	19.773	76.680	67.565	1.5368E-02	1.6945E-02	0.397
39	42	307.3	553.1	11.517	10.148	77.141	67.971	7.8343E-03	8.6322E-03	0.420
40	43	308.7	555.7	12.548	11.057	76.927	67.783	8.5625E-03	9.4375E-03	0.349
41	44	308.7	555.6	12.661	11.156	76.933	67.788	8.6386E-03	9.5213E-03	0.296

42	45	310.7	559.3	6.302	5.553	76.635	67.526	4.3190E-03	4.7625E-03	0.436
43	46	310.4	558.8	7.196	6.341	76.678	67.564	4.9286E-03	5.4343E-03	0.504
44	47	308.5	555.3	4.776	4.208	76.960	67.812	3.2571E-03	3.5898E-03	0.340
45	48	309.3	556.7	17.620	15.525	76.846	67.712	1.2038E-02	1.3269E-02	0.300
46	50	308.3	555.0	3.240	2.855	76.985	67.834	2.2089E-03	2.4344E-03	0.494
47	51	308.4	555.1	2.303	2.029	76.973	67.823	1.5702E-03	1.7305E-03	0.449
48	53	308.6	555.5	1.762	1.552	76.943	67.797	1.2020E-03	1.3248E-03	0.356
49	55	308.3	555.0	1.312	1.156	76.985	67.834	8.9458E-04	9.8591E-04	0.332
50	57	309.2	554.7	0.924	0.815	77.008	67.854	6.3002E-04	6.9432E-04	0.267
51	59	308.3	554.9	1.181	1.041	76.996	67.844	8.0520E-04	8.8740E-04	0.357
52	60	311.3	560.3	0.625	0.551	76.555	67.455	4.2870E-04	4.7277E-04	0.644
53	61	310.4	558.7	0.527	0.464	76.680	67.565	3.6096E-04	3.9800E-04	0.400
54	65	310.4	558.7	0.495	0.436	76.681	67.567	3.3902E-04	3.7380E-04	0.261
55	68	311.0	559.8	0.998	0.879	76.590	67.486	6.8435E-04	7.5467E-04	0.485
56	69	312.5	562.5	0.494	0.435	76.371	67.293	3.3985E-04	3.7490E-04	0.392
57	70	312.6	562.6	0.347	0.306	76.365	67.288	2.3880E-04	2.6343E-04	0.450
58	72	313.2	563.7	0.800	0.705	76.275	67.208	5.5113E-04	6.0905E-04	0.491
59	73	309.3	554.9	22.939	20.213	76.993	67.842	1.5638E-02	1.7234E-02	0.301
60	74	309.3	554.9	18.119	15.966	76.989	67.838	1.2353E-02	1.3614E-02	0.324
61	75	307.5	553.5	16.142	14.224	77.103	67.938	1.0986E-02	1.2106E-02	0.331
62	76	308.0	554.4	11.577	10.201	77.029	67.873	7.8875E-03	8.6923E-03	0.328
63	77	311.8	561.3	22.573	19.889	76.471	67.381	1.5507E-02	1.7104E-02	0.299
64	78	311.5	560.6	16.271	14.337	76.526	67.430	1.1169E-02	1.2318E-02	0.286
65	79	311.4	560.6	13.547	11.937	76.528	67.432	9.2988E-03	1.0255E-02	0.284
66	80	311.5	560.7	11.090	9.780	76.522	67.426	7.6192E-03	8.4030E-03	0.268
67	81	315.1	567.1	18.916	16.668	75.997	66.963	1.3089E-02	1.4446E-02	0.241
68	82	314.7	566.5	17.725	15.618	76.050	67.010	1.2254E-02	1.3523E-02	0.281
69	83	314.5	566.1	15.522	13.677	76.083	67.040	1.0725E-02	1.1837E-02	0.254
70	84	314.1	565.3	12.729	11.216	76.144	67.093	8.7878E-03	9.6975E-03	0.255
71	85	313.4	564.1	11.131	9.808	76.245	67.182	7.6732E-03	8.4662E-03	0.463
72	86	314.6	566.3	13.567	11.955	76.068	67.026	9.3771E-03	1.0349E-02	0.256
73	87	316.1	568.9	9.174	8.083	75.852	66.836	6.3611E-03	7.0228E-03	0.363
74	88	321.0	577.7	5.068	4.465	75.137	66.206	3.5522E-03	3.9261E-03	0.509
75	89	323.9	582.9	2.682	2.363	74.715	65.834	1.8922E-03	2.0928E-03	0.395

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0135E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.02	2.4462E 06	6.7751E 05	0.197	6.90	825.5	0.85057E 06	0.0018	RUN NO. 15
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ORB MATED
5.02	1.0 [illegible]E 06	6.7751E 05	0.645	101.49	1485.9	365.76	0.0060	$\alpha = -30°$, $\beta = 0°$

	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.376	0.1229	0.1229	0.1463	0.1617	39	42	0.368	0.0667	0.0667	0.0792	0.0874
2	2	0.375	0.0944	0.0944	0.1124	0.1243	40	43	0.370	0.0351	0.0351	0.0417	0.0460
3	3	0.375	0.0743	0.0743	0.0884	0.0978	41	44	0.369	0.1862	0.1862	0.2213	0.2443
4	4	0.375	0.0579	0.0579	0.0690	0.0762	42	45	0.373	0.0733	0.0733	0.0872	0.0964
5	5	0.375	0.0485	0.0485	0.0577	0.0638	43	46	0.373	0.0691	0.0691	0.0822	0.0908
6	6	0.374	0.0408	0.0408	0.0486	0.0537	44	47	0.371	0.0365	0.0365	0.0434	0.0479
7	7	0.374	0.0457	0.0457	0.0544	0.0601	45	48	0.370	0.4127	0.4127	0.4906	0.5417
8	9	0.373	0.0736	0.0786	0.0935	0.1033	46	50	0.370	0.0480	0.0480	0.0571	0.0631
9	9	0.372	0.0731	0.0731	0.0869	0.0960	47	51	0.370	0.0357	0.0357	0.0425	0.0469
10	10	0.371	0.0529	0.0529	0.0630	0.0695	48	53	0.371	0.0176	0.0176	0.0210	0.0231
11	11	0.371	0.0383	0.0383	0.0455	0.0503	49	55	0.370	0.0153	0.0153	0.0182	0.0201
12	12	0.370	0.0373	0.0373	0.0443	0.0489	50	57	0.370	0.0138	0.0138	0.0164	0.0181
13	13	0.370	0.0239	0.0239	0.0284	0.0314	51	59	0.369	0.0074	0.0074	0.0088	0.0097
14	14	0.369	0.0206	0.0206	0.0244	0.0270	52	60	0.374	0.0120	0.0120	0.0143	0.0158
15	15	0.368	0.0112	0.0112	0.0133	0.0147	53	61	0.373	0.0090	0.0090	0.0108	0.0119
16	16	0.369	0.0337	0.0337	0.0400	0.0442	54	65	0.373	0.0065	0.0065	0.0077	0.0085
17	17	0.370	0.0299	0.0299	0.0355	0.0392	55	68	0.373	0.0063	0.0063	0.0075	0.0083
18	18	0.370	0.0271	0.0271	0.0322	0.0355	56	69	0.376	0.0091	0.0091	0.0108	0.0119
19	20	0.371	0.0222	0.0222	0.0264	0.0292	57	70	0.376	0.0085	0.0085	0.0102	0.0112
20	22	0.369	0.0145	0.0145	0.0172	0.0190	58	72	0.376	0.0115	0.0115	0.0137	0.0152
21	24	0.369	0.0086	0.0086	0.0102	0.0113	59	73	0.369	0.1289	0.1289	0.1532	0.1691
22	25	0.369	0.0207	0.0207	0.0246	0.0272	60	74	0.369	0.0851	0.0851	0.1011	0.1116
23	26	0.400	0.0000	0.0000	0.0000	0.0000	61	75	0.368	0.0845	0.0845	0.1004	0.1108
24	27	0.369	0.0297	0.0297	0.0352	0.0389	62	76	0.369	0.1037	0.1037	0.1232	0.1360
25	28	0.369	0.0132	0.0132	0.0156	0.0173	63	77	0.373	0.1428	0.1428	0.1699	0.1878
26	29	0.369	0.0864	0.0864	0.1026	0.1133	64	78	0.373	0.0896	0.0896	0.1066	0.1177
27	30	0.369	0.0657	0.0657	0.0780	0.0861	65	79	0.373	0.0960	0.0960	0.1142	0.1262
28	31	0.369	0.0154	0.0154	0.0182	0.0201	66	80	0.373	0.1050	0.1050	0.1249	0.1380
29	32	0.369	0.0978	0.0978	0.1162	0.1283	67	81	0.378	0.1780	0.1780	0.2121	0.2345
30	34	0.369	0.0368	0.0368	0.0437	0.0483	68	82	0.377	0.1079	0.1079	0.1285	0.1421
31	33	0.368	0.0440	0.0440	0.0522	0.0577	69	83	0.377	0.0959	0.0959	0.1142	0.1263
32	35	0.369	0.0996	0.0996	0.1184	0.1307	70	84	0.376	0.0887	0.0887	0.1056	0.1167
33	36	0.367	0.0724	0.0724	0.0860	0.0949	71	85	0.375	0.1466	0.1466	0.1745	0.1929
34	37	0.368	0.0395	0.0395	0.0469	0.0518	72	86	0.377	0.1619	0.1619	0.1929	0.2133
35	38	0.368	0.0943	0.0943	0.1120	0.1237	73	87	0.379	0.0803	0.0803	0.0957	0.1059
36	39	0.368	0.0655	0.0655	0.0778	0.0858	74	88	0.384	0.0648	0.0648	0.0773	0.0856
37	40	0.370	0.1383	0.1383	0.1643	0.1814	75	89	0.388	0.0439	0.0439	0.0524	0.0581
38	41	0.370	0.4440	0.4440	0.5278	0.5829							

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	TEST NO. 195
5.22	3.4462E 06	6.7751E 05	0.197	6.90	825.5	0.35C57E 06	0.C018	RUN NO. 15
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	1.0504E 06	6.7751E 05	0.645	101.49	1485.9	365.76	0.C060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	318.3	573.0	9.110	8.027	74.150	65.336	6.4366E-03	7.1154E-03	0.415
2	2	318.0	572.3	7.008	6.175	74.204	65.384	4.9473E-03	5.4685E-03	0.328
3	3	318.0	572.4	5.512	4.857	74.202	65.382	3.8915E-03	4.3015E-03	0.396
4	4	317.9	572.3	4.299	3.788	74.208	65.388	3.0344E-03	3.3541E-03	0.410
5	5	317.5	571.5	3.601	3.173	74.274	65.446	2.5396E-03	2.8069E-03	0.378
6	6	317.1	570.8	3.035	2.674	74.325	65.490	2.1384E-03	2.3633E-03	0.336
7	7	316.6	569.8	3.398	2.994	74.404	65.560	2.3918E-03	2.6429E-03	0.343
8	8	315.8	568.5	5.857	5.161	74.512	65.655	4.1151E-03	4.5464E-03	0.314
9	9	315.0	567.0	5.454	4.806	74.639	65.767	3.8245E-03	4.2245E-03	0.401
10	10	314.5	566.2	3.955	3.485	74.701	65.822	2.7710E-03	3.0605E-03	0.404
11	11	313.8	564.8	2.865	2.524	74.811	65.918	2.0036E-03	2.2125E-03	0.374
12	12	313.5	564.3	2.790	2.459	74.853	65.955	1.9504E-03	2.1537E-03	0.384
13	13	313.3	564.0	1.789	1.576	74.881	65.981	1.2498E-03	1.3800E-03	0.360
14	14	312.3	562.1	1.543	1.359	75.031	66.112	1.0752E-03	1.1869E-03	0.365
15	15	311.8	561.3	0.841	0.741	75.099	66.173	5.8581E-04	6.4661E-04	0.375
16	16	312.6	562.7	2.526	2.226	74.985	66.072	1.7620E-03	1.9452E-03	0.377
17	17	312.9	563.3	2.239	1.973	74.935	66.028	1.5629E-03	1.7256E-03	0.378
18	18	313.2	563.8	2.027	1.786	74.898	65.995	1.4159E-03	1.5634E-03	0.256
19	20	313.8	564.9	1.664	1.466	74.807	65.915	1.1636E-03	1.2850E-03	0.269
20	22	312.3	562.2	1.087	0.958	75.027	66.109	7.5801E-04	8.3677E-04	0.268
21	24	312.4	562.4	0.646	0.569	75.008	66.092	4.5017E-04	4.9696E-04	0.415
22	25	312.5	562.5	1.553	1.368	75.000	66.085	1.0827E-03	1.1953E-03	0.400
23	26	338.8	609.9	0.000	0.000	71.164	62.705	0.0000	0.0000	*******
24	27	312.7	562.9	2.224	1.959	74.968	66.057	1.5514E-03	1.7128E-03	0.343
25	28	312.9	563.2	0.986	0.869	74.946	66.038	6.8805E-04	7.5964E-04	0.453
26	29	312.9	563.2	6.472	5.703	74.940	66.032	4.5180E-03	4.9881E-03	0.351
27	30	312.3	562.2	4.926	4.341	75.023	66.105	3.4343E-03	3.7911E-03	0.285
28	31	312.4	562.4	1.152	1.015	75.009	66.093	8.0322E-04	8.8670E-04	0.312
29	32	312.8	563.1	7.327	6.456	74.953	66.044	5.1137E-03	5.6457E-03	0.374
30	34	312.3	562.1	2.761	2.433	75.031	66.112	1.9247E-03	2.1247 3	0.298
31	33	311.8	561.3	3.302	2.909	75.098	66.171	2.2990E-03	2.5376 03	0.395
32	35	312.2	562.0	7.478	6.589	75.044	66.124	5.2114E-03	5.7527E-03	0.388
33	36	311.2	560.2	5.445	4.798	75.190	66.253	3.7863E-03	4.1787E-03	0.322
34	37	311.6	560.8	2.969	2.616	75.135	66.204	2.0664E-03	2.2808E-03	0.297
35	38	311.8	561.2	7.084	6.242	75.106	66.178	4.9321E-03	5.4439E-03	0.360
36	39	312.0	561.6	4.914	4.330	75.073	66.149	3.4231E-03	3.7785E-03	0.391
37	40	313.2	563.7	10.355	9.124	74.899	65.996	7.2327E-03	7.9859E-03	0.479
38	41	313.6	564.6	33.227	29.277	74.834	65.939	2.3231E-02	2.5653E-02	0.359
39	42	311.9	561.4	5.005	4.410	75.088	66.163	3.4858E-03	3.8476E-03	0.325
40	43	313.0	563.4	2.629	2.316	74.924	66.018	1.8353E-03	2.0264E-03	0.431
41	44	312.4	562.4	13.970	12.309	75.010	66.094	9.7408E-03	1.0753E-02	0.383

42	45	316.1	568.9	5.461	4.811	74.478	65.625	3.8387E-03	4.2412E-03	0.599
43	46	315.8	568.5	5.148	4.536	74.516	65.659	3.6166E-03	3.9956E-03	0.412
44	47	314.0	565.2	2.727	2.403	74.784	65.895	.9081E-03	2.1072E-03	0.338
45	48	313.5	564.4	30.888	27.217	74.848	65.952	2.1591E-02	2.3841E-02	0.258
46	50	313.6	564.6	3.596	3.168	74.832	65.938	2.5140E-03	2.7761E-03	0.221
47	51	313.5	564.4	2.673	2.356	74.849	65.952	1.8687E-03	2.0635E-03	0.271
48	53	314.1	565.3	1.318	1.161	74.773	65.885	9.2226E-04	1.0185E-03	0.326
49	55	313.8	564.8	1.146	1.010	74.817	65.924	8.0177E-04	8.8537E-04	0.299
50	57	313.3	563.9	1.032	0.909	74.885	65.984	7.2067E-04	7.9573E-04	0.292
51	59	312.9	563.2	0.552	0.487	74.944	66.035	3.8547E-04	4.2557E-04	0.292
52	60	316.9	570.5	0.892	0.786	74.354	65.516	6.2791E-04	6.9390E-04	0.574
53	61	316.1	569.0	0.673	0.593	74.471	65.619	4.7314E-04	5.2276E-04	0.362
54	65	315.7	568.3	0.481	0.424	74.529	65.670	3.3791E-04	3.7332E-04	0.278
55	68	315.6	568.1	0.473	0.417	74.549	65.688	3.3196E-04	3.6673E-04	0.507
56	69	316.6	573.5	0.672	0.592	74.112	65.303	4.7488E-04	5.2499E-04	0.359
57	70	318.6	573.5	0.633	0.558	74.107	65.298	4.4755E-04	4.9478E-04	0.435
58	72	318.5	573.3	0.854	0.752	74.127	65.316	6.0356E-04	6.6724E-04	0.327
59	73	312.5	562.5	9.668	8.519	75.004	66.088	6.7421E-03	7.4429E-03	0.289
60	74	312.4	562.3	6.382	5.623	75.018	66.101	4.4493E-03	4.9117E-03	0.311
61	75	311.8	561.3	6.344	5.590	75.099	66.172	4.4174E-03	4.8758E-03	0.312
62	76	312.2	562.0	7.779	6.855	75.042	66.122	5.4219E-03	5.9851E-03	0.308
63	77	316.1	569.0	10.636	9.372	74.472	65.620	7.4777E-03	8.2620E-03	0.309
64	78	315.7	568.2	6.676	5.882	74.534	65.675	4.6890E-03	5.1803E-03	0.271
65	79	315.6	568.1	7.159	6.308	74.549	65.688	5.0269E-03	5.5534E-03	0.280
66	80	315.6	568.1	7.827	6.897	74.549	65.688	5.4963E-03	6.0720E-03	0.278
67	81	319.8	575.6	13.161	11.597	73.939	65.150	9.3295E-03	1.0317E-02	0.315
68	82	319.1	574.4	7.989	7.039	74.032	65.232	5.6547E-03	6.2523E-03	0.299
69	83	319.0	574.2	7.101	6.257	74.050	65.248	5.0252E-03	5.5561E-03	0.269
70	84	318.6	573.6	6.570	5.789	74.104	65.296	4.6452E-03	5.1355E-03	0.297
71	85	317.8	572.1	10.879	9.586	74.222	65.400	7.6782E-03	8.4869E-03	0.355
72	86	319.4	575.0	11.979	10.555	73.990	65.195	8.4847E-03	9.3820E-03	0.299
73	87	321.3	578.3	5.921	5.217	73.721	64.958	4.2111E-03	4.6585E-03	0.359
74	88	325.6	586.0	4.734	4.171	73.097	64.408	3.4000E-03	3.7652E-03	0.462
75	89	328.5	591.2	3.188	2.809	72.673	64.035	2.3048E-03	2.5542E-03	0.303

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.022GE-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.12	2.3[illegible]E 06	6.5269E 05	0.197	6.65	825.7	0.85079E 06	0.0018	RUN NO. 16

MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	ILLUMINATED $\alpha = -30°$, $\beta = 0°$
5.12	1.01119E 06	6.5269E 05	0.645	97.76	1486.2	365.86	0.0060

CHAN	T/C	PW/HT	C/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	PW/HT	C/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.394	0.3220	0.3220	0.3856	0.4279	39	51	0.382	0.0255	0.0255	0.0305	0.0337
2	2	0.394	0.3042	0.3042	0.3667	0.4068	40	54	0.379	0.0377	0.0377	0.0450	0.0498
3	3	0.393	0.3035	0.3035	0.3634	0.4032	41	55	0.378	0.0309	0.0309	0.0368	0.0407
4	4	0.393	0.2446	0.2446	0.2927	0.3247	42	56	0.379	0.0378	0.0378	0.0450	0.0498
5	5	0.392	0.2204	0.2204	0.2637	0.2925	43	57	0.380	0.0512	0.0512	0.0611	0.0676
6	6	0.391	0.1912	0.1912	0.2288	0.2536	44	58	0.381	0.0360	0.0360	0.0429	0.0474
7	7	0.389	0.1691	0.1691	0.2010	0.2229	45	60	0.379	0.0329	0.0329	0.0393	0.0434
8	8	0.388	0.1416	0.1416	0.1692	0.1875	46	61	0.379	0.0307	0.0307	0.0365	0.0404
9	9	0.386	0.1064	0.1064	0.1271	0.1408	47	62	0.379	0.0325	0.0325	0.0387	0.0429
10	10	0.385	0.0934	0.0934	0.1115	0.1235	48	63	0.380	0.0471	0.0471	0.0562	0.0622
11	11	0.384	0.0827	0.0827	0.0987	0.1093	49	64	0.381	0.0386	0.0386	0.0460	0.0509
12	12	0.381	0.0706	0.0706	0.0842	0.0932	50	65	0.381	0.0147	0.0147	0.0175	0.0194
13	13	0.381	0.0172	0.0172	0.0206	0.0228	51	66	0.381	0.0047	0.0047	0.0056	0.0062
14	18	0.379	0.0601	0.0601	0.0716	0.0792	52	67	0.382	0.0054	0.0054	0.0065	0.0072
15	25	0.379	0.0588	0.0588	0.0701	0.0776	53	68	0.377	0.0117	0.0117	0.0140	0.0154
16	26	0.381	0.0420	0.0420	0.0500	0.0554	54	70	0.378	0.0270	0.0270	0.0322	0.0356
17	27	0.382	0.0251	0.0251	0.0299	0.0331	55	71	0.379	0.0244	0.0244	0.0291	0.0322
18	28	0.382	0.0120	0.0120	0.0143	0.0158	56	72	0.380	0.0350	0.0350	0.0417	0.0462
19	30	0.379	0.0572	0.0572	0.0682	0.0754	57	73	0.381	0.0371	0.0371	0.0442	0.0490
20	31	0.381	0.0410	0.0410	0.0489	0.0541	58	77	0.378	0.0222	0.0222	0.0264	0.0292
21	32	0.379	0.1264	0.1264	0.1507	0.1667	59	78	0.379	0.0187	0.0187	0.0223	0.0247
22	33	0.380	0.0785	0.0785	0.0936	0.1036	60	79	0.380	0.0282	0.0282	0.0337	0.0372
23	34	0.381	0.0308	0.0308	0.0368	0.0407	61	81	0.381	0.0185	0.0185	0.0221	0.0244
24	35	0.382	0.0226	0.0226	0.0270	0.0299	62	84	0.378	0.0239	0.0239	0.0285	0.0315
25	36	0.382	0.0125	0.0125	0.0149	0.0165	63	85	0.379	0.0173	0.0173	0.0206	0.0228
26	37	0.382	0.0043	0.0043	0.0052	0.0057	64	86	0.379	0.0206	0.0206	0.0245	0.0272
27	38	0.381	0.0014	0.0014	0.0017	0.0019	65	90	0.378	0.0254	0.0254	0.0303	0.0335
28	39	0.378	0.0129	0.0129	0.0154	0.0171	66	91	0.379	0.0211	0.0211	0.0252	0.0279
29	40	0.379	0.1347	0.1347	0.1606	0.1777	67	92	0.379	0.0152	0.0152	0.0182	0.0201
30	41	0.379	0.0793	0.0793	0.0946	0.1046	68	94	0.381	0.0196	0.0196	0.0234	0.0259
31	42	0.380	0.0899	0.0899	0.1072	0.1186	69	98	0.378	0.0238	0.0238	0.0283	0.0313
32	43	0.381	0.1035	0.1035	0.1234	0.1366	70	99	0.379	0.0212	0.0212	0.0253	0.0280
33	44	0.382	0.0422	0.0422	0.0504	0.0557	71	100	0.379	0.0123	0.0123	0.0147	0.0162
34	46	0.379	0.0578	0.0578	0.0689	0.0762	72	103	0.378	0.0201	0.0201	0.0240	0.0265
35	47	0.379	0.0470	0.0470	0.0560	0.0619	73	104	0.379	0.0200	0.0200	0.0238	0.0263
36	48	0.380	0.0590	0.0590	0.0703	0.0778	74	105	0.379	0.0097	0.0097	0.0116	0.0128
37	49	0.381	0.0636	0.0636	0.0759	0.0840	75	107	0.380	0.0282	0.0282	0.0336	0.0372
38	50	0.382	0.0439	0.0439	0.0523	0.0579							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)		TEST NO. 195
5.22	3.3200E 06	6.5269E 05	0.197	6.65	825.7	0.85079E 06	0.0018		RUN NO. 16
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	1.0119E 06	6.5269E 05	0.645	97.76	1486.2	365.86	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	333.9	601.0	22.735	20.033	70.610	62.217	1.7262E-02	1.9156E-02	0.269
2	2	333.6	600.5	21.632	19.061	70.651	62.253	1.6414E-02	1.8213E-02	0.276
3	3	333.1	599.6	21.466	18.915	70.721	62.315	1.6270E-02	1.8050E-02	0.342
4	4	332.3	598.2	17.323	15.264	70.833	62.414	1.3105E-02	1.4537E-02	0.388
5	5	331.8	597.2	15.627	13.769	70.909	62.481	1.1807E-02	1.3095E-02	0.395
6	6	330.9	595.6	13.583	11.968	71.035	62.591	1.0242E-02	1.1357E-02	0.401
7	7	329.8	593.6	11.969	10.546	71.191	62.729	9.0022E-03	9.9793E-03	0.392
8	8	328.7	591.6	10.102	8.901	71.352	62.871	7.5785E-03	8.3987E-03	0.403
9	9	327.1	588.9	7.615	6.710	71.572	63.064	5.6926E-03	6.3069E-03	0.419
10	10	326.1	587.0	6.697	5.901	71.720	63.195	4.9941E-03	5.5311E-03	0.389
11	11	324.9	584.8	5.944	5.238	71.895	63.350	4.4207E-03	4.8945E-03	0.379
12	12	323.0	581.5	5.092	4.487	72.159	63.582	3.7712E-03	4.1735E-03	0.343
13	13	323.0	581.3	1.245	1.097	72.171	63.592	9.2152E-04	1.0198E-03	0.325
14	18	320.6	577.1	4.358	3.840	72.503	63.885	3.2097E-03	3.5501E-03	0.376
15	25	320.9	577.6	4.263	3.756	72.463	63.850	3.1419E-03	3.4753E-03	0.381
16	26	322.5	580.5	3.031	2.671	72.240	63.653	2.2416E-03	2.4805E-03	0.359
17	27	323.4	582.1	1.807	1.592	72.113	63.541	1.3394E-03	1.4874E-03	0.355
18	28	323.6	582.4	0.864	0.761	72.085	63.516	6.4058E-04	7.0902E-04	0.370
19	30	321.1	577.9	4.144	3.651	72.443	63.832	3.0552E-03	3.3795E-03	0.354
20	31	322.7	580.8	2.960	2.608	72.213	63.629	2.1904E-03	2.4238E-03	0.349
21	32	321.0	577.8	9.161	8.072	72.452	63.840	6.7528E-03	7.4695E-03	0.299
22	33	322.1	579.8	5.677	5.002	72.295	63.702	4.1951E-03	4.6417E-03	0.489
23	34	322.6	580.7	2.226	1.961	72.224	63.639	1.6465E-03	1.8220E-03	0.417
24	35	323.2	581.7	1.632	1.438	72.140	63.565	1.2086E-03	1.3376E-03	0.340
25	36	323.9	582.9	0.899	0.792	72.041	63.478	6.6701E-04	7.3832E-04	0.348
26	37	323.7	582.6	0.312	0.275	72.066	63.500	2.3134E-04	2.5606E-04	0.388
27	38	322.8	581.1	0.102	0.090	72.188	63.607	7.5417E-05	8.3459E-05	0.289
28	39	319.8	575.7	0.940	0.828	72.620	63.988	6.9115E-04	7.6430E-04	0.408
29	40	321.3	578.3	9.757	8.597	72.411	63.804	7.1970E-03	7.9614E-03	0.403
30	41	321.3	578.4	5.744	5.061	72.403	63.797	4.2375E-03	4.6876E-03	0.430
31	42	322.3	580.1	6.497	5.725	72.265	63.675	4.8032E-03	5.3147E-03	0.400
32	43	323.0	581.4	7.469	6.581	72.167	63.589	5.5305E-03	6.1205E-03	0.344
33	44	323.2	581.7	3.046	2.684	72.138	63.563	2.2567E-03	2.4975E-03	0.458
34	46	321.3	578.4	4.185	3.687	72.405	63.798	3.0869E-03	3.4148E-03	0.422
35	47	321.3	578.3	3.400	2.996	72.409	63.802	2.5081E-03	2.7745E-03	0.402
36	48	322.3	580.1	4.263	3.756	72.270	63.679	3.1513E-03	3.4969E-03	0.384
37	49	322.8	581.0	4.595	4.049	72.195	63.614	3.4002E-03	3.7635E-03	0.362
38	50	323.2	581.8	3.165	2.789	72.130	63.557	2.3450E-03	2.5953E-03	0.389
39	51	323.9	583.1	1.838	1.620	72.032	63.470	1.3642E-03	1.5101E-03	0.333
40	54	321.4	578.6	2.732	2.408	72.387	63.783	2.0162E-03	2.2304E-03	0.395
41	55	320.3	576.5	2.240	1.973	72.556	63.932	1.6481E-03	1.8227E-03	0.391

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42	56	321.4	576.5	2.736	2.410	72.399	63.793	2.0182E-03	2.2327E-03	0.460
43	57	322.2	579.9	3.704	3.264	72.283	63.692	2.7379E-03	3.0294E-03	0.357
44	58	322.6	580.6	2.597	2.288	72.226	63.641	1.9211E-03	2.1258E-03	0.370
45	60	320.7	577.2	2.388	2.104	72.500	63.882	1.7590E-03	1.9455E-03	0.343
46	61	320.8	577.5	2.223	1.958	72.478	63.863	1.6376E-03	1.8113E-03	0.344
47	62	321.3	578.4	2.353	2.073	72.405	63.799	1.7357E-03	1.9200E-03	0.389
48	63	322.0	579.5	3.409	3.004	72.314	63.719	2.5181E-03	2.7865E-03	0.365
49	64	322.6	580.5	2.785	2.454	72.233	63.647	2.0599E-03	2.2794E-03	0.375
50	65	323.1	581.5	1.058	0.932	72.153	63.577	7.8361E-04	8.6723E-04	0.373
51	66	323.1	581.6	0.337	0.297	72.152	63.576	2.4946E-04	2.7608E-04	0.309
52	67	323.2	581.7	0.391	0.345	72.138	63.563	2.9001E-04	3.2096E-04	0.490
53	68	319.4	574.9	0.852	0.751	72.682	64.043	6.2605E-04	6.9223E-04	0.459
54	70	320.5	576.8	1.959	1.726	72.529	63.907	1.4424E-03	1.5953E-03	0.377
55	71	321.3	578.4	1.768	1.557	72.405	63.799	1.3039E-03	1.4424E-03	0.382
56	72	321.6	579.0	2.533	2.232	72.358	63.757	1.8702E-03	2.0691E-03	0.362
57	73	322.5	580.4	2.680	2.361	72.241	63.654	1.9820E-03	2.1932E-03	0.353
58	77	320.4	576.8	1.609	1.418	72.529	63.908	1.1844E-03	1.3100E-03	0.323
59	78	321.3	578.3	1.355	1.194	72.411	63.804	9.9942E-04	1.1056E-03	0.355
60	79	321.6	578.9	2.043	1.800	72.360	63.759	1.5082E-03	1.6686E-03	0.342
61	81	322.5	580.5	1.338	1.179	72.236	63.650	9.8945E-04	1.0949E-03	0.358
62	84	320.6	577.1	1.734	1.528	72.507	63.889	1.2773E-03	1.4127E-03	0.358
63	85	321.2	578.1	1.251	1.103	72.425	63.816	9.2269E-04	1.0209E-03	0.328
64	86	321.2	578.1	1.492	1.314	72.425	63.816	1.0999E-03	1.2167E-03	0.370
65	90	319.9	575.7	1.845	1.626	72.615	63.984	1.3565E-03	1.5001E-03	0.363
66	91	321.0	577.8	1.532	1.350	72.453	63.841	1.1292E-03	1.2491E-03	0.366
67	92	321.2	578.2	1.104	0.972	72.417	63.809	8.1397E-04	9.0042E-04	0.358
68	94	322.4	580.4	1.419	1.251	72.248	63.660	1.0495E-03	1.1613E-03	0.330
69	98	320.1	576.3	1.725	1.520	72.574	63.947	1.2690E-03	1.4034E-03	0.348
70	99	320.9	577.6	1.538	1.355	72.469	63.855	1.1335E-03	1.2538E-03	0.360
71	103	321.2	578.1	0.891	0.785	72.426	63.817	6.5707E-04	7.2684E-04	0.312
72	103	319.9	575.8	1.461	1.287	72.611	63.980	1.0743E-03	1.1877E-03	0.329
73	104	320.8	577.5	1.446	1.274	72.478	63.863	1.0658E-03	1.1788E-03	0.354
74	105	320.7	577.2	0.705	0.621	72.499	63.881	5.1920E-04	5.7427E-04	0.256
75	107	322.1	579.7	2.040	1.798	72.296	63.703	1.5075E-03	1.6680E-03	0.344

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9489E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	4.1532E 06	3.1651E 05	0.197	6.93	736.7	0.75394E 06	0.0018	RUN NO. 17
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	1.2659E 06	3.1651E 05	0.645	101.92	1326.0	324.21	0.0060	

ET MATED
$\alpha = 90°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.423	0.0344	0.0844	0.1021	0.1140	39	51	0.415	0.0173	0.0173	0.0209	0.0233
2	2	0.422	0.0407	0.0407	0.0493	0.0550	40	54	0.409	0.0355	0.0355	0.0428	0.0476
3	3	0.421	0.0354	0.0354	0.0428	0.0477	41	55	0.408	0.0353	0.0353	0.0425	0.0473
4	4	0.420	0.0328	0.0328	0.0396	0.0441	42	56	0.410	0.0362	0.0362	0.0436	0.0486
5	5	0.419	0.0301	0.0301	0.0364	0.0406	43	57	0.411	0.0268	0.0268	0.0323	0.0360
6	6	0.418	0.0231	0.0231	0.0279	0.0311	44	58	0.413	0.0202	0.0202	0.0243	0.0271
7	7	0.417	0.0188	0.0188	0.0227	0.0253	45	60	0.408	0.0323	0.0323	0.0389	0.0433
8	8	0.416	0.0151	0.0151	0.0182	0.0204	46	61	0.409	0.0280	0.0280	0.0337	0.0375
9	9	0.414	0.0111	0.0111	0.0133	0.0149	47	62	0.410	0.0391	0.0391	0.0471	0.0525
10	10	0.413	0.0096	0.0096	0.0116	0.0129	48	63	0.411	0.0327	0.0327	0.0394	0.0439
11	11	0.412	0.0095	0.0095	0.0114	0.0127	49	64	0.413	0.0279	0.0279	0.0337	0.0375
12	12	0.410	0.0090	0.0090	0.0109	0.0121	50	65	0.414	0.0203	0.0203	0.0245	0.0273
13	13	0.413	0.0155	0.0155	0.0187	0.0208	51	66	0.416	0.0486	0.0486	0.0587	0.0654
14	18	0.407	0.0041	0.0049	0.0059	0.0066	52	67	0.416	0.0905	0.0905	0.1092	0.1218
15	25	0.407	0.0099	0.0099	0.0119	0.0133	53	68	0.415	0.1593	0.1593	0.1922	0.2142
16	26	0.410	0.0163	0.0163	0.0196	0.0218	54	70	0.409	0.0304	0.0304	0.0366	0.0408
17	27	0.412	0.0120	0.0120	0.0145	0.0162	55	71	0.411	0.0393	0.0393	0.0473	0.0527
18	28	0.413	0.0172	0.0172	0.0207	0.0231	56	72	0.412	0.0407	0.0407	0.0491	0.0547
19	30	0.408	0.0136	0.0136	0.0163	0.0182	57	73	0.413	0.0364	0.0364	0.0438	0.0488
20	31	0.411	0.0173	0.0173	0.0208	0.0231	58	77	0.410	0.0431	0.0431	0.0519	0.0578
21	32	0.407	0.0171	0.0171	0.0206	0.0229	59	78	0.411	0.0535	0.0535	0.0645	0.0718
22	33	0.409	0.0153	0.0153	0.0184	0.0205	60	79	0.412	0.0501	0.0501	0.0604	0.0673
23	34	0.411	0.0183	0.0183	0.0220	0.0245	61	81	0.414	0.0342	0.0342	0.0413	0.0460
24	35	0.412	0.0142	0.0142	0.0171	0.0191	62	84	0.410	0.0650	0.0650	0.0782	0.0871
25	36	0.414	0.0174	0.0174	0.0209	0.0233	63	85	0.411	0.0816	0.0816	0.0984	0.1096
26	37	0.415	0.0467	0.0467	0.0563	0.0628	64	86	0.412	0.0707	0.0707	0.0852	0.0949
27	38	0.416	0.0844	0.0844	0.1018	0.1135	65	90	0.410	0.1007	0.1007	0.1212	0.1350
28	39	0.413	0.1594	0.1594	0.1922	0.2141	66	91	0.412	0.1235	0.1235	0.1488	0.1658
29	40	0.408	0.0202	0.0202	0.0243	0.0271	67	92	0.413	0.1155	0.1155	0.1392	0.1551
30	41	0.408	0.0243	0.0243	0.0292	0.0325	68	94	0.415	0.0809	0.0809	0.0976	0.1088
31	42	0.410	0.0229	0.0229	0.0276	0.0307	69	98	0.411	0.1439	0.1439	0.1734	0.1931
32	43	0.411	0.0193	0.0193	0.0233	0.0259	70	99	0.413	0.1722	0.1722	0.2075	0.2313
33	44	0.413	0.0146	0.0146	0.0175	0.0196	71	100	0.414	0.1582	0.1582	0.1908	0.2127
34	46	0.397	0.0000	0.0000	0.0000	0.0000	72	103	0.412	0.1813	0.1813	0.2185	0.2434
35	47	0.409	0.0336	0.0336	0.0404	0.0450	73	104	0.414	0.1813	0.1813	0.2186	0.2437
36	48	0.410	0.0307	0.0307	0.0370	0.0412	74	105	0.415	0.2198	0.2198	0.2651	0.2955
37	49	0.411	0.0236	0.0236	0.0284	0.0316	75	107	0.416	0.1050	0.1050	0.1267	0.1413
38	50	0.413	0.0172	0.0172	0.0208	0.0231							

PRECEDING PAGE BLANK NOT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	4.1532E 06	8.1651E 05	0.197	6.93	736.7	0.75394E 06	0.0018	RUN NO.	17
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)		
5.22	1.2659E 06	8.1651E 05	0.645	101.92	1326.0	324.21	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	317.3	571.2	5.106	4.499	60.494	53.304	4.1486E-03	4.6341E-03	0.536
2	2	316.7	570.1	2.468	2.175	60.581	53.380	2.0019E-03	2.2358E-03	0.530
3	3	316.2	569.2	2.145	1.890	60.656	53.446	1.7379E-03	1.9405E-03	0.451
4	4	315.4	567.7	1.992	1.755	60.778	53.553	1.6095E-03	1.7967E-03	0.448
5	5	314.8	566.7	1.834	1.616	60.858	53.625	1.4799E-03	1.6517E-03	0.461
6	6	314.1	565.4	1.407	1.240	60.963	53.716	1.1334E-03	1.2647E-03	0.457
7	7	313.3	564.0	1.149	1.012	61.070	53.811	9.2341E-04	1.0301E-03	0.446
8	8	312.2	561.9	0.926	0.816	61.240	53.961	7.4191E-04	8.2735E-04	0.451
9	9	311.0	559.9	0.679	0.599	61.403	54.105	5.4251E-04	6.0477E-04	0.469
10	10	310.2	558.4	0.590	0.519	61.518	54.206	4.6973E-04	5.2351E-04	0.432
11	11	309.2	556.5	0.585	0.516	61.673	54.342	4.6508E-04	5.1815E-04	0.442
12	12	307.8	554.0	0.560	0.493	61.876	54.521	4.4302E-04	4.9336E-04	0.423
13	13	310.1	558.1	0.954	0.840	61.543	54.228	7.5936E-04	8.4626E-04	0.324
14	18	305.6	550.1	0.305	0.269	62.187	54.795	2.3995E-04	2.6703E-04	0.458
15	25	305.7	550.2	0.617	0.544	62.179	54.788	4.8580E-04	5.4065E-04	0.463
16	26	308.1	554.5	1.006	0.886	61.834	54.484	7.9648E-04	8.8707E-04	0.453
17	27	309.5	557.0	0.742	0.654	61.629	54.303	5.8997E-04	6.5736E-04	0.453
18	28	310.3	558.6	1.058	0.932	61.508	54.197	8.4338E-04	9.3996E-04	0.383
19	30	306.1	550.9	0.844	0.744	62.119	54.735	6.6488E-04	7.4005E-04	0.434
20	31	308.4	555.2	1.066	0.939	61.779	54.435	8.4508E-04	9.4130E 04	0.444
21	32	305.8	550.4	1.064	0.938	62.163	54.774	8.3789E-04	9.3252E-04	0.445
22	33	307.3	553.1	0.946	0.833	61.949	54.586	7.4735E-04	8.3215E-04	0.474
23	34	308.3	555.0	1.129	0.995	61.793	54.448	8.9518E-04	9.9708E-04	0.436
24	35	309.6	557.3	0.877	0.772	61.608	54.285	6.9723E-04	7.7691E-04	0.448
25	36	310.6	559.1	1.068	0.941	61.463	54.157	8.5160E-04	9.4922E-04	0.402
26	37	311.7	561.0	2.862	2.521	61.309	54.021	2.2891E-03	2.5523E-03	0.381
27	38	312.1	561.8	5.167	4.552	61.249	53.968	4.1377E-03	4.6142E-03	0.366
28	39	310.0	557.9	9.814	8.648	61.559	54.242	7.8135E-03	8.7073E-03	0.367
29	40	306.2	551.2	1.256	1.107	62.099	54.717	9.8992E-04	1.1019E-03	0.426
30	41	306.4	551.5	1.507	1.328	62.071	54.693	1.1880E-03	1.3224E-03	0.445
31	42	307.4	553.4	1.417	1.249	61.925	54.564	1.1205E-03	1.2477E-03	0.442
32	43	308.4	555.1	1.194	1.052	61.789	54.444	9.4613E-04	1.0538E-03	0.398
33	44	309.8	557.7	0.896	0.790	61.575	54.256	7.1342E-04	7.9501E-04	0.417
34	46	298.3	537.0	0.000	0.000	63.237	55.720	0.0000	0.0000	0.277
35	47	306.7	552.0	2.082	1.834	62.032	54.658	1.6427E-03	1.8288E-03	0.442
36	48	307.8	554.1	1.902	1.676	61.869	54.515	1.5056E-03	1.6767E-03	0.437
37	49	308.7	555.6	1.455	1.282	61.743	54.404	1.1542E-03	1.2857E-03	0.399
38	50	309.9	557.8	1.061	0.935	61.570	54.252	8.4440E-04	9.4097E-04	0.398
39	51	311.2	560.2	1.064	0.937	61.379	54.083	8.4986E-04	9.4745E-04	0.415
40	54	308.1	552.1	2.204	1.942	62.025	54.653	1.7397E-03	1.9368E-03	0.456
41	55	306.1	551.0	2.192	1.932	62.113	54.730	1.7273E-03	1.9226E-03	0.447

REPRODUCIBILITY OF THE
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42	56	307.6	553.8	2.244	1.977	61.964	54.546	1.7750E-03	1.9780E-03	0.898
43	57	308.7	555.7	1.654	1.458	61.738	54.400	1.3126E-03	1.4622E-03	0.411
44	58	309.7	557.4	1.243	1.095	61.600	54.278	9.8905E-04	1.1021E-03	0.407
45	60	306.6	551.9	2.007	1.768	62.051	54.675	1.5829E-03	1.7621E-03	0.441
46	61	307.0	552.5	1.734	1.528	61.991	54.622	1.3690E-03	1.5242E-03	0.406
47	62	307.9	554.2	2.422	2.134	61.860	54.507	1.9172E-03	2.1351E-03	0.442
48	63	308.7	555.7	2.021	1.781	61.739	54.400	1.6033E-03	1.7860E-03	0.422
49	64	309.8	557.6	1.721	1.516	61.583	54.263	1.3694E-03	1.5260E-03	0.424
50	65	310.9	559.6	1.248	1.100	61.422	54.121	9.9643E-04	1.1107E-03	0.389
51	66	311.9	561.5	2.980	2.625	61.273	53.990	2.3851E-03	2.6596E-03	0.385
52	67	312.6	562.6	5.538	4.880	61.180	53.908	4.4410E-03	4.9532E-03	0.371
53	68	311.2	560.1	9.780	8.618	61.381	54.085	7.8130E-03	8.7102E-03	0.376
54	70	307.0	552.6	1.886	1.662	61.989	54.621	1.4893E-03	1.6582E-03	0.367
55	71	308.3	555.0	2.429	2.140	61.797	54.451	1.9251E-03	2.1442E-03	0.402
56	72	309.0	556.2	2.513	2.214	61.700	54.366	1.9952E-03	2.2228E-03	0.428
57	73	310.0	558.0	2.238	1.972	61.553	54.237	1.7823E-03	1.9862E-03	0.403
58	77	307.4	553.4	2.671	2.354	61.921	54.561	2.1122E-03	2.3520E-03	0.380
59	78	308.7	555.6	3.305	2.913	61.744	54.405	2.6224E-03	2.9212E-03	0.393
60	79	309.3	556.7	3.089	2.722	61.655	54.327	2.4550E-03	2.7353E-03	0.429
61	81	310.9	559.5	2.103	1.853	61.429	54.127	1.6783E-03	1.8708E-03	0.384
62	84	307.9	554.2	4.018	3.541	61.860	54.507	3.1810E-03	3.5426E-03	0.412
63	85	308.8	555.9	5.039	4.440	61.724	54.387	3.9997E-03	4.4557E-03	0.402
64	86	309.3	556.8	4.359	3.841	61.646	54.319	3.4644E-03	3.8600E-03	0.424
65	90	307.9	554.3	6.226	5.486	61.852	54.500	4.9293E-03	5.4898E-03	0.431
66	91	309.5	557.2	7.610	6.705	61.620	54.295	6.0516E-03	6.7430E-03	0.426
67	92	310.0	558.0	7.110	6.265	61.553	54.236	5.6610E-03	6.3087E-03	0.400
68	94	311.6	560.9	4.961	4.372	61.323	54.034	3.9678E-03	4.4239E-03	0.364
69	98	308.6	555.5	8.889	7.832	61.753	54.413	7.0511E-03	7.8544E-03	0.435
70	99	310.0	558.0	10.599	9.339	61.555	54.239	8.4393E-03	9.4047E-03	0.396
71	100	310.6	559.1	9.726	8.570	61.464	54.158	7.7574E-03	8.6465E-03	0.363
72	103	309.3	556.8	11.179	9.850	61.647	54.320	8.8851E-03	9.8996E-03	0.451
73	104	310.8	559.5	11.137	9.813	61.433	54.131	8.8879E-03	9.9074E-03	0.400
74	105	311.2	560.1	13.492	11.888	61.384	54.088	1.0777E-02	1.2014E-02	0.367
75	107	312.3	562.2	6.429	5.665	61.215	53.939	5.1523E-03	5.7460E-03	0.336

