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(NASA-CR-151766) RESULTS OF TRANSONIC TESTS IN THE NASA/MSFC 14-INCH TRISONIC WIND TUNNEL ON A 0.004-SCALE MODEL (74-OTS) SPACE SHUTTLE LAUNCH VEHICLE (FA25) (Chrysler Corp.) 375 p HC A16/MF A01 CSCL 22B G3/16

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SPACE SHUTTLE AEROTHERMODYNAMIC DATA REPORT

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RESULTS OF TRANSONIC TESTS IN THE NASA/MSFC 14-INCH TRISONIC WIND TUNNEL ON A 0.004-SCALE MODEL (74-OTS) SPACE SHUTTLE LAUNCH VEHICLE (FA25)

by

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Prepared under NASA Contract Number NAS9-13247

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for

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Model Number:	74-OTS
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ABSTRACT

An experimental investigation of the Space Shuttle Launch Vehicle was conducted in the NASA-MSFC 14-Inch Wind Tunnel (TWT-652; FA25). The primary objective of the test was to determine the aerodynamic increments due to the attach structure. Secondary objectives were to determine the effects of: (1) Orbiter nose mold line changes; (2) wire bundle fairings on data measurements; and (3) flow angularity.

The 0.004-scale model was tested over the Mach range from 0.60 to 1.25 at angles of attack and sideslip from -8 to +8 deg. The total pressure was 22 psia for all runs. Six-component orbiter data were obtained from a balance in the orbiter which was sting supported. The External Tank was attached to the solid rocket booster, each of which was sting supported. An alternate two sting/two balance arrangement was also tested with a single sting and balance in the External Tank measuring combined ET/SRB aero data replacing the two stings in the SRB's. Two runs were also made at Mach number 4.96 with the two SRB's removed.

The aerodynamic coefficients obtained from the test are tabulated as a function of angle of attack or sideslip for each Mach number value. Representative plots of the data are also included.

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SCHEDULES OF COEFFICIENTS PLOTTED:

(A) CNO, CLMO, CAO vs ALPHA

(B) CYO, CYNO, CBLO vs BETA

(C) CNTS, CLMTS, CATS vs ALPHA

(D) CYTS, CYNTS, CBLTS vs BETA

NOMENCLATURE

SYMBOL	COMPUTER NOTATION	DEFINITION
A	-	cross sectional area, in^2
AF	-	axial force, lbs
-	BREF	lateral reference length, inches
C_A	CA	axial force coefficients
	CAO	orbiter
	CATS	ET and SRBs
	CAT	launch vehicle
	CAFT	launch vehicle forebody
	CAFO	orbiter forebody
	CABO	orbiter base
	CAFTS	ET and SRBs forebody
	CABT	ET base
	CABLS	left SRB base
	CABRS	right SRB base
C_D	CD	drag coefficient
	CDO	orbiter
	CDTS	ET and SRBs
	CDT	launch vehicle
C_ℓ	CBL	rolling moment coefficient
	CBLO	orbiter
	CSLO	orbiter, stability axis
	CBLTS	ET and SRBs
	CSLTS	ET and SRBs, stability axis
	CBLT	launch vehicle
	CSLT	launch vehicle, stability axis

NOMENCLATURE (Continued)

SYMBOL	COMPUTER NOTATION	DEFINITION
C_L	CL	lift coefficient
	CLO	orbiter
	CLTS	ET and SRBs
	CLT	launch vehicle
C_m	CLM	pitching moment coefficient
	CLMO	orbiter
	CLMTS	ET and SRBs
	CLMT	launch vehicle
	CLMFT	launch vehicle forebody
	CLMFO	orbiter forebody
	CMBO	orbiter base
	CMBFO	orbiter body flap
C_n	CYN	yawing moment coefficient
	CYNO	orbiter
	CLNO	orbiter, stability axis
	CYNTS	ET and SRBs
	CLNTS	ET and SRBs, stability axis
	CYNT	launch vehicle
	CLNT	launch vehicle, stability axis
	CYNFT	launch vehicle forebody
	CYNFTS	ET and SRBs forebody
	CYNLS	left SRB
	CYNRS	right SRB
C_N	CN	normal force coefficient
	CNO	orbiter
	CNTS	ET and SRBs

NOMENCLATURE (Continued)

SYMBOL	COMPUTER NOTATION	DEFINITION
C_N (Cont'd)	CNT	launch vehicle
	CNFT	launch vehicle forebody
	CNFO	orbiter forebody
	CNBO	orbiter base
	CNBFO	orbiter body flap
C_P	CP	pressure coefficient
	CPBO	orbiter base
	CPBT	ET base
	CPBLS	left SRB base
	CPBRS	right SRB base
C_Y	CY	side force coefficient
	CYO	orbiter
	CYTS	ET and SRBs
	CYT	launch vehicle
ET	-	external tank
F	-	aerodynamic force, lbs
L_{REF}	LREF	longitudinal reference length, inches
M	-	aerodynamic moment, in-lbs
MRP	-	moment reference point
MACH	MACH	Mach number
NF	-	normal force, lbs
O	-	orbiter
OTS	-	launch vehicle
P	-	static pressure, psia

NOMENCLATURE (Continued)

SYMBOL	COMPUTER NOTATION	DEFINITION
P_o	-	total pressure, psia
PM	-	pitching moment, in-lbs
q	-	dynamic pressure, psia
R_N/ℓ	RN/L	Reynolds number
RM	-	rolling moment, in-lbs
S	-	Solid Rocket Booster
SRB	-	Solid Rocket Booster
SF	-	side force, lbs
SSLV	-	Space Shuttle Launch Vehicle
S_{REF}	SREF	reference area, in^2
-	STINGS	number of stings supporting the model
T	-	external tank
T_o	-	total temperature, ^oF
X	-	longitudinal transfer distance, inches
X_{cp}	XCP/L	longitudinal center of pressure location, % body length
	XCP/LO	orbiter
	XCP/LE	ET and SRBs
	XCP/LT	launch vehicle
$\overline{X}$	-	average longitudinal transfer distance inches
$\overline{Y}$	-	average lateral transfer distance, inches

NOMENCLATURE (Continued)

SYMBOL	COMPUTER NOTATION	DEFINITION
Y_{cp}	YCP/L	lateral center of pressure location, % body length
	YCP/LO	orbiter
	YCP/LE	ET and SRBs
	YCP/LT	launch vehicle
YM	-	yawing moment, in-lbs
Z	-	vertical transfer distance, inches
$\overline{Z}$	-	average vertical transfer distance, inches
α, α_O	ALPHA	orbiter angle of attack, degrees
α_N	ALFNOM	orbiter nominal angle of attack, degrees
α_T	ALPHAT	external tank angle of attack, degrees
β, β_O	BETA	orbiter angle of sideslip, degrees
β_N	BETNOM	orbiter nominal angle of sideslip, degrees
β_T	BETAT	external tank angle of sideslip, degrees
δ_{e_I}	IB-ELV	inboard elevon deflection, degrees
δ_{e_o}	OB-ELV	outboard elevon deflection, degrees

Subscripts

b	-	Orbiter base condition
f	-	forebody condition
O	-	Orbiter
S	-	solid rocket booster

NOMENCLATURE (Concluded)

SYMBOL	COMPUTER NOTATION	DEFINITION
Subscripts (Cont'd)		
T	-	external tank
TS	-	external tank and solid rocket booster combined
X	-	longitudinal axis
Y	-	lateral axis
Z	-	vertical axis
∞	-	freestream condition

INTRODUCTION

This report describes an experimental wind tunnel test program conducted in the MSFC 14-Inch Trisonic Wind Tunnel. The objectives of the test were:

1. Determine the External Tank/Orbiter attach structure aerodynamic coefficients.
2. Determine the effect of Orbiter nose mold line changes on the Orbiter aerodynamic coefficients in the launch configuration.
3. Compare flow angularity determined by inverted model with tunnel calibration.
4. Determine the effect of instrumentation wire bundles placed next to attach structure on Orbiter aerodynamics.

The 74-OTS 0.004-scale model was used in this test. The Orbiter contained a six-component balance and was sting supported. The ET was supported by the SRB's, each of which was sting supported. For a portion of the test, a balance supported on a single sting was installed in the ET and measured combined ET/SRB aero load. The SRB's were supported by the ET. The Orbiter/ET attach structure was alternately placed on the Orbiter and the ET.

Data were obtained at eight Mach numbers over the range from 0.6 to 1.25 at angles of attack and sideslip from -8 to +8 in 2 deg increments. Two runs were made at a Mach number of 4.96 with both SRB's removed.

CONFIGURATIONS INVESTIGATED

The SSLV model (Figure 1) used for this test is the same as in test IA-140 with certain modifications. A complete description of the model is given in Reference 2.

Modifications to all three major components of SSLV, i.e., ET, Orbiter, and SRB were made for this test. The ET nose was updated to a sharp cone and the attach structure was modeled in more detail. Fairings and a wire bundle utilized on previous larger model tests were simulated on this model. Figure 2a gives the dimensions of the ET aft attach structure, while Figure 2b delineates the fairings and wire bundles. Figure 3a is a photograph of the assorted attach structure parts. When the attach structure was part of the ET, it was labeled (AT) and the configuration was always the same. However, when the attach structure was part of the Orbiter, several configurations were tested and are labeled AO, AO1, AO2, etc. Figure 3b depicts the AT condition, while Figures 3c and 3d show two of the Orbiter mounted AO conditions.

Orbiter mold line changes shown in Figure 2c were simulated by building up the existing Orbiter wing and nose. The actual mold line increments on the model, converted to full scale, are shown in Figures 2d and 2e for several typical cross sections. The Orbiter 102 wing is thinner than the Orbiter 101 wing, so the mold line changes simulated are in the opposite direction of full scale changes from Orbiter 101 to 102.

Both SRB's were modified slightly. The aft ET/SRB attach ring was modified to resemble the most recent configuration and was shifted aft 6 in. full scale (or 0.024 in. model scale). Also, SRB separation motors were simulated on the aft skirt and a tunnel was simulated running from the shoulder to the flare exit plane.

CONFIGURATIONS INVESTIGATED (Continued)

The nomenclature for the modified model and various attachments is as follows:

O1	101 Orbiter
O2	102 Orbiter with mold line changes on wing and nose
O3	102 Orbiter with mold line changes on wing only
AO	attach structure on orbiter; footing (skis) on structure; 7-in. gap full scale between Orbiter and crossbeam
AO1	AO attach structure with "skis" removed
AO2	attach structure from IA-140 test
AO3	AO1 attach structure with gap reduced to 2 in. full scale
AO4	attach structure fabricated to reflect latest known dimensions, i.e., leg diameter and angles, gap size; add footing to tank
AT	attach structure on ET
PT	propellant feedlines attached to ET
PO	propellant feedlines attached to Orbiter
F1	Orbiter to ET propellant line fairing (see Figure 2b)
F2	ET to SRB attach fairing (see Figure 2b)
F3	wire bundle simulated on Orbiter to ET propellant line (see Figure 2b)
B1	SRB to ET aft fairing (see Figure 2b)

CONFIGURATIONS INVESTIGATED (Concluded)

T1S1	balance in sting supported Orbiter; ET attached to dual sting supported SRB's
T2S2	stings and balances in Orbiter and ET; SRB's supported by ET

TEST CONDITIONS

The tunnel conditions existing during the test are listed in Table I, while Table II shows the model configuration and altitude scheduled for each run.

The test apparatus utilized was the same as test IA-140 (Reference 2) with some modifications. The model was supported by two or three stings. In the three-sting configurations, there was a sting in the Orbiter and each SRB. The Orbiter contained a six-component balance with a dummy balance in each SRB. In the two sting arrangement, the Orbiter and ET each contained a sting and a six-component balance. The stings were shortened from IA-140 test conditions to place the center of the model at the tunnel sector center of rotation.

The Orbiter was supported by MSFC balance No. 239 and the tank by MSFC balance No. 231. The estimated maximum model loads and the balance capacities and accuracies are shown in Table III.

Model base pressure tap locations are shown in Figure 2f. The three Oribter pressures were manifolded to provide a single value.

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Trisonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.44, 1.93, and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dewpoint and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F. The air then passes through the test section which contains the nozzle blocks and test region.

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

DATA REDUCTION

All model forces and moments (measured by balance Nos. 231 and 239) were resolved in the body axis system and are presented in the form of non-dimensionalized coefficients. Data were corrected for weight tares and sting/balance deflections. All data herein are presented in terms of the orbiter attitude. A slight delta attitude existed between the components due to individual sting deflections. The ET attitude conditions are tabulated for comparison for the two sting test conditions.

Balance Measured Aerodynamic Coefficients

Body axis coefficients and base pressure coefficients were reduced as shown below. No corrections were made to these coefficients due to measured base pressures. Moment transfers are depicted in Figure 2e.

$$C_{N_{(O,\ TS)}} = \text{CNO or CNTS} = \frac{F_{N_{(O,\ TS)}}}{qS_{REF}}$$

$$C_{m_O} = \text{CLMO} = \frac{M_{Y_O}}{qS_{REF}L_{REF}} + C_{N_O} * \frac{X_{T_O}}{L_{REF}} - C_{A_O} * \frac{Z_{T_O}}{L_{REF}}$$

$$C_{m_{TS}} = \text{CLMTS} = \frac{M_{Y_{TS}}}{qS_{REF}L_{REF}} + C_{N_{TS}} * \frac{X_{T_T}}{L_{REF}}$$

$$C_{A_{(O,\ TS)}} = \text{CAO or CATS} = \frac{F_{A(O,\ TS)}}{qS_{REF}}$$

$$C_{Y_{(O,\ TS)}} = \text{CYO or CYTS} = \frac{F_{Y(O,\ TS)}}{qS_{REF}}$$

$$C_{n_O} = CYNO = \frac{M_{Z_O}}{qS_{REF}L_{REF}} + C_{Y_O} * \frac{X_{T_O}}{L_{REF}}$$

$$C_{n_{TS}} = CYNTS = \frac{M_{Z_T}}{qS_{REF}L_{REF}} + C_{Y_{TS}} * \frac{X_{T_T}}{L_{REF}}$$

$$C_{\ell_O} = CBLO = \frac{M_{X_O}}{qS_{REF}L_{REF}} - C_{Y_O} * \frac{Z_{T_O}}{L_{REF}}$$

$$C_{\ell_{TS}} = CBLTS = \frac{M_{X_T}}{qS_{REF}L_{REF}}$$

$$C_{P_{(O,T,S)}} = CPBO,\ CPBT,\ CPBLS,\ CPBRS = \frac{P_{(O,T,S)} - P_\infty}{q}$$

<u>Summary Total Aerodynamic Coefficients</u>

The following equations apply to the two sting, two balances setup only.

Total Launch Vehicle Forces and Moments

$$C_{A_T} = CAT = C_{A_{T_O}} + C_{A_{T_{TS}}}$$

$$C_{N_T} = CNT = C_{N_O} + C_{N_{TS}}$$

$$C_{m_T} = CLMT = C_{m_O} + C_{m_{TS}}$$

$$C_{Y_T} = CYT = C_{Y_O} + C_{Y_{TS}}$$

$$C_{n_T} = CYNT = C_{n_O} + C_{n_{TS}}$$

$$C_{\ell_T} = CBLT = C_{\ell_O} + C_{\ell_{TS}}$$

<u>Forebody Aerodynamic Coefficients</u>

Forebody Chord Force Coefficient (C_{A_f})

$$C_{A_f} = CAFT = C_{A_{f_O}} + C_{A_{f_{TS}}}$$

where: $C_{A_{f_O}} = CAFO = C_{A_O} - C_{A_{b_O}}$

and $C_{A_{b_O}} = CABO = -C_{p_O} \left(\frac{A_{b_O}}{S_{REF}}\right)$

$$C_{A_{f_{TS}}} = CAFTS = C_{A_{TS}} - C_{A_{b_T}} - C_{A_{b_{S_{L.H.}}}} - C_{A_{b_{S_{R.H.}}}}$$

and $C_{A_{b_T}} = CABT = -C_{p_T} \left(\frac{A_{b_T}}{S_{REF}}\right)$

and $C_{A_{b_{S_{L.H.}}}} = CABLS = -C_{p_{S_{L.H.}}} \left(\frac{A_{b_S}}{S_{REF}}\right)$

and $$C_{A_{b_{S_{R.H.}}}} = CABRS = -C_{p_{S_{R.H.}}} \left(\frac{A_{b_S}}{S_{REF}}\right)$$

Forebody Normal Force Coefficient (C_{N_f}) for the Total Launch Vehicle

$$C_{N_f} = CNFT = C_{N_{f_O}} + C_{N_{TS}}$$

where: $$C_{N_{f_O}} = CNFO = C_{N_O} - C_{N_{b_O}} - C_{N_{BF}}$$

and $$C_{N_{b_O}} = CNBO = -C_{p_O} \left(\frac{A_{b_O}}{S_{REF}}\right) \tan i_b$$

and $$C_{N_{BF}} = CNBFO = -C_{p_O} \left(\frac{A_{BF}}{S_{REF}}\right)$$

Forebody Pitching Moment Coefficient (C_{m_f}) for the Total Launch Vehicle

$$C_{m_f} = CLMFT = C_{m_{f_O}} + C_{m_{TS}}$$

where: $$C_{m_{f_O}} = CLMFO = C_{m_O} - C_{m_{b_O}} - C_{m_{BF}}$$

and $$C_{m_{b_O}} = CMBO = C_{N_{b_O}} \left(\frac{\bar{X}_{b_O}}{L_{REF}}\right) - C_{A_{b_O}} \left(\frac{\bar{Z}_{b_O}}{L_{REF}}\right)$$

and $$C_{m_{BF}} = CMBFO = C_{N_{BF}} \left(\frac{\bar{X}_{BF}}{L_{REF}} \right)$$

$$C_{n_f} = CYNFT = C_{n_{f_{TS}}} + C_{n_O}$$

where: $$C_{n_{f_{TS}}} = CYNFTS = C_{n_{TS}} - C_{n_{b_{S_{L.H.}}}} - C_{n_{b_{S_{R.H.}}}}$$

and $$C_{n_{b_{S_{L.H.}}}} = CYNLS = -C_{A_{b_{S_{L.H.}}}} * \frac{\bar{Y}_{b_S}}{L_{REF}}$$

and $$C_{n_{b_{S_{R.H.}}}} = CYNRS = C_{A_{b_{S_{R.H.}}}} * \frac{\bar{Y}_{b_S}}{L_{REF}}$$

For the single sting/balance in the orbiter setup, the TS terms are dropped from the equations given above.

The force data were also rotated to the stability axis system and the centers of pressure (X_{CP} in ET station, inches full scale, both pitch and yaw) computed.

Reference Dimensions and Constants

Symbol	Full Scale	Model Scale
A_{b_T}	597.6 ft^2	1.377 in^2
A_{BF}	142.6 ft^2	0.329 in^2
A_{b_O}	436.7 ft^2	1.006 in^2
A_{b_S} (One SRB)	236.4 ft^2	0.544 in^2
L_{REF}	1290.3 in.	5.160 in.
MRP	X_T 976 in.	3.904 in.
	Y_T 0 in.	0 in.
	Z_T 400 in.	1.500 in.
S_{REF}	2690.0 ft^2	6.198 in^2
$\overline{X}_{b_O}$	-1263.0 in.	-5.052 in.
$\overline{X}_{BF}$	-1329.7 in.	-5.319 in.
i_b	14.75 deg	14.75 deg
$\overline{Z}_{b_O}$	-326.5 in.	-1.306 in.
X_{T_O}	-901.75 in.	-3.607 in.
X_{T_T}	-530.5 in.	-2.122 in.
Z_{T_O}	-341.5 in.	-1.366 in.
$\overline{Y}_{b_S}$	250.5 in.	1.002 in.

REFERENCES

1. Simon, Erwin, "The George C. Marshall Space Flight Center's 14 x 14-Inch Trisonic Wind Tunnel Technical Handbook," NASA TM X-53185, 22 December 1964.

2. Allen, E. C., "Pretest Report for an Investigation in the MSFC TWT to Determine the Effects of a Multiple Sting Support System on the Mated Vehicle Aerodynamic Characteristics Utilizing the 0.004-Scale Model (74 OTS) of the Shuttle Vehicle 5 Configuration (IA-OTS) of the Shuttle Vehicle 5 Configuration (IA-140)," SD 75-SH-0272, Rockwell International Space Division, Southern Region Office, December 1975.

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TABLE I.

TEST CONDITIONS

Mach No.	R_N/ℓ	q (psi)	T_o (F)	P_o (psi)
0.6	3.1	4.4	100	22
0.8	4.8	6.5	100	22
0.9	5.7	7.4	100	22
0.95	6.1	7.8	100	22
1.05	7.0	8.4	100	22
1.10	7.3	8.7	100	22
1.15	7.8	8.9	100	22
1.25	8.4	9.3	100	22
4.96	4.8	3.1	100	90

TABLE II.

Sheet 1 of 2 JEV

TEST: FA25 (MSFC TWT 654) — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 10/25/78

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES δ_{ex}	δ_{eo}	ϕ	NO. OF RUNS	MACH NUMBERS .60	.80	.90	.95	1.05	1.10	1.15	1.25
RIX001	02ATPTTIS1	A	0	10	10	0		13/0	12/0	11/0	14/0	15/0	16/0	17/0	18/0
02	↓	0	A	↓	↓	90		19/0	20/0	21/0	22/0	23/0	24/0	25/0	26/0
03	02A0P0F1F2TIS1	A	0			0		35/0	36/0	37/0	38/0	39/0	40/0	41/0	42/0
04	↓	0	A			90		34/0	33/0	32/0	31/0	30/0	29/0	28/0	27/0
05	03A0P0F1F2TIS1	A	0			0		50/1	49/1	48/1	47/1	46/1	45/1	44/1	43/1
06	01A01P0TIS1	A	0			0				72/0					71/0
07	↓	0	A			90		80/0	79/0	78/0	78/0	77/0	76/0	75/0	74/0
08	01A02P0TIS1	A	0			0				82/0					81/0
09	↓	0	A			90				83/0					84/0
10	01A03P0TIS1	A	0			0				88/0					89/0
11	↓	0	A			90				91/0					90/0
12	01A04P0TIS1	A	0			0		94/0	95/0	93/0	96/0	97/0	98/0	99/0	92/0
13	↓	0	A			90		101/0	102/0	103/0	104/0	105/0	106/0	107/0	100/0
14	01A0P0TIS1	A	0			0				52/0					51/0
15	↓	0	A			90				53/0					54/0
16	01ATPTTIS1	A	0			0		70/0	69/0	56/1	68/0	67/0	66/0	65/0	55/1
17	↓	0	A			90		59/0	60/0	57/0	61/0	62/0	63/0	64/0	58/1
18	01A04PTTIS1	A	0			0		117/0	118/0	119/0	120/0	121/0	122/0	123/0	116/0
19	↓	0	A	↓	↓	90		109/0	110/0	111/0	112/1	113/0	114/0	108/0	115/0

α OR β SCHEDULES: A = ±8°, ±6°, ±4°, ±2°, 0°

R DATA CNΦ, CLMΦ, CAΦ, CYΦ, CYNΦ, CBLΦ, CPBΦ, CPBT, CPBLS, CPBRS
$ DATA CNT$, CLMT$, CAT$, CYT$, CYNT$, CBLT$, ALPHAT, BETAT
T DATA ALFNΦM, BETNΦM

TEST RUN NUMBERS

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TABLE II. (Concluded)

sheet 2 of 2 JEV

TEST: FA25 (MSFC TWT 654) — DATA SET/RUN NUMBER COLLATION SUMMARY — DATE: 10/25/78

DATA SET IDENTIFIER	CONFIGURATION	SCHD. α	SCHD. β	PARAMETERS/VALUES δ_{ex}	δ_{eo}	ϕ		NO. OF RUNS	MACH NUMBERS .60	.80	.90	.95	1.05	1.10	1.15	1.25		4.96
R1X020	01A04P0F1F2T1S1	A	0	10	10	0			129/0		128/0	127/0	126/0	125/0	124/0	130/0		
21	↓	0	A	↓	↓	90			132/0		133/0	134/0	135/0	136/0	137/0	131/0		
22	01A04P0B1F3T1S1	A	0			0			146/0		147/0	148/0	149/0	150/0	151/0	145/0		
23	↓	0	A			90			143/0		142/0	141/0	140/0	139/0	138/0	144/0		
24	01ATPTT1S1	A	0			180			159/0	158/0	157/0	156/0	155/0	154/0	153/0	152/0		
25	↓	0	A			270			167/0	166/0	165/0	164/0	163/0	162/0	161/0	160/0		
26	01ATPTT2S2	A	0			0			168/1	169/1	170/1	171/1	172/0	173/0	174/0	175/0		
27	↓	0	A			90			177/0	178/0	179/0	180/0	181/0	182/0	183/0	176/0		
28	01A04P0T2S2	A	0			0			199/0	198/0	197/0	196/0	195/0	194/0	193/0	192/0		
29	↓	0	A			90			190/0	189/0	188/0	187/0	186/1	185/0	184/0	191/0		
30	01A04PTT2S2	A	0			0			200/0	201/1	202/0	203/0	204/0	205/0	206/0	207/0		
31	↓	0	A			90			211/0			210/0		209/0		208/0		
32	01A04P0F1F2T2S2	A	0			0			223/0	222/0	221/0	220/0	219/0	218/0	217/0	216/0		
33	↓	0	A			90			212/0			213/0		214/0		215/1		
34	01A04P0B1F3T2S2	A	0			0			224/0	225/0	226/0	227/0	228/0	229/0	230/0	231/0		
35	↓	0	A			90			235/0			234/0		233/0		232/0		
36	01ATPTT2	A	0			0												237/0
37	↓	0	A	↓	↓	90												236/0

TEST RUN NUMBERS

α OR β SCHEDULES: A = ±8°, ±6°, ±4°, ±2°, 0°

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TABLE III.

BALANCES UTILIZED

MSFC 239 - Orbiter

	Capacity	Estimated Max Load	Accuracy*	Coefficient** Tolerance
NF	200 lb	95 lb	±1.0 lb	±0.016
SF	100 lb	40 lb	±0.5 lb	±0.008
AF	50 lb	48 lb	±0.25 lb	±0.004
PM	197 in-lb	170 in-lb	±0.99 in-lb	±0.0031
RM	98 in-lb	56 in-lb	±0.49 in-lb	±0.0016
YM	50 in-lb	42 in-lb	±0.25 in-lb	±0.0008

MSFC 231 - ET

	Capacity	Estimated Max Load	Accuracy*	Coefficient** Tolerance
NF	122 lb	16 lb	±0.61 lb	±0.0098
SF	52 lb	9 lb	±0.26 lb	±0.0042
AF	22 lb	14 lb	±0.11 lb	±0.0018
PM	122 in-lb	25 in-lb	±0.61 in-lb	±0.0019
RM	30 in-lb	3 in-lb	±0.15 in-lb	±0.0005
YM	53 in-lb	14 in-lb	±0.27 in-lb	±0.0008

* Accuracy based on ±0.5% of balance capacity.

** Tolerance based on q = 10 psi.

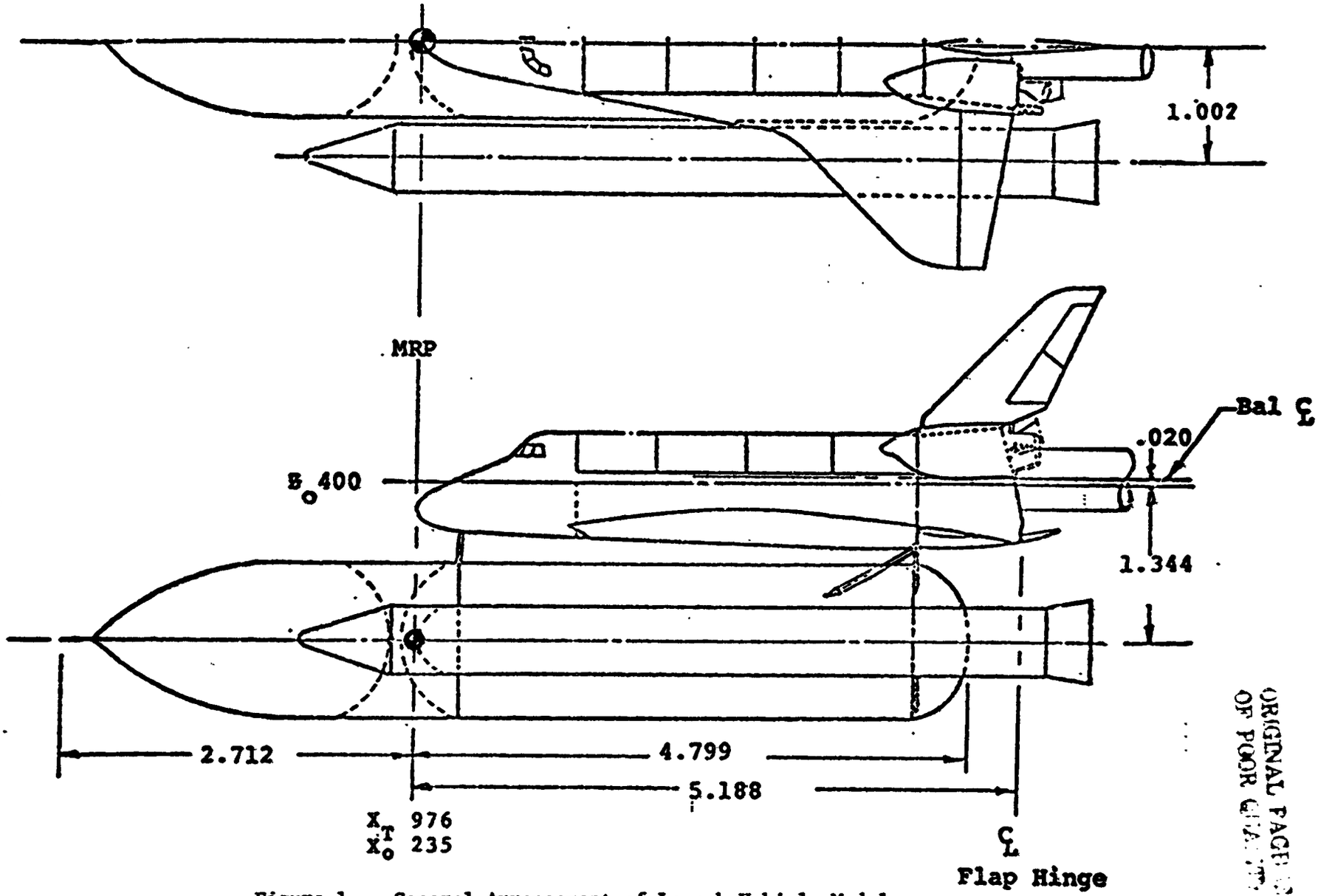

Figure 1. - General Arrangement of Launch Vehicle Model

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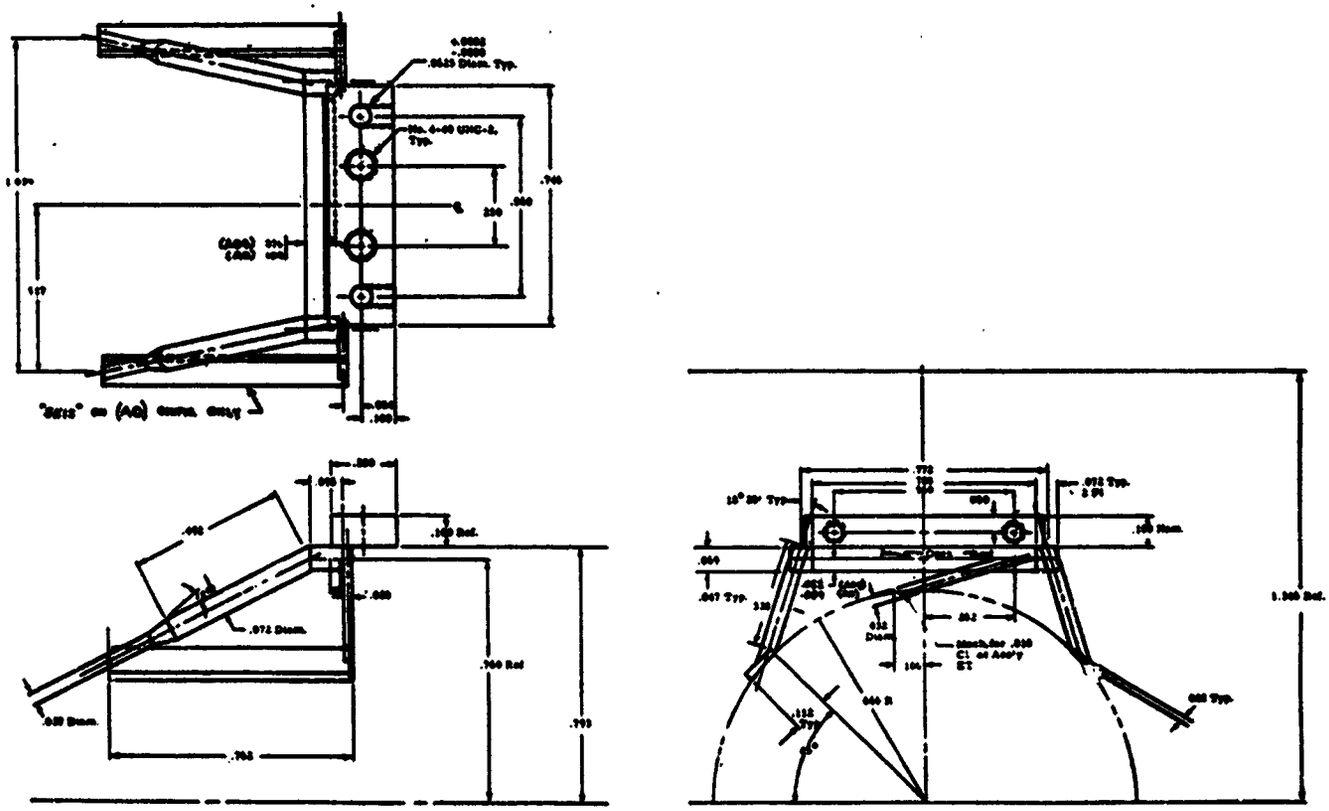

Figure 2a. - Attach Structure Dimensions

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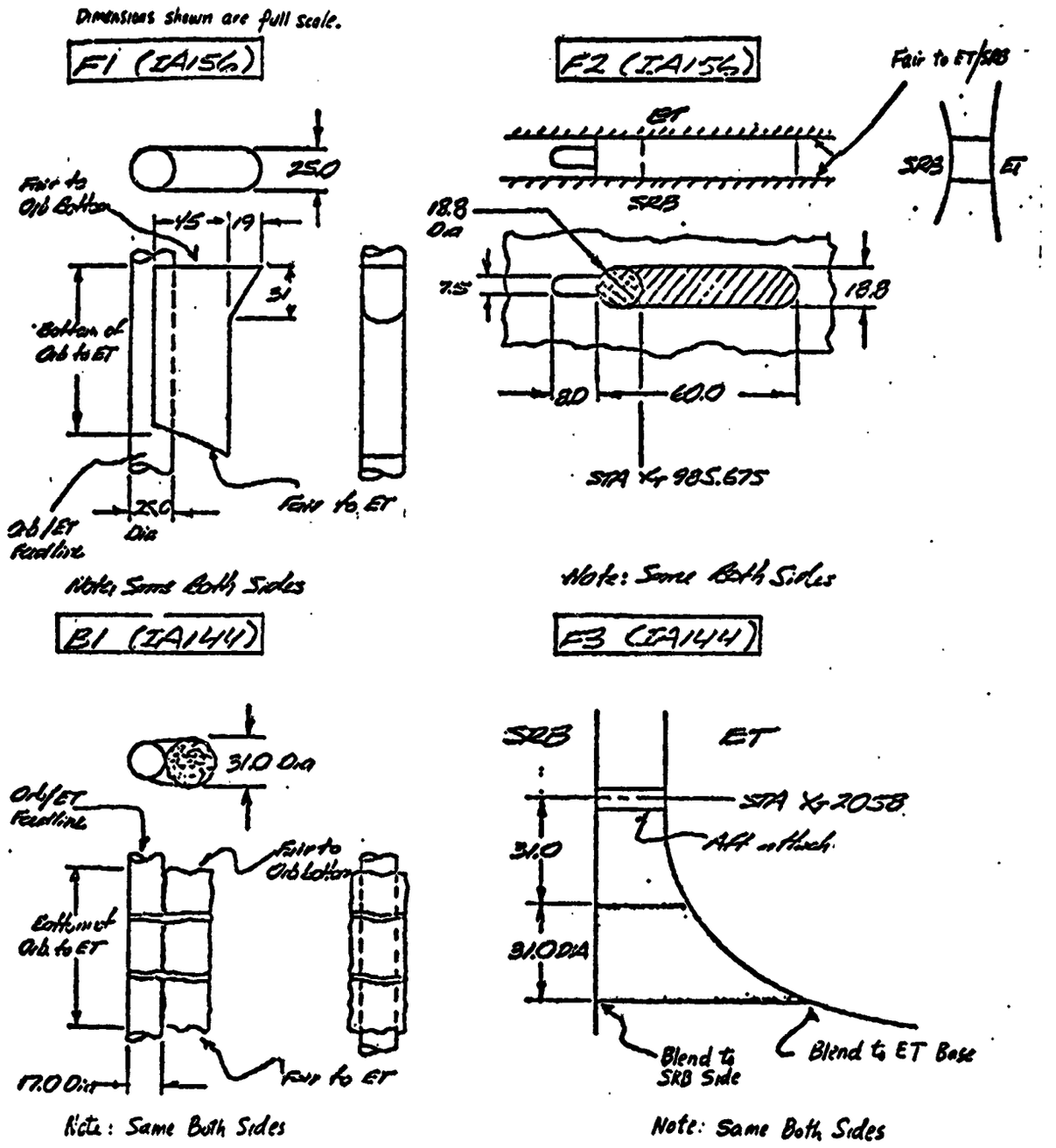

Figure 2b. - Fairings and Wire Bundles

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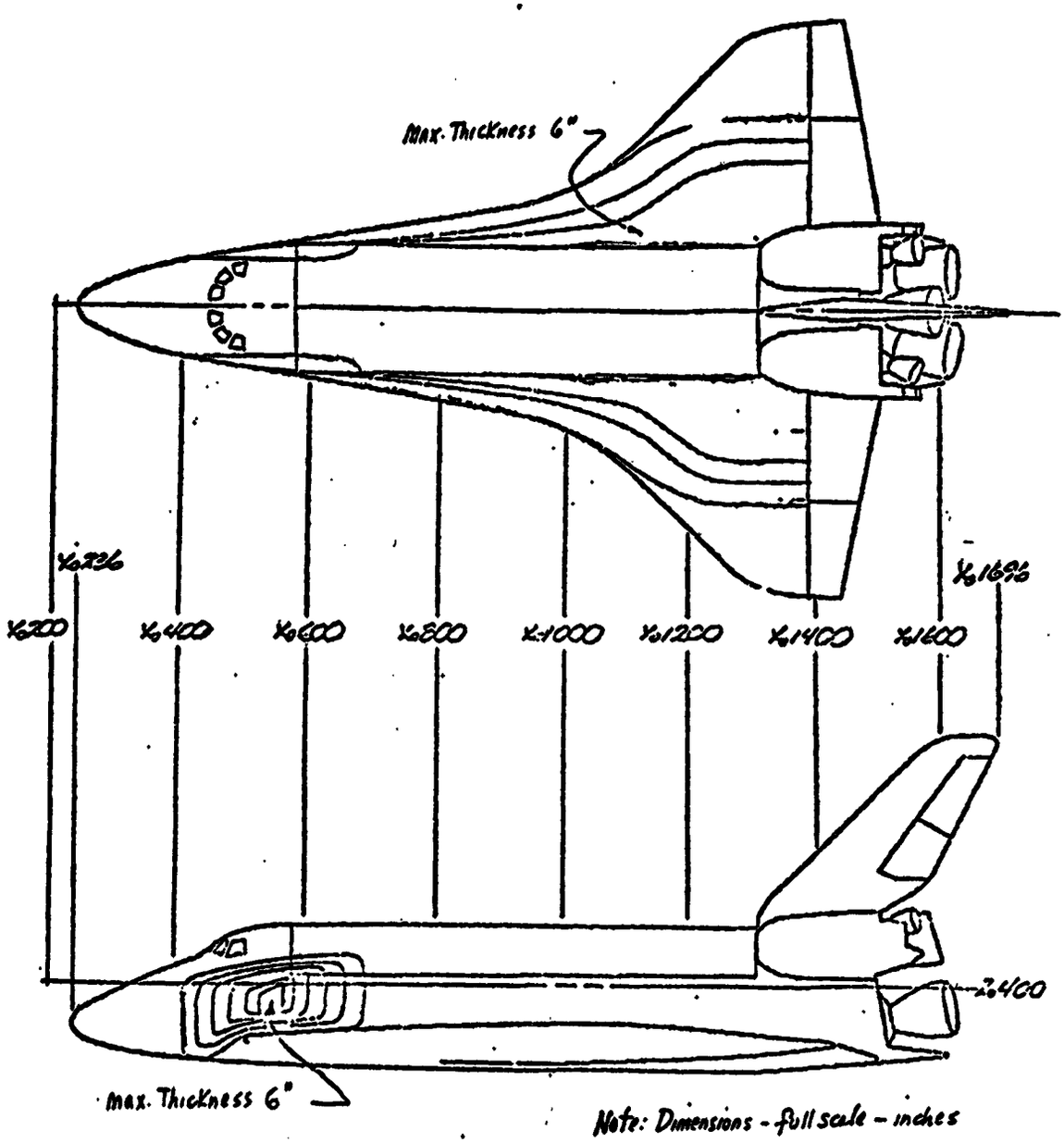

Figure 2c. - Oribiter 102 OML Requirements

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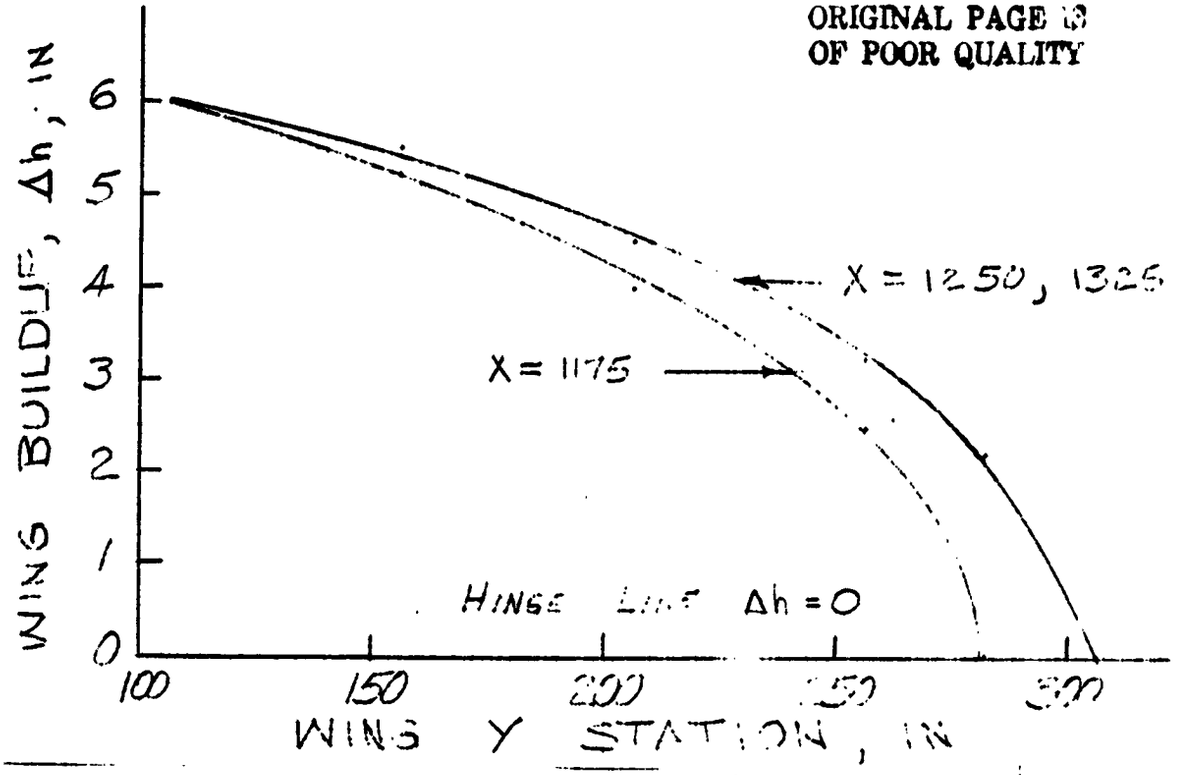


Figure 2d. - Typical Wing Moldline Buildup Cross-Section

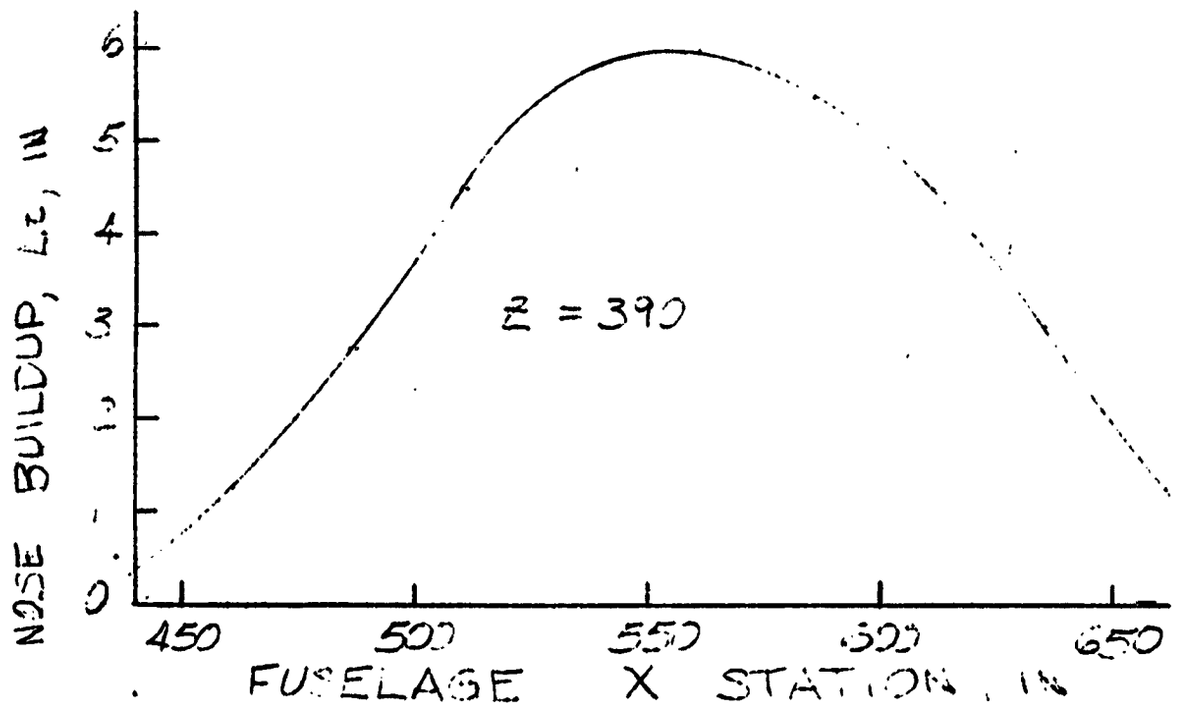
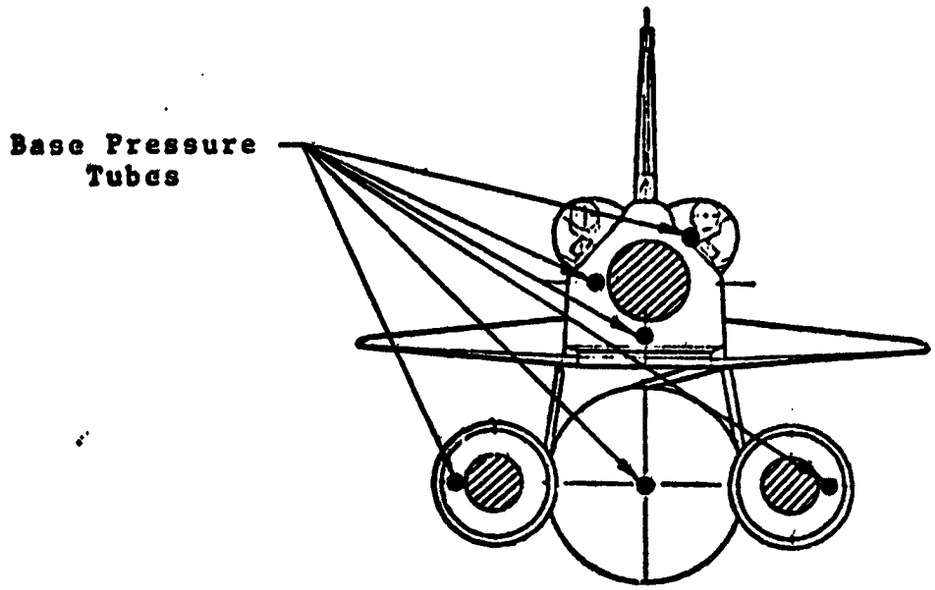
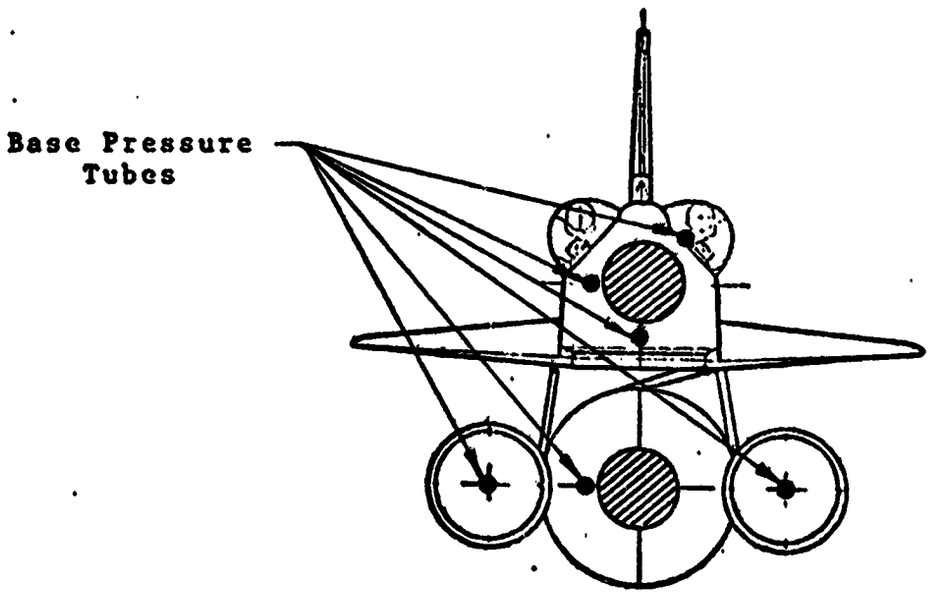


Figure 2e. - Typical Nose Buildup Cross-Section



a. One Balance, Three Stings



b. Balance in Orbiter and ET

Figure 2f. - Location of Base Pressure Tubes

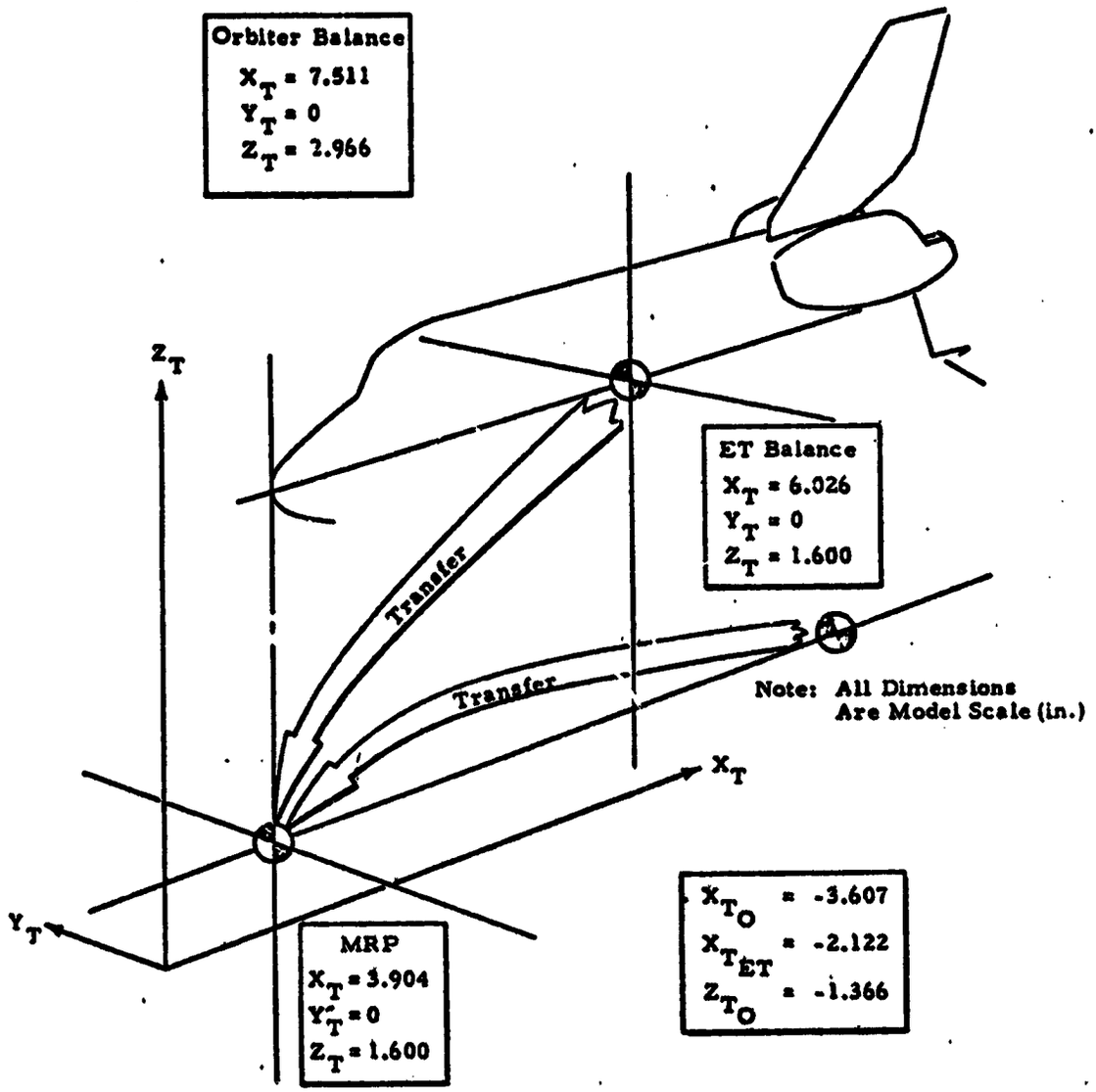


Figure 2g. - Balance Transfers in the Tank Reference System

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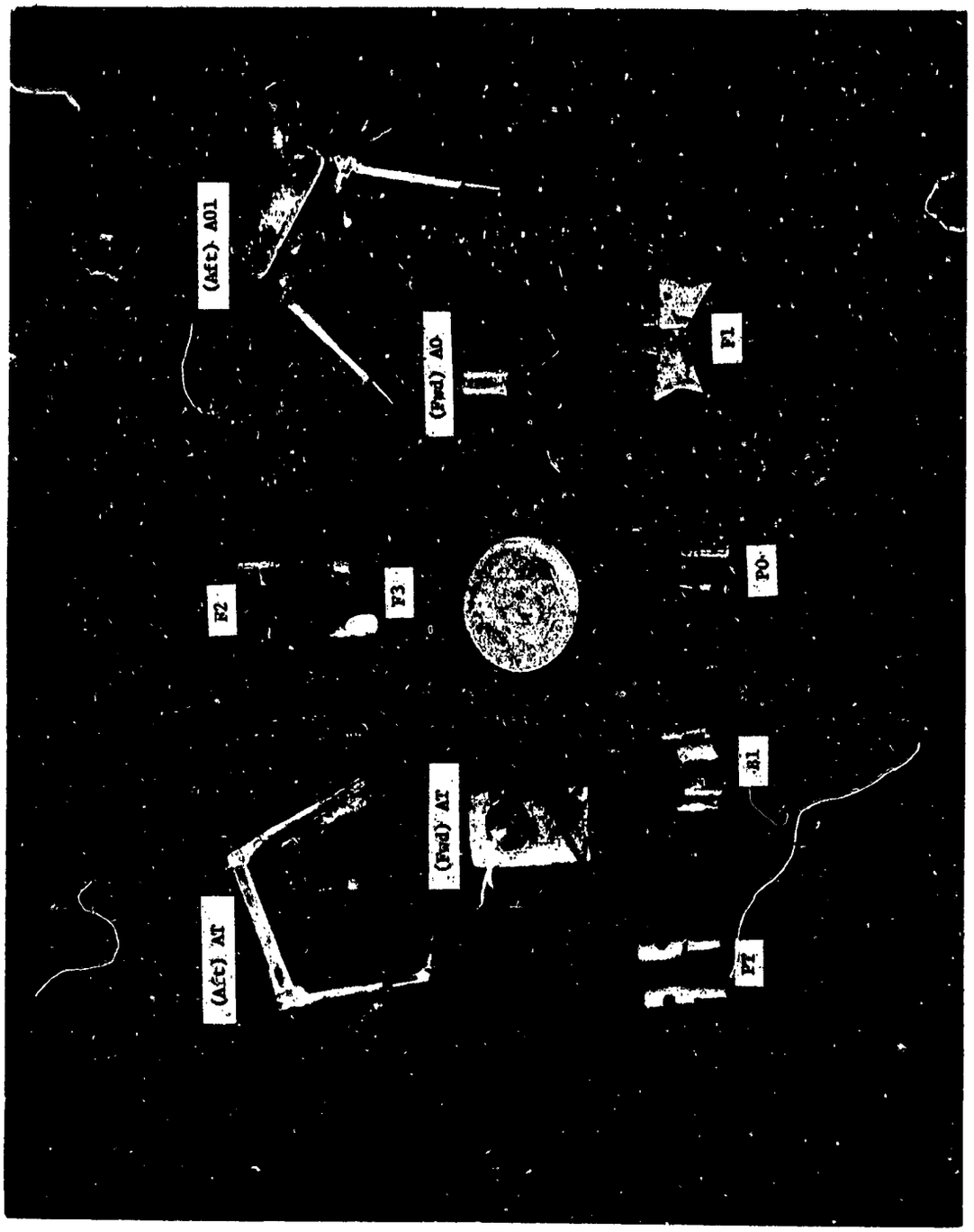