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.1782E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.30e2E 06	6.5037E 05	0.197	6.53	818.0	0.84239E 06	0.0018	RUN NO. 18

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ORB MATED $\alpha = 90°$, $\beta = 0°$
5.22	1.0083E 06	6.5037E 05	0.645	95.94	1472.4	362.25	0.0060	

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.357	0.0098	0.0098	0.0117	0.0128	39	42	0.355	0.0131	0.0131	0.0155	0.0170
2	2	0.357	0.0150	0.0150	0.0177	0.0195	40	43	0.356	0.0187	0.0187	0.0222	0.0244
3	3	0.357	0.0211	0.0211	0.0250	0.0276	41	44	0.355	0.0115	0.0115	0.0136	0.0150
4	4	0.358	0.0239	0.0239	0.0283	0.0312	42	45	0.356	0.0132	0.0132	0.0156	0.0172
5	5	0.357	0.0262	0.0262	0.0310	0.0341	43	46	0.357	0.0233	0.0233	0.0276	0.0304
6	6	0.357	0.0292	0.0292	0.0346	0.0381	44	47	0.356	0.0268	0.0268	0.0317	0.0349
7	7	0.357	0.0336	0.0336	0.0398	0.0439	45	48	0.354	0.0062	0.0062	0.0074	0.0081
8	8	0.357	0.0372	0.0372	0.0441	0.0485	46	50	0.357	0.1115	0.1115	0.1321	0.1454
9	9	0.000	0.0000	0.0000	0.0000	0.0000	47	51	0.356	0.1055	0.1055	0.1249	0.1376
10	10	0.356	0.0432	0.0432	0.0511	0.0563	48	53	0.357	0.0719	0.0719	0.0852	0.0938
11	11	0.356	0.0397	0.0397	0.0470	0.0518	49	55	0.356	0.0862	0.0862	0.1021	0.1125
12	12	0.356	0.0548	0.0548	0.0649	0.0715	50	57	0.357	0.1105	0.1105	0.1309	0.1442
13	13	0.356	0.1174	0.1174	0.1390	0.1531	51	59	0.357	0.2300	0.2300	0.2723	0.3000
14	14	0.356	0.2463	0.2463	0.2916	0.3211	52	60	0.357	0.1468	0.1468	0.1738	0.1915
15	15	0.356	0.1098	0.1098	0.1300	0.1432	53	61	0.357	0.1638	0.1638	0.1939	0.2136
16	16	0.355	0.0345	0.0345	0.0408	0.0449	54	65	0.358	0.1639	0.1639	0.1941	0.2138
17	17	0.356	0.0414	0.0414	0.0490	0.0540	55	68	0.358	0.1912	0.1912	0.2265	0.2495
18	18	0.356	0.0462	0.0462	0.0547	0.0602	56	69	0.358	0.2045	0.2045	0.2423	0.2669
19	20	0.357	0.0858	0.0858	0.1015	0.1118	57	70	0.358	0.2134	0.2134	0.2528	0.2785
20	22	0.356	0.1636	0.1636	0.1937	0.2133	58	72	0.359	0.2747	0.2747	0.3254	0.3586
21	24	0.355	0.0358	0.0358	0.0423	0.0466	59	73	0.355	0.0063	0.0063	0.0075	0.0082
22	25	0.355	0.0403	0.0403	0.0477	0.0526	60	74	0.355	0.0058	0.0058	0.0069	0.0076
23	26	0.404	0.0000	0.0000	0.0000	0.0000	61	75	0.354	0.0046	0.0046	0.0054	0.0060
24	27	0.356	0.0246	0.0246	0.0291	0.0320	62	76	0.355	0.0038	0.0038	0.0045	0.0049
25	28	0.356	0.0475	0.0475	0.0562	0.0619	63	77	0.356	0.0109	0.0109	0.0129	0.0142
26	29	0.355	0.0093	0.0093	0.0110	0.0121	64	78	0.356	0.0067	0.0067	0.0079	0.0087
27	30	0.355	0.0194	0.0194	0.0229	0.0253	65	79	0.356	0.0075	0.0075	0.0088	0.0097
28	31	0.356	0.0488	0.0488	0.0578	0.0636	66	80	0.357	0.0039	0.0039	0.0046	0.0050
29	32	0.355	0.0118	0.0118	0.0139	0.0153	67	81	0.358	0.0551	0.0551	0.0652	0.0719
30	34	0.355	0.0544	0.0544	0.0644	0.0709	68	82	0.358	0.0147	0.0147	0.0174	0.0191
31	33	0.355	0.0191	0.0191	0.0225	0.0248	69	83	0.358	0.0073	0.0073	0.0087	0.0096
32	35	0.355	0.0094	0.0094	0.0112	0.0123	70	84	0.358	0.0110	0.0110	0.0130	0.0144
33	36	0.354	0.0058	0.0058	0.0068	0.0075	71	85	0.357	0.0094	0.0094	0.0112	0.0123
34	37	0.351	0.0000	0.0000	0.0000	0.0000	72	86	0.358	0.0100	0.0100	0.0119	0.0131
35	38	0.355	0.0094	0.0094	0.0111	0.0122	73	87	0.360	0.0326	0.0326	0.0387	0.0426
36	39	0.355	0.0056	0.0056	0.0066	0.0073	74	88	0.363	0.0264	0.0264	0.0314	0.0346
37	40	0.356	0.0102	0.0102	0.0121	0.0134	75	89	0.363	0.0461	0.0461	0.0547	0.0603
38	41	0.356	0.0109	0.0109	0.0130	0.0143							

PRECEDING PAGE BLANK

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.3082E 06	6.5037E 05	0.197	6.53	818.0	0.84239E 06	0.0018	RUN NO. 18

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0083E 06	6.5037E 05	0.645	95.94	1472.4	362.25	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	299.7	539.4	0.725	0.639	73.633	64.881	5.2469E-04	5.7793E-04	0.406
2	2	299.5	539.1	1.102	0.971	73.662	64.906	7.9728E-04	8.7815E-04	0.494
3	3	299.7	539.5	1.557	1.372	73.629	64.877	1.1272E-03	1.2416E-03	0.528
4	4	299.9	539.8	1.760	1.551	73.607	64.858	1.2746E-03	1.4040E-03	0.563
5	5	299.8	539.6	1.926	1.697	73.623	64.871	1.3946E-03	1.5362E-03	0.536
6	6	299.8	539.6	2.148	1.893	73.622	64.871	1.5553E-03	1.7132E-03	0.530
7	7	299.6	539.3	2.477	2.183	73.646	64.893	1.7928E-03	1.9747E-03	0.544
8	8	299.1	538.4	2.744	2.418	73.712	64.950	1.9838E-03	2.1848E-03	0.548
9	9	0.0	0.0	0.000	0.000	0.000	0.000	0.0000	0.0000	-0.000
10	10	298.7	537.6	3.187	2.808	73.776	65.007	2.3020E-03	2.5350E-03	0.572
11	11	298.4	537.2	2.933	2.585	73.811	65.038	2.1175E-03	2.3318E-03	0.510
12	12	298.3	537.0	4.049	3.567	73.830	65.054	2.9217E-03	3.2173E-03	0.510
13	13	298.3	537.0	8.670	7.639	73.830	65.054	6.2566E-03	6.8894E-03	0.524
14	14	298.2	536.8	18.190	16.028	73.839	65.062	1.3125E-02	1.4453E-02	0.556
15	15	298.5	537.3	8.106	7.143	73.803	65.030	5.8525E-03	6.4448E-03	0.593
16	16	297.8	536.1	2.549	2.246	73.896	65.112	1.8374E-03	2.0230E-03	0.165
17	17	298.3	536.9	3.057	2.694	73.836	65.060	2.2060E-03	2.4291E-03	0.241
18	18	298.5	537.3	3.407	3.002	73.802	65.030	2.4599E-03	2.7088E-03	0.385
19	20	299.2	538.6	6.321	5.569	73.700	64.939	4.5705E-03	5.0338E-03	0.412
20	22	299.0	538.1	12.061	10.627	73.737	64.972	8.7163E-03	9.5993E-03	0.440
21	24	297.8	536.1	2.642	2.328	73.897	65.114	1.9049E-03	2.0973E-03	0.435
22	25	298.0	536.5	2.979	2.625	73.867	65.087	2.1486E-03	2.3658E-03	0.385
23	26	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0200	*******
24	27	298.2	536.8	1.814	1.598	73.842	65.064	1.3088E-03	1.4411E-03	0.550
25	28	298.4	537.2	3.504	3.087	73.814	65.040	2.5290E-03	2.7849E-03	0.494
26	29	297.9	536.2	0.686	0.604	73.889	65.106	4.9448E-04	5.4444E-04	0.500
27	30	298.0	536.4	1.431	1.261	73.874	65.093	1.0323E-03	1.1366E-03	0.527
28	31	298.2	536.8	3.603	3.175	73.845	65.068	2.5996E-03	2.8625E-03	0.432
29	32	298.1	536.6	0.868	0.765	73.859	65.079	6.2616E-04	6.8946E-04	0.610
30	34	298.1	536.6	4.019	3.542	73.857	65.078	2.8994E-03	3.1925E-03	0.454
31	33	297.6	535.7	1.409	1.241	73.927	65.140	1.0150E-03	1.1175E-03	0.605
32	35	297.5	535.6	0.699	0.616	73.940	65.151	5.0339E-04	5.5421E-04	0.538
33	36	297.3	535.1	0.427	0.376	73.980	65.186	3.0739E-04	3.3840E-04	0.498
34	37	294.6	530.3	0.000	0.000	0.000	0.000	0.0000	0.0000	-11.997
35	38	297.5	535.6	0.692	0.610	73.940	65.151	4.9879E-04	5.4915E-04	0.494
36	39	297.7	535.9	0.415	0.366	73.913	65.128	2.9926E-04	3.2948E-04	0.570
37	40	298.5	537.5	0.756	0.666	73.783	65.013	5.4575E-04	6.0099E-04	0.584
38	41	298.8	537.9	0.808	0.712	73.758	64.991	5.8341E-04	6.4249E-04	0.558
39	42	297.5	535.5	0.967	0.852	73.946	65.157	6.9684E-04	7.6718E-04	0.618
40	43	298.3	537.0	1.383	1.218	73.826	65.051	9.9786E-04	1.0988E-03	0.522
41	44	297.6	535.7	0.850	0.749	73.926	65.139	6.1236E-04	6.7419E-04	0.529

42	45	298.8	537.8	0.972	0.857	73.761	64.994	7.0224E-04	7.7335E-04	0.441
43	46	299.7	539.5	1.718	1.514	73.628	64.876	1.2438E-03	1.3700E-03	0.393
44	47	298.3	536.9	1.975	1.740	73.831	65.055	1.4253E-03	1.5694E-03	0.388
45	48	297.2	535.0	0.462	0.407	73.988	65.193	3.3273E-04	3.6630E-04	0.445
46	50	299.1	538.4	8.222	7.245	73.719	64.957	5.9437E-03	6.5460E-03	0.272
47	51	298.9	538.1	7.782	6.857	73.743	64.977	5.6236E-03	6.1932E-03	0.374
48	53	299.1	538.3	5.303	4.672	73.720	64.957	3.8332E-03	4.2216E-03	0.296
49	55	299.0	538.2	6.359	5.603	73.733	64.969	4.5959E-03	5.0615E-03	0.351
50	57	299.2	538.6	8.148	7.179	73.702	64.942	5.8914E-03	6.4886E-03	0.377
51	59	299.2	538.6	16.951	14.936	73.697	64.937	1.2258E-02	1.3501E-02	0.302
52	60	299.3	538.7	10.819	9.533	73.692	64.932	7.8241E-03	8.6173E-03	0.206
53	61	299.6	539.3	12.059	10.626	73.643	64.890	8.7279E-03	9.6135E-03	0.289
54	65	299.9	539.8	12.060	10.627	73.605	64.856	8.7337E-03	9.6205E-03	0.336
55	68	300.4	540.8	14.057	12.386	73.529	64.789	1.0192E-02	1.1228E-02	0.200
56	69	300.6	541.1	15.032	13.245	73.503	64.766	1.0903E-02	1.2012E-02	0.233
57	70	300.6	541.1	15.682	13.818	73.501	64.765	1.1375E-02	1.2532E-02	0.259
58	72	301.1	541.9	20.172	17.774	73.440	64.711	1.4645E-02	1.6136E-02	0.260
59	73	297.6	535.8	0.468	0.412	73.925	65.138	3.3709E-04	3.7113E-04	0.501
60	74	297.6	535.6	0.432	0.380	73.936	65.148	3.1103E-04	3.4243E-04	0.419
61	75	297.3	535.1	0.340	0.300	73.975	65.182	2.4481E-04	2.6951E-04	0.393
62	76	297.7	535.8	0.278	0.245	73.921	65.135	2.0045E-04	2.2069E-04	0.519
63	77	298.9	538.0	0.803	0.707	73.747	64.981	5.7991E-04	6.3865E-04	0.512
64	78	298.7	537.6	0.493	0.435	73.776	65.007	3.5624E-04	3.9231E-04	0.511
65	79	298.9	538.0	0.550	0.485	73.750	64.984	3.9745E-04	4.3771E-04	0.592
66	80	299.3	538.8	0.284	0.250	73.682	64.924	2.0523E-04	2.2604E-04	0.638
67	81	300.5	540.9	4.048	3.566	73.515	64.776	2.9352E-03	3.2337E-03	0.431
68	82	300.3	540.5	1.079	0.951	73.550	64.807	7.8231E-04	8.6182E-04	0.645
69	83	300.4	540.8	0.539	0.475	73.529	64.789	3.9053E-04	4.3023E-04	0.567
70	84	300.6	541.1	0.809	0.713	73.500	64.764	5.8663E-04	6.4630E-04	0.757
71	85	299.5	539.1	0.694	0.612	73.663	64.907	5.0232E-04	5.5327E-04	0.583
72	86	300.3	540.5	0.736	0.649	73.551	64.809	5.3369E-04	5.8792E-04	0.463
73	87	301.8	543.2	2.392	2.108	73.333	64.616	1.7395E-03	1.9169E-03	0.651
74	88	304.2	547.6	1.930	1.700	72.991	64.315	1.4110E-03	1.5557E-03	0.495
75	89	304.8	548.7	3.361	2.962	72.901	64.235	2.4611E-03	2.7140E-03	0.484

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9246E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH 5.22 | RE/METER 3.1036E 06 | REL LENGTH(METER) 6.1114E 05 | PT(ATM) 0.197 | TT(DEG K) 6.84 | HT(JOULE/KG) 874.7 | 0.90490E 06 | RS(METER) 0.0018 | TEST NO. 195

MACH 5.22 | RE/FT 9.4750E 05 | REL LENGTH(FT) 6.1114E 05 | PT(PSI) 0.645 | TT(DEG R) 100.56 | HT(BTU/LBM) 1574.5 | 389.13 | RS(FT) 0.0060 | RUN NO. 19

ORB MATED
$\alpha = 120°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.339	-0.0155	-0.0155	0.0183	0.0201
2	2	0.339	0.0205	0.0205	0.0241	0.0265
3	3	0.340	0.0252	0.0252	0.0297	0.0326
4	4	0.340	0.0238	0.0238	0.0280	0.0308
5	5	0.340	0.0240	0.0240	0.0283	0.0311
6	6	0.340	0.0235	0.0235	0.0277	0.0304
7	7	0.340	0.0256	0.0256	0.0301	0.0331
8	8	0.339	0.0281	0.0281	0.0331	0.0364
9	9	0.376	0.0000	0.0000	0.0000	0.0000
10	10	0.339	0.0416	0.0416	0.0490	0.0538
11	11	0.338	0.0713	0.0713	0.0839	0.0921
12	12	0.338	0.1072	0.1072	0.1262	0.1386
13	13	0.338	0.1794	0.1794	0.2113	0.2320
14	14	0.337	0.2257	0.2257	0.2659	0.2918
15	15	0.338	0.1740	0.1740	0.2049	0.2249
16	16	0.336	0.0237	0.0237	0.0279	0.0306
17	17	0.337	0.0345	0.0345	0.0407	0.0446
18	18	0.337	0.0754	0.0754	0.0888	0.0974
19	20	0.338	0.1030	0.1030	0.1213	0.1332
20	22	0.338	0.3968	0.3968	0.4674	0.5130
21	24	0.337	0.0400	0.0400	0.0471	0.0517
22	25	0.337	0.0515	0.0515	0.0606	0.0666
23	26	0.376	0.0000	0.0000	0.0000	0.0000
24	27	0.337	0.0479	0.0479	0.0564	0.0619
25	28	0.337	0.0824	0.0824	0.0970	0.1065
26	29	0.337	0.0218	0.0218	0.0257	0.0282
27	30	0.337	0.0231	0.0231	0.0272	0.0298
28	31	0.337	0.0391	0.0391	0.0461	0.0506
29	32	0.337	0.0135	0.0135	0.0159	0.0175
30	34	0.337	0.0124	0.0124	0.0146	0.0160
31	33	0.336	0.0102	0.0102	0.0120	0.0132
32	35	0.336	0.0067	0.0067	0.0078	0.0086
33	36	0.336	0.0054	0.0054	0.0064	0.0070
34	37	0.329	0.0000	0.0000	0.0000	0.0000
35	38	0.336	0.0054	0.0054	0.0064	0.0070
36	39	0.336	0.0176	0.0176	0.0208	0.0228
37	40	0.337	0.0230	0.0230	0.0271	0.0298
38	41	0.337	0.0046	0.0046	0.0054	0.0059
39	42	0.336	0.0419	0.0419	0.0493	0.0541
40	43	0.337	0.0522	0.0522	0.0615	0.0675
41	44	0.336	0.0039	0.0039	0.0046	0.0050
42	45	0.338	0.0224	0.0224	0.0264	0.0290
43	46	0.339	0.0346	0.0346	0.0407	0.0447
44	47	0.338	0.0336	0.0336	0.0396	0.0435
45	48	0.336	0.0060	0.0060	0.0071	0.0077
	50	0.337	0.0953	0.0953	0.1122	0.1231
	51	0.337	0.1040	0.1040	0.1225	0.1344
48	53	0.337	0.0734	0.0734	0.0864	0.0949
49	55	0.337	0.1158	0.1158	0.1364	0.1497
50	57	0.338	0.2681	0.2681	0.3158	0.3467
51	59	0.339	0.2602	0.2602	0.3065	0.3365
52	60	0.337	0.1087	0.1087	0.1280	0.1405
53	61	0.338	0.1425	0.1425	0.1678	0.1842
54	65	0.339	0.3251	0.3251	0.3831	0.4206
55	68	0.342	0.2635	0.2635	0.3107	0.3413
56	69	0.340	0.1752	0.1752	0.2065	0.2267
57	70	0.340	0.2191	0.2191	0.2582	0.2835
58	72	0.343	0.641	0.6415	0.7566	0.8312
59	73	0.336	0.0061	0.0061	0.0072	0.0079
60	74	0.336	0.0076	0.0076	0.0090	0.0099
61	75	0.336	0.0059	0.0059	0.0069	0.0076
62	76	0.337	0.0052	0.0052	0.0061	0.0067
63	77	0.337	0.0050	0.0050	0.0059	0.0065
64	78	0.338	0.0038	0.0038	0.0045	0.0050
65	79	0.339	0.0046	0.0046	0.0054	0.0059
66	80	0.340	0.0041	0.0041	0.0049	0.0054
67	81	0.340	0.0171	0.0171	0.0202	0.0222
68	82	0.340	0.0058	0.0058	0.0069	0.0075
69	83	0.341	0.0052	0.0052	0.0061	0.0067
70	84	0.343	0.0152	0.0152	0.0180	0.0197
71	85	0.339	0.0076	0.0076	0.0089	0.0098
72	86	0.341	0.0415	0.0415	0.0490	0.0538
73	87	0.344	0.0834	0.0834	0.0984	0.1081
74	88	0.348	0.0271	0.0271	0.0321	0.0352
75	89	0.349	0.0283	0.0283	0.0334	0.0368

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 19

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	3.1086E 06	6.1114E 05	0.197	6.84	874.7	0.20490E 06	0.0018
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	9.4750E 05	6.1114E 05	0.645	100.56	1574.5	389.13	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	305.7	550.3	1.294	1.141	83.434	73.517	8.4185E-04	9.2428E-04	0.564
2	2	305.7	550.3	1.708	1.505	83.436	73.519	1.1107E-03	1.2154E-03	0.615
3	3	306.2	551.1	2.100	1.850	83.371	73.461	1.3668E-03	1.5007E-03	0.649
4	4	306.5	551.7	1.982	1.746	83.324	73.420	1.2906E-03	1.4171E-03	0.653
5	5	306.3	551.4	2.001	1.763	83.348	73.441	1.3028E-03	1.4306E-03	0.651
6	6	306.4	551.5	1.960	1.727	83.338	73.432	1.2765E-03	1.4017E-03	0.641
7	7	306.3	551.3	2.130	1.877	83.359	73.450	1.3869E-03	1.5228E-03	0.644
8	8	305.7	550.2	2.346	2.067	83.448	73.529	1.5255E-03	1.6749E-03	0.649
9	9	338.8	609.9	0.000	0.000	78.601	69.259	0.0000	0.0000	*******
10	10	305.1	549.2	3.472	3.060	83.530	73.601	2.2553E-03	2.4758E-03	0.673
11	11	304.5	548.0	5.960	5.251	83.621	73.682	3.8659E-03	4.2434E-03	0.667
12	12	304.1	547.5	8.968	7.902	83.670	73.725	5.8134E-03	6.3806E-03	0.664
13	13	304.2	547.5	15.013	13.228	83.664	73.719	9.7332E-03	1.0683E-02	0.651
14	14	304.0	547.2	18.893	16.647	83.694	73.746	1.2244E-02	1.3438E-02	0.653
15	15	304.3	547.7	14.554	12.824	83.651	73.708	9.4374E-03	1.0358E-02	0.662
16	16	303.2	545.7	1.987	1.751	83.814	73.852	1.2855E-03	1.4107E-03	0.419
17	17	303.4	546.2	2.893	2.549	83.771	73.813	1.8726E-03	2.0551E-03	0.466
18	18	303.5	546.3	6.313	5.563	83.760	73.803	4.0878E-03	4.4861E-03	0.563
19	20	304.3	547.7	8.616	7.592	83.647	73.704	5.5875E-03	6.1329E-03	0.537
20	22	304.6	548.3	33.169	29.226	83.601	73.664	2.1522E-02	2.3624E-02	0.536
21	24	303.3	545.9	3.354	2.955	83.795	73.834	2.1705E-03	2.3819E-03	0.484
22	25	303.5	546.3	4.314	3.801	83.765	73.808	2.7930E-03	3.0652E-03	0.560
23	26	338.8	609.9	0.000	0.000	78.601	69.259	0.0000	0.0000	*******
24	27	303.7	546.7	4.013	3.536	83.732	73.779	2.5956E-03	2.8530E-03	0.438
25	28	303.7	546.7	6.897	6.077	83.732	73.779	4.4671E-03	4.9026E-03	0.576
26	29	303.5	546.2	1.830	1.612	83.770	73.812	1.1847E-03	1.3002E-03	0.667
27	30	303.4	546.2	1.932	1.703	83.773	73.816	1.2509E-03	1.3728E-03	0.558
28	31	303.5	546.3	3.279	2.889	83.760	73.803	2.1228E-03	2.3296E-03	0.453
29	32	303.6	546.4	1.133	0.999	83.754	73.798	7.3386E-04	8.0537E-04	0.606
30	34	303.5	546.3	1.038	0.914	83.760	73.804	6.7187E-04	7.3734E-04	0.600
31	33	303.1	545.5	0.855	0.754	83.828	73.863	5.5328E-04	6.0714E-04	0.527
32	35	302.9	545.3	0.558	0.492	83.844	73.878	3.6088E-04	3.9600E-04	0.611
33	36	302.6	544.7	0.454	0.400	83.897	73.925	2.9361E-04	3.2216E-04	0.551
34	37	296.8	534.2	0.000	0.000	84.752	74.678	0.0000	0.0000	1.751
35	38	302.8	545.0	0.454	0.400	83.873	73.903	2.9369E-04	3.2226E-04	0.575
36	39	302.8	545.0	1.479	1.303	83.873	73.903	9.5607E-04	1.0491E-03	0.656
37	40	303.7	546.7	1.930	1.701	83.733	73.780	1.2501E-03	1.3719E-03	0.612
38	41	304.0	547.3	0.383	0.337	83.684	73.737	2.4821E-04	2.7242E-04	0.588
39	42	302.5	544.6	3.516	3.098	83.903	73.930	2.2724E-03	2.4933E-03	0.718
40	43	303.4	546.1	4.375	3.855	83.777	73.819	2.8319E-03	3.1078E-03	0.587
41	44	302.7	544.9	0.327	0.288	83.879	73.909	2.1133E-04	2.3189E-04	0.710

42	45	304.4	548.0	1.876	1.653	83.628	73.687	1.2169E-03	1.3357E-03	0.687
43	46	305.3	549.5	2.888	2.544	83.506	73.580	1.8761E-03	2.0596E-03	0.597
44	47	304.1	547.4	2.814	2.479	83.676	73.730	1.8239E-03	2.0018E-03	0.596
45	48	304.6	548.7	0.503	0.443	83.897	73.925	3.2524E-04	3.5687E-04	0.558
46	50	303.5	546.3	7.981	7.032	83.764	73.808	5.1671E-03	5.6706E-03	0.521
47	51	303.3	546.0	8.717	7.681	83.787	73.828	5.6418E-03	6.1914E-03	0.550
48	53	303.7	546.6	6.146	5.415	83.738	73.784	3.9803E-03	4.3683E-03	0.499
49	55	303.9	547.1	9.697	8.544	83.701	73.752	6.2834E-03	6.8962E-03	0.541
50	57	304.7	548.4	22.410	19.746	83.591	73.655	1.4543E-02	1.5964E-02	0.563
51	59	305.3	549.5	21.724	19.142	83.503	73.578	1.4115E-02	1.5495E-02	0.493
52	60	303.8	546.9	9.097	8.016	83.714	73.763	5.8940E-03	6.4687E-03	0.426
53	61	304.2	547.5	11.920	10.503	83.662	73.718	7.7281E-03	8.4822E-03	0.522
54	65	305.8	550.4	27.123	23.899	83.428	73.511	1.7641E-02	1.9368E-02	0.581
55	68	307.9	554.3	21.903	19.300	83.114	73.235	1.4306E-02	1.5714E-02	0.342
56	69	306.0	550.7	14.612	12.875	83.401	73.488	9.5070E-03	1.0438E-02	0.445
57	70	306.6	551.9	18.251	16.081	83.309	73.407	1.1889E-02	1.3055E-02	0.512
58	72	308.7	555.7	53.248	46.918	83.002	73.136	3.4832E-02	3.8265E-02	0.590
59	73	302.6	544.7	0.514	0.453	83.894	73.922	3.3197E-04	3.6425E-04	0.521
60	74	302.8	545.0	0.640	0.564	83.868	73.899	4.1391E-04	4.5418E-04	0.550
61	75	302.7	544.8	0.491	0.433	83.887	73.916	3.1756E-04	3.4845E-04	0.606
62	76	303.7	546.7	0.436	0.384	83.732	73.779	2.8257E-04	3.1011E-04	0.643
63	77	304.0	547.1	0.420	0.370	83.696	73.748	2.7197E-04	2.9850E-04	0.490
64	78	304.3	547.7	0.321	0.283	83.650	73.707	2.0799E-04	2.2829E-04	0.512
65	79	305.1	549.1	0.382	0.336	83.534	73.604	2.4781E-04	2.7204E-04	0.698
66	80	306.6	551.9	0.344	0.303	83.307	73.405	2.2435E-04	2.4636E-04	0.734
67	81	306.1	550.9	1.428	1.258	83.388	73.476	9.2923E-04	1.0203E-03	0.573
68	82	306.6	551.9	0.484	0.427	83.309	73.406	3.1543E-04	3.4637E-04	0.659
69	83	307.5	553.5	0.430	0.379	83.175	73.288	2.8039E-04	3.0795E-04	0.623
70	84	308.7	555.7	1.263	1.113	82.994	73.129	8.2644E-04	9.0789E-04	0.880
71	85	305.8	550.5	0.632	0.556	83.423	73.507	4.1078E-04	4.5101E-04	0.579
72	86	307.5	553.6	3.453	3.043	83.171	73.285	2.2538E-03	2.4753E-03	0.577
73	87	310.0	558.0	6.906	6.085	82.814	72.970	4.5291E-03	4.9767E-03	0.605
74	88	313.6	564.4	2.233	1.968	82.287	72.506	1.4750E-03	1.6219E-03	0.519
75	89	314.8	566.7	2.322	2.046	82.108	72.348	1.5378E-03	1.6914E-03	0.437

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9303E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	TEST NO.
5.22	3.2314E 06	6.3529E 05	0.197	6.93	861.0	0.88973E 06	0.0018	RUN NO.

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	ET MATED
5.22	9.8494E 05	6.3529E 05	0.645	101.90	1549.8	382.61	0.0060	α = 120°, β = 0°

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.346	0.0423	0.0423	0.0499	0.0549	39	51	0.344	0.0274	0.0274	0.0323	0.0355
2	2	0.345	0.0311	0.0311	0.0367	0.0404	40	54	0.344	0.0262	0.0262	0.0309	0.0339
3	3	0.345	0.0275	0.0275	0.0324	0.0356	41	55	0.343	0.0316	0.0316	0.0373	0.0409
4	4	0.344	0.0174	0.0174	0.0205	0.0225	42	56	0.343	0.0280	0.0280	0.0330	0.0363
5	5	0.344	0.0128	0.0128	0.0151	0.0166	43	57	0.343	0.0377	0.0377	0.0445	0.0489
6	6	0.344	0.0079	0.0079	0.0093	0.0103	44	58	0.343	0.0623	0.0623	0.0735	0.0807
7	7	0.343	0.0058	0.0058	0.0068	0.0075	45	60	0.343	0.0382	0.0382	0.0451	0.0497
8	8	0.343	0.0052	0.0052	0.0062	0.0068	46	61	0.344	0.0430	0.0430	0.0507	0.0557
9	9	0.343	0.0050	0.0050	0.0060	0.0065	47	62	0.343	0.0404	0.0404	0.0476	0.0523
10	10	0.343	0.0049	0.0049	0.0057	0.0063	48	63	0.343	0.0365	0.0365	0.0430	0.0473
11	11	0.343	0.0046	0.0046	0.0054	0.0060	49	64	0.343	0.0762	0.0762	0.0898	0.0987
12	12	0.343	0.0077	0.0077	0.0091	0.0100	50	65	0.344	0.0416	0.0416	0.0491	0.0540
13	13	0.343	0.0109	0.0109	0.0129	0.0142	51	66	0.344	0.0375	0.0375	0.0443	0.0486
14	18	0.343	0.0151	0.0151	0.0178	0.0195	52	67	0.344	0.0737	0.0737	0.0869	0.0955
15	25	0.343	0.0160	0.0160	0.0188	0.0207	53	68	0.344	0.1264	0.1264	0.1492	0.1639
16	26	0.343	0.0200	0.0200	0.0236	0.0259	54	70	0.344	0.0592	0.0592	0.0698	0.0767
17	27	0.343	0.0199	0.0199	0.0235	0.0258	55	71	0.343	0.0517	0.0517	0.0610	0.0670
18	28	0.343	0.0153	0.0153	0.0180	0.0198	56	72	0.343	0.0472	0.0472	0.0557	0.0612
19	30	0.343	0.0155	0.0155	0.0182	0.0201	57	73	0.343	0.0690	0.0690	0.0814	0.0894
20	31	0.343	0.0224	0.0224	0.0264	0.0290	58	77	0.344	0.0790	0.0790	0.0932	0.1024
21	32	0.343	0.0140	0.0140	0.0165	0.0181	59	78	0.343	0.0738	0.0738	0.0871	0.0957
22	33	0.343	0.0183	0.0183	0.0216	0.0237	60	79	0.343	0.0793	0.0793	0.0936	0.1028
23	34	0.343	0.0264	0.0264	0.0311	0.0342	61	81	0.344	0.0815	0.0815	0.0961	0.1056
24	35	0.343	0.0276	0.0276	0.0326	0.0358	62	84	0.344	0.1031	0.1031	0.1216	0.1336
25	36	0.344	0.0166	0.0166	0.0195	0.0215	63	85	0.343	0.0971	0.0971	0.1146	0.1259
26	37	0.344	0.0400	0.0400	0.0472	0.0519	64	86	0.343	0.1214	0.1214	0.1432	0.1574
27	38	0.344	0.0694	0.0694	0.0819	0.0900	65	90	0.344	0.1307	0.1307	0.1542	0.1694
28	39	0.344	0.1249	0.1249	0.1474	0.1619	66	91	0.344	0.1198	0.1198	0.1413	0.1553
29	40	0.343	0.0127	0.0127	0.0149	0.0164	67	92	0.343	0.1675	0.1675	0.1976	0.2171
30	41	0.344	0.0127	0.0127	0.0150	0.0165	68	94	0.344	0.1030	0.1030	0.1216	0.1336
31	42	0.343	0.0212	0.0212	0.0250	0.0275	69	98	0.345	0.1513	0.1513	0.1786	0.1963
32	43	0.343	0.0334	0.0334	0.0394	0.0433	70	99	0.344	0.1731	0.1731	0.2042	0.2244
33	44	0.343	0.0310	0.0310	0.0366	0.0402	71	100	0.343	0.2142	0.2142	0.2527	0.2776
34	46	0.338	0.0000	0.0000	0.0000	0.0000	72	103	0.345	0.1647	0.1647	0.1944	0.2137
35	47	0.344	0.0216	0.0216	0.0255	0.0281	73	104	0.345	0.2056	0.2056	0.2427	0.2667
36	48	0.343	0.0233	0.0233	0.0275	0.0302	74	105	0.344	0.1200	0.1200	0.1416	0.1556
37	49	0.343	0.0387	0.0387	0.0456	0.0501	75	107	0.344	0.0473	0.0473	0.0558	0.0613
38	50	0.343	0.0450	0.0450	0.0531	0.0583							

REPRODUCIBILITY OF THE
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA *** TEST NO. 195

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	PUN NO. 20
5.22	3.2314E 06	6.3529E 05	0.197	6.93	861.0	0.88973E 06	0.C018	
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	
5.22	9.8494E 05	6.3529E 05	0.645	101.90	1549.8	382.61	0.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	306.1	551.0	3.457	3.046	81.740	72.024	2.2588E-03	2.4827E-03	0.633
2	2	305.6	550.1	2.545	2.243	81.809	72.085	1.6614E-03	1.8259E-03	0.563
3	3	305.3	549.6	2.249	1.982	81.854	72.124	1.4671E-03	1.6123E-03	0.590
4	4	304.9	548.8	1.423	1.254	81.920	72.182	9.2740E-04	1.0191E-03	0.624
5	5	304.5	548.1	1.051	0.926	81.972	72.228	6.8448E-04	7.5209E-04	0.574
6	6	304.4	547.9	0.650	0.572	81.988	72.242	4.2308E-04	4.6485E-04	0.529
7	7	304.3	547.7	0.472	0.416	82.007	72.259	3.0713E-04	3.3745E-04	0.477
8	8	304.0	547.1	0.428	0.377	82.054	72.300	2.7858E-04	3.0606E-04	0.577
9	9	304.0	547.2	0.414	0.365	82.048	72.296	2.6932E-04	2.9589E-04	0.606
10	10	304.0	547.2	0.398	0.351	82.047	72.295	2.5903E-04	2.8459E-04	0.609
11	11	303.9	547.1	0.378	0.333	82.056	72.302	2.4589E-04	2.7014E-04	0.602
12	12	303.5	546.3	0.632	0.557	82.121	72.360	4.1069E-04	4.5116E-04	0.369
13	13	303.7	546.7	0.898	0.791	82.088	72.330	5.8413E-04	6.4172E-04	0.372
14	18	303.7	546.7	1.236	1.089	82.089	72.332	8.0387E-04	8.8312E-04	0.480
15	25	303.9	547.1	1.3101	1.154	82.057	72.303	8.5205E-04	9.3609E-04	0.507
16	26	303.6	546.5	1.644	1.449	82.104	72.345	1.0690E-03	1.1743E-03	0.607
17	27	304.1	547.4	1.634	1.440	82.034	72.283	1.0632E-03	1.1681E-03	0.628
18	28	304.1	547.4	1.253	1.104	82.033	72.282	8.1557E-04	8.9604E-04	0.551
19	30	304.2	547.6	1.269	1.118	82.016	72.267	8.2588E-04	9.0739E-04	0.501
20	31	303.8	546.8	1.835	1.617	82.085	72.328	1.1934E-03	1.3111E-03	0.582
21	32	304.1	547.3	1.145	1.009	82.041	72.289	7.4505E-04	8.1856E-04	0.522
22	33	303.9	547.1	1.501	1.322	82.059	72.305	9.7639E-04	1.0727E-03	0.502
23	34	303.9	547.0	2.163	1.906	82.061	72.307	1.4070E-03	1.5458E-03	0.553
24	35	304.3	547.7	2.263	1.994	82.005	72.258	1.4734E-03	1.6189E-03	0.633
25	36	304.4	547.9	1.358	1.196	81.987	72.241	8.8410E-04	9.7139E-04	0.603
26	37	304.7	548.4	3.279	2.889	81.950	72.209	2.1363E-03	2.3474E-03	0.548
27	38	304.7	548.4	5.689	5.013	81.948	72.207	3.7065E-03	4.0727E-03	0.541
28	39	304.9	548.8	10.231	9.015	81.920	72.182	6.6684E-03	7.3275E-03	0.557
29	40	304.3	547.7	1.038	0.915	82.005	72.258	6.7600E-04	7.4273E-04	0.544
30	41	304.4	547.9	1.044	0.920	81.992	72.246	6.8004E-04	7.4715E-04	0.613
31	42	304.0	547.2	1.738	1.532	82.051	72.298	1.1310E-03	1.2426E-03	0.534
32	43	303.8	546.9	2.741	2.415	82.076	72.320	1.7829E-03	1.9587E-03	0.522
33	44	304.3	547.7	2.546	2.243	82.004	72.257	1.6574E-03	1.8210E-03	0.631
34	46	299.6	539.3	0.000	0.000	82.696	72.866	0.0000	0.0000	-1.492
35	47	304.6	548.3	1.774	1.563	81.962	72.219	1.1556E-03	1.2698E-03	0.624
36	48	304.2	547.5	1.913	1.686	82.020	72.271	1.2455E-03	1.3684E-03	0.615
37	49	303.9	547.0	3.172	2.795	82.068	72.313	2.0633E-03	2.2668E-03	0.631
38	50	304.3	547.7	3.689	3.250	82.005	72.258	2.4014E-03	2.6385E-03	0.562
39	51	304.8	548.6	2.244	1.978	81.933	72.194	1.4627E-03	1.6072E-03	0.567
40	54	304.7	548.4	2.145	1.890	81.949	72.208	1.3974E-03	1.5355E-03	0.612
41	55	304.2	547.5	2.591	2.283	82.021	72.272	1.6863E-03	1.8527E-03	0.614

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
43	57	303.9	547.0	3.095	2.727	82.068	72.313	2.0134E-03	2.2119E-03	0.617
44	58	303.9	546.9	5.111	4.503	82.071	72.316	3.3242E-03	3.6521E-03	0.540
45	60	304.2	547.5	3.135	2.762	82.019	72.270	2.0403E-03	2.2417E-03	0.597
46	61	304.5	548.1	3.523	3.104	81.974	72.230	2.2934E-03	2.5211E-03	0.[illegible]
47	62	303.5	546.4	3.317	2.922	82.114	72.354	2.1559E-03	2.3684E-03	0.565
48	63	303.7	546.6	2.996	2.640	82.096	72.337	1.9490E-03	2.1403E-03	0.652
49	64	304.0	547.3	6.249	5.506	82.041	72.289	4.0642E-03	4.4674E-03	0.597
50	65	304.4	547.9	3.415	3.009	81.991	72.246	2.2234E-03	2.4429E-03	0.[illegible]
51	66	304.5	548.1	3.075	2.709	81.973	72.230	2.0026E-03	2.2003E-03	0.554
52	67	304.5	548.1	6.039	5.320	81.973	72.232	3.9325E-03	4.3209E-03	0.537
53	68	304.9	548.9	10.356	9.125	81.911	72.174	6.7507E-03	7.4180E-03	0.561
54	70	304.5	548.1	4.853	4.276	81.977	72.233	3.1606E-03	3.4728E-03	0.604
55	71	304.0	547.2	4.245	3.740	82.050	72.297	2.7619E-03	3.0343E-03	0.587
56	72	303.7	546.7	3.975	3.415	82.089	72.332	2.5199E-03	2.7684E-03	0.565
57	73	304.1	547.4	5.660	4.988	82.033	72.282	3.6837E-03	4.0471E-03	0.[illegible]
58	77	304.5	548.2	6.473	5.704	81.970	72.227	4.2164E-03	4.6329E-03	0.594
59	78	304.1	547.3	6.056	5.336	82.039	72.288	3.9408E-03	4.3296E-03	0.[illegible]
60	79	303.9	547.0	6.510	5.736	82.068	72.313	4.2347E-03	4.6523E-03	0.594
61	81	304.5	548.0	6.630	5.886	81.980	72.236	4.3502E-03	4.7798E-03	0.578
62	84	304.7	548.4	8.446	7.442	81.946	72.205	5.5033E-03	6.0470E-03	0.599
63	85	303.9	547.1	7.971	7.024	82.058	72.304	5.1858E-03	5.6973E-03	0.574
64	86	303.7	546.6	9.970	8.785	82.094	72.336	6.4826E-03	7.1217E-03	0.[illegible]
65	90	304.7	548.5	10.709	9.436	81.944	72.203	6.9776E-03	7.6670E-03	0.592
66	91	304.3	547.8	9.823	8.655	82.001	72.254	6.3952E-03	7.0265E-03	0.580
67	92	303.7	546.7	13.751	12.116	82.088	72.331	8.9418E-03	9.8233E-03	[illegible]
68	94	304.7	548.5	8.443	7.439	81.939	72.199	5.5017E-03	6.0453E-03	0.556
69	98	305.3	549.5	12.389	10.916	81.862	72.132	8.0812E-03	8.8807E-03	0.595
70	99	304.4	547.9	14.191	12.504	81.988	72.243	9.2408E-03	1.0153E-02	0.558
71	100	304.0	547.2	17.574	15.485	82.046	72.293	1.1424E-02	1.2562E-02	0.535
72	103	305.6	550.1	13.477	11.875	81.809	72.085	8.7976E-03	9.6576E-03	0.613
73	104	305.3	549.5	16.834	14.833	81.861	72.130	1.0981E-02	1.2068E-02	0.[illegible]
74	105	304.5	548.1	9.838	8.569	81.975	72.231	6.4074E-03	7.0401E-03	0.514
75	107	305.1	549.2	3.872	3.412	81.885	72.152	2.5251E-03	2.7748E-03	0.527

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9757E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	DENSITY	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	5.6495E 00	0.197	6.92	836.4	0.86253E 06	0.0018	RUN NO. 21
MACH	DENSITY	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET MATRIX
5.22	1.0959E 06	0.645	101.74	1505.4	370.91	0.0060	α = -120°, β = 0°