Figure 3a. - Attach Structure Parts

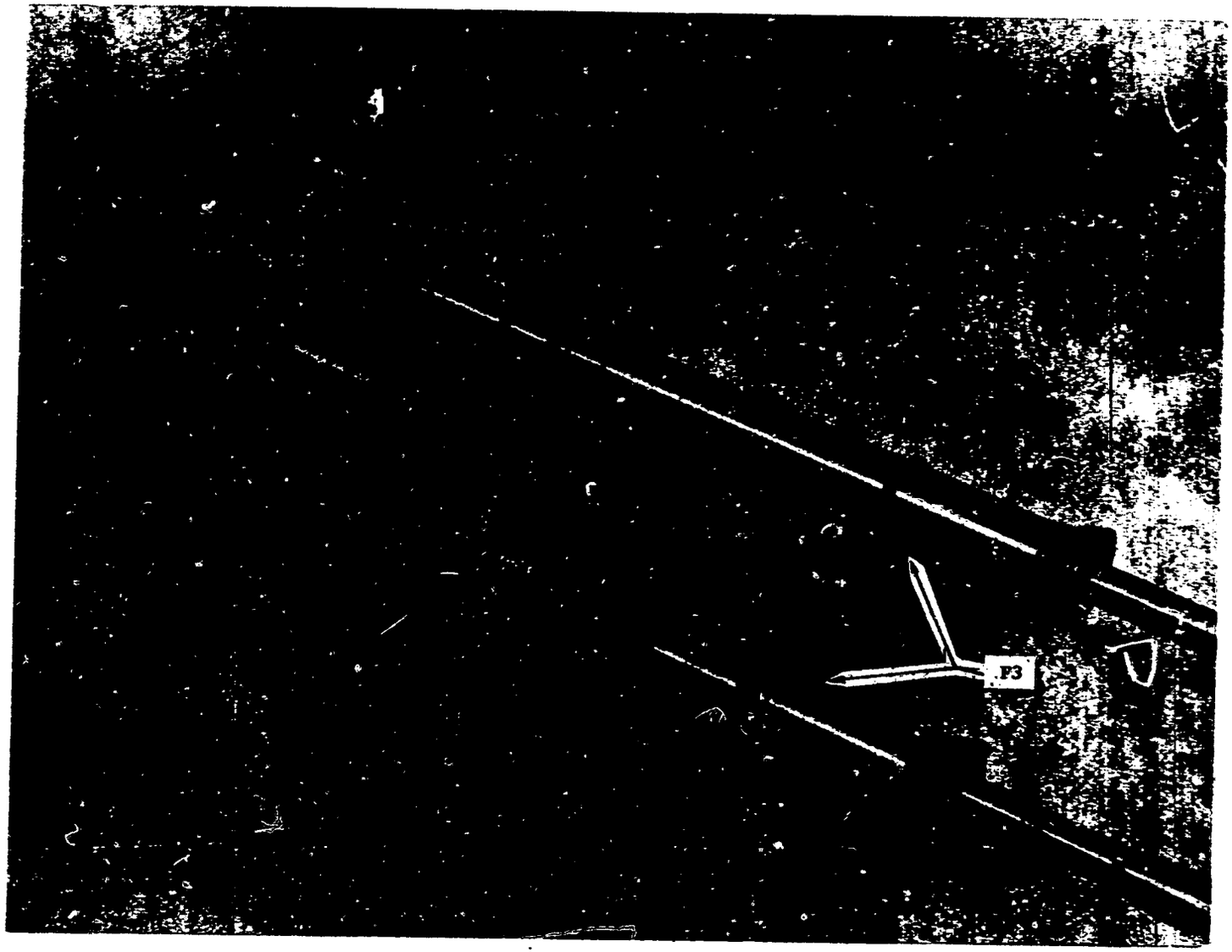

Figure 3b. - Sting Supported SRBs and ET with (AT) Attach Structure on ET and (F3) Fairings

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Figure 3c. - Sting Supported Orbiter with (AO) Attach Structure on Orbiter and (F1) Fairings

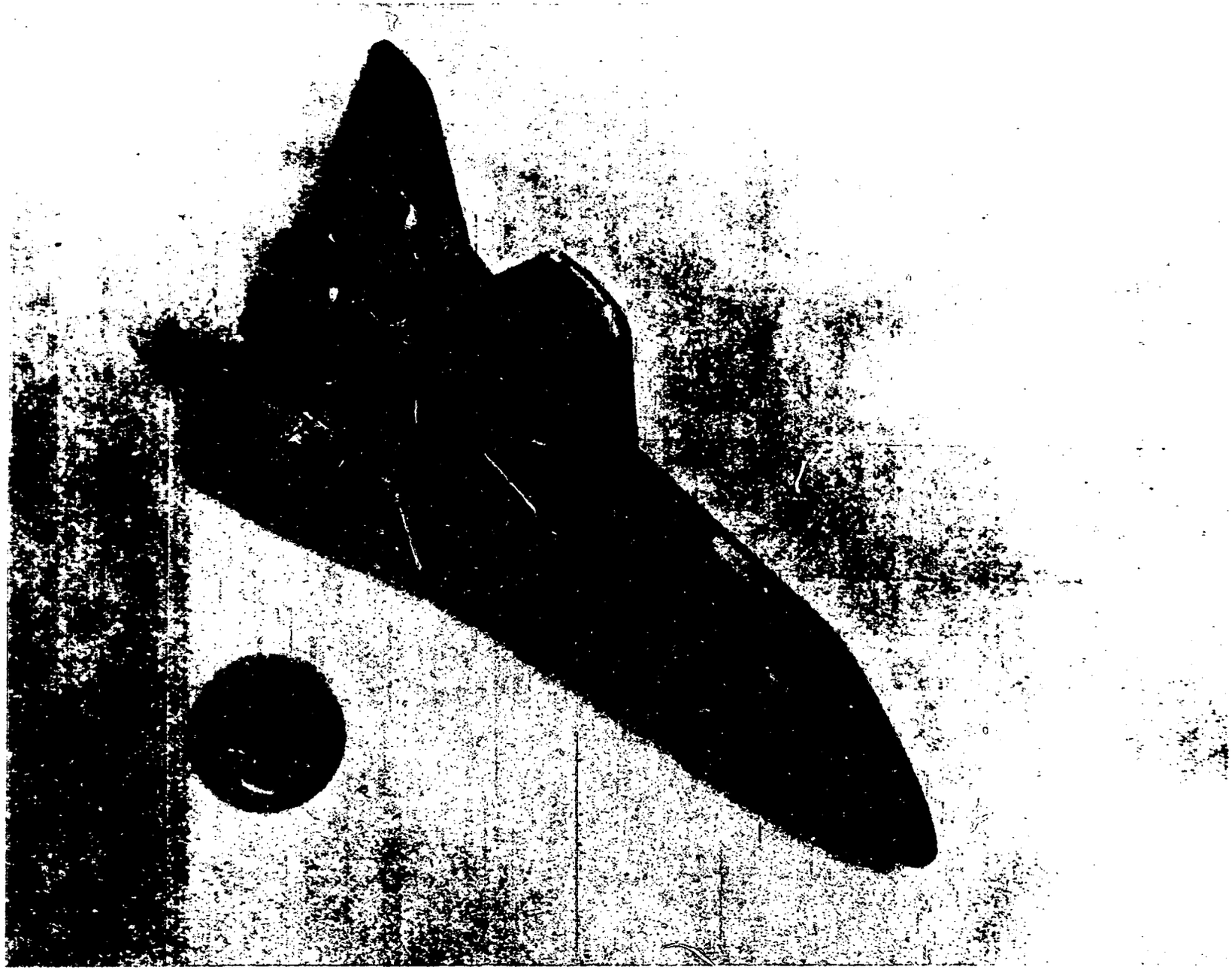

Figure 3d. - Orbiter with (A04) Attach Structure and (F1) Fairings

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DATA FIGURES

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(0)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

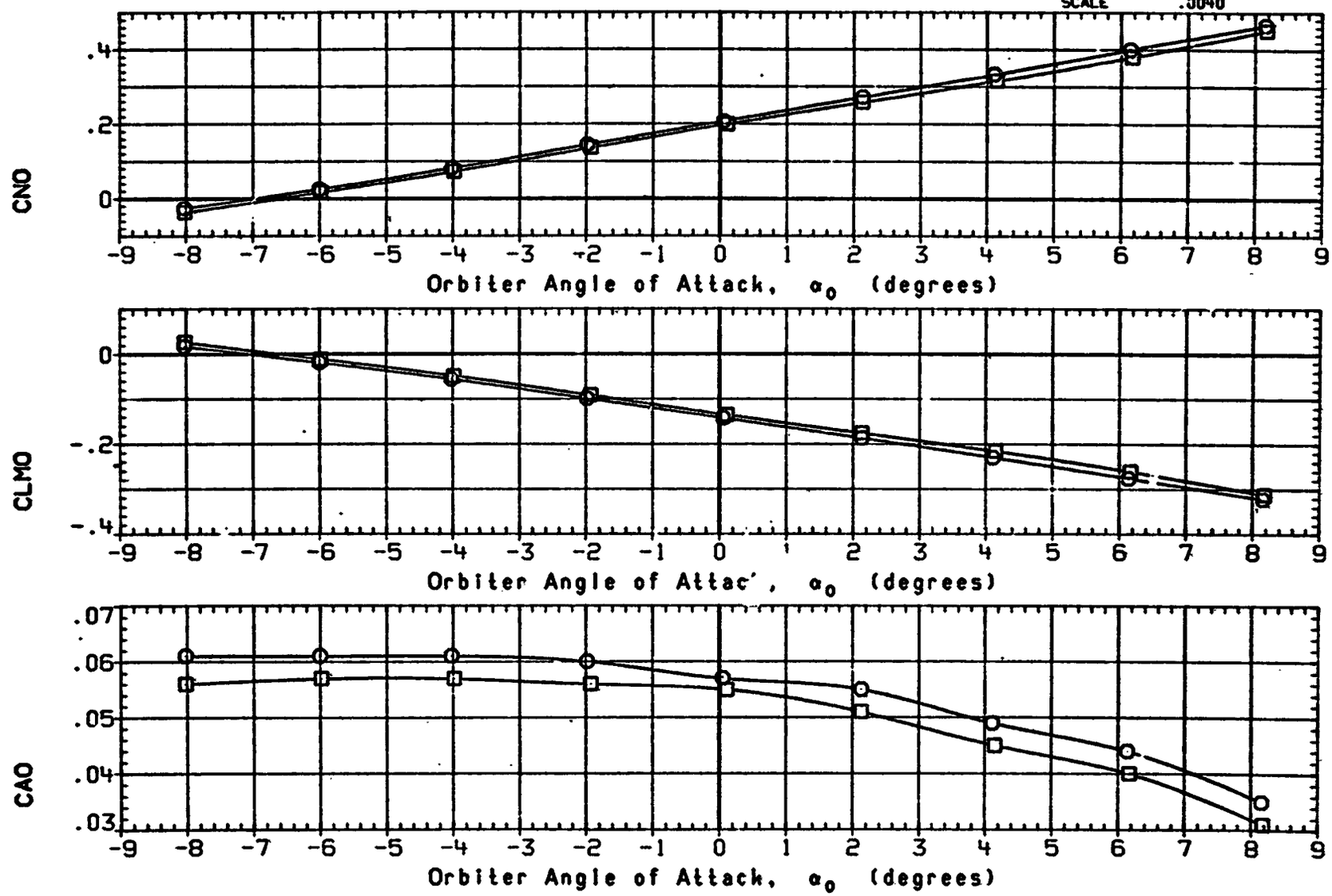

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(A) MACH = .60

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DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(O)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

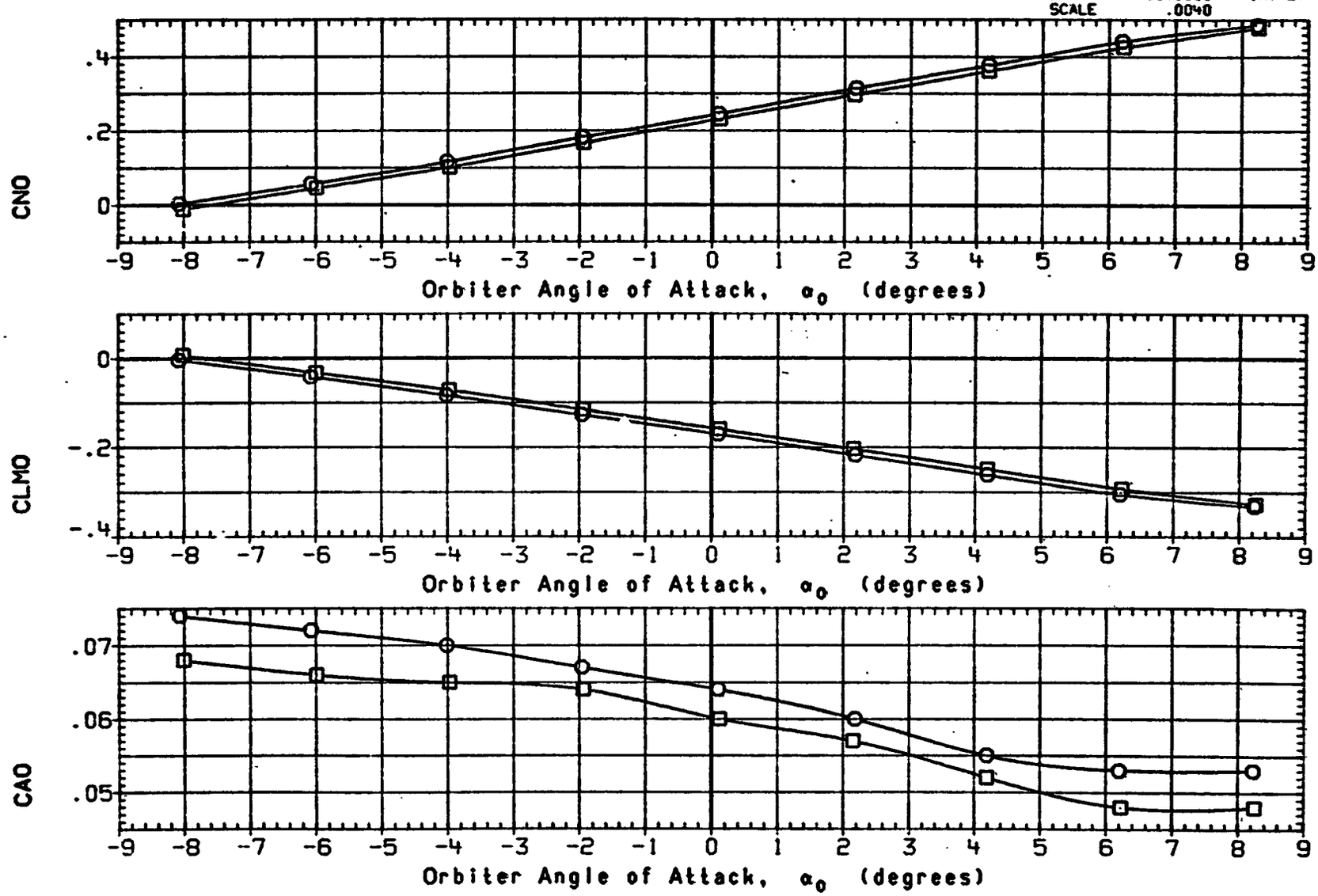

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(O)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
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ZMRP	400.0000	IN. ZT
SCALE	.0040	

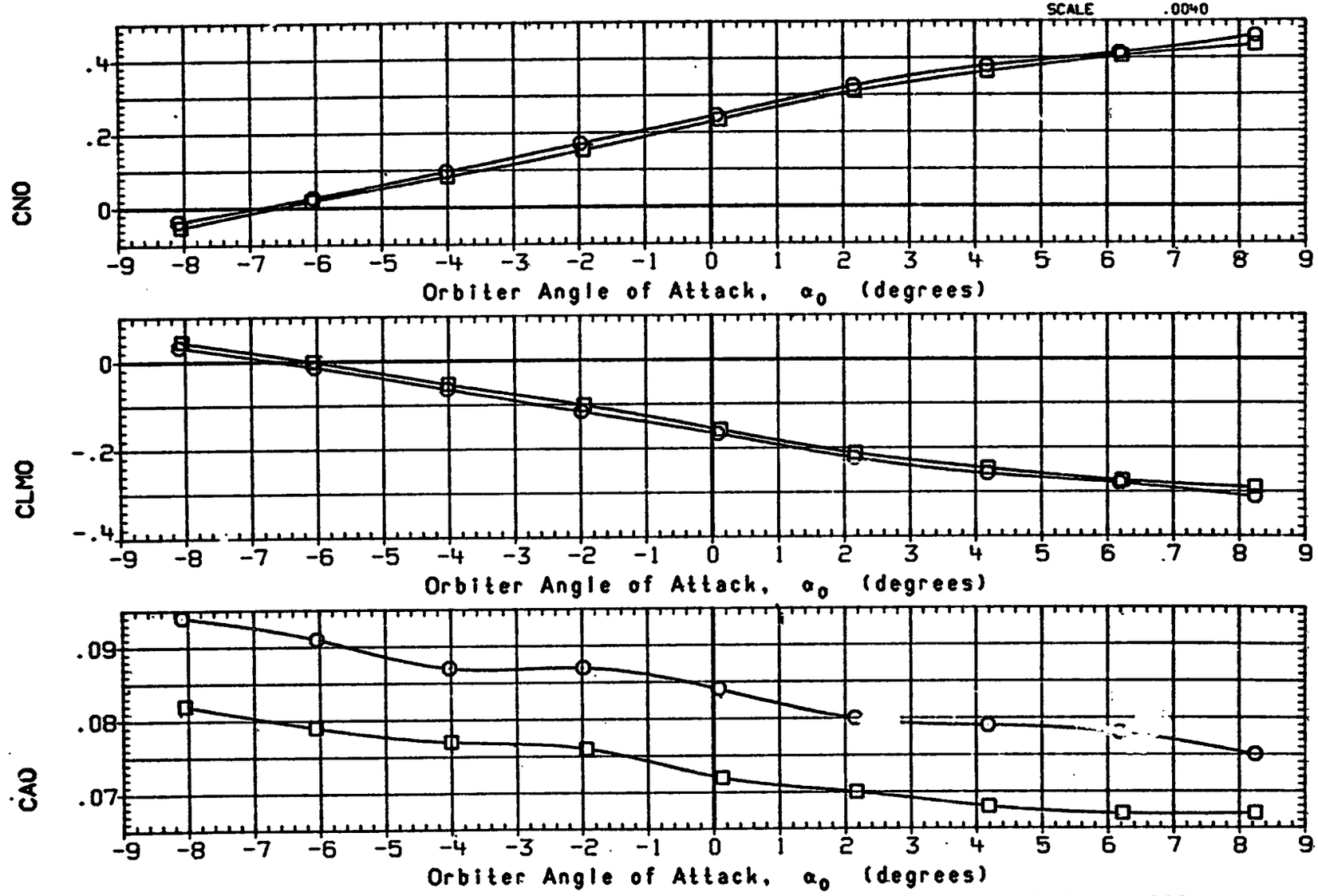

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(O)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
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YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

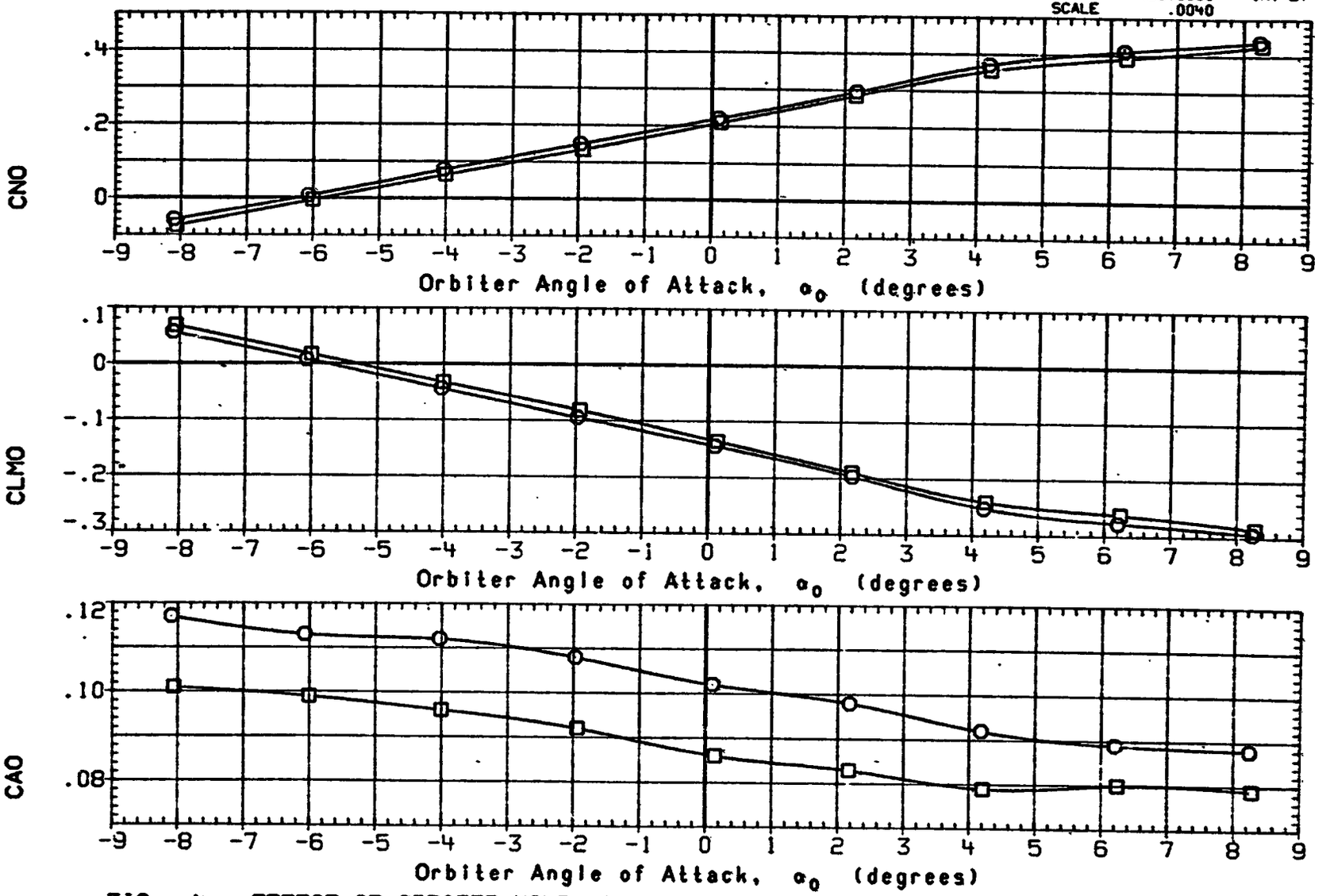

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(D)MACH = .94

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(0)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
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YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

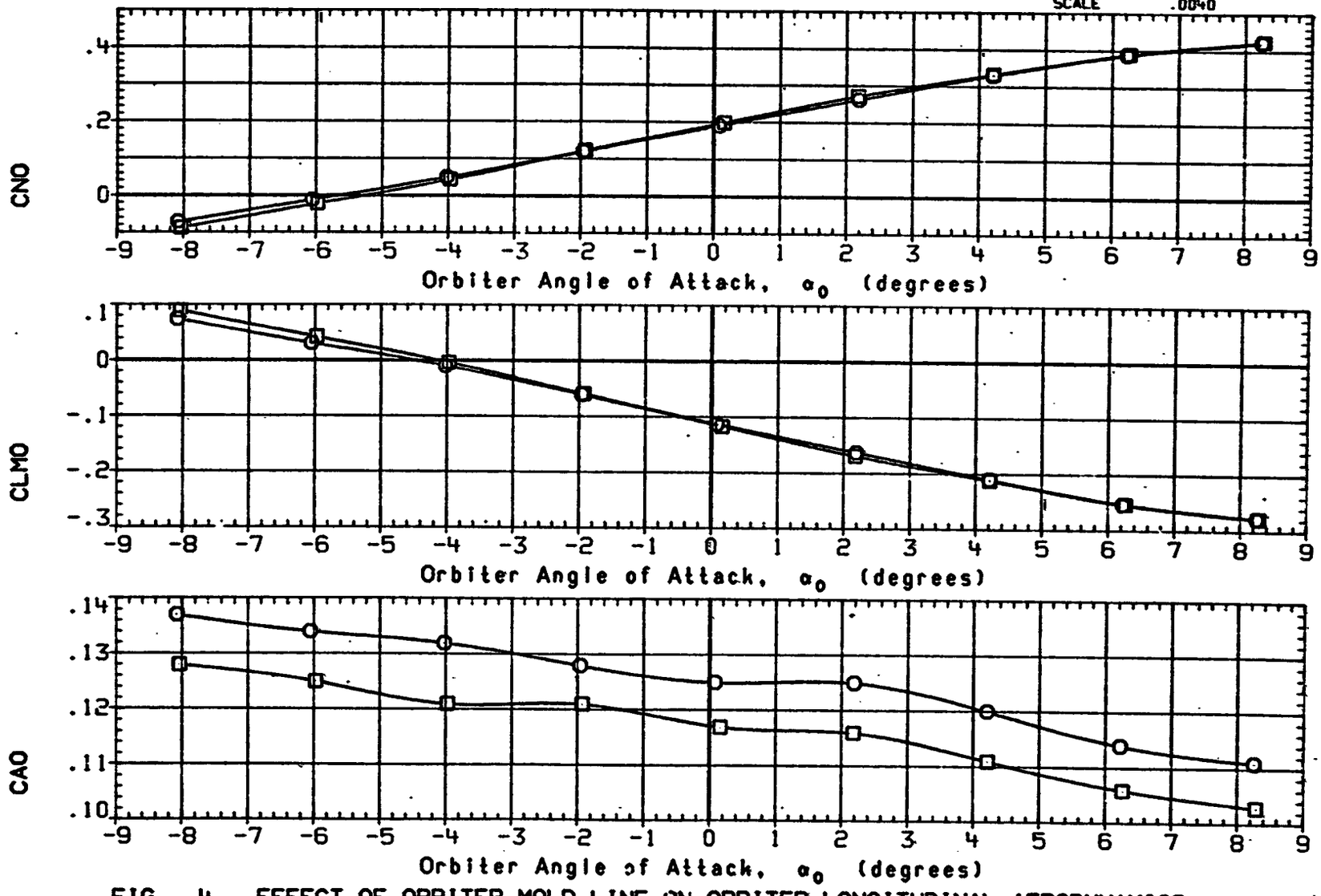

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(E)MACH = 1.03

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DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(O)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

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LREF	1290.3000	INCHES
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ZMRP	400.0000	IN. ZT
SCALE	.0040	

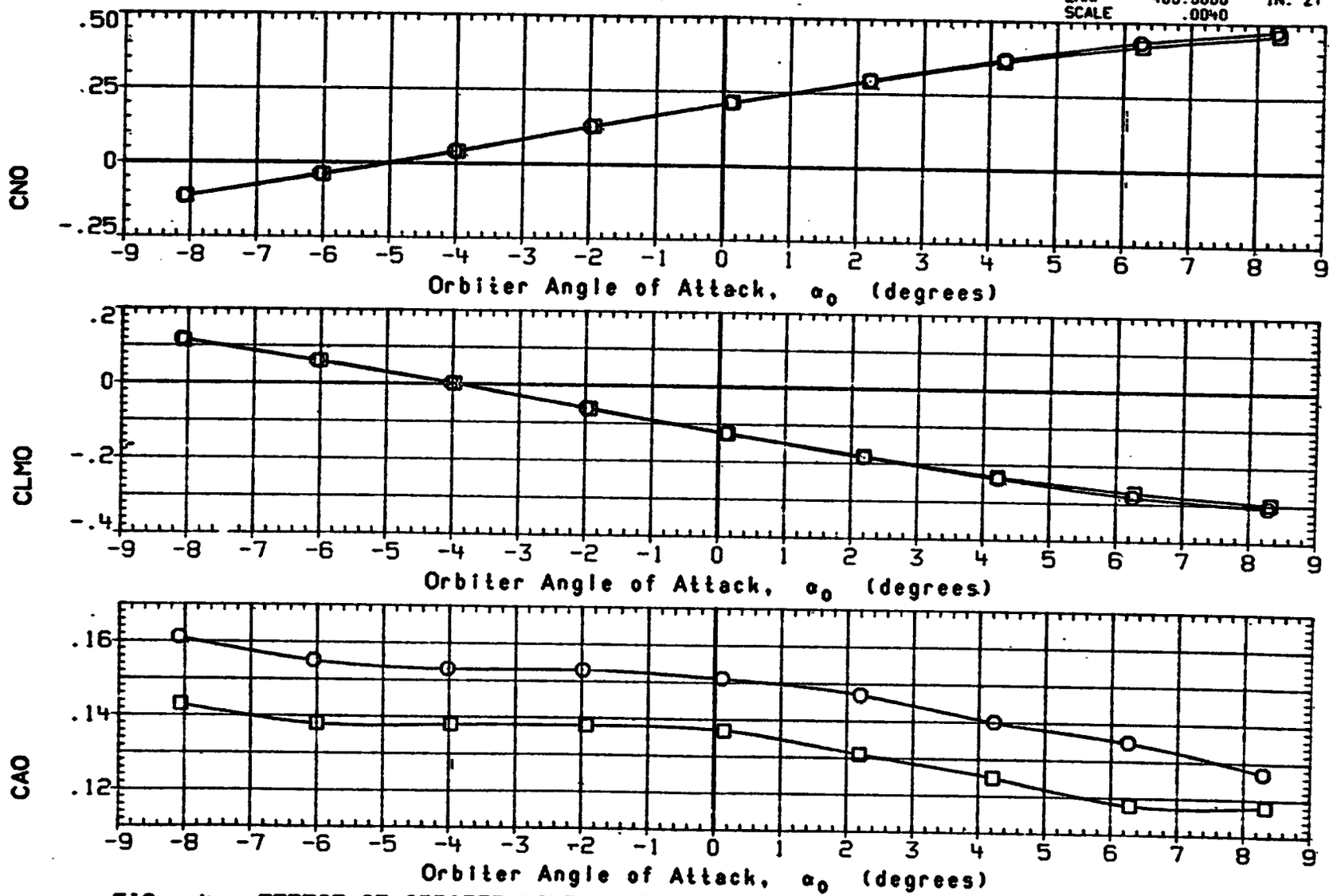

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(F)MACH = 1.09

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTTISI	(O)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTTISI	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
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YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
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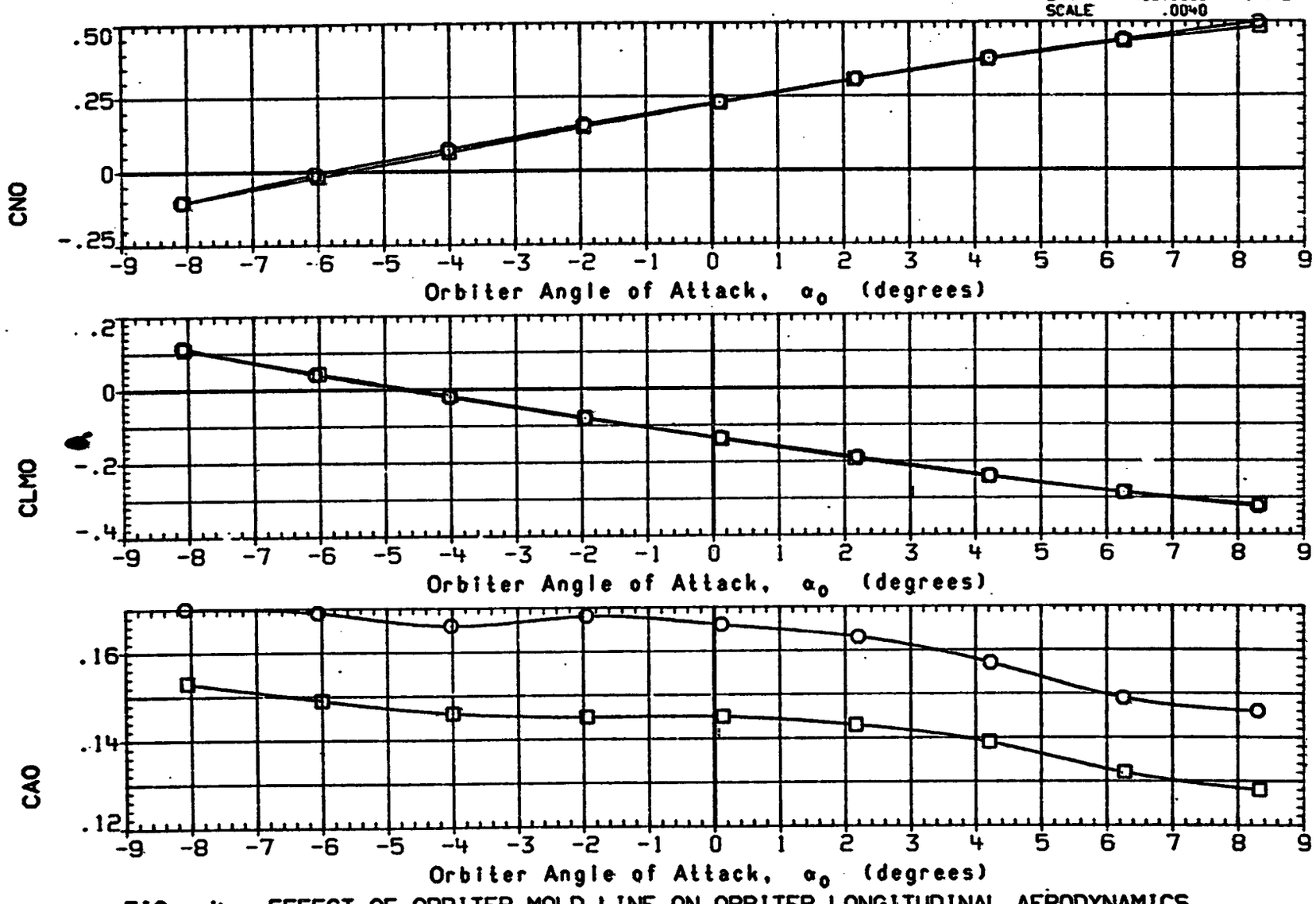

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(G)MACH = 1.14

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DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X001	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(O)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
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YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
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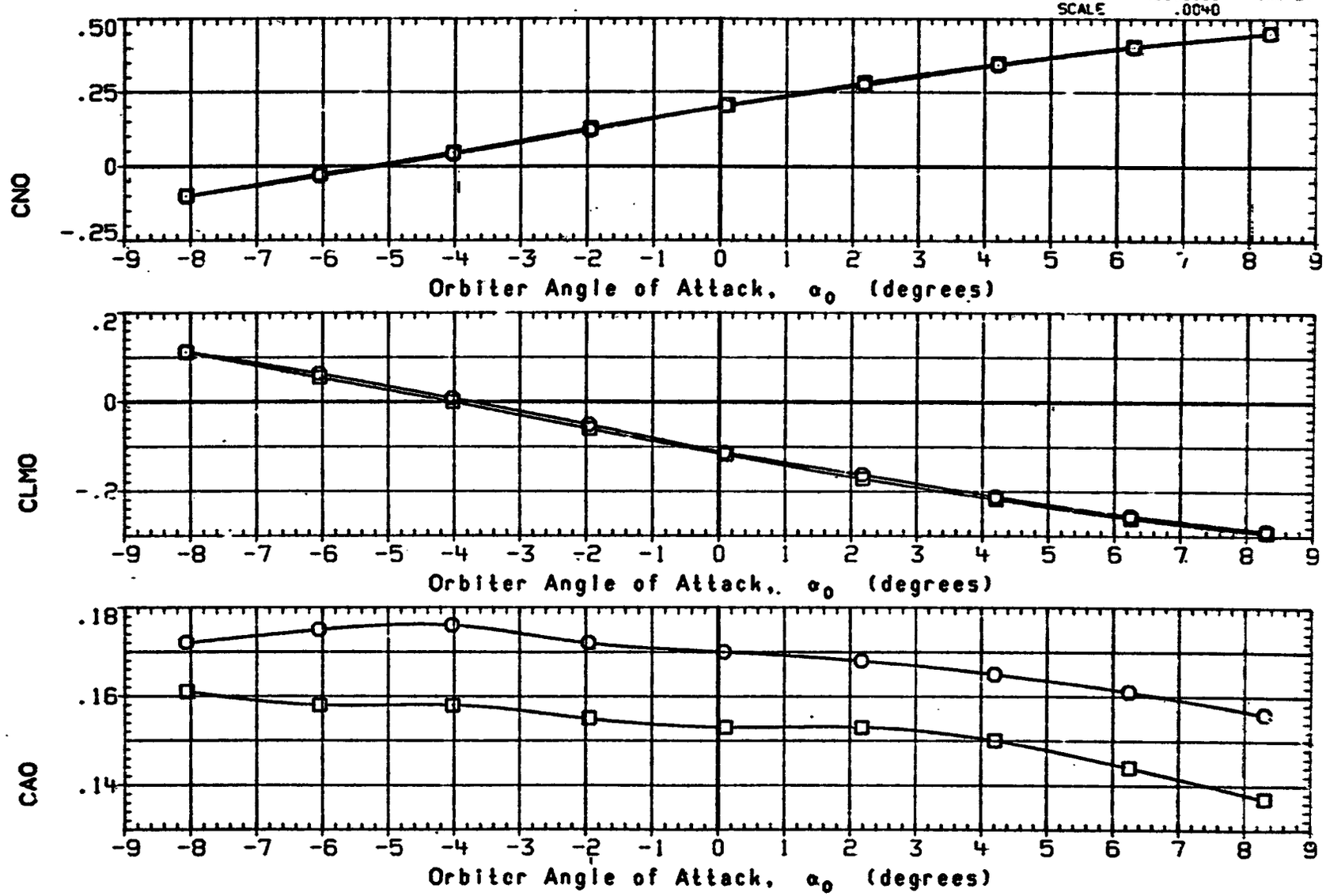

FIG. 4 EFFECT OF ORBITER MOLD LINE ON ORBITER LONGITUDINAL AERODYNAMICS ATTACH STRUCTURE ON ET

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25. MSFC TWT 652. CONFIG. 02ATPTT1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25. MSFC TWT 652. CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
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BREF	1290.3000	INCHES
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YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

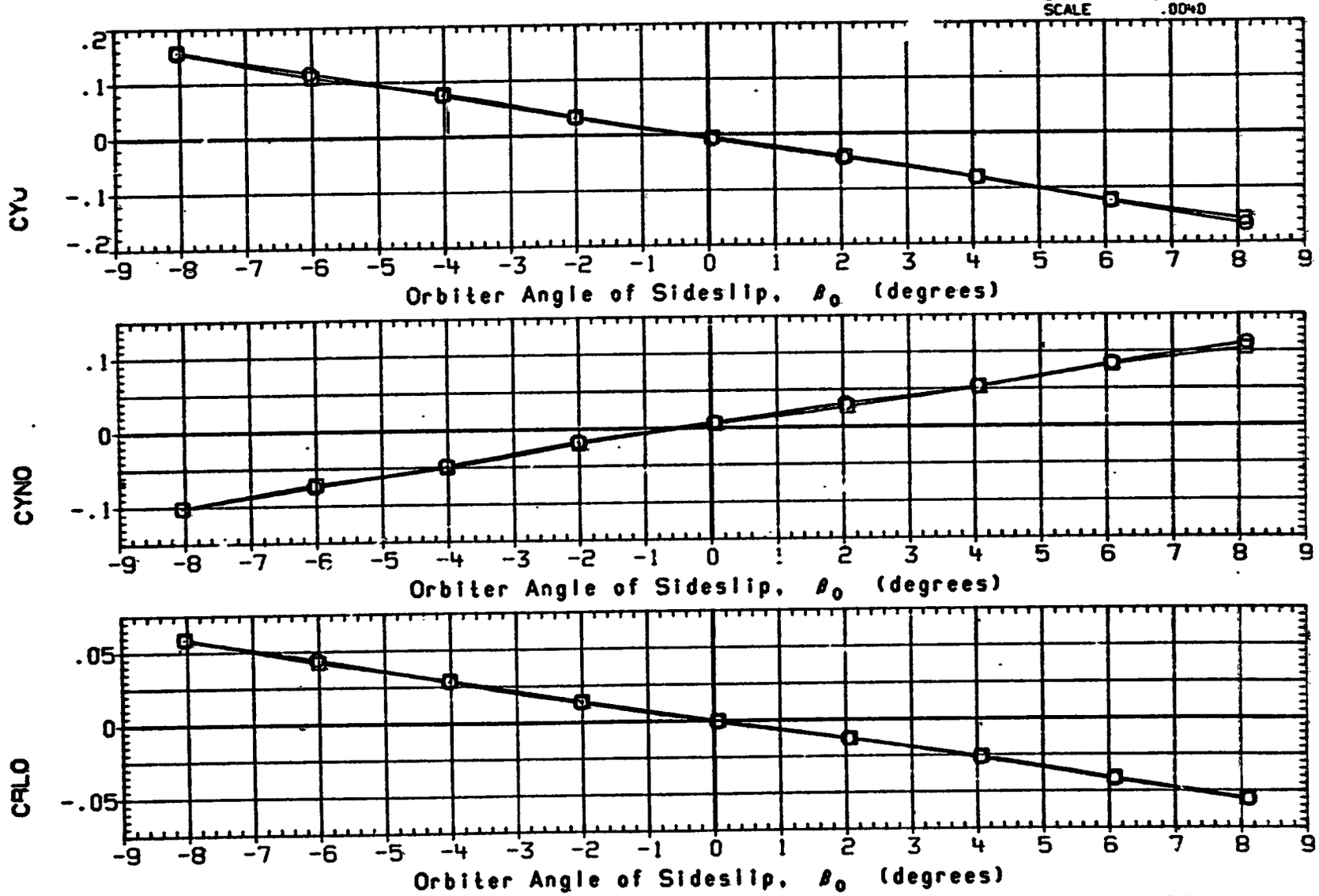

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25, MSFC TWT 652, CONFIG. 02ATPTTISI	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTTISI	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

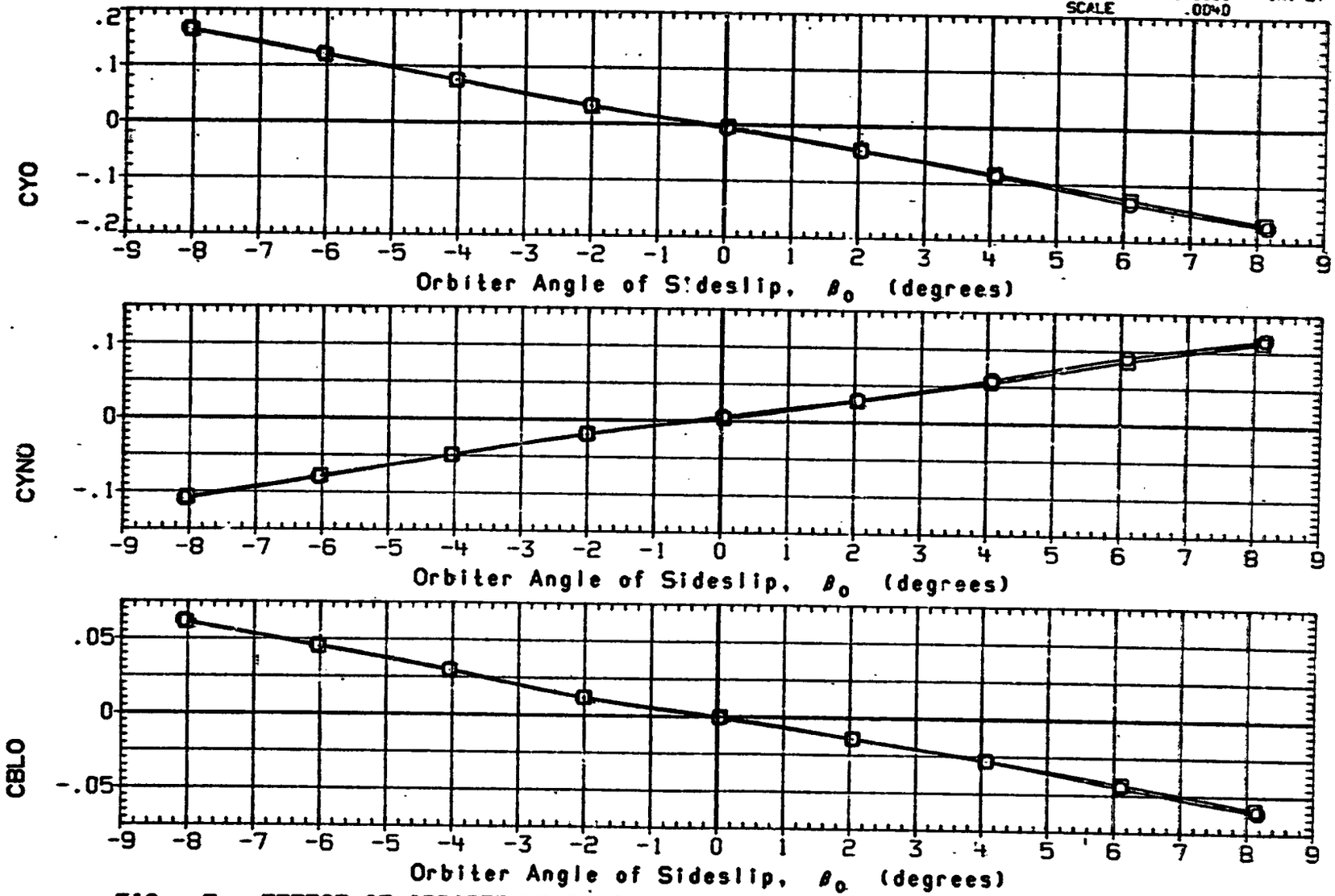

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25, MSFC TWT 652, CONFIG. 02ATPTTISI	(O)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTTISI	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

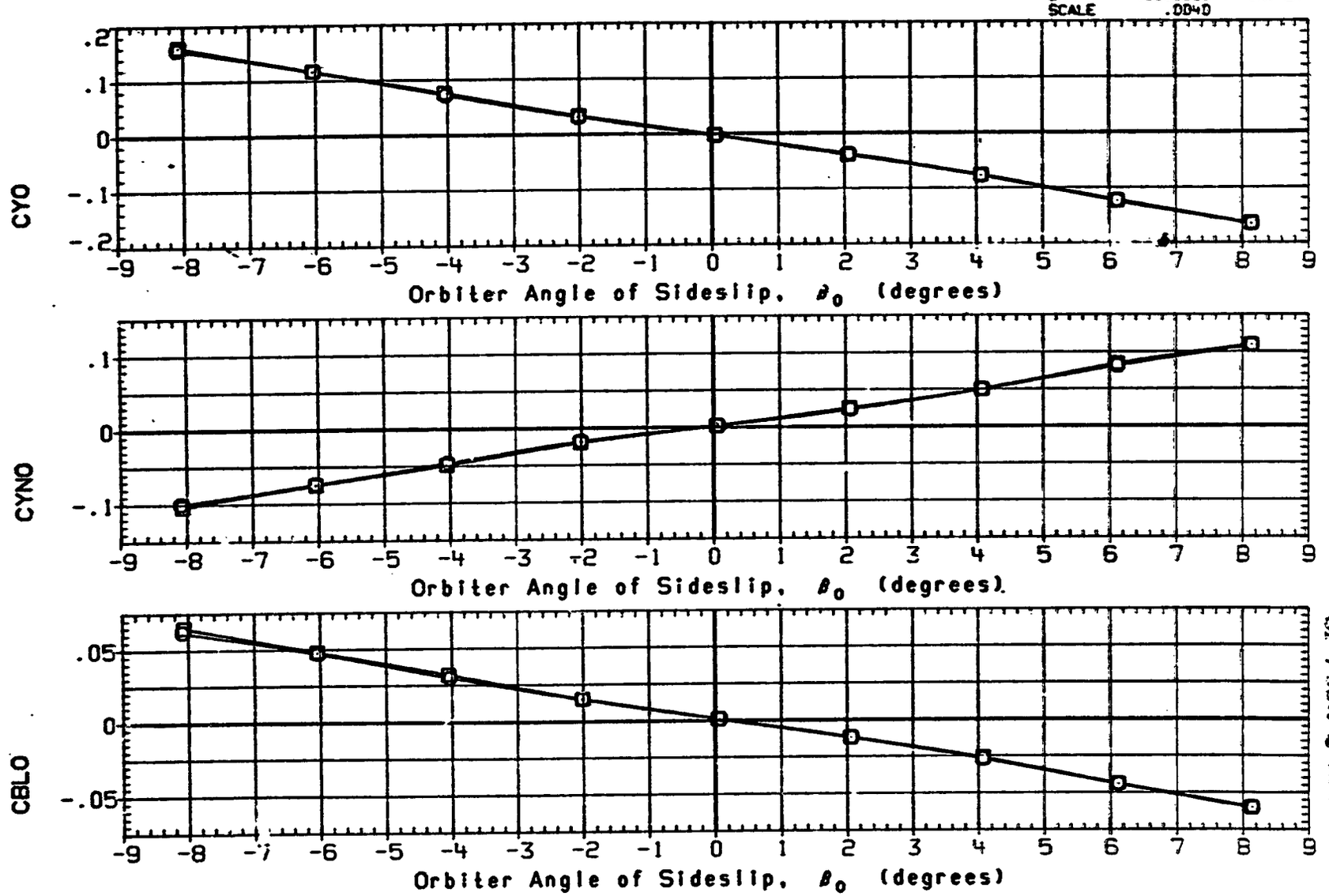

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(C)MACH = .90

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DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25, MSFC TWT 652, CONFIG. 02ATPTTISI	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTTISI	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

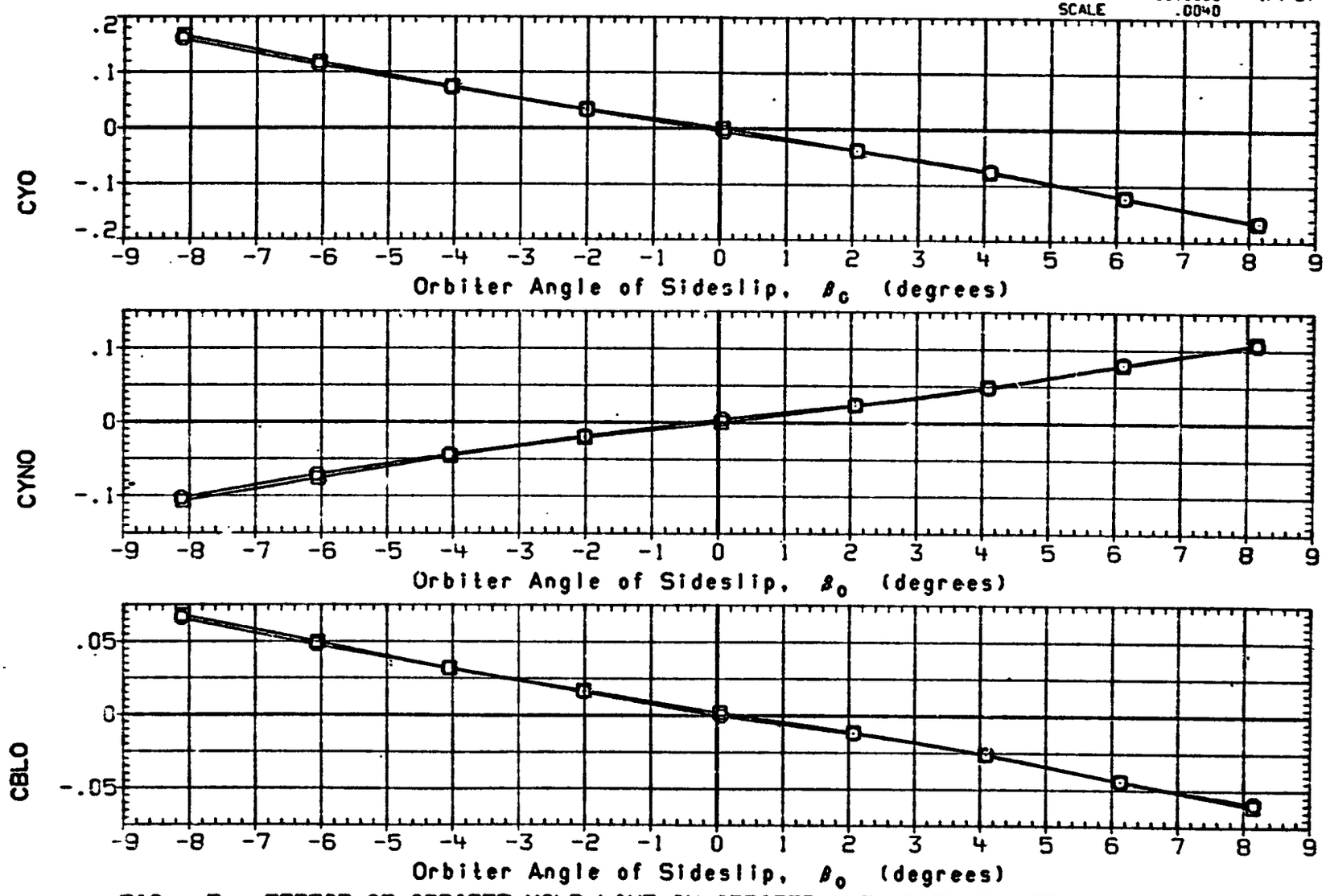

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

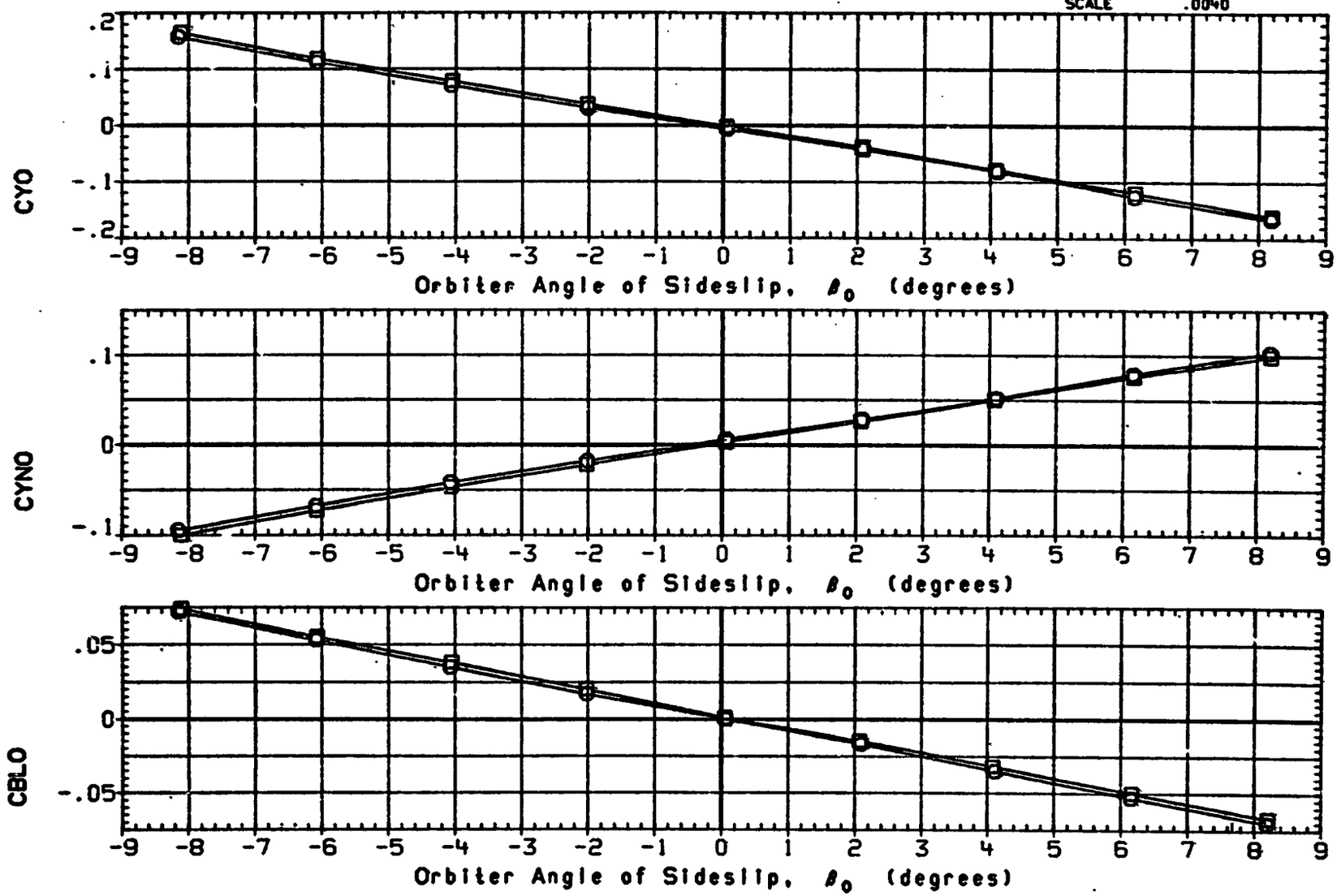

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(E)MACH = 1.05

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DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25. MSFC TWT 652. CONFIG. 02ATPTT1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25. MSFC TWT 652. CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