CHAN	T/C	H∞/HT	∞/∞S	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	H∞/HT	∞/∞S	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	C.359	0.0221	0.0221	0.0262	0.0289	39	51	0.358	0.0372	0.0372	0.0441	0.0486
2	2	C.358	C.0307	0.0307	0.0364	0.0401	40	54	0.356	0.0239	0.0239	0.0283	0.0311
3	3	C.356	C.0400	0.0400	0.0474	0.0522	41	55	0.355	0.0227	0.0227	0.0268	0.0296
4	4	C.358	0.0568	0.0568	0.0672	0.0741	42	56	0.357	0.0222	0.0222	0.0263	0.0289
5	5	C.358	C.0825	0.0825	C.0613	0.0895	43	57	0.358	0.0386	0.0386	0.0457	0.0503
6	6	0.358	0.0983	0.0983	0.1165	0.1283	44	58	0.357	0.0455	0.0455	0.0539	0.0593
7	7	C.358	0.1254	0.1254	0.1485	0.1636	45	60	0.355	0.0233	0.0233	0.0276	0.0304
8	8	C.358	C.1498	0.1498	0.1774	0.1954	46	61	0.355	0.0222	0.0222	0.0263	0.0289
9	9	C.356	C.1646	0.1646	0.1950	0.2149	47	62	0.356	0.0229	0.0229	0.0272	0.0299
10	10	C.356	C.1913	0.1913	0.2265	0.2496	48	63	0.357	0.0302	0.0302	0.0358	0.0394
11	11	C.355	0.2312	0.2312	0.2738	0.3017	49	64	0.357	0.0442	0.0442	0.0523	0.0576
12	12	C.357	0.2532	0.2532	0.2999	0.3303	50	65	0.357	0.0314	0.0314	0.0372	0.0409
13	13	C.359	0.0300	0.0300	0.0355	0.0391	51	66	0.357	0.0147	0.0147	0.0174	0.0192
14	18	C.357	0.0675	0.0675	0.0800	0.0881	52	67	0.356	0.0049	0.0049	C.0058	0.0064
15	25	C.357	0.0636	0.0636	0.0753	0.0829	53	68	0.354	0.0052	0.0052	C.0061	0.0067
16	26	C.358	0.1296	0.1296	0.1535	0.1691	54	70	0.355	0.0186	0.0186	0.0220	0.0242
17	27	C.359	0.1094	0.1094	0.1296	0.1428	55	71	0.356	0.0237	0.0237	C.0281	C.0309
18	28	C.358	C.0451	0.0451	0.0534	0.0588	56	72	0.357	0.0560	0.0560	0.0663	0.0730
19	30	C.357	0.0684	0.0684	0.0809	0.0891	57	73	0.357	0.0802	0.0802	0.0950	0.1046
20	31	C.358	C.1501	0.1501	0.1778	0.1959	58	77	0.355	0.0167	0.0167	0.0198	0.0218
21	32	C.356	C.0605	0.0605	0.0716	0.0788	59	78	0.356	0.0203	0.0203	0.0240	0.0265
22	33	C.356	C.0839	0.0839	0.0994	0.1095	60	79	0.356	0.0567	0.0567	0.0671	0.0739
23	34	C.359	0.1398	0.1398	C.1656	0.1825	61	81	0.357	0.0671	0.0671	C.0794	0.0875
24	35	C.359	C.1106	0.1106	0.1311	0.1444	62	84	0.355	0.0358	0.0358	0.0424	0.0467
25	36	C.358	0.0466	0.0466	C.0552	0.0608	63	85	0.355	0.0306	0.0306	0.0362	0.0398
26	37	C.358	C.0128	0.0128	C.0152	0.0167	64	86	0.356	0.0242	0.0242	0.0287	0.0316
27	38	C.357	C.0049	0.0049	0.0058	0.0064	65	90	0.354	0.0175	0.0175	C.0207	0.0228
28	39	C.355	0.0061	0.0061	0.0072	0.0079	66	91	0.356	0.0207	0.0207	C.0245	0.0270
29	40	C.356	0.0451	0.0451	0.0534	0.0588	67	92	0.356	0.0235	0.0235	C.0279	0.0307
30	41	C.356	0.0336	0.0336	C.0398	0.0439	68	94	0.357	0.0186	0.0186	C.0220	C.0243
31	42	C.357	C.0448	0.0448	0.0531	0.0584	69	98	0.355	0.0348	0.0348	0.0412	0.0454
32	43	C.358	C.1207	0.1207	0.1430	0.1575	70	99	0.356	0.0339	0.0339	0.0401	0.0442
33	44	C.359	0.1031	0.1031	C.1221	0.1345	71	100	0.356	0.0234	0.0234	0.0277	C.0305
34	46	C.350	C.0000	0.0000	0.0000	0.0000	72	103	0.355	0.0257	0.0257	C.0304	0.0334
35	47	C.356	0.0258	0.0258	0.0305	0.0336	73	104	0.356	0.0212	0.0212	0.0251	0.0276
36	48	C.358	C.0330	0.0330	0.0391	0.0431	74	105	0.357	0.0074	0.0074	0.0088	0.0097
37	49	C.358	C.0889	0.0889	0.1053	C.1159	75	107	0.358	0.0137	0.0137	C.0162	C.0179
38	50	C.358	C.0859	0.0859	0.1018	0.1121							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.3923E 06	6.6495E 05	0.197	6.92	836.4	0.86253E 06	0.0018	RUN NO.	21
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	1.0309E 06	6.6495E 05	0.645	101.74	1505.4	370.91	0.0060		

CHAN	T/C	Tw(DEG K)	Tw(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.500)	ST(0.650)	TIME(SEC)
1	1	307.9	554.2	1.714	1.510	77.493	68.282	1.1625E-03	1.2807E-03	0.758
2	2	307.5	553.4	2.382	2.099	77.554	68.335	1.6143E-03	1.7784E-03	0.543
3	3	307.6	553.7	3.099	2.731	77.531	68.315	2.1015E-03	2.3152E-03	0.576
4	4	307.5	553.5	4.402	3.879	77.548	68.330	2.9840E-03	3.2873E-03	0.643
5	5	307.1	552.8	5.326	4.692	77.604	68.380	3.6069E-03	3.9732E-03	0.656
6	6	307.5	553.4	7.625	6.718	77.554	68.335	5.1678E-03	5.6930E-03	0.684
7	7	307.7	553.8	9.720	8.565	77.525	68.310	6.5910E-03	7.2612E-03	0.677
8	8	307.5	553.5	11.614	10.233	77.550	68.332	7.8722E-03	8.6723E-03	0.689
9	9	307.6	553.8	12.765	11.248	77.528	68.313	8.6551E-03	9.5351E-03	0.708
10	10	307.6	553.7	14.828	13.066	77.534	68.318	1.0053E-02	1.1075E-02	0.680
11	11	307.3	553.2	17.934	15.803	77.571	68.350	1.2153E-02	1.3387E-02	0.678
12	12	306.7	552.1	19.667	17.330	77.663	68.431	1.3309E-02	1.4659E-02	0.647
13	13	307.5	554.2	2.322	2.046	77.450	68.279	1.5752E-03	1.7355E-03	0.687
14	18	306.5	551.8	5.246	4.622	77.689	68.455	3.5487E-03	3.9085E-03	0.640
15	25	306.4	551.4	4.941	4.354	77.717	68.479	3.3412E-03	3.6759E-03	0.670
16	26	307.8	554.0	10.044	8.850	77.512	68.298	6.8122E-03	7.5050E-03	0.676
17	27	308.1	554.6	8.471	7.464	77.457	68.250	5.7498E-03	6.3350E-03	0.638
18	28	307.8	554.0	3.495	3.079	77.512	68.298	2.3701E-03	2.6112E-03	0.706
19	30	306.5	551.7	5.311	4.680	77.699	68.463	3.5919E-03	3.9561E-03	0.677
20	31	307.8	554.0	11.633	10.251	77.504	68.292	7.8906E-03	8.6932E-03	0.665
21	32	306.1	550.9	4.702	4.143	77.758	68.515	3.1776E-03	3.4995E-03	0.695
22	33	307.4	553.3	6.509	5.735	77.568	68.348	4.4107E-03	4.8589E-03	0.733
23	34	307.9	554.2	10.834	9.546	77.490	68.279	7.3502E-03	8.0980E-03	0.691
24	35	308.2	554.7	8.569	7.551	77.453	68.247	5.8167E-03	6.4088E-03	0.702
25	36	307.9	554.2	3.610	3.181	77.494	68.283	2.4491E-03	2.6993E-03	0.693
26	37	307.5	553.5	0.992	0.874	77.548	68.330	6.7264E-04	7.4108E-04	0.641
27	38	306.7	552.1	0.379	0.334	77.660	68.429	2.5633E-04	2.8234E-04	0.581
28	39	304.8	548.6	0.472	0.416	77.951	68.685	3.1787E-04	3.4997E-04	0.573
29	40	306.0	550.8	3.508	3.091	77.770	68.526	2.3704E-03	2.6104E-03	0.687
30	41	305.9	550.6	2.617	2.306	77.786	68.540	1.7679E-03	1.9469E-03	0.670
31	42	307.0	552.6	3.477	3.064	77.621	68.395	2.3544E-03	2.5934E-03	0.713
32	43	307.6	553.6	9.360	8.247	77.538	68.322	6.3454E-03	6.9904E-03	0.679
33	44	308.0	554.4	7.982	7.036	77.479	68.270	5.4182E-03	5.9695E-03	0.695
34	46	300.4	540.8	0.000	0.000	0.000	0.000	0.0000	0.0000	-2.098
35	47	305.5	550.6	2.005	1.767	77.786	68.540	1.3542E-03	1.4913E-03	0.647
36	48	307.0	552.6	2.563	2.259	77.618	68.392	1.7357E-03	1.9119E-03	0.690
37	49	307.4	553.4	6.892	6.073	77.560	68.341	4.6708E-03	5.1454E-03	0.710
38	50	307.7	553.8	6.659	5.868	77.522	68.307	4.5156E-03	4.9748E-03	0.687
39	51	307.7	553.9	2.886	2.543	77.513	68.300	1.9575E-03	2.1566E-03	0.683
40	54	305.7	550.3	1.857	1.636	77.810	68.562	1.2538E-03	1.3808E-03	0.655
41	55	305.0	549.0	1.767	1.557	77.918	68.656	1.1916E-03	1.3119E-03	0.710

42	56	306.2	551.2	1.725	1.520	77.737	68.497	1.1663E-03	1.2849E-03	0.700
43	57	307.2	553.0	2.992	2.636	77.592	68.369	2.0268E-03	2.2327E-03	0.691
44	58	307.0	552.6	3.530	3.110	77.624	68.397	2.3902E-03	2.6328E-03	0.617
45	60	304.9	548.8	1.819	1.603	77.933	68.669	1.2263E-03	1.3501E-03	0.694
46	61	305.2	549.3	1.729	1.523	77.892	68.633	1.1658E-03	1.2836E-03	0.706
47	62	306.0	550.8	1.784	1.572	77.769	68.525	1.2055E-03	1.3276E-03	0.668
48	63	306.6	551.9	2.349	2.070	77.675	68.442	1.5892E-03	1.7504E-03	0.656
49	64	306.8	552.3	3.430	3.023	77.649	68.419	2.3219E-03	2.5575E-03	0.656
50	65	306.8	552.2	2.438	2.148	77.657	68.427	1.6497E-03	1.8171E-03	0.681
51	66	306.5	551.6	1.145	1.009	77.700	68.465	7.7416E-04	8.5265E-04	0.660
52	67	305.9	550.5	0.381	0.336	77.750	68.543	2.5751E-04	2.8359E-04	0.564
53	68	304.2	547.5	0.402	0.354	78.034	68.758	2.7059E-04	2.9788E-04	0.730
54	70	304.8	548.7	1.446	1.274	77.943	68.678	9.7478E-04	1.0732E-03	0.668
55	71	305.8	550.5	1.844	1.625	77.790	68.544	1.2456E-03	1.3717E-03	0.695
56	72	306.3	551.4	4.350	3.833	77.722	68.484	2.9411E-03	3.2392E-03	0.694
57	73	306.6	551.8	6.230	5.489	77.687	68.453	4.2143E-03	4.6416E-03	0.693
58	77	304.6	548.3	1.304	1.149	77.970	68.702	8.7856E-04	9.6725E-04	0.573
59	78	305.6	550.1	1.581	1.393	77.828	68.577	1.0673E-03	1.1753E-03	0.709
60	79	306.1	551.0	4.408	3.884	77.755	68.513	2.9789E-03	3.2806E-03	0.737
61	81	306.5	551.6	5.210	4.591	77.700	68.465	3.5239E-03	3.8812E-03	0.688
62	84	304.6	548.2	2.794	2.462	77.978	68.709	1.8820E-03	2.0720E-03	0.657
63	85	305.2	549.3	2.380	2.097	77.892	68.633	1.6053E-03	1.7676E-03	0.672
64	86	305.7	550.3	1.884	1.660	77.809	68.560	1.2722E-03	1.4010E-03	0.689
65	90	304.3	547.8	1.365	1.203	78.012	68.740	9.1895E-04	1.0117E-03	0.634
66	91	305.4	549.8	1.612	1.420	77.852	68.598	1.0879E-03	1.1979E-03	0.675
67	92	305.7	550.2	1.832	1.614	77.817	68.567	1.2366E-03	1.3617E-03	0.635
68	94	306.7	552.1	1.446	1.274	77.664	68.432	9.7821E-04	1.0775E-03	0.649
69	98	304.8	548.7	2.714	2.391	77.939	68.675	1.8291E-03	2.0139E-03	0.605
70	99	305.4	549.8	2.638	2.324	77.850	68.597	1.7803E-03	1.9604E-03	0.609
71	100	305.9	550.6	1.820	1.603	77.783	68.537	1.2292E-03	1.3537E-03	0.604
72	103	305.1	549.1	1.999	1.762	77.905	68.645	1.3482E-03	1.4845E-03	0.621
73	104	305.9	550.7	1.649	1.453	77.777	68.532	1.1137E-03	1.2265E-03	0.608
74	105	306.2	551.2	0.579	0.510	77.735	68.495	3.9110E-04	4.3073E-04	0.588
75	107	307.1	552.8	1.064	0.938	77.603	68.379	7.2082E-04	7.9402E-04	0.660

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FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0100E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.3017E 06	6.4910E 05 0.197	6.67	830.4	0.85594E 06	0.0018	RUN NO. 22
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ORB MATED
5.22	1.0063E 06	6.4910E 05 0.645	98.12	1494.7	368.07	0.0060	$\alpha = -120°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.365	0.0844	0.0844	0.1003	0.1107	39	42	0.366	0.1352	0.1353	0.1606	0.1772
2	2	0.368	0.0703	0.0703	0.0836	0.0923	40	43	0.368	0.1382	0.1382	0.1642	0.1812
3	3	0.369	0.0701	0.0701	0.0834	0.0920	41	44	0.366	0.0946	0.0946	0.1123	0.1239
4	4	0.369	0.0639	0.0639	0.0759	0.0838	42	45	0.369	0.0532	0.0532	0.0632	0.0698
5	5	0.369	0.0576	0.0576	0.0684	0.0755	43	46	0.370	0.0387	0.0387	0.0460	0.0508
6	6	0.369	0.0504	0.0504	0.0599	0.0661	44	47	0.352	0.0009	0.0009	0.0011	0.0012
7	7	0.369	0.0444	0.0444	0.0528	0.0583	45	48	0.365	0.0149	0.0149	0.0177	0.0195
8	8	0.368	0.0397	0.0397	0.0472	0.0521	46	50	0.367	0.0331	0.0331	0.0394	0.0434
9	9	0.367	0.0315	0.0315	0.0374	0.0413	47	51	0.367	0.0301	0.0301	0.0358	0.0395
10	10	0.367	0.0274	0.0274	0.0325	0.0359	48	53	0.367	0.0217	0.0217	0.0258	0.0285
11	11	0.366	0.0273	0.0273	0.0325	0.0358	49	55	0.367	0.0193	0.0193	0.0230	0.0253
12	12	0.366	0.0223	0.0223	0.0264	0.0292	50	57	0.367	0.0180	0.0180	0.0213	0.0235
13	13	0.366	0.0459	0.0459	0.0545	0.0601	51	59	0.367	0.0188	0.0188	0.0223	0.0246
14	14	0.365	0.0271	0.0271	0.0322	0.0355	52	60	0.368	0.0200	0.0200	0.0238	0.0262
15	15	0.365	0.0852	0.0852	0.1012	0.1116	53	61	0.367	0.0166	0.0166	0.0198	0.0218
16	16	0.367	0.0196	0.0196	0.0233	0.0257	54	65	0.368	0.0123	0.0123	0.0146	0.0161
17	17	0.367	0.0189	0.0189	0.0224	0.0247	55	68	0.370	0.0233	0.0233	0.0277	0.0306
18	18	0.367	0.0177	0.0177	0.0210	0.0232	56	69	0.370	0.0133	0.0133	0.0158	0.0174
19	20	0.368	0.0150	0.0150	0.0179	0.0197	57	70	0.370	0.0142	0.0142	0.0168	0.0186
20	22	0.366	0.0268	0.0268	0.0318	0.0351	58	72	0.372	0.0178	0.0178	0.0212	0.0234
21	24	0.366	0.0724	0.0724	0.0860	0.0949	59	73	0.364	0.1419	0.1419	0.1684	0.1858
22	25	0.367	0.0448	0.0448	0.0532	0.0587	60	74	0.364	0.1445	0.1445	0.1715	0.1891
23	26	0.398	0.0000	0.0000	0.0000	0.0000	61	75	0.364	0.1446	0.1446	0.1716	0.1893
24	27	0.367	0.0792	0.0792	0.0941	0.1038	62	76	0.366	0.1284	0.1284	0.1524	0.1682
25	28	0.368	0.0589	0.0589	0.0700	0.0772	63	77	0.367	0.2330	0.2330	0.2767	0.3052
26	29	0.366	0.2858	0.2858	0.3393	0.3744	64	78	0.367	0.2463	0.2463	0.2925	0.3228
27	30	0.366	0.1141	0.1141	0.1355	0.1495	65	79	0.367	0.2317	0.2317	0.2752	0.3036
28	31	0.367	0.0937	0.0937	0.1113	0.1228	66	80	0.369	0.2277	0.2277	0.2706	0.2987
29	32	0.366	0.3011	0.3011	0.3575	0.3944	67	81	0.371	0.3815	0.3815	0.4536	0.5009
30	34	0.367	0.1872	0.1872	0.2223	0.2453	68	82	0.371	0.4807	0.4807	0.5716	0.6313
31	33	0.366	0.1496	0.1496	0.1776	0.1960	69	83	0.372	0.5250	0.5250	0.6244	0.6897
32	35	0.365	0.4581	0.4581	0.5438	0.5999	70	84	0.373	0.5453	0.5453	0.6487	0.7167
33	36	0.364	0.2393	0.2393	0.2840	0.3132	71	85	0.371	0.0769	0.0769	0.0915	0.1010
34	37	0.355	0.0000	0.0000	0.0000	0.0000	72	86	0.374	0.1444	0.1444	0.1718	0.1898
35	38	0.364	0.2284	0.2284	0.2710	0.2989	73	87	0.377	0.1605	0.1605	0.1912	0.2114
36	39	0.366	0.1531	0.1531	0.1818	0.2006	74	88	0.380	0.0681	0.0681	0.0812	0.0899
37	40	0.368	0.1365	0.1365	0.1621	0.1789	75	89	0.384	0.0625	0.0625	0.0746	0.0826
38	41	0.368	0.1308	0.1308	0.1554	0.1715							

PRECEDING PAGE BLANK-NOT FILMED

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA *** TEST NO. 195

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)			PI NO. 22
5.22	3.3017E 06	6.4910E 05	0.197	6.67	830.4	0.85594E 06	0.0018			
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)			
5.22	1.0063E 06	6.4910E 05	0.645	98.12	1494.7	368.07	0.0060			

	CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
	1	1	314.2	565.5	6.268	5.523	74.288	65.458	4.5039E-03	4.9718E-03	0.368
	2	2	314.0	565.2	5.227	4.606	74.312	65.479	3.7546E-03	4.1445E-03	0.364
	3	3	314.5	566.1	5.208	4.589	74.244	65.419	3.7444E-03	4.1337E-03	0.369
	4	4	314.6	566.4	4.740	4.177	74.223	65.401	3.4096E-03	3.7642E-03	0.363
	5	5	314.7	566.4	4.272	3.764	74.220	65.398	3.0727E-03	3.3923E-03	0.356
	6	6	314.4	565.9	3.740	3.295	74.256	65.429	2.6887E-03	2.9682E-03	0.345
	7	7	314.2	565.5	3.299	2.907	74.289	65.458	2.3707E-03	2.6169E-03	0.359
	8	8	313.6	564.5	2.953	2.602	74.371	65.531	2.1191E-03	2.3389E-03	0.359
	9	9	313.0	563.3	2.346	2.067	74.464	65.613	1.6812E-03	1.8553E-03	0.343
	10	10	312.5	562.6	2.041	1.798	74.524	65.666	1.4609E-03	1.6121E-03	0.354
	11	11	311.9	561.4	2.040	1.798	74.617	65.748	1.4585E-03	1.6091E-03	0.375
	12	12	311.8	561.2	1.662	1.465	74.636	65.765	1.1881E-03	1.3108E-03	0.429
	13	13	311.8	561.2	3.426	3.018	74.634	65.763	2.4485E-03	2.7013E-03	0.433
	14	14	311.2	560.2	2.026	1.785	74.717	65.836	1.4464E-03	1.5956E-03	0.402
	15	15	311.2	560.1	6.368	5.611	74.720	65.839	4.5457E-03	5.0144E-03	0.449
	16	16	312.5	562.5	1.461	1.288	74.529	65.670	1.0463E-03	1.1545E-03	0.391
	17	17	312.9	563.1	1.404	1.237	74.480	65.627	1.0059E-03	1.1101E-03	0.391
	18	18	313.1	563.6	1.316	1.159	74.439	65.591	9.4317E-04	1.0409E-03	0.392
	19	20	313.6	564.5	1.119	0.986	74.371	65.531	8.0320E-04	8.8652E-04	0.379
	20	22	312.3	562.1	1.999	1.761	74.563	65.700	1.4302E-03	1.5781E-03	0.296
	21	24	312.3	562.1	5.402	4.760	74.563	65.701	3.8651E-03	4.2648E-03	0.369
	22	25	312.5	562.5	3.339	2.942	74.533	65.674	2.3903E-03	2.6375E-03	0.423
	23	26	338.8	609.9	0.000	0.000	70.755	62.345	0.0000	0.0000	*******
	24	27	312.8	563.0	5.902	5.200	74.490	65.635	4.2277E-03	4.6654E-03	0.407
	25	28	313.3	563.9	4.383	3.862	74.419	65.573	3.1429E-03	3.4687E-03	0.412
	26	29	311.9	561.5	21.325	18.790	74.610	65.742	1.5248E-02	1.6823E-02	0.396
	27	30	312.2	562.0	8.509	7.498	74.573	65.709	6.0879E-03	6.7172E-03	0.399
	28	31	312.7	562.9	6.983	6.153	74.497	65.642	5.0016E-03	5.5194E-03	0.417
	29	32	311.9	561.5	22.464	19.794	74.610	65.742	1.6062E-02	1.7722E-02	0.397
	30	34	312.3	562.2	13.959	12.300	74.553	65.692	9.9893E-03	1.1022E-02	0.373
	31	33	311.5	560.7	11.173	9.845	74.675	65.799	7.9813E-03	8.8050E-03	0.381
	32	35	311.2	560.1	34.232	30.163	74.719	65.837	2.4436E-02	2.6955E-02	0.374
	33	36	310.2	558.4	17.914	15.785	74.855	65.957	1.2761E-02	1.4074E-02	0.341
	34	37	302.9	545.2	0.000	0.000	75.915	66.891	0.0000	0.0000	7.719
	35	38	310.4	558.7	17.092	15.060	74.834	65.939	1.2179E-02	1.3433E-02	0.337
	36	39	311.8	561.2	11.428	10.070	74.634	65.763	8.1681E-03	9.0117E-03	0.488
	37	40	313.4	564.2	10.154	8.947	74.398	65.555	7.2835E-03	8.0387E-03	0.501
	38	41	313.2	563.8	9.738	8.581	74.429	65.582	6.9823E-03	7.7059E-03	0.399
	39	42	311.7	561.1	10.099	8.898	74.646	65.773	7.2169E-03	7.9620E-03	0.437
	40	43	313.4	564.1	10.283	9.060	74.402	65.558	7.3757E-03	8.1404E-03	0.406

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42	45	314.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
43	46	315.3	567.5	2.870	2.529	74.134	65.322	2.0673E-03	2.2826E-03	0.445
44	47	300.2	540.4	0.071	0.063	76.294	67.225	4.9450E-05	5.4419E-05	0.005
45	48	310.7	559.2	1.113	0.981	74.792	65.902	7.9362E-04	8.7536E-04	0.460
46	50	312.8	563.1	2.469	2.175	74.483	65.629	1.7686E-03	1.9517E-03	0.459
47	51	312.9	563.1	2.244	1.978	74.484	65.631	1.6078E-03	1.7742E-03	0.384
48	53	313.0	563.4	1.618	1.425	74.461	65.611	1.1592E-03	1.2792E-03	0.377
49	55	312.7	562.9	1.440	1.269	74.500	65.644	1.0312E-03	1.1379E-03	0.391
50	57	312.7	562.9	1.338	1.179	74.498	65.643	9.5812E-04	1.0573E-03	0.272
51	59	313.0	563.5	1.396	1.230	74.454	65.604	1.0009E-03	1.1045E-03	0.275
52	60	313.3	563.9	1.489	1.312	74.421	65.575	1.0681E-03	1.1788E-03	0.313
53	61	312.6	562.6	1.240	1.093	74.523	65.665	8.8793E-04	9.7980E-04	0.432
54	65	313.4	564.2	0.912	0.803	74.396	65.553	6.5401E-04	7.2183E-04	0.291
55	68	315.2	567.3	1.730	1.524	74.145	65.331	1.2459E-03	1.3757E-03	0.577
56	69	315.0	567.1	0.985	0.868	74.166	65.351	7.0933E-04	7.8317E-04	0.395
57	70	315.7	568.3	1.048	0.924	74.072	65.267	7.5577E-04	8.3457E-04	0.423
58	72	317.2	571.0	1.316	1.160	73.849	65.071	9.5204E-04	1.0517E-03	0.521
59	73	310.6	559.0	10.618	9.356	74.809	65.917	7.5691E-03	8.3485E-03	0.363
60	74	310.6	559.0	10.809	9.524	74.809	65.917	7.7051E-03	8.4985E-03	0.398
61	75	310.6	559.0	10.819	9.533	74.809	65.917	7.7121E-03	8.5062E-03	0.376
62	76	311.7	561.1	9.583	8.444	74.643	65.771	6.8484E-03	7.5556E-03	0.374
63	77	312.9	563.3	17.349	15.287	74.471	65.619	1.2431E-02	1.3719E-02	0.330
64	78	313.0	563.4	18.341	16.161	74.461	65.611	1.3144E-02	1.4505E-02	0.349
65	79	312.8	563.0	17.258	15.206	74.487	65.633	1.2363E-02	1.3643E-02	0.379
66	80	314.2	565.6	16.917	14.906	74.281	65.452	1.2157E-02	1.3420E-02	0.331
67	81	315.8	568.4	28.255	24.896	74.056	65.254	2.0375E-02	2.2500E-02	[illegible]
68	82	316.2	569.1	35.577	31.348	74.003	65.207	2.5676E-02	2.8356E-02	0.360
69	83	317.0	570.6	38.788	34.178	73.885	65.103	2.8045E-02	3.0978E-02	0.330
70	84	317.9	572.3	40.212	35.432	73.749	64.983	2.9136E-02	3.2191E-02	0.348
71	85	316.3	569.3	5.692	5.015	73.984	65.190	4.1090E-03	4.5381E-03	0.414
72	86	318.6	573.5	10.632	9.368	73.652	64.897	7.7151E-03	8.5253E-03	0.364
73	87	321.1	577.9	11.767	10.368	73.301	64.589	8.5852E-03	9.4922E-03	0.390
74	88	324.1	583.4	4.962	4.372	72.962	64.282	3.6455E-03	4.0336E-03	0.371
75	89	327.3	589.2	4.523	3.986	72.405	63.798	3.3472E-03	3.7064E-03	0.360

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9489E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

								TEST NO. 195
MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	RUN NO. 23
5.22	3.2232E 06	6.3367E 05	0.197	6.62	838.3	0.86469E 06	0.0018	
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	ORB MATED
5.22	9.8244E 05	6.3367E 05	0.645	97.27	1509.0	371.84	0.0060	α = -90°, β = 0°

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.367	0.2224	0.2224	0.2641	0.2915	39	42	0.364	0.2053	0.2053	0.2435	0.2686
2	2	0.367	0.2417	0.2417	0.2870	0.3167	40	43	0.366	0.2152	0.2152	0.2555	0.2818
3	3	0.367	0.1948	0.1948	0.2314	0.2553	41	44	0.364	0.5601	0.5601	0.6647	0.7331
4	4	0.367	0.1626	0.1626	0.1931	0.2131	42	45	0.367	0.0852	0.0852	0.1012	0.1117
5	5	0.367	0.1287	0.1287	0.1528	0.1686	43	46	0.368	0.1175	0.1175	0.1395	0.1540
6	6	0.367	0.1112	0.1112	0.1321	0.1458	44	47	0.348	0.0020	0.0020	0.0024	0.0027
7	7	0.367	0.1065	0.1065	0.1265	0.1396	45	48	0.364	0.1671	0.1671	0.1983	0.2187
8	8	0.366	0.0878	0.0878	0.1042	0.1150	46	50	0.365	0.0233	0.0233	0.0277	0.0305
9	9	0.365	0.0603	0.0603	0.0716	0.0789	47	51	0.365	0.0123	0.0123	0.0146	0.0161
10	10	0.365	0.0497	0.0497	0.0590	0.0651	48	53	0.365	0.0069	0.0068	0.0081	0.0089
11	11	0.364	0.0606	0.0606	0.0719	0.0793	49	55	0.364	0.0060	0.0060	0.0072	0.0079
12	12	0.364	0.0422	0.0422	0.0501	0.0552	50	57	0.364	0.0156	0.0156	0.0185	0.0204
13	13	0.363	0.0230	0.0230	0.0273	0.0301	51	59	0.364	0.0247	0.0247	0.0293	0.0323
14	14	0.362	0.0203	0.0203	0.0241	0.0265	52	60	0.365	0.0078	0.0078	0.0093	0.0103
15	15	0.362	0.0495	0.0495	0.0587	0.0647	53	61	0.364	0.0039	0.0039	0.0046	0.0051
16	16	0.364	0.0452	0.0452	0.0536	0.0591	54	65	0.365	0.0064	0.0064	0.0076	0.0084
17	17	0.365	0.0405	0.0405	0.0481	0.0530	55	68	0.366	0.0332	0.0332	0.0395	0.0435
18	18	0.365	0.0310	0.0310	0.0368	0.0405	56	69	0.367	0.0122	0.0122	0.0145	0.0160
19	20	0.365	0.0121	0.0121	0.0143	0.0158	57	70	0.367	0.0098	0.0098	0.0117	0.0129
20	22	0.364	0.0351	0.0351	0.0417	0.0460	58	72	0.369	0.0267	0.0267	0.0318	0.0351
21	24	0.364	0.0461	0.0461	0.0547	0.0603	59	73	0.363	0.2717	0.2717	0.3223	0.3554
22	25	0.364	0.0525	0.0525	0.0624	0.0688	60	74	0.363	0.2445	0.2445	0.2900	0.3198
23	26	0.394	0.0000	0.0000	0.0000	0.0000	61	75	0.363	0.2032	0.2032	0.2410	0.2658
24	27	0.365	0.0611	0.0611	0.0725	0.0799	62	76	0.364	0.2011	0.2011	0.2386	0.2631
25	28	0.365	0.0562	0.0562	0.0667	0.0736	63	77	0.366	0.2434	0.2434	0.2890	0.3188
26	29	0.365	0.1996	0.1996	0.2369	0.2613	64	78	0.366	0.2193	0.2193	0.2604	0.2873
27	30	0.364	0.1111	0.1111	0.1318	0.1454	65	79	0.365	0.2376	0.2376	0.2820	0.3111
28	31	0.365	0.0823	0.0823	0.0977	0.1078	66	80	0.366	0.3237	0.3237	0.3843	0.4241
29	32	0.366	0.2045	0.2045	0.2428	0.2679	67	81	0.369	0.2331	0.2331	0.2771	0.3059
30	34	0.364	0.1322	0.1322	0.1569	0.1731	68	82	0.369	0.2459	0.2459	0.2923	0.3227
31	33	0.364	0.1752	0.1752	0.2079	0.2292	69	83	0.370	0.2617	0.2617	0.3110	0.3434
32	35	0.365	0.1953	0.1953	0.2318	0.2557	70	84	0.370	0.2523	0.2523	0.3000	0.3312
33	36	0.362	0.2510	0.2510	0.2977	0.3282	71	85	0.369	0.1882	0.1882	0.2236	0.2469
34	37	0.350	0.0000	0.0000	0.0000	0.0000	72	86	0.371	0.1390	0.1390	0.1652	0.1825
35	38	0.364	0.2285	0.2285	0.2711	0.2990	73	87	0.373	0.0952	0.0952	0.1133	0.1252
36	39	0.364	0.2078	0.2078	0.2465	0.2719	74	88	0.378	0.0675	0.0675	0.0804	0.0890
37	40	0.366	0.2624	0.2624	0.3115	0.3437	75	89	0.381	0.0832	0.0832	0.0992	0.1098
38	41	0.367	0.3494	0.3494	0.4149	0.4578							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.2232E 06	6.3367E 05	0.197	6.62	838.3	0.86469E 06	0.0018	RUN NO.	23
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)		
5.22	9.8244E 05	6.3367E 05	0.645	97.27	1509.0	371.84	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.950)	ST(0.850)	TIME(SEC)
1	1	316.2	569.2	16.659	14.679	74.910	66.006	1.1994E-02	1.3236E-02	0.236
2	2	315.9	568.6	18.117	15.964	74.961	66.050	1.3033E-02	1.4382E-02	0.328
3	3	316.3	569.3	14.593	12.858	74.909	66.005	1.0506E-02	1.1594E-02	0.371
4	4	316.3	569.3	12.176	10.729	74.903	65.999	8.7671E-03	9.6754E-03	0.380
5	5	316.3	569.3	9.638	8.492	74.909	66.005	6.9391E-03	7.6579E-03	0.367
6	6	316.0	568.8	8.335	7.345	74.950	66.041	5.9976E-03	6.6185E-03	0.395
7	7	315.7	568.3	7.987	7.037	74.982	66.069	5.7439E-03	6.3382E-03	0.390
8	8	315.1	567.2	6.588	5.805	75.074	66.150	4.7315E-03	5.2202E-03	0.393
9	9	314.5	566.0	4.531	3.993	75.167	66.232	3.2497E-03	3.5849E-03	0.368
10	10	314.1	565.3	3.739	3.295	75.221	66.280	2.6795E-03	2.9556E-03	0.392
11	11	313.4	564.1	4.567	4.024	75.318	66.365	3.2675E-03	3.6037E-03	0.410
12	12	313.1	563.6	3.180	2.802	75.360	66.403	2.2737E-03	2.5074E-03	0.418
13	13	312.7	562.9	1.737	1.531	75.413	66.450	1.2413E-03	1.3688E-03	0.434
14	14	311.9	561.4	1.533	1.351	75.535	66.557	1.0934E-03	1.2054E-03	0.369
15	15	312.1	561.7	3.735	3.291	75.510	66.535	2.6648E-03	2.9381E-03	0.430
16	16	313.7	564.7	3.399	2.995	75.273	66.326	2.4338E-03	2.6844E-03	0.292
17	17	314.1	565.4	3.046	2.684	75.220	66.279	2.1825E-03	2.4075E-03	0.367
18	18	314.4	565.9	2.333	2.056	75.178	66.242	1.6731E-03	1.8457E-03	0.361
19	20	314.6	566.3	0.908	0.800	75.141	66.210	6.5161E-04	7.1885E-04	0.323
20	22	313.2	563.7	2.647	2.332	75.350	66.393	1.8931E-03	2.0878E-03	0.360
21	24	313.5	564.2	3.470	3.058	75.308	66.357	2.4835E-03	2.7390E-03	0.400
22	25	313.7	564.7	3.955	3.485	75.271	66.324	2.8322E-03	3.1238E-03	0.404
23	26	338.8	609.9	0.000	0.000	71.683	63.163	0.0000	0.0000	*******
24	27	314.1	565.4	4.593	4.047	75.218	66.277	3.2916E-03	3.6309E-03	0.444
25	28	314.6	566.3	4.225	3.722	75.148	66.215	3.0306E-03	3.3432E-03	0.413
26	29	314.6	566.4	14.995	13.213	75.139	66.208	1.0758E-02	1.1869E-02	0.351
27	30	313.7	564.6	8.362	7.368	75.281	66.332	5.9862E-03	6.6025E-03	0.431
28	31	314.2	565.5	6.192	5.456	75.208	66.268	4.4380E-03	4.8954E-03	0.394
29	32	314.9	566.8	15.363	13.536	75.107	66.179	1.1027E-02	1.2166E-02	0.359
30	34	313.8	564.8	9.953	8.770	75.268	66.321	7.1266E-03	7.8605E-03	0.394
31	33	313.0	563.3	13.207	11.637	75.381	66.421	9.4407E-03	1.0411E-02	0.404
32	35	314.0	565.3	14.694	12.947	75.226	66.284	1.0528E-02	1.1613E-02	0.348
33	36	311.6	561.0	18.970	16.715	75.570	66.587	1.3522E-02	1.4907E-02	0.380
34	37	301.8	543.2	0.000	0.000	76.988	67.837	0.0000	0.0000	2.409
35	38	313.0	563.4	17.223	15.176	75.372	66.413	1.2313E-02	1.3579E-02	0.358
36	39	313.2	563.8	15.654	13.794	75.341	66.386	1.1197E-02	1.2349E-02	0.462
37	40	315.2	567.4	19.696	17.354	75.060	66.138	1.4148E-02	1.5609E-02	0.432
38	41	315.7	568.2	26.204	23.089	74.994	66.080	1.8842E-02	2.0791E-02	0.396
39	42	313.0	563.4	15.473	13.633	75.373	66.414	1.1062E-02	1.2199E-02	0.390
40	43	314.9	566.7	16.163	14.242	75.110	66.182	1.1601E-02	1.2799E-02	0.378
41	44	313.5	564.3	42.181	37.167	75.304	66.353	3.0187E-02	3.3297E-02	0.764

42	45	316.0	568.7	6.393	5.625	74.951	66.042	4.5[illegible]E-03	5.[illegible]E-03	[illegible]
43	46	316.6	569.8	8.793	7.748	74.866	65.967	6.3351E-03	6.9918E-03	0.402
44	47	299.5	539.0	0.158	0.139	77.318	68.128	1.0979E-04	1.2072E-04	0.133
45	48	313.3	563.9	12.592	11.095	75.338	66.383	9.0071E-03	9.9335E-03	0.375
46	50	314.2	565.6	1.754	1.546	75.201	66.262	1.2576E-03	1.3872E-03	0.449
47	51	314.1	565.3	0.927	0.817	75.221	66.280	6.6400E-04	7.3243E-04	0.347
48	53	314.1	565.5	0.513	0.452	75.211	66.271	3.6775E-04	4.0566E-04	0.344
49	55	313.8	564.8	0.454	0.400	75.262	66.316	3.2514E-04	3.5862E-04	0.304
50	57	313.7	564.7	1.174	1.035	75.275	66.327	8.4081E-04	9.2738E-04	0.217
51	59	313.6	564.5	1.859	1.638	75.284	66.335	1.3309E-03	1.4678E-03	0.356
52	60	314.6	566.2	0.590	0.520	75.150	66.217	4.2300E-04	4.6664E-04	0.427
53	61	313.7	564.6	0.292	0.257	75.280	66.332	2.0898E-04	2.3049E-04	0.356
54	65	314.2	565.5	0.483	0.426	75.207	66.268	3.4636E-04	3.8206E-04	0.145
55	68	315.5	567.9	2.493	2.197	75.020	66.103	1.7921E-03	1.9774E-03	0.468
56	69	315.8	568.5	0.918	0.809	74.972	66.060	6.6033E-04	7.2867E-04	0.414
57	70	316.1	569.1	0.736	0.648	74.926	66.020	5.2969E-04	5.8455E-04	0.471
58	72	317.3	571.2	1.999	1.761	74.753	65.868	1.4426E-03	1.5925E-03	0.427
59	73	312.7	562.8	20.489	18.054	75.422	66.457	1.4637E-02	1.6141E-02	0.323
60	74	312.5	562.5	18.447	16.255	75.447	66.479	1.3174E-02	1.4526E-02	0.337
61	75	312.2	561.9	15.342	13.518	75.494	66.520	1.0948E-02	1.2071E-02	0.368
62	76	313.0	563.4	15.157	13.355	75.376	66.416	1.0835E-02	1.1949E-02	0.394
63	77	315.3	567.5	18.264	16.093	75.048	66.128	1.3122E-02	1.4478E-02	0.339
64	78	315.0	566.9	16.470	14.512	75.095	66.169	1.1824E-02	1.3045E-02	0.324
65	79	314.5	566.0	17.859	15.736	75.167	66.232	1.2808E-02	1.4129E-02	0.321
66	80	315.4	567.8	24.285	21.399	75.028	66.109	1.7453E-02	1.9257E-02	0.319
67	81	317.9	572.3	17.408	15.339	74.667	65.791	1.2579E-02	1.3888E-02	[illegible]
68	82	318.0	572.4	18.361	16.179	74.655	65.781	1.3271E-02	1.4651E-02	0.326
69	83	318.3	573.0	19.525	17.204	74.614	65.745	1.4121E-02	1.5591E-02	0.298
70	84	318.6	573.5	18.818	16.581	74.574	65.710	1.3618E-02	1.5036E-02	0.307
71	85	317.6	571.6	14.062	12.391	74.723	65.841	1.0153E-02	1.1208E-02	0.410
72	86	319.3	574.7	10.350	9.120	74.475	65.623	7.5015E-03	8.2843E-03	0.381
73	87	321.0	577.7	7.069	6.229	74.235	65.411	5.1424E-03	5.6812E-03	0.440
74	88	325.5	585.9	4.968	4.377	73.589	64.842	3.6502E-03	4.0370E-03	0.409
75	89	328.1	590.5	6.090	5.366	73.218	64.515	4.5009E-03	4.9808E-03	0.364

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9206E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH 5.22 | RE/METER 3.1875E 06 | REL 5.2664E 05 | LENGTH(METER) 0.197 | PT(ATM) 6.58 | TT(DEG K) 840.9 | HT(JOULE/KG) 0.86752E 06 | RS(METER) 0.0018 | TEST NO. 195 | RUN 24

MACH 5.22 | RE/FT 9.7154E 05 | REL 6.2664E 05 | LENGTH(FT) 0.645 | PT(PSI) 96.66 | TT(DEG F) 1513.6 | HT(BTU/LBM) 373.05 | RS(FT) 0.0060 | ET MATED a = -90°, B = 0°

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.377	0.0764	0.0764	0.0910	0.1007	39	51	0.379	0.0660	0.0660	0.0787	0.0870
2	2	0.377	0.1124	0.1124	0.1359	0.1480	40	54	0.373	0.0444	0.0444	0.0528	0.0584
3	3	0.378	0.1382	0.1382	0.1647	0.1821	41	55	0.371	0.0354	0.0354	0.0422	0.0466
4	4	0.378	0.1546	0.1546	0.1843	0.2038	42	56	0.375	0.0418	0.0418	0.0498	0.0550
5	5	0.377	0.1556	0.1556	0.1854	0.2050	43	57	0.378	0.0552	0.0552	0.0658	0.0727
6	6	0.378	0.1676	0.1676	0.1997	0.2209	44	58	0.378	0.0800	0.0800	0.0953	0.1054
7	7	0.377	0.1729	0.1729	0.2060	0.2278	45	60	0.372	0.0411	0.0411	0.0489	0.0540
8	8	0.377	0.1730	0.1730	0.2061	0.2278	46	61	0.372	0.0432	0.0432	0.0514	0.0567
9	9	0.376	0.1652	0.1652	0.1967	0.2174	47	62	0.375	0.0385	0.0385	0.0458	0.0506
10	10	0.375	0.1818	0.1818	0.2164	0.2392	48	63	0.377	0.0766	0.0766	0.0912	0.1009
11	11	0.374	0.2249	0.2249	0.2677	0.2958	49	64	0.378	0.1310	0.1310	0.1561	0.1726
12	12	0.373	0.2727	0.2727	0.3244	0.3584	50	65	0.378	0.0657	0.0657	0.0783	0.0866
13	13	0.374	0.0332	0.0332	0.0395	0.0437	51	66	0.376	0.0222	0.0222	0.0265	0.0293
14	18	0.372	0.2657	0.2657	0.3160	0.3491	52	67	0.374	0.0058	0.0058	0.0069	0.0076
15	25	0.373	0.0988	0.0888	0.1056	0.1167	53	68	0.370	0.0025	0.0025	0.0029	0.0032
16	26	0.377	0.2817	0.2817	0.3356	0.3711	54	70	0.371	0.0374	0.0374	0.0444	0.0491
17	27	0.378	0.1108	0.1108	0.1321	0.1461	55	71	0.375	0.0302	0.0302	0.0360	0.0398
18	28	0.378	0.0428	0.0428	0.0510	0.0564	56	72	0.377	0.0694	0.0694	0.0826	0.0914
19	30	0.373	0.0377	0.0377	0.0448	0.0495	57	73	0.378	0.1366	0.1366	0.1628	0.1800
20	31	0.378	0.2666	0.2666	0.3176	0.3513	58	77	0.371	0.0325	0.0325	0.0386	0.0427
21	32	0.372	0.0554	0.0554	0.0659	0.0727	59	78	0.374	0.0255	0.0255	0.0303	0.0335
22	33	0.376	0.0765	0.0765	0.0911	0.1007	60	79	0.376	0.0540	0.0540	0.0644	0.0712
23	34	0.378	0.1507	0.1507	0.1796	0.1986	61	81	0.377	0.0662	0.0662	0.0789	0.0872
24	35	0.378	0.1385	0.1385	0.1650	0.1825	62	84	0.371	0.0270	0.0270	0.0321	0.0355
25	36	0.378	0.0681	0.0681	0.0812	0.0898	63	85	0.374	0.0213	0.0213	0.0254	0.0280
26	37	0.377	0.0168	0.0168	0.0200	0.0221	64	86	0.376	0.0264	0.0264	0.0314	0.0348
27	38	0.375	0.0037	0.0037	0.0044	0.0049	65	90	0.370	0.0214	0.0214	0.0254	0.0281
28	39	0.369	0.0033	0.0033	0.0039	0.0043	66	91	0.373	0.0173	0.0173	0.0206	0.0227
29	40	0.373	0.0939	0.0939	0.1117	0.1234	67	92	0.375	0.0130	0.0130	0.0154	0.0171
30	41	0.373	0.0777	0.0777	0.0924	0.1021	68	94	0.378	0.0333	0.0333	0.0397	0.0439
31	42	0.376	0.0783	0.0783	0.0932	0.1031	69	98	0.370	0.0177	0.0177	0.0211	0.0233
32	43	0.378	0.1213	0.1213	0.1445	0.1598	70	99	0.374	0.0141	0.0141	0.0168	0.0186
33	44	0.379	0.0919	0.0919	0.1095	0.1212	71	100	0.376	0.0085	0.0085	0.0102	0.0112
34	46	0.353	0.0000	0.0000	0.0000	0.0000	72	103	0.370	0.0184	0.0184	0.0219	0.0241
35	47	0.373	0.0563	0.0563	0.0670	0.0740	73	104	0.374	0.0184	0.0184	0.0219	0.0242
36	48	0.376	0.0770	0.0770	0.0917	0.1014	74	105	0.376	0.0145	0.0145	0.0172	0.0190
37	49	0.378	0.1311	0.1311	0.1562	0.1727	75	107	0.379	0.0120	0.0120	0.0144	0.0159
38	50	0.379	0.1484	0.1484	0.1769	0.1957							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	S(METER)	TEST NO. 195
5.22	3.1875E 06	9.2664E 05 0.197	6.58	940.9	0.86752E 06	.0018	RUN NO. 24
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	S(FT)	
5.22	9.7154E 05	6.2664E 05 0.645	96.66	1513.6	373.05	.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.950)	ST(0.850)	TIME(SEC)
1	1	326.0	586.9	5.630	4.961	73.683	64.925	4.1519E-03	4.5912E-03	0.475
2	2	326.0	586.9	8.278	7.294	73.681	64.923	6.1050E-03	6.7510E-03	0.254
3	3	326.4	587.5	10.176	8.966	73.630	64.878	7.5103E-03	8.3057E-03	0.302
4	4	326.3	587.4	11.388	10.034	73.640	64.887	8.4039E-03	9.2928E-03	0.394
5	5	325.9	586.6	11.471	10.107	73.699	64.939	8.4571E-03	9.3517E-03	0.393
6	6	326.1	587.0	12.351	10.883	73.674	64.917	9.1093E-03	1.0073E-02	0.397
7	7	325.9	586.6	12.742	11.228	73.701	64.941	9.3942E-03	1.0388E-02	0.391
8	8	325.3	585.5	12.766	11.249	73.791	65.020	9.3989E-03	1.0391E-02	0.389
9	9	324.7	584.4	12.203	10.753	73.879	65.097	8.9722E-03	9.9183E-03	0.413
10	10	324.1	583.4	13.442	11.844	73.957	65.166	9.8710E-03	1.0911E-02	0.384
11	11	323.2	581.8	16.661	14.681	74.085	65.279	1.2211E-02	1.3494E-02	0.383
12	12	322.0	579.5	20.249	17.842	74.264	65.437	1.4799E-02	1.6350E-02	0.339
13	13	322.9	581.2	2.463	2.170	74.126	65.315	1.8038E-03	1.9933E-03	0.385
14	18	321.6	579.0	19.742	17.395	74.308	65.476	1.4419E-02	1.5928E-02	0.401
15	25	321.9	579.3	6.596	5.812	74.278	65.449	4.8199E-03	5.3247E-03	0.445
16	26	326.1	586.9	20.754	18.287	73.678	64.920	1.5307E-02	1.6927E-02	0.421
17	27	326.7	588.0	8.157	7.187	73.591	64.844	6.0239E-03	6.6622E-03	0.331
18	28	326.1	587.0	3.155	2.780	73.668	64.912	2.3269E-03	2.5731E-03	0.399
19	30	322.2	580.0	2.797	2.464	74.223	65.401	2.0452E-03	2.2596E-03	0.445
20	31	326.4	587.5	19.628	17.295	73.631	64.879	1.4486E-02	1.6021E-02	0.351
21	32	321.4	578.6	4.116	3.627	74.339	65.503	3.0046E-03	3.3190E-03	0.416
22	33	324.5	584.1	5.655	4.983	73.901	65.116	4.1563E-03	4.5944E-03	0.429
23	34	326.2	587.1	11.102	9.782	73.660	64.905	8.1903E-03	9.0572E-03	0.407
24	35	326.7	588.1	10.189	8.978	73.582	64.836	7.5260E-03	8.3237E-03	0.427
25	36	326.5	587.6	5.015	4.419	73.622	64.871	3.7016E-03	4.0937E-03	0.395
26	37	325.3	585.5	1.236	1.089	73.792	65.021	9.1007E-04	1.0062E-03	0.410
27	38	323.6	582.4	0.274	0.241	74.032	65.232	2.0085E-04	2.2198E-04	0.417
28	39	319.0	574.1	0.246	0.217	74.690	65.812	1.7860E-04	1.9717E-04	0.443
29	40	321.8	579.3	6.976	6.147	74.282	65.452	5.0970E-03	5.6308E-03	0.346
30	41	321.9	579.4	5.771	5.085	74.275	65.447	4.2170E-03	4.6587E-03	0.389
31	42	324.9	584.7	5.781	5.094	73.850	65.072	4.2523E-03	4.7009E-03	0.438
32	43	326.7	588.0	8.925	7.864	73.591	64.844	6.5914E-03	7.2900E-03	0.421
33	44	327.0	588.6	6.760	5.957	73.547	64.805	4.9958E-03	5.5257E-03	0.416
34	46	304.8	548.6	0.000	0.000	76.719	67.600	0.0000	0.0000	21.736
35	47	321.8	579.2	4.185	3.688	74.289	65.458	3.0578E-03	3.3780E-03	0.375
36	48	324.8	584.6	5.690	5.014	73.861	65.082	4.1846E-03	4.6261E-03	0.405
37	49	326.5	587.8	9.647	8.500	73.611	64.861	7.1223E-03	7.8768E-03	0.421
38	50	327.1	588.9	10.914	9.617	73.523	64.784	8.0688E-03	8.9249E-03	0.406
39	51	327.0	588.5	4.855	4.278	73.550	64.807	3.5881E-03	3.9687E-03	0.426
40	54	321.9	579.3	3.300	2.907	74.278	65.449	2.4111E-03	2.6636E-03	0.373
41	55	320.8	577.5	2.638	2.325	74.428	65.580	1.9235E-03	2.1244E-03	0.392

42	[illegible]	324.1	[illegible]	3.092	2.724	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
43	57	326.2	587.2	4.066	3.583	73.659	64.903	2.9999E-03	3.3174E-03	0.385
44	58	326.6	587.9	5.886	5.186	73.601	64.852	4.3461E-03	4.8066E-03	0.378
45	60	320.9	577.6	3.059	2.696	74.416	65.570	2.2307E-03	2.4638E-03	0.411
46	61	321.1	578.0	3.212	2.830	74.382	65.540	2.3430E-03	2.5880E-03	0.409
47	62	324.0	583.2	2.846	2.508	73.971	65.178	2.0898E-03	2.3098E-03	0.401
48	63	325.9	586.5	5.645	4.974	73.708	64.947	4.1614E-03	4.6015E-03	0.397
49	64	326.6	587.9	9.642	8.496	73.604	64.855	7.1192E-03	7.8735E-03	0.398
50	65	326.2	587.2	4.842	4.266	73.654	64.899	3.5720E-03	3.9502E-03	0.399
51	66	325.1	585.2	1.642	1.447	73.817	65.043	1.2086E-03	1.3362E-03	0.397
52	67	323.4	582.1	0.427	0.377	74.061	65.258	3.1938E-04	3.4633E-04	0.379
53	68	319.5	575.0	0.184	0.162	74.620	65.751	1.3387E-04	1.4781E-04	0.178
54	70	320.4	576.7	2.783	2.452	74.483	65.630	2.0270E-03	2.2385E-03	0.398
55	71	323.6	582.5	2.237	1.971	74.029	65.229	1.6410E-03	1.8136E-03	0.395
56	72	325.4	585.7	5.118	4.510	73.771	65.003	3.7694E-03	4.1676E-03	0.419
57	73	326.4	587.5	10.058	8.863	73.629	64.877	7.4238E-03	8.2101E-03	0.392
58	77	320.3	576.6	2.420	2.132	74.495	65.641	1.7625E-03	1.9464E-03	0.392
59	78	323.3	581.9	1.888	1.664	74.076	65.271	1.3841E-03	1.5295E-03	0.385
60	79	325.1	585.2	3.989	3.515	73.813	65.040	2.9361E-03	3.2461E-03	0.436
61	81	325.9	586.7	4.880	4.300	73.698	64.938	3.5977E-03	3.9783E-03	0.433
62	84	320.1	576.3	2.014	1.775	74.522	65.664	1.4664E-03	1.6194E-03	0.392
63	85	322.6	580.7	1.581	1.393	74.168	65.352	1.1571E-03	1.2785E-03	0.383
64	86	324.4	583.9	1.952	1.720	73.919	65.133	1.4343E-03	1.5854E-03	0.428
65	90	319.6	575.3	1.594	1.405	74.598	65.731	1.1593E-03	1.2801E-03	0.391
66	91	322.5	580.5	1.283	1.131	74.183	65.365	9.3892E-04	1.0374E-03	0.399
67	92	324.3	583.7	0.959	0.845	73.931	65.143	7.0476E-04	7.7901E-04	[illegible]
68	94	326.4	587.4	2.454	2.163	73.636	64.883	1.8114E-03	2.0032E-03	0.349
69	98	319.9	575.8	1.322	1.165	74.561	65.698	9.6200E-04	1.0623E-03	0.384
70	99	322.7	580.8	1.048	0.924	74.160	65.345	7.6731E-04	8.4783E-04	0.388
71	100	324.5	584.1	0.631	0.556	73.898	65.114	4.6347E-04	5.1232E-04	0.335
72	103	320.0	576.0	1.371	1.208	74.543	65.682	9.9756E-04	1.1016E-03	0.352
73	104	322.7	580.9	1.365	1.203	74.151	65.337	9.9970E-04	1.1046E-03	0.373
74	105	324.5	584.1	1.069	0.942	73.904	65.120	7.8596E-04	8.6880E-04	0.369
75	107	327.2	588.9	0.886	0.781	73.521	64.782	6.5493E-04	7.2442E-04	0.368

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* FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9050E-01 (SLUGS/FT2-SEC)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.2017E 06	4.3082E 05	0.197	6.56	835.9	0.86205E 06	0.0018	RUN NO. 25
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ORB ALONE
5.22	9.7601E 05	1.3082E 05	0.645	96.37	1504.7	370.70	0.0060	$\alpha = -90°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.360	0.0087	0.0087	0.0104	0.0114	39	42	0.358	0.2074	0.2074	0.2457	0.2706
2	2	0.360	0.0088	0.0088	0.0104	0.0115	40	43	0.360	0.2187	0.2187	0.2592	0.2857
3	3	0.360	0.0094	0.0094	0.0111	0.0122	41	44	0.359	0.5670	0.5670	0.6717	0.7401
4	4	0.360	0.0096	0.0096	0.0114	0.0126	42	45	0.360	0.0120	0.0120	0.0142	0.0156
5	5	0.359	0.0093	0.0093	0.0110	0.0121	43	46	0.360	0.0162	0.0162	0.0192	0.0211
6	6	0.359	0.0087	0.0087	0.0103	0.0114	44	47	0.349	0.0000	0.0000	0.0000	0.0000
7	7	0.359	0.0099	0.0099	0.0117	0.0129	45	48	0.358	0.1650	0.1650	0.1954	0.2153
8	8	0.358	0.0100	0.0100	0.0119	0.0131	46	50	0.358	0.0129	0.0129	0.0152	0.0168
9	9	0.358	0.0073	0.0073	0.0086	0.0095	47	51	0.359	0.0061	0.0061	0.0073	0.0080
10	10	0.357	0.0084	0.0084	0.0100	0.0110	48	53	0.359	0.0065	0.0065	0.0077	0.0084
11	11	0.357	0.0090	0.0090	0.0107	0.0118	49	55	0.359	0.0057	0.0057	0.0068	0.0075
12	12	0.357	0.0072	0.0072	0.0085	0.0094	50	57	0.359	0.0041	0.0041	0.0048	0.0053
13	13	0.357	0.0082	0.0082	0.0097	0.0107	51	59	0.359	0.0045	0.0045	0.0054	0.0059
14	14	0.356	0.0054	0.0054	0.0064	0.0070	52	60	0.360	0.0066	0.0066	0.0078	0.0086
15	15	0.356	0.0042	0.0042	0.0050	0.0055	53	61	0.360	0.0053	0.0053	0.0063	0.0069
16	16	0.357	0.0087	0.0087	0.0103	0.0113	54	67	0.360	0.0042	0.0042	0.0050	0.0055
17	17	0.358	0.0094	0.0094	0.0112	0.0123	55	68	0.362	0.0132	0.0132	0.0156	0.0172
18	18	0.358	0.0051	0.0051	0.0060	0.0066	56	69	0.362	0.0050	0.0050	0.0060	0.0066
19	20	0.359	0.0075	0.0075	0.0088	0.0097	57	70	0.362	0.0062	0.0062	0.0073	0.0081
20	22	0.358	0.0038	0.0038	0.0045	0.0049	58	72	0.364	0.0083	0.0083	0.0099	0.0109
21	24	0.357	0.0482	0.0482	0.0571	0.0629	59	73	0.357	0.2622	0.2622	0.3105	0.3421
22	25	0.358	0.0539	0.0539	0.0639	0.0703	60	74	0.357	0.2391	0.2391	0.2832	0.3120
23	26	0.395	0.0000	0.0000	0.0000	0.0000	61	75	0.357	0.1999	0.1999	0.2367	0.2607
24	27	0.358	0.0619	0.0619	0.0734	0.0808	62	76	0.358	0.1964	0.1964	0.2326	0.2563
25	28	0.359	0.0583	0.0583	0.0691	0.0761	63	77	0.361	0.2360	0.2360	0.2798	0.3085
26	29	0.359	0.2024	0.2024	0.2398	0.2643	64	78	0.361	0.2153	0.2153	0.2552	0.2813
27	30	0.358	0.1116	0.1116	0.1322	0.1457	65	79	0.361	0.2383	0.2383	0.2825	0.3113
28	31	0.358	0.0822	0.0822	0.0973	0.1072	66	80	0.362	0.3173	0.3173	0.3763	0.4148
29	32	0.360	0.2014	0.2014	0.2386	0.2630	67	81	0.365	0.2361	0.2361	0.2802	0.3091
30	34	0.359	0.1327	0.1327	0.1572	0.1731	68	82	0.365	0.2548	0.2548	0.3024	0.3336
31	33	0.357	0.1752	0.1752	0.2075	0.2285	69	83	0.365	0.2650	0.2650	0.3146	0.3470
32	35	0.359	0.1964	0.1964	0.2327	0.2564	70	84	0.365	0.2491	0.2491	0.2956	0.3262
33	36	0.356	0.2516	0.2516	0.2979	0.3281	71	85	0.363	0.1901	0.1901	0.2255	0.2487
34	37	0.352	0.0000	0.0000	0.0000	0.0000	72	86	0.365	0.1411	0.1411	0.1674	0.1847
35	38	0.358	0.2251	0.2251	0.2666	0.2937	73	87	0.367	0.0966	0.0966	0.1148	0.1266
36	39	0.358	0.2113	0.2113	0.2503	0.2758	74	88	0.372	0.0716	0.0716	0.0851	0.0940
37	40	0.360	0.2679	0.2679	0.3175	0.3499	75	89	0.376	0.0839	0.0839	0.0999	0.1104
38	41	0.361	0.3526	0.3526	0.4180	0.4607							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.2087E 06	6.3082E 05	0.197	6.56	835.9	0.86205E 06	0.0018	RUN NO. 25
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	9.7801E 05	6.3082E 05	0.645	96.37	1504.7	370.70	0.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	309.0	556.2	0.657	0.579	75.232	66.290	4.7169E-04	5.1982E-04	0.425
2	2	308.6	555.5	0.661	0.582	75.290	66.341	4.7366E-04	5.2195E-04	0.426
3	3	308.7	555.7	0.704	0.621	75.275	66.327	5.0513E-04	5.5664E-04	0.434
4	4	308.7	555.7	0.725	0.639	75.273	66.326	5.1997E-04	5.7300E-04	0.486
5	5	308.5	555.3	0.700	0.617	75.306	66.355	5.0183E-04	5.[illegible]98E-04	0.412
6	6	308.4	555.0	0.656	0.578	75.327	66.373	4.6999E-04	5.[illegible]88E-04	0.369
7	7	308.1	554.6	0.744	0.656	75.359	66.401	5.3301E-04	5.[illegible]29E-04	0.399
8	8	307.6	553.6	0.756	0.666	75.440	66.472	5.4088E-04	5.9589E-04	0.380
9	9	307.1	552.7	0.549	0.484	75.512	66.536	3.9229E-04	4.3214E-04	0.401
10	10	306.8	552.2	0.637	0.561	75.553	66.572	4.5504E-04	5.0123E-04	0.435
11	11	306.4	551.5	0.684	0.602	75.607	66.620	4.8788E-04	5.3735E-04	0.425
12	12	306.3	551.3	0.544	0.479	75.620	66.631	3.8817E-04	4.2753E-04	0.402
13	13	306.4	551.5	0.619	0.546	75.605	66.618	4.4195E-04	4.8677E-04	0.447
14	14	305.7	550.3	0.407	0.358	75.704	66.706	2.8973E-04	3.1906E-04	0.386
15	15	305.8	550.4	0.317	0.279	75.697	66.700	2.2578E-04	2.4865E-04	0.408
16	16	306.4	551.5	0.655	0.577	75.607	66.620	4.6729E-04	5.1467E-04	0.581
17	17	306.9	552.4	0.711	0.627	75.536	66.557	5.0804E-04	5.5963E-04	0.585
18	18	307.2	552.9	0.382	0.336	75.497	66.523	2.7285E-04	3.0057E-04	0.338
19	20	308.1	554.6	0.562	0.496	75.363	66.405	4.0273E-04	4.4374E-04	0.338
20	22	306.9	552.5	0.285	0.251	75.531	66.553	2.0361E-04	2.2429E-04	0.319
21	24	306.8	552.3	3.641	3.208	75.545	66.566	2.6006E-03	2.8646E-03	0.402
22	25	307.3	553.1	4.069	3.585	75.480	66.508	2.9090E-03	3.2046E-03	0.419
23	26	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	307.5	553.5	4.674	4.118	75.452	66.483	3.3425E-03	3.6824E-03	0.461
25	28	308.0	554.4	4.394	3.872	75.377	66.417	3.1465E-03	3.4668E-03	0.433
26	29	308.4	555.0	15.246	13.434	75.327	66.373	1.0925E-02	1.2038E-02	0.359
27	30	307.1	552.8	8.429	7.427	75.506	66.531	6.0234E-03	6.6353E-03	0.448
28	31	307.7	553.8	6.198	5.461	75.421	66.456	4.4345E-03	4.8855E-03	0.408
29	32	308.7	555.6	15.160	13.358	75.283	66.335	1.0870E-02	1.1978E-02	0.354
30	34	307.5	553.4	10.011	8.821	75.454	66.485	7.1598E-03	7.8877E-03	0.412
31	33	306.7	552.0	13.238	11.665	75.567	66.585	9.4513E-03	1.0410E-02	0.415
32	35	307.9	554.3	14.809	13.049	75.389	66.428	1.0601E-02	1.1680E-02	0.357
33	36	305.8	550.5	19.045	16.781	75.689	66.692	1.3572E-02	1.4947E-02	0.388
34	37	301.9	543.5	0.000	0.000	0.000	0.000	0.0000	0.0000	0.013
35	38	307.1	552.8	16.995	14.975	75.507	66.532	1.2144E-02	1.3378E-02	0.360
36	39	307.3	553.1	15.950	14.054	75.478	66.506	1.1403E-02	1.2562E-02	0.477
37	40	309.1	556.4	20.149	17.754	75.220	66.279	1.4461E-02	1.5937E-02	0.453
38	41	309.7	557.5	26.492	23.343	75.131	66.200	1.9039E-02	2.0985E-02	0.420
39	42	307.0	552.6	15.666	13.804	75.521	66.545	1.1193E-02	1.2329E-02	0.399
40	43	308.8	555.9	16.462	14.505	75.262	66.316	1.1807E-02	1.3011E-02	0.394
41	44	309.0	554.4	42.733	37.654	75.374	66.414	3.0599E-02	3.3714E-02	0.272

42	45	304.7	555.6	0.901	0.794	75.279	66.331	6.4594E-04	7.1181E-04	0.585
43	46	305.3	555.9	1.217	1.072	75.261	66.315	8.7286E-04	9.6189E-04	0.632
44	47	299.3	538.7	0.000	0.000	0.000	0.000	0.0000	0.0000	0.152
45	48	306.9	552.5	12.462	10.981	75.528	66.551	8.9027E-03	9.8067E-03	0.372
46	50	307.7	553.8	0.971	0.855	75.423	66.458	6.9441E-04	7.6505E-04	0.687
47	51	307.3	553.0	0.462	0.407	75.410	66.446	3.3065E-04	3.6429E-04	0.573
48	53	307.1	552.3	0.488	0.430	75.381	66.421	3.4928E-04	3.8483E-04	0.319
49	55	307.0	552.2	0.433	0.382	75.395	66.433	3.1025E-04	3.4182E-04	0.317
50	57	307.8	554.0	0.308	0.271	75.410	66.446	2.2036E-04	2.4278E-04	0.261
51	59	307.9	554.2	0.341	0.300	75.396	66.434	2.4404E-04	2.6888E-04	0.408
52	60	307.9	554.0	0.494	0.435	75.251	66.306	3.5427E-04	3.9042E-04	0.484
53	61	307.9	554.0	0.397	0.350	75.249	66.304	2.8469E-04	3.1374E-04	0.448
54	65	309.3	556.8	0.316	0.278	75.186	66.249	2.2691E-04	2.5009E-04	0.263
55	69	310.5	558.9	0.990	0.872	75.021	66.104	7.1235E-04	7.8530E-04	0.742
56	69	310.9	559.6	0.377	0.332	74.969	66.058	2.7155E-04	2.9938E-04	0.354
57	70	311.1	560.0	0.462	0.407	74.932	66.025	3.3279E-04	3.6692E-04	0.485
58	72	312.4	562.2	0.624	0.550	74.756	65.870	4.5090E-04	4.9728E-04	0.590
59	73	309.8	552.2	19.811	17.457	75.554	66.573	1.4147E-02	1.5583E-02	0.302
60	74	306.7	552.1	18.070	15.922	75.563	66.581	1.2902E-02	1.4212E-02	0.331
61	75	306.4	551.5	15.115	13.318	75.604	66.617	1.0785E-02	1.1879E-02	0.380
62	76	307.4	553.3	14.821	13.059	75.464	66.494	1.0598E-02	1.1675E-02	0.405
63	77	309.8	557.7	17.731	15.624	75.116	66.187	1.2746E-02	1.4049E-02	0.331
64	78	309.5	557.2	16.183	14.259	75.157	66.224	1.1625E-02	1.2813E-02	0.328
65	79	309.8	557.6	17.900	15.773	75.127	66.197	1.2865E-02	1.4180E-02	0.343
66	80	310.6	559.1	23.797	20.968	75.001	66.086	1.7136E-02	1.8891E-02	0.334
67	81	313.1	563.7	17.622	15.527	74.643	65.771	1.2758E-02	1.4073E-02	0.333
68	82	313.1	563.5	19.021	16.760	74.653	65.779	1.3770E-02	1.5188E-02	0.350
69	83	313.3	564.0	19.776	17.426	74.619	65.750	1.4324E-02	1.5800E-02	0.311
70	84	313.7	564.6	18.571	16.364	74.567	65.703	1.3462E-02	1.4851E-02	0.310
71	85	311.6	560.9	14.234	12.542	74.866	65.967	1.0271E-02	1.1325E-02	0.425
72	86	313.4	564.1	10.525	9.274	74.612	65.743	7.6242E-03	8.4103E-03	0.403
73	87	315.1	567.1	7.186	6.332	74.368	65.528	5.2248E-03	5.7653E-03	0.461
74	88	319.1	574.4	5.273	4.655	73.791	65.020	3.8754E-03	4.2806E-03	0.454
75	89	322.4	580.3	6.149	5.418	73.325	64.609	4.5436E-03	5.0225E-03	0.382

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9067E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. - 195
RUN NO. 25

MACH	RE/FT	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	
4.22	[illegible]E 06	0.197	6.85	339.4	0.864806E 06	0.0018	
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG F)	HT(BTU/LBM)	RS(FT)	USB ALONE
4.22	1.61[illegible]E 06	0.645	100.64	1509.2	371.89	0.0060	α = -120°, β = 0°

SN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.3[illegible]	0.0105	[illegible]	0.0124	0.0137	39	42	0.358	0.1329	0.1329	0.1574	0.1734
2	2	0.359	[illegible]	0.0108	0.0128	0.0141	40	43	0.360	0.1395	0.1395	0.1653	0.1822
3	3	0.359	0.0121	0.0121	0.0144	0.0158	41	44	0.358	0.0967	0.0967	0.1146	0.1263
4	4	0.359	0.0106	0.0106	0.0125	0.0138	42	45	0.360	0.0188	0.0188	0.0222	0.0245
5	5	0.359	0.0094	0.0094	0.0112	0.0123	43	46	0.360	0.0110	0.0110	0.0130	0.0143
6	6	0.359	0.0097	0.0097	0.0115	0.0127	44	47	0.346	0.0000	0.0000	0.0000	0.0000
7	7	0.359	0.0097	0.0097	0.0115	0.0126	45	48	0.357	0.0160	0.0160	0.0190	0.0209
8	8	0.358	0.0091	0.0091	0.0108	0.0119	46	50	0.359	0.0109	0.0109	0.0129	0.0142
9	9	0.358	0.0096	0.0096	0.0099	0.0109	47	51	0.359	0.0072	0.0072	0.0085	0.0094
10	10	0.359	0.0100	0.0100	0.0118	0.0130	48	53	0.360	0.0046	0.0046	0.0054	0.0060
11	11	0.357	0.0170	0.0170	0.0201	0.0222	49	55	0.360	0.0038	0.0038	0.0045	0.0049
12	12	0.357	0.0151	0.0151	0.0179	0.0197	50	57	0.360	0.0046	0.0046	0.0055	0.0060
13	13	0.358	0.0061	0.0061	0.0072	0.0079	51	59	0.360	0.0078	0.0078	0.0093	0.0102
14	14	0.357	0.0046	0.0046	0.0054	0.0060	52	60	0.360	0.0114	0.0114	0.0135	0.0149
15	15	0.358	0.0099	0.0099	0.0117	0.0128	53	61	0.360	0.0071	0.0071	0.0084	0.0093
16	16	0.359	0.0113	0.0113	0.0133	0.0147	54	65	0.362	0.0076	0.0076	0.0090	0.0099
17	17	0.358	[illegible]	0.0079	0.0094	0.0103	55	68	0.364	0.0202	0.0222	0.0264	0.0291
18	18	0.357	[illegible]	0.0108	0.0127	0.0140	56	69	0.363	0.0070	0.0070	0.0083	0.0091
19	20	0.360	0.0048	0.0048	0.0057	0.0062	57	70	0.364	0.0070	0.0070	0.0083	0.0091
20	22	0.359	0.0047	0.0047	0.0056	0.0062	58	72	0.367	0.0121	0.0121	0.0143	0.0158
21	24	0.359	0.0741	0.0741	0.0878	0.0967	59	73	0.357	0.1406	0.1406	0.1655	0.1834
22	25	0.[illegible]	0.0458	0.0458	0.0542	0.0598	60	74	0.357	0.1426	0.1426	0.1689	0.1860
23	26	0.[illegible]	0.0000	0.0000	0.0000	0.0000	61	75	0.357	0.1459	0.1459	0.1728	0.1904
24	27	0.360	0.0807	0.0807	0.0957	0.1054	62	76	0.359	0.1278	0.1278	0.1514	0.1668
25	28	0.360	0.0596	0.0596	0.0707	0.0779	63	77	0.360	0.2310	0.2310	0.2738	0.3017
26	29	0.359	0.2859	0.2859	0.3387	0.3732	64	78	0.360	0.2407	0.2407	0.2854	0.3145
27	30	0.359	0.1164	0.1164	0.1380	0.1520	65	79	0.361	0.2289	0.2289	0.2713	0.2991
28	31	0.360	0.0996	0.0996	0.1181	0.1301	66	80	0.363	0.2372	0.2372	0.2813	0.3102
29	32	0.359	0.3021	0.3021	0.3579	0.3943	67	81	0.365	0.3689	0.3689	0.4378	0.4829
30	34	0.359	0.1886	0.1886	0.2235	0.2463	68	82	0.368	0.4810	0.4810	0.5714	0.6306
31	33	0.358	0.1476	0.1477	0.1749	0.1927	69	83	0.366	0.5051	0.5051	0.5995	0.6616
32	35	0.358	0.4405	0.4405	0.5217	0.5748	70	84	0.367	0.5199	0.5198	0.6174	0.6813
33	36	0.357	0.2423	0.2423	0.2869	0.3160	71	85	0.363	0.0782	0.0782	0.0927	0.1023
34	37	0.350	0.0000	0.0000	0.0000	0.0000	72	86	0.366	0.1463	0.1463	0.1738	0.1917
35	38	0.357	0.2149	0.2149	0.2545	0.2803	73	87	0.369	0.1594	0.1594	0.1894	0.2091
36	[illegible]	0.358	0.1560	0.1560	0.1848	0.2036	74	88	0.372	0.0689	0.0689	0.0820	0.0905
37	40	0.360	0.1361	0.1361	0.1613	0.1777	75	89	0.376	0.0627	0.0627	0.0747	0.0825
38	41	0.360	0.1086	0.1286	0.1525	0.1680							

PRECEDING PAGE BLANK NO

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.3327E 06	6.5520E 05 0.197	6.85	838.4	0.86480E 06	0.0018	RUN NO. 26
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
5.22	1.0158E 06	6.5520E 05 0.645	100.64	1509.2	371.89	0.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	309.6	557.2	0.809	0.713	77.161	67.990	5.5529E-04	6.1189E-04	0.508
2	2	309.3	556.7	0.831	0.732	77.203	68.027	5.7005E-04	6.2813E-04	0.472
3	3	309.5	557.1	0.937	0.825	77.173	68.000	6.4272E-04	7.0823E-04	0.496
4	4	309.5	557.1	0.815	0.718	77.168	67.996	5.5931E-04	6.1632E-04	0.539
5	5	309.4	556.9	0.729	0.642	77.184	68.010	4.9975E-04	5.5068E-04	0.509
6	6	309.2	556.6	0.752	0.663	77.210	68.032	5.1586E-04	5.6840E-04	0.506
7	7	309.1	556.3	0.748	0.659	77.235	68.055	5.1291E-04	5.6513E-04	0.502
8	8	308.6	555.5	0.704	0.620	77.303	68.114	4.8221E-04	5.3125E-04	0.516
9	9	308.2	554.7	0.647	0.570	77.362	68.166	4.4263E-04	4.8760E-04	0.555
10	10	307.9	554.3	0.772	0.680	77.399	68.199	5.2766E-04	5.8125E-04	0.589
11	11	307.7	553.9	1.315	1.159	77.433	68.229	8.9912E-04	9.9038E-04	0.565
12	12	307.7	553.9	1.171	1.032	77.426	68.223	8.0072E-04	8.8200E-04	0.569
13	13	307.9	554.2	0.471	0.415	77.408	68.207	3.2175E-04	3.5442E-04	0.493
14	14	307.0	552.6	0.355	0.313	77.536	68.320	2.4222E-04	2.6676E-04	0.515
15	15	307.5	553.5	0.763	0.672	77.465	68.257	5.2122E-04	5.7409E-04	0.556
16	16	308.3	554.9	0.871	0.768	77.349	68.155	5.9632E-04	6.5692E-04	0.631
17	17	309.7	555.7	0.612	0.539	77.284	68.098	4.1906E-04	4.6169E-04	0.508
18	18	308.8	555.9	0.831	0.732	77.269	68.085	5.6952E-04	6.2747E-04	0.486
19	20	309.8	557.6	0.369	0.325	77.127	67.959	2.5309E-04	2.7891E-04	0.462
20	22	308.8	555.9	0.365	0.322	77.268	68.083	2.5028E-04	2.7574E-04	0.390
21	24	309.0	556.1	5.723	5.042	77.248	68.066	3.9220E-03	4.3213E-03	0.504
22	25	309.4	556.9	3.533	3.113	77.190	68.015	2.4232E-03	2.6702E-03	0.576
23	26	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	309.6	557.3	6.230	5.489	77.156	67.985	4.2755E-03	4.7114E-03	0.537
25	28	310.2	558.4	4.596	4.050	77.064	67.904	3.1584E-03	3.4809E-03	0.540
26	29	308.7	555.7	22.097	19.470	77.285	68.098	1.5136E-02	1.6676E-02	0.516
27	30	309.1	556.4	8.992	7.923	77.227	68.047	6.1647E-03	6.7924E-03	0.541
28	31	309.8	557.6	7.684	6.770	77.126	67.959	5.2756E-03	5.8137E-03	0.566
29	32	308.9	556.0	23.337	20.563	77.258	68.075	1.5992E-02	1.7619E-02	0.513
30	34	309.5	557.0	14.556	12.825	77.175	68.002	9.9866E-03	1.1004E-02	0.510
31	33	308.5	555.3	11.416	10.059	77.317	68.127	7.8180E-03	8.6107E-03	0.502
32	35	308.2	554.8	34.073	30.023	77.356	68.161	2.3315E-02	2.5685E-02	0.477
33	36	307.4	553.3	18.771	16.540	77.481	68.271	1.2821E-02	1.4121E-02	0.468
34	37	301.6	542.8	0.000	0.000	0.000	0.000	0.0000	0.0000	0.963
35	38	307.4	553.3	16.654	14.674	77.481	68.271	1.1375E-02	1.2529E-02	0.395
36	39	308.6	555.6	12.057	10.624	77.294	68.107	8.2576E-03	9.0976E-03	0.626
37	40	310.2	558.4	10.485	9.239	77.068	67.907	7.2053E-03	7.9410E-03	0.630
38	41	309.9	557.8	9.920	8.741	77.116	67.950	6.8119E-03	7.5068E-03	0.512
39	42	308.5	555.3	10.275	9.053	77.317	68.127	7.0346E-03	7.7499E-03	0.556
40	43	310.2	558.4	10.749	9.471	77.061	67.902	7.3869E-03	8.1412E-03	0.550
41	44	308.7	555.6	7.477	6.588	77.294	68.106	5.1209E-03	5.6418E-03	0.378

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REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

42	45	309.9	557.9	1.447	1.275	77.106	67.941	9.9385E-04	1.0953E-03	0.618
43	46	310.2	558.4	0.846	0.745	77.061	67.902	5.8127E-04	6.4062E-04	0.691
44	47	298.2	536.8	0.000	0.000	0.000	0.000	0.0000	0.0000	-0.052
45	48	307.2	553.0	1.243	1.095	77.502	68.289	8.4860E-04	9.3463E-04	0.609
46	50	309.2	556.5	0.938	0.739	77.218	68.040	5.7482E-04	6.3337E-04	0.663
47	51	309.1	556.4	0.555	0.489	77.226	68.046	3.8068E-04	4.1945E-04	0.521
48	53	309.7	557.4	0.353	0.311	77.142	67.973	2.4236E-04	2.6707E-04	0.405
49	55	309.7	557.4	0.291	0.257	77.147	67.977	1.9982E-04	2.2020E-04	0.382
50	57	309.8	557.7	0.357	0.315	77.124	67.956	2.4519E-04	2.7020E-04	0.394
51	59	310.4	558.7	0.603	0.531	77.041	67.884	4.1426E-04	4.5657E-04	0.512
52	60	310.3	558.5	0.878	0.774	77.053	67.894	6.0346E-04	6.6509E-04	0.427
53	61	310.4	558.7	0.545	0.481	77.042	67.884	3.7500E-04	4.1330E-04	0.569
54	65	311.7	561.1	0.583	0.513	76.850	67.715	4.0161E-04	4.4276E-04	0.425
55	68	313.6	564.5	1.702	1.500	76.571	67.469	1.1781E-03	1.2993E-03	0.813
56	69	313.0	563.4	0.536	0.472	76.662	67.550	3.7025E-04	4.0830E-04	0.592
57	70	313.8	564.8	0.532	0.469	76.548	67.449	3.6863E-04	4.0658E-04	0.642
58	72	315.7	568.3	0.921	0.812	76.267	67.202	6.4082E-04	7.0710E-04	0.830
59	73	307.5	553.5	10.890	9.595	77.463	68.255	7.4399E-03	8.1946E-03	0.485
60	74	307.5	553.5	11.047	9.734	77.460	68.253	7.5475E-03	8.3132E-03	0.509
61	75	307.6	553.8	11.302	9.959	77.441	68.236	7.7242E-03	8.5081E-03	0.493
62	76	309.1	556.5	9.869	8.696	77.221	68.042	6.7663E-03	7.4554E-03	0.482
63	77	310.2	558.3	17.803	15.686	77.076	67.914	1.2232E-02	1.3481E-02	0.442
64	78	310.3	558.5	18.551	16.346	77.055	67.896	1.2750E-02	1.4052E-02	0.457
65	79	311.0	559.7	17.612	15.518	76.956	67.809	1.2122E-02	1.3362E-02	0.490
66	80	312.8	563.0	18.189	16.027	76.697	67.580	1.2568E-02	1.3859E-02	0.449
67	81	314.0	565.2	28.227	24.872	76.514	67.419	1.9557E-02	2.1572E-02	0.459
68	82	316.1	569.7	36.633	32.279	76.153	67.101	2.5518E-02	2.8163E-02	0.641
69	83	315.2	567.3	38.558	33.974	76.344	67.269	2.6783E-02	2.9550E-02	0.457
70	84	316.4	569.5	39.589	34.883	76.165	67.112	2.7572E-02	3.0429E-02	0.478
71	85	312.9	563.2	5.995	5.282	76.680	67.565	4.1433E-03	4.5690E-03	0.521
72	86	315.3	567.5	11.170	9.843	76.331	67.258	7.7606E-03	8.5625E-03	0.497
73	87	317.8	572.0	12.107	10.668	75.962	66.933	8.4579E-03	9.3372E-03	0.513
74	88	320.6	577.0	5.206	4.587	75.560	66.579	3.6590E-03	4.0420E-03	0.486
75	89	324.2	583.5	4.704	4.145	75.033	66.114	3.3327E-03	3.6846E-03	0.483

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9855E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	3.3633E 06	6.6121E 05	0.197	6.83	632.8	0.65856E 06	0.0018

TEST NO. 195
RUN NO. 27

MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0251E 06	6.6121E 05	0.645	100.45	1499.0	369.20	0.0060

ORB ALONE
$\alpha = 120°$, $\beta = 0°$

CHAN	T/C	RE/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.366	0.0750	0.0750	0.0891	0.0983	39	42	0.361	0.0530	0.0530	0.0628	0.0692
2	2	0.366	0.0953	0.0953	0.1132	0.1249	40	43	0.363	0.0437	0.0437	0.0518	0.0571
3	3	0.367	0.1136	0.1136	0.1349	0.1489	41	44	0.362	0.0124	0.0124	0.0147	0.0162
4	4	0.367	0.1116	0.1116	0.1325	0.1462	42	45	0.364	0.0533	0.0533	0.0633	0.0698
5	5	0.367	0.1091	0.1091	0.1296	0.1430	43	46	0.365	0.0798	0.0798	0.0548	0.1045
6	6	0.367	0.1057	0.1057	0.1255	0.1385	44	47	0.349	0.0127	0.0127	0.0150	0.0165
7	7	0.366	0.1062	0.1062	0.1261	0.1391	45	48	0.362	0.0118	0.0118	0.0139	0.0154
8	8	0.366	0.1057	0.1057	0.1255	0.1385	46	50	0.364	0.0781	0.0781	0.0927	0.1022
9	9	0.365	0.1030	0.1030	0.1222	0.1348	47	51	0.364	0.0800	0.0800	0.0949	0.1047
10	10	0.364	0.0986	0.0986	0.1170	0.1291	48	53	0.365	0.0916	0.0916	0.1087	0.1199
11	11	0.363	0.1000	0.1000	0.1186	0.1308	49	55	0.365	0.0977	0.0977	0.1160	0.1279
12	12	0.363	0.0932	0.0932	0.1106	0.1219	50	57	0.365	0.1153	0.1153	0.1369	0.1510
13	13	0.363	0.0927	0.0927	0.1099	0.1212	51	59	0.366	0.1608	0.1608	0.1909	0.2106
14	14	0.362	0.1060	0.1060	0.1257	0.1386	52	60	0.365	0.0762	0.0762	0.0904	0.0598
15	15	0.363	0.1661	0.1661	0.1970	0.2172	53	61	0.365	0.0939	0.0939	0.1115	0.1230
16	16	0.363	0.0608	0.0608	0.0721	0.0795	54	65	0.367	0.1134	0.1134	0.1347	0.1486
17	17	0.363	0.0658	0.0658	0.0781	0.0861	55	68	0.370	0.1395	0.1395	0.1658	0.1830
18	18	0.363	0.0844	0.0844	0.1002	0.1105	56	69	0.368	0.1002	0.1002	0.1191	0.1314
19	20	0.365	0.0878	0.0878	0.1042	0.1149	57	70	0.369	0.1099	0.1099	0.1306	0.1442
20	22	0.364	0.1278	0.1278	0.1516	0.1672	58	72	0.372	0.1437	0.1437	0.1709	0.1888
21	24	0.362	0.0195	0.0195	0.0231	0.0255	59	73	0.362	0.0075	0.0075	0.0089	0.0098
22	25	0.362	0.0164	0.0164	0.0194	0.0214	60	74	0.362	0.0105	0.0105	0.0124	0.0137
23	26	0.396	0.0000	0.0000	0.0000	0.0000	61	75	0.362	0.0086	0.0086	0.0102	0.0112
24	27	0.363	0.0132	0.0132	0.0156	0.0172	62	76	0.364	0.0039	0.0039	0.0046	0.0051
25	28	0.363	0.0129	0.0129	0.0153	0.0169	63	77	0.365	0.0098	0.0098	0.0117	0.0129
26	29	0.362	0.0179	0.0179	0.0213	0.0234	64	78	0.366	0.0040	0.0040	0.0048	0.0053
27	30	0.362	0.0157	0.0157	0.0187	0.0206	65	79	0.366	0.0032	0.0032	0.0038	0.0042
28	31	0.363	0.0157	0.0157	0.0186	0.0206	66	80	0.368	0.0025	0.0025	0.0030	0.0033
29	32	0.363	0.0096	0.0096	0.0114	0.0126	67	81	0.368	0.0127	0.0127	0.0151	0.0167
30	34	0.362	0.0060	0.0060	0.0071	0.0078	68	82	0.372	0.0054	0.0054	0.0064	0.0071
31	33	0.362	0.0070	0.0070	0.0083	0.0091	69	83	0.370	0.0029	0.0029	0.0034	0.0038
32	35	0.362	0.0077	0.0077	0.0092	0.0101	70	84	0.372	0.0043	0.0043	0.0051	0.0056
33	36	0.361	0.0067	0.0067	0.0079	0.0088	71	85	0.368	0.0125	0.0125	0.0148	0.0164
34	37	0.396	0.0000	0.0000	0.0000	0.0000	72	86	0.371	0.0784	0.0784	0.0933	0.1030
35	38	0.361	0.0100	0.0100	0.0118	0.0131	73	87	0.375	0.1801	0.1801	0.2144	0.2370
36	39	0.361	0.0184	0.0184	0.0218	0.0240	74	88	0.380	0.0724	0.0724	0.0863	0.0955
37	40	0.363	0.0120	0.0120	0.0143	0.0158	75	89	0.383	0.0603	0.0603	0.0720	0.0797
38	41	0.363	0.0043	0.0043	0.0051	0.0057							

PRECEDING PAGE BLANK-NOT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA *** TEST NO. 195 RUN NO. 27