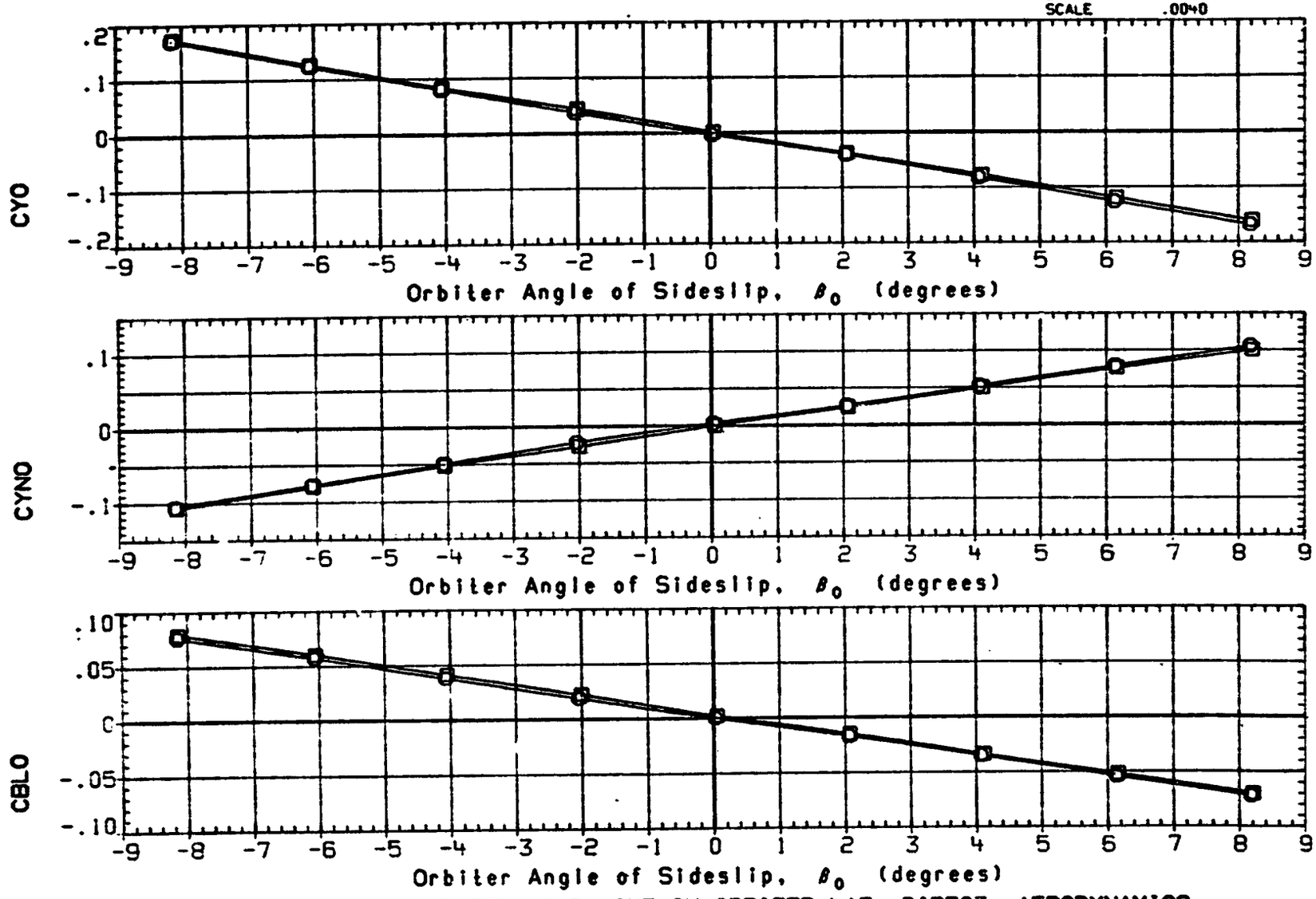

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(F)MACH = 1.09

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

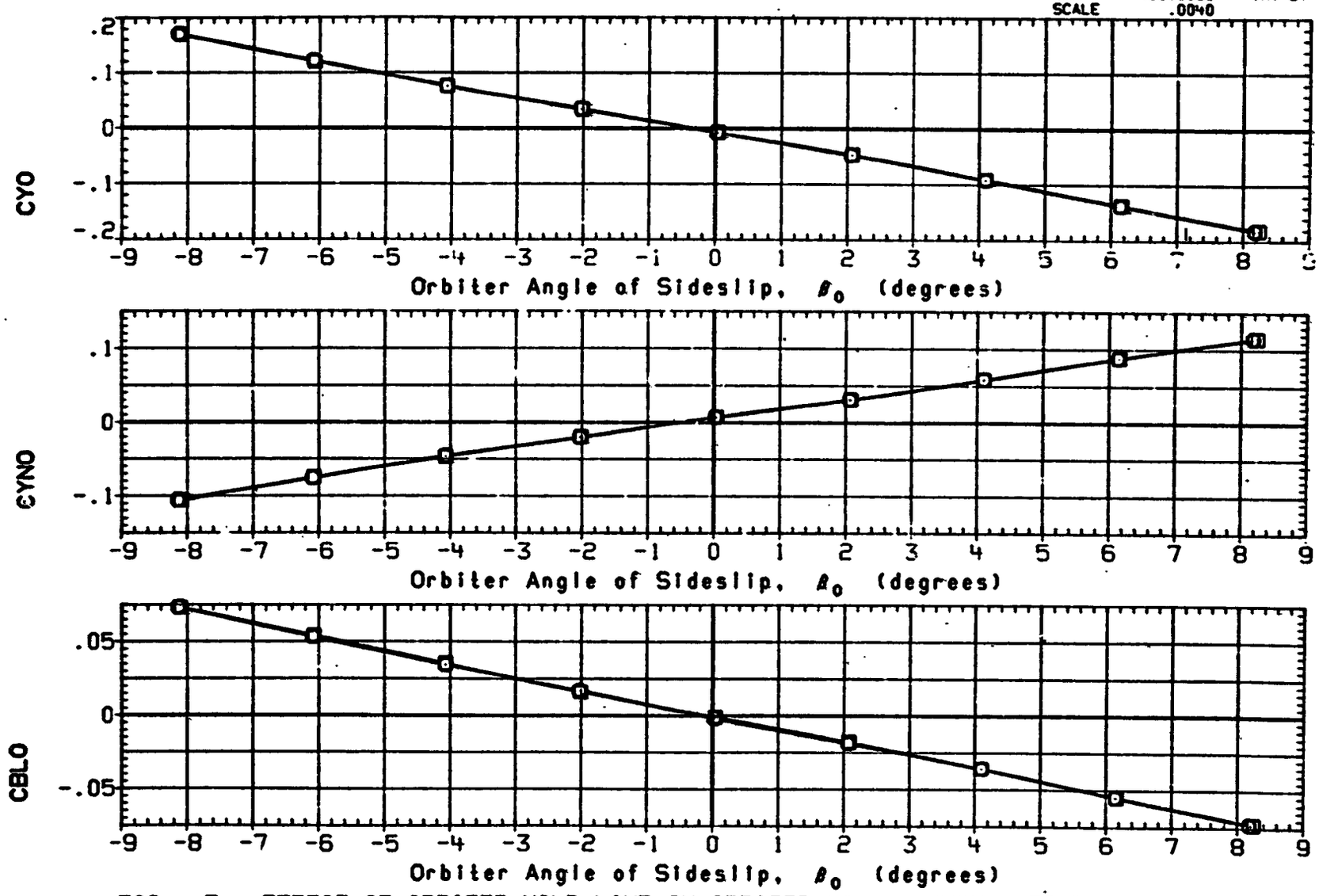

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(G)MACH = 1.14

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DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X002	○	FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

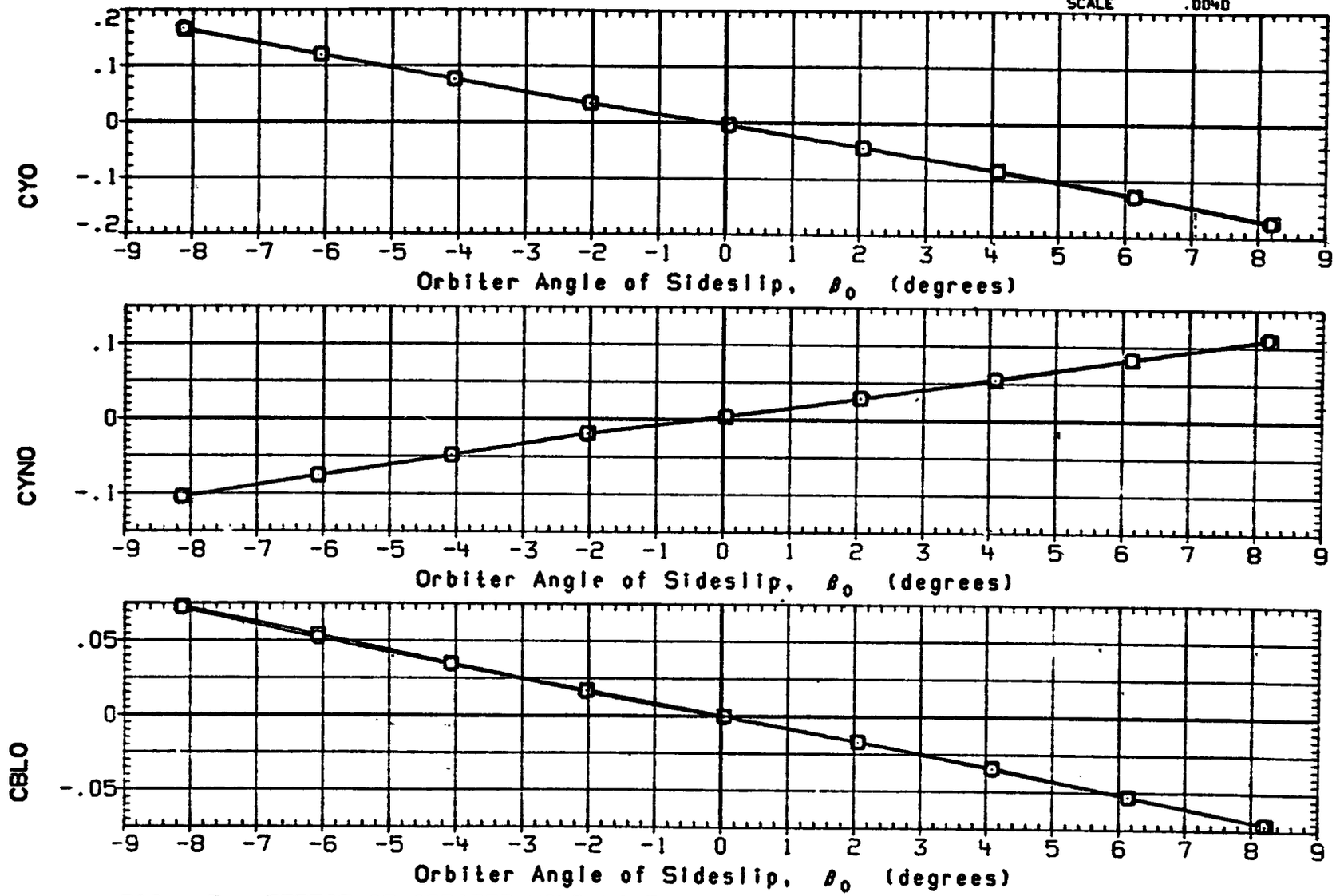

FIG. 5 EFFECT OF ORBITER MOLD LINE ON ORBITER LAT.-DIRECT. AERODYNAMICS ATTACH STRUCTURE ON ET

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.004C	

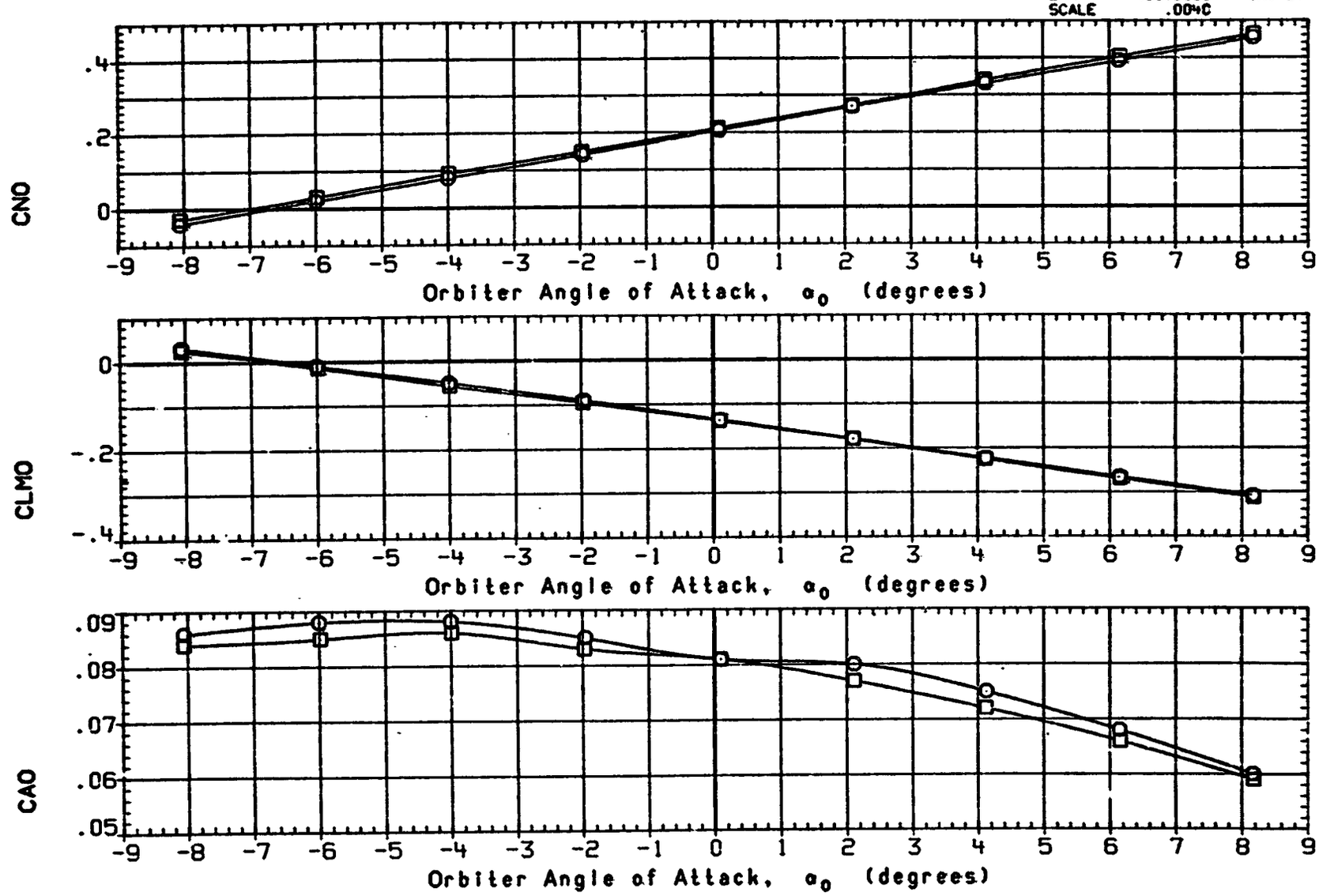

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(A)MACH = .60

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DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

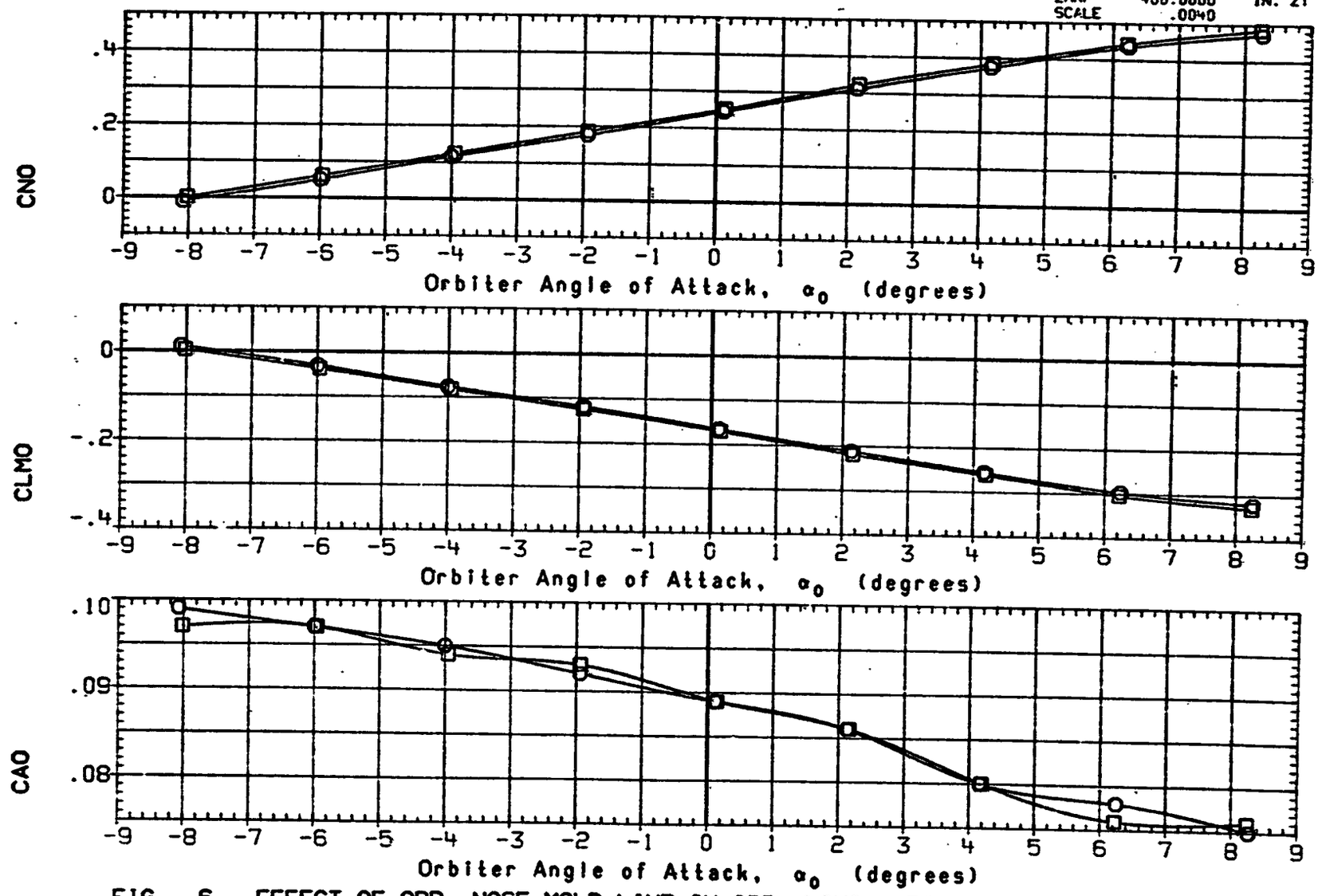

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

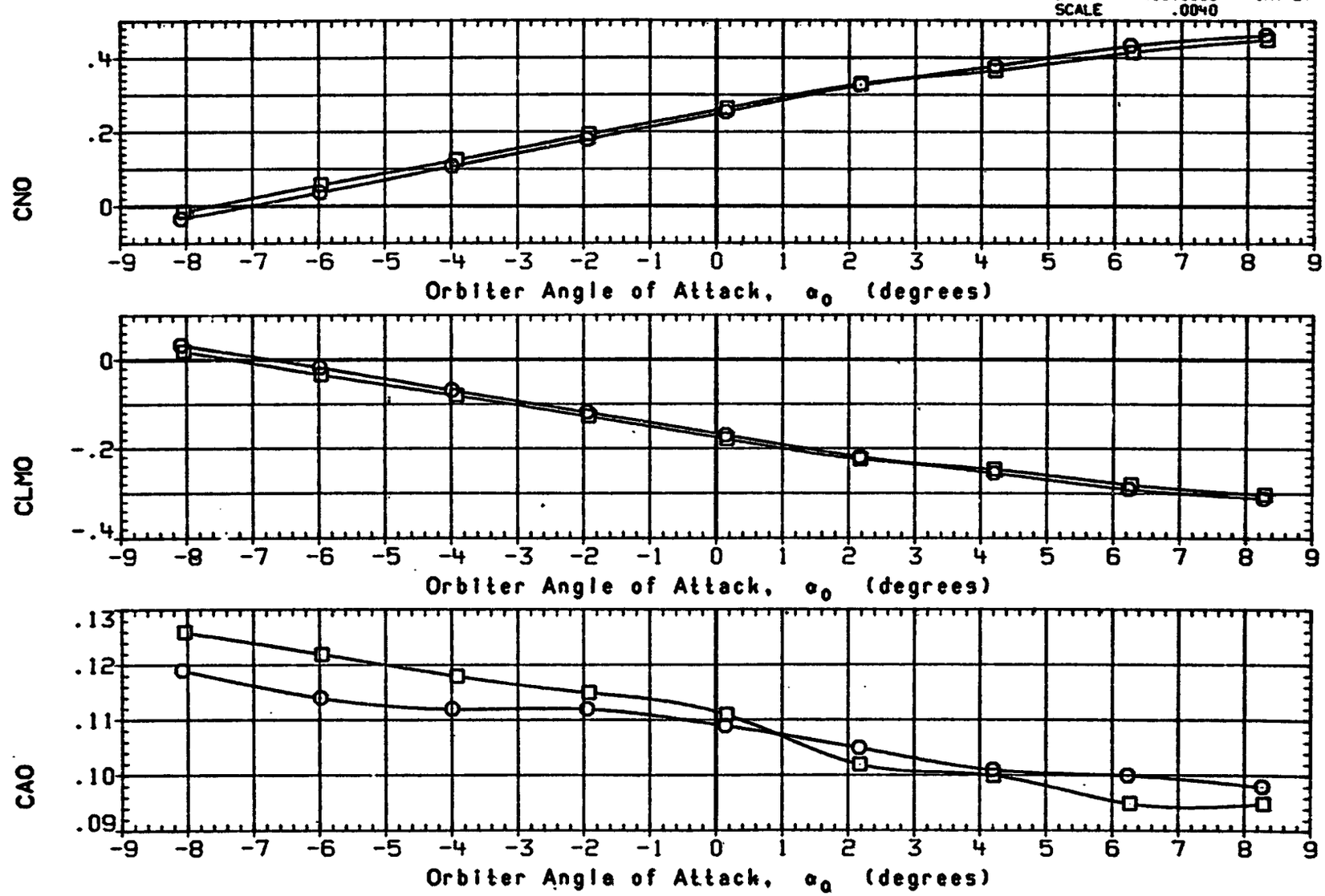

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(C)MACH = .89

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

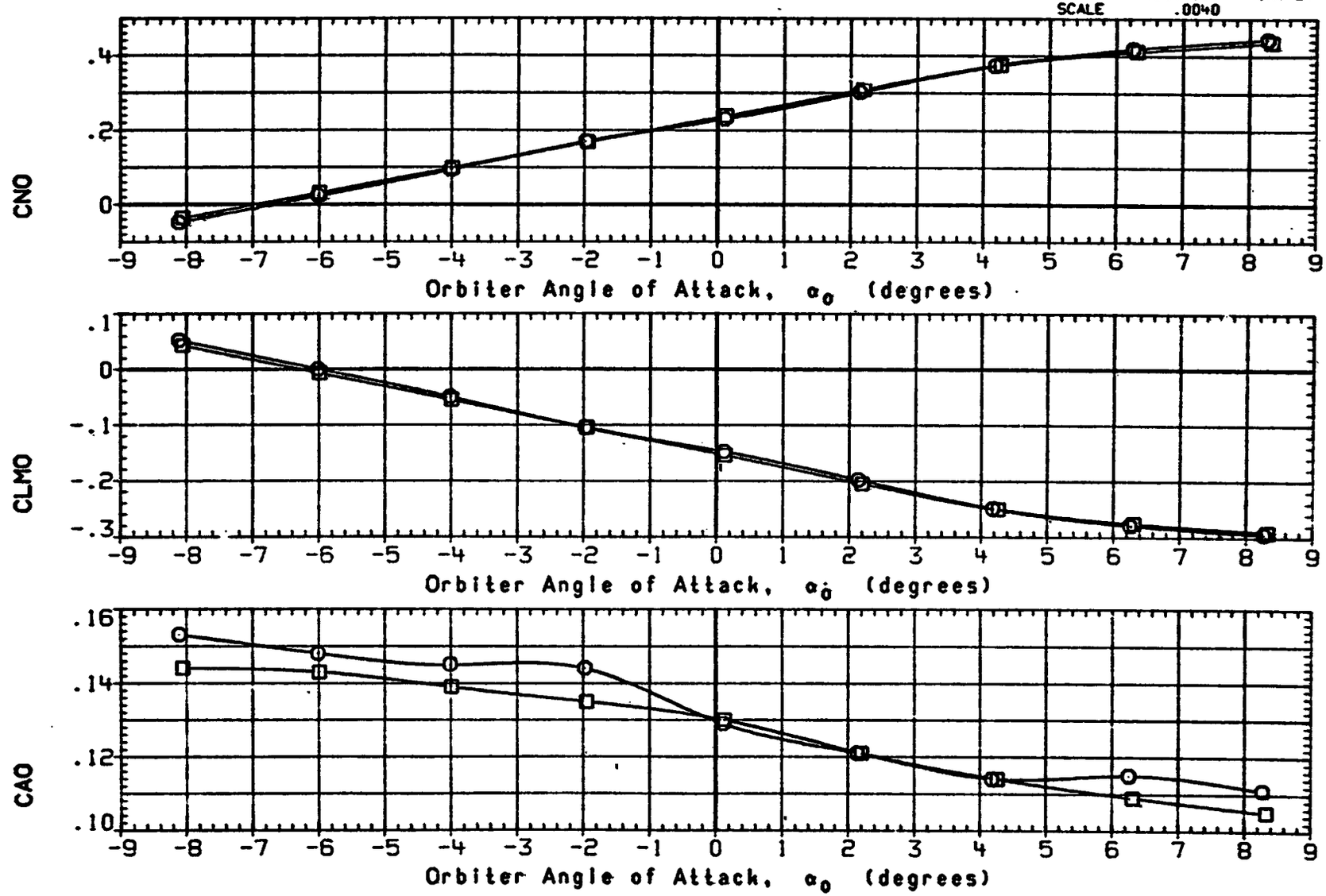

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(D)MACH = .94

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

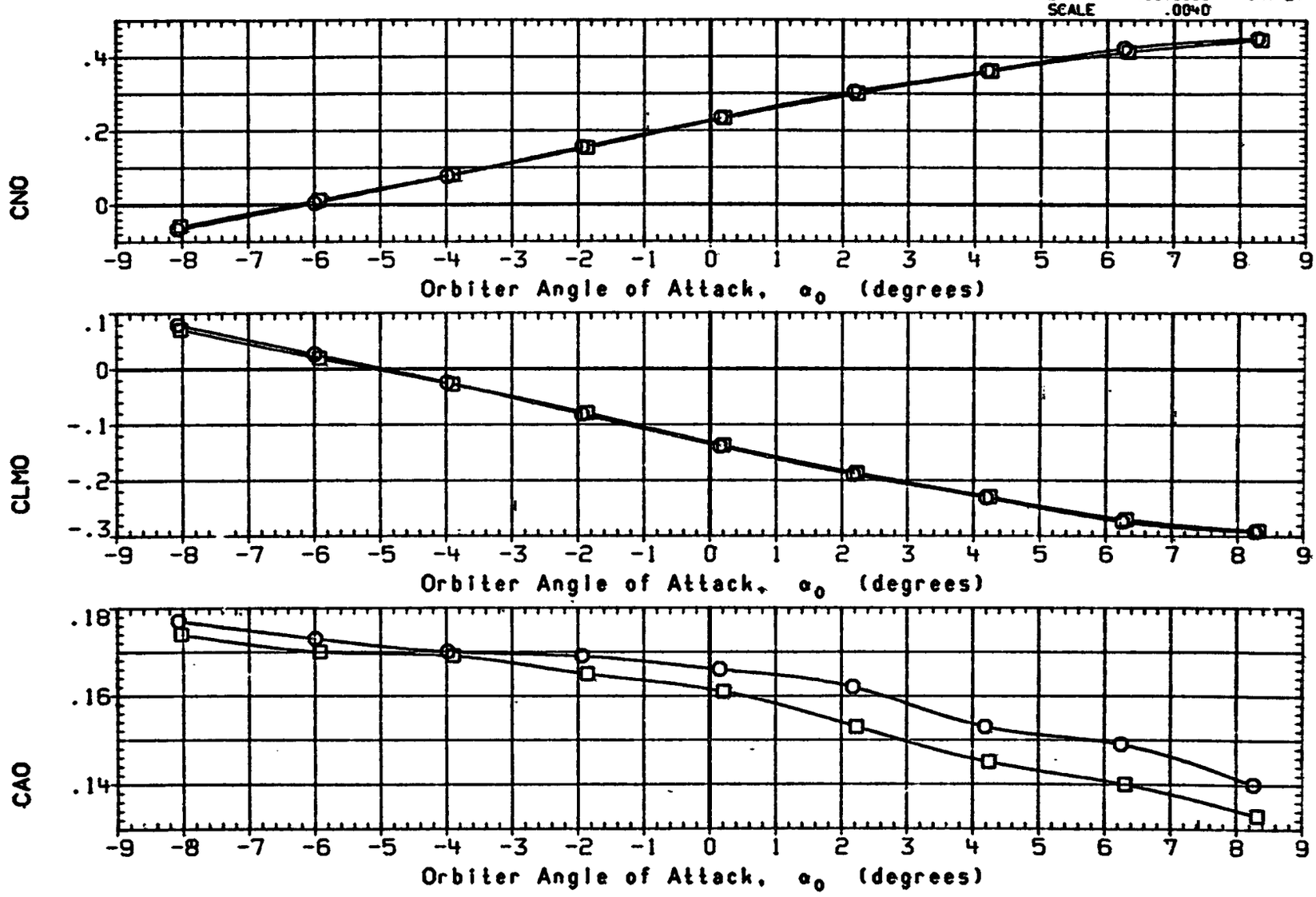

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(E)MACH = 1.05

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DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

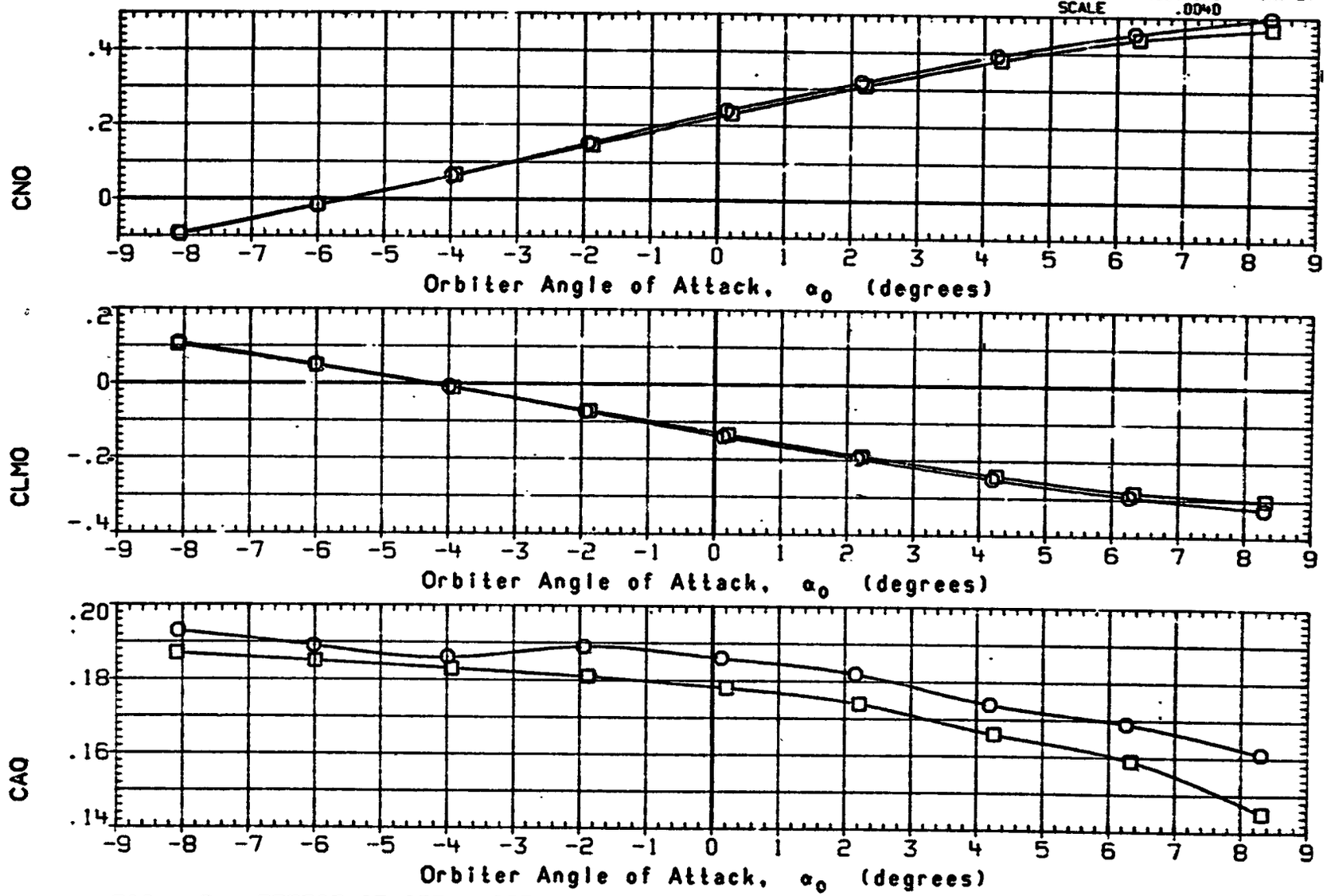

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(F)MACH = 1.09

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

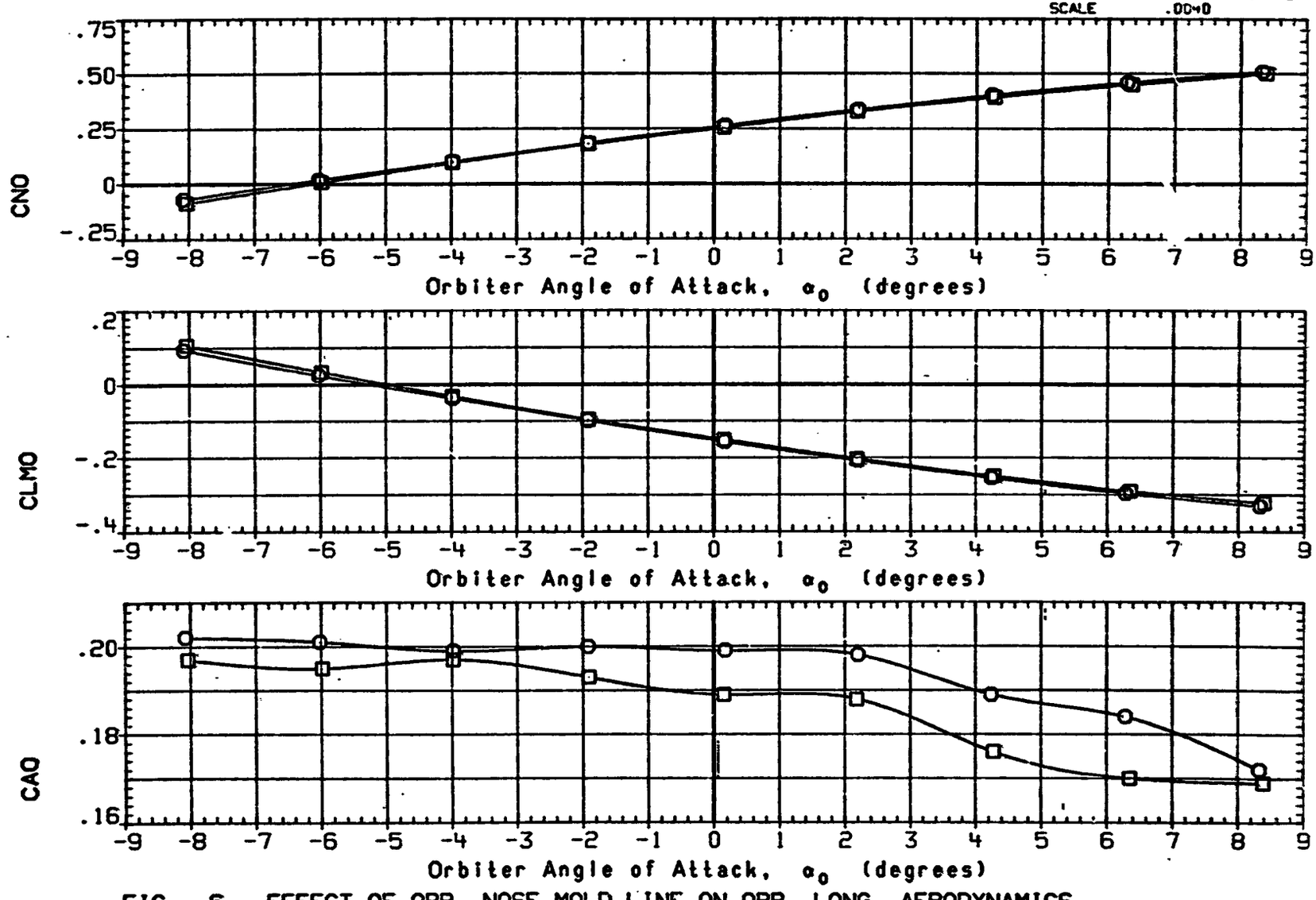

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(G)MACH = 1.14

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DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X003	○	FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000
R1X005	□	FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

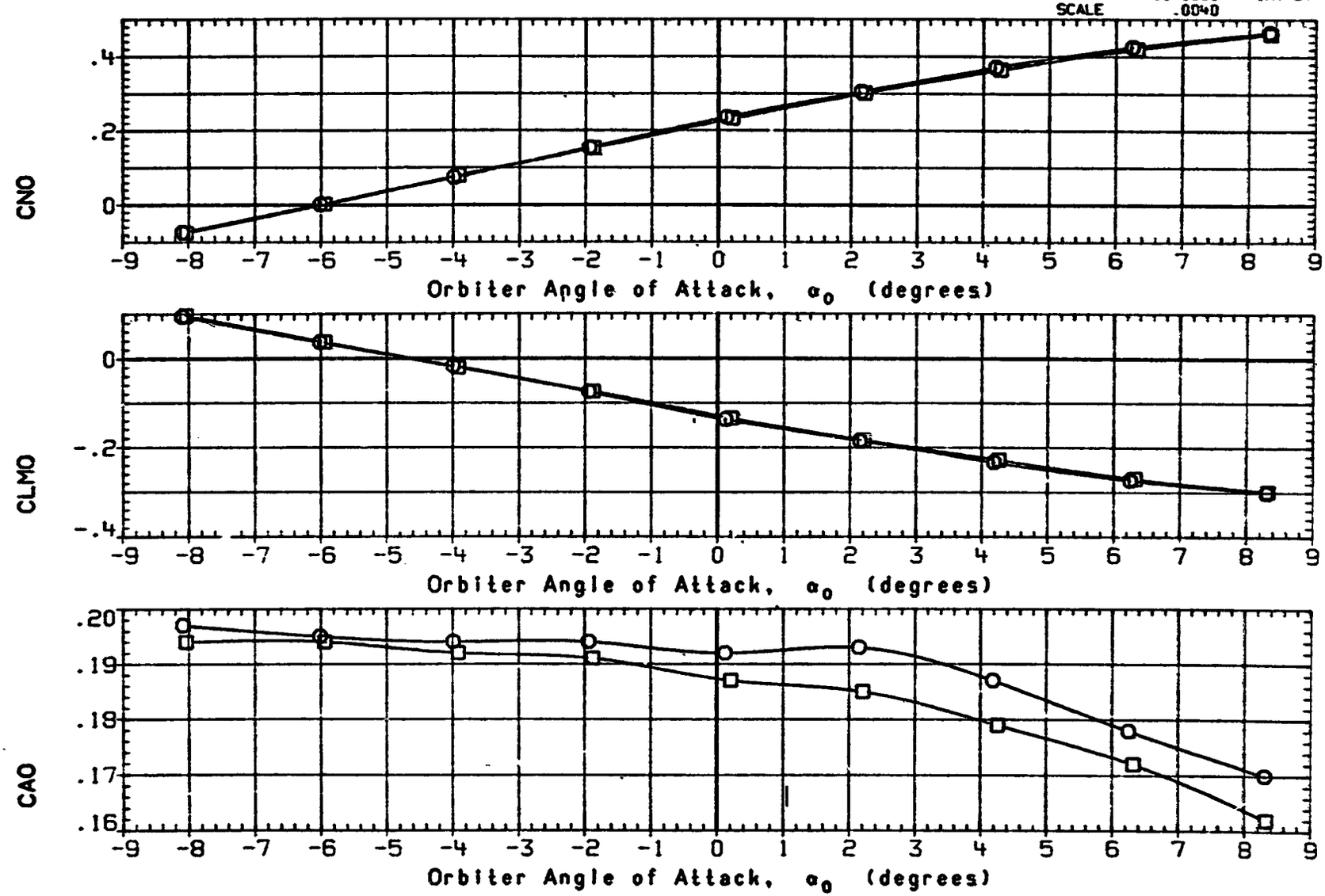

FIG. 6 EFFECT OF ORB. NOSE MOLD LINE ON ORB. LONG. AERODYNAMICS
ATTACH STRUCTURE ON ORBITER

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X014	○	FA25, MSFC TWT 652, CONFIG. 01A0P0T1S1	(0)	.000	10.000	10.000	3.000
R1X006	□	FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1	(0)	.000	10.000	10.000	3.000
R1X008	◇	FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1	(0)	.000	10.000	10.000	3.000
R1X010	△	FA25, MSFC TWT 652, CONFIG. 01A03P0T1S1	(0)	.000	10.000	10.000	3.000
R1X012	◺	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

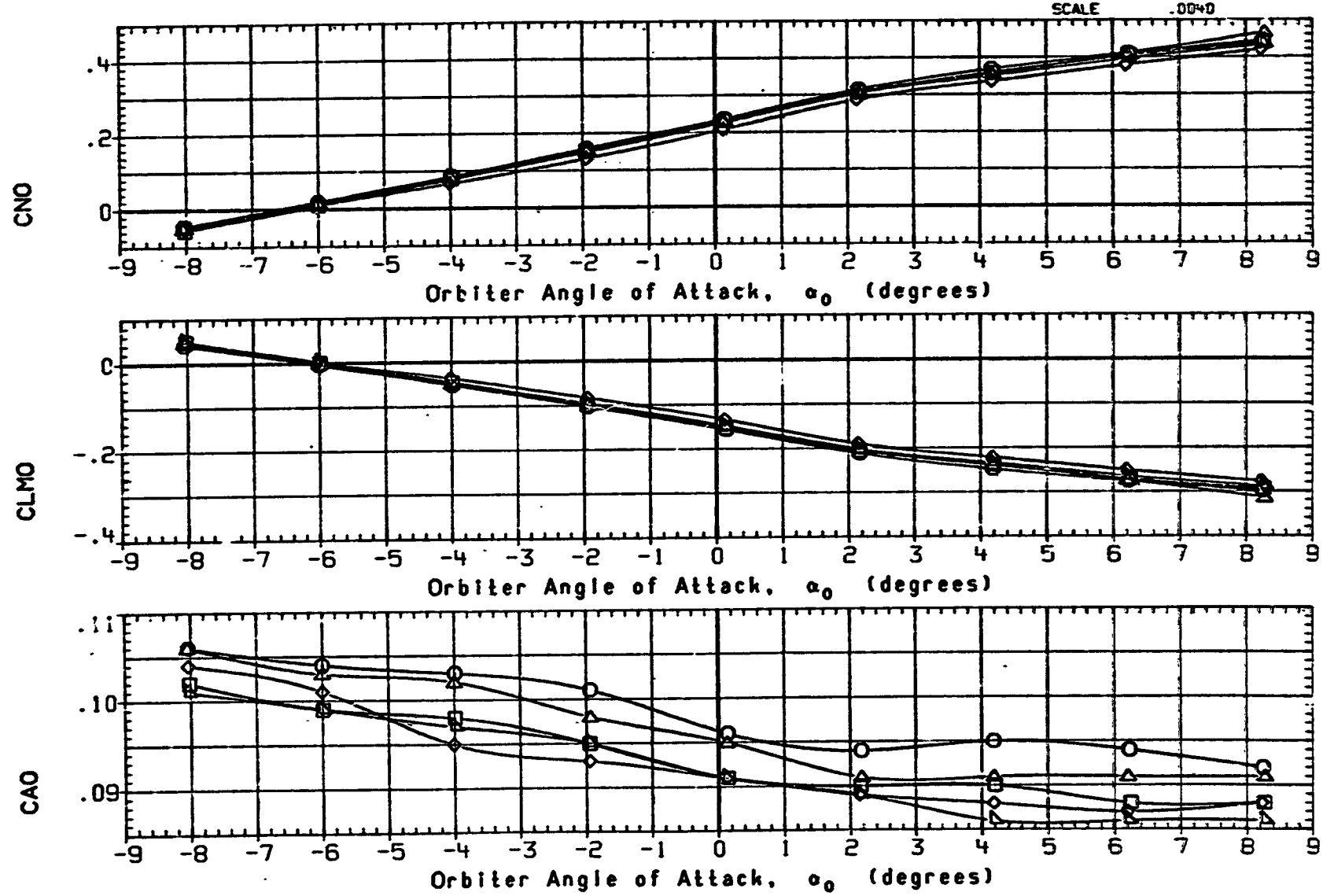

FIG. 7 EFFECT OF VARIOUS ATTACH STRUCTURES ON ORBITER LONGITUDINAL AERO CHARACTERISTICS

(A) MACH = .90

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X014	○	FA25, MSFC TWT 652, CONFIG. 01A0P0T1S1	(0)	.000	10.000	10.000	3.000
R1X006	□	FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1	(0)	.000	10.000	10.000	3.000
R1X008	◇	FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1	(0)	.000	10.000	10.000	3.000
R1X010	△	FA25, MSFC TWT 652, CONFIG. 01A03P0T1S1	(0)	.000	10.000	10.000	3.000
R1X012	◺	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

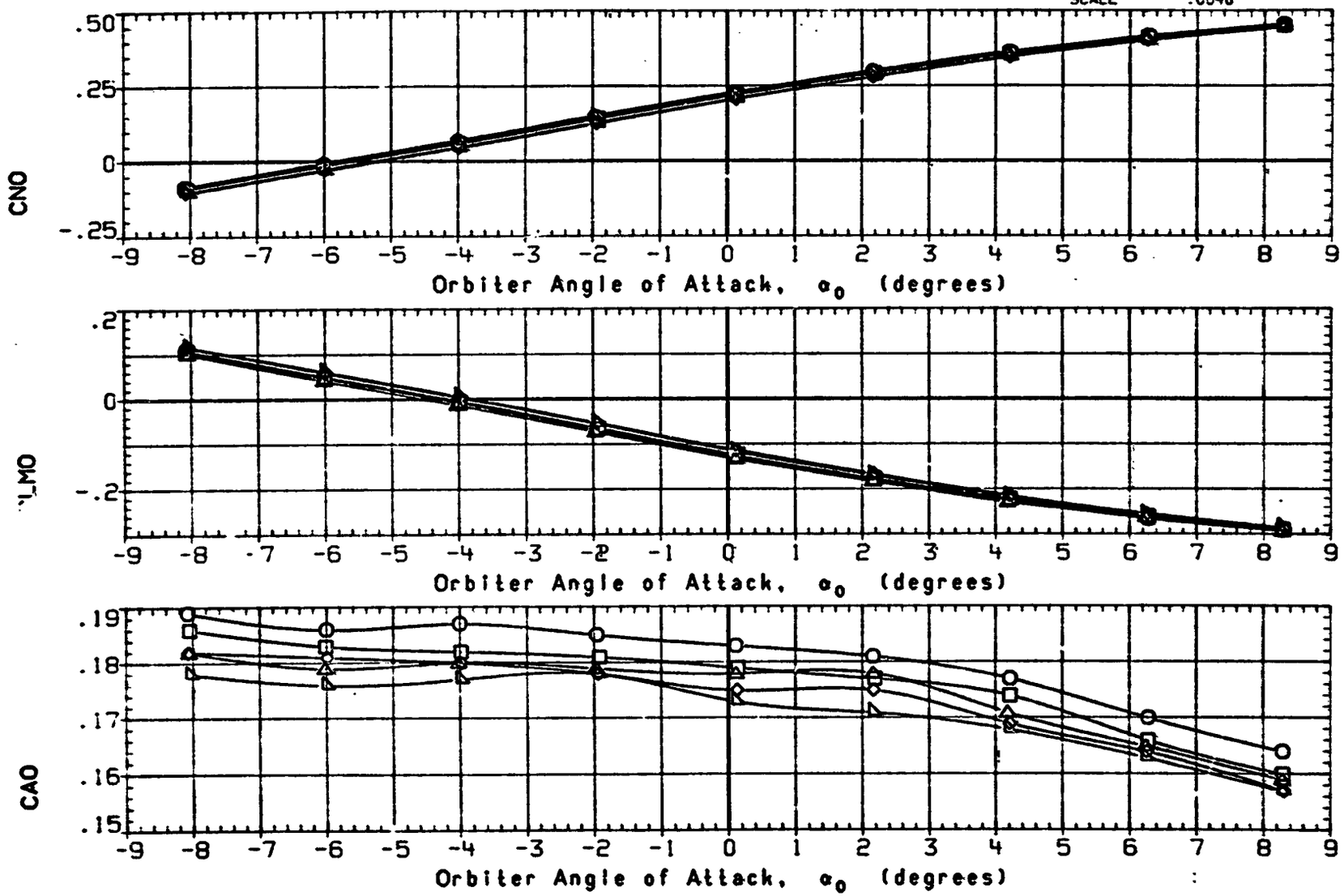

FIG. 7 EFFECT OF VARIOUS ATTACH STRUCTURES ON ORBITER LONGITUDINAL AERO CHARACTERISTICS

(B)MACH = 1.25

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X015	○	FA25, MSFC TWT 652, CONFIG. 01A0P0T1S1	(0)	.000	10.000	10.000	3.000
R1X007	□	FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1	(0)	.000	10.000	10.000	3.000
R1X009	◇	FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1	(0)	.000	10.000	10.000	3.000
R1X011	△	FA25, MSFC TWT 652, CONFIG. 01A03P0T1S1	(0)	.000	10.000	10.000	3.000
R1X013	◺	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2650.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

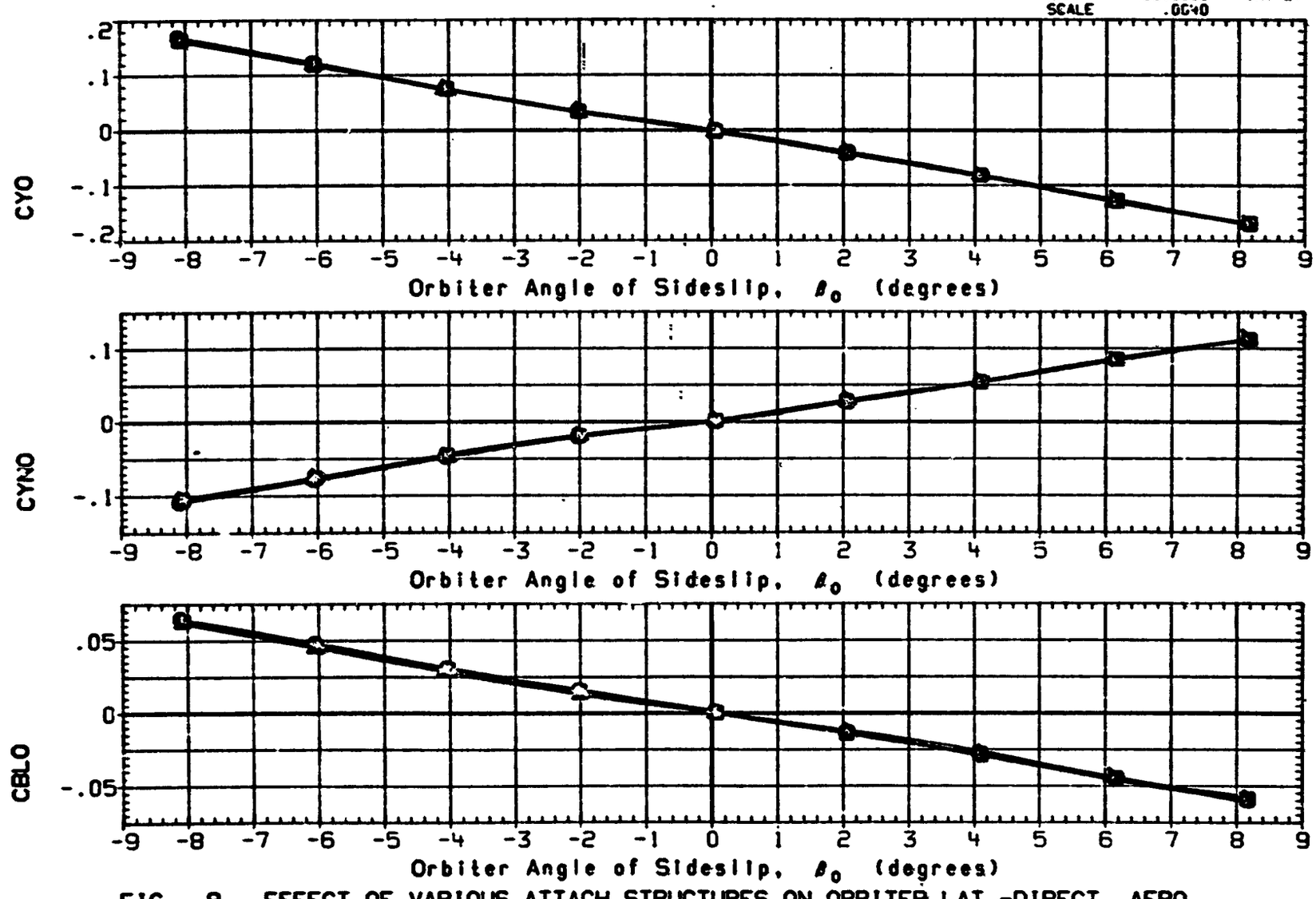

FIG. 8 EFFECT OF VARIOUS ATTACH STRUCTURES ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS

(A)MACH = .90

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X015	○	FA25, MSFC TWT 652, CONFIG. 01A0P0T1S1	(0)	.000	10.000	10.000	3.000
R1X007	□	FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1	(0)	.000	10.000	10.000	3.000
R1X009	◇	FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1	(0)	.000	10.000	10.000	3.000
R1X011	△	FA25, MSFC TWT 652, CONFIG. 01A03P0T1S1	(0)	.000	10.000	10.000	3.000
R1X013	◺	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

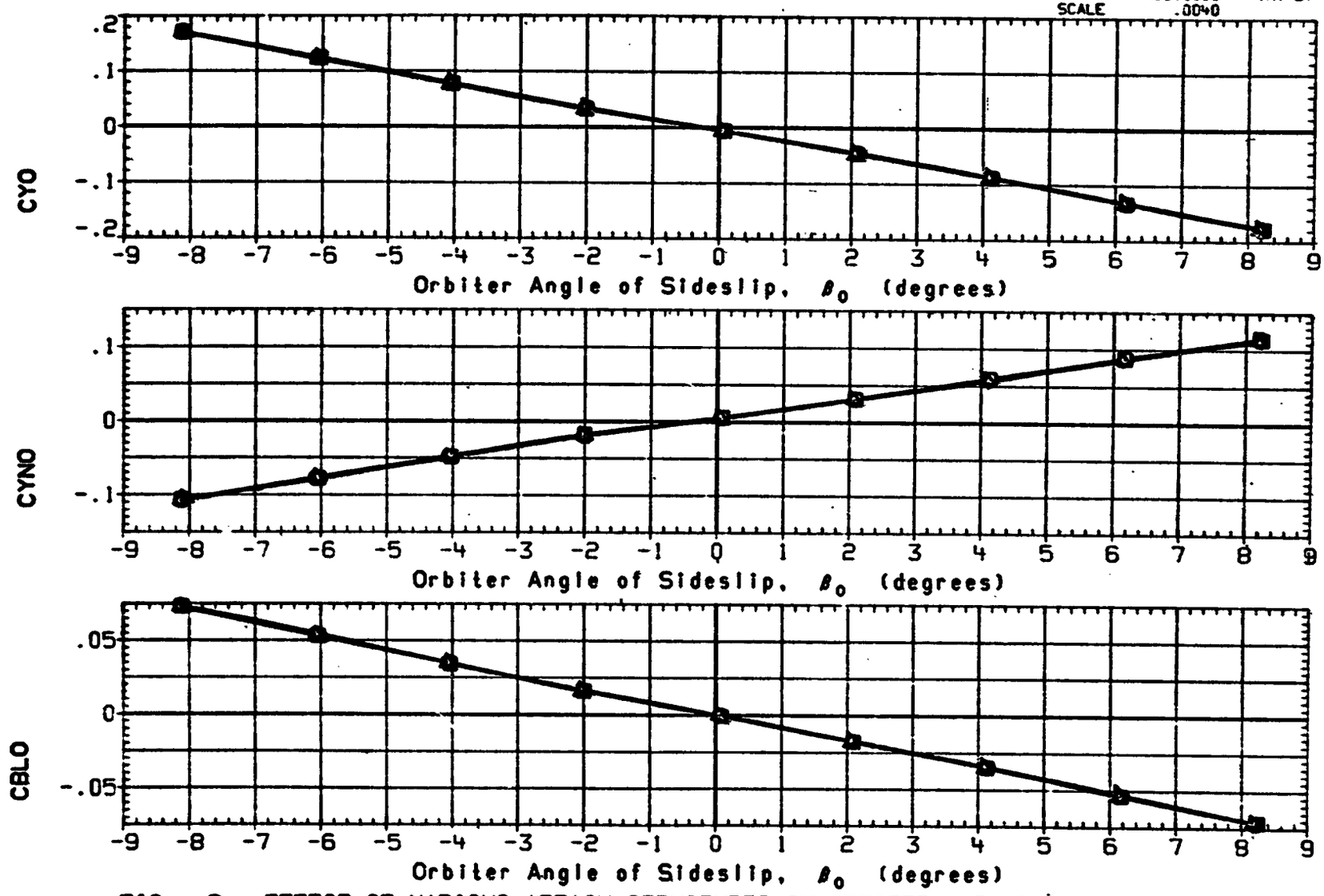

FIG. 8 EFFECT OF VARIOUS ATTACH STRUCTURES ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS

(B)MACH = 1.25

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

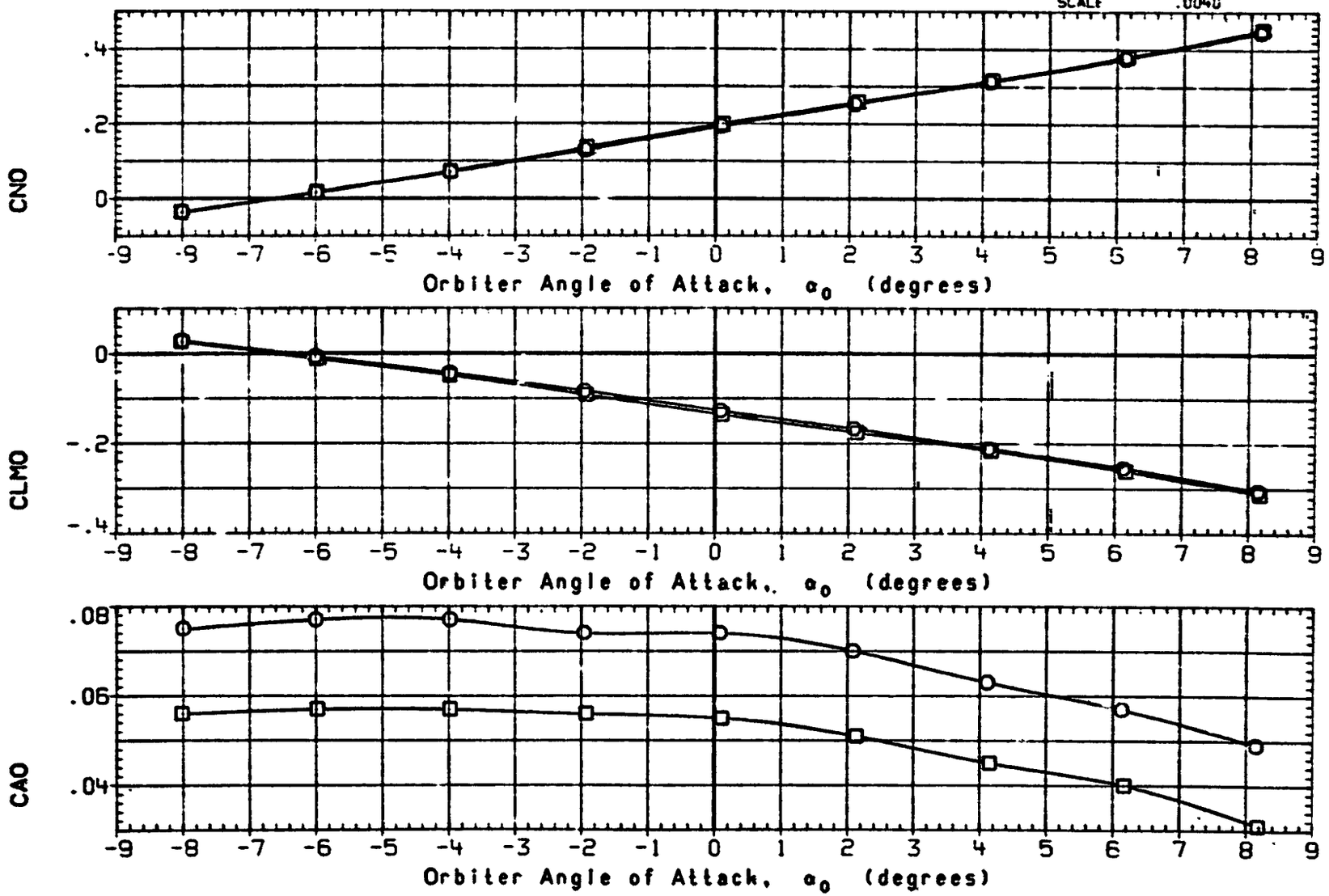

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(A) MACH = .60

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

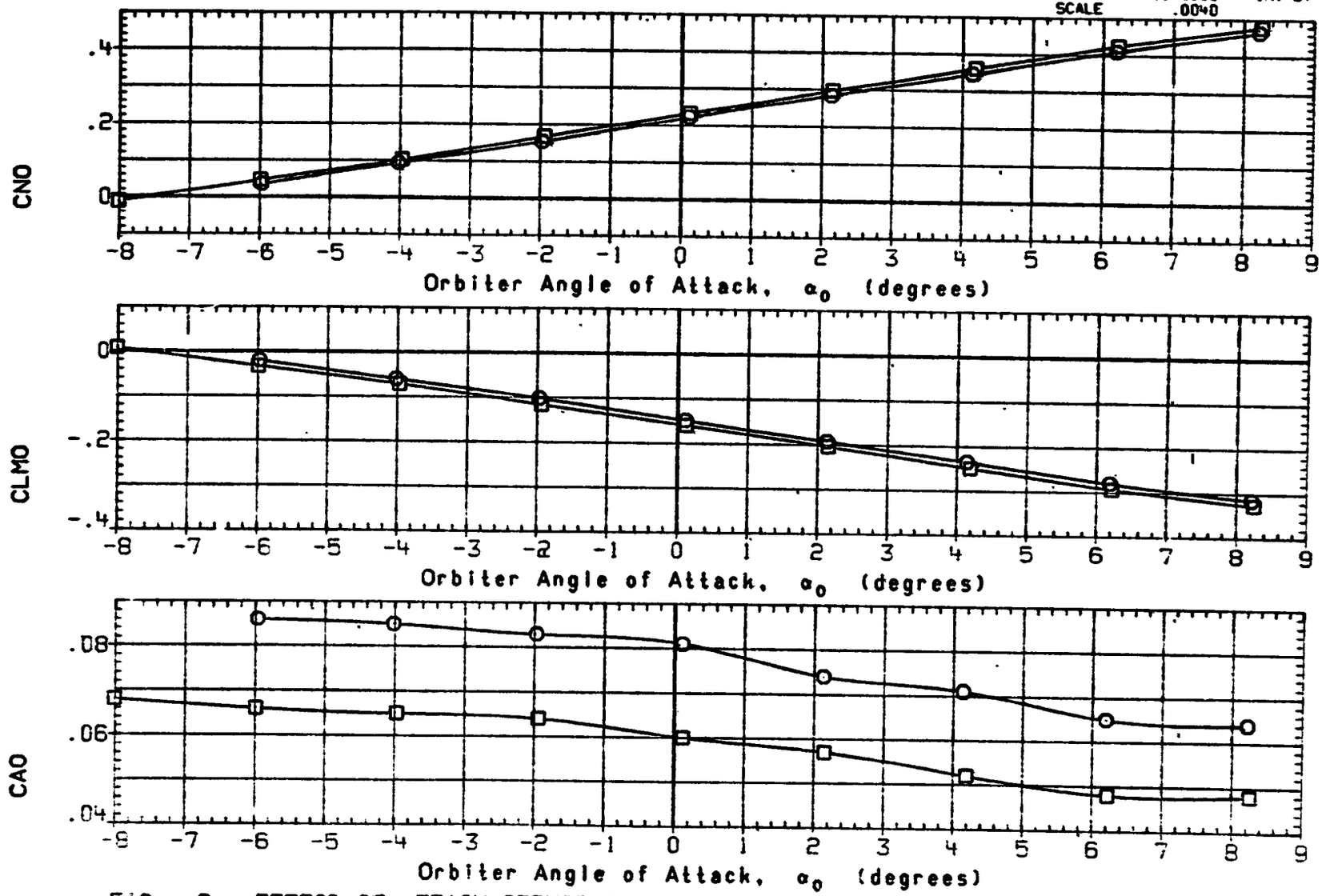

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(B) MACH = .80

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

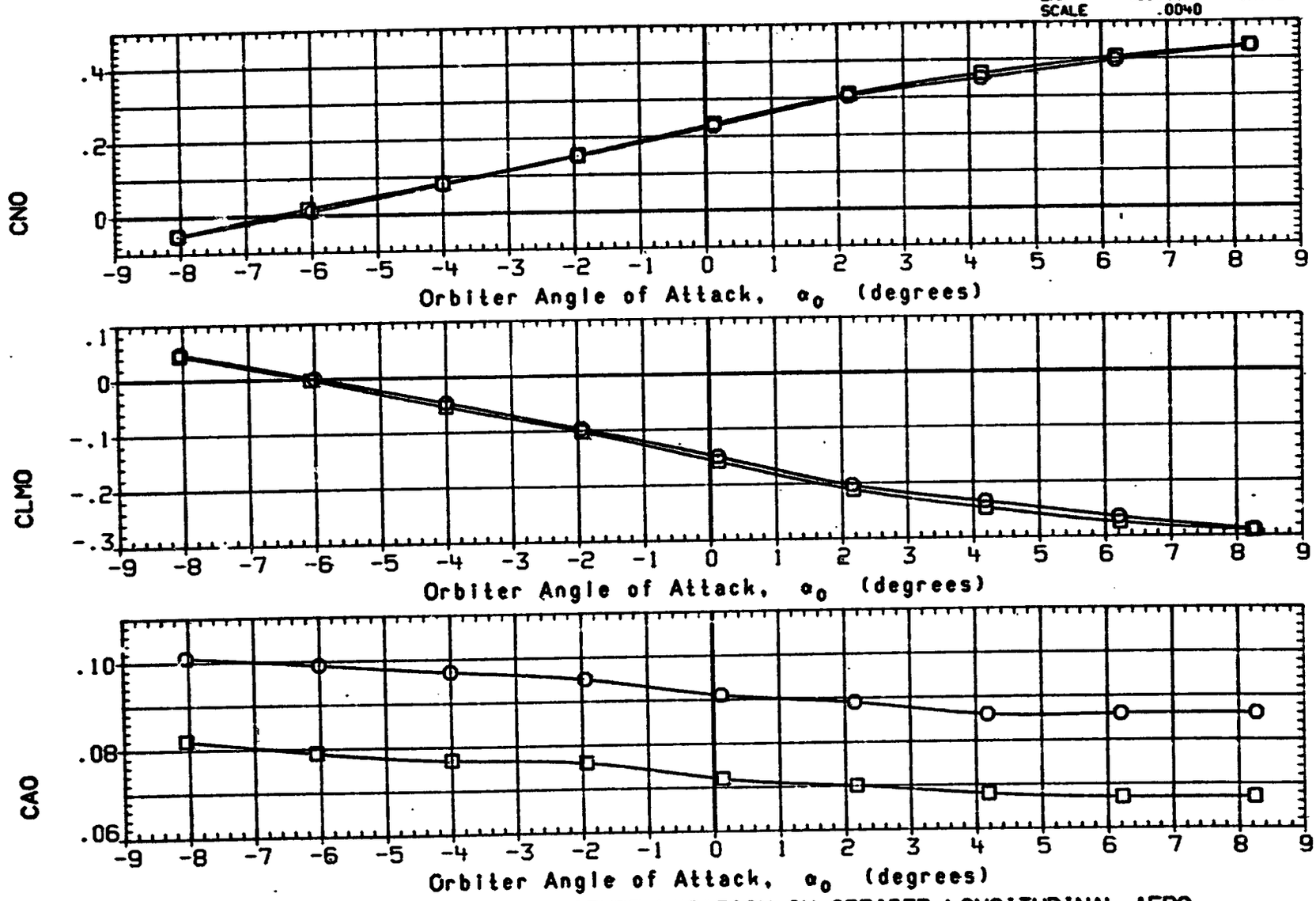

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(D)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(D)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

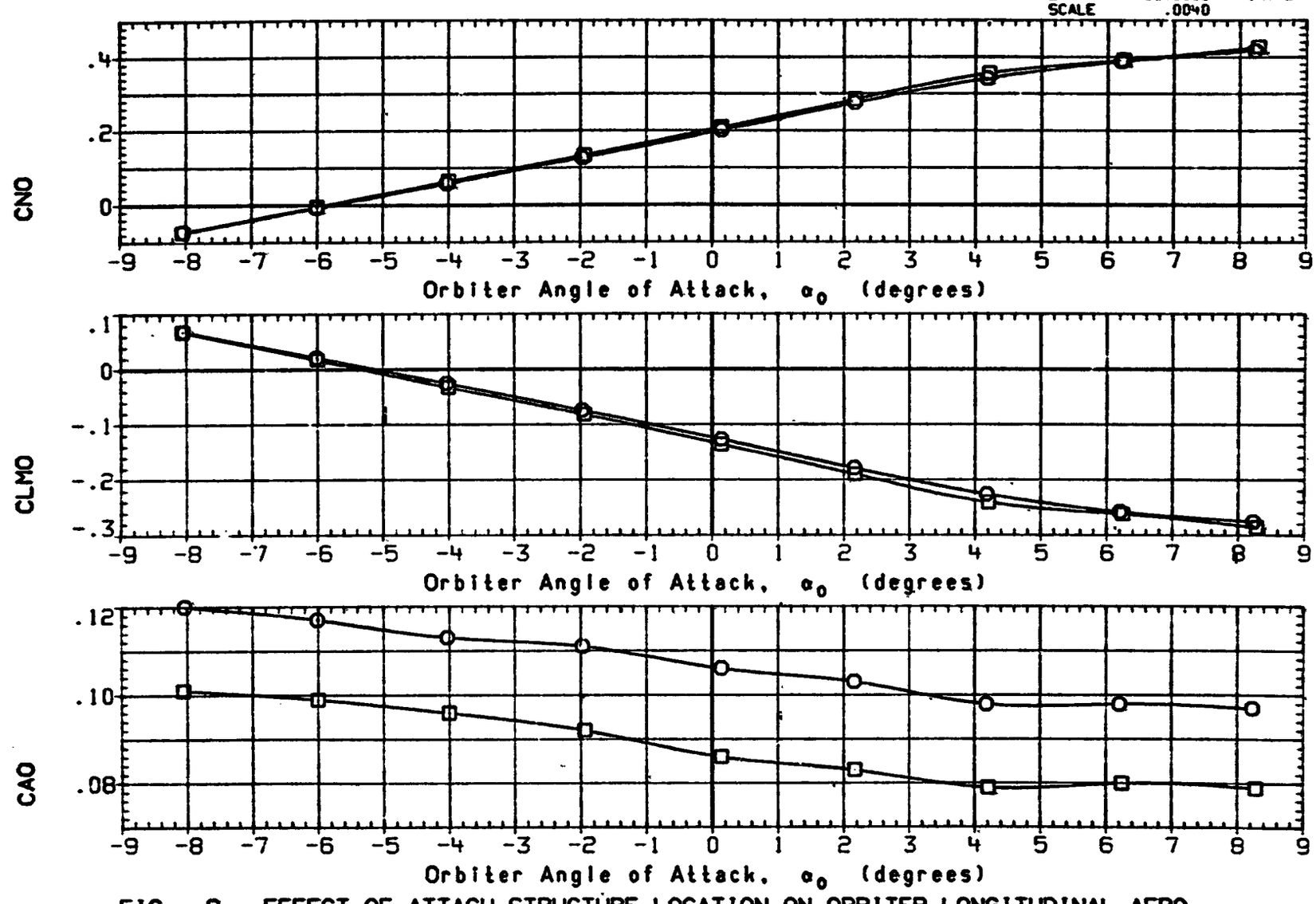

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

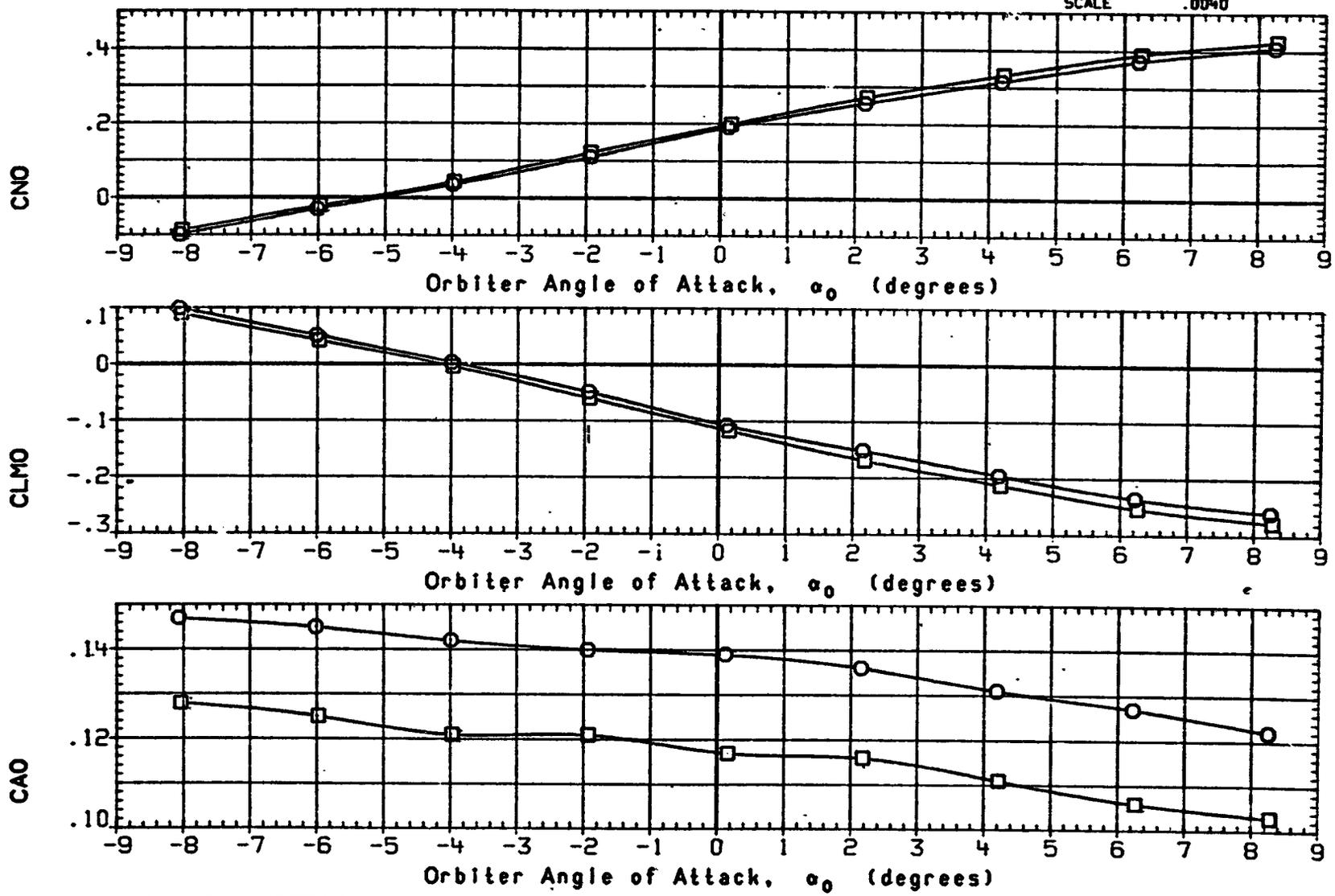

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(E)MACH = 1.04

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

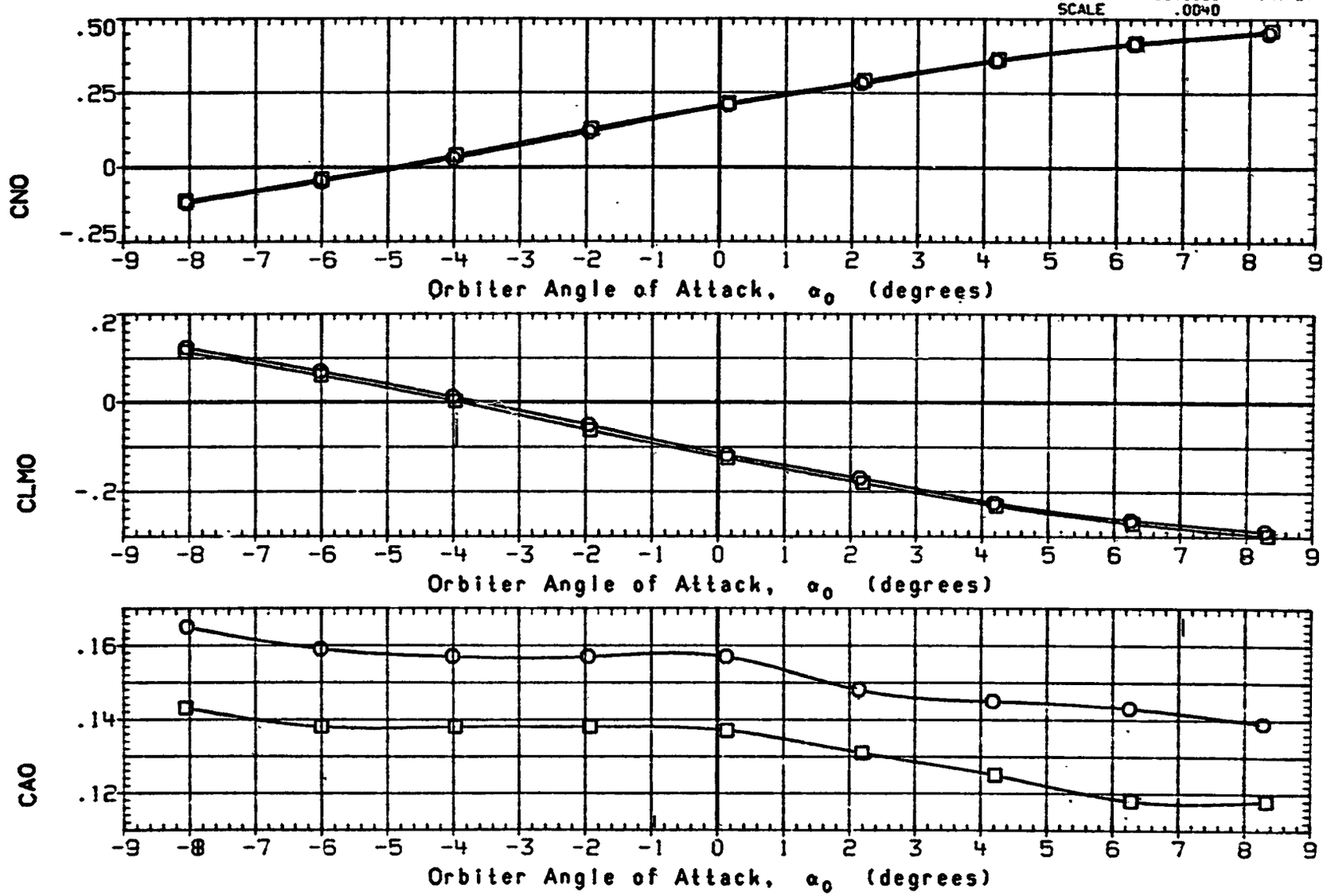

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(F)MACH = 1.09

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	0
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

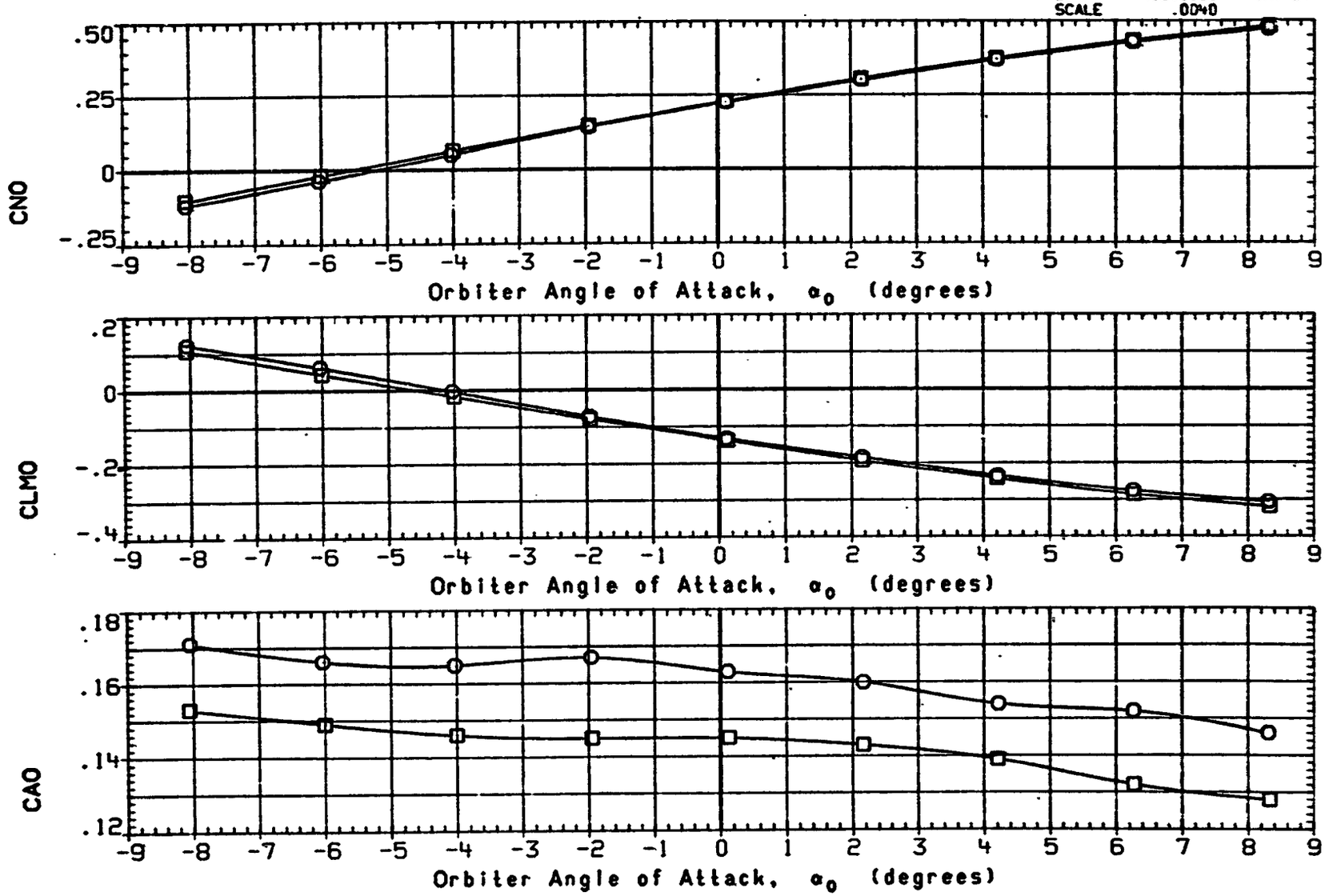

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(G)MACH = 1.14

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(O)	.000	10.000	10.000	3.000
R1X016	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

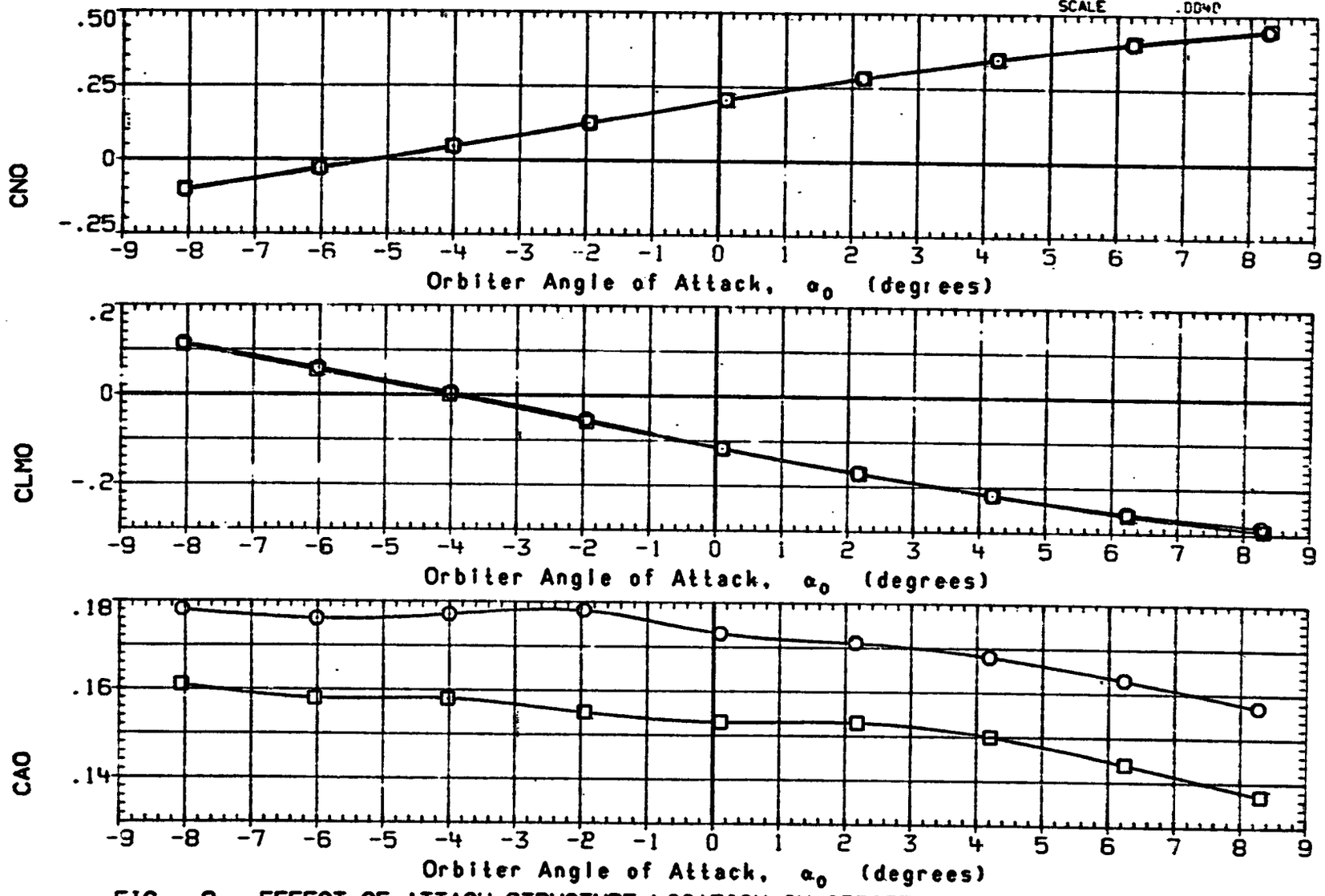

FIG. 9 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25. MSFC TWT 652. CONFIG. 01ATPT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

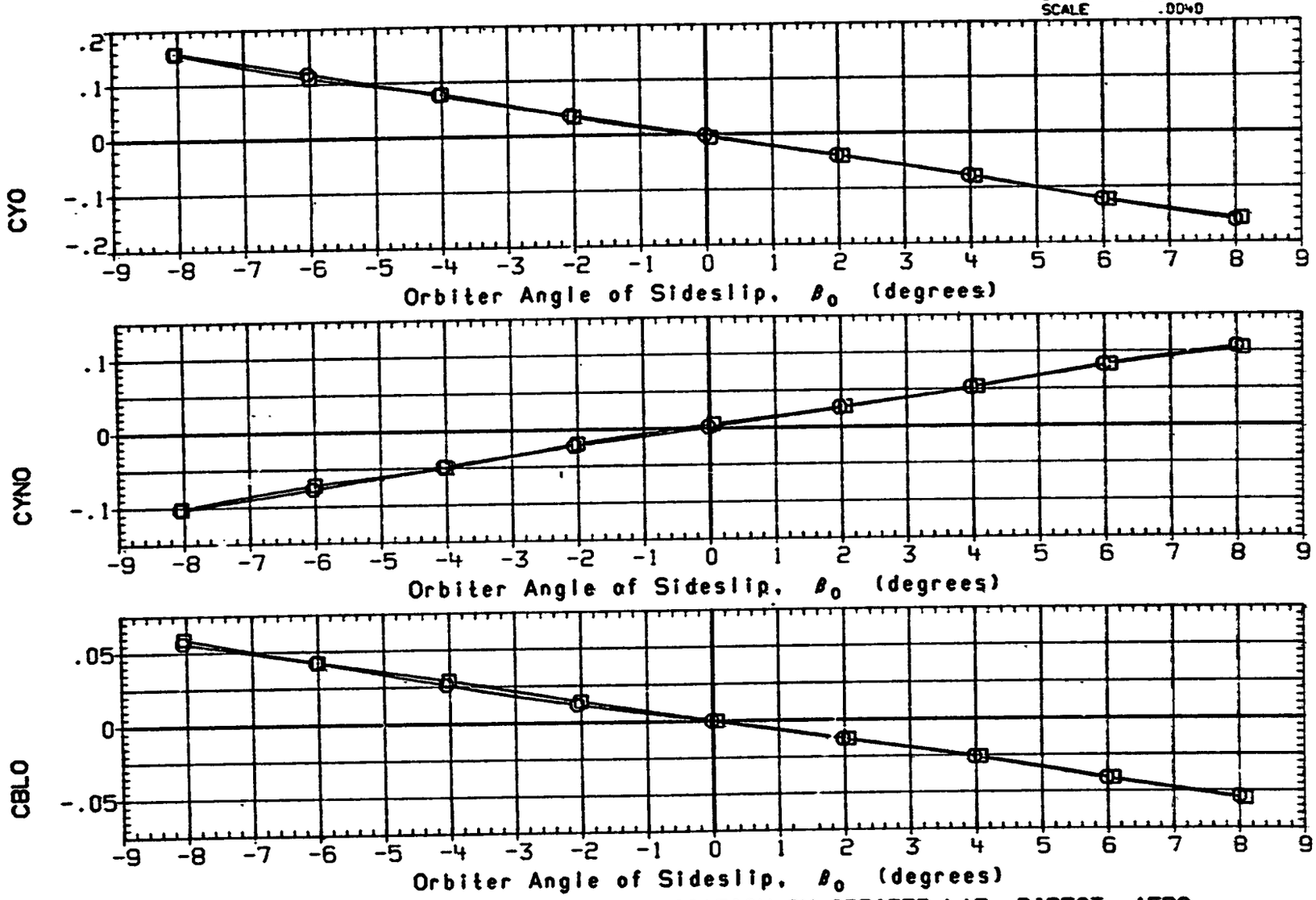

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

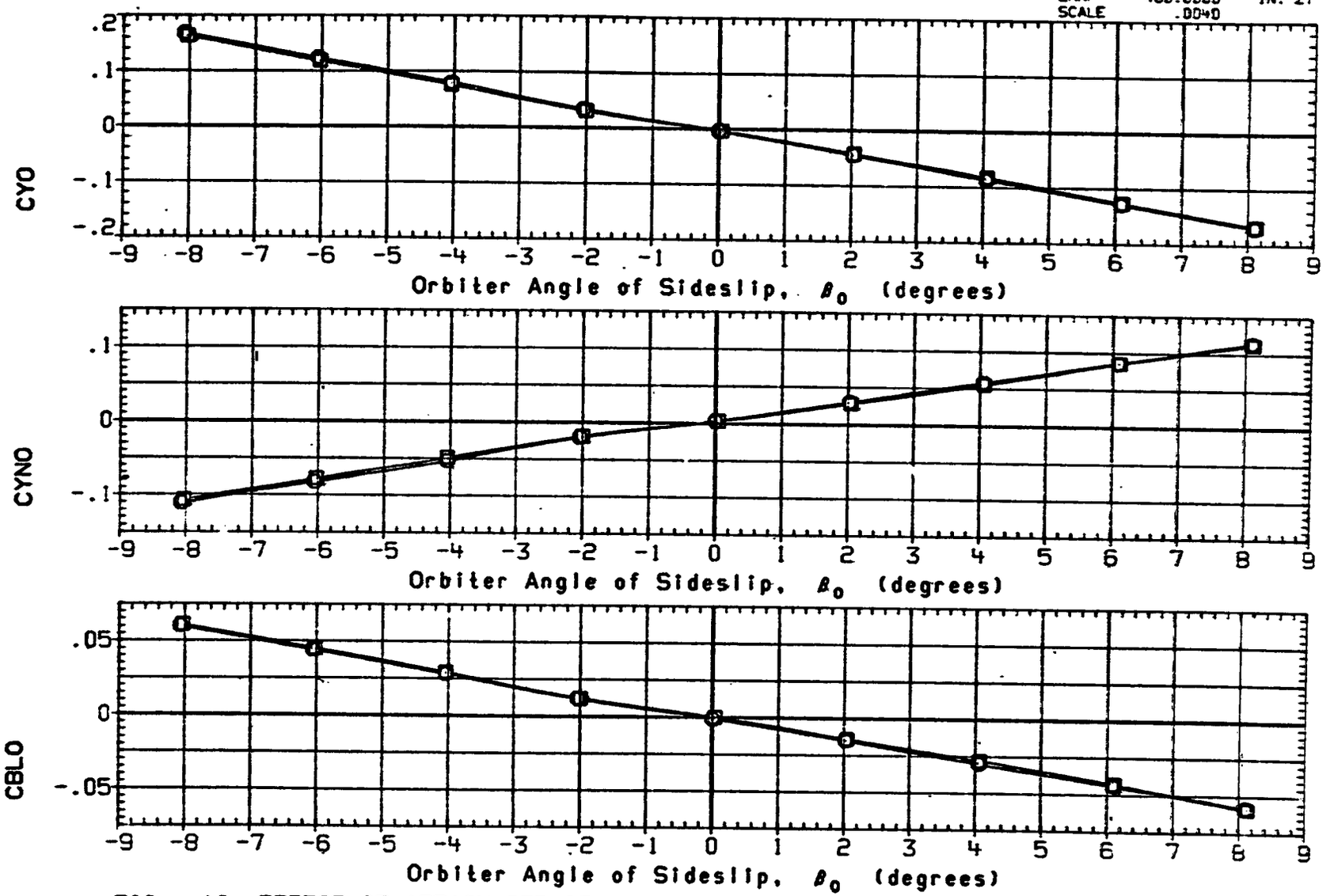

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25. MSFC TWT 652. CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

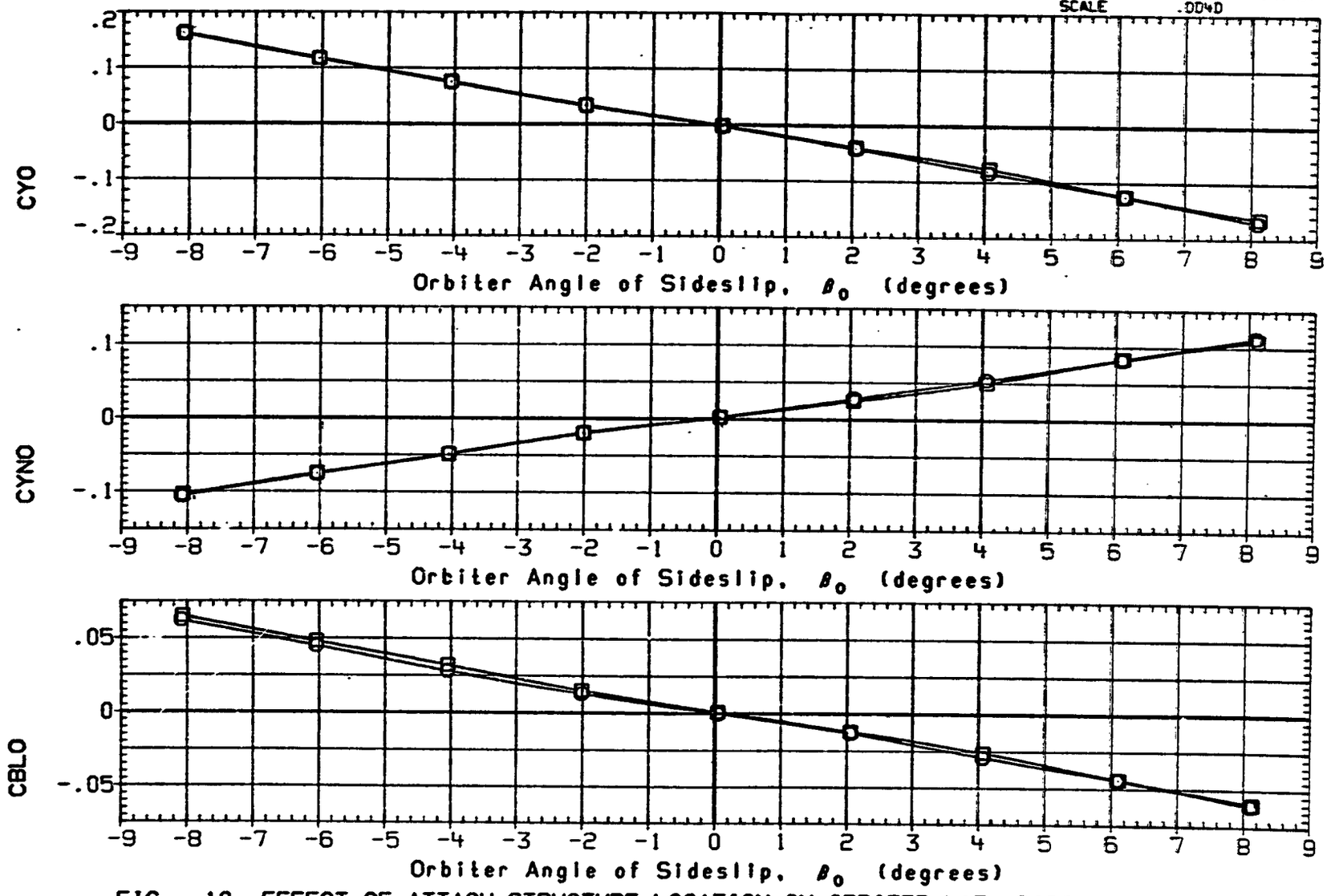

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(C)MACH = .90

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DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(O)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPT1S1	(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

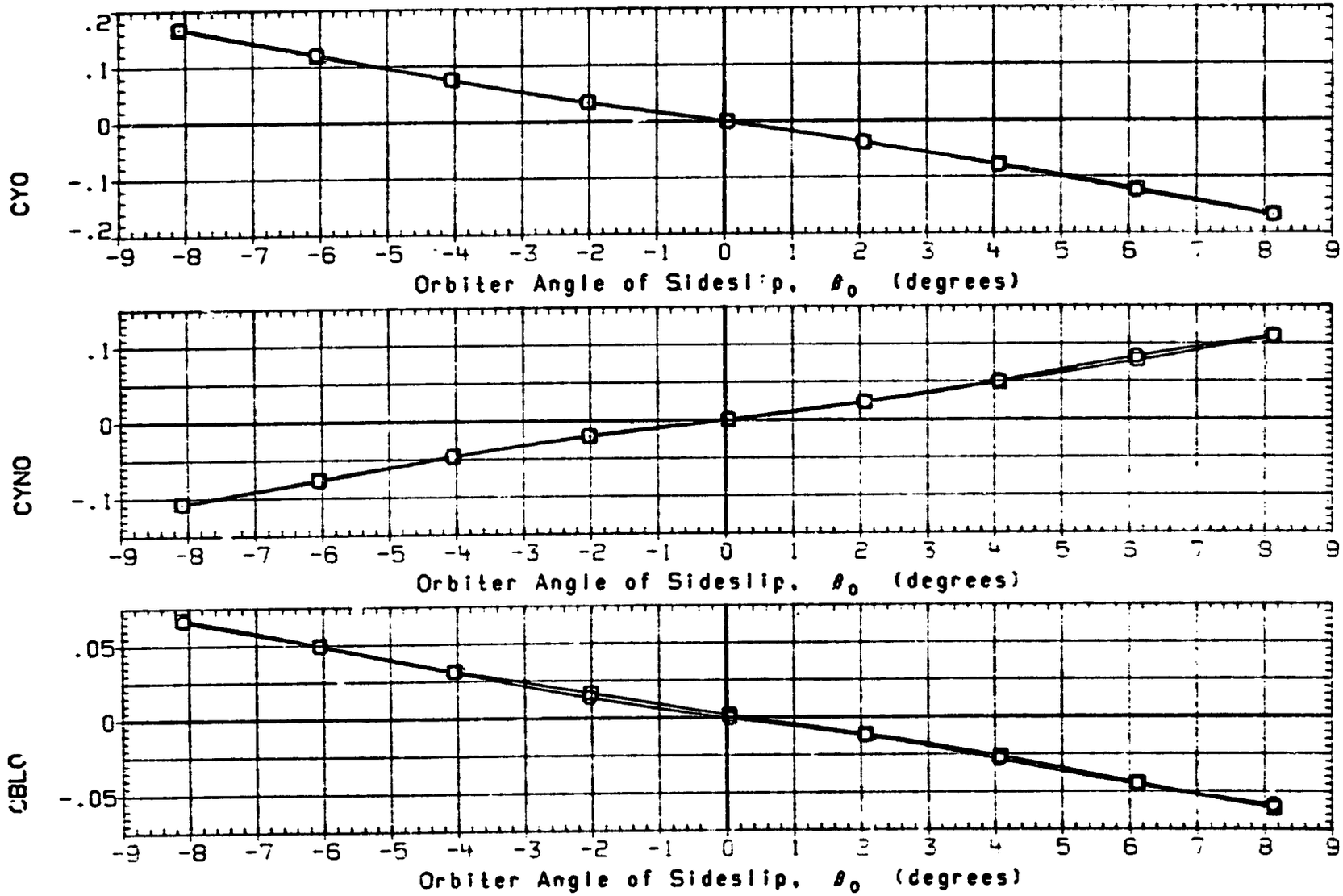

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25. MSFC TWT 652. CONFIG. 01ATPT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1230.3000	INCHES
BREF	1230.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

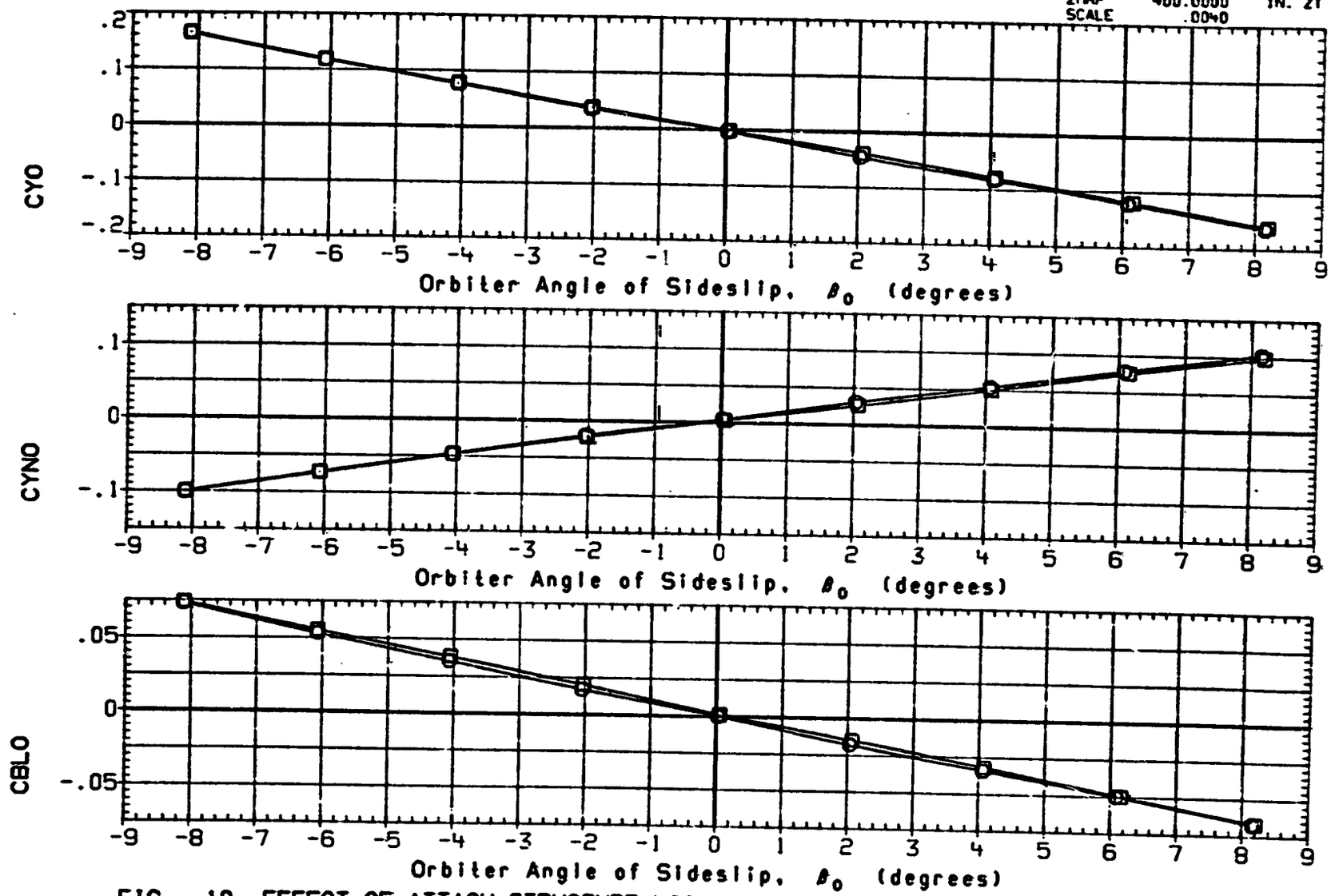

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(E)MACH = 1.05

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DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

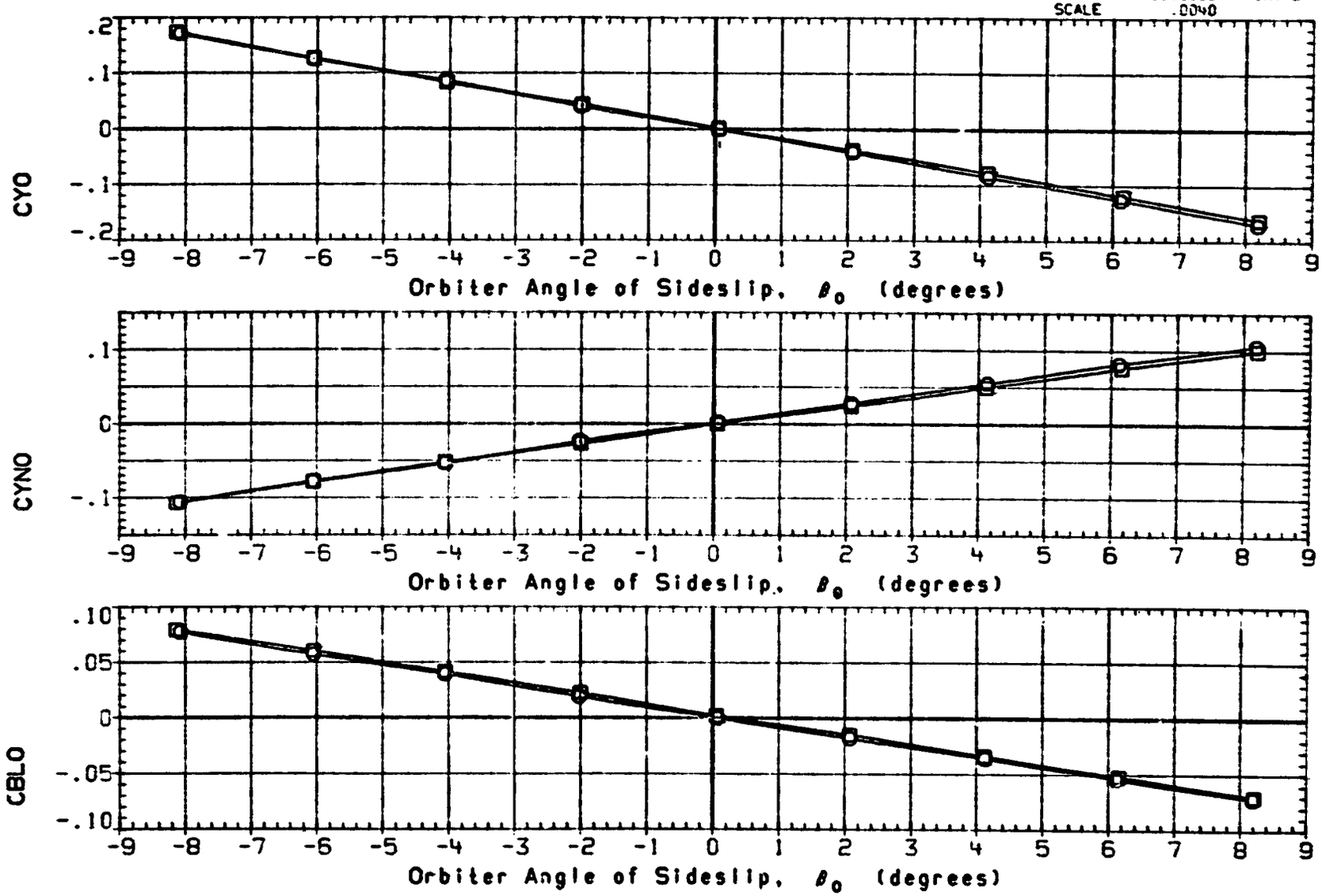

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(F)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

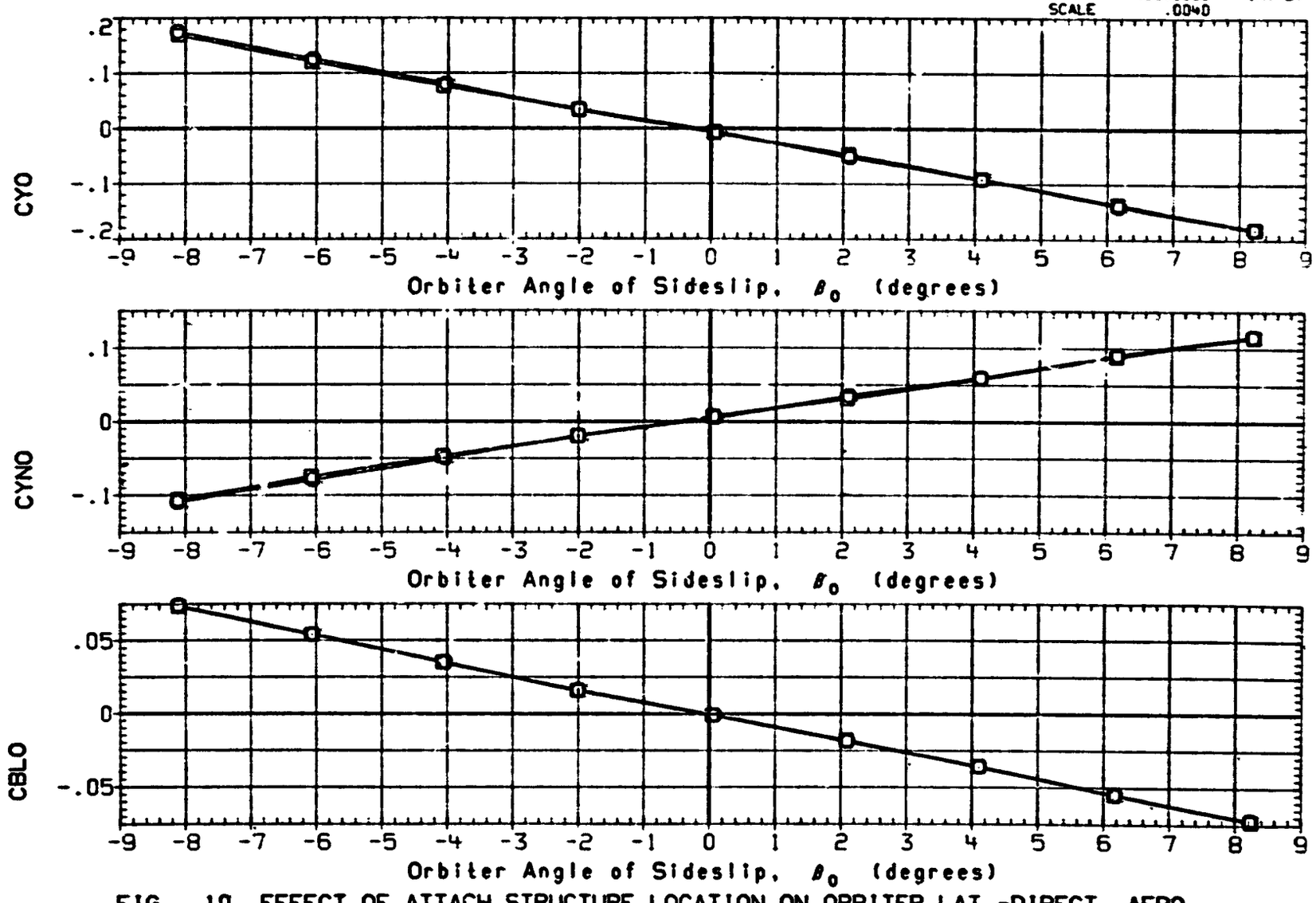

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(G)MACH = 1.14

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DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1	(0)	.000	10.000	10.000	3.000
R1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

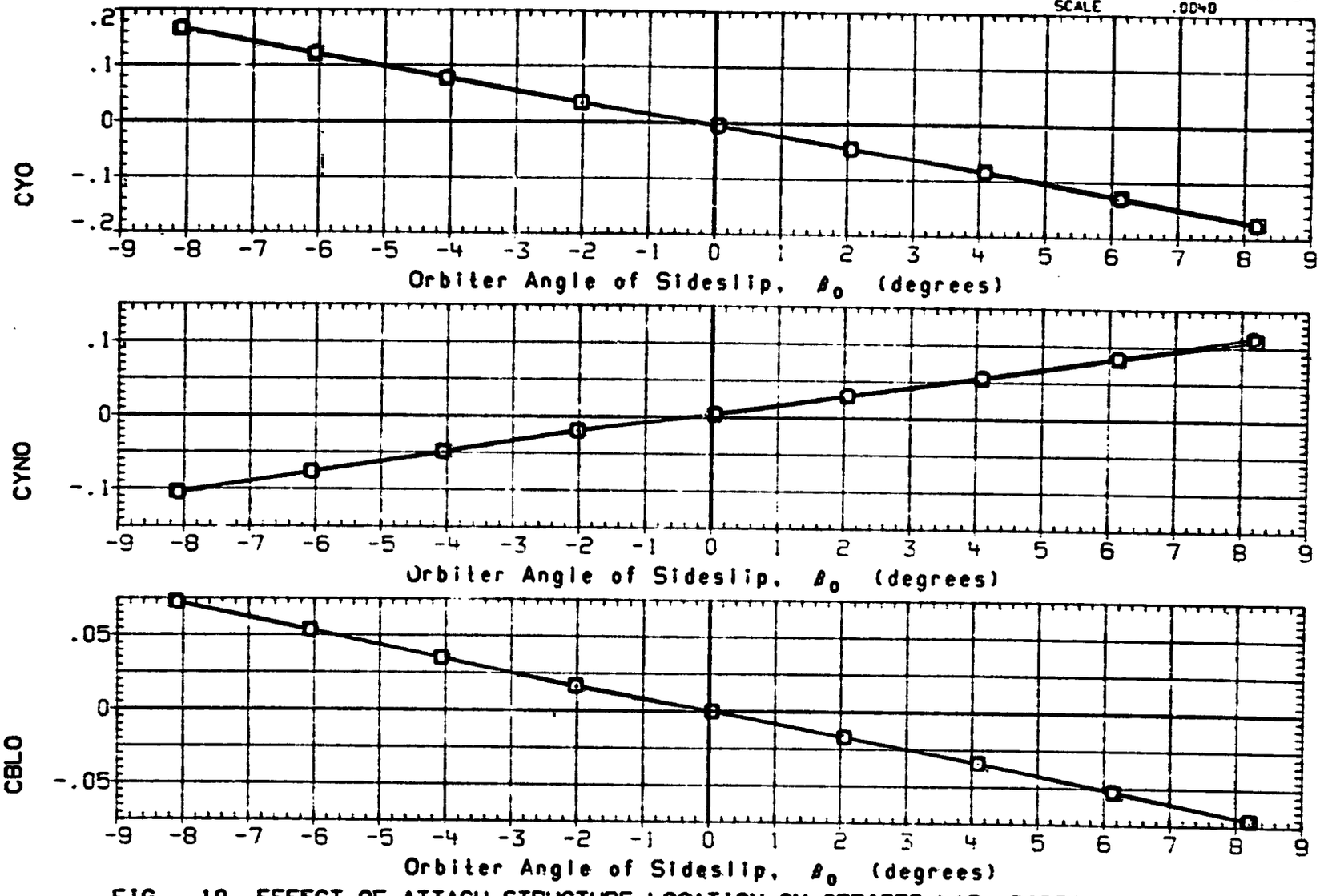

FIG. 10 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (THREE STING ARRANGEMENT)

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

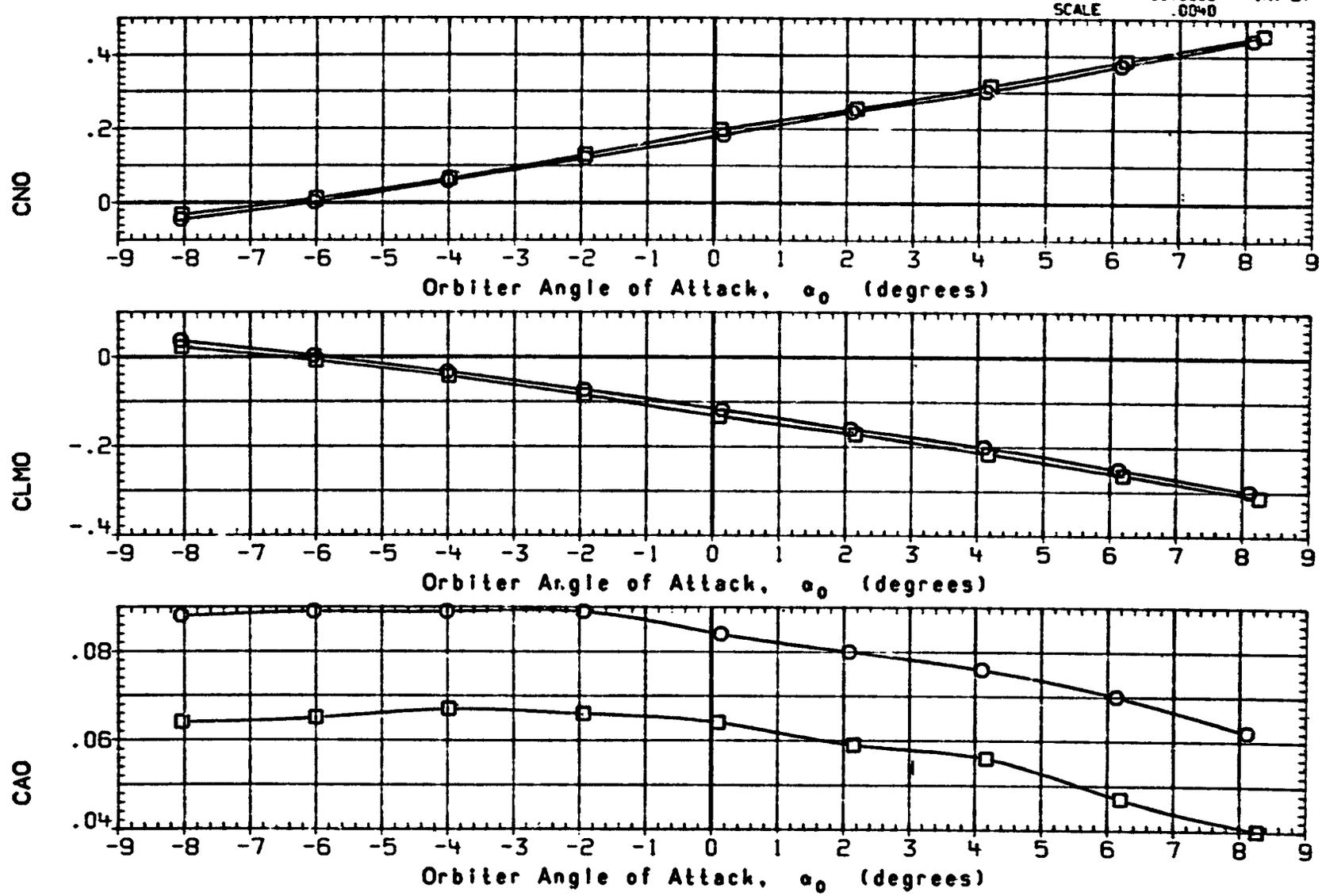

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION		
SREF	2699.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