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	3.3633E 06	6.6121E 05	0.197	6.83	832.8	0.85856E 06	0.0018
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0251E 06	6.6121E 05	0.645	100.45	1499.0	369.20	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(C.850)	TIME(SEC)
1	1	313.2	563.7	5.676	5.001	75.671	66.676	3.9636E-03	4.3734E-03	0.253
2	2	313.1	563.7	7.213	6.355	75.674	66.679	5.0365E-03	5.5572E-03	0.347
3	3	313.5	564.4	8.592	7.571	75.617	66.629	6.0049E-03	6.6262E-03	0.383
4	4	313.8	564.8	8.432	7.430	75.578	66.594	5.8967E-03	6.5072E-03	0.405
5	5	313.5	564.4	8.252	7.271	75.615	66.627	5.7671E-03	6.3645E-03	0.391
6	6	313.4	564.2	7.993	7.043	75.636	66.640	5.5853E-03	6.1631E-03	0.379
7	7	313.1	563.5	8.037	7.081	75.684	66.688	5.6111E-03	6.1911E-03	0.390
8	8	312.5	562.4	8.011	7.059	75.771	66.765	5.5859E-03	6.1624E-03	0.394
9	9	311.8	561.2	7.814	6.886	75.874	66.855	5.4404E-03	6.0009E-03	0.403
10	10	311.4	560.4	7.490	6.600	75.933	66.908	5.2098E-03	5.7460E-03	0.421
11	11	310.6	559.2	7.603	6.699	76.038	67.000	5.2800E-03	5.8225E-03	0.406
12	12	310.3	558.5	7.094	6.251	76.094	67.049	4.9225E-03	5.4278E-03	0.399
13	13	310.0	558.0	7.056	6.217	76.131	67.082	4.8935E-03	5.3956E-03	0.406
14	14	309.3	556.7	8.085	7.124	76.239	67.177	5.5979E-03	6.1712E-03	0.406
15	15	310.2	558.4	12.639	11.137	76.098	67.052	8.7697E-03	9.6700E-03	0.416
16	16	310.0	558.0	4.626	4.076	76.129	67.080	3.2084E-03	3.5376E-03	0.181
17	17	310.4	558.7	5.007	4.412	76.077	67.034	3.4752E-03	3.8320E-03	0.193
18	18	310.7	559.3	6.420	5.657	76.025	66.988	4.4594E-03	4.9177E-03	0.283
19	20	311.7	561.0	6.660	5.868	75.889	66.868	4.6357E-03	5.1132E-03	0.315
20	22	311.2	560.1	9.705	8.551	75.959	66.930	6.7478E-03	7.4421E-03	0.344
21	24	309.8	557.6	1.483	1.307	76.165	67.111	1.0279E-03	1.1333E-03	0.394
22	25	309.4	557.6	1.248	1.099	76.150	67.099	8.6501E-04	9.5373E-04	0.304
23	26	338.8	609.9	0.000	0.000	71.947	63.395	0.0000	0.0000	*******
24	27	310.2	558.3	1.003	0.884	76.107	67.060	6.9619E-04	7.6764E-04	0.346
25	28	310.3	558.6	0.982	0.865	76.080	67.037	6.8164E-04	7.5163E-04	0.313
26	29	309.8	557.7	1.365	1.203	76.155	67.103	9.4642E-04	1.0435E-03	0.436
27	30	309.8	557.6	1.198	1.056	76.162	67.109	8.3062E-04	9.1580E-04	0.322
28	31	310.0	558.0	1.197	1.054	76.135	67.085	8.2989E-04	9.1503E-04	0.298
29	32	309.9	557.8	0.731	0.644	76.146	67.095	5.0693E-04	5.5892E-04	0.409
30	34	309.8	557.7	0.455	0.401	76.158	67.105	3.1557E-04	3.4793E-04	0.264
31	33	309.4	557.0	0.533	0.470	76.212	67.153	3.6917E-04	4.0700E-04	0.298
32	35	309.4	557.0	0.589	0.519	76.214	67.155	4.0823E-04	4.5006E-04	0.445
33	36	308.6	555.4	0.511	0.451	76.339	67.265	3.5349E-04	3.8963E-04	0.394
34	37	338.8	609.9	0.000	0.000	71.947	63.395	0.0000	0.0000	*******
35	38	308.8	555.8	0.762	0.671	76.310	67.239	5.2709E-04	5.8101E-04	0.396
36	39	308.9	556.1	1.403	1.236	76.285	67.217	9.7072E-04	1.0701E-03	0.430
37	40	310.0	558.0	0.917	0.808	76.128	67.079	6.3605E-04	7.0131E-04	0.423
38	41	310.3	558.5	0.330	0.291	76.091	67.046	2.2885E-04	2.5234E-04	0.438
39	42	308.8	555.8	4.042	3.561	76.305	67.235	2.7959E-03	3.0819E-03	0.388
40	43	309.9	557.8	3.327	2.931	76.146	67.095	2.3067E-03	2.5433E-03	0.330
41	44	309.1	556.4	0.947	0.834	76.258	67.194	6.5522E-04	7.2230E-04	0.404

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	46	311.7	561.1	6.058	5.338	75.880	66.861	4.2175E-03	4.6519E-03	0.369
	47	296.3	537.0	0.989	0.871	77.834	68.582	6.6891E-04	7.3566E-04	0.283
		309.2	556.6	0.896	0.790	76.244	67.181	6.2042E-04	6.8395E-04	0.364
		311.0	559.8	5.937	5.231	75.983	66.952	4.1263E-03	4.5506E-03	0.274
		311.1	560.0	6.076	5.356	75.972	66.942	4.2255E-03	4.6601E-03	0.295
		311.7	561.0	6.953	6.127	75.885	66.865	4.8401E-03	5.3387E-03	0.322
		311.8	561.2	7.414	6.533	75.869	66.851	5.1621E-03	5.6940E-03	0.304
		312.2	561.9	8.745	7.705	75.815	66.804	6.0936E-03	6.7220E-03	0.302
		312.6	563.0	12.176	10.729	75.727	66.726	8.4956E-03	9.3730E-03	0.260
		312.1	562.4	5.772	5.086	75.777	66.770	4.0242E-03	4.4395E-03	0.181
		312.2	561.9	7.121	6.275	75.812	66.801	4.9624E-03	5.4742E-03	0.275
54	69	314.0	565.2	8.567	7.549	75.548	66.568	5.9940E-03	6.6149E-03	0.271
55	69	315.9	568.7	10.499	9.251	75.270	66.323	7.3765E-03	8.1442E-03	0.151
56	69	314.9	566.8	7.558	6.660	75.422	66.457	5.2981E-03	5.8481E-03	0.215
57	70	315.7	568.3	8.275	7.291	75.298	66.348	5.8113E-03	6.4158E-03	0.238
58	72	317.7	571.8	10.780	9.499	75.015	66.099	7.6033E-03	8.3980E-03	0.225
59	73	309.4	556.9	0.573	0.505	76.218	67.158	3.9710E-04	4.3778E-04	0.348
60	74	309.5	557.1	0.799	0.704	76.206	67.148	5.5326E-04	6.0995E-04	0.368
61	75	309.6	557.2	0.653	0.576	76.193	67.136	4.5278E-04	4.9919E-04	0.372
62	76	310.8	559.4	0.294	0.259	76.014	66.979	2.0428E-04	2.2528E-04	0.396
63	77	312.2	561.9	0.744	0.656	75.818	66.806	5.1867E-04	5.7216E-04	0.338
64	78	312.5	562.4	0.306	0.270	75.773	66.766	2.1359E-04	2.3563E-04	0.257
65	79	313.0	563.4	0.241	0.212	75.697	66.699	1.6835E-04	1.8574E-04	0.378
66	80	314.6	566.3	0.189	0.167	75.458	66.488	1.3252E-04	1.4626E-04	0.392
67	81	314.9	566.9	0.960	0.845	75.416	66.451	6.7267E-04	7.4250E-04	0.546
68	82	317.7	571.9	0.403	0.355	75.007	66.092	2.8415E-04	3.1385E-04	0.498
69	83	316.4	569.6	0.215	0.190	75.197	66.259	1.5154E-04	1.6733E-04	0.270
70	84	317.7	571.8	0.321	0.283	75.017	66.100	2.2658E-04	2.5026E-04	0.598
71	85	315.0	566.9	0.941	0.829	75.408	66.444	6.5961E-04	7.2832E-04	0.466
72	86	317.5	571.6	5.886	5.186	75.034	66.115	4.1503E-03	4.5839E-03	0.410
73	87	320.7	577.3	13.428	11.832	74.573	65.709	9.5354E-03	1.0540E-02	0.439
74	88	324.7	584.5	5.356	4.719	73.989	65.194	3.8376E-03	4.2458E-03	0.341
75	89	327.7	589.9	4.435	3.907	73.558	64.814	3.1988E-03	3.5415E-03	0.286

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9905E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.3679E 06	6.6801E 05	6.85	828.7	0.95408E 06	0.0018	RUN NO. 28
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ORB ALONE
5.22	1.0257E 06	6.6801E 05	0.645	100.68	1491.6	367.27	0.0060	$\alpha = 90°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.375	0.1605	0.1605	0.1910	0.2112	39	42	0.368	0.0065	0.0065	0.0077	0.0085
2	2	0.375	0.1722	0.1722	0.2050	0.2266	40	43	0.369	0.0104	0.0104	0.0124	0.0137
3	3	0.376	0.1905	0.1905	0.2268	0.2507	41	44	0.368	0.0074	0.0074	0.0088	0.0097
4	4	0.376	0.1800	0.1800	0.2144	0.2370	42	45	0.373	0.0999	0.0999	0.1188	0.1313
5	5	0.376	0.1730	0.1730	0.2061	0.2278	43	46	0.374	0.1298	0.1298	0.1544	0.1706
6	6	0.376	0.1636	0.1636	0.1948	0.2153	44	47	0.357	0.0228	0.0228	0.0270	0.0297
7	7	0.375	0.1610	0.1610	0.1916	0.2118	45	48	0.368	0.0064	0.0064	0.0076	0.0084
8	8	0.374	0.1571	0.1571	0.1870	0.2066	46	50	0.372	0.1075	0.1075	0.1279	0.1413
9	9	0.373	0.1451	0.1451	0.1727	0.1907	47	51	0.373	0.1077	0.1077	0.1282	0.1416
10	10	0.372	0.1341	0.1341	0.1595	0.1762	48	53	0.373	0.0999	0.0999	0.1189	0.1313
11	11	0.371	0.1285	0.1285	0.1527	0.1687	49	55	0.373	0.0949	0.0949	0.1129	0.1248
12	12	0.371	0.1065	0.1065	0.1266	0.1398	50	57	0.373	0.0918	0.0918	0.1092	0.1206
13	13	0.370	0.1039	0.1039	0.1235	0.1363	51	59	0.373	0.0881	0.0881	0.1049	0.1159
14	14	0.369	0.1106	0.1106	0.1314	0.1451	52	60	0.374	0.0916	0.0916	0.1090	0.1204
15	15	0.370	0.0980	0.0980	0.1165	0.1287	53	61	0.374	0.1045	0.1045	0.1244	0.1375
16	16	0.370	0.0908	0.0908	0.1080	0.1192	54	65	0.375	0.0952	0.0952	0.1133	0.1253
17	17	0.371	0.0915	0.0915	0.1089	0.1202	55	68	0.376	0.0814	0.0814	0.0969	0.1072
18	18	0.372	0.1098	0.1098	0.1305	0.1442	56	69	0.377	0.1192	0.1192	0.1420	0.1571
19	20	0.373	0.0994	0.0994	0.1183	0.1307	57	70	0.378	0.1100	0.1100	0.1310	0.1449
20	22	0.371	0.0991	0.0991	0.1179	0.1302	58	72	0.379	0.1049	0.1049	0.1251	0.1383
21	24	0.369	0.0106	0.0106	0.0126	0.0140	59	73	0.369	0.0085	0.0085	0.0102	0.0112
22	25	0.369	0.0133	0.0183	0.0217	0.0240	60	74	0.369	0.0055	0.0055	0.0065	0.0072
23	26	0.398	0.0000	0.0000	0.0000	0.0000	61	75	0.369	0.0039	0.0039	0.0047	0.0052
24	27	0.369	0.0006	0.0006	0.0007	0.0008	62	76	0.370	0.0027	0.0027	0.0032	0.0035
25	28	0.370	0.0026	0.0026	0.0031	0.0034	63	77	0.374	0.0086	0.0086	0.0102	0.0113
26	29	0.369	0.0071	0.0071	0.0085	0.0093	64	78	0.374	0.0055	0.0055	0.0065	0.0072
27	30	0.369	0.0010	0.0010	0.0012	0.0014	65	79	0.374	0.0055	0.0055	0.0065	0.0072
28	31	0.369	0.0021	0.0021	0.0025	0.0028	66	80	0.375	0.0028	0.0028	0.0033	0.0036
29	32	0.369	0.0080	0.0080	0.0095	0.0105	67	81	0.377	0.0236	0.0236	0.0281	0.0310
30	34	0.369	0.0014	0.0014	0.0017	0.0019	68	82	0.380	0.0064	0.0064	0.0077	0.0085
31	33	0.368	0.0025	0.0025	0.0030	0.0033	69	83	0.378	0.0037	0.0037	0.0044	0.0048
32	35	0.369	0.0125	0.0125	0.0149	0.0164	70	84	0.378	0.0040	0.0040	0.0048	0.0053
33	36	0.367	0.0025	0.0025	0.0029	0.0032	71	85	0.376	0.0075	0.0075	0.0089	0.0099
34	37	0.398	0.0000	0.0000	0.0000	0.0000	72	86	0.379	0.0297	0.0297	0.0354	0.0392
35	38	0.368	0.0123	0.0123	0.0147	0.0162	73	87	0.382	0.0519	0.0519	0.0620	0.0686
36	39	0.368	0.0025	0.0025	0.0030	0.0033	74	88	0.388	0.0257	0.0257	0.0307	0.0340
37	40	0.370	0.0065	0.0065	0.0077	0.0085	75	89	0.392	0.0484	0.0484	0.0580	0.0643
38	41	0.370	0.0079	0.0079	0.0093	0.0103							

PRECEDING PAGE BLANK NO

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PPELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.3579E 06	6.6801E 05	0.197	6.35	828.7	0.85406E 06	0.0018	RUN NO. 28
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	
.22	1.0357E 06	6.6801E 05	0.645	100.68	1491.6	367.27	0.0060	

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	318.9	574.1	11.920	10.503	74.278	65.449	8.4603E-03	9.3509E-03	0.339
2	2	319.0	574.1	12.788	11.268	74.270	65.442	9.0778E-03	1.0034E-02	0.435
3	3	319.6	575.2	14.129	12.450	74.185	65.367	1.0042E-02	1.1101E-02	0.471
4	4	319.9	575.8	13.346	11.760	74.135	65.323	9.4935E-03	1.0495E-02	0.489
5	5	319.7	575.4	12.834	11.308	74.166	65.350	9.1247E-03	1.0087E-02	0.476
6	6	319.3	574.8	12.141	10.698	74.215	65.393	8.6256E-03	9.5345E-03	0.458
7	7	318.8	573.8	11.960	10.538	74.298	65.467	8.4859E-03	9.3790E-03	0.462
8	8	318.0	572.3	11.691	10.301	74.415	65.570	8.2800E-03	9.1496E-03	0.456
9	9	316.9	570.4	10.823	9.537	74.574	65.710	7.6470E-03	8.4479E-03	0.444
10	10	316.3	569.4	10.013	8.822	74.655	65.781	7.0655E-03	7.8045E-03	0.442
11	11	315.4	567.8	9.607	8.465	74.782	65.893	6.7660E-03	7.4722E-03	0.393
12	12	315.1	567.2	7.971	7.023	74.830	65.935	5.6095E-03	6.1945E-03	0.348
13	13	314.8	566.7	7.776	6.852	74.871	65.972	5.4691E-03	6.0391E-03	0.411
14	14	313.7	564.7	8.300	7.313	75.035	66.116	5.8231E-03	6.4283E-03	0.442
15	15	314.6	566.4	7.344	6.471	74.899	65.997	5.1627E-03	5.7005E-03	0.399
16	16	314.9	566.8	6.800	5.992	74.860	65.962	4.7833E-03	5.2819E-03	0.188
17	17	315.4	567.8	6.846	6.033	74.784	65.895	4.8216E-03	5.3248E-03	0.156
18	18	316.1	569.1	8.197	7.223	74.681	65.804	5.7823E-03	6.3869E-03	0.244
19	20	317.1	570.7	7.410	6.530	74.544	65.684	5.2381E-03	5.7870E-03	0.307
20	22	315.8	568.5	7.405	6.525	74.725	65.843	5.2201E-03	5.7654E-03	0.278
21	24	313.6	564.6	0.799	0.704	75.044	66.124	5.6026E-04	6.1848E-04	0.258
22	25	313.7	564.7	1.371	1.208	75.029	66.111	9.6160E-04	1.0616E-03	0.292
23	26	338.8	609.9	0.000	0.000	71.388	62.902	0.0000	0.0000	*******
24	27	314.1	565.4	0.043	0.038	74.974	66.062	3.0546E-05	3.3724E-05	-1.754
25	28	314.4	566.0	0.193	0.170	74.927	66.021	1.3553E-04	1.4965E-04	-0.853
26	29	313.9	565.0	0.534	0.471	75.011	66.095	3.7494E-04	4.1392E-04	0.564
27	30	313.8	564.8	0.077	0.068	75.026	66.108	5.4281E-05	5.9924E-05	-0.687
28	31	314.1	565.3	0.158	0.140	74.985	66.072	1.1117E-04	1.2274E-04	-1.242
29	32	314.0	565.2	0.600	0.529	74.994	66.080	4.2156E-04	4.6540E-04	0.594
30	34	313.7	564.6	0.109	0.096	75.040	66.121	7.6241E-05	8.4164E-05	-0.519
31	33	313.3	563.9	0.187	0.165	75.097	66.171	1.3104E-04	1.4465E-04	0.300
32	35	313.5	564.3	0.940	0.828	75.065	66.143	6.5935E-04	7.2784E-04	0.553
33	36	312.2	561.9	0.186	0.163	75.257	66.312	1.2974E-04	1.4317E-04	0.244
34	37	338.8	609.9	0.000	0.000	71.388	62.902	0.0000	0.0000	*******
35	38	312.8	563.1	0.928	0.818	75.165	66.230	6.4976E-04	7.1715E-04	0.574
36	39	312.9	563.3	0.188	0.166	75.150	66.217	1.3158E-04	1.4522E-04	0.502
37	40	314.2	565.6	0.485	0.427	74.956	66.047	3.4062E-04	3.7606E-04	0.530
38	41	314.5	566.2	0.589	0.519	74.914	66.010	4.1408E-04	4.5721E-04	0.535
39	42	312.9	563.1	0.486	0.429	75.159	66.226	3.4053E-04	3.7585E-04	0.536
40	43	314.2	565.5	0.782	0.689	74.965	66.054	5.4887E-04	6.0598E-04	0.406
41	44	313.3	564.0	0.558	0.492	75.090	66.164	3.9117E-04	4.3179E-04	0.428

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[illegible]	[illegible]	317.6	571.6	7.437	6.553	74.476	65.623	5.2621E-03	5.8142E-03	0.586
43	46	318.0	572.4	9.655	8.507	74.411	65.566	6.8387E-03	7.5569E-03	0.430
44	47	303.3	545.9	1.746	1.539	76.553	67.453	1.1974E-03	1.3188E-03	0.317
45	48	313.3	564.0	0.478	0.421	75.091	66.165	3.3513E-04	3.6993E-04	0.194
46	50	316.7	570.1	8.019	7.066	74.594	65.728	5.6639E-03	6.2570E-03	0.210
47	51	316.9	570.5	8.034	7.079	74.567	65.704	5.6766E-03	6.2712E-03	0.276
48	53	317.4	571.3	7.442	6.557	74.496	65.641	5.2640E-03	5.8161E-03	0.297
49	55	317.3	571.1	7.073	6.232	74.514	65.657	5.0018E-03	5.5262E-03	0.284
50	57	317.3	571.1	6.839	6.026	74.516	65.659	4.8360E-03	5.3430E-03	0.254
51	59	317.1	570.8	6.570	5.789	74.537	65.677	4.6442E-03	5.1310E-03	0.187
52	60	318.4	573.2	6.807	5.998	74.347	65.510	4.8262E-03	5.3337E-03	0.165
53	61	319.2	574.8	7.773	6.949	74.375	65.534	5.5089E-03	6.0878E-03	0.263
54	65	319.3	574.7	7.066	6.226	74.226	65.403	5.0194E-03	5.5482E-03	0.218
55	63	319.9	575.9	6.035	5.318	74.138	65.325	4.2930E-03	4.7460E-03	0.107
56	69	320.9	577.6	8.822	7.773	73.903	65.198	6.2891E-03	6.9544E-03	0.225
57	70	321.4	578.6	8.128	7.162	73.914	65.129	5.8013E-03	6.4159E-03	0.223
58	72	322.2	579.9	7.744	6.823	73.905	65.032	5.5365E-03	6.1241E-03	0.196
59	73	313.9	565.0	0.641	0.565	75.012	66.096	4.5010E-04	4.9689E-04	0.456
60	74	313.9	565.0	0.410	0.361	75.011	66.095	2.8780E-04	3.1772E-04	0.295
61	75	313.8	564.9	0.296	0.261	75.017	66.100	2.0767E-04	2.2926E-04	0.397
62	76	314.7	566.4	0.200	0.176	74.893	65.991	1.4077E-04	1.5543E-04	0.336
63	77	317.7	571.8	0.641	0.565	74.457	65.607	4.5383E-04	5.0146E-04	0.458
64	78	317.7	571.6	0.407	0.359	74.456	65.606	2.8843E-04	3.1870E-04	0.418
65	79	317.9	572.1	0.408	0.360	74.435	65.587	2.8895E-04	3.1929E-04	0.506
66	80	318.7	573.6	0.206	0.181	74.311	65.478	1.4586E-04	1.6121E-04	0.576
67	81	320.8	577.4	1.743	1.536	74.008	65.211	1.2425E-03	1.3739E-03	0.663
68	82	323.2	581.7	0.475	0.418	73.659	64.903	3.4016E-04	3.7635E-04	0.679
69	83	321.3	578.3	0.272	0.239	73.933	65.145	1.9388E-04	2.1441E-04	0.457
70	84	321.8	579.2	0.295	0.260	73.860	65.081	2.1063E-04	2.3296E-04	0.640
71	85	319.9	575.7	0.557	0.491	74.140	65.328	3.9597E-04	4.3775E-04	0.535
72	86	322.3	580.2	2.124	1.933	73.780	65.010	1.5690E-03	1.7356E-03	0.540
73	87	325.2	585.4	3.911	3.358	73.363	64.643	2.7435E-03	3.0369E-03	0.411
74	88	320.4	576.7	1.864	1.643	72.615	63.984	1.3580E-03	1.5051E-03	0.248
75	89	333.1	599.7	3.499	3.093	72.212	63.629	2.5649E-03	2.8448E-03	0.440

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0013E-01 (SLUGS/FT2-SEC)

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 29

ORB ALONE
α = -30°, β = 0°

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	1.3679E 06	6.6211E 05	0.197	6.70	822.2	0.84697E 06	0.0018
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0265E 06	6.6211E 05	0.645	98.51	1480.0	364.22	0.0060

	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.370	0.0085	0.0085	0.0101	0.0111	39	42	0.365	0.1611	0.1611	0.1912	0.2110
2	2	0.369	0.0027	0.0027	0.0032	0.0035	40	43	0.367	0.1727	0.1727	0.2051	0.2263
3	3	0.369	0.0031	0.0031	0.0036	0.0040	41	44	0.367	0.1662	0.1662	0.1974	0.2178
4	4	0.369	0.0034	0.0034	0.0040	0.0044	42	45	0.367	0.0216	0.0216	0.0257	0.0283
5	5	0.369	0.0036	0.0036	0.0043	0.0047	43	46	0.368	0.0080	0.0080	0.0095	0.0105
6	6	0.369	0.0039	0.0039	0.0046	0.0051	44	47	0.359	0.0000	0.0000	0.0000	0.0000
7	7	0.368	0.0043	0.0043	0.0051	0.0057	45	48	0.367	0.2351	0.2351	0.2792	0.3082
8	8	0.367	0.0043	0.0043	0.0051	0.0056	46	50	0.368	0.0156	0.0156	0.0185	0.0205
9	9	0.366	0.0048	0.0048	0.0057	0.0063	47	51	0.367	0.0044	0.0044	0.0052	0.0058
10	10	0.366	0.0051	0.0051	0.0060	0.0067	48	53	0.368	0.0025	0.0025	0.0029	0.0033
11	11	0.366	0.0041	0.0041	0.0049	0.0054	49	55	0.367	0.0024	0.0024	0.0029	0.0031
12	12	0.366	0.0037	0.0037	0.0043	0.0048	50	57	0.367	0.0029	0.0029	0.0034	0.0038
13	13	0.366	0.0021	0.0021	0.0025	0.0028	51	59	0.367	0.0040	0.0040	0.0047	0.0052
14	14	0.365	0.0030	0.0030	0.0036	0.0040	52	60	0.369	0.0068	0.0068	0.0081	0.0089
15	15	0.365	0.0053	0.0053	0.0063	0.0070	53	61	0.368	0.0038	0.0038	0.0046	0.0050
16	16	0.366	0.0114	0.0114	0.0135	0.0149	54	65	0.368	0.0037	0.0037	0.0044	0.0048
17	17	0.366	0.0074	0.0074	0.0088	0.0097	55	68	0.369	0.0067	0.0067	0.0080	0.0088
18	18	0.367	0.0017	0.0017	0.0020	0.0022	56	69	0.370	0.0052	0.0052	0.0062	0.0068
19	20	0.368	0.0013	0.0013	0.0016	0.0017	57	70	0.370	0.0055	0.0055	0.0065	0.0072
20	22	0.366	0.0038	0.0038	0.0046	0.0050	58	72	0.370	0.0063	0.0063	0.0074	0.0082
21	24	0.365	0.0254	0.0254	0.0301	0.0332	59	73	0.367	0.3044	0.3044	0.3615	0.3989
22	25	0.365	0.0375	0.0375	0.0445	0.0491	60	74	0.366	0.2391	0.2391	0.2839	0.3132
23	26	0.402	0.0000	0.0000	0.0000	0.0000	61	75	0.365	0.2115	0.2115	0.2511	0.2770
24	27	0.366	0.0340	0.0340	0.0404	0.0446	62	76	0.366	0.1561	0.1561	0.1854	0.2045
25	29	0.366	0.0329	0.0329	0.0390	0.0431	63	77	0.370	0.3166	0.3166	0.3763	0.4155
26	29	0.368	0.1778	0.1778	0.2112	0.2331	64	78	0.369	0.2251	0.2251	0.2675	0.2953
27	30	0.366	0.0608	0.0608	0.0721	0.0796	65	79	0.369	0.1870	0.1870	0.2223	0.2453
28	31	0.366	0.0428	0.0428	0.0508	0.0561	66	80	0.369	0.1553	0.1553	0.1845	0.2037
29	32	0.368	0.1675	0.1675	0.1990	0.2196	67	81	0.373	0.2622	0.2622	0.3119	0.3446
30	34	0.366	0.0719	0.0719	0.0853	0.0942	68	82	0.372	0.2471	0.2471	0.2939	0.3247
31	33	0.366	0.1089	0.1089	0.1292	0.1426	69	83	0.372	0.2149	0.2149	0.2556	0.2823
32	35	0.368	0.1603	0.1603	0.1904	0.2101	70	84	0.371	0.1754	0.1754	0.2086	0.2304
33	36	0.365	0.1742	0.1742	0.2067	0.2281	71	85	0.370	0.1471	0.1471	0.1748	0.1931
34	37	0.402	0.0000	0.0000	0.0000	0.0000	72	86	0.371	0.1862	0.1862	0.2214	0.2445
35	38	0.367	0.1548	0.1548	0.1838	0.2028	73	87	0.372	0.1267	0.1267	0.1506	0.1664
36	39	0.366	0.2059	0.2059	0.2444	0.2697	74	88	0.377	0.0656	0.0656	0.0781	0.0864
37	40	0.368	0.1469	0.1469	0.1745	0.1926	75	89	0.379	0.0369	0.0369	0.0440	0.0487
38	41	0.369	0.2918	0.2918	0.3468	0.3828							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.3679E 06	6.6211E 05	0.197	6.70	822.2	0.84697E 06	0.0018	RUN NO.	29
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	1.0265E 06	6.6211E 05	0.645	98.51	1480.0	364.22	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	312.2	561.9	0.623	0.549	73.450	64.720	4.4899E-04	4.9578E-04	0.630
2	2	311.4	560.6	0.197	0.173	73.557	64.813	1.4153E-04	1.5625E-04	0.210
3	3	311.2	560.1	0.226	0.199	73.594	64.847	1.6232E-04	1.7919E-04	0.254
4	4	311.0	559.8	0.248	0.219	73.618	64.868	1.7849E-04	1.9704E-04	0.315
5	5	310.6	559.2	0.265	0.234	73.669	64.912	1.9058E-04	2.1036E-04	0.413
6	6	310.3	558.6	0.288	0.254	73.712	64.950	2.0685E-04	2.2831E-04	0.405
7	7	310.0	558.0	0.318	0.280	73.758	64.991	2.2815E-04	2.5180E-04	0.453
8	8	309.5	557.0	0.315	0.277	73.837	65.061	2.2564E-04	2.4900E-04	0.439
9	9	308.9	556.1	0.356	0.313	73.916	65.130	2.5460E-04	2.8092E-04	0.311
10	10	308.7	555.7	0.377	0.332	73.945	65.156	2.6945E-04	2.9729E-04	0.414
11	11	308.6	555.4	0.307	0.270	73.965	65.173	2.1945E-04	2.4212E-04	0.392
12	12	308.6	555.5	0.271	0.239	73.959	65.168	1.9371E-04	2.1372E-04	0.388
13	13	308.7	555.7	0.158	0.139	73.948	65.158	1.1296E-04	1.2464E-04	0.358
14	14	307.9	554.2	0.226	0.199	74.065	65.261	1.6117E-04	1.7779E-04	0.380
15	15	308.0	554.3	0.393	0.347	74.053	65.251	2.8088E-04	3.0984E-04	0.380
16	16	308.3	555.0	0.840	0.740	74.001	65.205	6.0032E-04	6.6229E-04	0.619
17	17	309.0	556.2	0.545	0.480	73.908	65.123	3.9006E-04	4.3039E-04	0.550
18	18	309.5	557.1	0.125	0.110	73.835	65.059	8.9545E-05	9.8814E-05	0.257
19	20	310.1	558.2	0.096	0.085	73.748	64.982	6.9142E-05	7.6310E-05	0.137
20	22	308.9	556.1	0.284	0.250	73.913	65.127	2.0295E-04	2.2393E-04	0.321
21	24	307.9	554.3	1.880	1.657	74.060	65.257	1.3426E-03	1.4811E-03	0.400
22	25	308.1	554.6	2.774	2.444	74.029	65.230	1.9815E-03	2.1960E-03	0.430
23	26	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	309.4	555.2	2.517	2.218	73.984	65.190	1.7998E-03	1.9856E-03	0.371
25	28	309.7	555.7	2.431	2.142	73.944	65.155	1.7391E-03	1.9188E-03	0.372
26	29	310.0	558.1	13.114	11.555	73.754	64.987	9.4089E-03	1.0384E-02	0.360
27	30	308.3	555.0	4.496	3.962	74.002	65.206	3.2135E-03	3.5452E-03	0.386
28	31	308.6	555.5	3.165	2.789	73.959	65.168	2.2640E-03	2.4978E-03	0.378
29	32	310.5	558.8	12.343	10.876	73.695	64.936	8.8641E-03	9.7839E-03	0.352
30	34	308.7	555.7	5.316	4.684	73.947	65.158	3.8025E-03	4.1954E-03	0.352
31	33	308.3	554.9	8.056	7.098	74.010	65.213	5.7572E-03	6.3514E-03	0.342
32	35	310.0	558.0	11.820	10.415	73.760	64.993	8.4801E-03	9.3591E-03	0.366
33	36	307.6	553.8	12.908	11.374	74.099	65.292	9.2120E-03	1.0161E-02	0.317
34	37	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
35	38	309.2	556.6	11.432	10.073	73.871	65.090	8.1873E-03	9.0343E-03	0.323
36	39	308.6	555.5	15.226	13.416	73.957	65.166	1.0890E-02	1.2015E-02	0.400
37	40	310.2	558.4	10.828	9.541	73.726	64.962	7.7725E-03	8.5786E-03	0.454
38	41	311.2	560.2	21.475	18.923	73.588	64.841	1.5448E-02	1.7053E-02	0.364
39	42	308.1	554.5	11.929	10.511	74.039	65.238	8.5210E-03	9.4000E-03	0.402
40	43	309.4	557.0	12.752	11.236	73.840	65.063	9.1371E-03	1.0083E-02	0.335
41	44	309.1	556.4	12.291	10.821	73.889	65.107	8.7930E-03	9.7024E-03	0.274

42	45	309.9	557.8	1.593	1.404	73.774	65.005	1.1427E-03	1.2611E-03	0.423
43	46	310.0	557.9	0.588	0.518	73.766	64.998	4.2195E-04	4.6568E-04	0.558
44	47	308.0	545.5	0.000	0.000	0.000	0.000	0.0000	0.0000	-4.185
45	49	309.[illegible]	557.3	17.355	15.292	73.814	65.040	1.2440E-02	1.3728E-02	0.284
[illegible]	50	31[illegible]	557.9	1.152	1.015	73.765	64.997	8.2613E-04	9.1175E-04	0.724
47	51	309.8	557.7	0.325	0.286	73.783	65.013	2.3289E-04	2.5701E-04	0.689
[illegible]	[illegible]	311.0	559.0	0.183	0.161	73.761	64.993	1.3126E-04	1.4487E-04	0.306
49	55	309.6	557.3	0.177	0.156	73.814	65.040	1.2712E-04	1.4028E-04	0.253
50	57	309.5	557.1	0.213	0.188	73.829	65.053	1.5255E-04	1.6835E-04	0.243
51	59	309.4	557.0	0.292	0.257	73.841	65.064	2.0923E-04	2.3089E-04	0.372
52	60	311.0	559.7	0.501	0.441	73.623	64.872	3.5986E-04	3.9725E-04	0.702
53	61	310.3	558.6	0.283	0.249	73.724	64.961	2.0320E-04	2.2427E-04	0.418
54	65	310.3	558.5	0.272	0.239	73.718	64.956	1.9499E-04	2.1522E-04	0.329
55	[illegible]	311.0	559.7	0.493	0.434	73.623	64.872	3.5427E-04	3.9107E-04	0.555
[illegible]	[illegible]	[illegible]	561.3	0.382	0.337	73.498	64.762	2.7540E-04	3.0408E-04	0.445
57	[illegible]	311.8	561.2	0.403	0.355	73.503	64.766	2.9000E-04	3.2019E-04	0.528
[illegible]	[illegible]	[illegible]	562.2	0.459	0.404	73.426	64.698	3.3096E-04	3.6546E-04	0.521
59	73	[illegible]	[illegible]	23.493	19.819	73.889	65.106	1.6105E-02	1.7770E-02	0.277
60	74	309.9	558.9	17.676	15.575	73.927	65.140	1.2648E-02	1.3955E-02	0.303
61	[illegible]	[illegible]	554.6	15.660	13.799	74.031	65.231	1.1188E-02	1.2342E-02	0.308
62	76	308.6	556.5	11.547	10.175	73.963	65.171	8.2580E-03	9.1110E-03	0.310
63	77	312.0	561.5	23.263	20.498	73.478	64.744	1.6763E-02	1.8509E-02	0.292
[illegible]	[illegible]	311.2	560.2	16.562	14.593	73.583	64.836	1.1914E-02	1.3153E-02	0.278
[illegible]	79	310.9	559.6	13.773	12.136	73.635	64.883	9.9003E-03	1.0929E-02	0.273
[illegible]	80	311.0	559.9	11.430	10.072	73.610	64.860	8.2193E-03	9.0735E-03	0.256
[illegible]	81	314.3	565.7	19.179	16.900	73.146	64.451	1.3892E-02	1.5347E-02	0.238
[illegible]	[illegible]	313.[illegible]	565.[illegible]	16.092	15.943	73.210	64.508	1.3091E-02	1.4461E-02	0.270
[illegible]	[illegible]	313.[illegible]	564.[illegible]	15.746	13.874	73.266	64.558	1.1383E-02	1.2573E-02	0.246
[illegible]	85	313.1	563.5	12.861	11.332	73.317	64.602	9.2902E-03	1.0260E-02	0.246
[illegible]	86	312.3	562.1	10.901	9.517	73.435	64.706	7.7878E-03	8.5995E-03	0.427
[illegible]	[illegible]	313.7	562.9	13.667	12.042	73.379	64.657	9.8629E-03	1.0892E-02	0.231
[illegible]	87	313.5	564.2	9.279	8.176	73.261	64.553	6.7089E-03	7.4103E-03	0.327
[illegible]	[illegible]	317.7	571.8	4.766	4.200	72.659	64.022	3.4785E-03	3.8460E-03	0.378
[illegible]	[illegible]	319.4	574.9	2.675	2.357	72.414	63.806	1.9596E-03	2.1675E-03	0.351

[illegible]-STREAM DENSITY-VELOCITY PRODUCT = 1.9697E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.9[illegible]E 06	7.4865E 05	0.197	6.68	760.0	0.77912E 06	0.0018	RUN NO. 30
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ORB ALONE $\alpha = -60°$, $\beta = 0°$
5.22	1.1607E 06	7.4865E 05	0.645	98.16	1368.0	335.04	0.0060	

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.391	0.0334	0.0334	0.0399	0.0447	39	42	0.384	0.0660	0.0660	0.0788	0.0872
2	2	0.390	0.0084	0.0084	0.0100	0.0111	40	43	0.385	0.0351	0.0351	0.0419	0.0464
3	3	0.390	0.0060	0.0060	0.0071	0.0079	41	44	0.385	0.1971	0.1971	0.2354	0.2607
4	4	0.390	0.0071	0.0071	0.0085	0.0095	42	45	0.388	0.0307	0.0307	0.0367	0.0407
5	5	0.390	0.0111	0.0111	0.0133	0.0148	43	46	0.388	0.0086	0.0086	0.0102	0.0113
6	6	0.390	0.0137	0.0137	0.0164	0.0182	44	47	0.386	0.0000	0.0000	0.0000	0.0000
7	7	0.388	0.0145	0.0145	0.0173	0.0192	45	48	0.386	0.4341	0.4341	0.5185	0.5744
8	8	0.387	0.0143	0.0143	0.0170	0.0189	46	50	0.387	0.0081	0.0081	0.0096	0.0107
9	9	0.386	0.0127	0.0127	0.0152	0.0168	47	51	0.387	0.0042	0.0042	0.0050	0.0056
10	10	0.386	0.0102	0.0102	0.0122	0.0135	48	53	0.387	0.0025	0.0025	0.0030	0.0034
11	11	0.385	0.0072	0.0072	0.0086	0.0095	49	55	0.387	0.0018	0.0018	0.0022	0.0024
12	12	0.385	0.0069	0.0069	0.0082	0.0091	50	57	0.386	0.0009	0.0009	0.0011	0.0012
13	13	0.385	0.0086	0.0086	0.0103	0.0114	51	59	0.386	0.0026	0.0026	0.0032	0.0035
14	14	0.384	0.0109	0.0109	0.0130	0.0143	52	60	0.389	0.0105	0.0105	0.0126	0.0139
[illegible]	15	0.384	0.0023	0.0023	0.0028	0.0031	53	61	0.388	0.0049	0.0049	0.0059	0.0065
[illegible]	16	0.385	0.0083	0.0083	0.0099	0.0109	54	65	0.387	0.0020	0.0020	0.0023	0.0026
[illegible]	17	0.385	0.0054	0.0054	0.0065	0.0072	55	68	0.387	0.0051	0.0051	0.0061	0.0067
[illegible]	18	0.386	0.0048	0.0048	0.0057	0.0063	56	69	0.390	0.0091	0.0091	0.0108	0.0120
[illegible]	20	0.387	0.0018	0.0018	0.0021	0.0024	57	70	0.390	0.0072	0.0072	0.0086	0.0095
[illegible]	22	0.385	0.0024	0.0024	0.0028	0.0031	58	72	0.389	0.0050	0.0050	0.0060	0.0067
[illegible]	24	0.385	0.0086	0.0086	0.0102	0.0113	59	73	0.385	0.1354	0.1354	0.1617	0.1791
[illegible]	25	0.384	0.0217	0.0217	0.0259	0.0287	60	74	0.385	0.0879	0.0879	0.1049	0.1162
[illegible]	26	0.417	0.0000	0.0000	0.0000	0.0000	61	75	0.384	0.0859	0.0859	0.1026	0.1136
[illegible]	27	0.386	0.0272	0.0272	0.0324	0.0359	62	76	0.384	0.1062	0.1062	0.1268	0.1404
[illegible]	28	0.385	0.0139	0.0139	0.0167	0.0184	63	77	0.389	0.1494	0.1494	0.1787	0.1980
[illegible]	29	0.385	0.0972	0.0972	0.1161	0.1286	64	78	0.388	0.0942	0.0942	0.1126	0.1248
27	30	0.385	0.0658	0.0658	0.0785	0.0869	65	79	0.387	0.1014	0.1014	0.1212	0.1343
28	31	0.385	0.0149	0.0149	0.0178	0.0197	66	80	0.387	0.1109	0.1109	0.1325	0.1467
29	32	0.385	0.1066	0.1066	0.1273	0.1410	67	81	0.392	0.1820	0.1820	0.2178	0.2416
30	34	0.385	0.0358	0.0358	0.0428	0.0474	68	82	0.391	0.1211	0.1211	0.1449	0.1606
31	33	0.385	0.0453	0.0453	0.0540	0.0598	69	83	0.390	0.1196	0.1196	0.1430	0.1586
32	35	0.385	0.1055	0.1055	0.1260	0.1396	70	84	0.389	0.1232	0.1232	0.1473	0.1633
33	36	0.384	0.0728	0.0728	0.0870	0.0963	71	85	0.389	0.1509	0.1509	0.1804	0.2000
34	37	0.437	0.0000	0.0000	0.0000	0.0000	72	86	0.390	0.1670	0.1670	0.1998	0.2215
35	39	0.384	0.1000	0.1000	0.1194	0.1322	73	87	0.392	0.0822	0.0822	0.0984	0.1091
36	38	0.385	0.0680	0.0680	0.0812	0.0899	74	88	0.395	0.0686	0.0686	0.0822	0.0913
37	40	0.386	0.1411	0.1411	0.1685	0.1867	75	89	0.398	0.0455	0.0455	0.0546	0.0606
38	41	0.386	0.4644	0.4644	0.5548	0.6146							

PRECEDING PAGE BLANK-NOT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 30

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
7.22	3.8CA1E 06	7.4865E 05	0.197	6.68	760.0	0.77912E 06	0.0018
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
7.22	1.1607E 06	7.4865E 05	0.645	98.16	1368.0	335.04	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	303.4	546.1	2.168	1.910	64.944	57.225	1.6900E-03	1.8741E-03	0.599
2	2	302.7	544.9	0.544	0.480	65.037	57.306	4.2370E-04	4.6978E-04	0.464
3	3	302.6	544.7	0.388	0.342	65.055	57.322	3.0207E-04	3.3491E-04	0.391
4	4	302.4	544.4	0.464	0.409	65.080	57.344	3.6126E-04	4.0052E-04	0.335
5	5	302.2	544.0	0.725	0.639	65.112	57.372	5.6367E-04	6.2488E-04	0.382
6	6	301.6	542.9	0.896	0.790	65.199	57.449	6.9560E-04	7.7101E-04	0.340
7	7	301.1	542.0	0.945	0.833	65.265	57.507	7.3283E-04	8.1218E-04	0.389
8	8	300.4	540.7	0.932	0.821	65.371	57.601	7.2109E-04	7.9900E-04	0.398
9	9	299.6	539.3	0.831	0.733	65.479	57.696	6.4216E-04	7.1140E-04	0.455
10	10	299.2	538.6	0.671	0.591	65.539	57.749	5.1757E-04	5.7331E-04	0.481
11	11	298.8	537.8	0.472	0.416	65.604	57.806	3.6363E-04	4.0274E-04	0.420
12	12	298.5	537.3	0.451	0.397	65.640	57.837	3.4704E-04	3.8434E-04	0.491
13	13	298.5	537.3	0.566	0.499	65.640	57.837	4.3616E-04	4.8304E-04	0.484
14	14	298.0	536.4	0.713	0.628	65.710	57.900	5.4847E-04	6.0734E-04	0.484
15	15	298.1	536.5	0.154	0.136	65.704	57.895	1.1869E-04	1.3143E-04	0.371
16	16	298.5	537.3	0.542	0.478	65.638	57.836	4.1750E-04	4.6238E-04	0.640
17	17	299.0	538.2	0.356	0.314	65.570	57.776	2.7465E-04	3.0421E-04	0.617
18	18	299.3	538.7	0.313	0.276	65.530	57.741	2.4181E-04	2.6735E-04	0.336
19	20	300.0	540.1	0.117	0.103	65.420	57.644	9.0431E-05	1.0019E-04	0.355
20	22	299.9	539.9	0.155	0.137	65.588	57.792	1.1952E-04	1.3238E-04	0.309
21	24	298.2	536.8	0.562	0.495	65.677	57.870	4.3259E-04	4.7905E-04	0.461
22	25	298.3	536.9	1.425	1.256	65.670	57.864	1.0970E-03	1.2148E-03	0.471
23	26	338.9	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	298.6	537.5	1.783	1.571	65.627	57.826	1.3735E-03	1.5212E-03	0.385
25	28	298.7	537.7	0.915	0.806	65.612	57.813	7.0499E-04	7.8080E-04	0.506
26	29	298.9	537.8	6.377	5.619	65.597	57.800	4.9149E-03	5.4436E-03	0.406
27	30	298.5	537.2	4.316	3.803	65.646	57.843	3.3237E-03	3.6809E-03	0.349
28	31	298.6	537.4	0.977	0.861	65.631	57.830	7.5248E-04	8.3337E-04	0.437
29	32	299.0	538.2	6.988	6.157	65.573	57.779	5.3879E-03	5.9678E-03	0.433
30	34	298.7	537.6	2.350	2.071	65.616	57.816	1.8105E-03	2.0052E-03	0.356
31	33	298.3	536.9	2.972	2.619	65.669	57.864	2.2878E-03	2.5336E-03	0.439
32	35	298.5	537.3	6.928	6.105	65.641	57.839	5.3355E-03	5.9089E-03	0.447
33	36	297.7	535.9	4.789	4.220	65.750	57.935	3.6812E-03	4.0760E-03	0.385
34	37	338.9	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
35	38	298.1	536.5	6.571	5.790	65.700	57.890	5.0551E-03	5.5978E-03	0.418
36	39	298.5	537.2	4.464	3.934	65.646	57.843	3.4377E-03	3.8072E-03	0.436
37	40	299.5	539.0	9.239	8.141	65.504	57.718	7.1324E-03	7.9010E-03	0.522
38	41	299.7	539.4	30.405	26.791	65.471	57.692	2.3484E-02	2.6016E-02	0.420
39	42	298.0	536.5	4.334	3.819	65.706	57.896	3.3341E-03	3.6920E-03	0.372
40	43	299.0	538.2	2.300	2.027	65.573	57.778	1.7733E-03	1.9642E-03	0.477
41	44	298.5	537.2	12.940	11.402	65.445	57.662	9.9641E-03	1.1035E-02	0.398