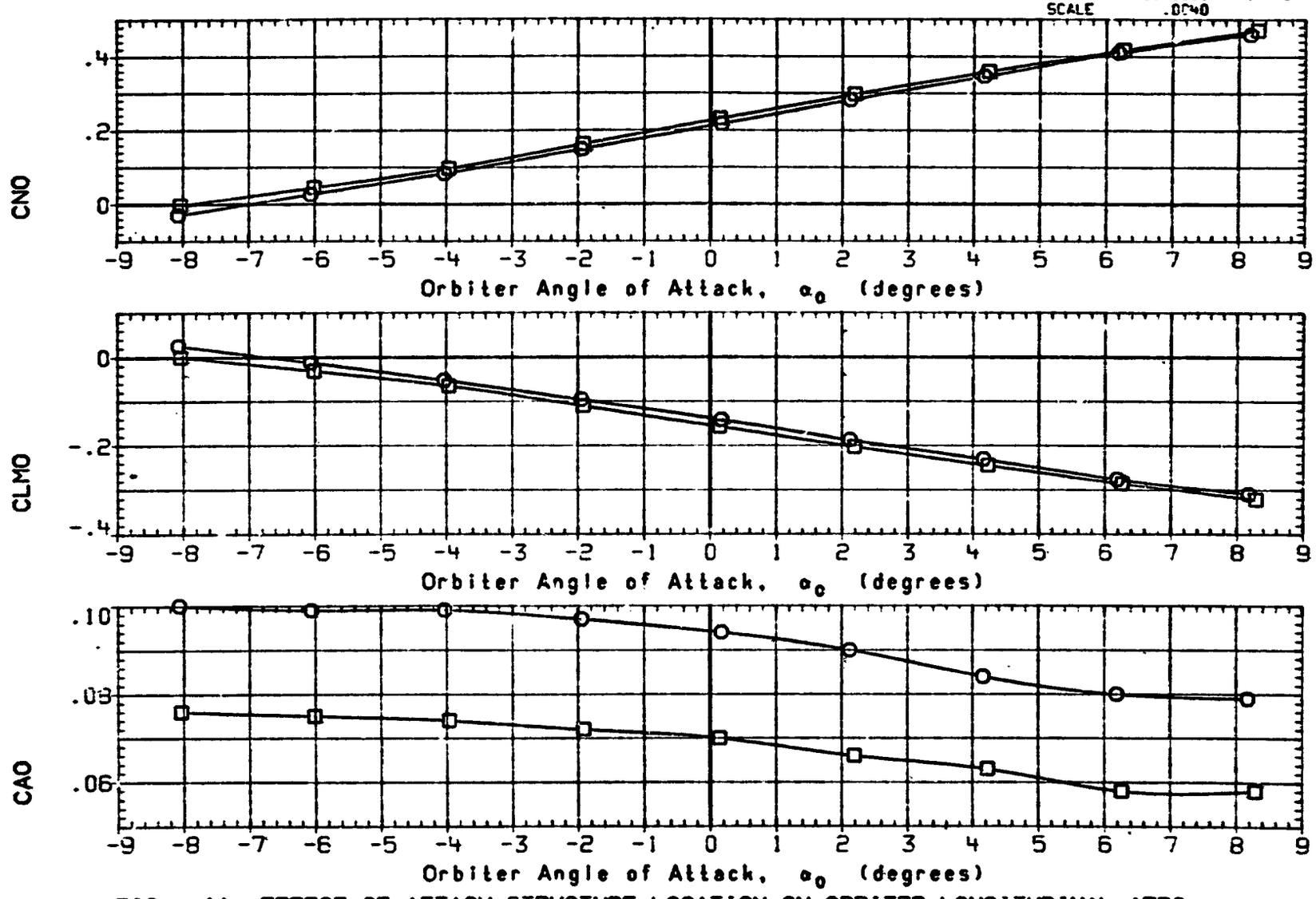

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

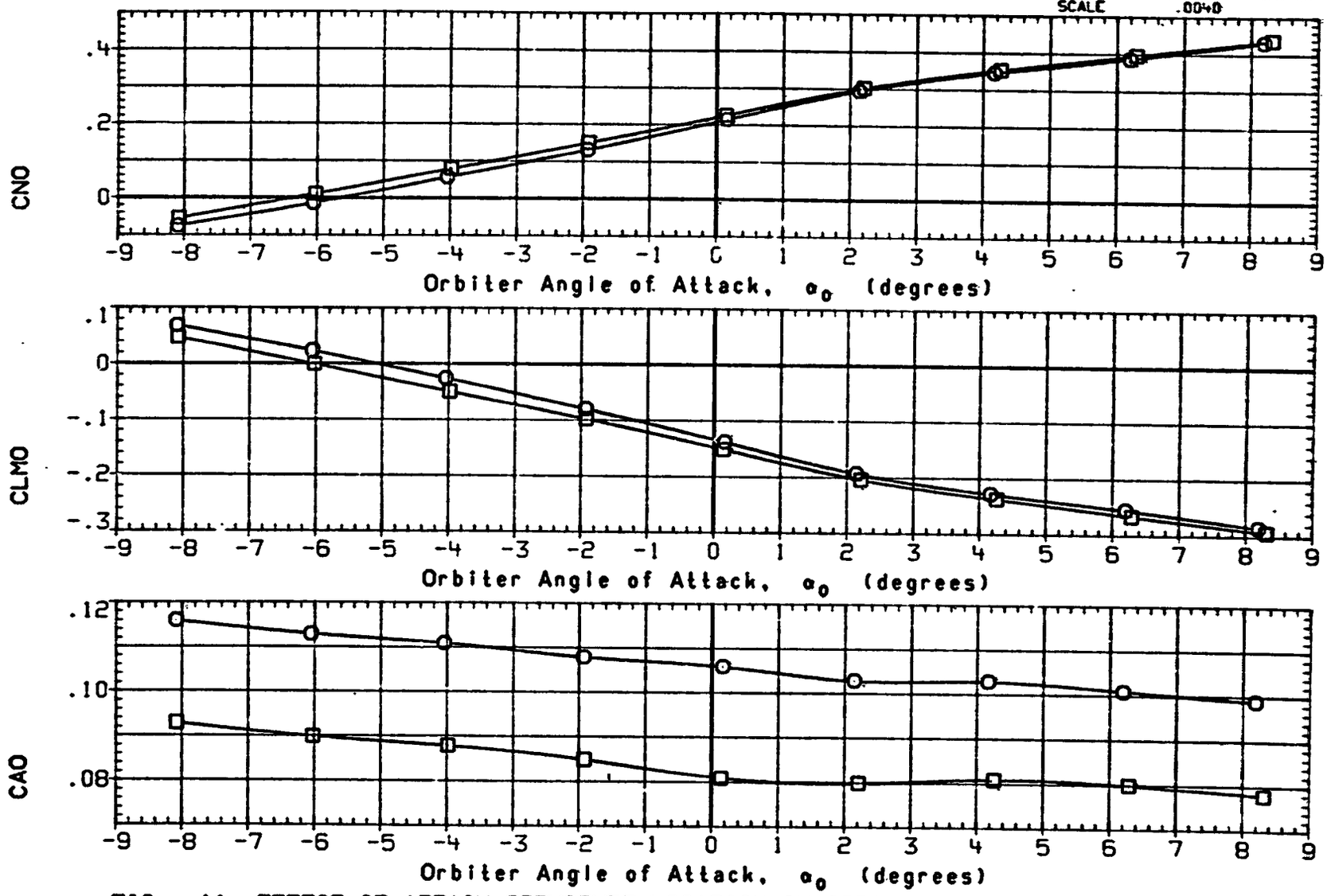

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(C)MACH = .90

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DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

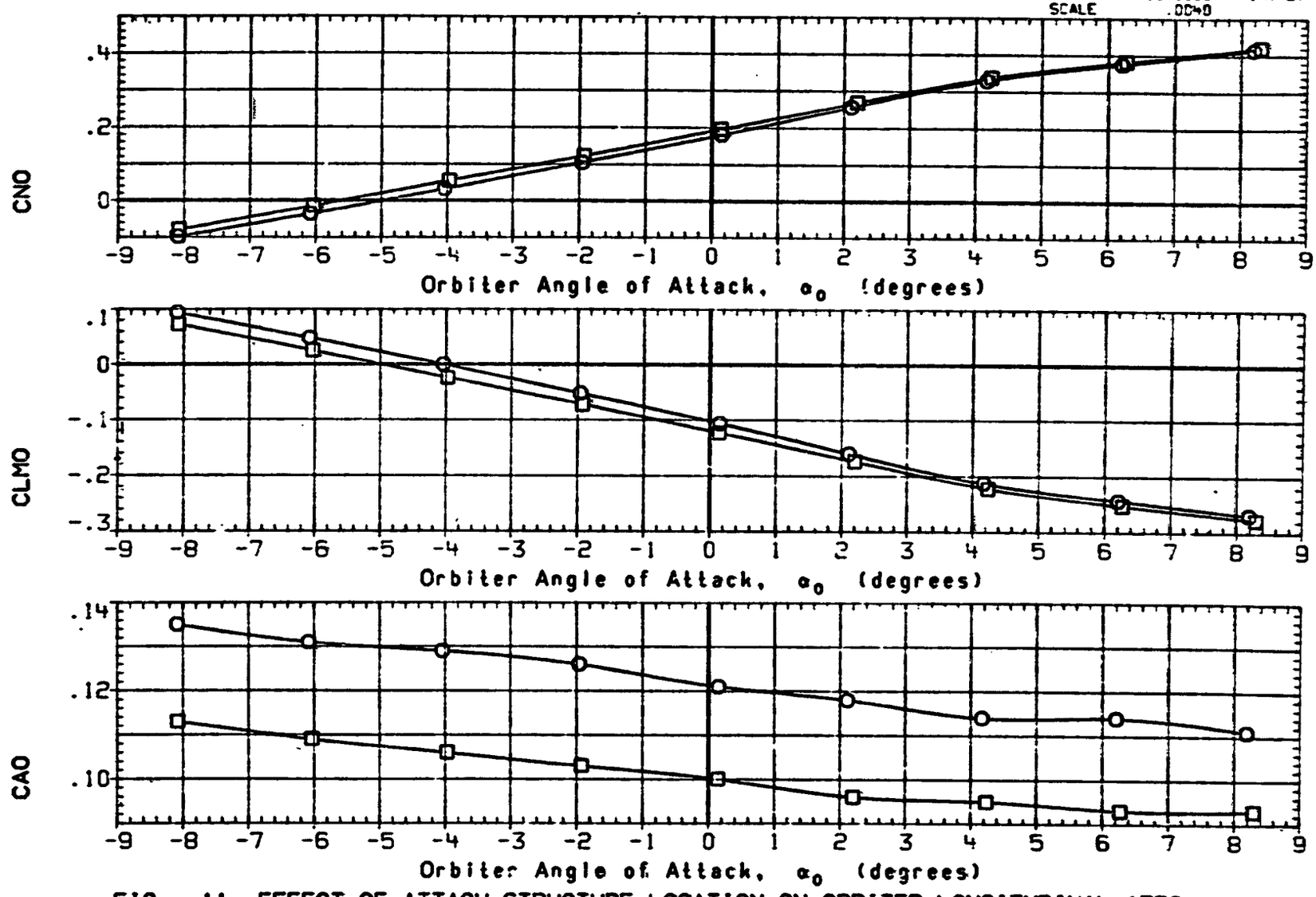

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

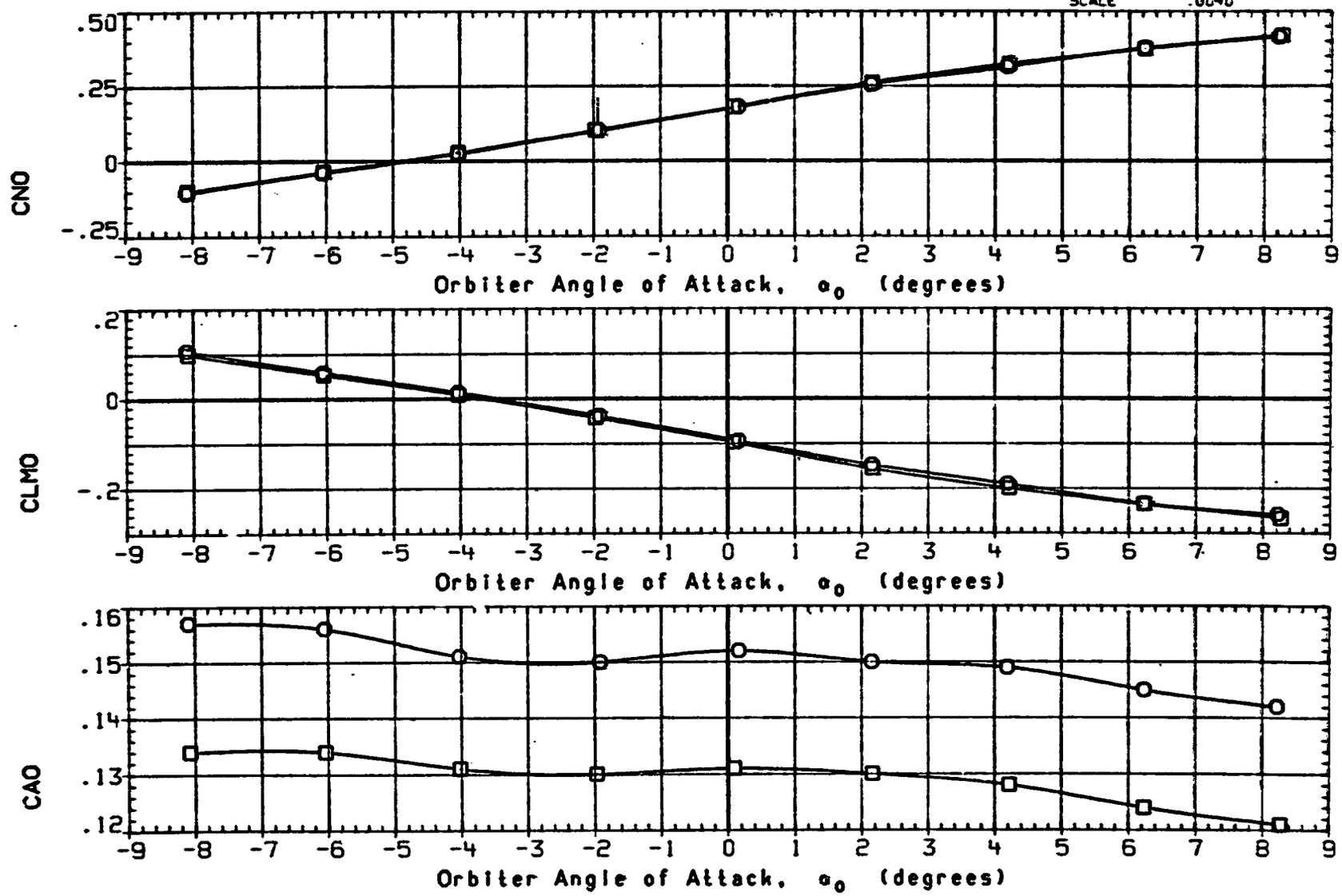

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(E)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

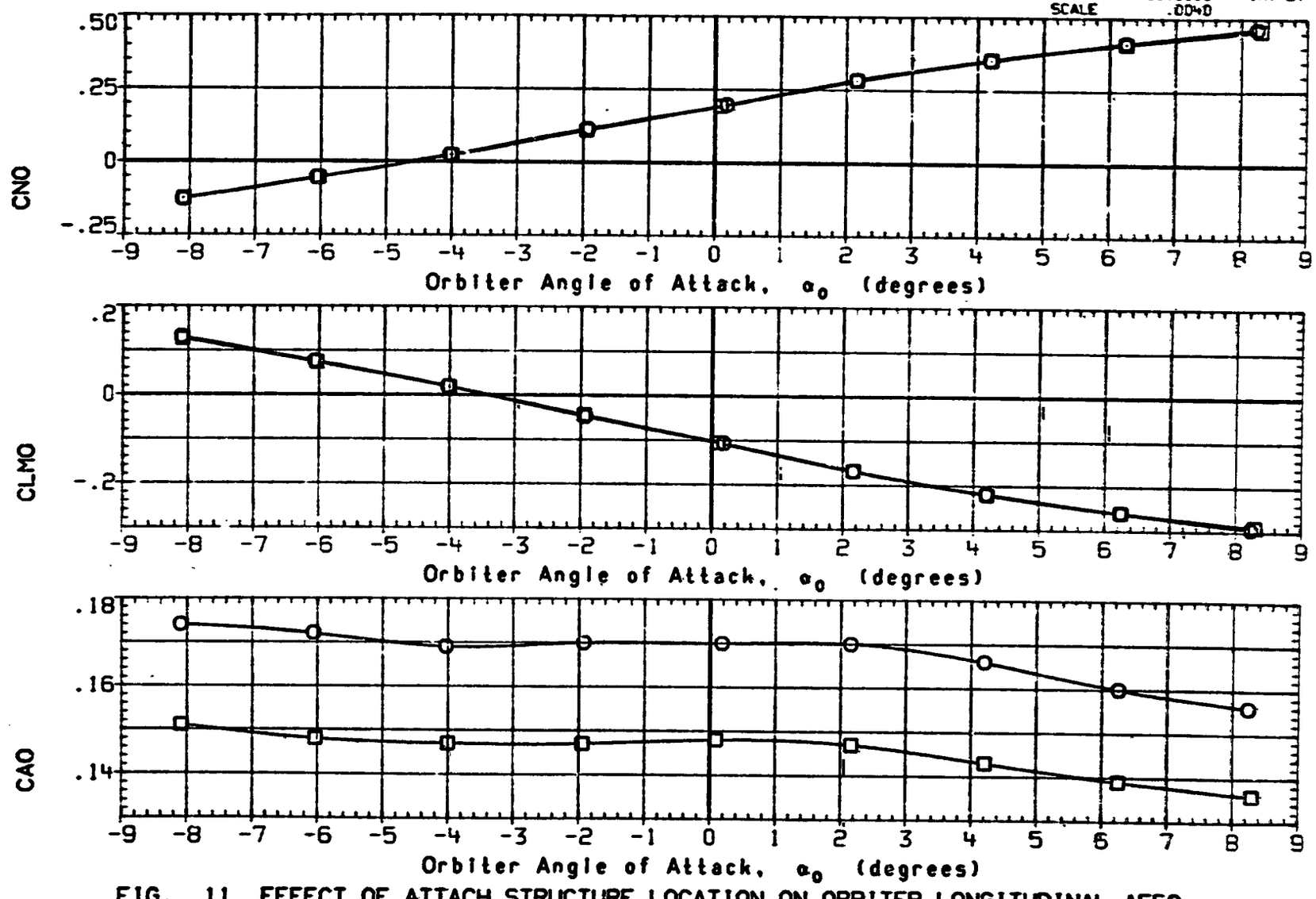

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(F)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

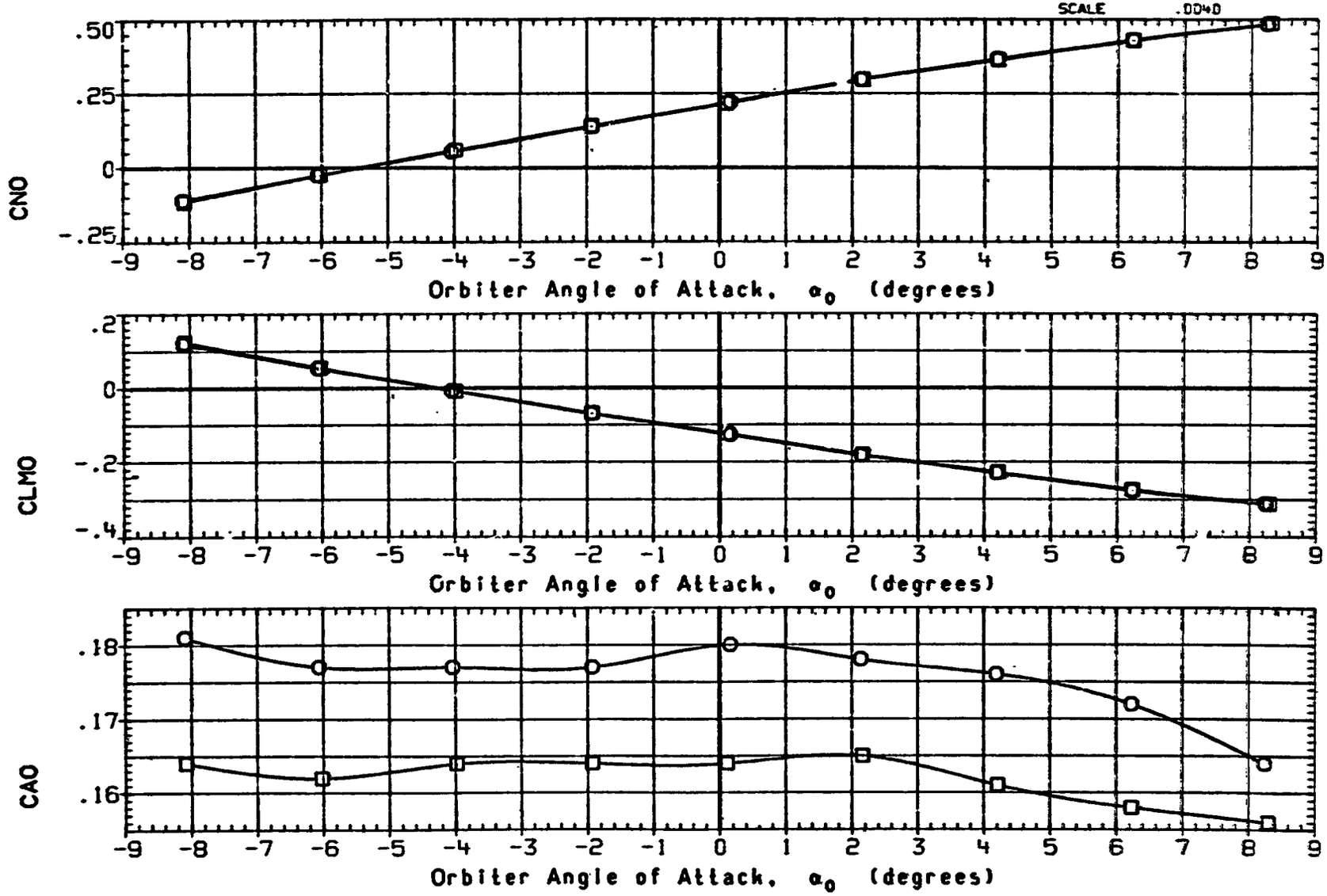

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(G)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(O)	.000	10.000	10.000	2.000
R1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(O)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

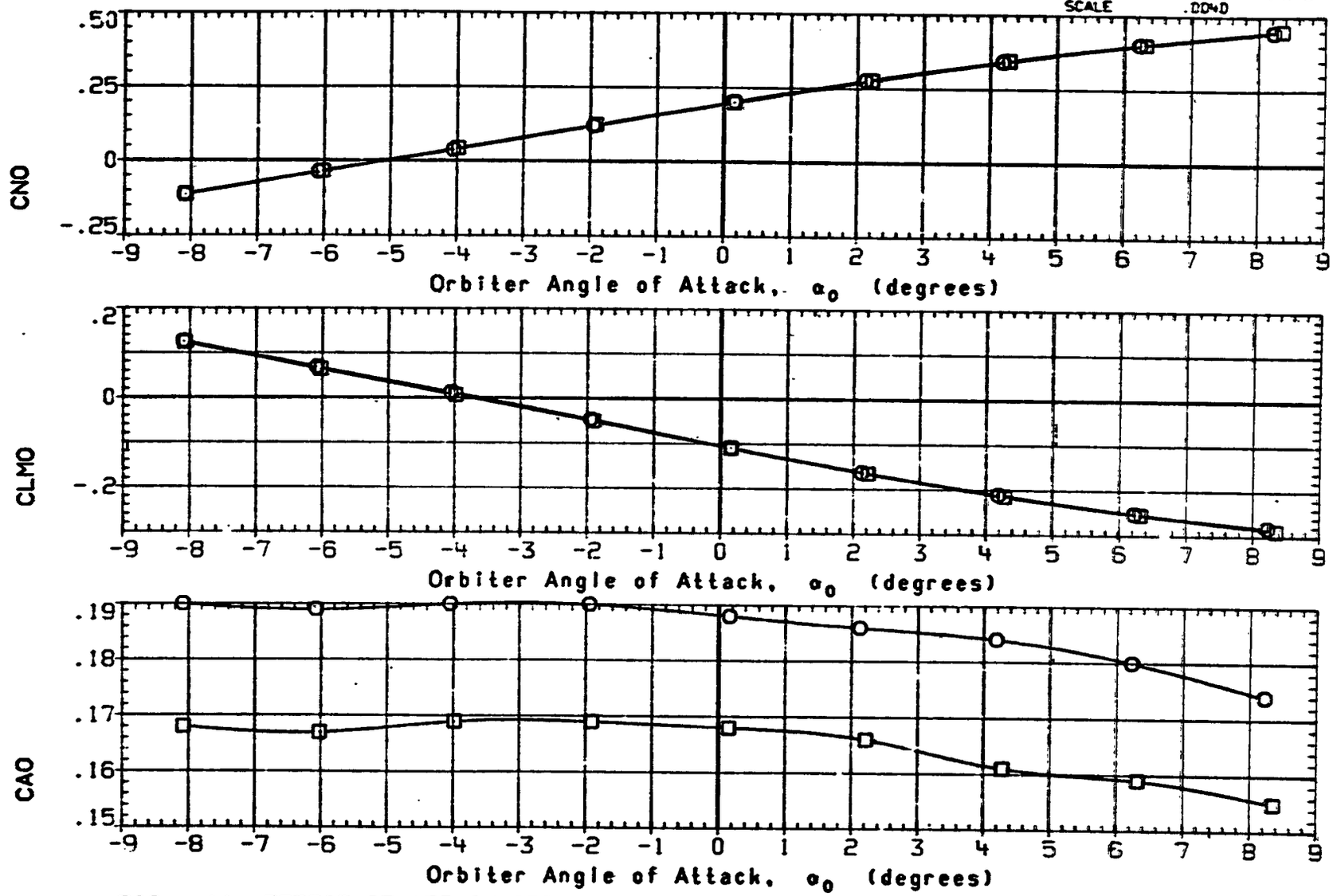

FIG. 11 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LONGITUDINAL AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

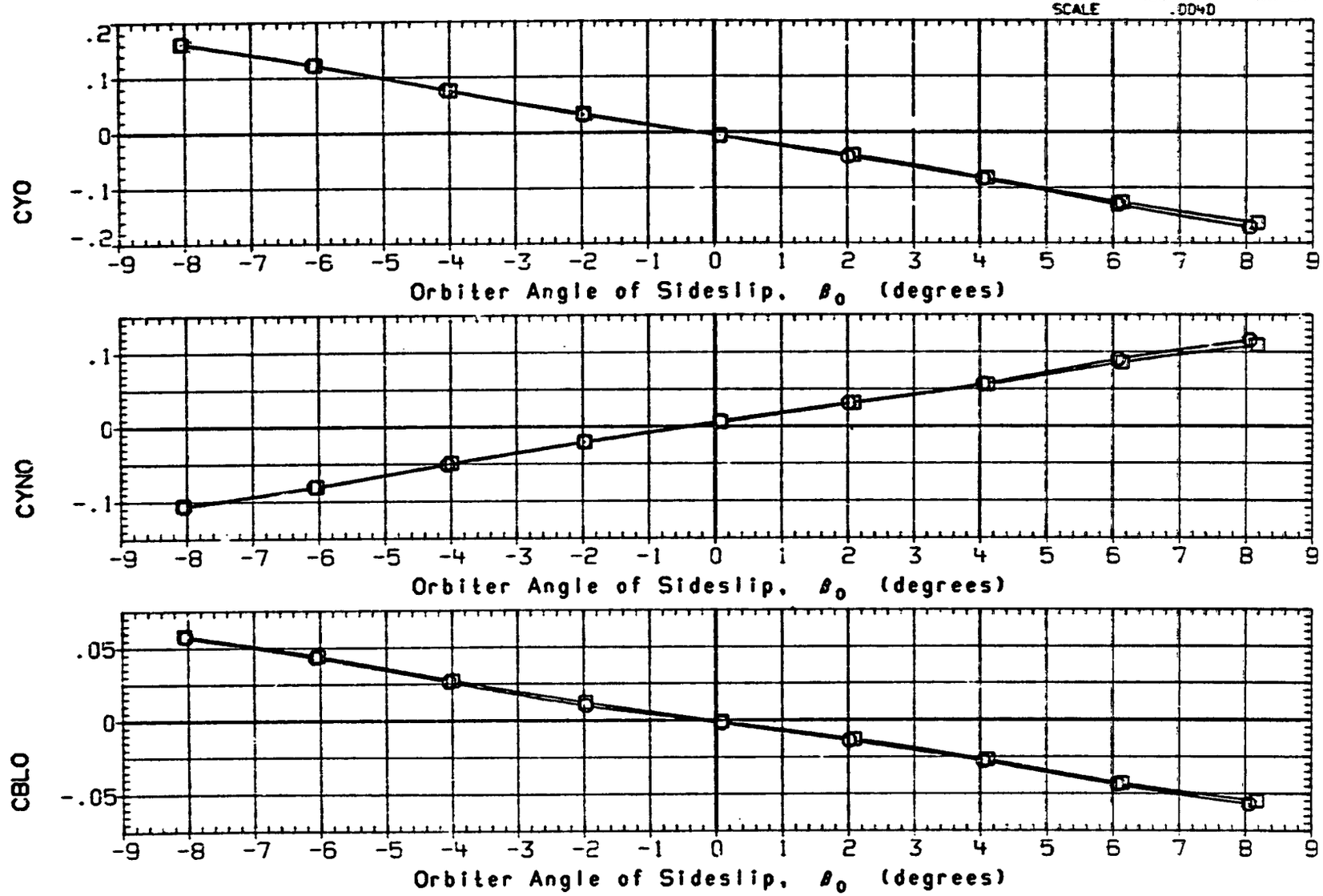

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(A)MACH = .60

OF POOR QUALITY

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ. FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. WT
YMRP	.0000	IN. WT
ZMRP	400.0000	IN. WT
SCALE	.0040	

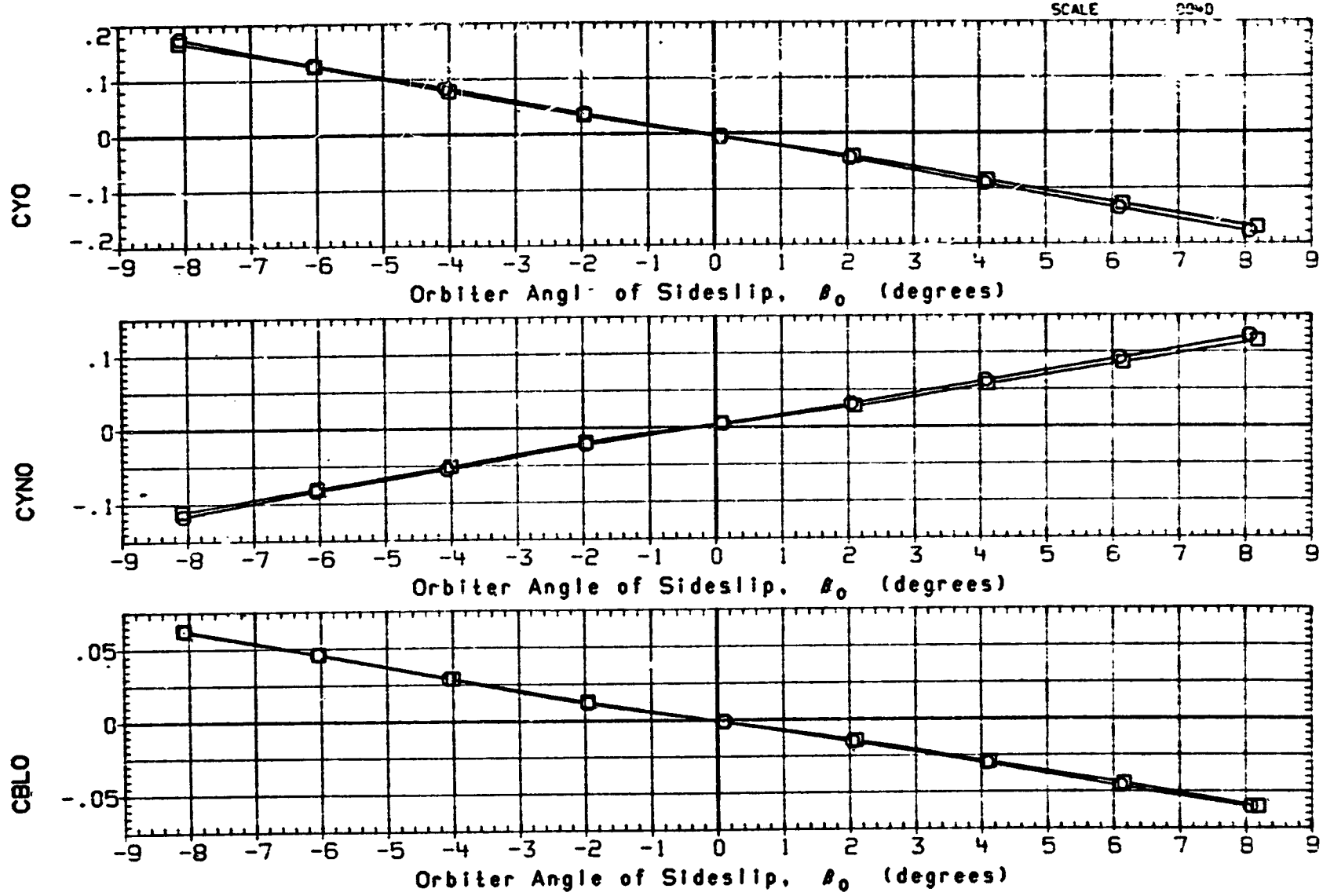

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(B) MACH = .80

C-2

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

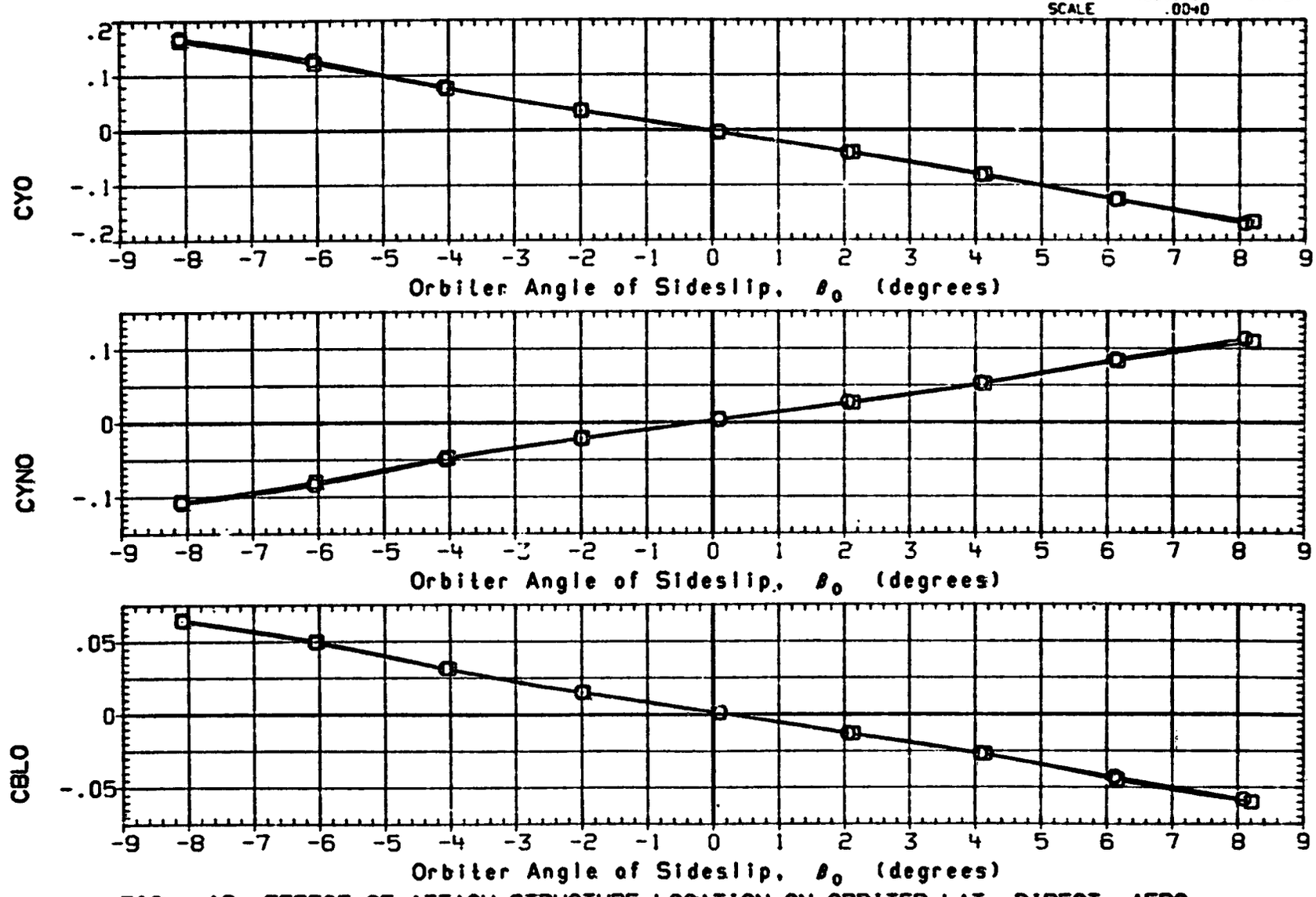

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

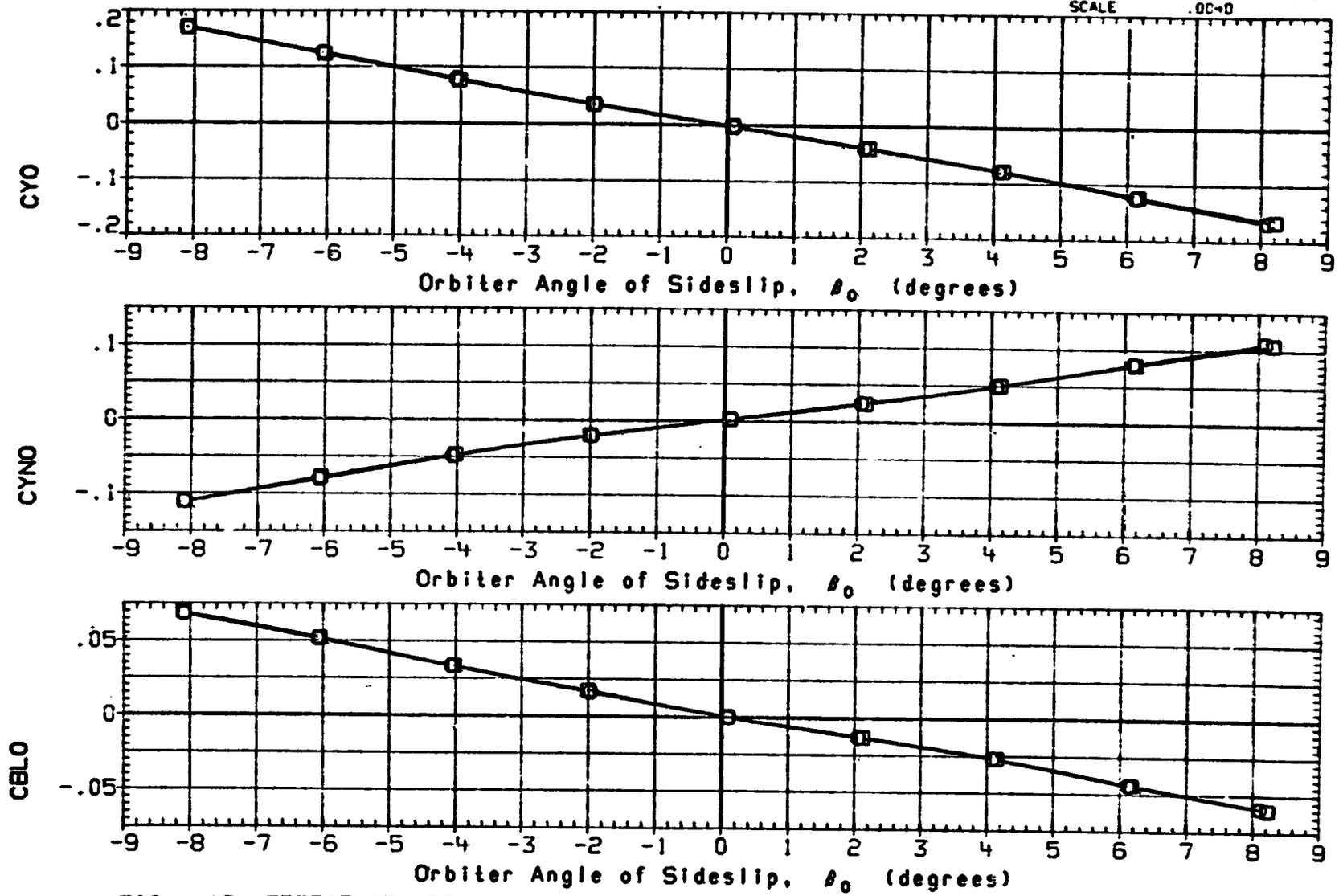

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T232	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT252	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.00+0	

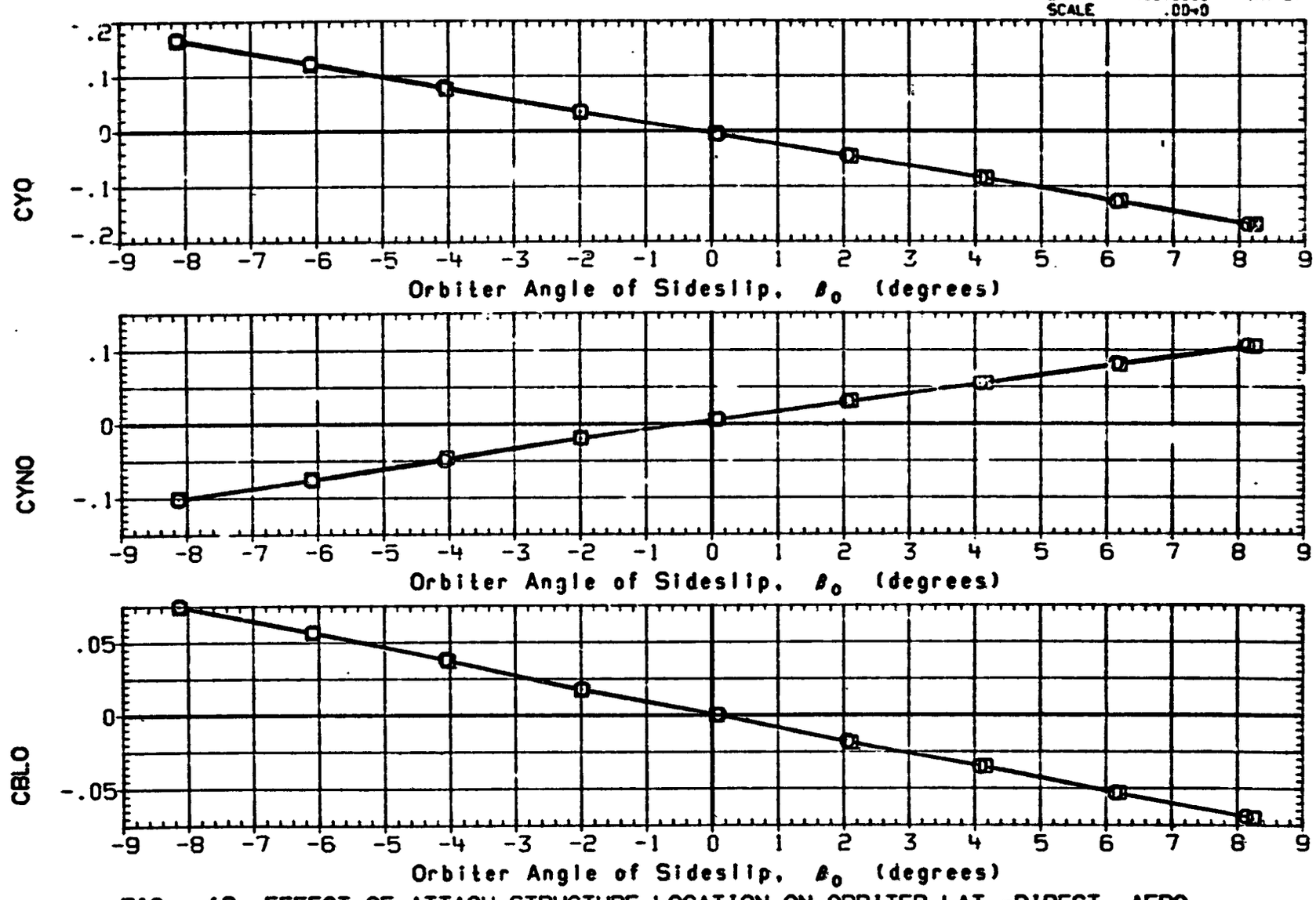

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(E)MACH = 1.05

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DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

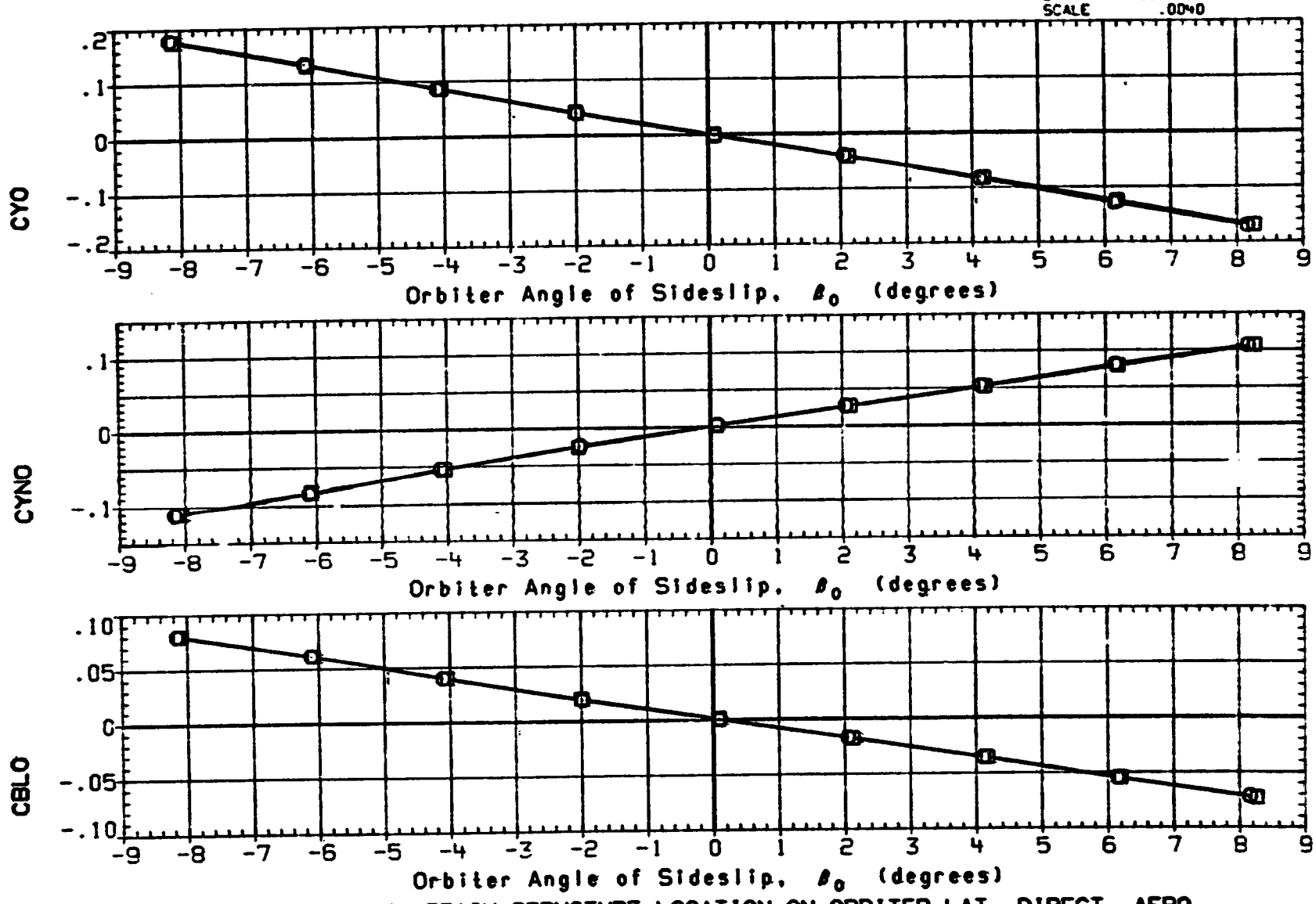

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(F)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

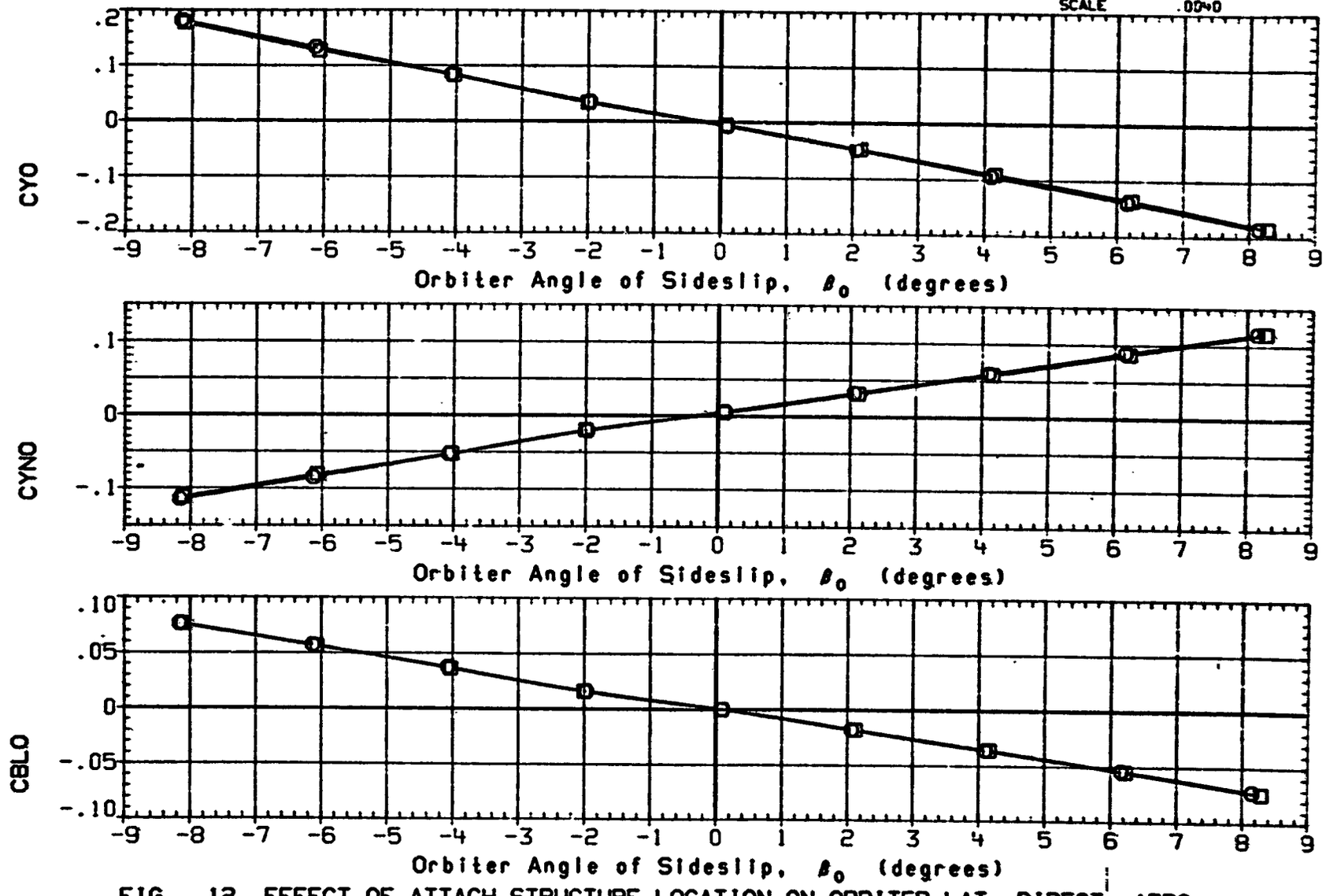

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(G)MACH = 1.15

OF POOR QUALITY

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01AC4P0T2S2	(0)	.000	10.000	10.000	2.000
R1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

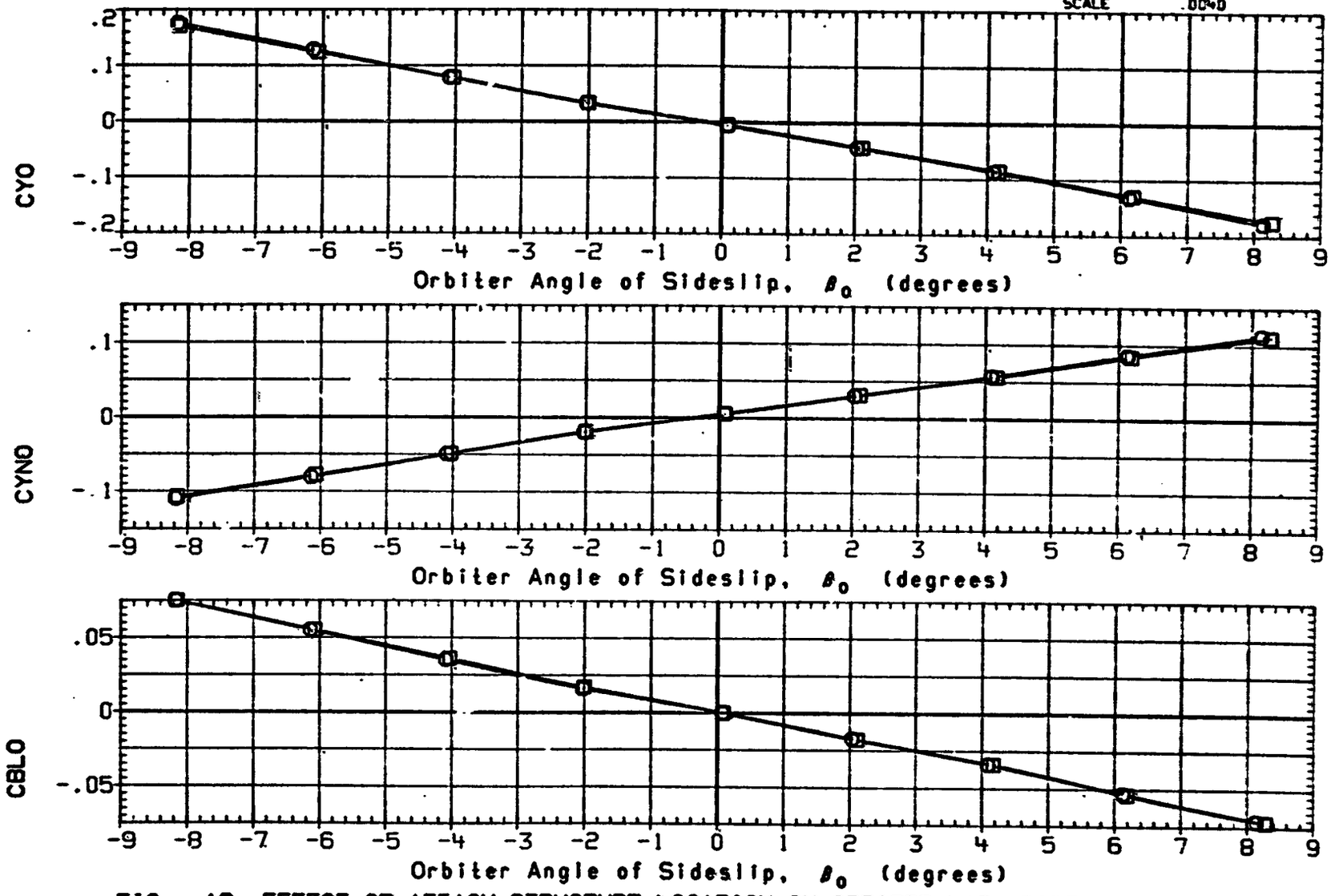

FIG. 12 EFFECT OF ATTACH STRUCTURE LOCATION ON ORBITER LAT.-DIRECT. AERO CHARACTERISTICS (TWO STING ARRANGEMENT)

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25. MSFC TWT 652. CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