[illegible]	[illegible]	301.1	542.0	2.[illegible]	1.766	65.265	57.507	1.5[illegible]E-03	1.7221E-03	0.486
[illegible]	46	301.0	541.8	0.559	0.492	65.281	57.522	4.3307E-04	4.7994E-04	0.550
[illegible]	47	[illegible]	538.6	0.000	0.000	0.000	0.000	0.0000	0.0000	0.837
[illegible]	[illegible]	[illegible]	539.7	28.448	25.066	65.532	57.742	2.1950E-02	2.4314E-02	0.327
[illegible]	[illegible]	[illegible]	540.4	0.528	0.465	65.399	57.625	4.0825E-04	4.5234E-04	0.605
[illegible]	51	[illegible]	540.1	0.275	0.243	65.419	57.643	2.1278E-04	2.3575E-04	0.673
[illegible]	[illegible]	[illegible]	540.6	0.166	0.147	65.380	57.609	1.2873E-04	1.4264E-04	0.459
[illegible]	55	[illegible]	539.7	0.118	0.104	65.447	57.667	9.1239E-05	1.0108E-04	0.161
50	57	[illegible]	539.1	0.061	0.054	65.500	57.714	4.7303E-05	5.2401E-05	0.103
51	[illegible]	[illegible]	538.3	0.173	0.153	65.560	57.767	1.3353E-04	1.4791E-04	0.381
52	60	301.5	542.7	0.686	0.605	65.211	57.460	5.3236E-04	5.9006E-04	0.528
53	61	[illegible]	542.0	0.321	0.283	65.270	57.512	2.4880E-04	2.7573E-04	0.452
54	65	300.5	540.9	0.128	0.113	65.358	57.590	9.8954E-05	1.0965E-04	0.335
55	69	300.3	540.6	0.332	0.292	65.383	57.611	2.5655E-04	2.8426E-04	0.522
56	[illegible]	[illegible]	544.7	0.589	0.519	65.057	57.324	4.5859E-04	5.0844E-04	0.454
57	70	[illegible]	544.3	0.468	0.413	65.087	57.350	3.6411E-04	4.0367E-04	0.472
[illegible]	[illegible]	[illegible]	543.7	0.328	0.289	65.136	57.393	2.5449E-04	2.8211E-04	0.499
[illegible]	[illegible]	[illegible]	538.1	8.878	7.823	65.578	57.783	6.8445E-03	7.5810E-03	0.359
60	[illegible]	[illegible]	537.5	5.767	5.081	65.628	57.827	4.4418E-03	4.9194E-03	0.375
61	[illegible]	[illegible]	536.4	5.647	4.976	65.711	57.900	4.3432E-03	4.8094E-03	0.371
62	76	[illegible]	536.3	6.975	6.146	65.678	57.871	5.3679E-03	5.9444E-03	0.359
63	[illegible]	301.4	542.6	9.747	8.589	65.223	57.470	7.5618E-03	8.3812E-03	0.366
64	78	300.8	541.4	6.155	5.423	65.318	57.554	4.7670E-03	5.2826E-03	0.334
[illegible]	79	[illegible]	540.3	6.633	5.845	65.403	57.629	5.1299E-03	5.6837E-03	0.343
[illegible]	80	299.9	539.8	7.255	6.393	65.444	57.665	5.6067E-03	6.2116E-03	0.339
[illegible]	81	303.9	547.0	11.805	10.402	64.870	57.159	9.2162E-03	1.0222E-02	0.376
[illegible]	[illegible]	[illegible]	[illegible]	7.872	6.[illegible]	[illegible]	57.277	6.1307E-03	6.7979E-03	0.382
[illegible]	[illegible]	[illegible]	[illegible]	7.779	6.854	65.058	57.325	6.0522E-03	6.7102E-03	0.340
[illegible]	84	302.1	543.9	8.023	7.070	65.125	57.384	6.2352E-03	6.9122E-03	0.307
[illegible]	85	302.0	543.6	9.828	8.660	65.143	57.399	7.6355E-03	8.4642E-03	0.399
[illegible]	[illegible]	[illegible]	[illegible]	10.864	9.57[illegible]	65.053	57.321	8.4538E-03	9.37[illegible]E-03	0.363
[illegible]	87	[illegible]	[illegible]	5.335	4.7[illegible]	64.887	57.174	4.1633E-03	4.6174E-03	0.424
[illegible]	[illegible]	[illegible]	[illegible]	4.424	3.8[illegible]	64.460	56.79[illegible]	3.4737E-03	3.[illegible]614E-03	0.510
[illegible]	89	[illegible]	555.3	2.923	2.576	64.215	56.582	2.3089E-03	2.5641E-03	0.369

[illegible] DENSITY-VELOCITY PRODUCT = 2.0602E-01 (SLUGS/FT2 SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 31

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)		RS(METER)								
5.22	3.2074E 06	6.3057E 05	0.197	6.87	860.6	0.88929E 06		0.0018								
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)		RS(FT)								
5.22	9.7762E 05	6.3057E 05	0.645	101.05	1549.1	382.42		0.0060								

ET ALONE
$\alpha = -30°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.364	0.3301	0.3301	0.3917	0.4320	39	51	0.349	0.0123	0.0123	0.0145	0.0160
2	2	0.363	0.3135	0.3135	0.3719	0.4102	40	54	0.347	0.0692	0.0692	0.0817	0.0898
3	3	0.363	0.3077	0.3077	0.3650	0.4025	41	55	0.346	0.0687	0.0687	0.0811	0.0892
4	4	0.361	0.2459	0.2459	0.2915	0.3213	42	56	0.347	0.0668	0.0668	0.0789	0.0868
5	5	0.361	0.2215	0.2215	0.2626	0.2894	43	57	0.348	0.0462	0.0462	0.0546	0.0600
6	6	0.359	0.1917	0.1917	0.2272	0.2503	44	58	0.348	0.0263	0.0263	0.0311	0.0342
7	7	0.358	0.1690	0.1690	0.2002	0.2206	45	60	0.346	0.0699	0.0699	0.0825	0.0907
8	8	0.356	0.1414	0.1414	0.1674	0.1844	46	61	0.347	0.0695	0.0695	0.0821	0.0902
9	9	0.354	0.1057	0.1057	0.1251	0.1377	47	62	0.347	0.0663	0.0663	0.0783	0.0861
10	10	0.353	0.0928	0.0928	0.1098	0.1209	48	63	0.348	0.0478	0.0478	0.0565	0.0621
11	11	0.352	0.0828	0.0828	0.0979	0.1077	49	64	0.348	0.0269	0.0269	0.0317	0.0349
12	12	0.349	0.0717	0.0717	0.0847	0.0932	50	65	0.349	0.0118	0.0118	0.0140	0.0154
13	13	0.349	0.0174	0.0174	0.0205	0.0226	51	66	0.349	0.0039	0.0039	0.0046	0.0051
14	14	0.347	0.0609	0.0609	0.0719	0.0791	52	67	0.348	0.0047	0.0047	0.0056	0.0061
15	25	0.347	0.0594	0.0594	0.0702	0.0771	53	68	0.346	0.0115	0.0115	0.0135	0.0149
16	26	0.348	0.0419	0.0419	0.0495	0.0544	54	70	0.347	0.0714	0.0714	0.0844	0.0927
17	27	0.349	0.0252	0.0252	0.0297	0.0327	55	71	0.347	0.0635	0.0635	0.0750	0.0825
18	28	0.349	0.0120	0.0120	0.0141	0.0155	56	72	0.348	0.0470	0.0470	0.0555	0.0611
19	30	0.347	0.0638	0.0638	0.0753	0.0828	57	73	0.348	0.0259	0.0259	0.0306	0.0336
20	31	0.349	0.0418	0.0418	0.0494	0.0543	58	77	0.347	0.0714	0.0714	0.0843	0.0926
21	32	0.346	0.0642	0.0642	0.0757	0.0833	59	78	0.348	0.0652	0.0652	0.0770	0.0847
22	33	0.348	0.0580	0.0580	0.0685	0.0753	60	79	0.348	0.0478	0.0478	0.0564	0.0621
23	34	0.348	0.0434	0.0434	0.0513	0.0564	61	81	0.348	0.0117	0.0117	0.0138	0.0152
24	35	0.349	0.0271	0.0271	0.0320	0.0352	62	84	0.347	0.0704	0.0704	0.0831	0.0914
25	36	0.349	0.0135	0.0135	0.0159	0.0175	63	85	0.347	0.0660	0.0660	0.0780	0.0857
26	37	0.349	0.0045	0.0045	0.0053	0.0058	64	86	0.347	0.0488	0.0488	0.0577	0.0634
27	38	0.349	0.0016	0.0016	0.0018	0.0020	65	90	0.346	0.0704	0.0704	0.0831	0.0914
28	39	0.346	0.0132	0.0132	0.0156	0.0172	66	91	0.347	0.0659	0.0659	0.0778	0.0856
29	40	0.347	0.0639	0.0639	0.0755	0.0830	67	92	0.347	0.0484	0.0484	0.0572	0.0628
30	41	0.347	0.0647	0.0647	0.0764	0.0840	68	94	0.350	0.0123	0.0123	0.0146	0.0160
31	42	0.348	0.0629	0.0629	0.0743	0.0818	69	98	0.347	0.0723	0.0723	0.0853	0.0938
32	43	0.348	0.0434	0.0434	0.0513	0.0564	70	99	0.347	0.0658	0.0658	0.0777	0.0854
33	44	0.349	0.0258	0.0258	0.0305	0.0335	71	100	0.347	0.0485	0.0485	0.0573	0.0630
34	46	0.334	0.0000	0.0000	0.0000	0.0000	72	103	0.347	0.0682	0.0682	0.0805	0.0885
35	47	0.347	0.0701	0.0701	0.0828	0.0910	73	104	0.347	0.0630	0.0630	0.0744	0.0818
36	48	0.348	0.0660	0.0660	0.0779	0.0857	74	105	0.347	0.0462	0.0462	0.0545	0.0600
37	49	0.348	0.0471	0.0471	0.0556	0.0611	75	107	0.348	0.0143	0.0143	0.0169	0.0186
38	50	0.349	0.0280	0.0280	0.0331	0.0364							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

									TEST NO. 195
MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)		RUN NO. 31
5.22	3.2074E 06	6.3057E 05	0.197	6.87	860.6	0.88929E 06	0.0018		
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(ET)		
5.22	9.7762E 05	6.3057E 05	0.645	101.05	1549.1	382.42	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	322.5	580.5	26.056	22.959	78.939	69.556	1.7768E-02	1.9597E-02	0.282
2	2	321.8	579.3	24.779	21.833	79.038	69.643	1.6873E-02	1.8607E-02	0.290
3	3	321.4	578.4	24.343	21.450	79.110	69.706	1.6559E-02	1.8259E-02	0.348
4	4	320.0	576.0	19.497	17.180	79.306	69.879	1.3226E-02	1.4579E-02	0.386
5	5	319.5	575.1	17.582	15.492	79.381	69.946	1.1913E-02	1.3131E-02	0.392
6	6	318.2	572.7	15.255	13.442	79.575	70.116	1.0308E-02	1.1359E-02	0.397
7	7	317.1	570.7	13.479	11.877	79.739	70.261	9.0869E-03	1.0010E-02	0.384
8	8	315.4	567.8	11.309	9.965	79.975	70.469	7.5986E-03	8.3681E-03	0.395
9	9	313.9	565.0	8.477	7.470	80.203	70.670	5.6773E-03	6.2501E-03	0.406
10	10	312.7	562.9	7.462	6.575	80.375	70.822	4.9853E-03	5.4870E-03	0.378
11	11	311.3	560.4	6.670	5.877	80.579	71.001	4.4434E-03	4.8891E-03	0.373
12	12	309.3	556.8	5.798	5.109	80.870	71.257	3.8471E-03	4.2313E-03	0.347
13	13	309.1	556.4	1.406	1.238	80.899	71.283	9.3214E-04	1.0252E-03	0.322
14	18	307.2	552.9	4.944	4.356	81.183	71.533	3.2656E-03	3.5902E-03	0.376
15	25	307.1	552.8	4.825	4.252	81.196	71.545	3.1869E-03	3.5036E-03	0.383
16	26	308.3	555.0	3.396	2.992	81.018	71.388	2.2483E-03	2.4723E-03	0.362
17	27	308.9	556.0	2.037	1.794	80.934	71.314	1.3499E-03	1.4846E-03	0.358
18	28	309.0	556.2	0.968	0.853	80.918	71.300	6.4170E-04	7.0574E-04	0.361
19	30	307.4	553.3	5.175	4.560	81.157	71.510	3.4195E-03	3.7596E-03	0.369
20	31	308.7	555.6	3.383	2.981	80.965	71.341	2.2412E-03	2.4647E-03	0.355
21	32	306.8	552.2	5.212	4.592	81.244	71.587	3.4400E-03	3.7815E-03	0.367
22	33	308.0	554.4	4.701	4.143	81.067	71.431	3.1106E-03	3.4203E-03	0.372
23	34	308.5	555.2	3.515	3.097	80.995	71.368	2.3280E-03	2.5600E-03	0.361
24	35	309.1	556.3	2.192	1.932	80.908	71.291	1.4537E-03	1.5988E-03	0.367
25	36	309.1	556.4	1.088	0.959	80.858	71.282	7.2177E-04	7.9382E-04	0.345
26	37	309.2	556.6	0.363	0.319	80.884	71.270	2.4047E-04	2.6448E-04	0.352
27	38	308.7	555.7	0.126	0.111	80.961	71.337	8.3611E-05	9.1949E-05	0.288
28	39	306.2	551.2	1.076	0.948	81.325	71.658	7.0925E-04	7.7959E-04	0.387
29	40	307.0	552.6	5.192	4.575	81.210	71.557	3.4286E-03	3.7692E-03	0.360
30	41	307.2	552.9	5.255	4.630	81.186	71.536	3.4708E-03	3.8157E-03	0.372
31	42	308.1	554.6	5.102	4.495	81.048	71.414	3.3703E-03	3.7126E-03	0.371
32	43	308.5	555.3	3.514	3.097	80.989	71.362	2.3278E-03	2.5598E-03	0.356
33	44	309.1	556.3	2.088	1.840	80.908	71.291	1.3844E-03	1.5226E-03	0.361
34	46	296.2	533.1	0.000	0.000	0.000	0.000	0.0000	0.0000	0.728
35	47	307.1	552.8	5.694	5.017	81.197	71.546	3.7604E-03	4.1341E-03	0.378
36	48	308.0	554.5	5.347	4.711	81.059	71.424	3.5380E-03	3.8903E-03	0.374
37	49	308.4	555.0	3.813	3.360	81.012	71.383	2.5246E-03	2.7762E-03	0.369
38	50	308.9	556.0	2.270	2.000	80.933	71.313	1.5048E-03	1.6549E-03	0.364
39	51	309.3	556.8	0.995	0.876	80.871	71.258	6.5987E-04	7.2578E-04	0.340
40	54	307.2	552.9	5.618	4.950	81.183	71.533	3.7110E-03	4.0758E-03	0.384
41	55	306.6	551.8	5.585	4.921	81.274	71.614	3.6848E-03	4.0505E-03	0.387

42	56	307.5	553.5	5.423	4.779	81.137	71.492	3.5848E-03	3.9413E-03	0.460
43	57	308.1	554.6	3.747	3.301	81.046	71.413	2.4796E-03	2.7266E-03	0.375
44	58	308.3	555.0	2.132	1.878	81.018	71.388	1.4114E-03	1.5521E-03	0.359
45	60	306.6	551.9	5.681	5.006	81.266	71.606	3.7484E-03	4.1205E-03	0.385
46	61	307.2	552.9	5.642	4.972	81.187	71.537	3.7269E-03	4.0973E-03	0.383
47	62	307.6	553.7	5.378	4.739	81.119	71.477	3.5560E-03	3.9098E-03	0.371
48	63	308.1	554.6	3.877	3.416	81.044	71.411	2.5662E-03	2.8217E-03	0.378
49	64	308.5	555.2	2.176	1.918	80.997	71.369	1.4414E-03	1.5850E-03	0.368
50	65	308.7	555.7	0.958	0.844	80.959	71.336	6.3467E-04	6.9797E-04	0.350
51	66	308.6	555.5	0.316	0.279	80.971	71.347	2.0959E-04	2.3049E-04	0.294
52	67	308.1	554.7	0.382	0.336	81.044	71.411	2.5274E-04	2.7791E-04	0.356
53	68	306.0	551.9	0.932	0.821	81.271	71.611	6.1505E-04	6.7610E-04	0.421
54	70	306.8	552.3	5.804	5.114	81.233	71.577	3.8312E-03	4.2117E-03	0.377
55	71	307.5	553.5	5.155	4.542	81.136	71.492	3.4075E-03	3.7464E-03	0.375
56	72	307.8	554.1	3.813	3.360	81.092	71.453	2.5218E-03	2.7728E-03	0.372
57	73	308.3	554.9	2.098	1.849	81.024	71.393	1.3890E-03	1.5274E-03	0.366
58	77	307.0	552.7	5.796	5.107	81.206	71.554	3.8272E-03	4.2074E-03	0.372
59	78	307.7	553.9	5.287	4.659	81.103	71.463	3.4965E-03	3.8445E-03	0.366
60	79	308.0	554.3	3.874	3.413	81.071	71.434	2.5627E-03	2.8179E-03	0.368
61	81	308.2	554.8	0.948	0.835	81.029	71.398	6.2729E-04	6.8978E-04	0.351
62	84	307.1	552.7	5.715	5.036	81.200	71.548	3.7744E-03	4.1455E-03	0.372
63	85	307.3	553.2	5.358	4.721	81.162	71.515	3.5406E-03	3.8927E-03	0.368
64	86	307.6	553.8	3.961	3.490	81.116	71.474	2.6188E-03	2.8794E-03	0.371
65	90	306.6	551.9	5.722	5.042	81.265	71.605	3.7755E-03	4.1503E-03	0.365
66	91	307.3	553.2	5.350	4.714	81.162	71.515	3.5351E-03	3.8866E-03	0.377
67	92	307.7	553.8	3.926	3.459	81.115	71.473	2.5959E-03	2.8542E-03	0.356
68	94	310.1	558.1	0.994	0.876	80.763	71.163	6.6078E-04	7.2688E-04	0.460
69	95	306.9	552.5	5.869	5.172	81.218	71.564	3.8751E-03	4.2600E-03	0.356
70	99	307.3	553.2	5.338	4.704	81.163	71.516	3.5272E-03	3.8779E-03	0.357
71	100	307.5	553.6	3.938	3.470	81.131	71.487	2.6030E-03	2.8619E-03	0.348
72	103	307.0	552.6	5.535	4.880	81.209	71.556	3.6574E-03	4.0208E-03	0.361
73	104	307.4	553.3	5.113	4.505	81.153	71.507	3.3786E-03	3.7146E-03	0.354
74	105	307.3	553.1	3.749	3.304	81.173	71.524	2.4771E-03	2.7234E-03	0.357
75	107	307.7	553.9	1.162	1.024	81.101	71.461	7.6849E-04	8.4496E-04	0.328

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9603E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	TEST NO. 195
5.22	3.4676E 06	6.8172E 05	0.197	7.19	842.6	0.8694E 06	0.0018	RUN NO. 32

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	ET ALONE $\alpha = -60°$, $\beta = 0°$
5.22	1.0569E 06	6.8172E 05	0.645	105.62	1516.7	373.87	0.0060	

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.362	0.1834	0.1834	0.2175	0.2398	39	51	0.354	0.0220	0.0220	0.0260	0.0286
2	2	0.362	0.2241	0.2241	0.2657	0.2930	40	54	0.355	0.1302	0.1302	0.1541	0.1696
3	3	0.362	0.2524	0.2524	0.2993	0.3300	41	55	0.354	0.1260	0.1260	0.1491	0.1642
4	4	0.361	0.2451	0.2451	0.2906	0.3203	42	56	0.355	0.1229	0.1229	0.1454	0.1601
5	5	0.361	0.2337	0.2337	0.2770	0.3054	43	57	0.355	0.0851	0.0851	0.1008	0.1110
6	6	0.360	0.2228	0.2228	0.2641	0.2910	44	58	0.354	0.0481	0.0481	0.0569	0.0626
7	7	0.360	0.2135	0.2135	0.2530	0.2788	45	60	0.355	0.1265	0.1265	0.1497	0.1649
8	8	0.359	0.1942	0.1942	0.2301	0.2536	46	61	0.355	0.1249	0.1249	0.1478	0.1627
9	9	0.358	0.1633	0.1633	0.1934	0.2131	47	62	0.355	0.1191	0.1191	0.1410	0.1552
10	10	0.358	0.1541	0.1541	0.1825	0.2011	48	63	0.355	0.0853	0.0853	0.1010	0.1112
11	11	0.357	0.1527	0.1527	0.1808	0.1992	49	64	0.354	0.0471	0.0471	0.0558	0.0614
12	12	0.355	0.1446	0.1446	0.1711	0.1884	50	65	0.354	0.0198	0.0198	0.0234	0.0257
13	13	0.353	0.0202	0.0202	0.0239	0.0263	51	66	0.353	0.0061	0.0061	0.0072	0.0079
14	18	0.355	0.1432	0.1432	0.1695	0.1866	52	67	0.353	0.0045	0.0045	0.0053	0.0058
15	25	0.355	0.1392	0.1392	0.1648	0.1814	53	68	0.352	0.0068	0.0068	0.0080	0.0088
16	26	0.355	0.0926	0.0926	0.1096	0.1207	54	70	0.355	0.1279	0.1279	0.1514	0.1666
17	27	0.355	0.0495	0.0495	0.0586	0.0645	55	71	0.355	0.1128	0.1128	0.1336	0.1471
18	28	0.354	0.0191	0.0191	0.0226	0.0249	56	72	0.355	0.0827	0.0827	0.0978	0.1077
19	30	0.355	0.1450	0.1450	0.1716	0.1889	57	73	0.354	0.0443	0.0443	0.0524	0.0576
20	31	0.355	0.0916	0.0916	0.1084	0.1194	58	77	0.355	0.1273	0.1273	0.1507	0.1659
21	32	0.355	0.1419	0.1419	0.1679	0.1849	59	78	0.355	0.1158	0.1158	0.1371	0.1509
22	33	0.356	0.1279	0.1279	0.1514	0.1668	60	79	0.355	0.0828	0.0828	0.0980	0.1079
23	34	0.355	0.0940	0.0940	0.1112	0.1224	61	81	0.353	0.0193	0.0193	0.0229	0.0252
24	35	0.355	0.0546	0.0546	0.0646	0.0711	62	84	0.355	0.1271	0.1271	0.1504	0.1656
25	36	0.354	0.0231	0.0231	0.0273	0.0301	63	85	0.355	0.1173	0.1173	0.1388	0.1529
26	37	0.354	0.0055	0.0055	0.0065	0.0071	64	86	0.355	0.0846	0.0846	0.1001	0.1102
27	38	0.353	0.0043	0.0043	0.0051	0.0056	65	90	0.355	0.1292	0.1292	0.1529	0.1683
28	39	0.351	0.0089	0.0089	0.0106	0.0116	66	91	0.355	0.1193	0.1193	0.1412	0.1554
29	40	0.355	0.1362	0.1362	0.1612	0.1775	67	92	0.355	0.0843	0.0843	0.0998	0.1099
30	41	0.355	0.1334	0.1334	0.1579	0.1739	68	94	0.356	0.0197	0.0197	0.0233	0.0257
31	42	0.356	0.1299	0.1299	0.1537	0.1693	69	98	0.355	0.1343	0.1343	0.1589	0.1750
32	43	0.355	0.0892	0.0892	0.105	0.1162	70	99	0.355	0.1204	0.1204	0.1425	0.1569
33	44	0.355	0.0516	0.0516	0.0[illegible]	0.0672	71	100	0.355	0.0859	0.0859	0.1017	0.1119
34	46	0.344	0.0000	0.0000	0.0	0.0000	72	103	0.355	0.1281	0.1281	0.1516	0.1669
35	47	0.355	0.1356	0.1356	0.1	0.1767	73	104	0.356	0.1180	0.1180	0.1397	0.1538
36	48	0.356	0.1285	0.1285	0.15[illegible]	0.1675	74	105	0.355	0.0841	0.0841	0.0996	0.1096
37	49	0.355	0.0906	0.0906	0.1073	0.1181	75	107	0.354	0.0235	0.0235	0.0278	0.0306
38	50	0.355	0.0534	0.0534	0.0632	0.0696							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO.	195
5.22	3.4676E 06	6.8172E 05	0.197	7.19	842.6	0.86941E 06	0.0018	RUN NO.	32
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)		
5.22	1.0569E 06	6.8172E 05	0.645	105.62	1516.7	373.87	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	313.3	564.0	14.514	12.789	79.125	69.720	9.5226E-03	1.0498E-02	0.417
2	2	313.2	563.7	17.738	15.630	79.149	69.741	1.1634E-02	1.2825E-02	0.280
3	3	313.0	563.3	19.988	17.612	79.182	69.770	1.3103E-02	1.4445E-02	0.335
4	4	312.5	562.5	19.425	17.116	79.248	69.829	1.2722E-02	1.4023E-02	0.410
5	5	312.4	562.3	18.525	16.323	79.270	69.847	1.2129E-02	1.3368E-02	0.419
6	6	311.9	561.4	17.676	15.575	79.340	69.909	1.1561E-02	1.2742E-02	0.418
7	7	311.6	560.8	16.947	14.933	79.391	69.955	1.1076E-02	1.2207E-02	0.411
8	8	310.8	559.4	15.441	13.606	79.505	70.054	1.0076E-02	1.1102E-02	0.420
9	9	310.2	558.3	12.997	11.452	79.598	70.137	8.4695E-03	9.3308E-03	0.440
10	10	309.7	557.4	12.279	10.819	79.671	70.201	7.9931E-03	8.8049E-03	0.411
11	11	309.0	556.3	12.182	10.734	79.766	70.285	7.9195E-03	8.7227E-03	0.410
12	12	307.7	553.8	11.560	10.186	79.972	70.466	7.4935E-03	8.2509E-03	0.376
13	13	305.6	550.1	1.621	1.429	80.280	70.738	1.0464E-03	1.1517E-03	0.358
14	18	307.3	553.1	11.461	10.099	80.028	70.516	7.4229E-03	8.1727E-03	0.421
15	25	307.3	553.1	11.142	9.818	80.026	70.514	7.2165E-03	7.9455E-03	0.434
16	26	307.3	553.2	7.410	6.529	80.022	70.511	4.7996E-03	5.2845E-03	0.412
17	27	307.9	552.5	3.962	3.491	80.077	70.559	2.5646E-03	2.8234E-03	0.407
18	28	306.2	551.2	1.533	1.351	80.185	70.654	9.9080E-04	1.0906E-03	0.415
19	30	307.5	553.6	11.595	10.217	79.990	70.482	7.5138E-03	8.2732E-03	0.420
20	31	307.6	553.7	7.325	6.455	79.980	70.473	4.7477E-03	5.2277E-03	0.409
21	32	307.0	552.6	11.363	10.013	80.068	70.551	7.3556E-03	8.0981E-03	0.413
22	33	307.8	554.1	10.229	9.013	79.951	70.447	6.6324E-03	7.3032E-03	0.419
23	34	307.6	553.6	7.515	6.622	79.989	70.481	4.8701E-03	5.3623E-03	0.413
24	35	307.1	552.9	4.370	3.851	80.049	70.534	2.8296E-03	3.1153E-03	0.424
25	36	306.5	551.6	1.851	1.631	80.151	70.624	1.1970E-03	1.3176E-03	0.414
26	37	306.2	551.2	0.439	0.387	80.190	70.658	2.8361E-04	3.1219E-04	0.392
27	38	305.8	550.5	0.343	0.302	80.245	70.706	2.2130E-04	2.4357E-04	0.407
28	39	304.2	547.6	0.718	0.633	80.484	70.918	4.6218E-04	5.0853E-04	0.497
29	40	307.2	553.0	10.901	9.605	80.037	70.524	7.0594E-03	7.7724E-03	0.405
30	41	307.3	553.2	10.679	9.410	80.022	70.510	6.9170E-03	7.6158E-03	0.411
31	42	307.9	554.2	10.382	9.148	79.935	70.434	6.7327E-03	7.4138E-03	0.411
32	43	307.6	553.6	7.132	6.285	79.985	70.478	4.6223E-03	5.0895E-03	0.431
33	44	307.2	553.0	4.131	3.640	80.038	70.524	2.6750E-03	2.9451E-03	0.418
34	46	299.2	536.8	0.000	0.000	81.386	71.712	0.0000	0.0000	0.664
35	47	307.4	553.3	10.847	9.558	80.010	70.500	7.0271E-03	7.7371E-03	0.404
36	48	308.0	554.3	10.270	9.050	79.928	70.428	6.6613E-03	7.3352E-03	0.402
37	49	307.5	553.6	7.251	6.389	79.991	70.483	4.6986E-03	5.1735E-03	0.403
38	50	307.1	552.8	4.277	3.768	80.054	70.539	2.7690E-03	3.0485E-03	0.410
39	51	306.7	552.1	1.760	1.551	80.113	70.592	1.1388E-03	1.2537E-03	0.406
40	54	307.5	553.4	10.415	9.177	80.001	70.492	6.7481E-03	7.4299E-03	0.405
41	55	306.8	552.3	10.096	8.896	80.058	70.578	6.5321E-03	7.1912E-03	0.401

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42	56	307.4	553.3	9.830	8.662	80.012	70.502	[illegible]	[illegible]	[illegible]
43	57	307.3	553.2	6.814	6.004	80.024	70.512	4.4135E-03	4.8593E-03	0.400
44	58	306.5	551.8	3.853	3.395	80.141	70.615	2.4915E-03	2.7427E-03	0.401
45	60	306.9	552.4	10.129	8.925	80.089	70.570	6.5547E-03	7.2161E-03	0.397
46	61	307.4	553.2	9.990	8.803	80.018	70.507	6.4714E-03	7.1252E-03	0.395
47	62	307.5	553.4	9.532	8.399	80.003	70.494	6.1765E-03	6.8001E-03	0.391
48	63	307.3	553.2	6.926	6.015	80.020	70.508	4.4216E-03	4.8693E-03	0.398
49	64	306.7	552.0	3.776	3.327	80.121	70.598	2.4425E-03	2.6889E-03	0.397
50	65	306.1	551.0	1.585	1.396	80.203	70.669	1.0237E-03	1.1268E-03	0.395
51	66	305.7	550.2	0.489	0.431	80.268	70.727	3.1541E-04	3.4715E-04	0.383
52	67	305.4	549.7	0.358	0.315	80.315	70.769	2.3065E-04	2.5384E-04	0.371
53	68	304.4	547.9	0.545	0.480	80.466	70.901	3.5087E-04	3.8607E-04	0.399
54	70	307.2	553.0	10.239	9.022	80.041	70.527	6.6306E-03	7.3002E-03	0.390
55	71	307.5	553.5	9.027	7.954	79.995	70.487	5.8491E-03	6.4403E-03	0.393
56	72	307.2	552.9	6.616	5.830	80.047	70.532	4.2839E-03	4.7165E-03	0.390
57	73	306.6	551.9	3.546	3.124	80.132	70.608	2.2932E-03	2.5245E-03	0.390
58	77	307.3	553.1	10.190	8.979	80.031	70.518	6.5993E-03	7.2659E-03	0.382
59	78	307.7	553.8	9.261	8.160	79.973	70.467	6.0029E-03	6.6097E-03	0.377
60	79	307.2	553.0	6.628	5.840	80.041	70.527	4.2918E-03	4.7252E-03	0.390
61	81	305.9	550.6	1.551	1.366	80.238	70.700	1.0014E-03	1.1022E-03	0.386
62	84	307.3	553.2	10.171	8.962	80.025	70.513	6.5878E-03	7.2533E-03	0.383
63	85	307.3	553.2	9.388	8.272	80.024	70.512	6.0808E-03	6.6950E-03	0.374
64	86	307.0	552.6	6.774	5.969	80.068	70.550	4.3847E-03	4.8273E-03	0.391
65	90	307.1	552.9	10.341	9.112	80.050	70.535	6.6953E-03	7.3714E-03	0.379
66	91	307.6	553.6	9.540	8.406	79.989	70.481	6.1824E-03	6.8072E-03	0.388
67	92	307.2	552.9	6.752	5.949	80.046	70.531	4.3718E-03	4.8132E-03	0.387
68	9	308.1	554	1.574	1.387	79.904	70.407	1.0213E-03	1.1247E-03	0.404
69	98	307.5	553.5	10.741	9.465	79.998	70.489	6.9599E-03	7.6632E-03	0.378
70	99	307.6	553.7	9.630	8.485	79.986	70.479	6.2409E-03	6.8716E-03	0.374
71	100	307.1	552.9	6.878	6.060	80.049	70.534	4.4532E-03	4.9029E-03	0.367
72	103	307.4	553.3	10.251	9.032	80.014	70.503	6.6404E-03	7.3113E-03	0.378
73	104	307.8	554.1	9.436	8.314	79.945	70.443	6.1186E-03	6.7374E-03	0.379
74	105	307.2	552.9	6.735	5.935	80.048	70.533	4.3612E-03	4.8015E-03	0.396
75	107	306.2	551.1	1.884	1.660	80.197	70.665	1.2172E-03	1.3398E-03	0.371

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0752E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.2798E 06	6.4479E 05 0.197	6.85	847.3	0.87454E 06	0.0018	RUN NO. 33

MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET ALONE
5.22	9.9968E 05	6.4479E 05 0.645	100.74	1525.1	376.07	0.0060	α = 0°, β = 0°

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.376	0.3854	0.3854	0.4588	0.5072	39	51	0.362	0.0065	0.0085	0.0077	0.0085
2	2	0.375	0.2723	0.2723	0.3241	0.3582	40	54	0.357	0.0058	0.0058	0.0069	0.0075
3	3	0.374	0.2294	0.2294	0.2730	0.3017	41	55	0.356	0.0059	0.0059	0.0070	0.0078
4	4	0.372	0.1473	0.1473	0.1752	0.1935	42	56	0.358	0.0063	0.0063	0.0075	0.0082
5	5	0.372	0.1255	0.1255	0.1492	0.1648	43	57	0.360	0.0060	0.0060	0.0071	0.0078
6	6	0.370	0.0960	0.0960	0.1141	0.1260	44	58	0.361	0.0060	0.0060	0.0071	0.0078
7	7	0.369	0.0740	0.0740	0.0880	0.0971	45	60	0.356	0.0060	0.0060	0.0070	0.0078
8	8	0.367	0.0540	0.0540	0.0642	0.0708	46	61	0.357	0.0057	0.0057	0.0067	0.0074
9	9	0.365	0.0348	0.0348	0.0414	0.0456	47	62	0.358	0.0064	0.0064	0.0075	0.0083
10	10	0.364	0.0264	0.0264	0.0314	0.0346	48	63	0.360	0.0056	0.0056	0.0067	0.0074
11	11	0.362	0.0200	0.0200	0.0237	0.0261	49	64	0.361	0.0058	0.0058	0.0069	0.0076
12	12	0.360	0.0147	0.0147	0.0174	0.0192	50	65	0.361	0.0061	0.0061	0.0072	0.0080
13	13	0.361	0.0133	0.0133	0.0158	0.0174	51	66	0.361	0.0061	0.0061	0.0072	0.0079
14	18	0.357	0.0083	0.0083	0.0098	0.0108	52	67	0.361	0.0061	0.0061	0.0073	0.0080
15	25	0.357	0.0073	0.0073	0.0086	0.0095	53	68	0.360	0.0065	0.0065	0.0077	0.0085
16	26	0.360	0.0078	0.0078	0.0092	0.0101	54	70	0.357	0.0056	0.0056	0.0066	0.0073
17	27	0.361	0.0076	0.0076	0.0090	0.0100	55	71	0.358	0.0054	0.0054	0.0064	0.0070
18	28	0.362	0.0077	0.0077	0.0092	0.0101	56	72	0.359	0.0051	0.0051	0.0061	0.0067
19	30	0.357	0.0074	0.0074	0.0087	0.0096	57	73	0.360	0.0052	0.0052	0.0061	0.0068
20	31	0.360	0.0075	0.0075	0.0088	0.0097	58	77	0.357	0.0048	0.0048	0.0057	0.0062
21	32	0.357	0.0071	0.0071	0.0084	0.0092	59	78	0.359	0.0045	0.0045	0.0054	0.0059
22	33	0.359	0.0071	0.0071	0.0084	0.0092	60	79	0.360	0.0043	0.0043	0.0051	0.0056
23	34	0.360	0.0072	0.0072	0.0085	0.0094	61	81	0.361	0.0048	0.0048	0.0057	0.0063
24	35	0.361	0.0077	0.0077	0.0092	0.0101	62	84	0.357	0.0035	0.0035	0.0041	0.0045
25	36	0.362	0.0077	0.0077	0.0091	0.0100	63	85	0.358	0.0033	0.0033	0.0040	0.0044
26	37	0.362	0.0071	0.0071	0.0084	0.0093	64	86	0.359	0.00	0.0031	0.0037	0.0041
27	38	0.362	0.0071	0.0071	0.0084	0.0092	65	90	0.356	0.0029	0.0029	0.0034	0.0038
28	39	0.359	0.0073	0.0073	0.0087	0.0095	66	91	0.358	0.0031	0.0031	0.0037	0.0041
29	40	0.357	0.0068	0.0068	0.0081	0.0089	67	92	0.360	0.0033	0.0033	0.0039	0.0043
30	41	0.357	0.0063	0.0063	0.0074	0.0082	68	94	0.361	0.0032	0.0032	0.0038	0.0042
31	42	0.359	0.0068	0.0068	0.0081	0.0089	69	98	0.357	0.0045	0.0045	0.0053	0.0059
32	43	0.360	0.0066	0.0066	0.0078	0.0086	70	99	0.358	0.0047	0.0047	0.0056	0.0062
33	44	0.362	0.0066	0.0066	0.0079	0.0087	71	100	0.360	0.0046	0.0046	0.0054	0.0059
34	46	0.356	0.0000	0.0000	0.0000	0.0000	72	103	0.357	0.0066	0.0066	0.0078	0.0085
35	47	0.357	0.0064	0.0064	0.0076	0.0084	73	104	0.359	0.0066	0.0066	0.0078	0.0086
36	48	0.359	0.0066	0.0066	0.0078	0.0086	74	105	0.359	0.0061	0.0061	0.0073	0.0080
37	49	0.360	0.0065	0.0065	0.0077	0.0085	75	107	0.361	0.0055	0.0055	0.0065	0.0071
38	50	0.361	0.0067	0.0067	0.0080	0.0088							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 33

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG.K)	HT(JOULE/KG)	RS(METER)
5.22	3.2798E 06	6.4479E 05	0.197	6.85	847.3	0.87454E 06	0.0018
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG F)	HT(BTU/LBM)	RS(FT)
5.22	9.9968E 05	6.4479E 05	0.645	100.74	1525.1	376.07	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	327.0	588.6	29.308	25.824	76.055	67.015	2.0614E-02	2.2786E-02	0.215
2	2	326.2	587.2	20.738	18.273	76.166	67.112	1.4562E-02	1.6094E-02	0.363
3	3	325.6	586.0	17.496	15.416	76.260	67.196	1.2268E-02	1.3556E-02	0.444
4	4	324.1	583.5	11.262	9.923	76.468	67.379	7.8720E-03	8.6959E-03	0.431
5	5	323.6	582.4	9.603	8.462	76.551	67.452	6.7047E-03	7.4054E-03	0.431
6	6	322.1	579.8	7.367	6.491	76.762	67.638	5.1272E-03	5.6612E-03	0.436
7	7	320.9	577.6	5.696	5.019	76.939	67.794	3.9535E-03	4.3641E-03	0.412
8	8	319.4	574.9	4.170	3.675	77.165	67.993	2.8851E-03	3.1836E-03	0.421
9	9	317.8	572.0	2.696	2.376	77.395	68.195	1.8591E-03	2.0508E-03	0.450
10	10	316.6	570.0	2.051	1.807	77.561	68.342	1.4107E-03	1.5557E-03	0.418
11	11	315.2	567.4	1.552	1.368	77.765	68.521	1.0644E-03	1.1735E-03	0.411
12	12	313.3	564.0	1.145	1.009	78.044	68.767	7.8232E-04	8.6212E-04	0.380
13	13	314.5	566.1	1.039	0.916	77.874	68.618	7.1155E-04	7.8433E-04	0.329
14	18	311.0	559.8	0.650	0.573	78.386	69.068	4.4161E-04	4.8641E-04	0.402
15	25	310.9	559.6	0.571	0.503	78.400	69.081	3.8814E-04	4.2751E-04	0.400
16	26	313.5	564.3	0.606	0.534	78.023	68.749	4.1403E-04	4.5627E-04	0.384
17	27	314.6	566.2	0.593	0.522	77.865	68.610	4.0602E-04	4.4756E-04	0.365
18	28	315.0	567.0	0.601	0.530	77.800	68.552	4.1204E-04	4.5424E-04	0.378
19	30	311.1	560.1	0.579	0.510	78.363	69.049	3.9344E-04	4.3337E-04	0.385
20	31	313.8	564.9	0.581	0.512	77.975	68.706	3.9746E-04	4.3805E-04	0.372
21	32	310.6	559.1	0.554	0.488	78.440	69.116	3.7641E-04	4.1457E-04	0.373
22	33	312.4	562.3	0.551	0.486	78.183	68.889	3.7579E-04	4.1404E-04	0.366
23	34	313.7	564.6	0.562	0.495	77.997	68.726	3.8399E-04	4.2319E-04	0.370
24	35	314.7	566.5	0.601	0.530	77.840	68.587	4.1166E-04	4.5379E-04	0.387
25	36	315.2	567.3	0.598	0.527	77.777	68.532	4.0986E-04	4.5185E-04	0.348
26	37	315.4	567.8	0.551	0.486	77.737	68.497	3.7831E-04	4.1709E-04	0.329
27	38	315.2	567.4	0.548	0.483	77.768	68.524	3.7602E-04	4.1455E-04	0.325
28	39	312.8	563.0	0.571	0.503	78.127	68.840	3.8938E-04	4.2904E-04	0.318
29	40	310.8	559.4	0.534	0.471	78.421	69.099	3.6290E-04	3.9970E-04	0.377
30	41	310.9	559.6	0.491	0.433	78.403	69.083	3.3249E-04	3.6731E-04	0.339
31	42	312.5	562.5	0.534	0.471	78.167	68.875	3.6438E-04	4.0146E-04	0.358
32	43	313.8	564.8	0.516	0.455	77.978	68.710	3.5277E-04	3.8880E-04	0.342
33	44	314.8	566.7	0.516	0.454	77.825	68.574	3.5321E-04	3.9937E-04	0.342
34	46	310.3	558.6	0.000	0.000	78.480	69.152	C.0000	0.0000	-8.104
35	47	311.0	559.8	0.502	0.442	78.387	69.069	3.4123E-04	3.7585E-04	0.368
36	48	312.5	562.6	0.518	0.456	78.161	68.871	3.5299E-04	3.8893E-04	0.352
37	49	313.7	564.6	0.506	0.446	77.993	68.723	3.4588E-04	3.8119E-04	0.331
38	50	314.7	566.5	0.525	0.463	77.840	68.588	3.5983E-04	3.9665E-04	0.342
39	51	315.4	567.7	0.5061	0.445	77.743	68.503	3.4677E-04	3.8232E-04	0.322
40	54	311.0	559.7	0.457	0.403	78.391	69.073	3.1067E-04	3.4218E-04	0.311
41	55	310.2	558.4	0.467	0.411	78.495	69.165	3.1670E-04	3.4977E-04	0.345