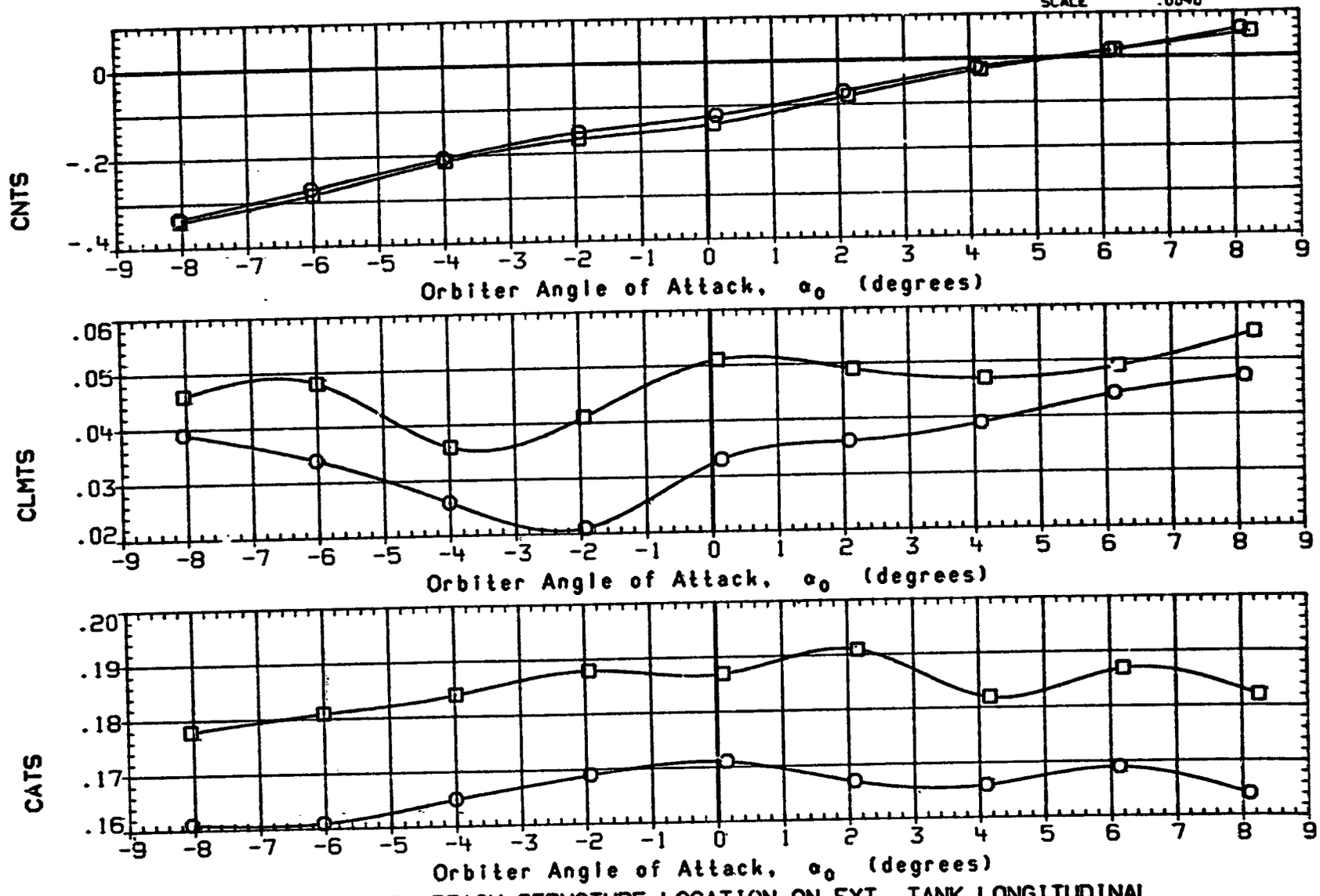

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(A) MACH = .60

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

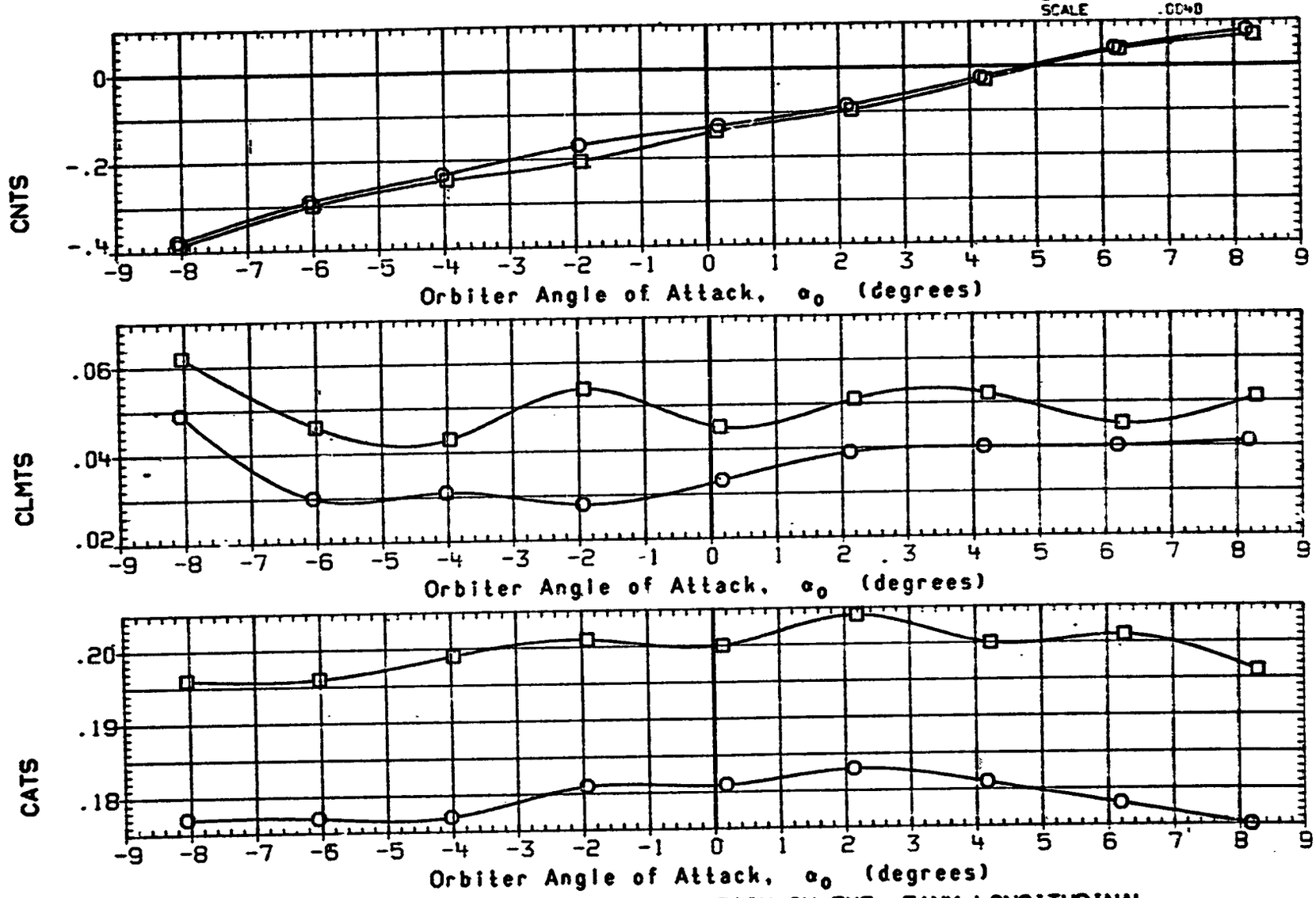

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25. MSFC TWT 652. CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

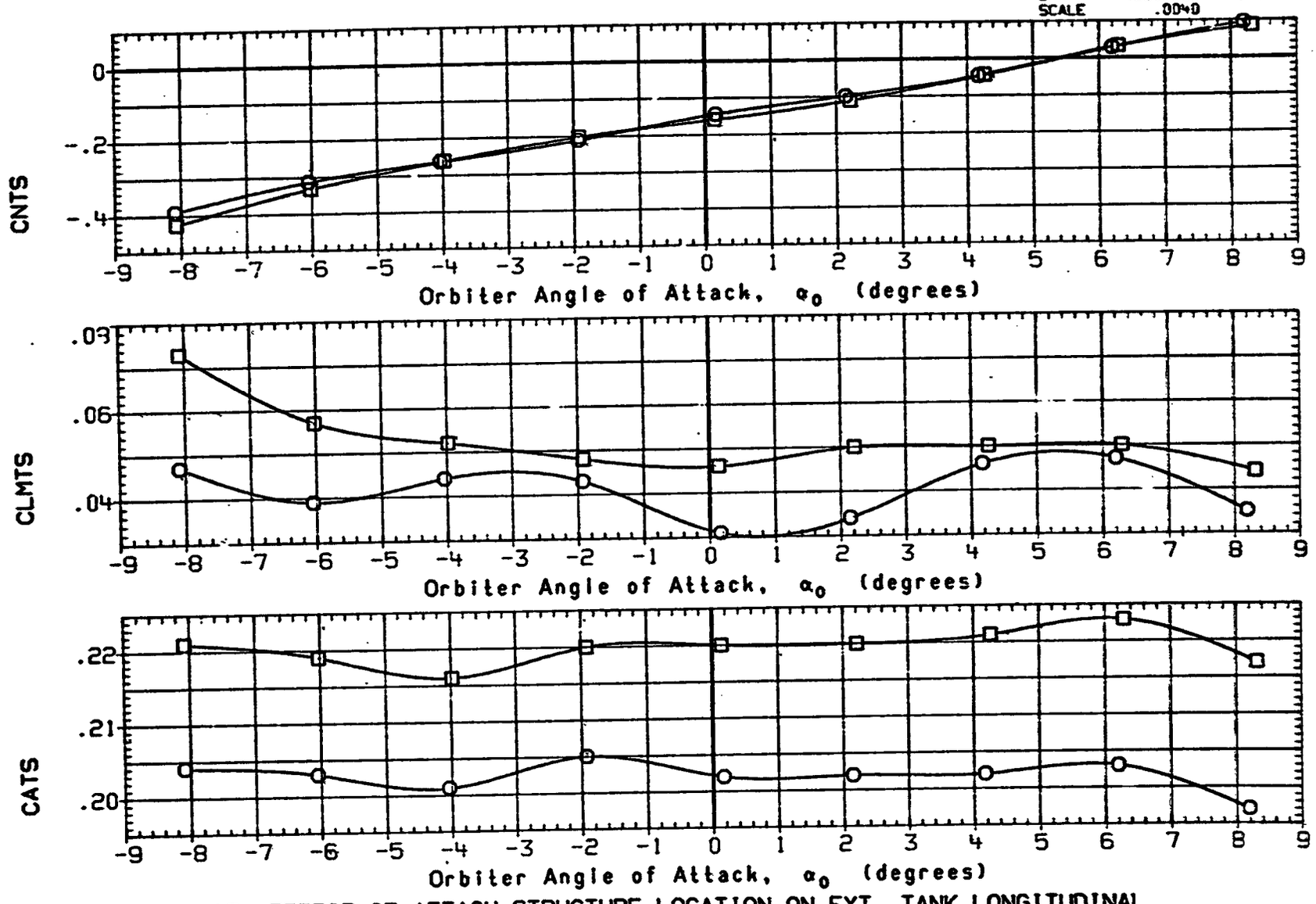

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

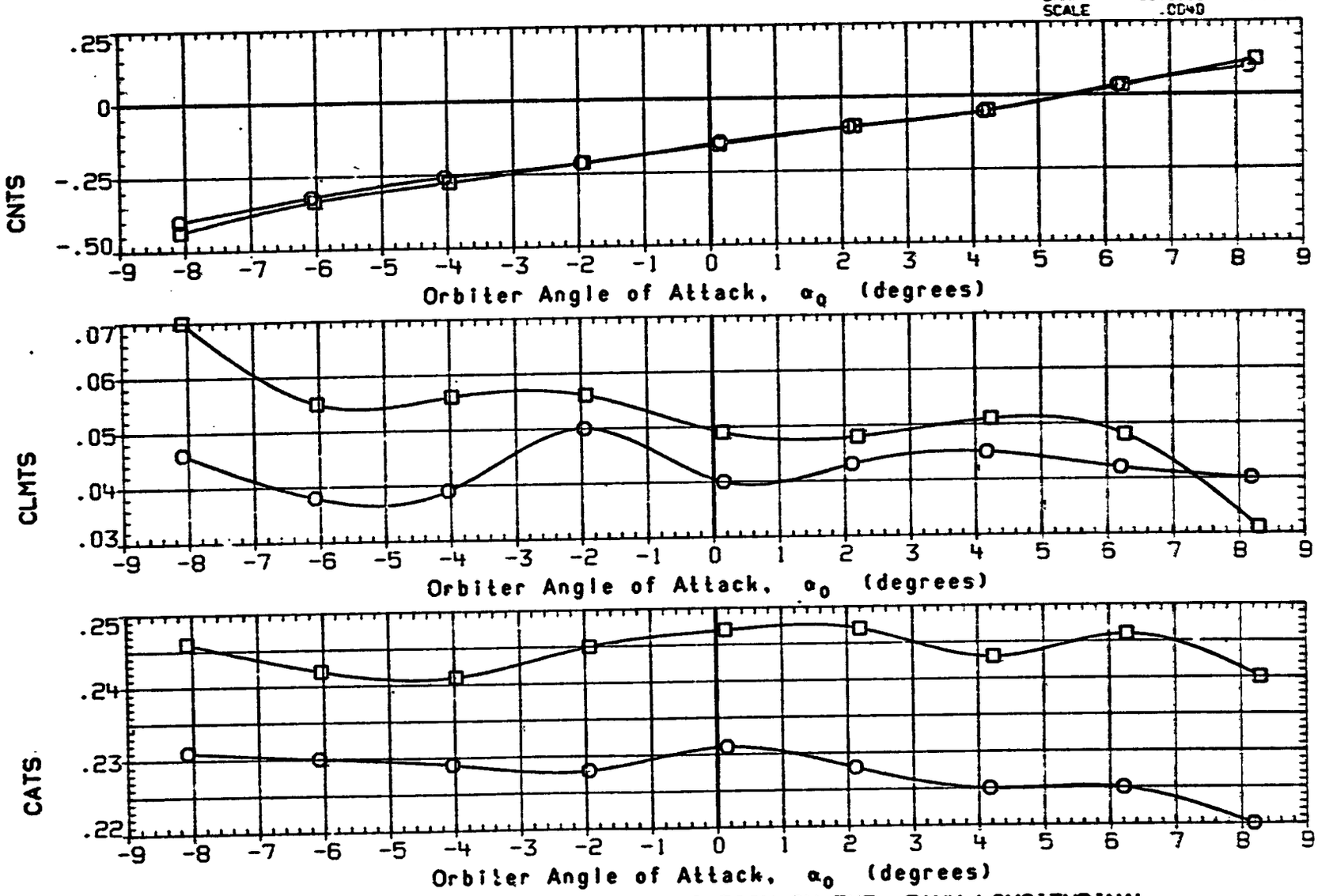

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

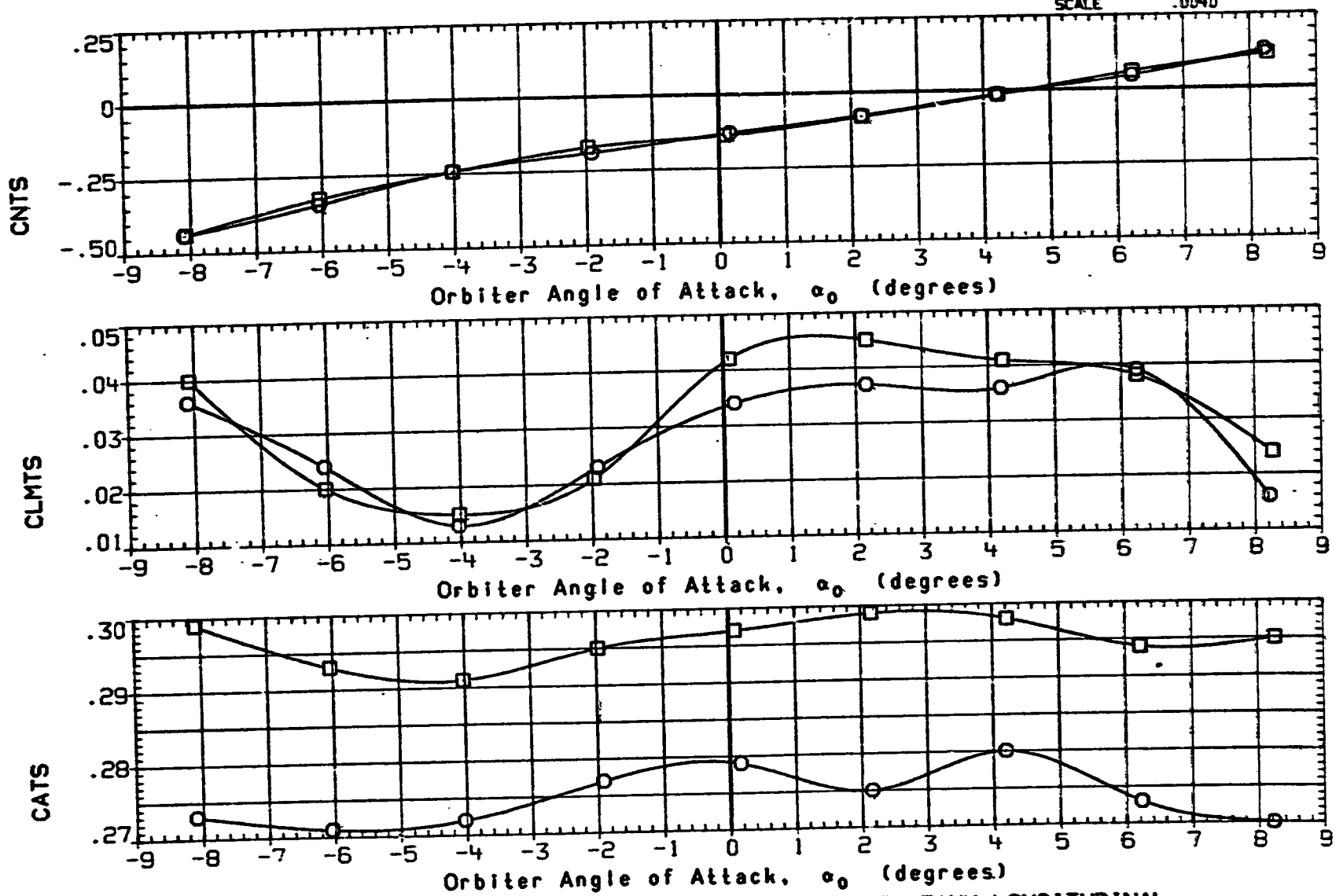

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(E)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

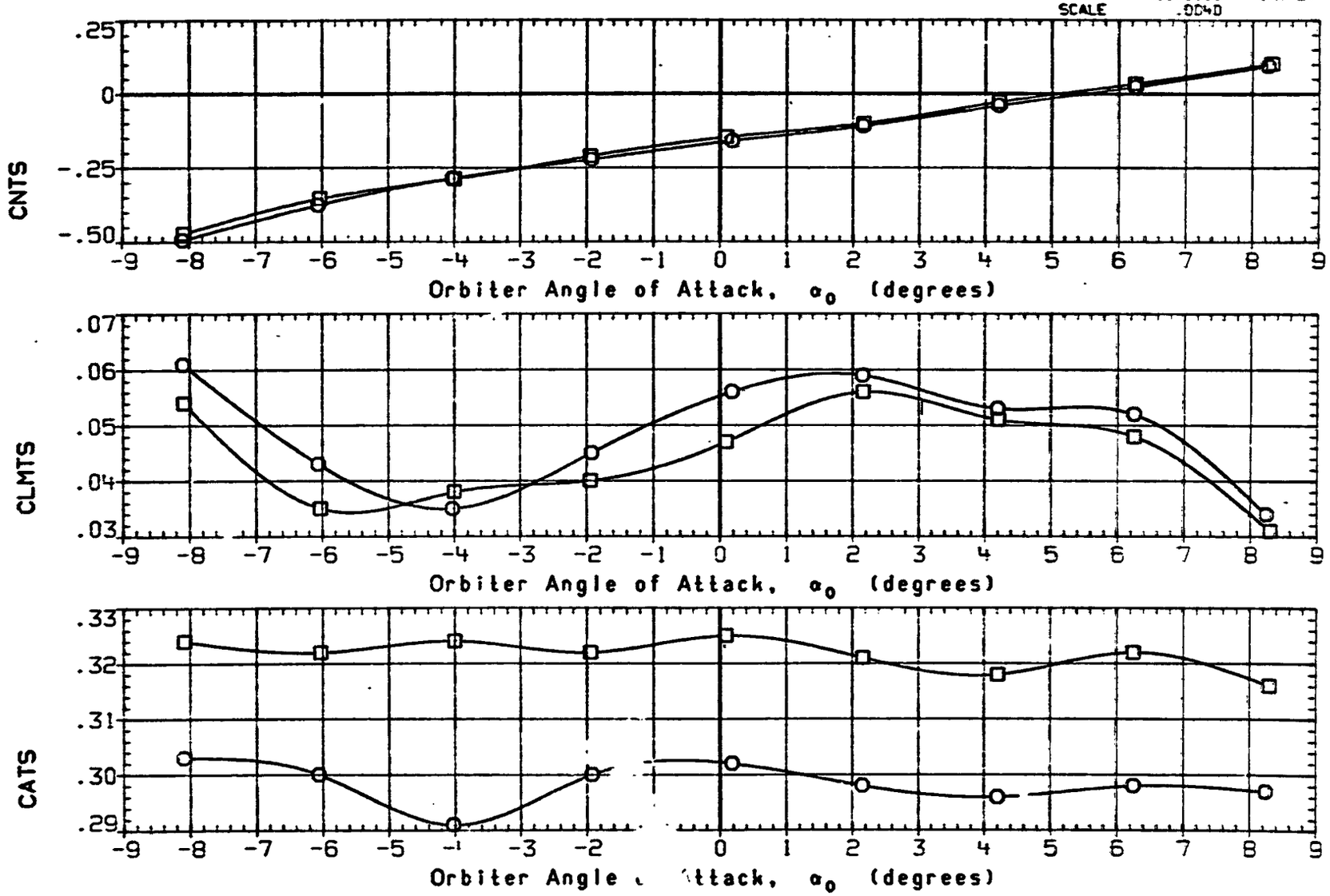

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(F)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25. MSFC TWT 652. CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

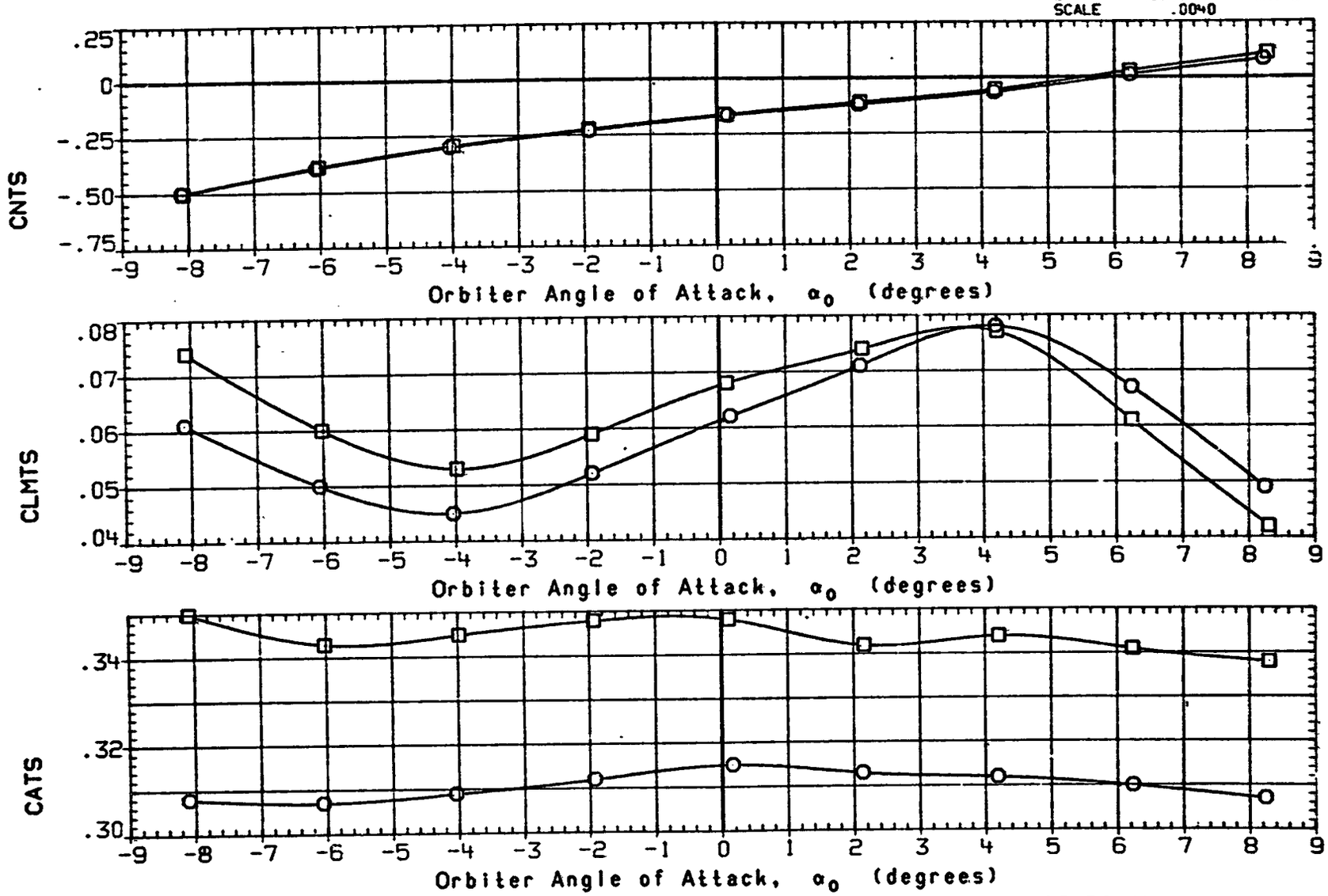

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(G)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION		BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X026	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

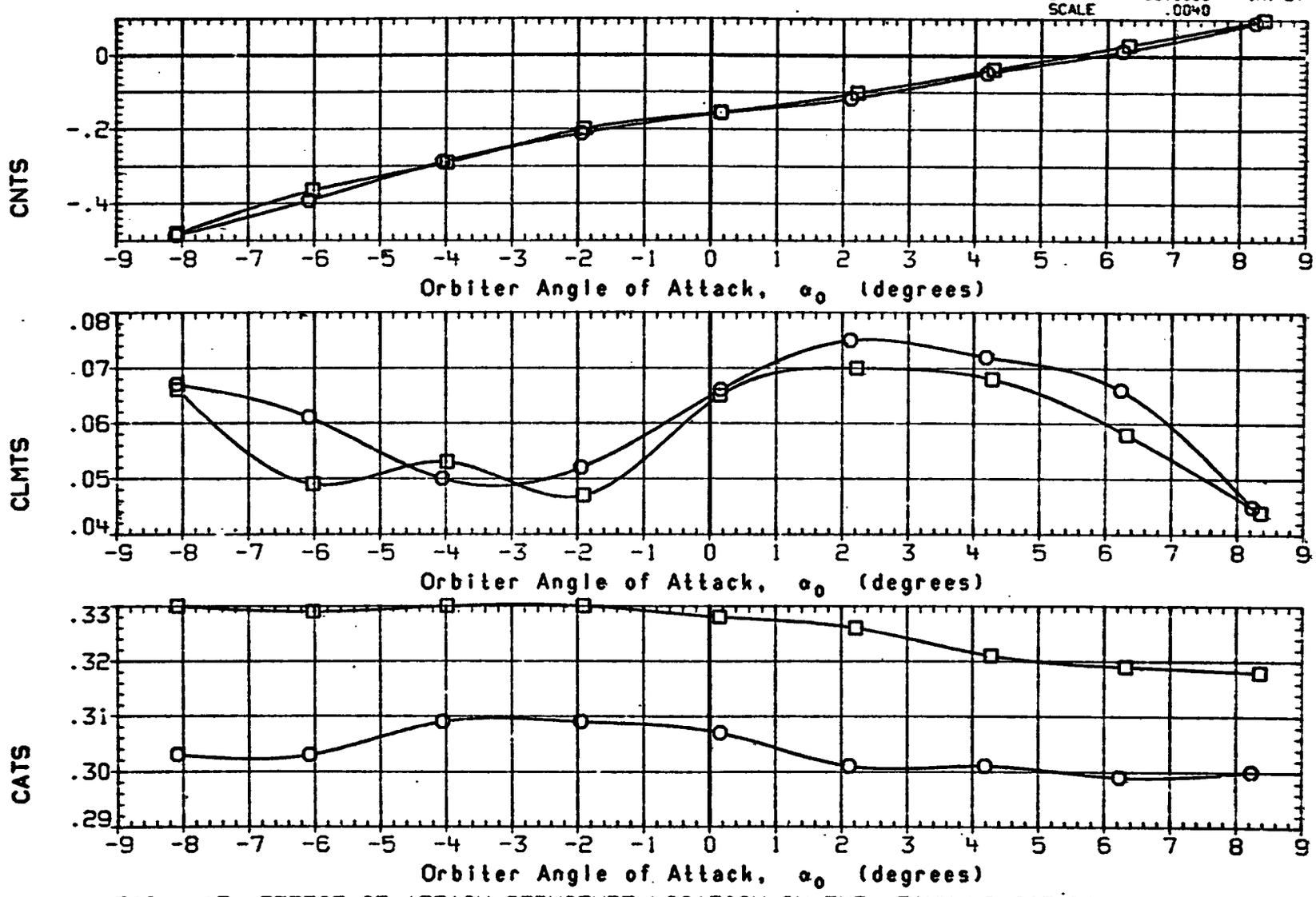

FIG. 13 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LONGITUDINAL AERO CHARACTERISTICS

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

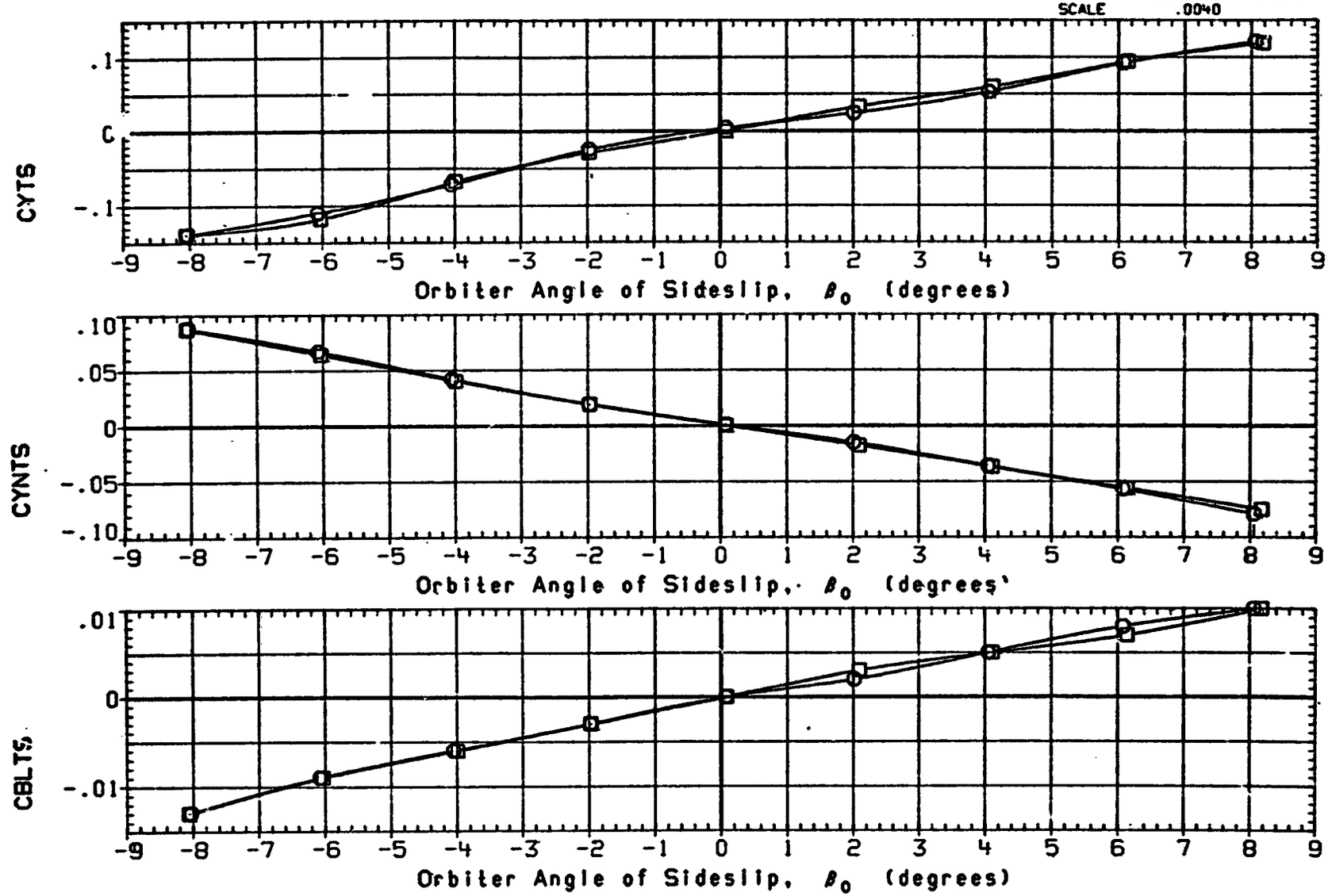

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

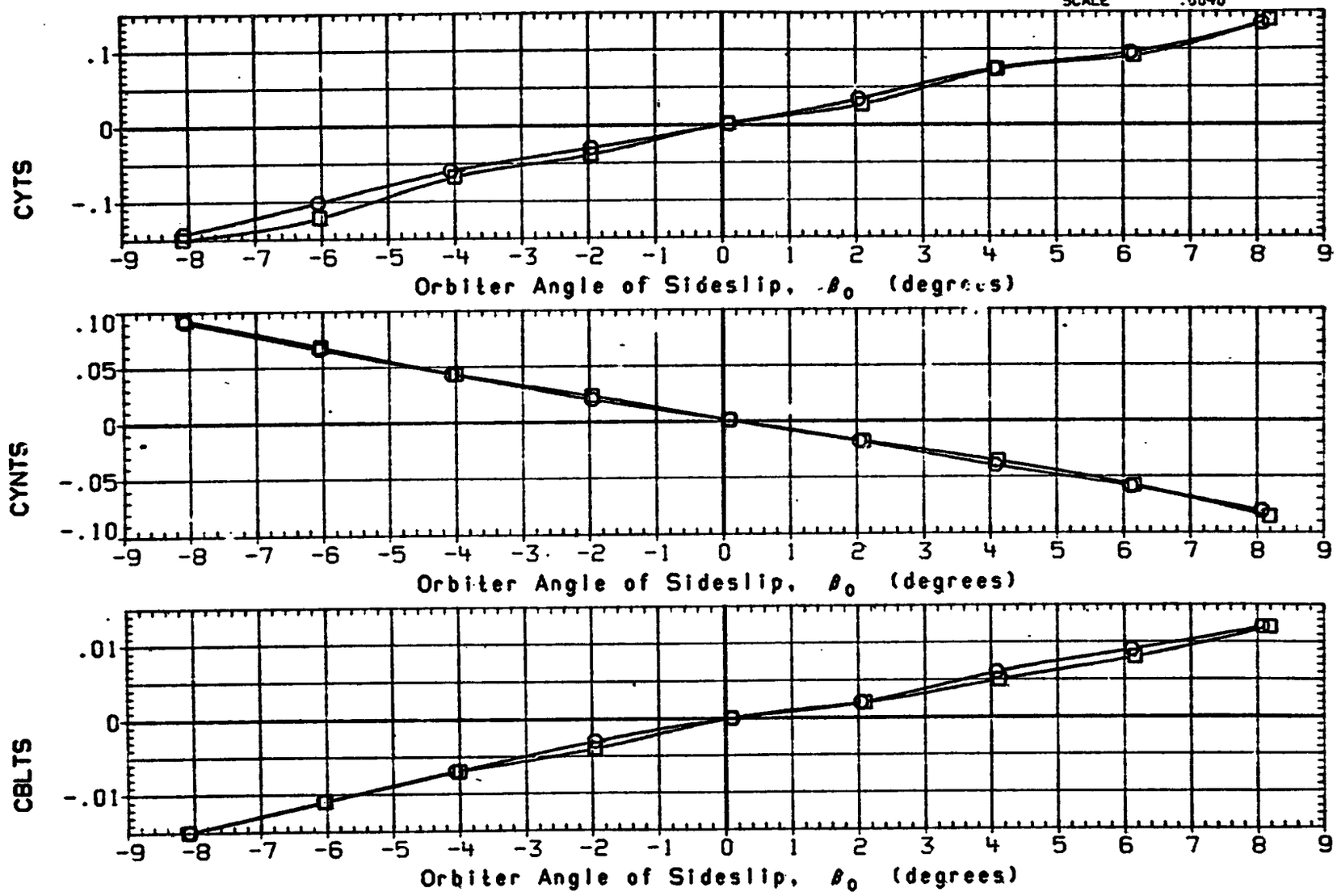

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X027	□	FA25. MSFC TWT 652. CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

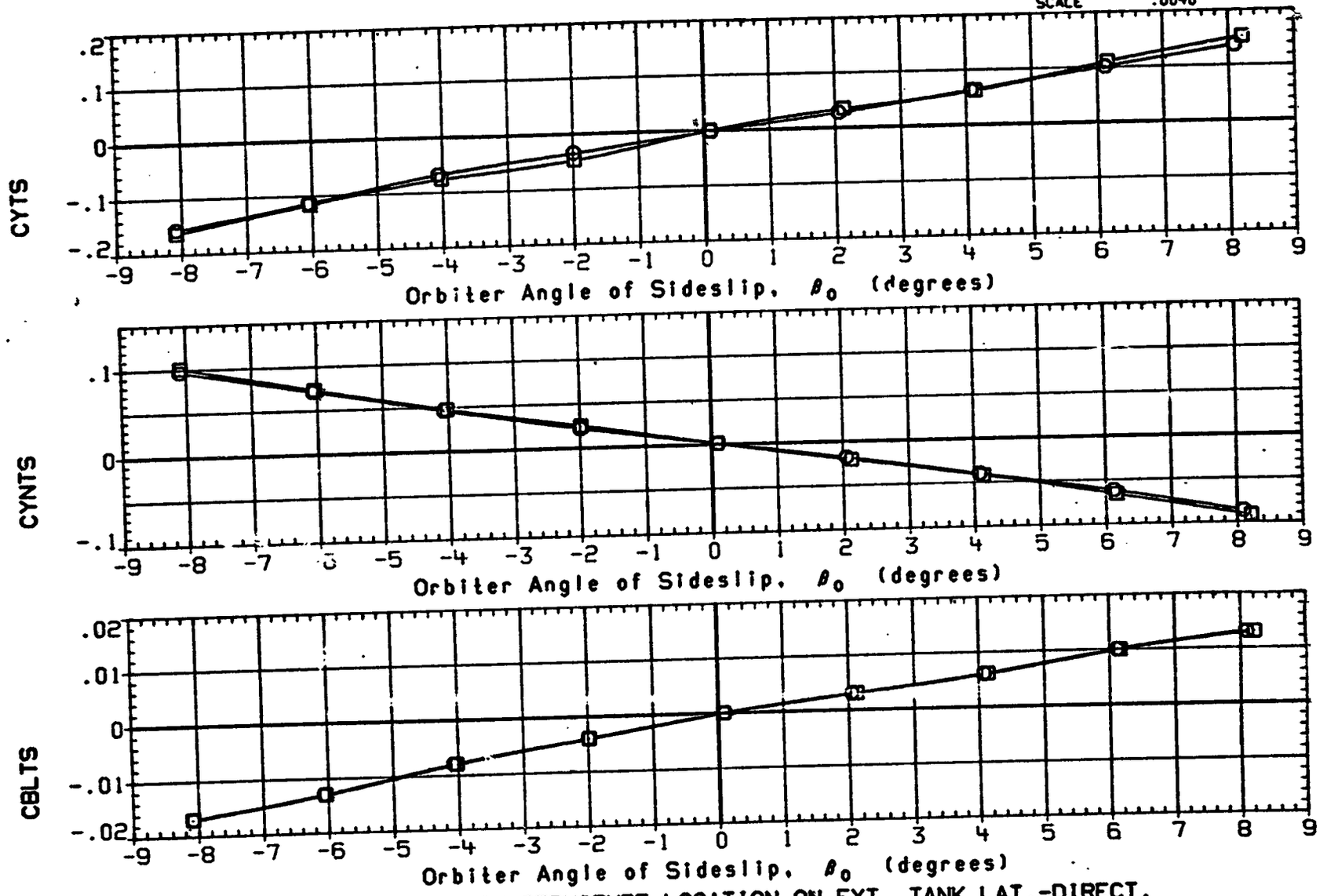

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

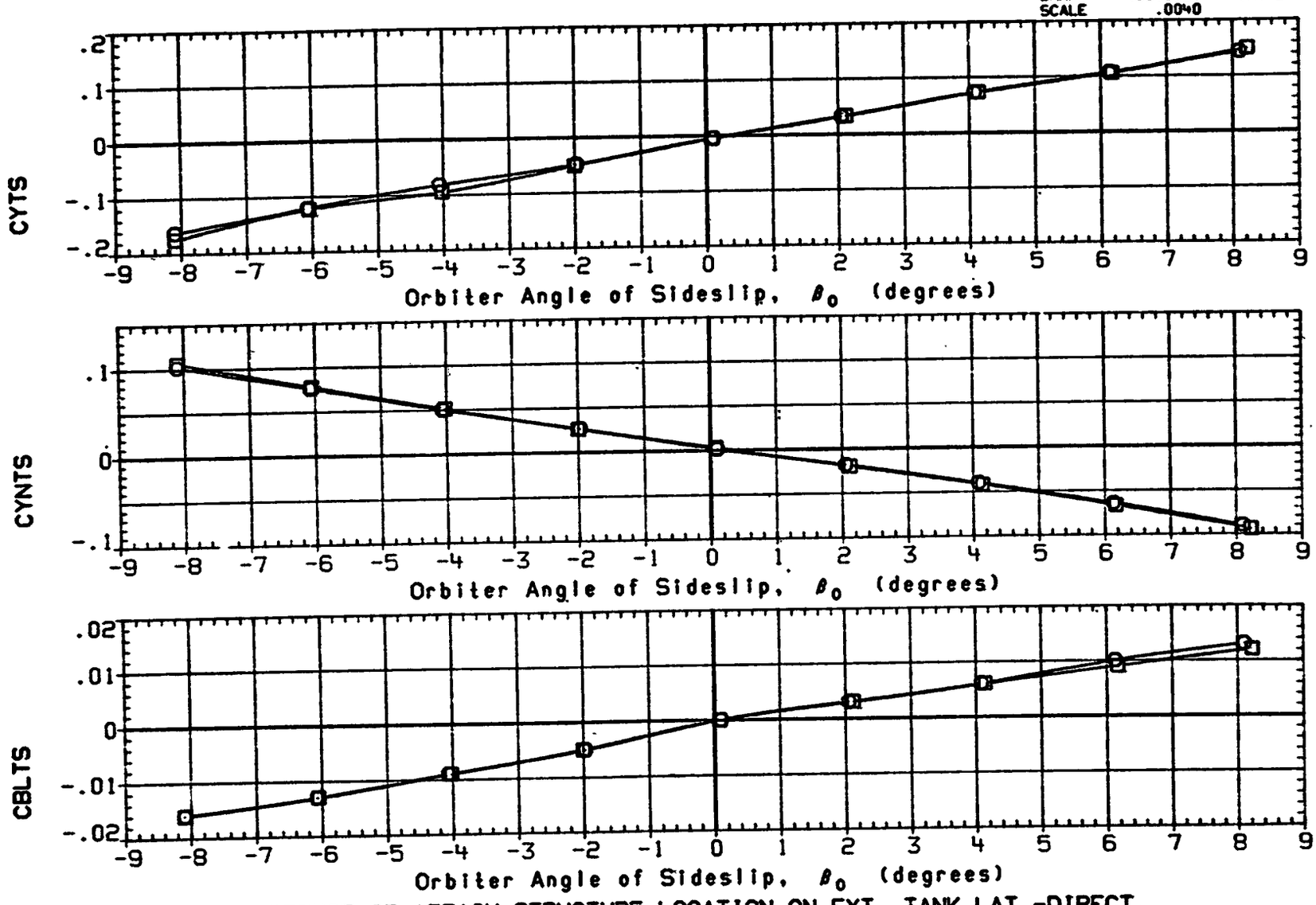

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

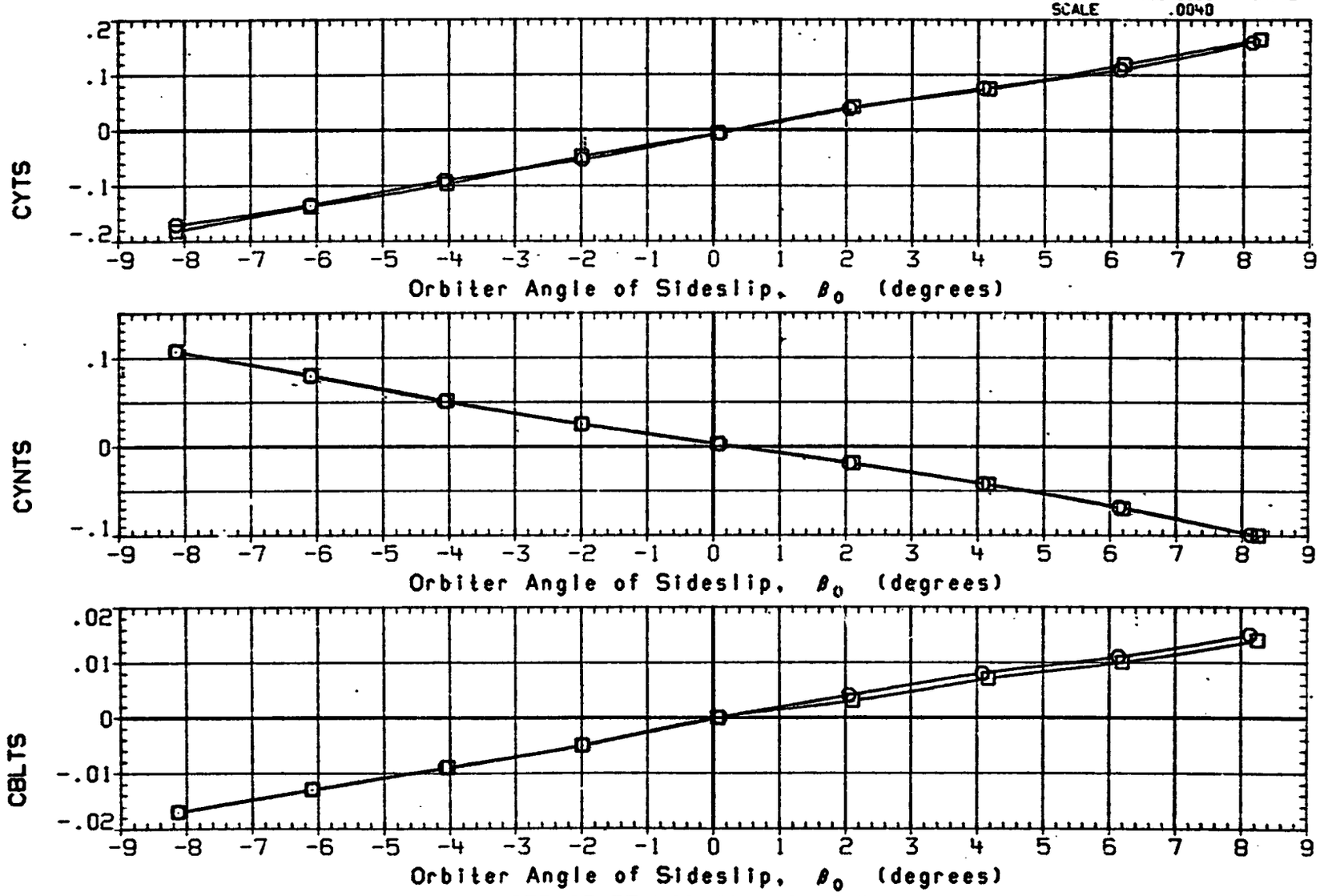

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(E)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

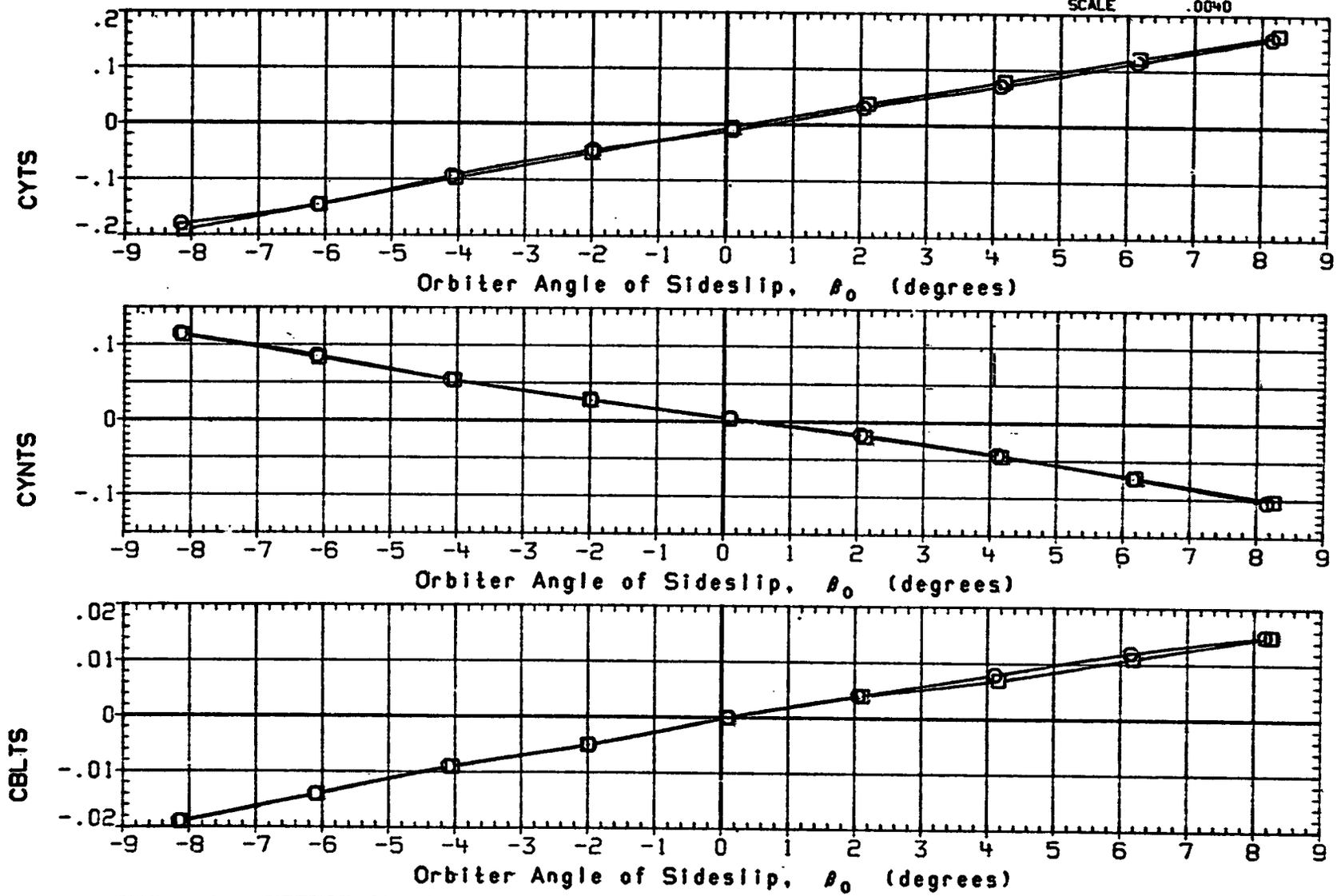

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(F)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

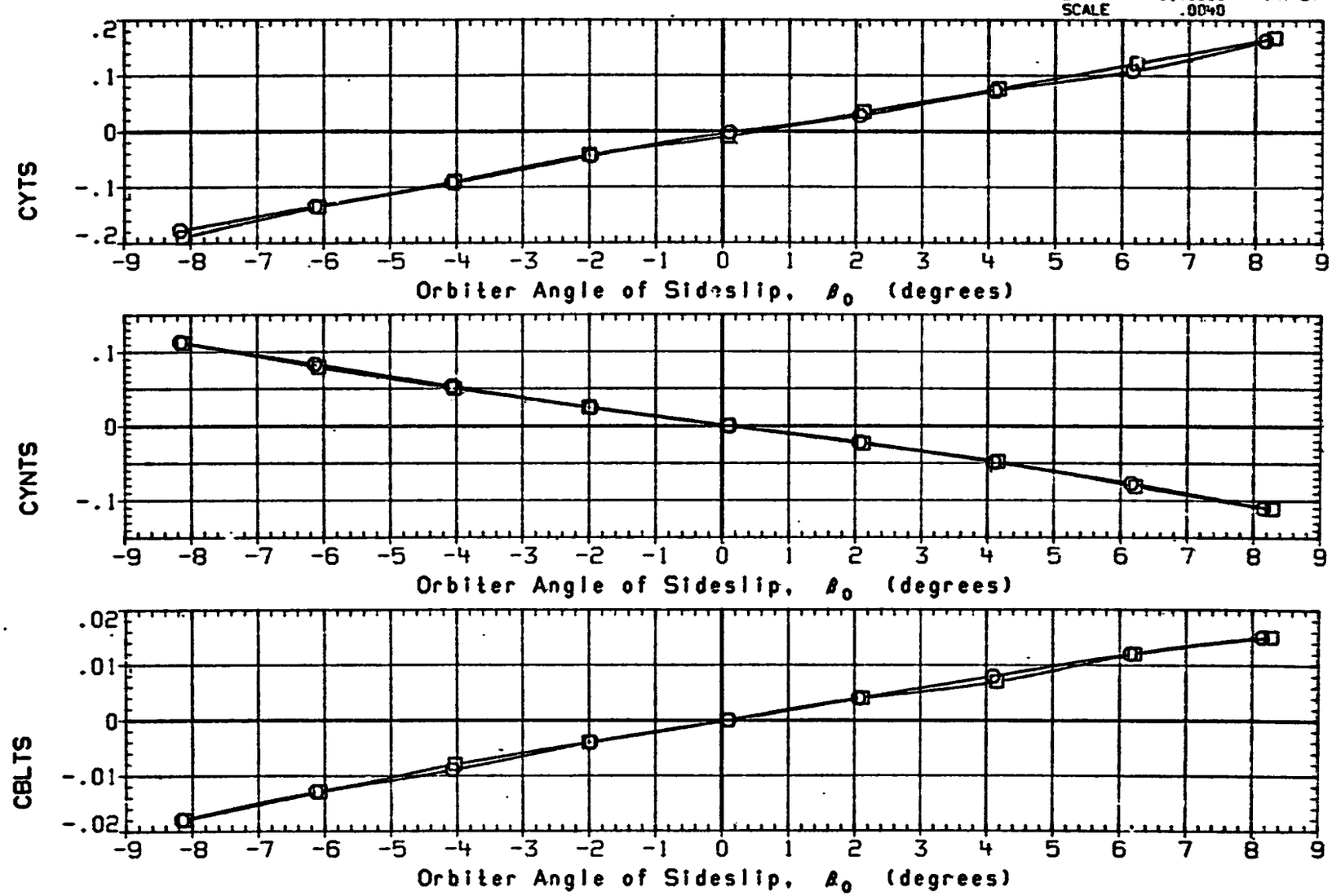

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(G)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION		ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2	(TS)	.000	10.000	10.000	2.000
S1X027	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2	(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

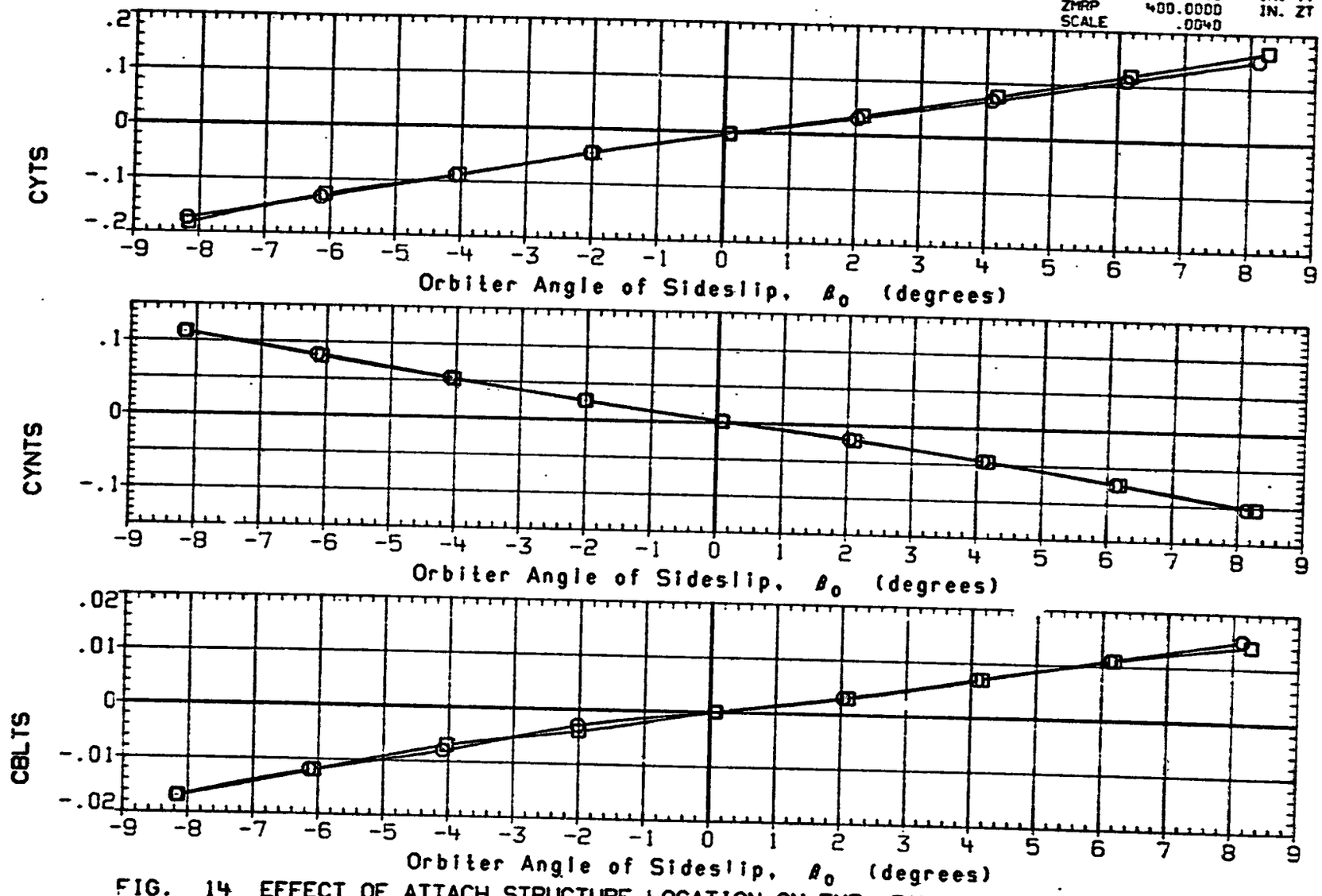

FIG. 14 EFFECT OF ATTACH STRUCTURE LOCATION ON EXT. TANK LAT.-DIRECT. AERO CHARACTERISTICS

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01AC4P0T1S1 (0)	.000	10.000	10.000	3.000
R1X020	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X022	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

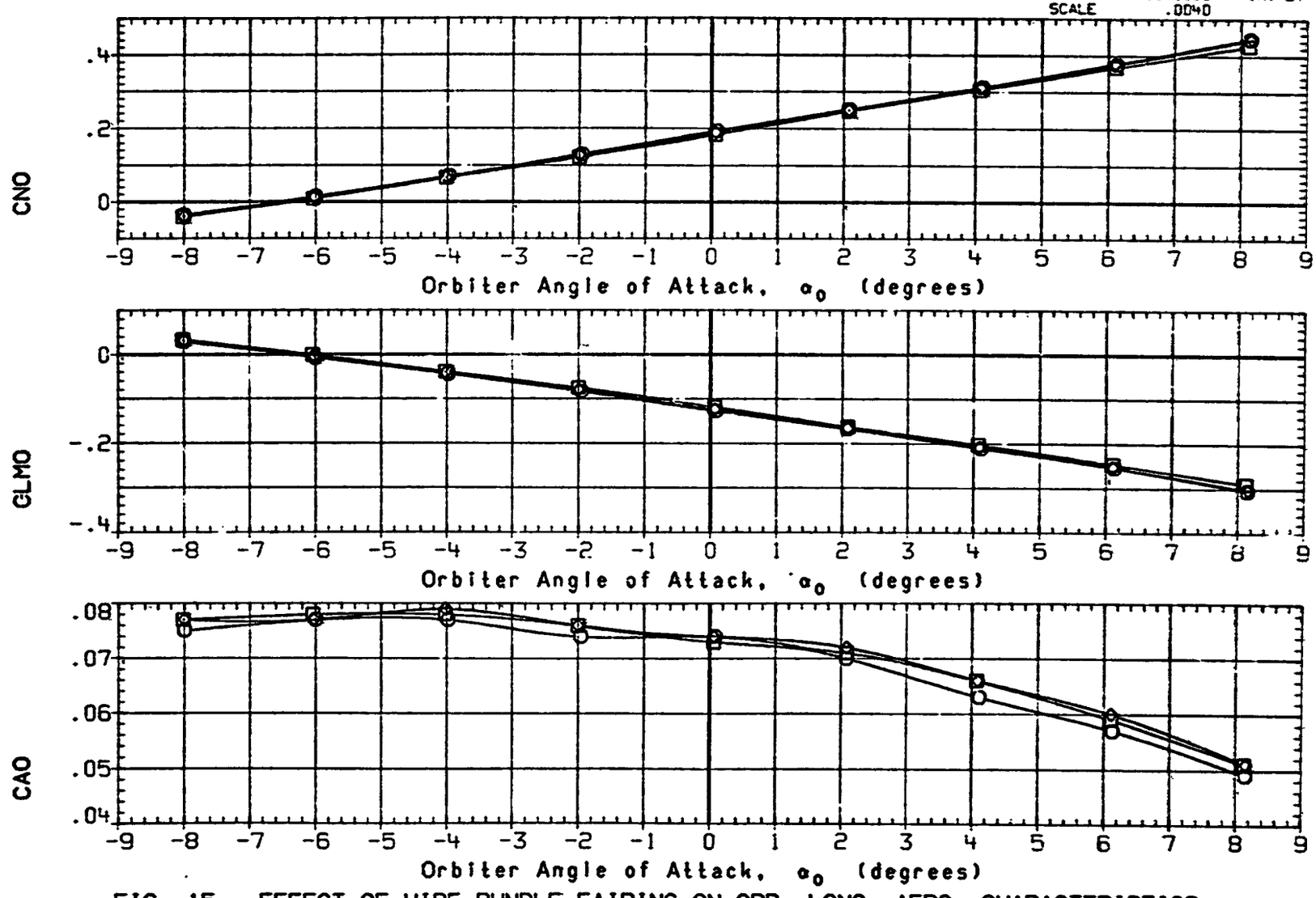

FIG. 15 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS THREE STING ARRANGEMENT

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X020	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X022	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

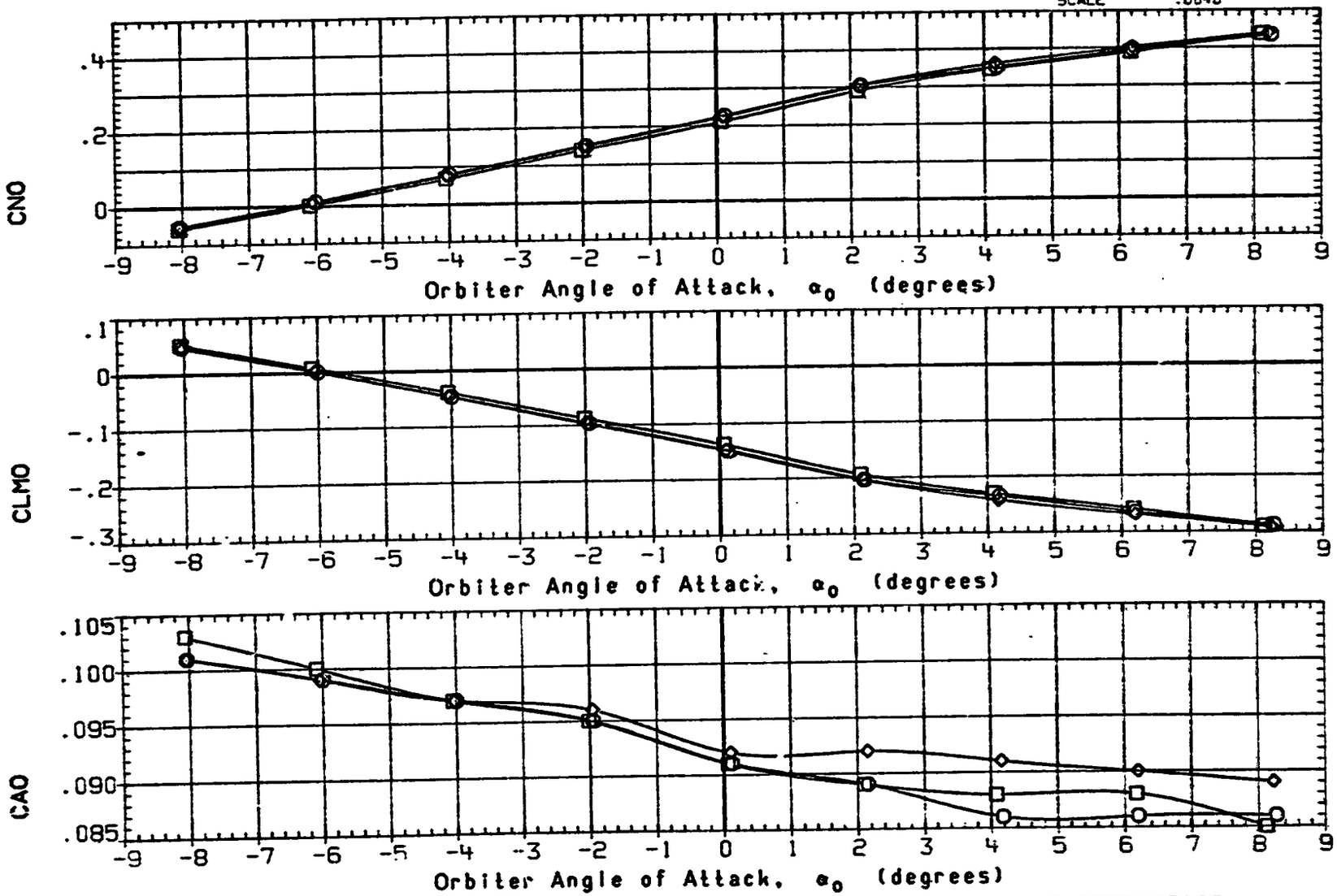

FIG. 15 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS THREE STING ARRANGEMENT

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X020	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X022	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

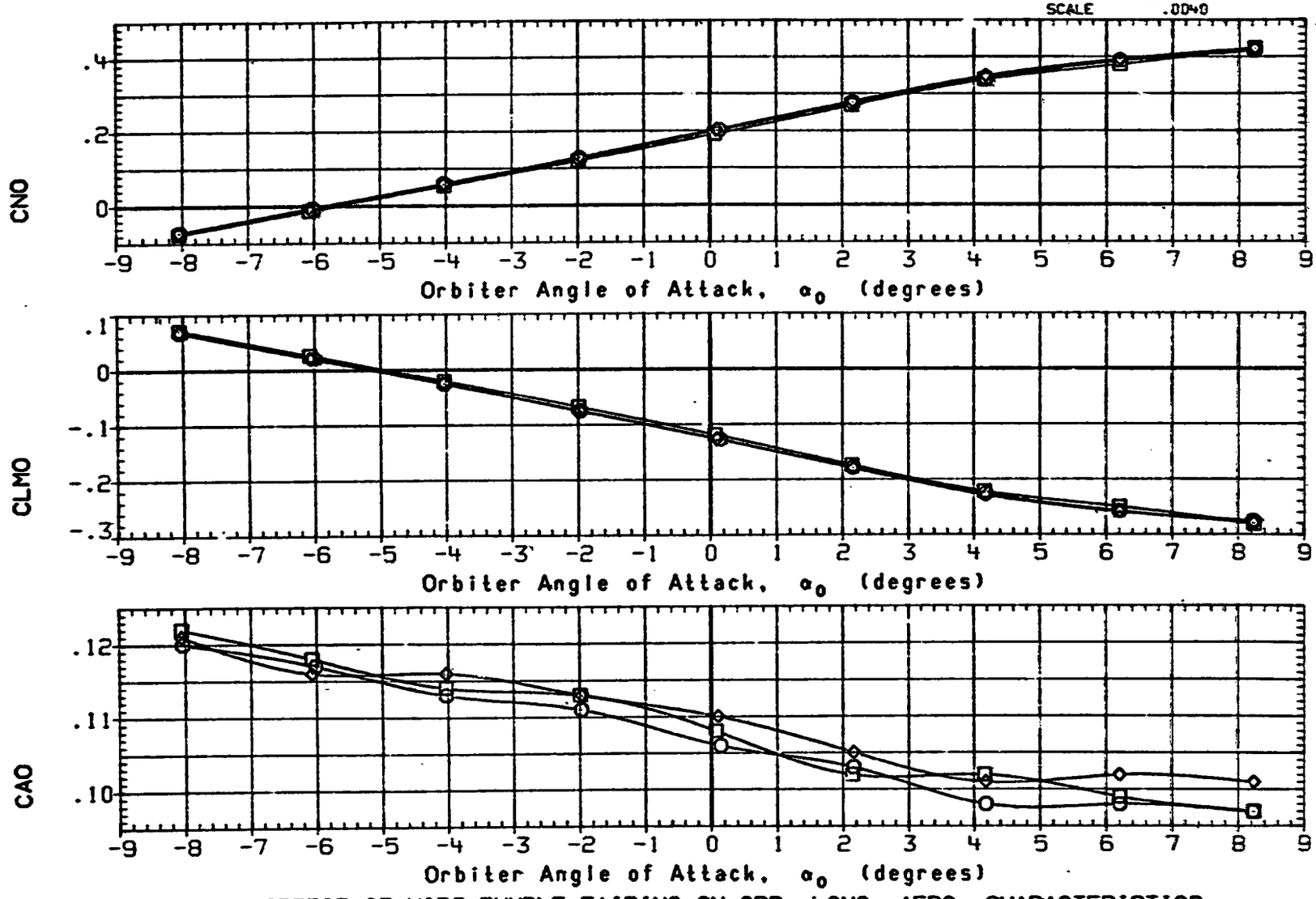

FIG. 15 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS THREE STING ARRANGEMENT

(C)MACH = .95

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X020	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X022	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

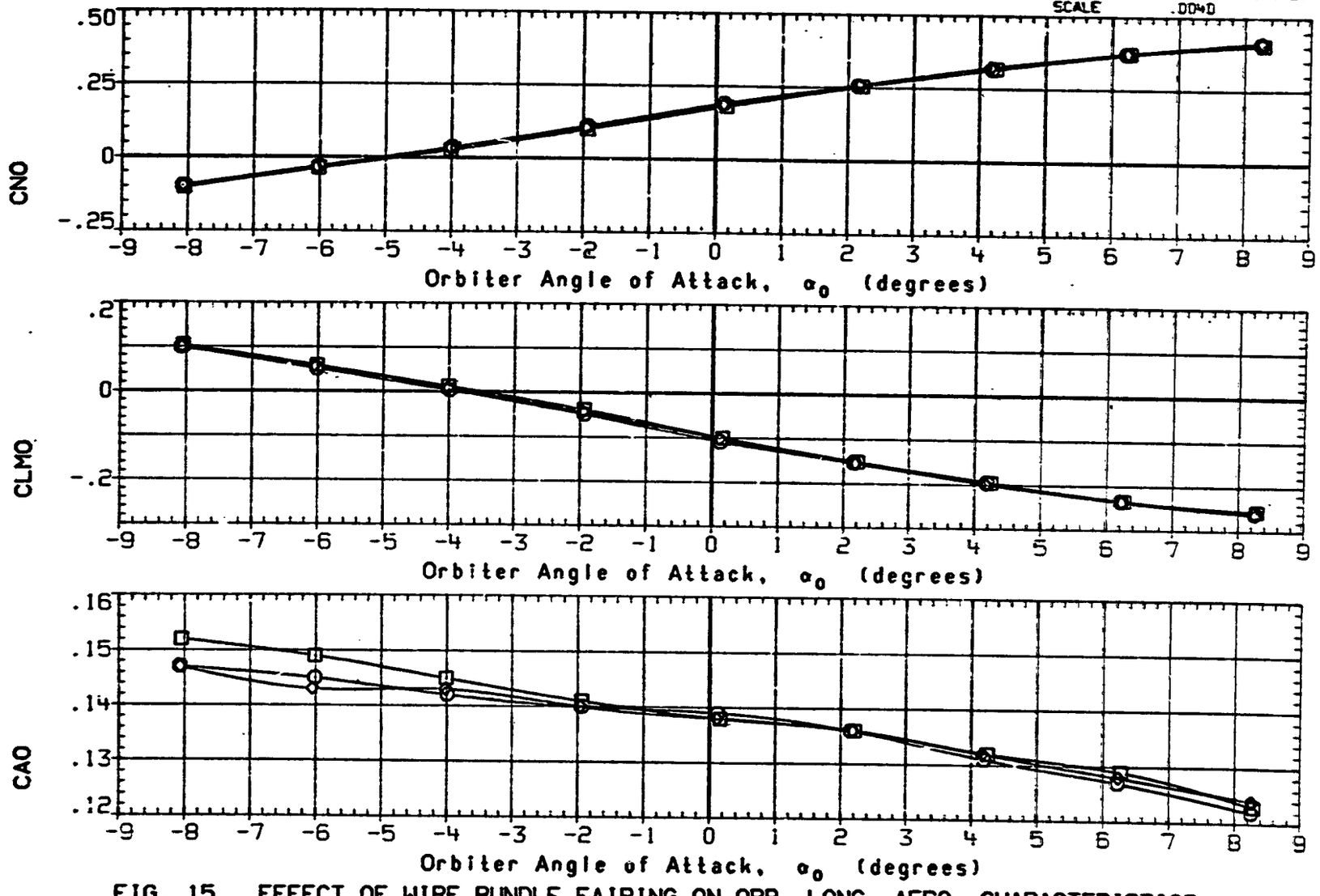

FIG. 15 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS THREE STING ARRANGEMENT

(D)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X020	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X022	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

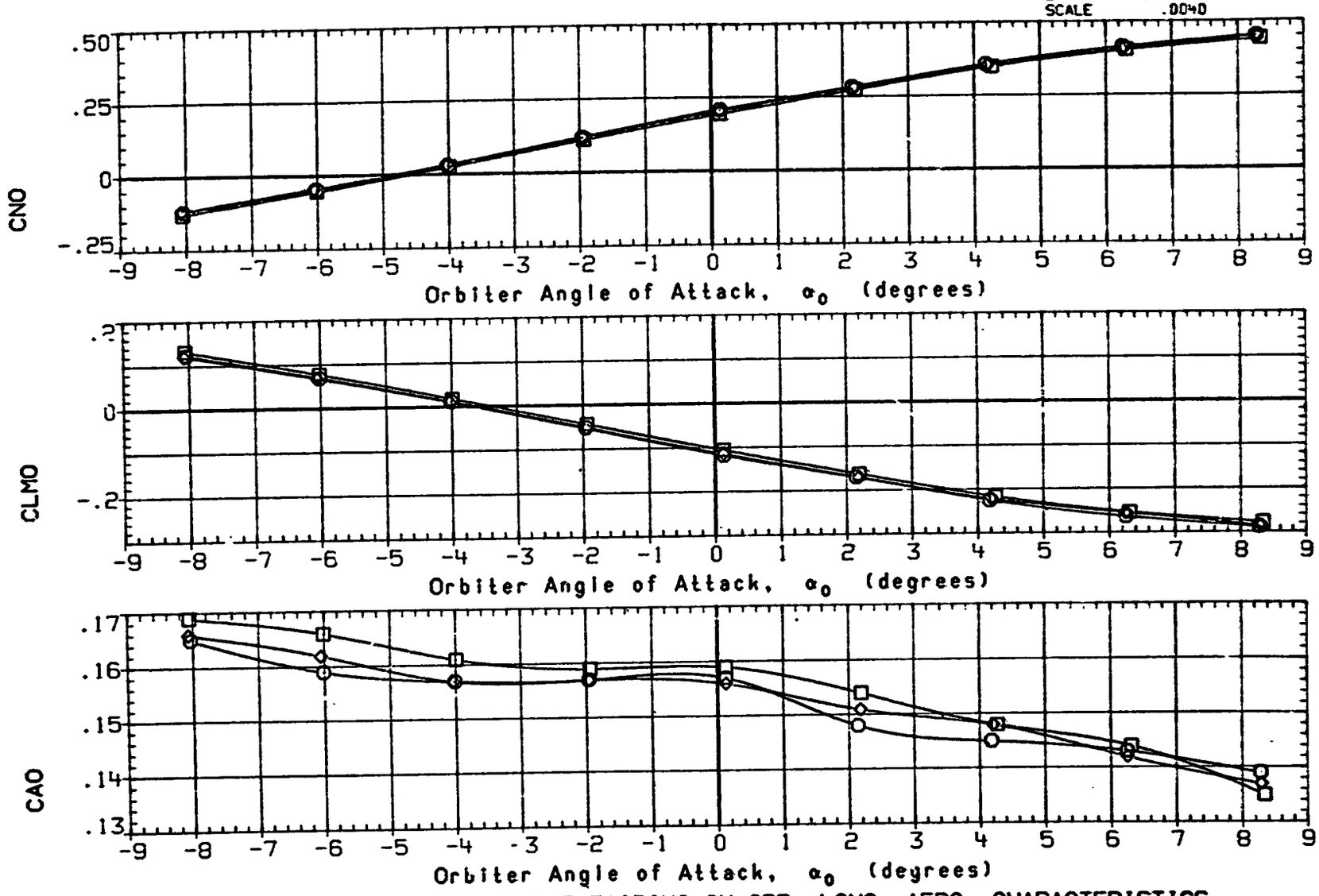

FIG. 15 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS THREE STING ARRANGEMENT

(E)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (O)	.000	10.000	10.000	3.000
R1X020	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(O)	.000	10.000	10.000	3.000
R1X022	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(O)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

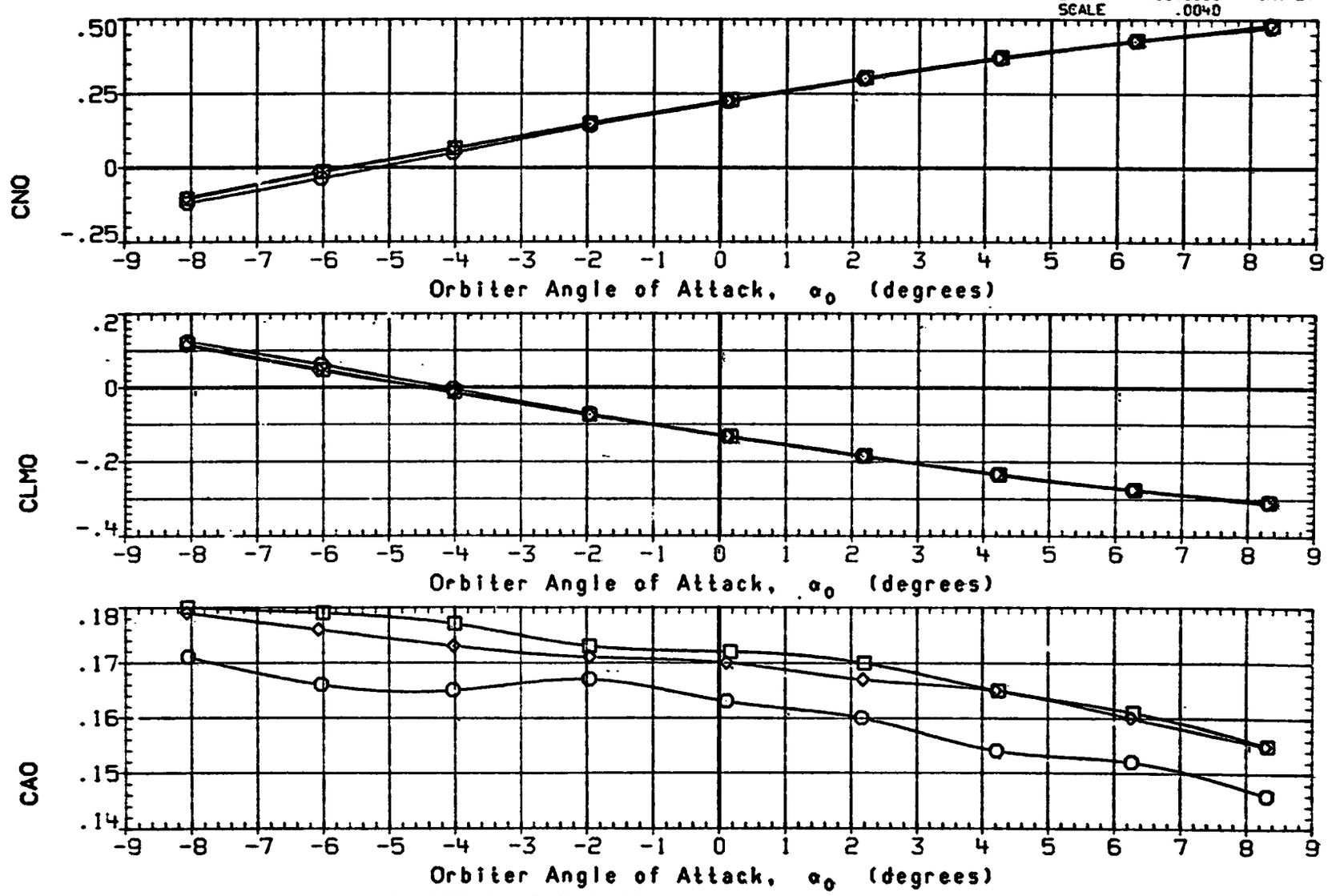

FIG. 15 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS THREE STING ARRANGEMENT

(F)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X012	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X020	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X022	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

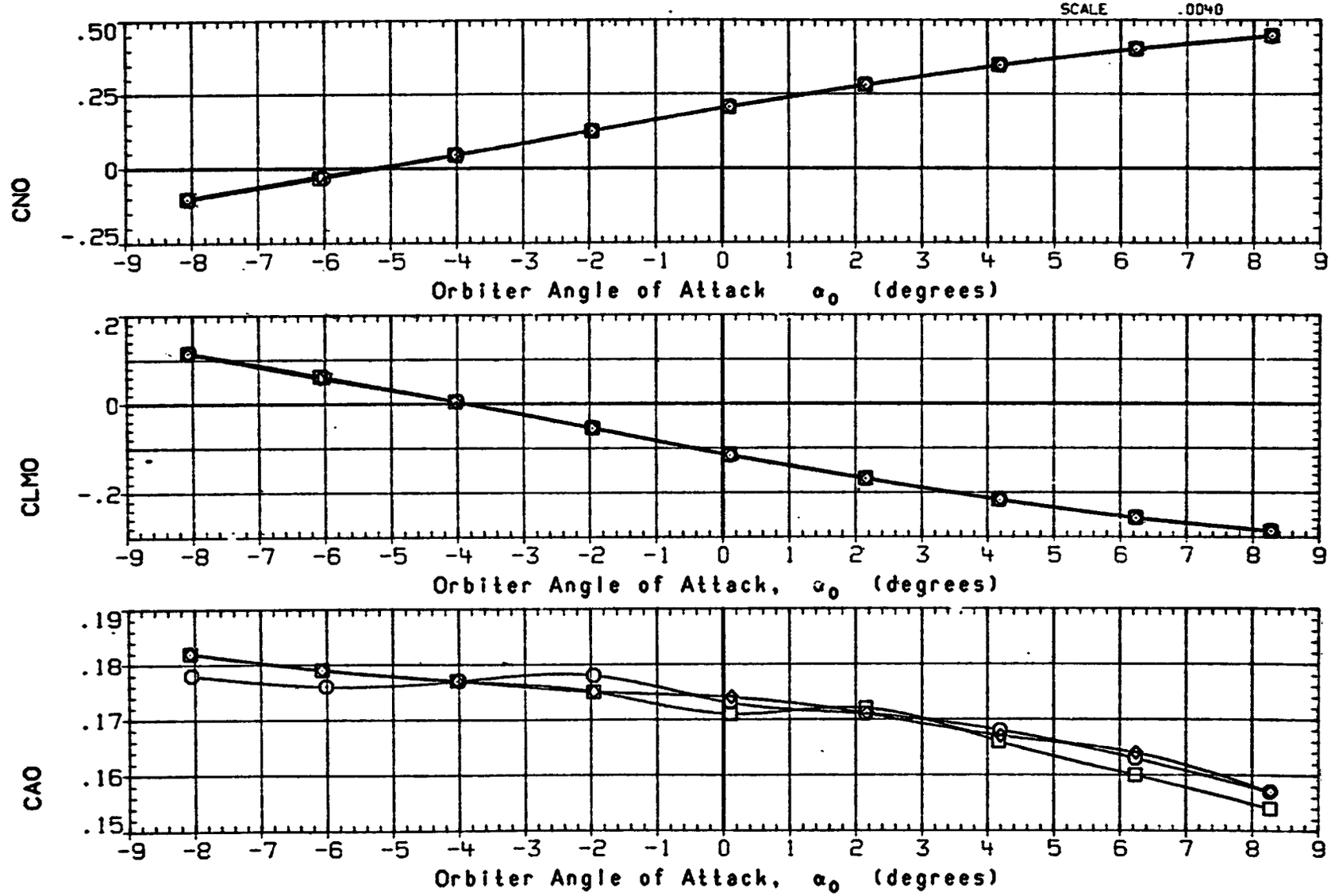

FIG. 15 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS THREE STING ARRANGEMENT

(G)MACH = 1.25

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DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X021	□	FA25. MSFC TWT 652. CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X023	◇	FA25. MSFC TWT 652. CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

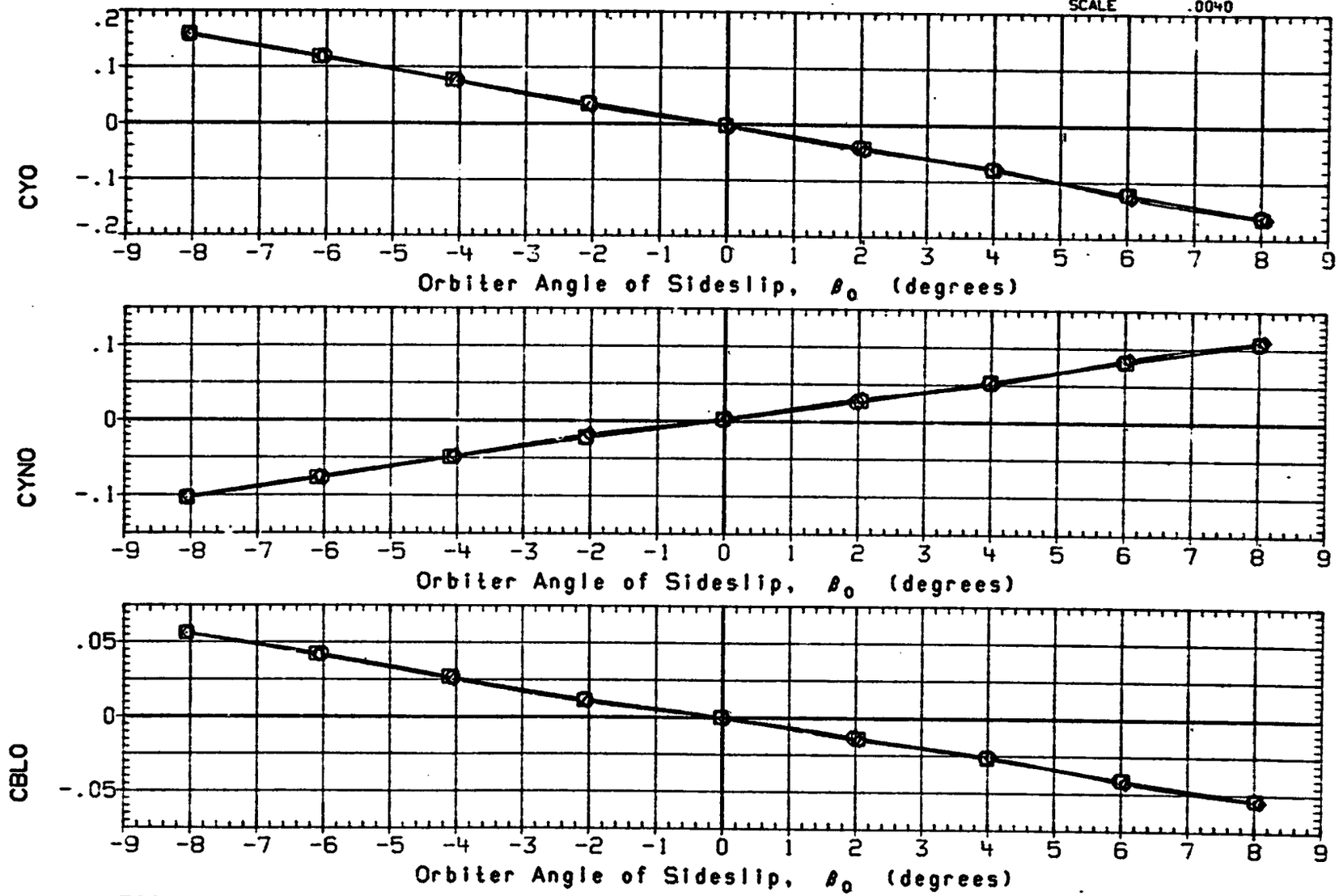

FIG. 16 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. THREE STING ARRANGEMENT

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X021	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X023	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

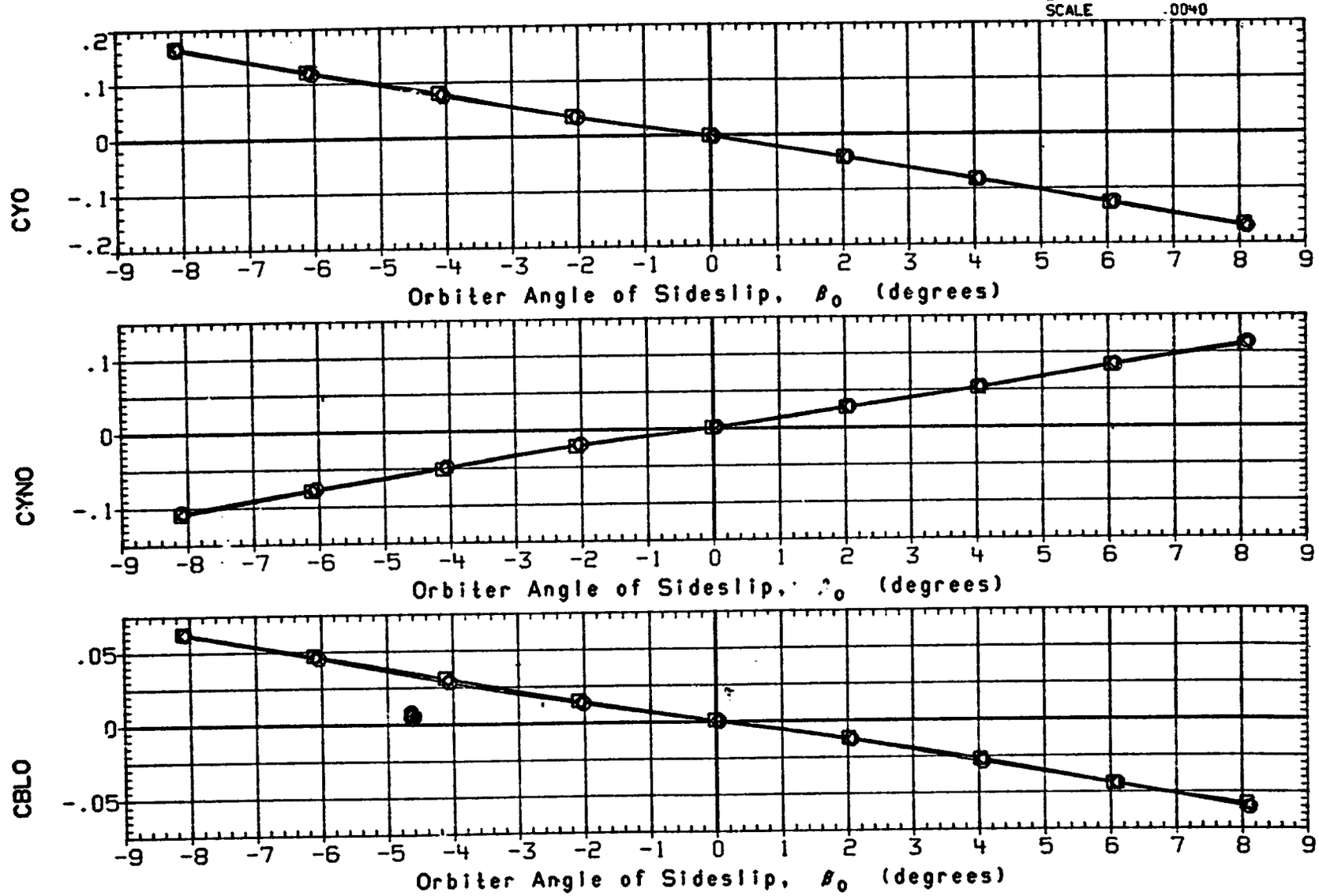

FIG. 16 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. THREE STING ARRANGEMENT

(B)MACH = .90

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X021	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X023	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

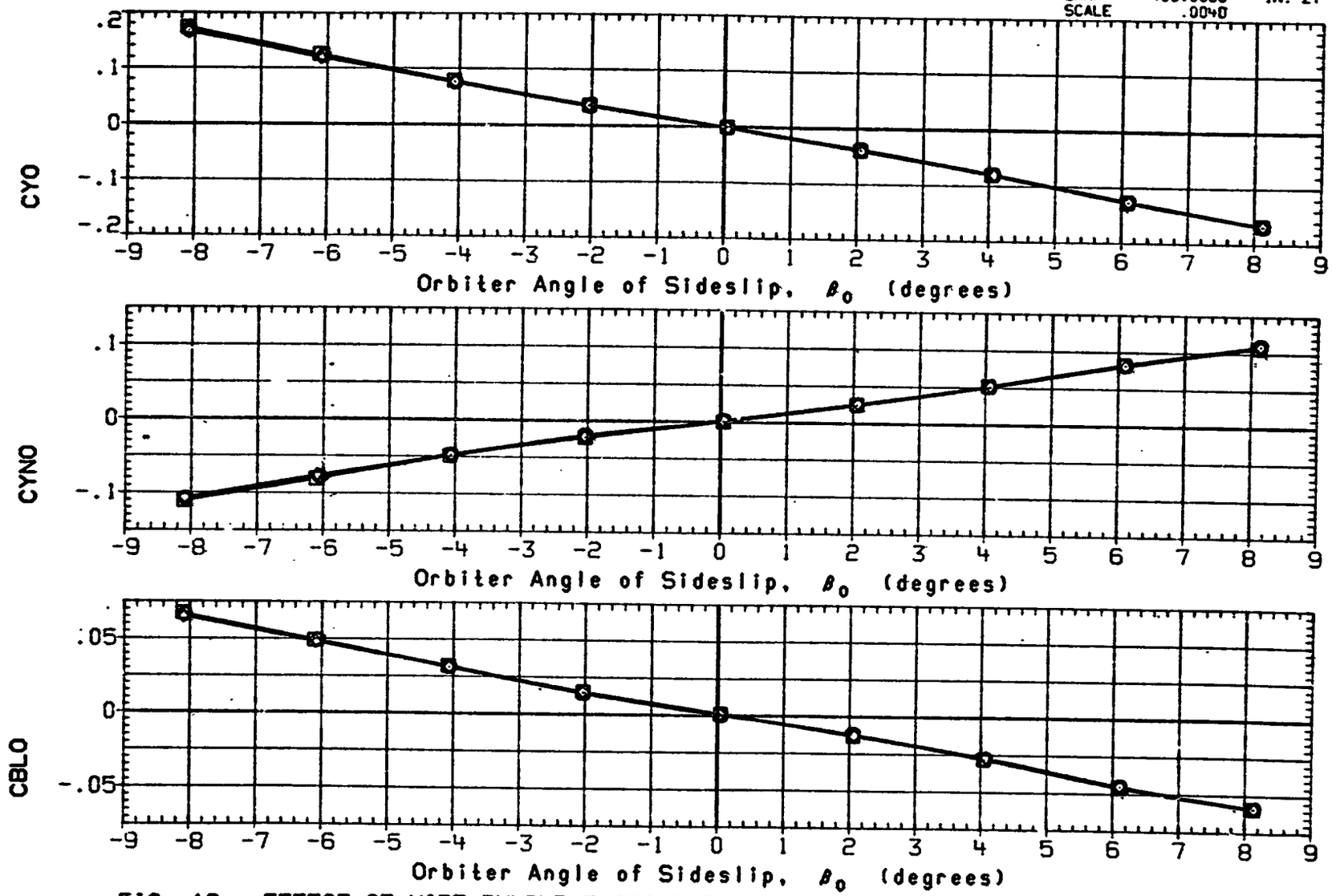

FIG. 16 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. THREE STING ARRANGEMENT

(C)MACH = .95

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X021	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X023	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

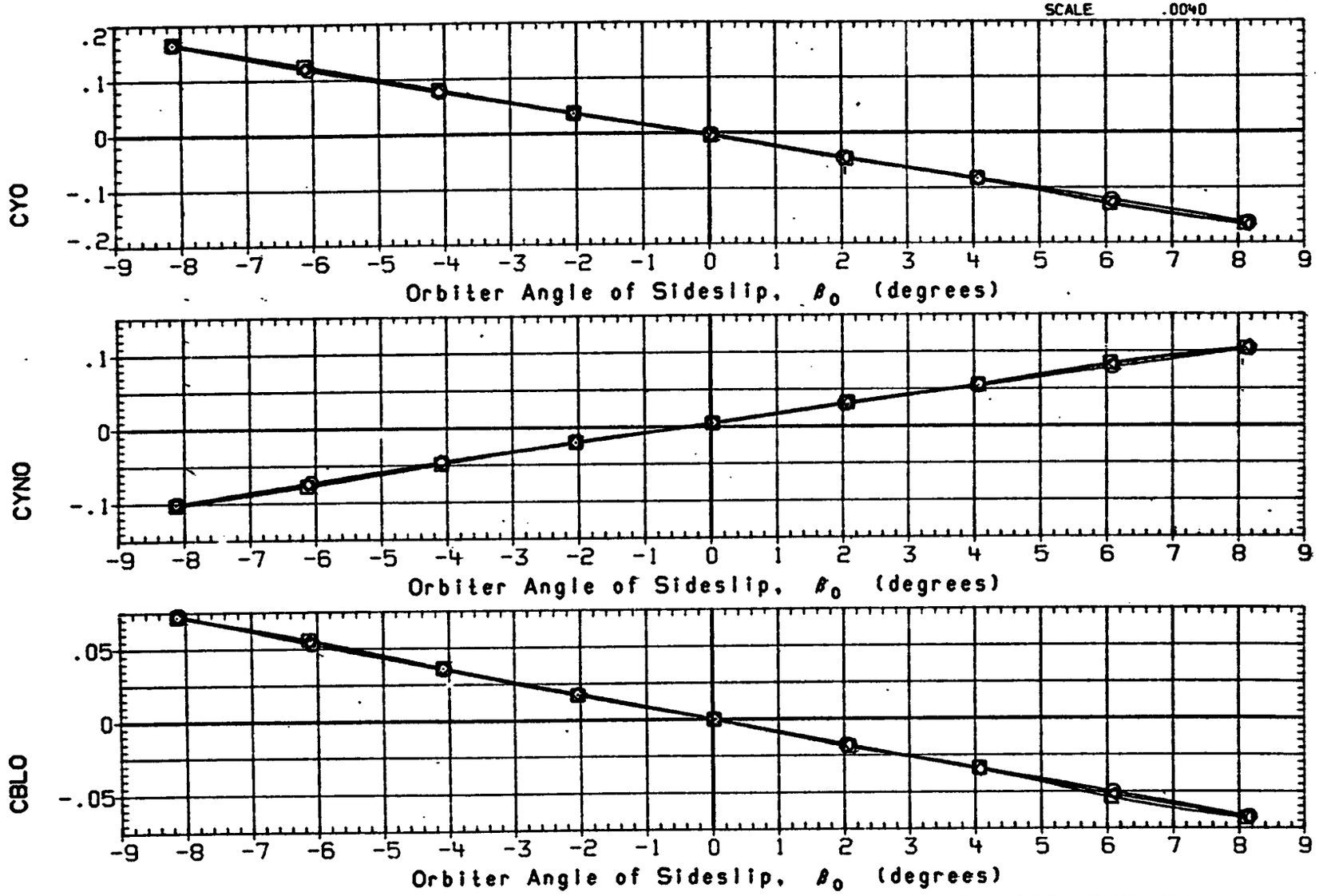

FIG. 16 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. THREE STING ARRANGEMENT

(D)MACH = 1.05

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DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X021	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X023	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

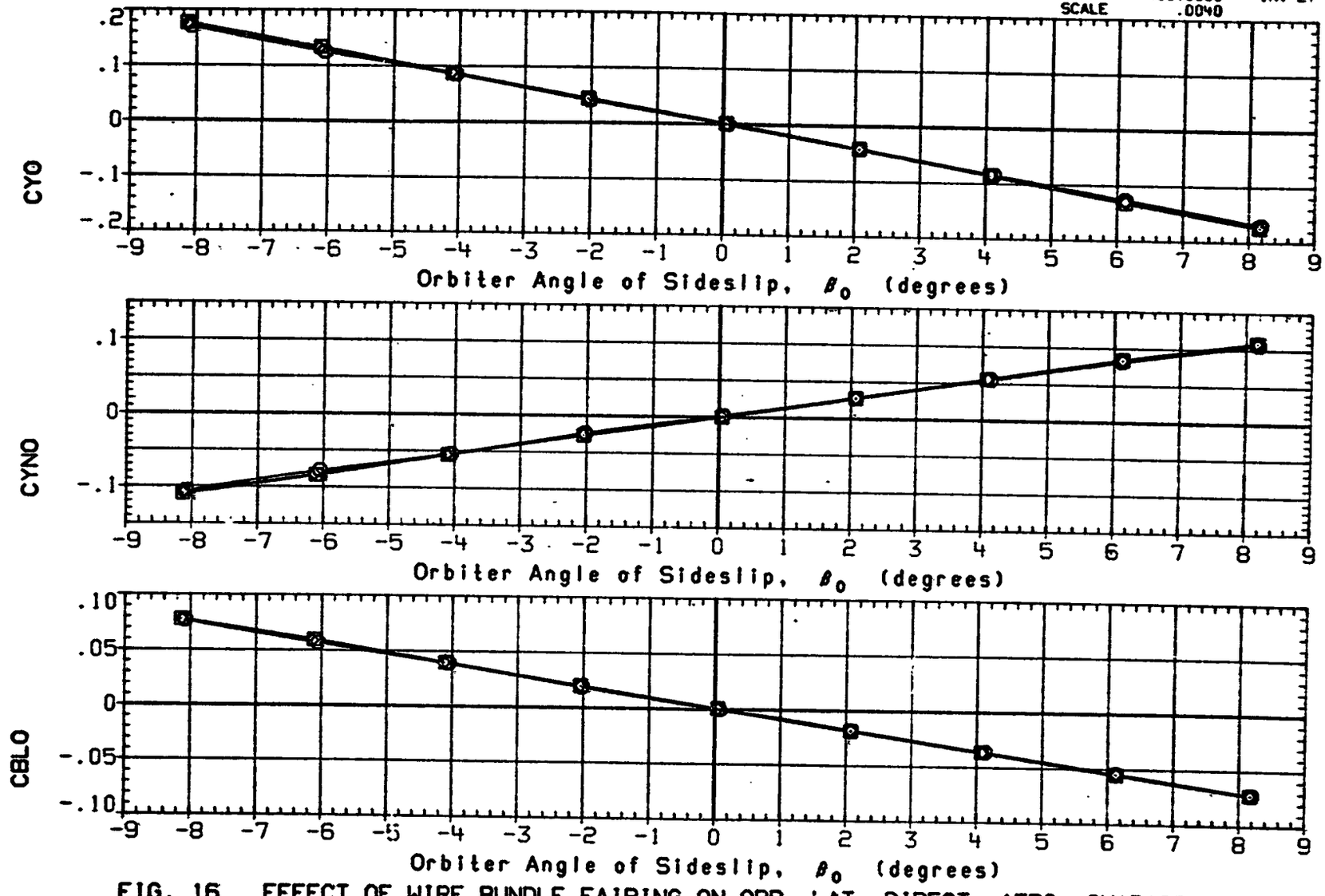

FIG. 16 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. THREE STING ARRANGEMENT

(E)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X021	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X023	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

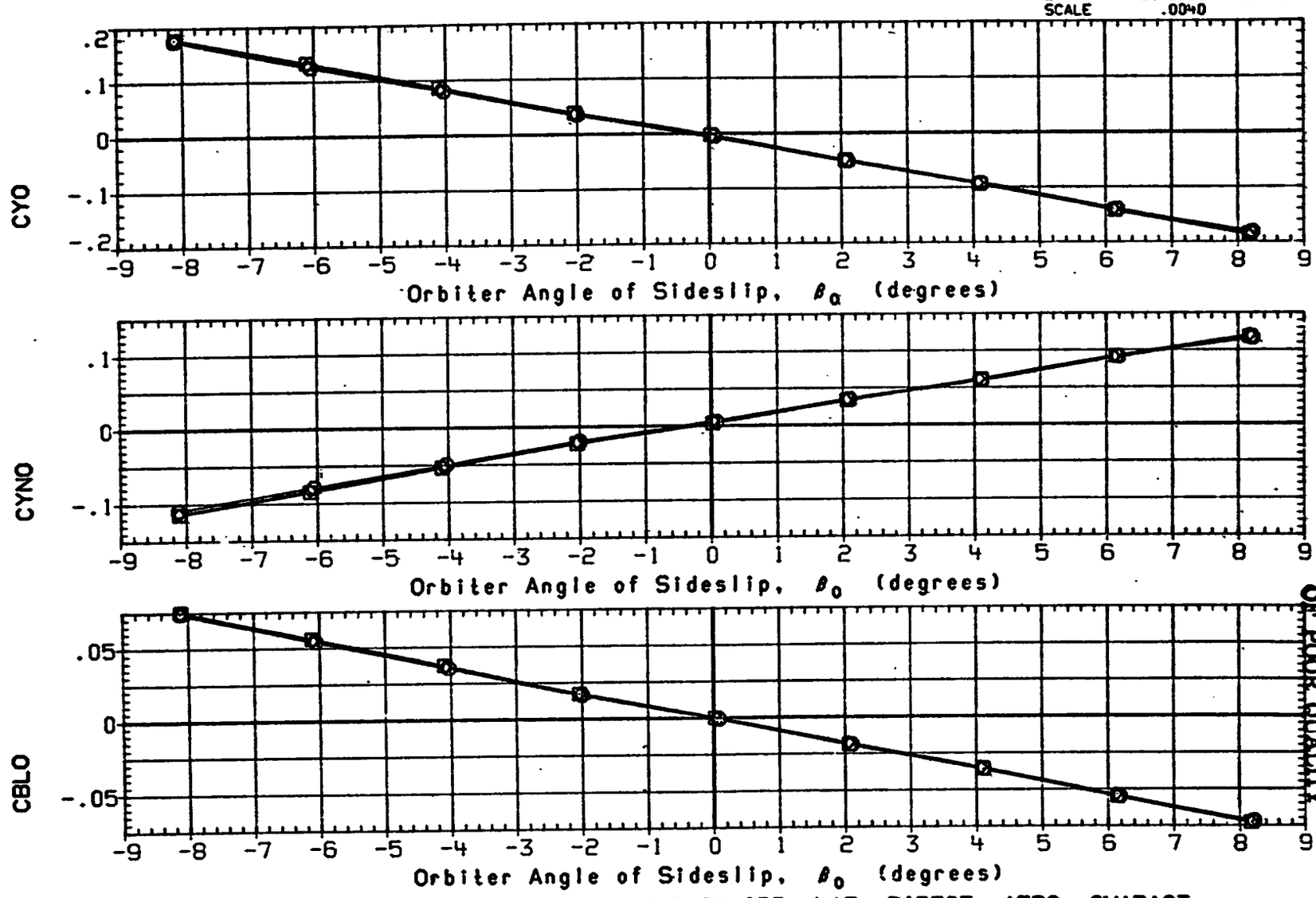

FIG. 16 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. THREE STING ARRANGEMENT

(F)MACH = 1.15

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DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X013	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)	.000	10.000	10.000	3.000
R1X021	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0)	.000	10.000	10.000	3.000
R1X023	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0)	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

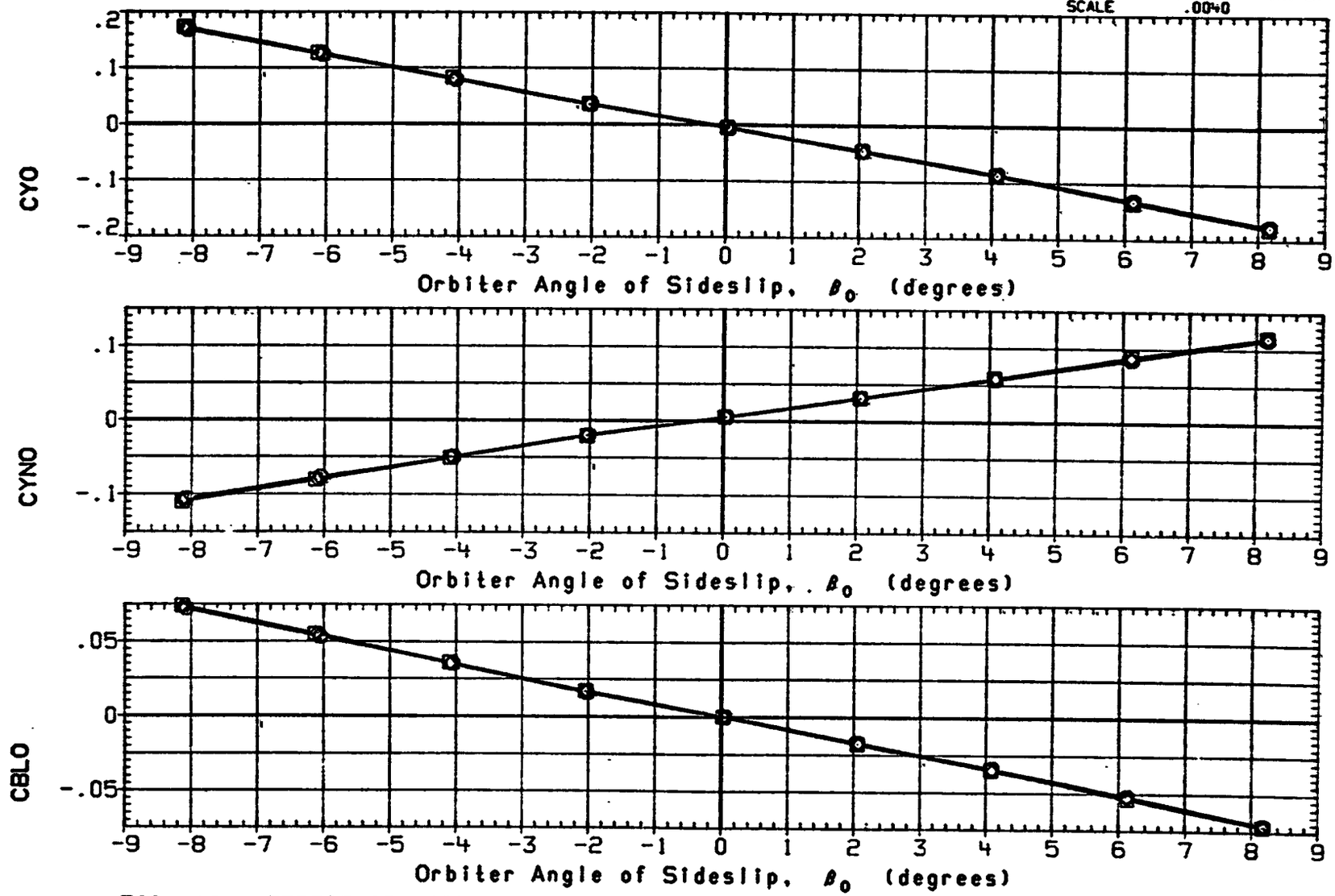

FIG. 16 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. THREE STING ARRANGEMENT

(G)MACH = 1.25

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

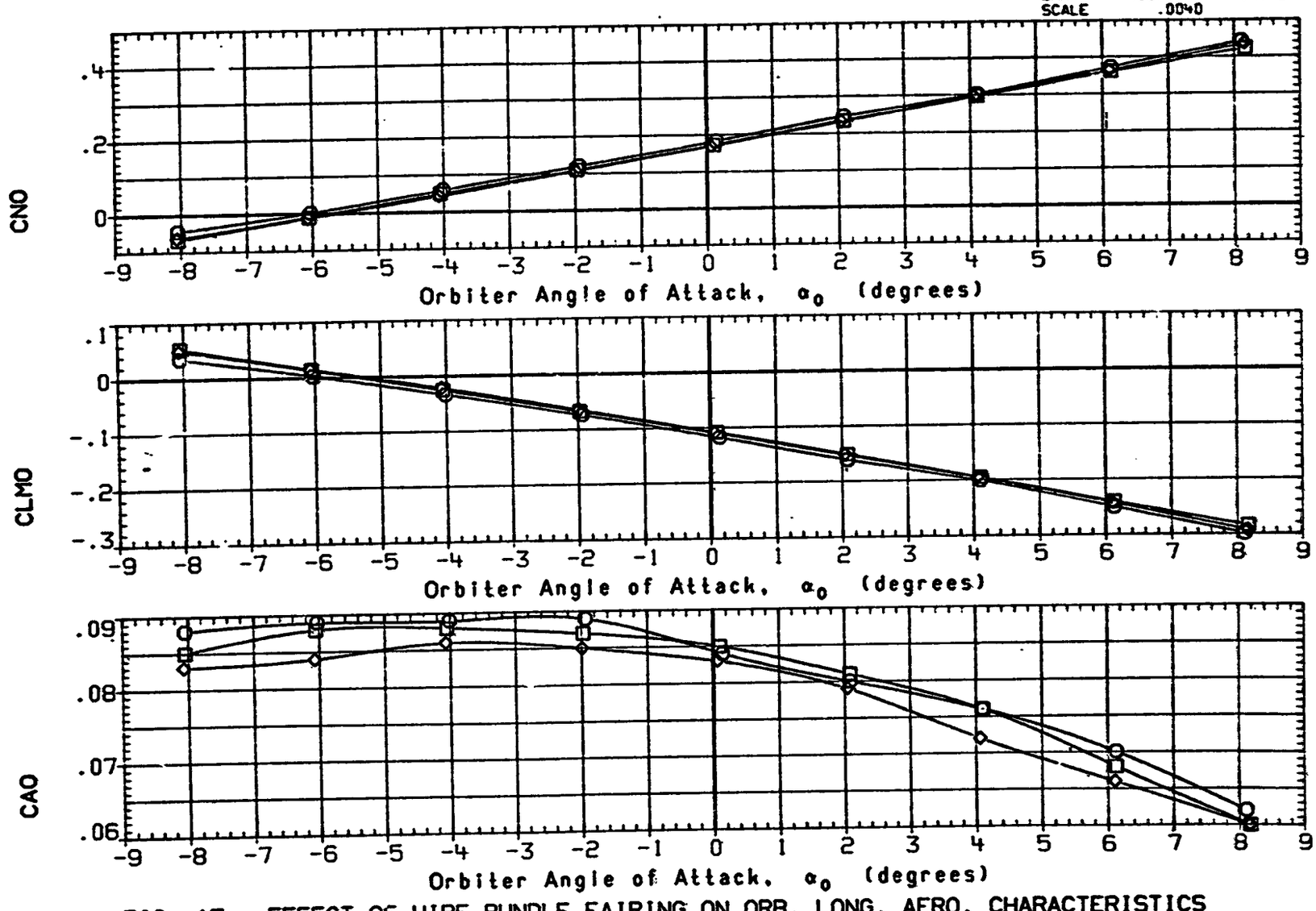

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS TWO STING ARRANGEMENT

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

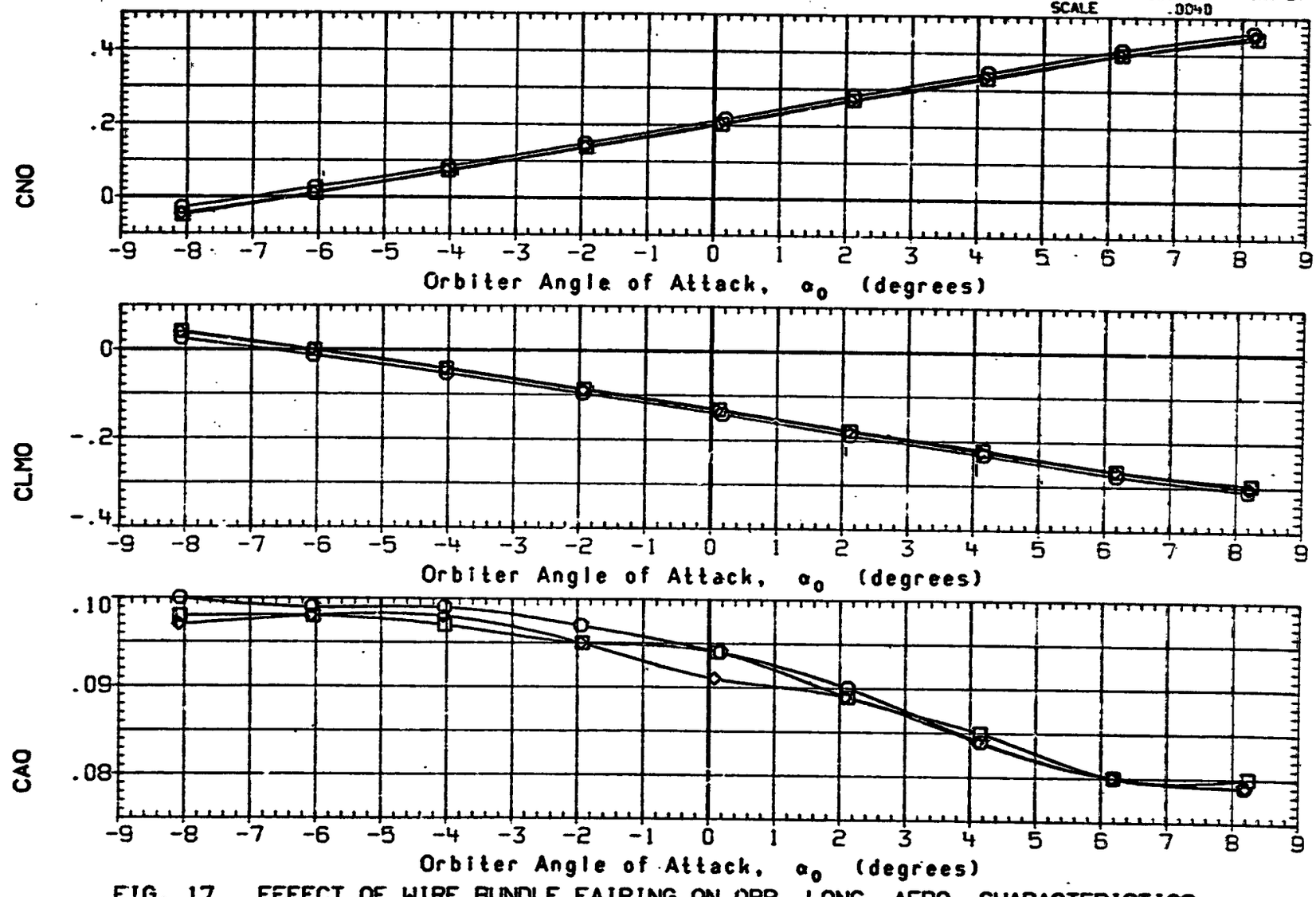

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS TWO STING ARRANGEMENT

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25. MSFC TWT 652. CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25. MSFC TWT 652. CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X034	◇	FA25. MSFC TWT 652. CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