42	56	311.9	561.5	0.493	0.435	78.250	68.949	3.3598E-04	3.7014E-04	0.435
43	57	313.3	563.9	0.466	0.410	78.055	68.777	3.1797E-04	3.5040E-04	0.347
44	58	313.9	565.1	0.467	0.411	77.955	68.689	3.1934E-04	3.5196E-04	0.334
45	60	310.2	558.4	0.467	0.412	78.500	69.169	3.1709E-04	3.4920E-04	0.380
46	61	310.8	559.4	0.443	0.391	78.414	69.093	3.0123E-04	3.3178E-04	0.354
47	62	312.0	561.5	0.497	0.438	78.244	68.943	3.3874E-04	3.7318E-04	0.414
48	63	313.2	563.7	0.441	0.388	78.069	68.786	3.0076E-04	3.3143E-04	0.328
49	64	314.1	565.3	0.454	0.400	77.938	68.674	3.1040E-04	3.4212E-04	0.321
50	65	314.6	566.3	0.474	0.418	77.859	68.604	3.2458E-04	3.5779E-04	0.329
51	66	314.7	566.5	0.471	0.415	77.840	68.587	3.2258E-04	3.5560E-04	0.260
52	67	314.7	566.4	0.478	0.421	77.851	68.597	3.2759E-04	3.6111E-04	0.268
53	68	313.3	563.9	0.506	0.446	78.049	68.772	3.4564E-04	3.8089E-04	0.292
54	70	310.5	559.0	0.439	0.387	78.453	69.128	2.9820E-04	3.2842E-04	0.355
55	71	312.0	561.6	0.420	0.370	78.2 2	68.942	2.8571E-04	3.1476E-04	0.341
56	72	312.9	563.3	0.402	0.354	78.104	68.820	2.7299E-04	3.0191E-04	0.342
57	73	313.9	564.9	0.404	0.356	77.968	68.701	2.7609E-04	3.0429E-04	0.338
58	77	310.6	559.1	0.375	0.331	78.438	69.115	2.5474E-04	2.8056E-04	0.324
59	78	312.2	561.9	0.356	0.314	78.215	68.918	2.4240E-04	2.6706E-04	0.299
60	79	313.1	563.6	0.333	0.293	78.077	68.797	2.2720E-04	2.5036E-04	0.273
61	91	314.2	565.5	0.376	0.331	77.920	68.658	2.5718E-04	2.8347E-04	0.302
62	86	310.9	559.6	0.271	0.239	78.404	69.085	1.8456E-04	2.0329E-04	0.283
63	89	311.9	561.5	0.262	0.231	78.249	68.948	1.7820E-04	1.9637E-04	0.224
64	90	312.9	563.2	0.244	0.215	78.107	68.823	1.6616E-04	1.8310E-04	0.139
65	99	310.4	558.7	0.228	0.201	78.479	69.150	1.5448E-04	1.7012E-04	0.177
	91	311.8	561.3	0.245	0.216	78.265	68.962	1.6682E-04	1.8377E-04	0.169
	92	313.0	563.5	0.256	0.225	78.087	68.806	1.7461E-04	1.9240E-04	0....
	94	314.3	565.7	0.252	0.222	77.911	68.650	1.7265E-04	1.9020E-04	0....
	98	310.8	559.4	0.352	0.311	78.418	69.097	2.3937E-04	2.6365E-04	0.292
66	99	312.1	561.8	0.371	0.327	78.226	68.928	2.5288E-04	2.7860E-04	0.247
67	100	313.1	563.6	0.356	0.313	78.079	68.798	2.4275E-04	2.6750E-04	0.199
68	103	311.0	559.8	0.514	0.453	78.383	69.066	3.4907E-04	3.8448E-04	0.387
69	104	312.3	562.2	0.515	0.454	78.191	68.897	3.5099E-04	3.8670E-04	0.345
70	107	313.0	563.3	0.479	0.422	78.100	68.816	3.2714E-04	3.6043E-04	0.309
71	107	314.2	565.5	0.426	0.375	77.922	68.660	2.9121E-04	3.2097E-04	0.284

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9741E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	2.4525E 06	6.7876E 05	0.197	6.80	316.6	0.84082E 06	0.0018	RUN NO. 34
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ORB ALONE
5.22	1.0526E 06	6.7876E 05	0.645	99.89	1469.9	361.57	0.0060	$\alpha = 0°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.374	0.1106	0.1106	0.1316	0.1454	39	42	0.366	0.0299	0.0299	0.0355	0.0392
2	2	0.373	0.0463	0.0463	0.0550	0.0608	40	43	0.368	0.0297	0.0297	0.0353	0.0389
3	3	0.372	0.0305	0.0305	0.0362	0.0400	41	44	0.367	0.0296	0.0296	0.0352	0.0388
4	4	0.373	0.0230	0.0230	0.0273	0.0302	42	45	0.371	0.0660	0.0660	0.0785	0.0867
5	5	0.373	0.0173	0.0173	0.0205	0.0227	43	46	0.371	0.0401	0.0401	0.0477	0.0527
6	6	0.372	0.0135	0.0135	0.0161	0.0178	44	47	0.355	0.0000	0.0000	0.0000	0.0000
7	7	0.372	0.0120	0.0120	0.0143	0.0158	45	48	0.367	0.2364	0.2364	0.2808	0.3099
8	8	0.371	0.0106	0.0106	0.0126	0.0139	46	50	0.369	0.0613	0.0613	0.0728	0.0804
9	9	0.370	0.0083	0.0083	0.0099	0.0109	47	51	0.369	0.0449	0.0449	0.0533	0.0589
10	10	0.369	0.0069	0.0069	0.0082	0.0090	48	53	0.369	0.0182	0.0182	0.0216	0.0239
11	11	0.368	0.0059	0.0059	0.0071	0.0078	49	55	0.369	0.0130	0.0130	0.0154	0.0171
12	12	0.368	0.0052	0.0052	0.0062	0.0069	50	57	0.369	0.0102	0.0102	0.0122	0.0134
13	13	0.368	0.0046	0.0046	0.0054	0.0060	51	59	0.368	0.0061	0.0061	0.0072	0.0080
14	14	0.367	0.0041	0.0049	0.0059	0.0065	52	60	0.371	0.0439	0.0439	0.0522	0.0577
15	15	0.367	0.0048	0.0048	0.0058	0.0063	53	61	0.370	0.0316	0.0316	0.0376	0.0415
16	16	0.366	0.0237	0.0237	0.0281	0.0310	54	65	0.370	0.0163	0.0163	0.0194	0.0214
17	17	0.367	0.0240	0.0240	0.0285	0.0314	55	68	0.370	0.0075	0.0075	0.0089	0.0099
18	18	0.366	0.0222	0.0222	0.0264	0.0292	56	69	0.372	0.0490	0.0490	0.0582	0.0643
19	20	0.368	0.0139	0.0138	0.0164	0.0181	57	70	0.372	0.0324	0.0324	0.0386	0.0426
20	22	0.368	0.0111	0.0111	0.0131	0.0145	58	72	0.372	0.0167	0.0167	0.0198	0.0219
21	24	0.367	0.0084	0.0084	0.0100	0.0110	59	73	0.367	0.0288	0.0288	0.0342	0.0378
22	25	0.367	0.0195	0.0195	0.0232	0.0256	60	74	0.367	0.0105	0.0105	0.0125	0.0138
23	26	0.365	0.0000	0.0000	0.0000	0.0000	61	75	0.367	0.0033	0.0033	0.0039	0.0043
24	27	0.368	0.0056	0.0056	0.0066	0.0073	62	76	0.367	0.0031	0.0031	0.0036	0.0040
25	28	0.368	0.0187	0.0187	0.0222	0.0245	63	77	0.370	0.0406	0.0406	0.0483	0.0533
26	29	0.367	0.0085	0.0085	0.0101	0.0112	64	78	0.370	0.0150	0.0150	0.0178	0.0196
27	30	0.368	0.0101	0.0101	0.0120	0.0133	65	79	0.369	0.0123	0.0123	0.0146	0.0161
28	31	0.368	0.0174	0.0174	0.0207	0.0228	66	80	0.369	0.0106	0.0106	0.0125	0.0138
29	32	0.367	0.0121	0.0121	0.0144	0.0159	67	81	0.373	0.0843	0.0843	0.1003	0.1108
30	34	0.368	0.0113	0.0113	0.0134	0.0148	68	82	0.372	0.0308	0.0308	0.0366	0.0405
31	33	0.367	0.0134	0.0134	0.0159	0.0176	69	83	0.372	0.0234	0.0234	0.0278	0.0307
32	35	0.367	0.0124	0.0124	0.0147	0.0162	70	84	0.372	0.0178	0.0178	0.0211	0.0234
33	36	0.366	0.0175	0.0175	0.0207	0.0229	71	85	0.371	0.0426	0.0426	0.0507	0.0560
34	37	0.367	0.0000	0.0000	0.0000	0.0000	72	86	0.373	0.0292	0.0292	0.0347	0.0383
35	38	0.366	0.0114	0.0114	0.0136	0.0150	73	87	0.374	0.0144	0.0144	0.0171	0.0189
36	39	0.367	0.0216	0.0216	0.0256	0.0283	74	88	0.378	0.0527	0.0527	0.0628	0.0695
37	40	0.369	0.0538	0.0538	0.0639	0.0705	75	89	0.381	0.0291	0.0291	0.0347	0.0384
38	41	0.369	0.0369	0.0369	0.0438	0.0483							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
PLN NO. 34

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	3.4525E 06	6.7876E 05	0.197	6.80	816.6	0.84082E 06	0.0018

MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0523E 06	6.7876E 05	0.645	99.89	1469.9	361.57	0.0060

CHAN	T/C	Tw(DEG K)	Tw(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.90C)	ST(0.850)	TIME(SEC)
1	1	312.7	562.9	8.070	7.111	72.990	64.314	5.7927E-03	6.4006E-03	0.430
2	2	312.3	562.1	3.379	2.977	73.062	64.377	2.4228E-03	2.6768E-03	0.405
3	3	312.3	562.2	2.225	1.960	73.048	64.365	1.5953E-03	1.7626E-03	0.409
4	4	312.3	562.1	1.679	1.480	73.056	64.372	1.2041E-03	1.3303E-03	0.450
5	5	312.2	561.9	1.262	1.112	73.076	64.390	9.0443E-04	9.5921E-04	0.412
6	6	311.5	560.8	0.990	0.872	73.164	64.467	7.0860E-04	7.8296E-04	0.391
7	7	311.0	559.9	0.879	0.774	73.238	64.533	6.2832E-04	6.9398E-04	0.416
8	8	310.3	558.5	0.776	0.683	73.351	64.632	5.5361E-04	6.1135E-04	0.387
9	9	309.4	556.9	0.610	0.537	73.474	64.740	4.3431E-04	4.7951E-04	0.380
10	10	308.9	556.1	0.504	0.444	73.543	64.802	3.5895E-04	3.9627E-04	0.389
11	11	308.3	554.9	0.437	0.385	73.639	64.886	3.1076E-04	3.4302E-04	0.337
12	12	308.0	554.4	0.386	0.340	73.675	64.918	2.7388E-04	3.0228E-04	0.332
13	13	307.8	554.0	0.336	0.296	73.713	64.951	2.3819E-04	2.6288E-04	0.262
14	14	307.0	552.5	0.364	0.321	73.827	65.052	2.5777E-04	2.8443E-04	0.309
15	15	307.0	552.6	0.358	0.315	73.826	65.051	2.5332E-04	2.7953E-04	0.409
16	16	307.9	554.3	1.744	1.536	73.650	64.930	1.2379E-03	1.3663E-03	0.260
17	17	308.3	555.0	1.766	1.556	73.622	64.879	1.2547E-03	1.3849E-03	0.297
18	18	308.7	555.7	1.637	1.442	73.574	64.828	1.1641E-03	1.2850E-03	0.318
19	20	309.3	556.7	1.011	0.891	73.494	64.758	7.2016E-04	7.9509E-04	0.282
20	22	307.8	554.0	0.815	0.718	73.710	64.948	5.7830E-04	6.3824E-04	0.290
21	24	307.4	553.4	0.618	0.545	73.757	64.990	4.3850E-04	4.8392E-04	0.373
22	25	307.6	553.6	1.440	1.269	73.741	64.976	1.0215E-03	1.1273E-03	0.371
23	26	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	308.0	554.4	0.411	0.362	73.678	64.920	2.9156E-04	3.2179E-04	0.480
25	28	308.2	554.8	1.378	1.214	73.645	64.891	9.7892E-04	1.0805E-03	0.310
26	29	307.5	553.4	0.628	0.554	73.755	64.989	4.4556E-04	4.9171E-04	0.445
27	30	307.7	553.9	0.747	0.658	73.719	64.956	5.2989E-04	5.8481E-04	0.358
28	31	307.9	554.3	1.282	1.130	73.685	64.927	9.1023E-04	1.0046E-03	0.307
29	32	307.5	553.5	0.892	0.786	73.751	64.984	6.3289E-04	6.9845E-04	0.469
30	34	308.0	554.4	0.831	0.732	73.681	64.923	5.9013E-04	6.5133E-04	0.359
31	33	307.5	553.5	0.989	0.872	73.747	64.981	7.0165E-04	7.7433E-04	0.276
32	35	307.1	552.8	0.914	0.805	73.805	65.032	6.4747E-04	7.1447E-04	0.526
33	36	306.5	551.7	1.290	1.137	73.854	65.111	9.1306E-04	1.0074E-03	0.209
34	37	307.0	552.6	0.000	0.000	0.000	0.000	0.0000	0.0000	0.266
35	38	306.5	551.7	0.845	0.745	73.893	65.109	5.9835E-04	6.6018E-04	0.434
36	39	307.3	553.1	1.592	1.403	73.785	65.015	1.1265E-03	1.2454E-03	0.487
37	40	308.6	555.4	3.957	3.487	73.597	64.849	2.8135E-03	3.1057E-03	0.370
38	41	308.6	555.5	2.713	2.390	73.553	64.845	1.9291E-03	2.1294E-03	0.256
39	42	306.8	552.2	2.209	1.947	73.856	65.077	1.5647E-03	1.7265E-03	0.382
40	43	308.0	554.3	2.188	1.928	73.684	64.925	1.5538E-03	1.7150E-03	0.316
41	44	307.9	552.6	2.187	1.927	73.824	65.049	1.5497E-03	1.7101E-03	0.381

42	45	310.6	559.1	4.837	4.262	73.298	64.586	3.4554E-03	3.8161E-03	0.403
43	46	310.6	559.2	2.941	2.592	73.255	64.583	2.1013E-03	2.3207E-03	0.363
44	47	297.3	535.1	0.000	0.000	0.000	0.000	0.0000	0.0000	0.435
45	48	307.5	553.6	17.434	15.362	73.745	64.979	1.2368E-02	1.3649E-02	0.267
46	50	309.1	556.5	4.506	3.970	73.511	64.774	3.2078E-03	3.5415E-03	0.223
47	51	309.0	556.2	3.300	2.908	73.532	64.792	2.3488E-03	2.5930E-03	0.296
48	53	309.3	556.7	1.339	1.180	73.494	64.758	9.5337E-04	1.0526E-03	0.294
49	55	308.9	556.0	0.956	0.842	73.547	64.805	6.8033E-04	7.5104E-04	0.273
50	57	308.6	555.5	0.753	0.663	73.591	64.843	5.3535E-04	5.9096E-04	0.273
51	59	308.1	554.7	0.447	0.394	73.657	64.902	3.1757E-04	3.5052E-04	0.183
52	60	310.2	558.4	3.224	2.841	73.358	64.639	2.3009E-03	2.5408E-03	0.269
53	61	310.1	558.1	2.321	2.045	73.377	64.655	1.6562E-03	1.8289E-03	0.313
54	65	309.8	557.6	1.196	1.054	73.419	64.692	8.5300E-04	9.4186E-04	0.219
55	68	309.7	557.4	0.551	0.486	73.436	64.707	3.9293E-04	4.3385E-04	0.146
56	69	311.4	560.5	3.583	3.157	73.186	64.487	2.5640E-03	2.8322E-03	0.335
57	70	311.3	560.4	2.375	2.093	73.199	64.498	1.6994E-03	1.8771E-03	0.286
58	72	311.3	560.3	1.221	1.076	73.206	64.505	8.7370E-04	9.6505E-04	0.263
59	73	307.3	553.1	2.126	1.873	73.779	65.009	1.5073E-03	1.6633E-03	0.342
60	74	307.2	552.9	0.778	0.686	73.798	65.026	5.5170E-04	6.0880E-04	0.294
61	75	306.9	552.3	0.242	0.213	73.844	65.066	1.7135E-04	1.8908E-04	0.266
62	76	307.1	552.9	0.227	0.200	73.802	65.030	1.6065E-04	1.7727E-04	0.271
63	77	309.8	557.6	2.983	2.628	73.418	64.691	2.1269E-03	2.3485E-03	0.383
64	78	309.5	557.1	1.100	0.969	73.464	64.732	7.8369E-04	8.6526E-04	0.276
65	79	309.1	556.4	0.901	0.794	73.514	64.776	6.4132E-04	7.0802E-04	0.276
66	80	309.1	556.4	0.776	0.684	73.514	64.776	5.5243E-04	6.0988E-04	0.277
67	81	312.1	561.9	6.160	5.428	73.078	64.392	4.4158E-03	4.8785E-03	0.439
68	82	311.4	560.5	2.255	1.987	73.185	64.486	1.6137E-03	1.7825E-03	0.339
69	83	311.4	560.5	1.710	1.506	73.188	64.489	1.2234E-03	1.3514E-03	0.296
70	84	311.3	560.3	1.301	1.146	73.202	64.501	9.3088E-04	1.0282E-03	0.290
71	85	310.8	559.5	3.125	2.753	73.267	64.559	2.2333E-03	2.4666E-03	0.379
72	86	312.0	561.7	2.132	1.879	73.053	64.405	1.5280E-03	1.6880E-03	0.274
73	87	313.5	564.3	1.048	0.924	72.882	64.219	7.5362E-04	8.3286E-04	0.281
74	88	316.5	569.8	3.820	3.366	72.442	63.831	2.7655E-03	3.0585E-03	0.454
75	89	318.8	573.9	2.098	1.848	72.111	63.540	1.5266E-03	1.6893E-03	0.341

FREE-STREAM DENSITY-VELOCITY PRODUCT = 2.0045E-01 (SLUGS/FT2-SEC)

REPRODUCIBILITY OF THE
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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.4656E 06	6.8723E 05	0.197	6.66	800.3	0.82298E 06	0.0018	RUN NO. 35
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	CRB ALONE
5.22	1.0655E 06	6.8723E 05	0.645	97.88	1440.5	353.90	0.0060	$\alpha = 30°$, $\beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.385	0.2308	0.2308	0.2756	0.3052	39	42	0.377	0.0016	0.0016	0.0019	0.0021
2	2	0.385	0.1454	0.1454	0.1736	0.1923	40	43	0.378	0.0023	0.0023	0.0028	0.0031
3	3	0.385	0.1239	0.1239	0.1479	0.1638	41	44	0.377	0.0091	0.0091	0.0108	0.0120
4	4	0.385	0.1049	0.1049	0.1253	0.1388	42	45	0.383	0.1306	0.1306	0.1559	0.1726
5	5	0.385	0.0923	0.0923	0.1102	0.1220	43	46	0.384	0.1115	0.1115	0.1331	0.1474
6	6	0.384	0.0822	0.0822	0.0981	0.1086	44	47	0.365	0.0000	0.0000	0.0000	0.0000
7	7	0.384	0.0776	0.0776	0.0926	0.1025	45	48	0.378	0.0288	0.0288	0.0344	0.0380
8	8	0.383	0.0750	0.0750	0.0895	0.0991	46	50	0.381	0.1270	0.1270	0.1514	0.1676
9	9	0.381	0.0688	0.0688	0.0821	0.0908	47	51	0.381	0.1148	0.1148	0.1369	0.1515
10	10	0.381	0.0618	0.0618	0.0737	0.0815	48	53	0.381	0.0604	0.0604	0.0721	0.0798
11	11	0.380	0.0611	0.0611	0.0728	0.0805	49	55	0.380	0.0451	0.0451	0.0538	0.0595
12	12	0.379	0.0551	0.0551	0.0657	0.0727	50	57	0.380	0.0377	0.0377	0.0450	0.0498
13	13	0.379	0.0468	0.0468	0.0558	0.0618	51	59	0.379	0.0269	0.0269	0.0321	0.0355
14	14	0.377	0.0424	0.0424	0.0505	0.0558	52	60	0.382	0.1380	0.1380	0.1647	0.1822
15	15	0.377	0.0294	0.0294	0.0350	0.0387	53	61	0.382	0.1153	0.1153	0.1376	0.1523
16	16	0.379	0.0683	0.0683	0.0814	0.0900	54	65	0.381	0.0788	0.0788	0.0940	0.1040
17	17	0.380	0.0702	0.0702	0.0837	0.0926	55	68	0.381	0.0433	0.0433	0.0516	0.0571
18	18	0.380	0.0780	0.0780	0.0930	0.1029	56	69	0.384	0.1489	0.1489	0.1777	0.1968
19	20	0.381	0.0521	0.0521	0.0621	0.0687	57	70	0.383	0.0931	0.0931	0.1111	0.1230
20	22	0.379	0.0406	0.0406	0.0484	0.0536	58	72	0.383	0.0584	0.0584	0.0697	0.0772
21	24	0.378	0.0187	0.0187	0.0223	0.0247	59	73	0.377	0.0014	0.0014	0.0017	0.0019
22	25	0.378	0.0137	0.0137	0.0163	0.0180	60	74	0.377	0.0019	0.0019	0.0022	0.0025
23	26	0.414	0.0000	0.0000	0.0000	0.0000	61	75	0.377	0.0027	0.0027	0.0032	0.0035
24	27	0.379	0.0203	0.0203	0.0242	0.0268	62	76	0.377	0.0044	0.0044	0.0052	0.0058
25	28	0.379	0.0274	0.0274	0.0326	0.0361	63	77	0.381	0.0143	0.0143	0.0171	0.0189
26	29	0.378	0.0090	0.0090	0.0107	0.0118	64	78	0.380	0.0031	0.0031	0.0036	0.0040
27	30	0.378	0.0063	0.0063	0.0075	0.0082	65	79	0.380	0.0055	0.0055	0.0066	0.0073
28	31	0.379	0.0347	0.0347	0.0414	0.0458	66	80	0.380	0.0053	0.0053	0.0063	0.0070
29	32	0.378	0.0080	0.0080	0.0095	0.0105	67	81	0.384	0.0524	0.0524	0.0626	0.0693
30	34	0.378	0.0135	0.0135	0.0160	0.0177	68	82	0.383	0.0133	0.0133	0.0158	0.0175
31	33	0.378	0.0033	0.0033	0.0039	0.0044	69	83	0.383	0.0064	0.0064	0.0076	0.0084
32	35	0.377	0.0065	0.0065	0.0078	0.0086	70	84	0.383	0.0054	0.0054	0.0064	0.0071
33	36	0.376	0.0034	0.0034	0.0040	0.0045	71	85	0.382	0.0106	0.0106	0.0126	0.0140
34	37	0.377	0.0000	0.0000	0.0000	0.0000	72	86	0.384	0.0089	0.0089	0.0107	0.0118
35	38	0.377	0.0062	0.0062	0.0074	0.0082	73	87	0.386	0.0109	0.0109	0.0130	0.0144
36	39	0.377	0.0032	0.0032	0.0038	0.0042	74	88	0.390	0.0155	0.0155	0.0185	0.0205
37	40	0.379	0.0057	0.0057	0.0068	0.0075	75	89	0.392	0.0153	0.0153	0.0183	0.0203
38	41	0.379	0.0122	0.0122	0.0146	0.0161							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA *** TEST NO. 195

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	RUN NO. 05
5.22	3.4956E 06	6.8723E 05	0.197	6.66	800.3	0.82298E 06	0.0018
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)	
5.22	1.0655E 06	6.8723E 05	0.645	97.88	1440.5	353.90	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	315.5	567.9	16.002	14.100	69.345	61.102	1.2084E-02	1.3383E-02	0.328
2	2	315.2	567.4	10.088	8.889	69.388	61.141	7.6128E-03	8.4308E-03	0.358
3	3	315.6	568.0	8.589	7.568	69.338	61.096	6.4867E-03	7.1844E-03	0.378
4	4	315.6	568.1	7.276	6.411	69.332	61.091	5.4957E-03	6.0666E-03	0.396
5	5	315.5	567.9	6.398	5.637	69.345	61.102	4.8312E-03	5.3507E-03	0.383
6	6	314.9	566.8	5.704	5.026	69.436	61.183	4.3012E-03	4.7630E-03	0.358
7	7	314.4	565.9	5.391	4.750	69.507	61.245	4.0598E-03	4.4951E-03	0.378
8	8	313.5	564.3	5.223	4.603	69.634	61.357	3.9256E-03	4.3456E-03	0.374
9	9	312.4	562.4	4.801	4.231	69.784	61.489	3.5996E-03	3.9836E-03	0.374
10	10	311.9	561.5	4.316	3.803	69.859	61.555	3.2315E-03	3.5758E-03	0.379
11	11	311.0	559.9	4.275	3.767	69.994	61.674	3.1939E-03	3.5333E-03	0.359
12	12	310.6	559.1	3.861	3.402	70.043	61.717	2.8821E-03	3.1881E-03	0.352
13	13	310.4	558.7	3.283	2.893	70.079	61.749	2.4494E-03	2.7093E-03	0.346
14	14	309.3	556.7	2.976	2.623	70.239	61.890	2.2147E-03	2.4490E-03	0.327
15	15	309.2	556.6	2.064	1.819	70.243	61.893	1.5358E-03	1.6983E-03	0.340
16	16	310.8	559.4	4.781	4.213	70.023	61.700	3.5703E-03	3.9495E-03	0.167
17	17	311.2	560.2	4.914	4.330	69.961	61.645	3.6731E-03	4.0637E-03	0.202
18	18	311.7	561.0	5.453	4.805	69.896	61.588	4.0804E-03	4.5148E-03	0.286
19	20	312.0	561.6	3.638	3.206	69.848	61.545	2.7249E-03	3.0152E-03	0.258
20	22	310.2	558.4	2.849	2.511	70.101	61.769	2.1249E-03	2.3503E-03	0.246
21	24	309.8	557.7	1.312	1.156	70.159	61.820	9.7787E-04	1.0815E-03	0.373
22	25	310.0	557.9	0.959	0.845	70.138	61.801	7.1458E-04	7.9033E-04	0.286
23	26	309.8	557.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******
24	27	310.3	558.6	1.424	1.255	70.086	61.755	1.0622E-03	1.1748E-03	0.366
25	28	310.5	559.0	1.918	1.690	70.056	61.729	1.4318E-03	1.5838E-03	0.355
26	29	309.7	557.5	0.631	0.556	70.170	61.829	4.6995E-04	5.1973E-04	0.350
27	30	309.9	557.8	0.439	0.387	70.153	61.814	3.2709E-04	3.6175E-04	0.375
28	31	310.2	558.3	2.434	2.145	70.110	61.777	1.8151E-03	2.0075E-03	0.259
29	32	309.8	557.7	0.561	0.495	70.156	61.917	4.1821E-04	4.6252E-04	0.320
30	34	309.9	557.9	0.944	0.832	70.142	61.805	7.0351E-04	7.7808E-04	0.332
31	33	309.5	557.1	0.232	0.205	70.208	61.962	1.7291E-04	1.9122E-04	0.117
32	35	309.3	556.8	0.458	0.404	70.230	61.882	3.4110E-04	3.7719E-04	0.401
33	36	308.4	555.1	0.239	0.210	70.364	62.000	1.7740E-04	1.9613E-04	0.291
34	37	308.9	555.9	0.000	0.000	0.000	0.000	0.0000	0.0000	-0.274
35	38	308.7	555.6	0.436	0.384	70.323	61.964	3.2378E-04	3.5799E-04	0.357
36	39	308.9	556.0	0.226	0.199	70.290	61.935	1.6781E-04	1.8555E-04	0.242
37	40	310.2	558.4	0.401	0.353	70.102	61.769	2.9907E-04	3.3079E-04	-0.791
38	41	310.5	559.0	0.858	0.756	70.05	61.728	6.4043E-04	7.0842E-04	0.472
39	42	308.6	555.5	0.114	0.100	70.330	61.970	8.4707E-05	9.3654E-05	-0.131
40	43	309.8	557.6	0.163	0.144	70.164	61.824	1.2154E-04	1.3441E-04	-1.637
41	44	309.0	556.2	0.639	0.563	70.279	61.925	4.7608E-04	5.2638E-04	0.334

42	45	314.2	565.6	9.083	8.003	69.532	61.267	6.8375E-03	7.5703E-03	0.432
43	46	314.4	566.0	7.750	6.829	69.498	61.237	5.8377E-03	6.4637E-03	0.337
44	47	299.5	539.1	0.000	0.000	0.000	0.000	0.0000	0.0000	0.482
45	48	309.6	557.3	2.024	1.784	70.188	61.845	1.5075E-03	1.6671E-03	0.293
46	50	312.1	561.7	8.868	7.814	69.836	61.535	6.6423E-03	7.3502E-03	0.161
47	51	312.0	561.5	8.018	7.065	69.853	61.550	6.0042E-03	6.6440E-03	0.227
48	53	312.2	561.9	4.220	3.719	69.825	61.525	3.1618E-03	3.4989E-03	0.279
49	55	311.6	560.9	3.154	2.779	69.903	61.594	2.3597E-03	2.6108E-03	0.239
50	57	311.2	560.2	2.641	2.327	69.961	61.645	1.9740E-03	2.1839E-03	0.218
51	59	310.6	559.1	1.887	1.663	70.045	61.719	1.4090E-03	1.5586E-03	0.168
52	60	312.9	563.2	9.623	8.479	69.720	61.433	7.2218E-03	7.9932E-03	0.182
53	61	312.8	563.1	8.041	7.085	69.730	61.441	6.0338E-03	6.6781E-03	0.277
54	65	312.5	562.5	5.497	4.844	69.773	61.479	4.1218E-03	4.5616E-03	0.254
55	68	312.4	562.3	3.019	2.660	69.789	61.494	2.2632E-03	2.5046E-03	0.189
56	69	314.3	565.7	10.351	9.121	69.520	61.256	7.7938E-03	8.6293E-03	0.347
57	70	314.2	565.6	6.471	5.702	69.531	61.266	4.8715E-03	5.3935E-03	0.280
58	72	314.2	565.5	4.063	3.580	69.540	61.274	3.0579E-03	3.3856E-03	0.259
59	73	309.3	556.8	0.101	0.089	70.230	61.882	7.4941E-05	8.2871E-05	0.024
60	74	309.1	556.4	0.132	0.116	70.257	61.906	9.7853E-05	1.0820E-04	0.149
61	75	308.8	555.8	0.189	0.167	70.310	61.953	1.4078E-04	1.5565E-04	0.203
62	76	309.2	556.6	0.309	0.272	70.245	61.895	2.2961E-04	2.5391E-04	0.236
63	77	311.9	561.5	1.000	0.881	69.858	61.555	7.4904E-04	8.2884E-04	0.439
64	78	311.7	561.0	0.214	0.188	69.895	61.587	1.5983E-04	1.7684E-04	0.195
65	79	311.4	560.5	0.387	0.341	69.938	61.625	2.8967E-04	3.2048E-04	0.317
66	80	311.6	561.0	0.370	0.326	69.899	61.590	2.7650E-04	3.0594E-04	0.281
67	81	314.4	566.0	3.644	3.211	69.498	61.237	2.7450E-03	3.0394E-03	0.576
68	82	313.8	564.8	0.924	0.814	69.590	61.319	6.9511E-04	7.6953E-04	0.397
69	83	313.8	564.9	0.444	0.391	69.583	61.312	3.3378E-04	3.6952E-04	0.320
70	84	313.9	565.0	0.373	0.329	69.577	61.306	2.8079E-04	3.1086E-04	0.266
71	85	313.1	563.6	0.739	0.651	69.689	61.405	5.5476E-04	6.1404E-04	0.427
72	86	314.7	566.5	0.621	0.547	69.458	61.202	4.6798E-04	5.1821E-04	0.393
73	87	316.1	569.0	0.752	0.663	69.264	61.031	5.6891E-04	6.3018E-04	0.425
74	88	319.6	575.3	1.062	0.936	68.761	60.588	8.1019E-04	8.9827E-04	0.324
75	89	322.0	579.5	1.045	0.921	68.424	60.291	8.0174E-04	8.8945E-04	0.263

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9901E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 36

MACH 5.12	RE/METER 3.7105E 06	REL 6.3314E 05	LENGTH(METER) 0.197	PT(ATM) 6.71	TT(DEG K) 846.2	HT(JOULE/KG) 0.87332E 06
MACH 5.22	RE/FT 5.0161E 05	REL 6.3314E 05	LENGTH(FT) 0.645	PT(PSI) 98.68	TT(DEG R) 1523.1	HT(BTU/LBM) 375.55

RS(METER) 0.0018
RS(FT) 0.0060

ORB ALONE
$\alpha = 60°$, $\beta = 0°$

CHAN	T/C	Hw/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.365	0.2658	0.2658	0.3154	0.3479
2	2	0.365	0.2166	0.2166	0.2571	0.2836
3	3	0.366	0.2095	0.2095	0.2487	0.2744
4	4	0.366	0.1695	0.1696	0.2251	0.2484
5	5	0.366	0.1740	0.1740	0.2066	0.2279
6	6	0.366	0.1605	0.1605	0.1905	0.2102
7	7	0.365	0.1538	0.1538	0.1825	0.2014
8	8	0.364	0.1488	0.1488	0.1765	0.1947
9	9	0.363	0.1369	0.1369	0.1624	0.1791
10	10	0.363	0.1262	0.1262	0.1497	0.1650
11	11	0.362	0.1246	0.1246	0.1477	0.1628
12	12	0.361	0.1078	0.1078	0.1278	0.1408
13	13	0.361	0.0929	0.0929	0.1102	0.1214
14	14	0.359	0.0854	0.0854	0.1012	0.1115
15	15	0.360	0.0648	0.0648	0.0768	0.0847
16	16	0.361	0.1082	0.1082	0.1283	0.1414
	17	0.361	0.0994	0.0994	0.1178	0.1299
18	18	0.362	0.1165	0.1165	0.1382	0.1523
19	20	0.362	0.0873	0.0873	0.1035	0.1141
20	22	0.361	0.0767	0.0767	0.0909	0.1002
21	24	0.359	0.0206	0.0206	0.0244	0.0269
22	25	0.359	0.0181	0.0181	0.0215	0.0236
23	26	0.360	0.0000	0.0000	0.0000	0.0000
24	27	0.360	0.0051	0.0051	0.0060	0.0067
25	28	0.360	0.0240	0.0240	0.0284	0.0314
26	29	0.360	0.0035	0.0035	0.0042	0.0046
27	30	0.359	0.0004	0.0004	0.0005	0.0006
28	31	0.360	0.0038	0.0038	0.0045	0.0049
29	32	0.360	0.0083	0.0083	0.0098	0.0108
30	34	0.360	0.0007	0.0007	0.0009	0.0010
31	33	0.359	0.0004	0.0004	0.0005	0.0005
32	35	0.359	0.0112	0.0112	0.0133	0.0146
33	36	0.358	0.0012	0.0012	0.0014	0.0015
34	37	0.390	0.0000	0.0000	0.0000	0.0000
35	38	0.359	0.0102	0.0102	0.0121	0.0133
36	39	0.358	0.0011	0.0011	0.0014	0.0015
37	40	0.360	0.0064	0.0064	0.0076	0.0083
38	41	0.360	0.0124	0.0124	0.0147	0.0162
39	42	0.358	0.0018	0.0018	0.0021	0.0024
40	43	0.359	0.0035	0.0035	0.0042	0.0046
41	44	0.358	0.0062	0.0062	0.0073	0.0081
42	45	0.363	0.1419	0.1419	0.1683	0.1856
43	46	0.364	0.1494	0.1494	0.1773	0.1955
44	47	0.347	0.0000	0.0000	0.0000	0.0000
45	48	0.358	0.0392	0.0392	0.0464	0.0511
46	50	0.362	0.1320	0.1320	0.1565	0.1725
47	51	0.362	0.1251	0.1251	0.1483	0.1635
48	53	0.362	0.0905	0.0905	0.1073	0.1183
49	55	0.361	0.0802	0.0802	0.0951	0.1048
50	57	0.361	0.0739	0.0739	0.0877	0.0966
51	59	0.361	0.0602	0.0602	0.0714	0.0787
52	60	0.362	0.1122	0.1122	0.1331	0.1467
53	61	0.362	0.1125	0.1125	0.1333	0.1470
54	65	0.362	0.0832	0.0832	0.0986	0.1087
55	68	0.363	0.0572	0.0572	0.0679	0.0748
56	69	0.363	0.1415	0.1415	0.1678	0.1851
57	70	0.364	0.1124	0.1124	0.1333	0.1470
58	72	0.364	0.0821	0.0821	0.0975	0.1075
59	73	0.359	0.0007	0.0007	0.0008	0.0009
60	74	0.358	0.0026	0.0026	0.0031	0.0034
61	75	0.358	0.0046	0.0046	0.0054	0.0059
62	76	0.359	0.0057	0.0057	0.0067	0.0074
63	77	0.361	0.0032	0.0032	0.0038	0.0042
64	78	0.361	0.0021	0.0021	0.0025	0.0027
65	79	0.360	0.0043	0.0043	0.0051	0.0057
66	80	0.361	0.0035	0.0035	0.0041	0.0045
67	81	0.363	0.0359	0.0359	0.0426	0.0470
68	82	0.363	0.0065	0.0065	0.0078	0.0086
69	83	0.363	0.0030	0.0030	0.0035	0.0039
70	84	0.364	0.0042	0.0042	0.0050	0.0055
71	85	0.361	0.0045	0.0045	0.0054	0.0059
72	86	0.362	0.0069	0.0069	0.0082	0.0090
73	87	0.364	0.0127	0.0127	0.0150	0.0166
74	88	0.367	0.0092	0.0092	0.0109	0.0121
75	89	0.369	0.0140	0.0140	0.0167	0.0184

PRECEDING PAGE BLANK-NOT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH 5.22	RE/METER 3.2205E 06	REL 6.3314E 05	LENGTH(METER) 0.197	PT(ATM) 6.71	TT(DEG K) 845.2	HT(JOULE/KG) 0.87332E 06	RS(METER) C.0018			TEST NO. 195		
MACH 5.22	RE/FT 9.8161E 05	REL 6.3314E 05	LENGTH(FT) 0.645	PT(PSI) 98.68	TT(DEG R) 1523.1	HT(BTU/LBM) 375.55	RS(FT) 0.0060			RUN NO. 36		
CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)		
1	1	317.3	571.2	20.336	17.917	76.513	67.419	1.4312E-02	1.5787E-02	0.251		
2	2	317.4	571.2	16.571	14.601	76.508	67.414	1.1665E-02	1.2867E-02	0.322		
3	3	318.0	572.4	16.010	14.107	76.414	67.331	1.1286E-02	1.2451E-02	0.357		
4	4	318.3	573.0	14.479	12.758	76.368	67.291	1.0214E-02	1.1269E-02	0.377		
5	5	318.4	573.1	13.285	11.706	76.356	67.280	9.3728E-03	1.0341E-02	0.363		
6	6	317.9	572.3	12.265	10.807	76.424	67.340	8.6446E-03	9.5369E-03	0.351		
7	7	317.5	571.5	11.762	10.364	76.486	67.394	8.2824E-03	9.1365E-03	0.359		
8	8	316.7	570.1	11.395	10.041	76.596	67.492	8.0108E-03	8.8354E-03	0.359		
9	9	315.8	568.4	10.504	9.256	76.734	67.613	7.3694E-03	8.1263E-03	0.363		
10	10	315.3	567.6	9.692	8.540	76.803	67.674	6.7927E-03	7.4895E-03	0.370		
11	11	314.4	565.8	9.584	8.444	76.941	67.795	6.7029E-03	7.3850E-03	0.348		
12	12	314.0	565.2	8.298	7.312	76.996	67.844	5.7939E-03	6.3919E-03	0.331		
13	13	313.6	564.5	7.162	6.310	77.049	67.891	5.0009E-03	5.5119E-03	0.323		
14	14	312.5	562.5	6.596	5.812	77.209	68.032	4.5949E-03	5.0632E-03	0.328		
15	15	313.0	563.3	5.001	4.406	77.142	67.973	3.4872E-03	3.8430E-03	0.338		
16	16	313.7	564.7	8.338	7.347	77.032	67.875	5.8239E-03	6.4191E-03	0.161		
17	17	314.2	565.6	7.648	6.739	76.958	67.811	5.3476E-03	5.8948E-03	0.135		
18	18	314.7	566.5	8.959	7.894	76.890	67.750	6.2709E-03	6.9133E-03	0.221		
19	20	314.9	566.8	6.708	5.911	76.864	67.727	4.6974E-03	5.1788E-03	0.212		
20	22	313.7	564.6	5.906	5.204	77.038	67.881	4.1251E-03	4.5466E-03	0.222		
21	24	312.3	562.2	1.589	1.400	77.235	68.055	1.1067E-03	1.2194E-03	0.256		
22	25	312.5	562.5	1.398	1.232	77.209	68.032	9.7368E-04	1.0729E-03	0.236		
23	26	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******		
24	27	312.8	563.1	0.394	0.347	77.161	67.990	2.7447E-04	3.0246E-04	0.237		
25	28	313.0	563.5	1.851	1.631	77.131	67.963	1.2913E-03	1.4230E-03	0.250		
26	29	312.6	562.8	0.271	0.239	77.188	68.014	1.8873E-04	2.0797E-04	0.386		
27	30	312.5	562.6	0.034	0.030	77.204	68.027	2.3570E-05	2.5972E-05	-0.884		
28	31	312.7	562.9	0.292	0.258	77.175	68.002	2.0381E-04	2.2459E-04	-0.272		
29	32	312.9	563.1	0.639	0.563	77.157	67.986	4.4555E-04	4.9059E-04	0.535		
30	34	312.7	562.9	0.056	0.050	77.178	68.005	3.9169E-05	4.3163E-05	-1.746		
31	33	312.3	562.1	0.032	0.028	77.240	68.059	2.2411E-05	2.4694E-05	-0.610		
32	35	312.3	562.2	0.864	0.761	77.233	68.052	6.0157E-04	6.6285E-04	0.427		
33	36	311.2	560.2	0.090	0.079	77.393	68.194	6.2536E-05	6.8851E-05	0.315		
34	37	338.8	609.9	0.000	0.000	0.000	0.000	0.0000	0.0000	*******		
35	38	311.8	561.2	0.790	0.696	77.314	68.124	5.4959E-04	6.0551E-04	0.378		
36	39	311.7	561.0	0.088	0.078	77.325	68.134	6.1460E-05	6.7712E-05	0.122		
37	40	312.8	563.0	0.493	0.435	77.172	67.999	3.4394E-04	3.7901E-04	0.192		
38	41	312.9	563.3	0.958	0.845	77.148	67.977	6.6832E-04	7.3650E-04	0.382		
39	42	311.3	560.3	0.140	0.123	77.365	68.186	9.7292E-05	1.0718E-04	0.373		
40	43	312.3	562.2	0.273	0.240	77.231	68.051	1.8989E-04	2.0923E-04	-0.029		
41	44	311.4	560.4	0.479	0.422	77.373	68.176	3.3286E-04	3.6669E-04	0.274		

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

42	45	316.1	566.9	10.879	9.566	76.693	67.577	7.6369E-03	8.4218E-03	0.443
43	46	316.8	570.2	11.441	10.081	76.594	67.490	8.0435E-03	8.8715E-03	0.323
44	47	301.4	542.5	0.000	0.000	0.000	0.000	0.0000	0.0000	1.049
45	48	311.6	560.8	3.029	2.669	77.343	68.150	2.1059E-03	2.3201E-03	0.046
46	50	314.7	566.4	10.149	8.942	76.896	67.755	7.1028E-03	7.8303E-03	0.124
47	51	314.5	566.0	9.621	8.477	76.925	67.781	6.7304E-03	7.4195E-03	0.189
48	53	314.0	566.3	6.959	6.131	76.902	67.761	4.8697E-03	5.3684E-03	0.214
49	55	314.2	566.3	6.171	5.437	76.962	67.814	4.3147E-03	4.7562E-03	0.198
50	57	314.2	565.6	5.690	5.014	76.961	67.813	3.9784E-03	4.3855E-03	0.187
51	59	314.1	565.3	4.637	4.086	76.982	67.832	3.2415E-03	3.5731E-03	0.161
52	60	314.0	566.4	8.629	7.603	76.900	67.759	6.0388E-03	6.6574E-03	0.098
53	61	314.6	566.3	8.646	7.620	76.901	67.760	6.0519E-03	6.6718E-03	0.199
54	65	314.4	566.9	6.391	5.631	76.855	67.719	4.4755E-03	4.9342E-03	0.170
55	68	315.1	567.8	4.393	3.871	76.784	67.657	3.0796E-03	3.3956E-03	0.092
56	69	315.8	568.5	10.855	9.565	76.726	67.606	7.6165E-03	8.3989E-03	0.190
57	70	316.1	569.0	8.618	7.594	76.690	67.574	6.0500E-03	6.6718E-03	0.186
58	72	315.6	568.6	6.292	5.544	76.616	67.509	4.4221E-03	4.8772E-03	0.158
59	73	311.2	561.4	0.051	0.045	77.297	68.109	3.5282E-05	3.8872E-05	-0.645
60	74	311.7	561.0	0.203	0.179	77.329	68.137	1.4103E-04	1.5537E-04	0.196
61	75	311.3	560.3	0.352	0.311	77.388	68.189	2.4491E-04	2.6980E-04	0.292
62	76	311.9	561.4	0.439	0.387	77.297	68.109	3.0560E-04	3.3670E-04	0.293
63	77	313.8	564.9	0.246	0.217	77.018	67.863	1.7175E-04	1.8931E-04	0.414
64	78	313.6	564.5	0.161	0.142	77.047	67.889	1.1239E-04	1.2387E-04	0.284
65	79	313.4	564.2	0.334	0.294	77.073	67.911	2.3316E-04	2.5698E-04	0.246
66	80	314.2	565.5	0.267	0.235	76.969	67.820	1.8677E-04	2.0588E-04	0.228
67	81	316.0	568.7	2.754	2.427	76.708	67.590	1.9330E-03	2.1316E-03	0.548
68	82	315.6	568.1	0.502	0.443	76.758	67.635	3.5234E-04	3.8852E-04	0.456
69	83	315.8	568.4	0.229	0.202	76.732	67.611	1.6066E-04	1.7716E-04	0.234
70	84	316.2	569.2	0.321	0.283	76.673	67.559	2.2566E-04	2.4886E-04	0.372
71	85	313.9	565.1	0.349	0.308	77.002	67.849	2.4422E-04	2.6920E-04	0.324
	86	314.7	566.5	0.531	0.468	76.890	67.750	3.7200E-04	4.1011E-04	0.114
	87	316.4	569.5	0.971	0.855	76.642	67.532	6.8192E-04	7.5206E-04	0.428
	88	319.1	574.4	0.701	0.618	76.255	67.191	4.9547E-04	5.4676E-04	0.253
	89	321.2	578.2	1.065	0.939	75.949	66.922	7.5627E-04	8.3495E-04	0.255

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9363E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)	TEST NO. 195
5.22	3.2673E 06	6.4233E 05	0.197	6.84	848.0	0.87530E 05	0.0018	RUN NO. 37
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)	ET ALONE
5.22	9.9586E 05	6.4233E 05	0.645	100.48	1526.3	376.40	0.0060	$\alpha = -50°, \beta = 0°$

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.373	0.0781	0.0781	0.0929	0.1027	39	51	0.374	0.0247	0.0247	0.0294	0.0325
2	2	0.373	0.1177	0.1177	0.1401	0.1548	40	54	0.365	0.1632	0.1632	0.1937	0.2137
3	3	0.373	0.1432	0.1432	0.1704	0.1883	41	55	0.364	0.1604	0.1604	0.1903	0.2099
4	4	0.373	0.1579	0.1579	0.1879	0.2076	42	56	0.370	0.1551	0.1551	0.1844	0.2036
5	5	0.373	0.1583	0.1583	0.1884	0.2081	43	57	0.373	0.1048	0.1048	0.1247	0.1378
6	6	0.373	0.1672	0.1672	0.1989	0.2198	44	58	0.373	0.0571	0.0571	0.0679	0.0750
7	7	0.374	0.1739	0.1739	0.2069	0.2286	45	60	0.365	0.1639	0.1639	0.1945	0.2146
8	8	0.373	0.1702	0.1702	0.2025	0.2237	46	61	0.366	0.1628	0.1628	0.1933	0.2133
9	9	0.372	0.1551	0.1551	0.1845	0.2038	47	62	0.371	0.1545	0.1545	0.1837	0.2029
10	10	0.371	0.1579	0.1579	0.1878	0.2074	48	63	0.373	0.1078	0.1078	0.1282	0.1417
11	11	0.369	0.1686	0.1686	0.2005	0.2211	49	64	0.374	0.0567	0.0567	0.0675	0.0746
12	12	0.367	0.1727	0.1727	0.2051	0.2264	50	65	0.373	0.0233	0.0233	0.0278	0.0307
13	13	0.371	0.0222	0.0222	0.0264	0.0291	51	66	0.370	0.0070	0.0070	0.0084	0.0092
14	19	0.365	0.1722	0.1722	0.2044	0.2255	52	67	0.367	0.0039	0.0039	0.0046	0.0051
15	25	0.365	0.1641	0.1641	0.1947	0.2148	53	68	0.359	0.0059	0.0059	0.0070	0.0077
16	26	0.373	0.1073	0.1073	0.1277	0.1411	54	70	0.365	0.1658	0.1658	0.1968	0.2171
1	27	0.374	0.0571	0.0571	0.0680	0.0751	55	71	0.371	0.1457	0.1457	0.1732	0.1913
2	28	0.373	0.0228	0.0228	0.0272	0.0300	56	72	0.373	0.1040	0.1040	0.1237	0.1367
9	30	0.365	0.1706	0.1706	0.2025	0.2233	57	73	0.373	0.0527	0.0527	0.0627	0.0693
0	31	0.373	0.1053	0.1053	0.1252	0.1384	58	77	0.366	0.1634	0.1634	0.1940	0.2140
1	32	0.364	0.1681	0.1681	0.1995	0.2201	59	78	0.371	0.1481	0.1481	0.1761	0.1945
2	33	0.370	0.1500	0.1500	0.1783	0.1969	60	79	0.373	0.1034	0.1034	0.1230	0.1359
3	34	0.373	0.1081	0.1081	0.1286	0.1421	61	81	0.373	0.0219	0.0219	0.0260	0.0287
4	35	0.374	0.0613	0.0613	0.0729	0.0806	62	84	0.367	0.1637	0.1637	0.1944	0.2145
5	36	0.373	0.0264	0.0264	0.0315	0.0348	63	85	0.371	0.1500	0.1500	0.1783	0.1970
6	37	0.371	0.0062	0.0062	0.0074	0.0082	64	86	0.373	0.1046	0.1046	0.1244	0.1374
7	38	0.367	0.0023	0.0023	0.0028	0.0030	65	90	0.366	0.1661	0.1661	0.1972	0.2176
8	39	0.358	0.0037	0.0037	0.0044	0.0049	66	91	0.371	0.1506	0.1506	0.1791	0.1978
9	40	0.365	0.1614	0.1614	0.1915	0.2113	67	92	0.373	0.1026	0.1026	0.1220	0.1348
0	41	0.365	0.1602	0.1602	0.1901	0.2097	68	94	0.372	0.0215	0.0215	0.0256	0.0283
1	42	0.371	0.1540	0.1540	0.1831	0.2022	69	98	0.366	0.1767	0.1767	0.2098	0.2314
2	43	0.374	0.1035	0.1035	0.1232	0.1361	70	99	0.372	0.1557	0.1557	0.1851	0.2045
3	44	0.374	0.0585	0.0585	0.0696	0.0769	71	100	0.374	0.1059	0.1059	0.1260	0.1392
4	46	0.389	0.0000	0.0000	0.0000	0.0000	72	103	0.367	0.1716	0.1716	0.2037	0.2248
5	47	0.366	0.1677	0.1677	0.1991	0.2197	73	104	0.372	0.1559	0.1559	0.1854	0.2048
6	48	0.371	0.1578	0.1578	0.1876	0.2072	74	105	0.374	0.1047	0.1047	0.1246	0.1377
7	49	0.373	0.1084	0.1084	0.1290	0.1425	75	107	0.374	0.0247	0.0247	0.0294	0.0324
8	50	0.374	0.0617	0.0617	0.0734	0.0811							

PRECEDING PAGE BLANK-NOT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 37

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	3.2673E 06	6.4233E 05	0.197	6.84	848.0	0.37530E 06	0.0018
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	9.9586E 05	6.4233E 05	0.645	100.48	1526.3	376.40	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	C(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.85)	TIME(SEC)
1	1	325.2	585.3	5.963	5.254	76.334	67.261	4.1836E-03	4.6222E-03	0.532
2	2	325.0	584.9	8.991	7.922	76.364	67.287	6.3054E-03	6.966 E-03	0.340
3	3	325.5	585.9	10.927	9.628	76.287	67.219	7.6720E-03	8.4770E-03	0.384
4	4	325.5	585.9	12.046	10.614	76.286	67.219	8.4580E-03	9.3455E-03	0.447
5	5	325.2	585.4	12.084	10.647	76.324	67.251	8.4796E-03	9.3688E-03	0.453
6	6	325.5	585.9	12.754	11.238	76.289	67.221	8.9546E-03	9.8941E-03	0.463
7	7	325.5	586.0	13.264	11.687	76.281	67.213	9.3138E-03	1.0291E-02	0.452
8	8	324.9	584.9	12.997	11.452	76.370	67.292	9.1144E-03	1.0069E-02	0.454
9	9	324.1	583.5	11.863	10.453	76.483	67.392	8.3047E-03	9.1733E-03	0.469
10	10	323.3	581.9	12.100	10.662	76.610	67.504	8.4547E-03	9.3371E-03	0.438
11	11	321.8	579.3	12.949	11.409	76.823	67.691	9.0192E-03	9.9572E-03	0.430
12	12	320.0	576.1	13.311	11.729	77.081	67.919	9.2 65E-03	1.0193E-02	0.392
13	13	323.5	582.3	1.698	1.496	76.577	67.475	1.1870E-03	1.3110E-03	0.429
14	19	318.2	572.7	13.323	11.739	77.355	68.160	9.2068E-03	1.0156E-02	0.409
15	25	318.0	572.4	12.694	11.185	77.378	68.180	8.7698E-03	9.6737E-03	0.408
	26	324.9	584.9	8.198	7.224	76.370	67.292	5.7489E-03	6.3513E-03	0.432
17	27	325.7	586.3	4.358	3.840	76.252	67.189	3.0611E-03	3.3825E-03	0.437
18	28	324.7	584.5	1.745	1.537	76.397	67.316	1.2230E-03	1.3511E-03	0.464
19	30	318.2	572.8	13.193	11.625	77.348	68.154	9.1181E-03	1.0058E-02	0.395
20	31	325.1	585.1	8.036	7.081	76.348	67.273	5.6373E-03	6.2282E-03	0.426
21	32	317.6	571.6	13.020	11.473	77.439	68.234	8.9869E-03	9.9123E-03	0.389
22	33	322.6	580.7	11.505	10.138	76.710	67.592	8.0274E-03	8.8638E-03	0.417
23	34	325.1	585.1	8.254	7.273	76.349	67.274	5.7897E-03	6.3966E-03	0.426
24	35	325.9	586.7	4.669	4.114	76.223	67.162	3.2814E-03	3.6260E-03	0.440
25	36	325.1	585.2	2.019	1.779	76.339	67.265	1.4162E-03	1.5647E-03	0.450
26	37	323.0	581.3	0.477	0.421	76.655	67.544	3.3326E-04	3.6801E-04	0.434
27	38	319.9	575.9	0.179	0.158	77.096	67.932	1.2431E-04	1.3718E-04	0.299
28	39	312.1	561.7	0.293	0.258	78.241	68.941	1.9965E-04	2.1994E-04	0.340
29	40	317.8	572.1	12.490	11.006	77.400	68.200	8.6260E-03	9.5147E-03	0.374
30	41	318.2	572.8	12.388	10.916	77.345	68.151	8.5625E-03	9.4455E-03	0.383
31	42	323.0	581.4	11.802	10.399	76.650	67.539	8.2416E-03	9.1013E-03	0.406
32	43	325.5	585.9	7.899	6.960	76.282	67.215	5.5464E-03	6.1285E-03	0.412
33	44	326.3	587.3	4.454	3.925	76.177	67.122	3.1324E-03	3.4617E-03	0.437
34	46	338.8	609.9	0.000	0.000	74.349	65.512	0.0000	0.0000	*******
35	47	318.6	573.4	12.964	11.423	77.294	68.106	8.9675E-03	9.8930E-03	0.379
36	48	323.0	581.4	12.094	10.656	76.648	67.538	8.4456E-03	9.3265E-03	0.402
37	49	325.4	585.7	8.271	7.288	76.298	67.229	5.8063E-03	6.4154E-03	0.418
38	50	326.1	587.1	4.699	4.141	76.192	67.135	3.3040E-03	3.6512E-03	0.433
39	51	325.5	585.9	1.888	1.663	76.283	67.216	1.3255E-03	1.4646E-03	0.441
40	54	318.3	573.0	12.618	11.119	77.332	68.140	8.7233E-03	9.6230E-03	0.379
41	55	317.6	571.7	12.417	10.941	77.438	68.233	8.5707E-03	9.4532E-03	0.379

42	56	322.6	580.7	11.897	10.483	76.709	67.591	8.3009E-03	9.1658E-03	0.476
43	57	325.2	585.3	8.001	7.050	76.337	67.263	5.6137E-03	6.2023E-03	0.417
44	58	325.5	585.8	4.353	3.835	76.293	67.224	3.0560E-03	3.3766E-03	0.424
45	60	318.0	572.3	12.682	11.175	77.384	68.186	8.7607E-03	9.6636E-03	0.377
46	61	318.6	573.6	12.585	11.090	77.283	68.097	8.7067E-03	9.6055E-03	0.377
47	62	323.1	581.5	11.843	10.436	76.660	67.531	8.2716E-03	9.1345E-03	0.407
48	63	325.4	585.7	8.223	7.245	76.305	67.235	5.7718E-03	6.3773E-03	0.419
49	64	325.9	586.6	4.325	3.811	76.229	67.168	3.0395E-03	3.3587E-03	0.426
50	65	324.9	584.8	1.782	1.571	76.376	67.297	1.2498E-03	1.3808E-03	0.441
51	66	322.8	581.0	0.540	0.476	76.681	67.567	3.7670E-04	4.1597E-04	0.446
52	67	319.9	575.7	0.300	0.264	77.107	67.942	2.0810E-04	2.2965E-04	0.381
53	69	312.8	563.1	0.463	0.408	78.130	68.843	3.1666E-04	3.4891E-04	0.420
54	70	318.2	572.7	12.825	11.301	77.349	68.155	8.8540E-03	9.7780E-03	0.362
55	71	322.9	581.3	11.170	9.842	76.659	67.547	7.7992E-03	8.6125E-03	0.387
56	72	324.9	584.8	7.942	6.998	76.374	67.296	5.5688E-03	6.1523E-03	0.404
57	73	325.4	585.8	4.023	3.544	76.297	67.228	2.8239E-03	3.1202E-03	0.413
58	77	319.0	574.1	12.621	11.121	77.239	68.058	8.7372E-03	9.6397E-03	0.348
59	78	323.5	582.3	11.341	9.993	76.578	67.476	7.9284E-03	8.7563E-03	0.370
60	79	325.4	585.7	7.888	6.951	76.302	67.232	5.5373E-03	6.1182E-03	0.396
61	81	324.7	584.4	1.670	1.472	76.407	67.325	1.1705E-03	1.2931E-03	0.422
62	84	319.6	575.3	12.627	11.126	77.143	67.973	8.7532E-03	9.6589E-03	0.344
63	85	323.5	582.2	11.485	10.120	76.581	67.478	8.0286E-03	8.8670E-03	0.366
64	86	325.3	585.5	7.979	7.031	76.319	67.247	5.6000E-03	6.1872E-03	0.387
65	90	318.8	573.9	12.836	11.311	77.264	68.080	8.8828E-03	9.8000E-03	0.341
66	91	323.2	581.8	11.542	10.170	76.618	67.511	8.0638E-03	8.9053E-03	0.372
67	92	325.4	585.7	7.826	6.896	76.305	67.235	5.4934E-03	6.0697E-03	0.374
68	94	324.6	584.3	1.644	1.449	76.417	67.334	1.1524E-03	1.2730E-03	0.400
69	98	319.1	574.4	13.641	12.020	77.212	68.034	9.4467E-03	1.0423E-02	0.343
70	99	324.1	583.3	11.908	10.492	76.494	67.402	8.3349E-03	9.2065E-03	0.366
71	102	326.0	586.8	8.063	7.109	76.210	67.151	5.6709E-03	6.2669E-03	0.373
72	103	319.8	575.7	13.229	11.657	77.116	67.950	9.1747E-03	1.0124E-02	0.345
73	104	324.3	583.8	11.919	10.502	76.454	67.366	8.3476E-03	9.2211E-03	0.363
74	105	326.1	587.0	7.978	7.030	76.158	67.140	5.6093E-03	6.1987E-03	0.381
75	107	325.9	586.7	1.880	1.657	76.222	67.162	1.3216E-03	1.4604E-03	0.374

FREE-STREAM DENSITY-VELOCITY PRODUCT = 1.9682E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 38

MACH	RE/METER	REL LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	3.4107E 06	6.7052E 05 0.197	6.67	813.3	0.83722E 06	0.0018
MACH	RE/FT	REL LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0396E 06	6.7052E 05 0.645	98.02	1464.0	360.02	0.0060

ET ALONE
α = -120°, β = 0°

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.383	0.0251	0.0251	0.0299	0.0331
2	2	0.382	0.0333	0.0333	0.0398	0.0440
3	3	0.383	0.0413	0.0413	0.0493	0.0546
4	4	0.383	0.0493	0.0493	0.0588	0.0651
5	5	0.382	0.0522	0.0522	0.0623	0.0690
6	6	0.382	0.0603	0.0603	0.0719	0.0796
7	7	0.382	0.0681	0.0681	0.0813	0.0900
8	8	0.381	0.0734	0.0734	0.0876	0.0969
9	9	0.382	0.0754	0.0754	0.0900	0.0996
10	10	0.382	0.0855	0.0855	0.1020	0.1129
11	11	0.381	0.1038	0.1038	0.1238	0.1370
12	12	0.380	0.1220	0.1220	0.1455	0.1609
13	13	0.384	0.0158	0.0158	0.0188	0.0209
14	28	0.380	0.1289	0.1289	0.1537	0.1701
15	25	0.381	0.1239	0.1239	0.1477	0.1634
16	26	0.386	0.0825	0.0825	0.0985	0.1091
17	27	0.387	0.0458	0.0458	0.0547	0.0606
18	28	0.387	0.0187	0.0187	0.0223	0.0247
19	30	0.381	0.1293	0.1293	0.1542	0.1706
20	31	0.386	0.0812	0.0812	0.0970	0.1075
21	32	0.381	0.1282	0.1282	0.1529	0.1692
22	33	0.384	0.1144	0.1144	0.1366	0.1512
23	34	0.383	0.0837	0.0837	0.1000	0.1107
24	35	0.387	0.0491	0.0491	0.0587	0.0650
25	36	0.387	0.0215	0.0215	0.0257	0.0285
26	37	0.385	0.0052	0.0052	0.0062	0.0069
27	38	0.384	0.0023	0.0023	0.0027	0.0030
28	39	0.378	0.0039	0.0039	0.0046	0.0051
29	40	0.381	0.1241	0.1241	0.1480	0.1638
30	41	0.381	0.1227	0.1227	0.1463	0.1619
31	42	0.384	0.1172	0.1172	0.1399	0.1549
32	43	0.387	0.0800	0.0800	0.0956	0.1059
33	44	0.388	0.0463	0.0463	0.0554	0.0613
34	46	0.406	0.0000	0.0000	0.0000	0.0000
35	47	0.381	0.1275	0.1275	0.1520	0.1683
36	48	0.385	0.1197	0.1197	0.1429	0.1583
37	49	0.387	0.0828	0.0828	0.0989	0.1095
38	50	0.388	0.0485	0.0485	0.0580	0.0643
39	51	0.388	0.0196	0.0196	0.0234	0.0260
40	54	0.381	0.1242	0.1242	0.1482	0.1640
41	55	0.380	0.1225	0.1225	0.1460	0.1616
42	56	0.384	0.1180	0.1180	0.1409	0.1560
43	57	0.386	0.0799	0.0799	0.0955	0.1058
44	58	0.387	0.0446	0.0446	0.0532	0.0590
45	60	0.381	0.1249	0.1249	0.1489	0.1648
46	61	0.381	0.1250	0.1250	0.1491	0.1650
47	62	0.384	0.1177	0.1177	0.1406	0.1556
48	63	0.386	0.0827	0.0827	0.0988	0.1095
49	64	0.387	0.0447	0.0447	0.0534	0.0592
50	65	0.387	0.0182	0.0182	0.0218	0.0241
51	66	0.386	0.0050	0.0050	0.0059	0.0066
52	67	0.384	0.0034	0.0034	0.0040	0.0045
53	68	0.379	0.0039	0.0039	0.0046	0.0051
54	70	0.381	0.1324	0.1324	0.1579	0.1747
55	71	0.384	0.1159	0.1159	0.1384	0.1533
56	72	0.386	0.0825	0.0825	0.0985	0.1091
57	73	0.387	0.0433	0.0433	0.0518	0.0574
58	77	0.381	0.1361	0.1361	0.1623	0.1796
59	78	0.384	0.1229	0.1229	0.1467	0.1624
60	79	0.386	0.0852	0.0852	0.1018	0.1127
61	81	0.387	0.0183	0.0183	0.0219	0.0243
62	84	0.382	0.1388	0.1388	0.1655	0.1832
63	85	0.384	0.1263	0.1263	0.1508	0.1670
64	86	0.386	0.0870	0.0870	0.1039	0.1151
65	90	0.381	0.1435	0.1435	0.1712	0.1894
66	91	0.384	0.1292	0.1282	0.1531	0.1695
67	92	0.386	0.0854	0.0854	0.1020	0.1130
68	94	0.387	0.0183	0.0183	0.0219	0.0243
69	98	0.381	0.1532	0.1532	0.1827	0.2022
70	99	0.385	0.1323	0.1323	0.1580	0.1750
71	100	0.387	0.0879	0.0879	0.1050	0.1164
72	103	0.382	0.1540	0.1540	0.1837	0.2033
73	104	0.385	0.1392	0.1392	0.1662	0.1841
74	105	0.387	0.0961	0.0961	0.1148	0.1272
75	107	0.389	0.0383	0.0383	0.0457	0.0507

PRECEDING PAGE BLANK-NOT

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 195
RUN NO. 38

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	RS(METER)
5.22	3.4107E 06	6.7052E 05	0.197	6.67	813.3	0.83722E 06	0.0018
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	RS(FT)
5.22	1.0396E 06	6.7052E 05	0.645	98.02	1464.0	360.02	0.0060

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(0.900)	ST(0.850)	TIME(SEC)
1	1	319.0	574.2	1.777	1.565	70.914	62.485	1.3243E-03	1.4660E-03	0.532
2	2	318.7	573.7	2.364	2.083	70.951	62.518	1.7611E-03	1.9494E-03	0.356
3	3	319.0	574.2	2.929	2.581	70.910	62.482	2.1835E-03	2.4171E-03	0.395
4	4	318.9	574.0	3.496	3.081	70.926	62.496	2.6054E-03	2.8841E-03	0.457
5	5	318.7	573.6	3.707	3.266	70.957	62.522	2.7610E-03	3.0561E-03	0.464
6	6	318.8	573.8	4.276	3.767	70.940	62.508	3.1856E-03	3.5263E-03	0.474
7	7	318.8	573.9	4.834	4.259	70.934	62.502	3.6020E-03	3.9872E-03	0.460
8	8	318.6	573.6	5.207	4.588	70.961	62.526	3.8783E-03	4.2929E-03	0.465
9	9	318.5	573.3	5.352	4.716	70.985	62.547	3.9847E-03	4.4104E-03	0.480
10	10	318.2	572.8	6.072	5.351	71.019	62.577	4.5185E-03	5.0010E-03	0.450
11	11	317.7	571.9	7.378	6.501	71.055	62.644	5.4831E-03	6.0678E-03	0.443
12	12	316.9	570.4	8.687	7.654	71.210	62.746	6.4440E-03	7.1297E-03	0.401
13	13	320.0	575.9	1.117	0.984	70.771	62.359	8.3426E-04	9.2374E-04	0.377
14	19	317.2	570.9	9.175	8.084	71.172	62.712	6.9104E-03	7.5357E-03	0.432
15	25	317.4	571.3	8.811	7.764	71.145	62.688	6.5432E-03	7.2404E-03	0.436
16	26	321.7	579.0	5.816	5.125	70.530	62.146	4.3623E-03	4.8322E-03	0.460
17	27	322.6	580.7	3.223	2.840	70.391	62.024	2.4227E-03	2.6844E-03	0.474
18	28	322.3	580.2	1.314	1.158	70.433	62.061	9.8693E-04	1.0934E-03	0.493
19	30	317.6	571.7	9.193	8.101	71.108	62.656	6.8311E-03	7.5594E-03	0.423
20	31	321.9	579.5	5.724	5.044	70.489	62.110	4.2963E-03	4.7555E-03	0.458
21	32	317.3	571.1	9.125	8.041	71.161	62.702	6.7747E-03	7.4963E-03	0.420
22	33	320.3	576.5	8.091	7.129	70.731	62.323	6.0488E-03	6.6980E-03	0.448
23	34	322.0	579.6	5.897	5.196	70.482	62.104	4.4268E-03	4.9041E-03	0.460
24	35	322.9	581.2	3.453	3.043	70.356	61.993	2.5974E-03	2.8781E-03	0.482
25	36	322.8	581.1	1.515	1.335	70.361	61.998	1.1398E-03	1.2629E-03	0.482
26	37	321.9	579.5	0.367	0.323	70.492	62.113	2.7548E-04	3.0517E-04	0.440
27	38	320.3	576.5	0.161	0.142	70.728	62.321	1.2037E-04	1.3329E-04	0.321
28	39	315.1	567.2	0.276	0.243	71.470	62.975	2.0383E-04	2.2543E-04	0.374
29	40	317.4	571.4	8.830	7.780	71.135	62.679	6.5579E-03	7.2567E-03	0.410
30	41	317.7	571.8	8.721	7.684	71.100	62.648	6.4810E-03	7.1721E-03	0.417
31	42	320.5	576.9	8.283	7.298	70.694	62.291	6.1958E-03	6.8613E-03	0.440
32	43	322.4	580.2	5.633	4.963	70.431	62.059	4.2315E-03	4.6882E-03	0.448
33	44	323.1	581.6	3.257	2.870	70.325	61.966	2.4514E-03	2.7165E-03	0.478
34	46	338.8	609.9	0.000	0.000	68.077	59.985	0.0000	0.0000	*******
35	47	317.8	572.	9.061	7.984	71.080	62.631	6.7356E-03	7.4541E-03	0.411
36	48	320.5	577.0	8.463	7.457	70.691	62.289	6.3308E-03	7.0109E-03	0.434
37	49	322.2	580.0	5.830	5.137	70.447	62.073	4.3787E-03	4.8512E-03	0.447
38	50	323.1	581.6	3.413	3.008	70.322	61.963	2.5688E-03	2.8466E-03	0.473
39	51	323.2	581.8	1.378	1.214	70.303	61.947	1.0374E-03	1.1496E-03	0.474
40	54	317.8	572.1	8.830	7.780	71.077	62.629	6.5639E-03	7.2641E-03	0.413
41	55	317.1	570.7	8.719	7.683	71.189	62.727	6.4702E-03	7.1591E-03	0.411

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42	56	320.0	576.0	8.350	7.357	70.767	62.355	6.2386E-03	6.9079E-03	0.509
43	57	321.9	579.4	5.636	4.966	70.496	62.116	4.2295E-03	4.6854E-03	0.447
44	58	322.5	580.5	3.138	2.765	70.411	62.042	2.3578E-03	2.6124E-03	0.465
45	60	317.2	571.0	8.888	7.832	71.164	62.705	6.5983E-03	7.3010E-03	0.410
46	61	317.6	571.7	8.891	7.834	71.109	62.656	6.6059E-03	7.3102E-03	0.413
47	62	320.1	576.1	8.332	7.341	70.759	62.349	6.2258E-03	6.8937E-03	0.437
48	63	321.9	579.4	5.832	5.139	70.495	62.116	4.3767E-03	4.8485E-03	0.450
49	64	322.7	580.8	3.147	2.773	70.386	62.020	2.3663E-03	2.6219E-03	0.465
50	65	322.6	580.7	1.284	1.131	70.391	62.024	9.6498E-04	1.0692E-03	0.472
51	66	321.8	579.2	0.351	0.309	70.511	62.129	2.6337E-04	2.9175E-04	0.393
52	67	320.2	576.3	0.239	0.211	70.741	62.332	1.7889E-04	1.9809E-04	0.436
53	68	315.6	568.1	0.276	0.243	71.399	62.912	2.0424E-04	2.2591E-04	0.318
54	70	317.3	571.2	9.420	8.300	71.147	62.690	6.9949E-03	7.7402E-03	0.406
55	71	320.2	576.3	8.202	7.227	70.746	62.336	6.1300E-03	6.7878E-03	0.429
56	72	321.6	578.9	5.817	5.126	70.539	62.155	4.3623E-03	4.8321E-03	0.440
57	73	322.5	580.5	3.050	2.688	70.411	62.041	2.2922E-03	2.5397E-03	0.465
58	77	317.7	571.8	9.675	8.525	71.102	62.650	7.1894E-03	7.9560E-03	0.402
59	78	320.5	576.9	8.685	7.653	70.697	62.294	6.4966E-03	7.1944E-03	0.418
60	79	321.9	579.5	6.004	5.291	70.489	62.111	4.5066E-03	4.9924E-03	0.440
61	81	322.6	580.6	1.289	1.136	70.400	62.032	9.6922E-04	1.0739E-03	0.479
62	84	318.0	572.4	9.859	8.687	71.051	62.606	7.3326E-03	8.1152E-03	0.401
63	85	320.4	576.7	8.934	7.872	70.714	62.309	6.6810E-03	7.3984E-03	0.419
64	86	321.7	579.1	6.136	5.407	70.518	62.136	4.6034E-03	5.0954E-03	0.435
65	90	317.5	571.5	10.209	8.996	71.121	62.667	7.5842E-03	8.3926E-03	0.402
66	91	320.4	576.7	9.065	7.988	70.710	62.305	6.7794E-03	7.5074E-03	0.431
67	92	322.2	579.9	6.017	5.302	70.458	62.083	4.5184E-03	5.0058E-03	0.429
68	94	322.7	580.9	1.290	1.137	70.375	62.010	9.7015E-04	1.0750E-03	0.465
69	98	317.9	572.2	10.887	9.593	71.070	62.622	8.0946E-03	8.9582E-03	0.406
70	99	320.9	577.6	9.345	8.234	70.643	62.246	6.9963E-03	7.7485E-03	0.427
71	100	322.4	580.4	6.191	5.455	70.419	62.049	4.6518E-03	5.1539E-03	0.430
72	103	318.4	573.1	10.931	9.632	70.999	62.560	8.1364E-03	9.0055E-03	0.410
73	104	321.2	578.2	9.824	8.656	70.592	62.201	7.3609E-03	8.1530E-03	0.417
74	105	322.6	580.7	6.765	5.961	70.393	62.026	5.0854E-03	5.6346E-03	0.427
75	107	323.9	582.9	2.686	2.367	70.216	61.870	2.0252E-03	2.2446E-03	0.402

STREAM DENSITY-VELOCITY PRODUCT = 1.9727E-01 (SLUGS/FT2-SEC)

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

TEST NO. 105
RUN NO. 39

MACH	RE/METER	REL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)		
5.30	1.552E 07	3.0624E 06	0.197	28.74	765.2	0.78482E 06	0.0016		
MACH	RE/FT	REL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)		ET ALONE
5.30	4.7480E 06	3.0624E 06	0.645	422.42	1377.4	337.49	0.0060		α = -90°, β = 0°

CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)	CHAN	T/C	HW/HT	Q/QS	H/HS(1.000)	H/HS(0.900)	H/HS(0.850)
1	1	0.430	0.0763	0.0763	0.0925	0.1036	39	51	0.431	0.0277	0.0277	0.0936	0.0878
2	2	0.430	0.1223	0.1223	0.1483	0.1660	40	54	0.420	0.1965	0.1965	0.2374	0.2649
3	3	0.431	0.1483	0.1483	0.1799	0.2014	41	55	0.419	0.1909	0.1909	0.2306	0.2574
4	4	0.431	0.1705	0.1705	0.2069	0.2316	42	56	0.428	0.1865	0.1865	0.2261	0.2529
5	5	0.431	0.1857	0.1857	0.2252	0.2521	43	57	0.432	0.1190	0.1190	0.1443	0.1616
6	6	0.432	0.1998	0.1998	0.2425	0.2715	44	58	0.432	0.0629	0.0629	0.0763	0.0855
7	7	0.432	0.1915	0.1915	0.2324	0.2602	45	60	0.420	0.1939	0.1939	0.2343	0.2615
8	8	0.431	0.1916	0.1916	0.2324	0.2602	46	61	0.421	0.1939	0.1939	0.2344	0.2617
9	9	0.430	0.1728	0.1728	0.2096	0.2346	47	62	0.429	0.1787	0.1787	0.2167	0.2424
10	10	0.428	0.1780	0.1780	0.2157	0.2413	48	63	0.433	0.1233	0.1233	0.1497	0.1677
11	11	0.426	0.1951	0.1951	0.2363	0.2641	49	64	0.433	0.0628	0.0628	0.0762	0.0854
12	12	0.422	0.2019	0.2019	0.2442	0.2727	50	65	0.430	0.0247	0.0247	0.0300	0.0335
13	13	0.426	0.0259	0.0259	0.0314	0.0351	51	66	0.426	0.0069	0.0069	0.0084	0.0094
14	18	0.420	0.2379	0.2379	0.2874	0.3208	52	67	0.421	0.0043	0.0053	0.0064	0.0072
15	25	0.420	0.2007	0.2007	0.2425	0.2707	53	68	0.410	0.0099	0.0098	0.0118	0.0131
16	26	0.432	0.1305	0.1305	0.1584	0.1774	54	70	0.420	0.2005	0.2005	0.2423	0.2705
17	27	0.432	0.0683	0.0683	0.0829	0.0928	55	71	0.429	0.1714	0.1714	0.2078	0.2325
18	28	0.430	0.0257	0.0257	0.0311	0.0348	56	72	0.431	0.1202	0.1202	0.1458	0.1632
19	30	0.420	0.2095	0.2095	0.2531	0.2826	57	73	0.431	0.0590	0.0590	0.0716	0.0802
20	31	0.432	0.1280	0.1280	0.1553	0.1739	58	77	0.422	0.1929	0.1929	0.2332	0.2604
21	32	0.419	0.2054	0.2054	0.2481	0.2768	59	78	0.429	0.1711	0.1711	0.2075	0.2322
22	33	0.428	0.1893	0.1893	0.2282	0.2553	60	79	0.431	0.1169	0.1169	0.1419	0.1588
23	34	0.432	0.1360	0.1360	0.1650	0.1848	61	81	0.430	0.0238	0.0238	0.0289	0.0323
24	35	0.433	0.0743	0.0743	0.0902	0.1010	62	84	0.423	0.1902	0.1902	0.2301	0.2571
25	36	0.430	0.0304	0.0304	0.0369	0.0413	63	85	0.430	0.1744	0.1744	0.2115	0.2367
26	37	0.426	0.0068	0.0069	0.0082	0.0091	64	86	0.432	0.1216	0.1216	0.1476	0.1652
27	38	0.420	0.0030	0.0030	0.0036	0.0040	65	90	0.422	0.2049	0.2049	0.2477	0.2766
28	39	0.407	0.0039	0.0039	0.0047	0.0052	66	91	0.429	0.1855	0.1855	0.2249	0.2514
29	40	0.419	0.1953	0.1953	0.2359	0.2632	67	92	0.432	0.1239	0.1239	0.1504	0.1684
30	41	0.420	0.1937	0.1937	0.2340	0.2612	68	94	0.430	0.0241	0.0241	0.0292	0.0326
31	42	0.429	0.1862	0.1862	0.2257	0.2524	69	98	0.422	0.1919	0.1919	0.2320	0.2592
32	43	0.432	0.1260	0.1260	0.1529	0.1712	70	99	0.431	0.1709	0.1709	0.2074	0.2321
33	44	0.433	0.0688	0.0688	0.0835	0.0935	71	100	0.434	0.1174	0.1174	0.1426	0.1597
34	46	0.434	0.0000	0.0000	0.0000	0.0000	72	103	0.424	0.1740	0.1740	0.2105	0.2352
35	47	0.421	0.2075	0.2075	0.2508	0.2800	73	104	0.432	0.1589	0.1589	0.1928	0.2159
36	48	0.429	0.2001	0.2001	0.2426	0.2714	74	105	0.434	0.1078	0.1078	0.1310	0.1467
37	49	0.433	0.1273	0.1273	0.1546	0.1731	75	107	0.432	0.0250	0.0253	0.0304	0.0340
38	50	0.433	0.0727	0.0727	0.0882	0.0988							

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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AMES RESEARCH CENTER MOFFETT FIELD CALIF. *** PRELIMINARY DATA ***

MACH	RE/METER	PEL	LENGTH(METER)	PT(ATM)	TT(DEG K)	HT(JOULE/KG)	PS(METER)	TEST NO.	195
5.30	1.5577E 07	3.0624E 06	0.197	28.74	765.2	0.78492E 06	0.0018	RUN NO.	39
MACH	RE/FT	PEL	LENGTH(FT)	PT(PSI)	TT(DEG R)	HT(BTU/LBM)	PS(FT)		
5.30	4.7480E 06	3.0624E 06	0.645	422.42	1377.4	337.49	0.0060		

CHAN	T/C	TW(DEG K)	TW(DEG R)	Q(W/CM2)	Q(BTU/FT2-SEC)	QS(W/CM2)	QS(BTU/FT2-SEC)	ST(C.P.D)	ST(C.P.S)	TIME(SEC)
1	1	335.9	604.7	9.380	8.265	122.914	108.303	1.5570E-03	2.1369E-03	0.516
2	2	336.0	604.8	15.030	13.244	122.898	108.290	3.1361E-03	3.5205E-03	0.312
3	3	337.0	606.6	18.179	16.018	122.615	108.041	3.8034E-03	4.2576E-03	0.337
4	4	337.1	606.8	20.903	18.418	122.582	108.011	4.3746E-03	4.8971E-03	0.393
5	5	336.8	606.3	22.773	20.066	122.663	108.083	4.7623E-03	5.3307E-03	0.409
6	6	337.4	607.3	24.477	21.567	122.500	107.939	5.1267E-03	5.7296E-03	0.383
7	7	337.6	607.6	23.445	20.658	122.444	107.890	4.9182E-03	5.5010E-03	0.407
8	8	336.9	606.5	23.491	20.699	122.628	108.052	4.9142E-03	5.5002E-03	0.393
9	9	335.9	604.6	21.248	18.723	122.931	108.319	4.4322E-03	4.9596E-03	0.421
10	10	334.7	602.4	21.939	19.331	123.270	108.617	4.5614E-03	5.1023E-03	0.390
11	11	332.7	598.9	24.161	21.289	123.825	109.107	4.9979E-03	5.5960E-03	0.384
12	12	329.9	593.8	25.166	22.175	124.630	109.816	5.1656E-03	5.7694E-03	0.347
13	13	333.1	599.5	3.206	2.825	123.729	109.022	6.6372E-04	7.4204E-04	0.439
14	18	328.2	590.7	29.764	26.226	125.131	110.259	6.0837E-03	6.7876E-03	0.422
15	25	328.1	590.6	25.119	22.133	125.152	110.275	5.1308E-03	5.7272E-03	0.358
16	26	337.6	607.7	15.982	14.083	122.438	107.884	3.3496E-03	3.7503E-03	0.401
17	27	337.9	608.3	8.152	7.180	122.346	107.803	1.7520E-03	1.9618E-03	0.421
18	28	336.0	604.9	3.154	2.779	122.886	108.279	6.5820E-04	7.3655E-04	0.456
19	30	328.2	590.7	26.211	23.095	125.123	110.251	5.3652E-03	5.9779E-03	0.344
20	31	337.5	607.5	15.670	13.808	122.467	107.910	3.2932E-03	3.6758E-03	0.399
21	32	327.3	589.1	25.749	22.689	125.379	110.476	5.3494E-03	5.9571E-03	0.339
22	33	334.5	602.0	23.229	20.468	123.337	108.676	4.8766E-03	5.4388E-03	0.385
23	34	337.5	607.4	16.656	14.676	122.476	107.918	3.4895E-03	3.9067E-03	0.311
24	35	338.0	608.4	9.091	8.010	122.332	107.791	1.9071E-03	2.1356E-03	0.391
25	36	336.4	605.5	3.736	3.292	122.788	108.193	7.8036E-04	8.7337E-04	0.414
26	37	332.7	598.9	0.836	0.737	123.830	109.111	1.7069E-04	1.9327E-04	0.408
27	38	328.5	591.3	0.374	0.329	125.030	110.168	7.6280E-05	8.5269E-05	0.235
28	39	318.3	572.9	0.496	0.437	127.947	112.738	9.8750E-05	1.0991E-04	0.308
29	40	327.1	588.7	24.501	21.589	125.442	110.531	4.9911E-03	5.5595E-03	0.326
30	41	327.8	590.1	24.256	21.373	125.221	110.337	4.9514E-03	5.5165E-03	0.335
31	42	334.9	602.8	22.937	20.211	123.208	108.563	4.7718E-03	5.3181E-03	0.377
32	43	337.7	607.9	15.424	13.591	122.408	107.858	3.2335E-03	3.6205E-03	0.399
33	44	338.6	609.5	8.403	7.404	122.157	107.637	1.7659E-03	1.9776E-03	0.419
34	46	338.8	609.9	0.000	0.000	122.087	107.576	0.0000	0.0000	******
35	47	329.0	592.2	25.914	22.834	124.895	110.050	5.3060E-03	5.9244E-03	0.335
36	48	335.3	603.6	24.627	21.700	123.084	108.454	5.1294E-03	5.7398E-03	0.389
37	49	338.0	608.4	15.576	13.725	122.317	107.778	3.2681E-03	3.6596E-03	0.379
38	50	338.2	608.8	8.884	7.828	122.260	107.727	1.8651E-03	2.0886E-03	0.372
39	51	336.6	605.9	3.395	2.991	122.715	108.128	7.0953E-04	7.9416E-04	0.432
40	54	327.9	590.2	24.600	21.676	125.209	110.326	5.0221E-03	5.6055E-03	0.333
41	55	327.6	589.6	23.421	21.077	125.299	110.405	4.8704E-03	5.4457E-03	0.320

42	56	334.7	602.4	22.994	20.261	123.273	108.381	4.[illegible]E-03	[illegible]	0.445
43	57	337.3	607.1	14.575	12.843	122.528	107.944	3.0519E-03	3.4167E-03	0.369
44	58	337.2	607.0	7.711	6.794	122.553	107.936	1.6142E-03	1.8070E-03	0.392
45	60	328.0	590.5	24.267	21.382	125.162	110.235	4.9562E-03	5.5329E-03	0.317
46	61	329.0	592.3	24.214	21.336	124.878	110.035	4.9587E-03	5.5367E-03	0.324
47	62	335.2	603.4	22.002	19.387	123.117	108.493	4.5813E-03	5.1253E-03	0.348
48	63	338.1	608.6	15.084	13.291	122.293	107.757	3.1659E-03	3.5448E-03	0.373
49	64	338.2	608.8	7.676	6.764	122.265	107.732	1.6115E-03	1.8046E-03	0.390
50	65	336.3	605.4	3.033	2.673	122.805	108.209	6.3343E-04	7.0890E-04	0.411
51	66	332.9	599.3	0.859	0.757	123.773	109.061	1.7775E-04	1.9872E-04	0.373
52	67	329.0	592.2	0.665	0.586	124.887	110.043	1.3616E-04	1.5208E-04	0.267
53	68	330.4	576.8	1.244	1.096	127.336	112.200	2.4923E-04	2.7739E-04	0.353
54	70	328.4	591.1	25.080	22.098	125.066	110.200	5.1268E-03	5.7233E-03	0.317
55	71	334.9	602.9	21.122	18.611	123.197	108.553	4.3946E-03	4.9161E-03	0.343
56	72	337.1	606.8	14.728	12.977	122.579	108.009	3.0825E-03	3.4507E-03	0.370
57	73	337.0	606.6	7.240	6.379	122.615	108.040	1.5147E-03	1.6955E-03	0.395
58	77	329.4	593.0	24.066	21.205	124.767	109.936	4.9334E-03	5.5092E-03	0.285
59	78	335.5	603.9	21.057	18.554	123.037	108.413	4.3878E-03	4.9099E-03	0.316
60	79	336.9	606.5	14.337	12.633	122.627	108.051	2.9993E-03	3.3574E-03	0.340
61	81	335.8	604.4	2.931	2.583	122.955	108.340	6.1131E-04	6.8404E-04	0.425
62	84	330.9	595.6	23.654	20.843	124.351	109.570	4.8681E-03	5.4387E-03	0.281
63	85	336.2	605.1	21.425	18.878	122.844	108.242	4.4728E-03	5.0055E-03	0.316
64	86	337.9	608.3	14.872	13.104	122.346	107.803	3.1195E-03	3.4930E-03	0.354
65	90	329.4	593.0	25.569	22.529	124.783	109.951	5.2407E-03	5.8523E-03	0.310
66	91	335.3	603.8	22.820	20.108	123.046	108.420	4.7549E-03	5.3200E-03	0.359
67	93	337.9	608.2	15.158	13.357	122.353	107.809	3.1794E-03	3.5601E-03	0.369
[illegible]	[illegible]	[illegible]	[illegible]	2.960	2.608	123.001	108.381	6.1701E-04	6.9033E-04	0.388
69	98	330.1	594.1	23.904	21.063	124.585	109.776	4.9095E-03	5.4926E-03	0.269
70	99	337.1	606.8	20.950	18.460	122.580	108.010	4.3845E-03	4.9083E-03	0.321
71	100	339.0	610.2	14.327	12.624	122.033	107.528	3.0146E-03	3.3766E-03	0.342
72	103	331.1	596.0	21.627	19.057	124.295	109.521	4.4532E-03	4.9756E-03	0.261
73	104	337.3	607.2	19.470	17.156	122.521	107.958	4.0772E-03	4.5646E-03	0.304
74	105	333.9	601.0	13.165	11.601	122.676	107.565	2.7639E-03	3.1013E-03	0.324
75	107	337.5	607.6	3.064	2.700	122.458	107.902	6.4198E-04	7.1376E-04	0.312

FREE-STREAM DENSITY-VELOCITY PRODUCT = 8.2742E-01 (SLUGS/FT2-SEC)