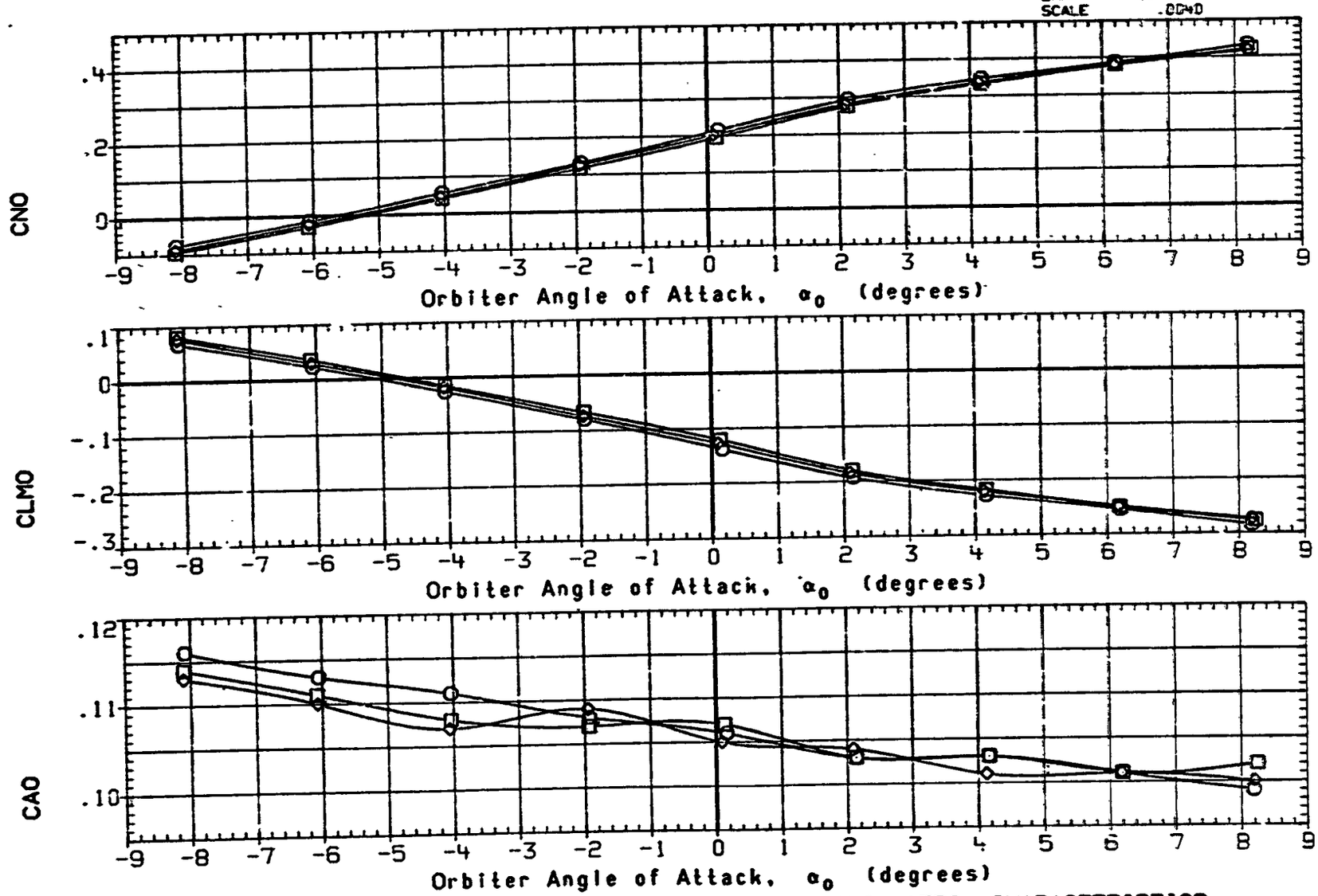

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS TWO STING ARRANGEMENT

(C)MACH = .90

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DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	0040	

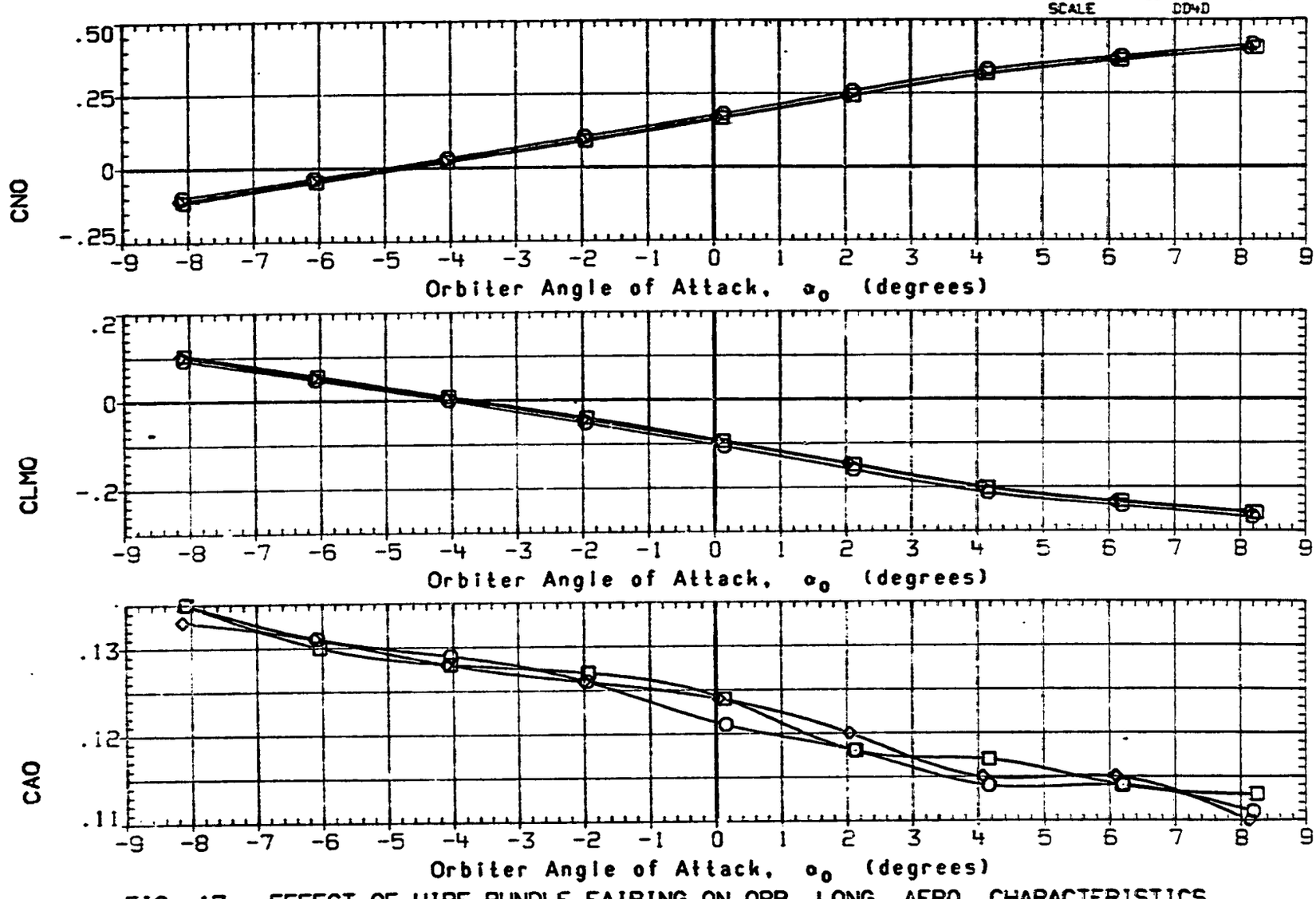

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS
TWO STING ARRANGEMENT

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

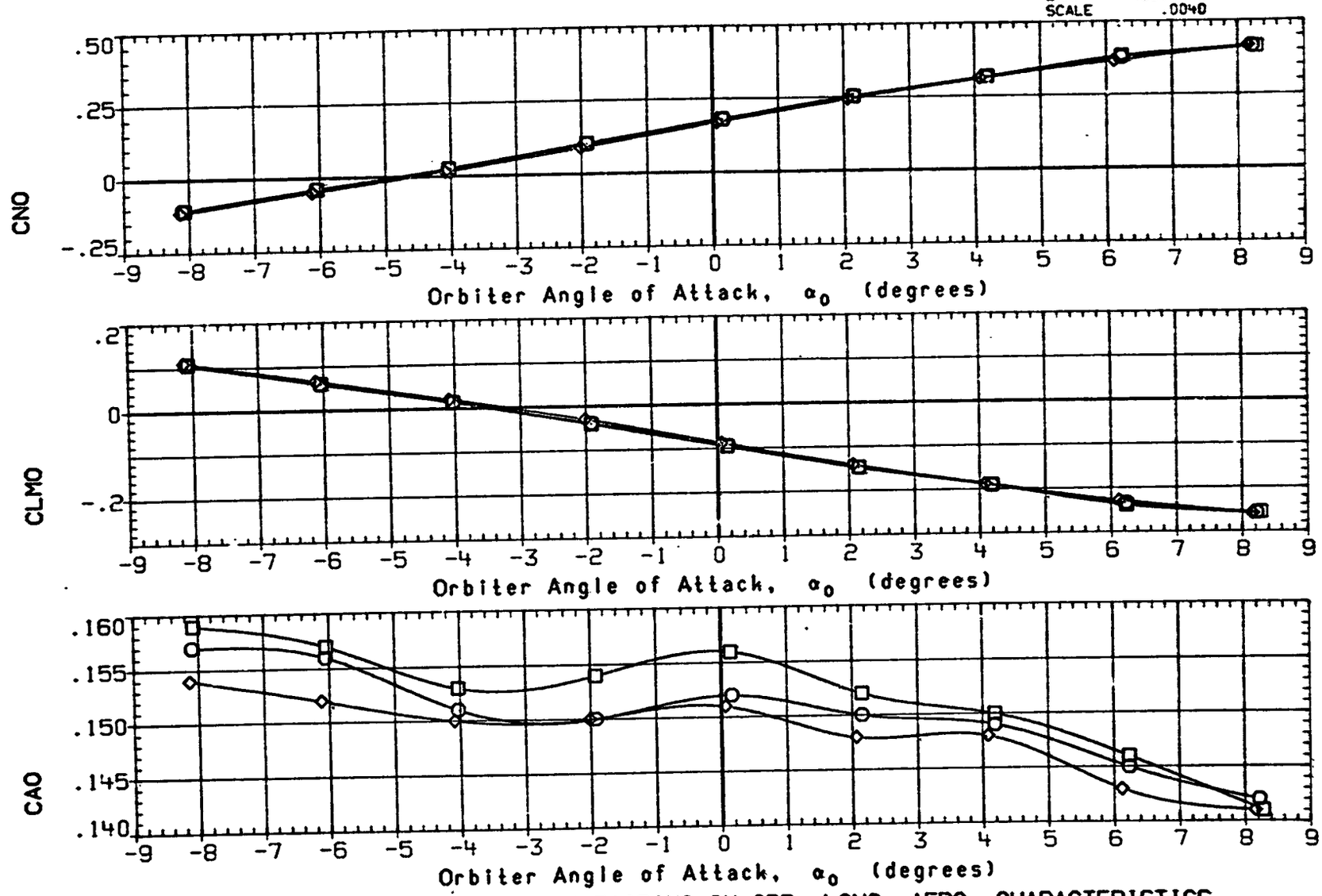

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS TWO STING ARRANGEMENT

(E)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.090	2.000
R1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

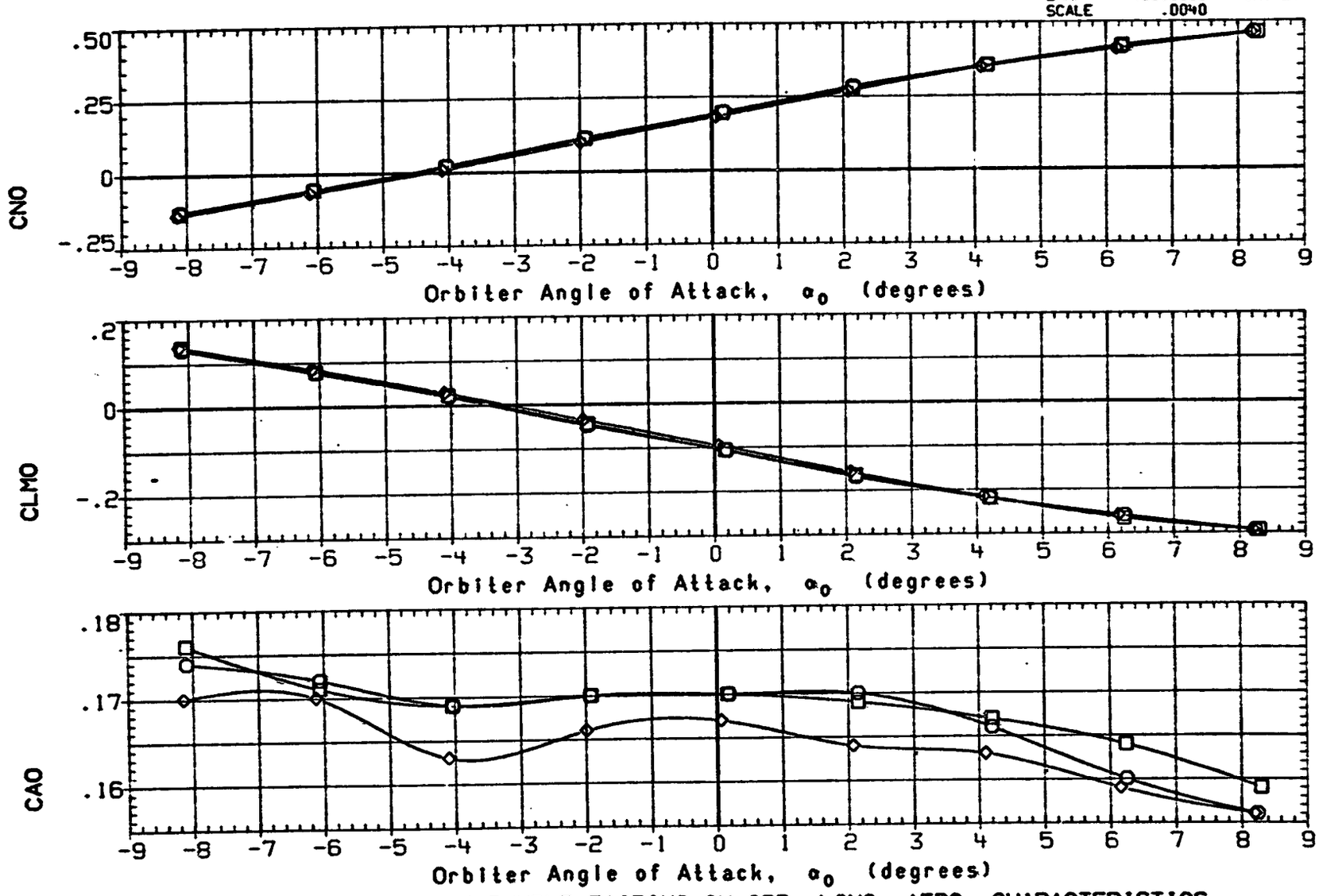

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS TWO STING ARRANGEMENT

(F)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

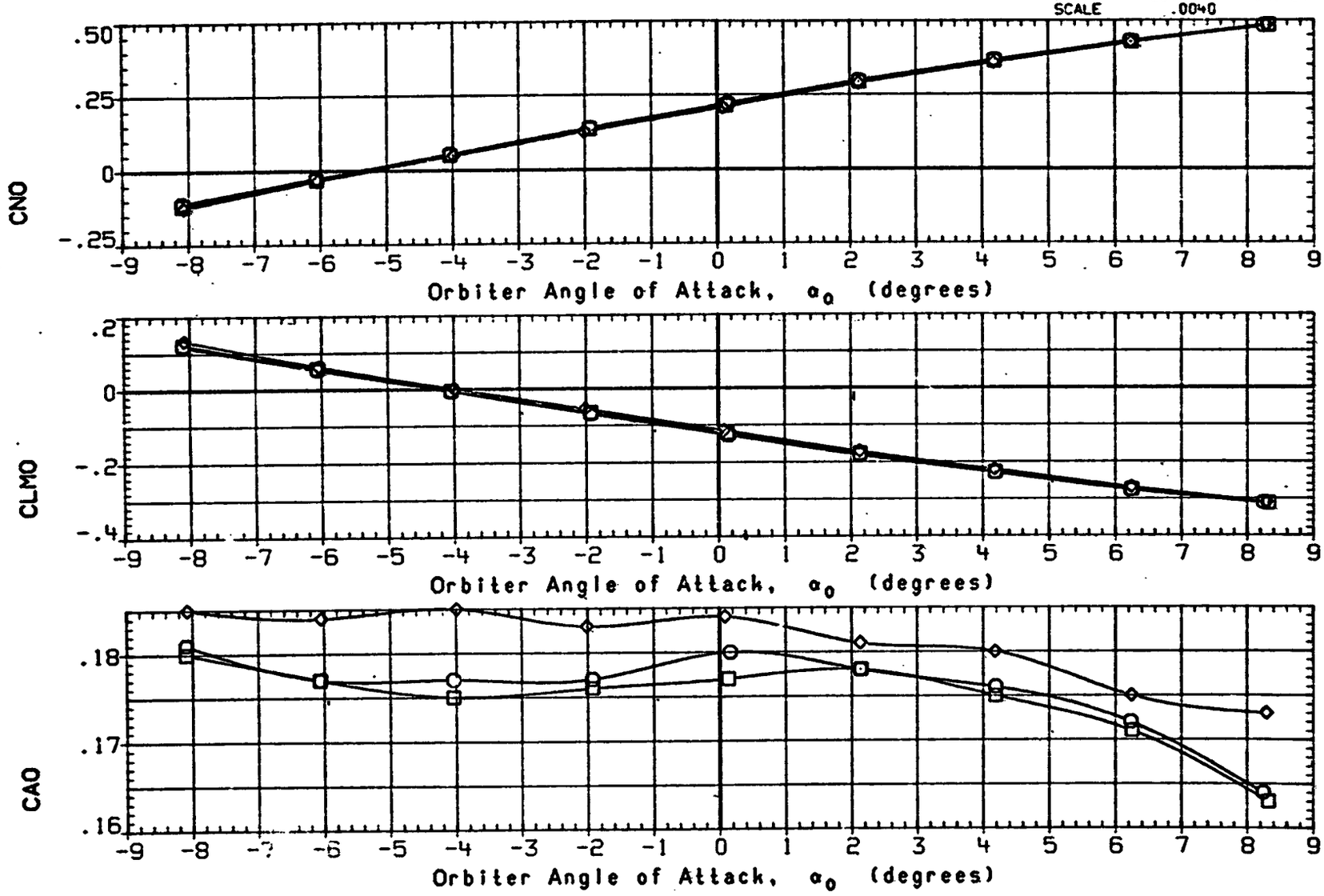

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS TWO STING ARRANGEMENT

(G)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
R1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

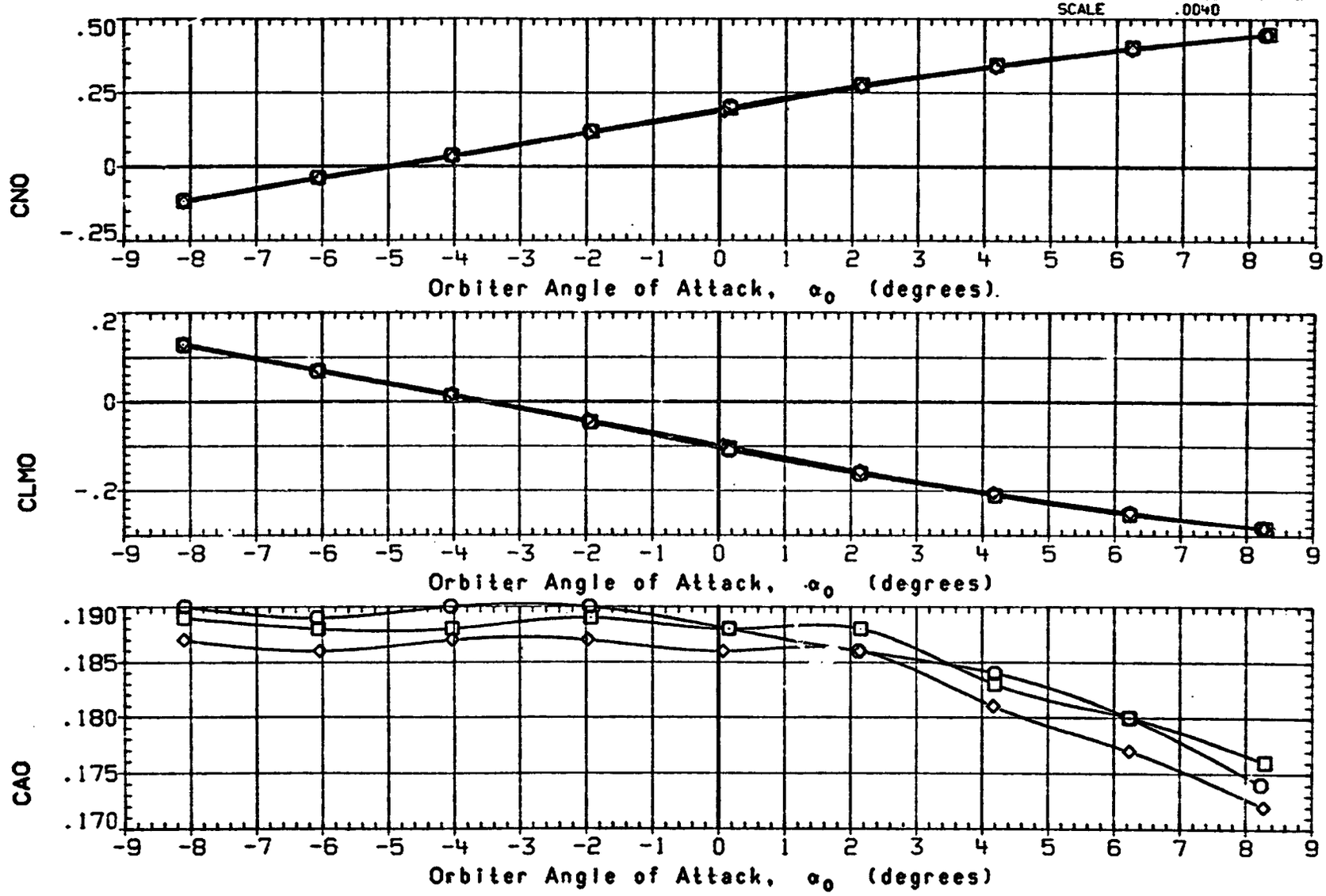

FIG. 17 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LONG. AERO. CHARACTERISTICS TWO STING ARRANGEMENT

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

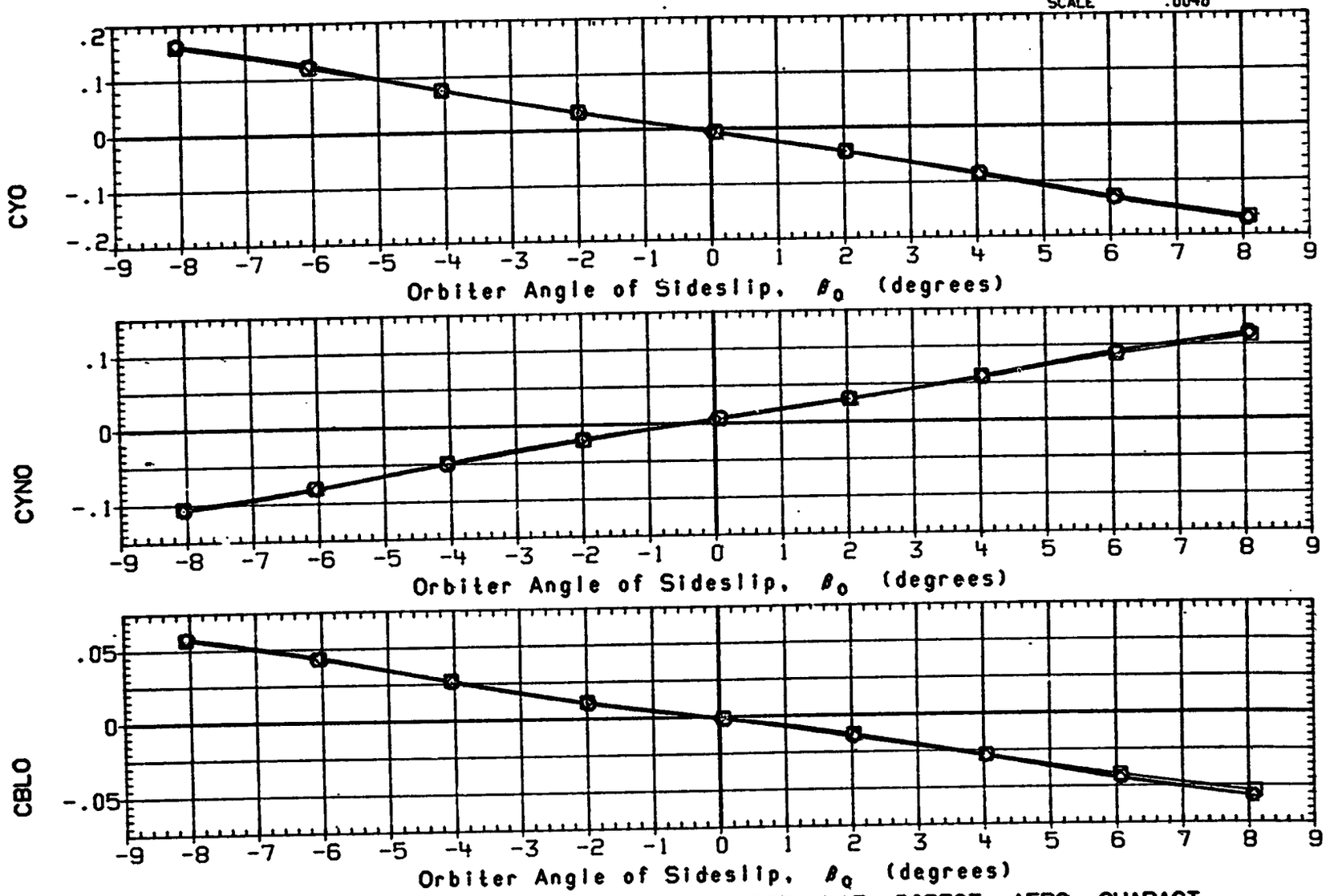

FIG. 18 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. TWO STING ARRANGEMENT

(A)MACH = .60

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DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

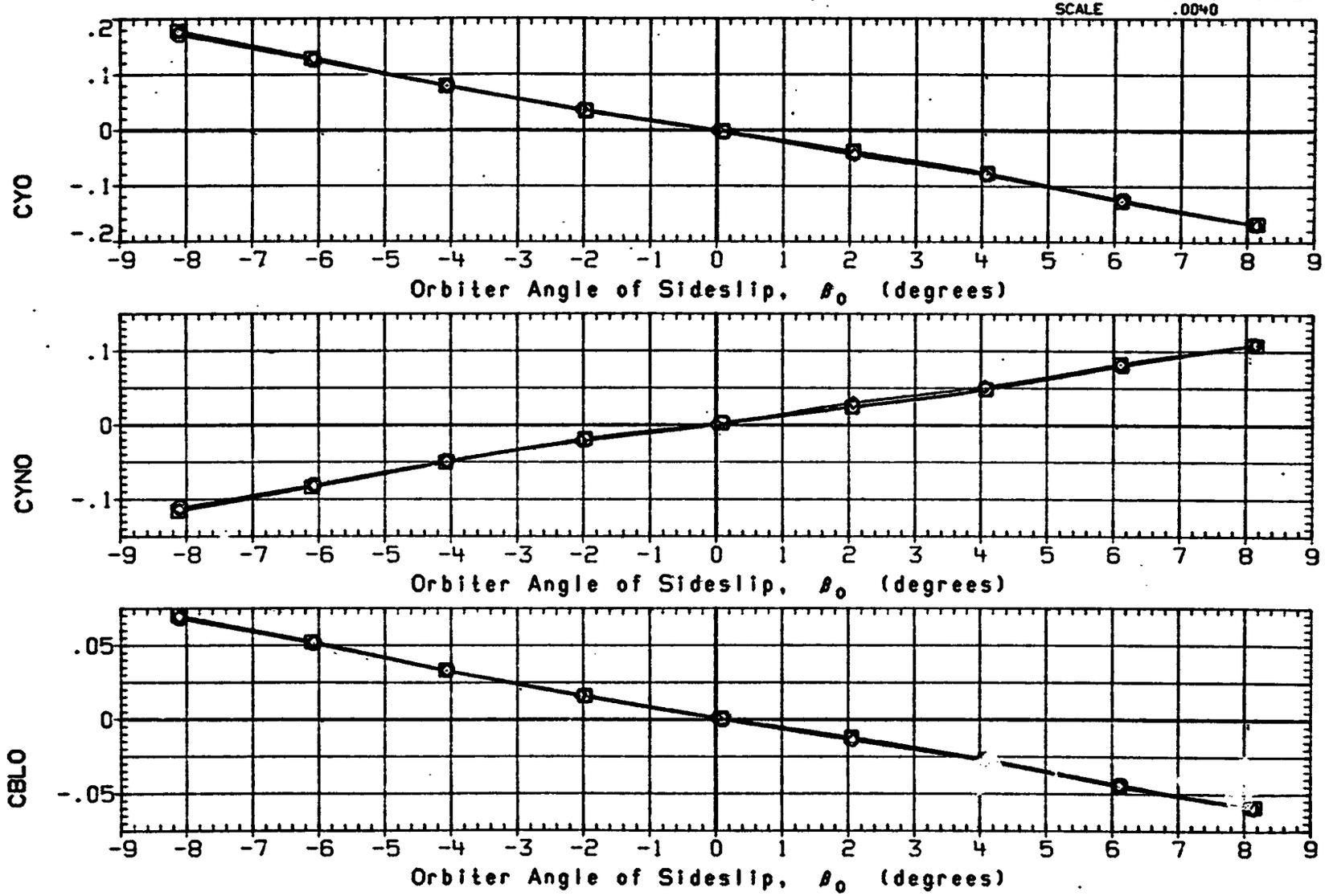

FIG. 18 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. TWO STING ARRANGEMENT

(B)MACH = .95

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (O)	.000	10.000	10.000	2.000
R1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(O)	.000	10.000	10.000	2.000
R1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(O)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

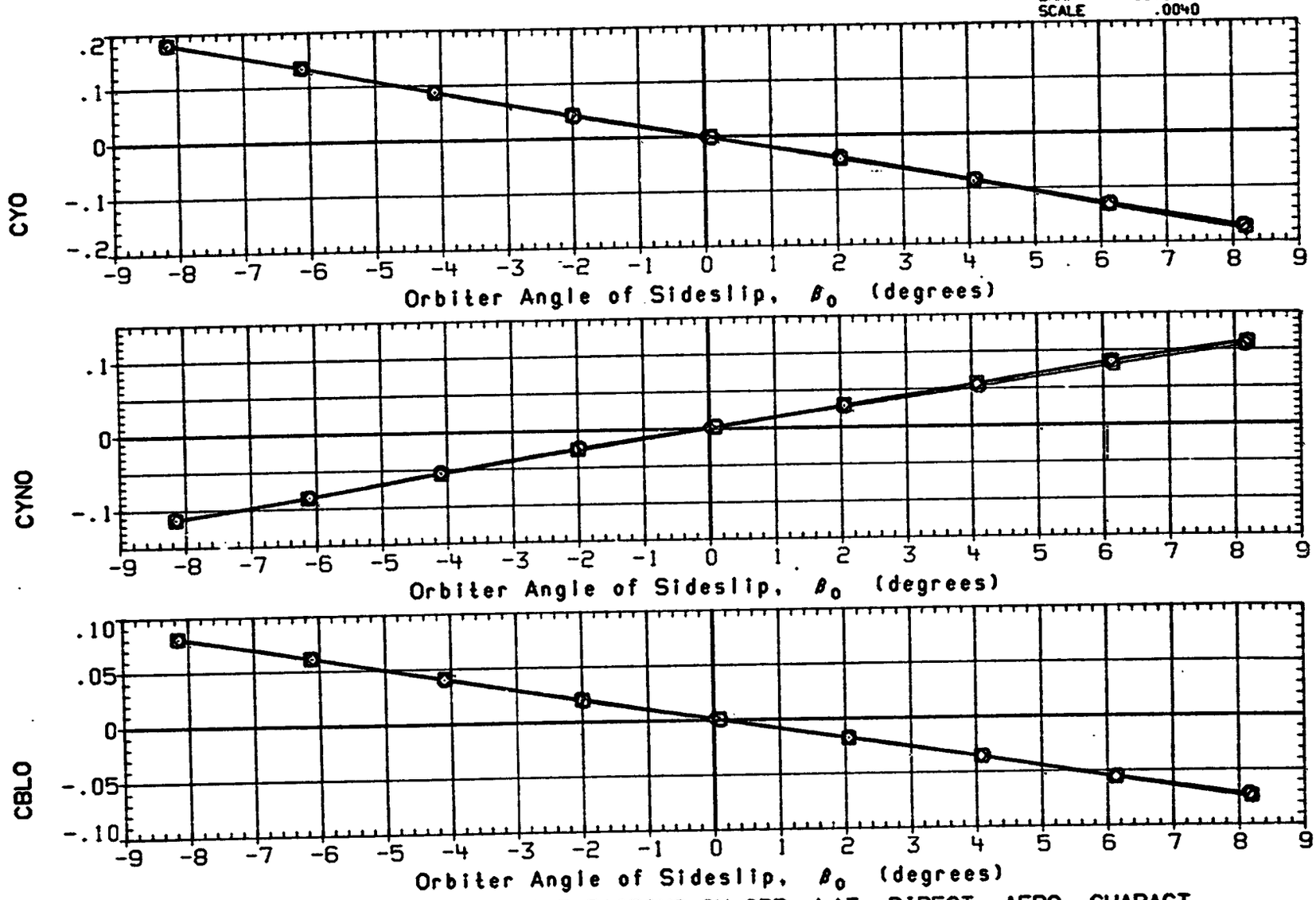

FIG. 18 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. TWO STING ARRANGEMENT

(C)MACH = 1.10

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DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (O)	.000	10.000	10.000	2.000
R1X033	□	DATA NOT AVAILABLE	.000	10.000	10.000	2.000
R1X035	◇	DATA NOT AVAILABLE	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

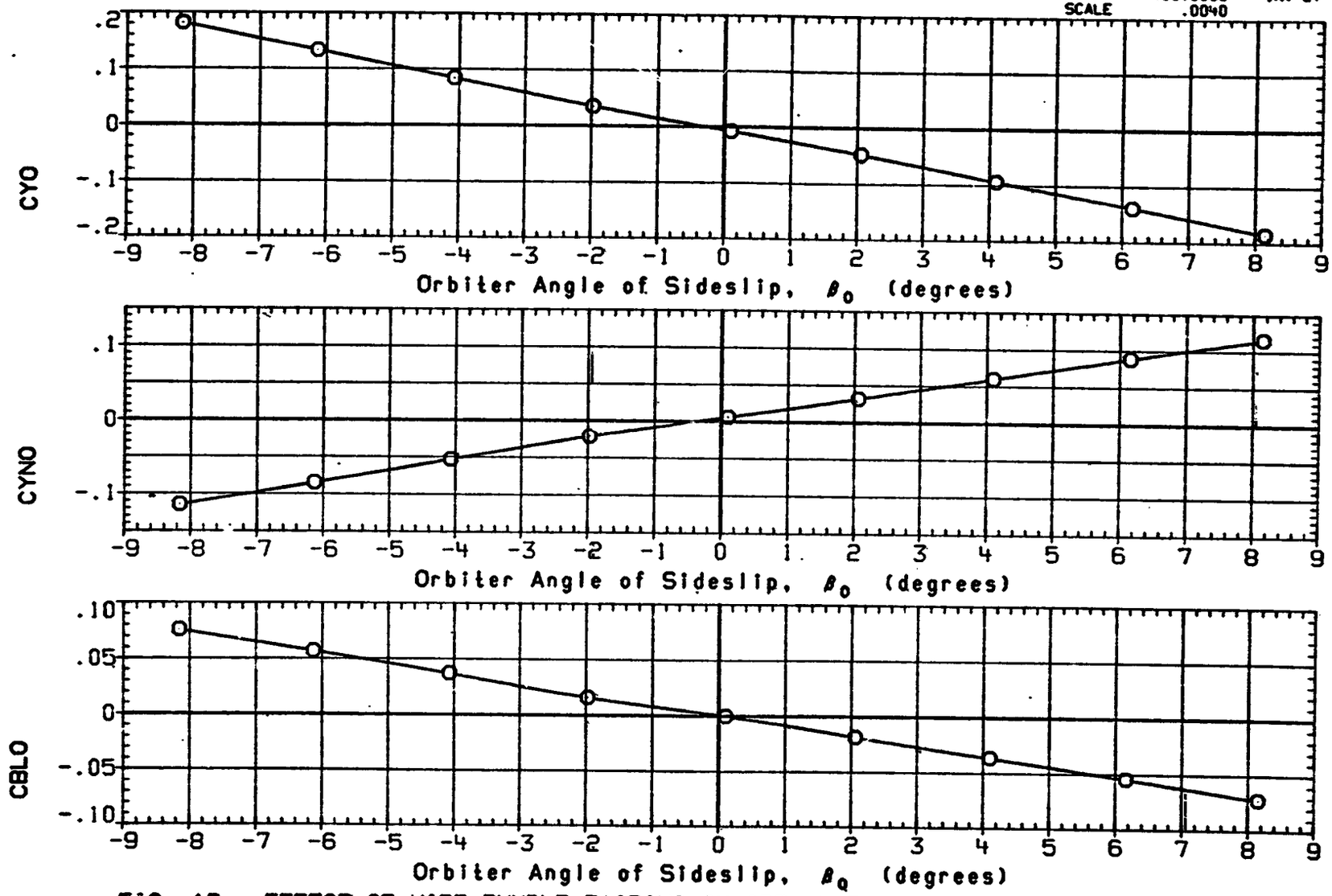

FIG. 18 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT. TWO STING ARRANGEMENT

(D)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
R1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0)	.000	10.000	10.000	2.000
R1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0)	.000	10.000	10.000	2.000
R1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

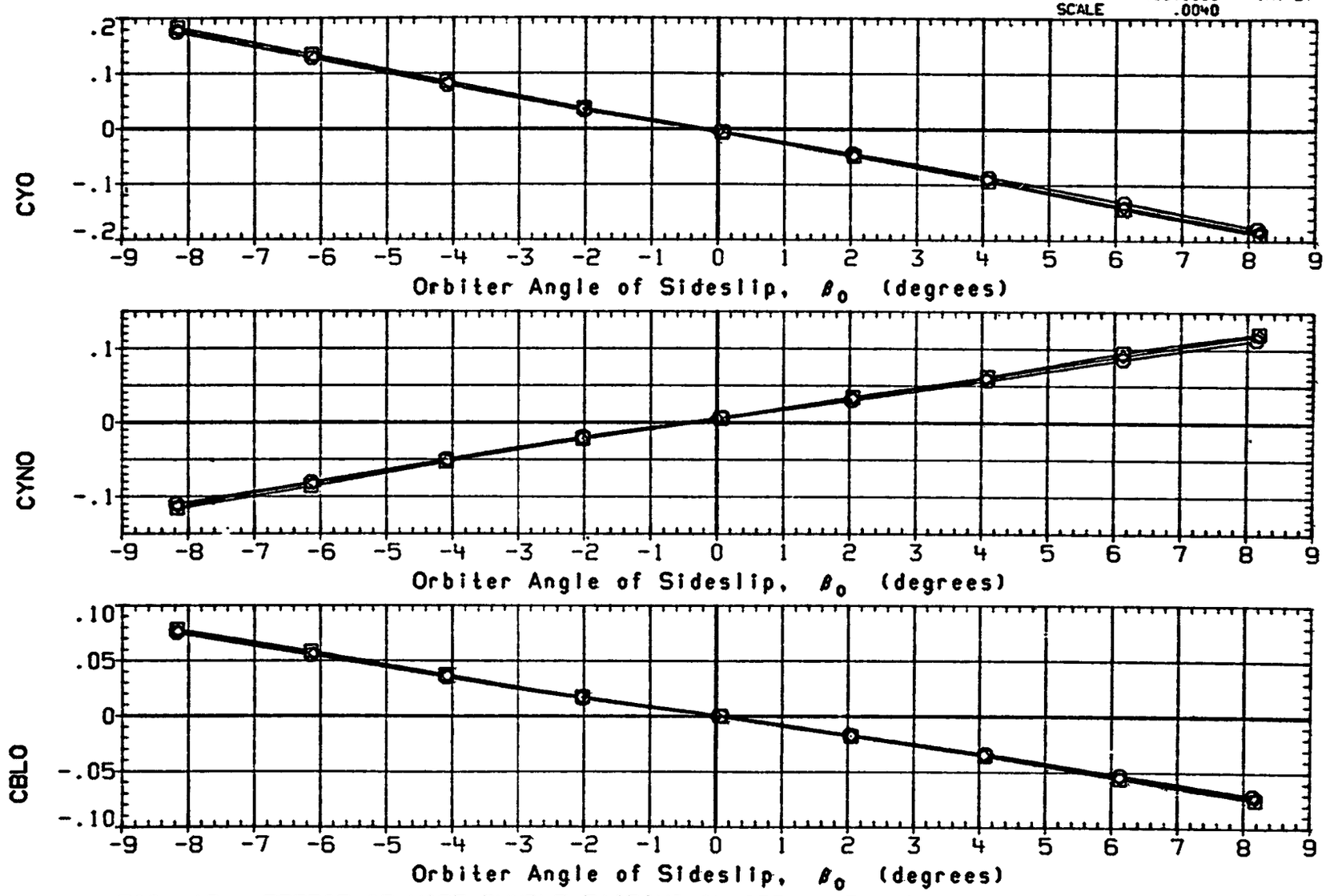

FIG. 18 EFFECT OF WIRE BUNDLE FAIRING ON ORB. LAT.-DIRECT. AERO. CHARACT.
TWO STING ARRANGEMENT

(E)MACH = 1.25

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DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

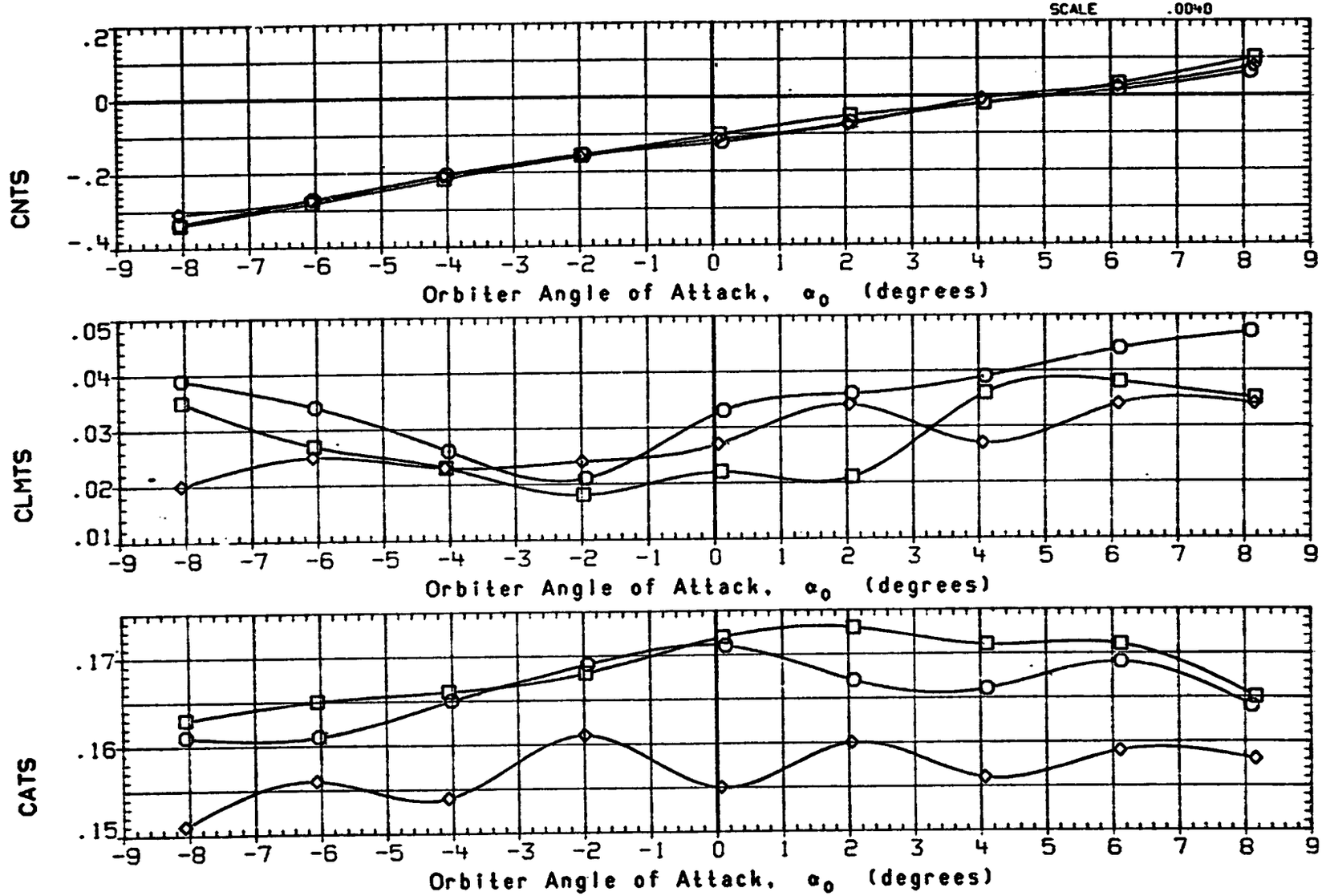

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P07252 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

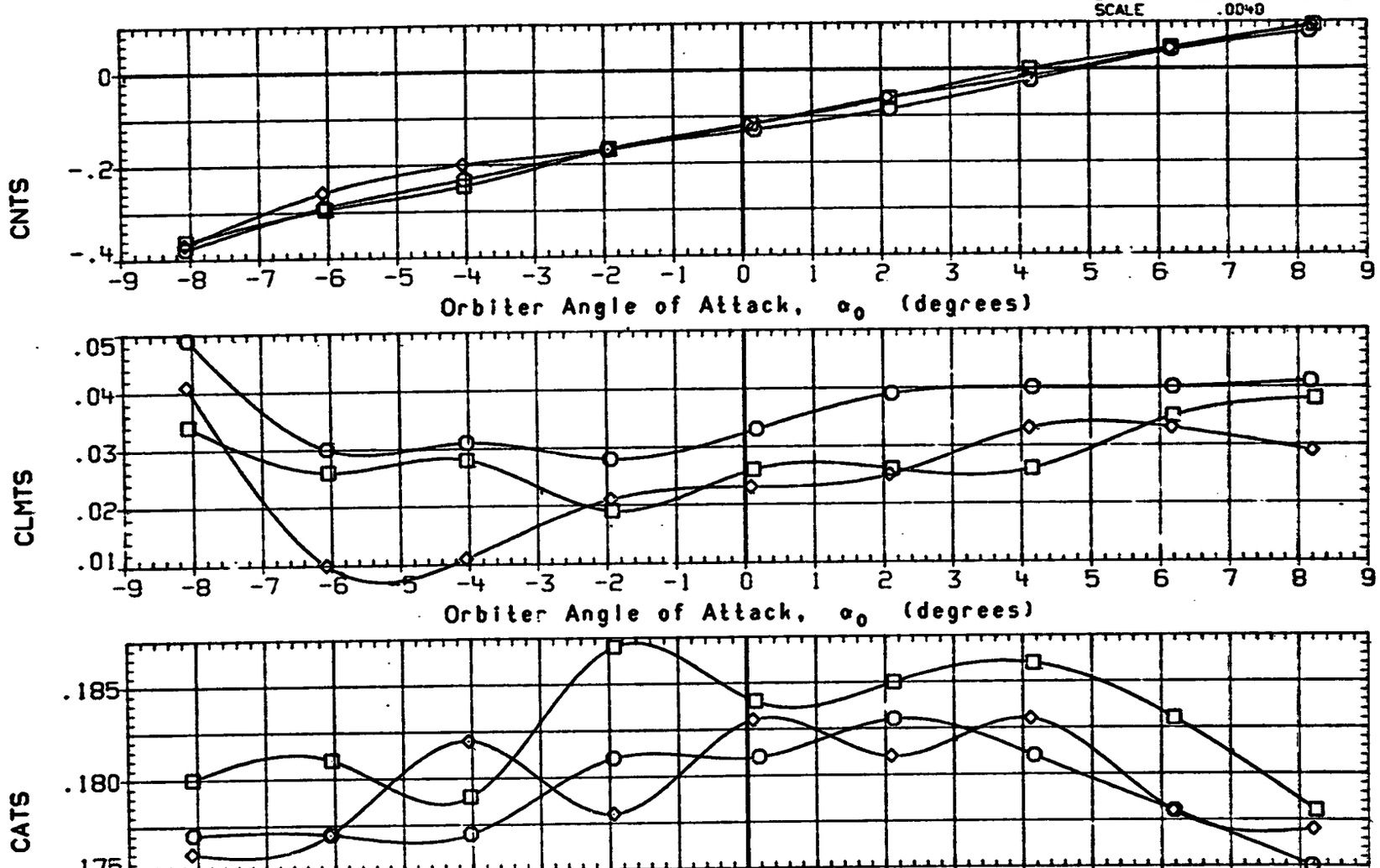

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(B)MACH = .80

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DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

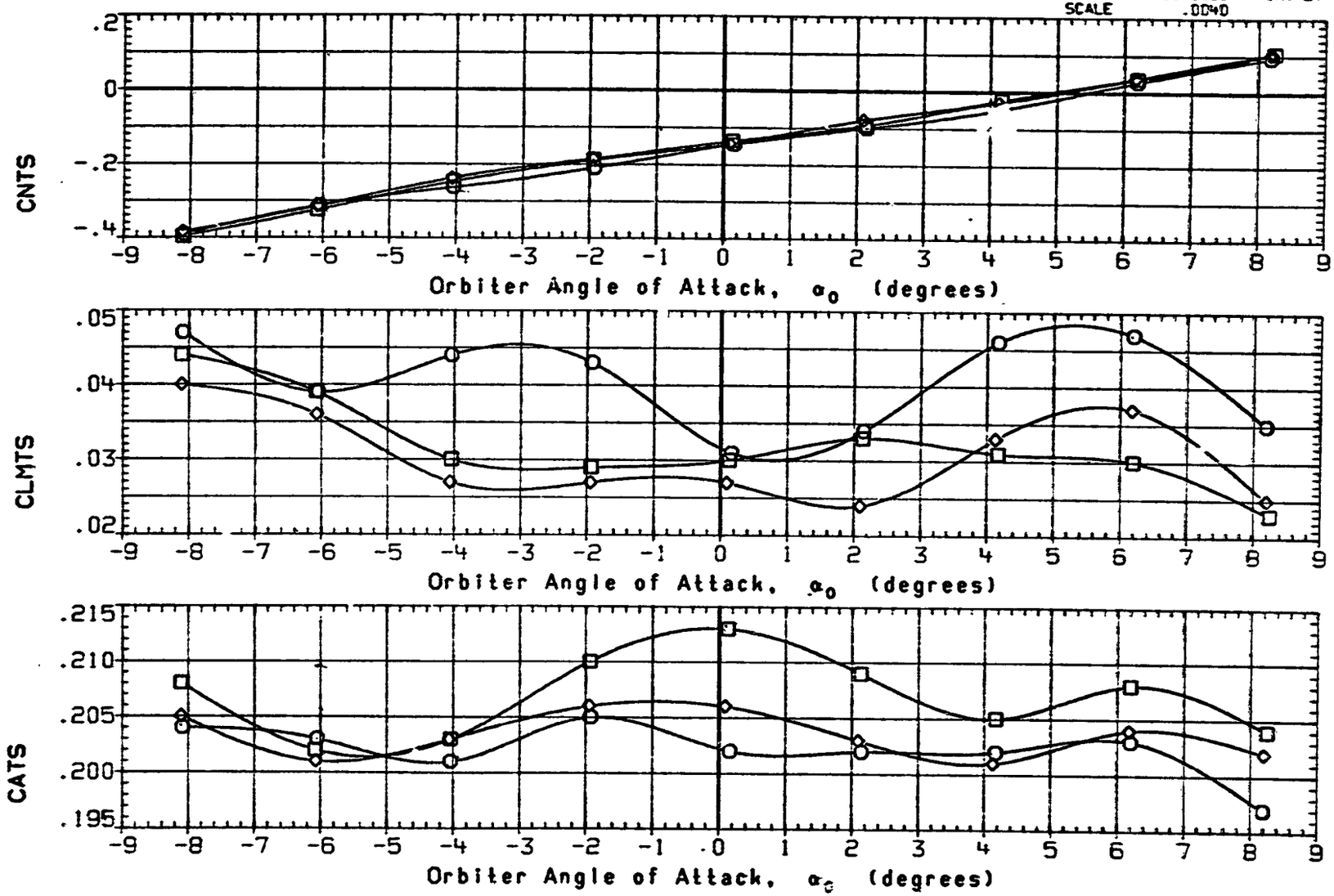

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

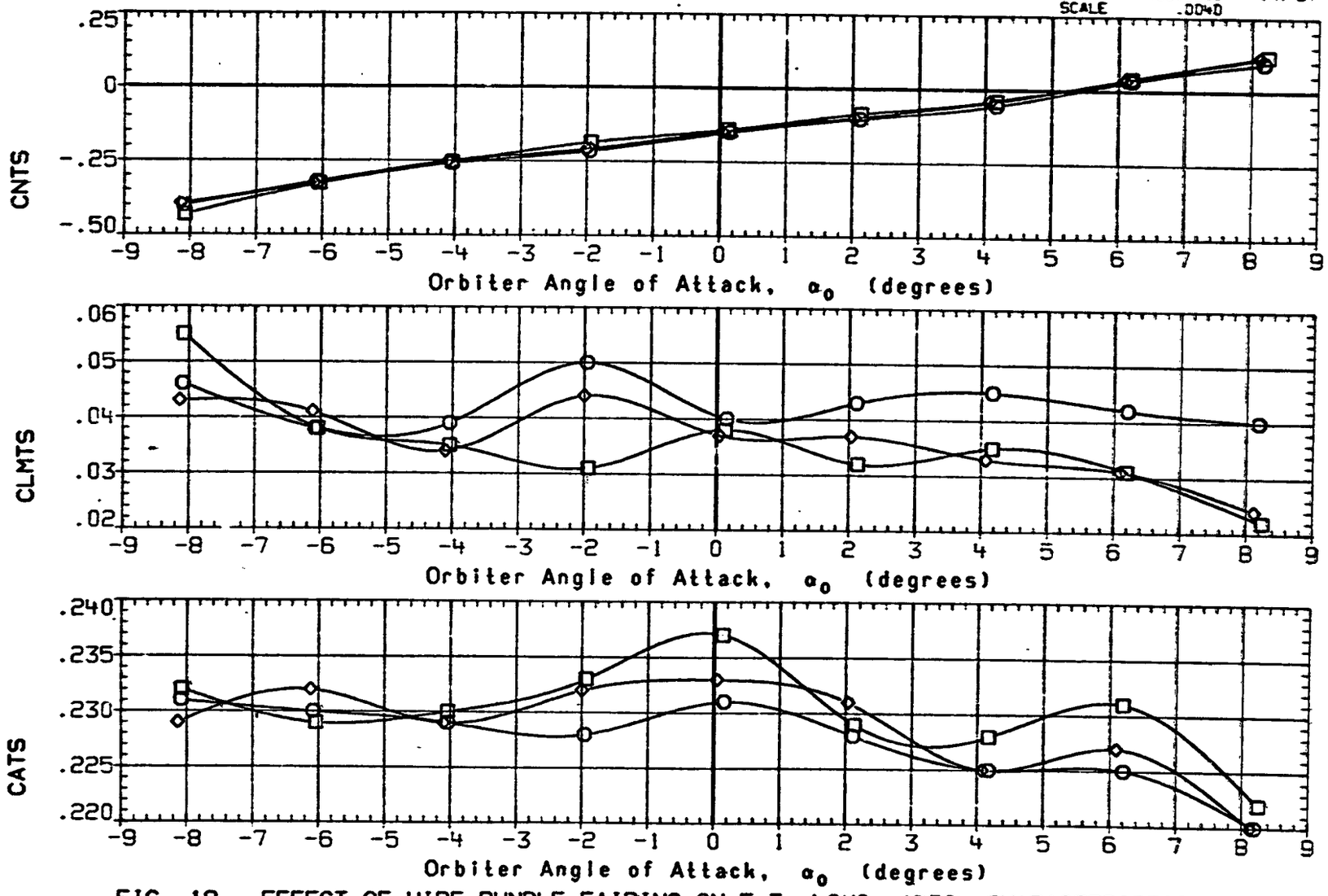

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

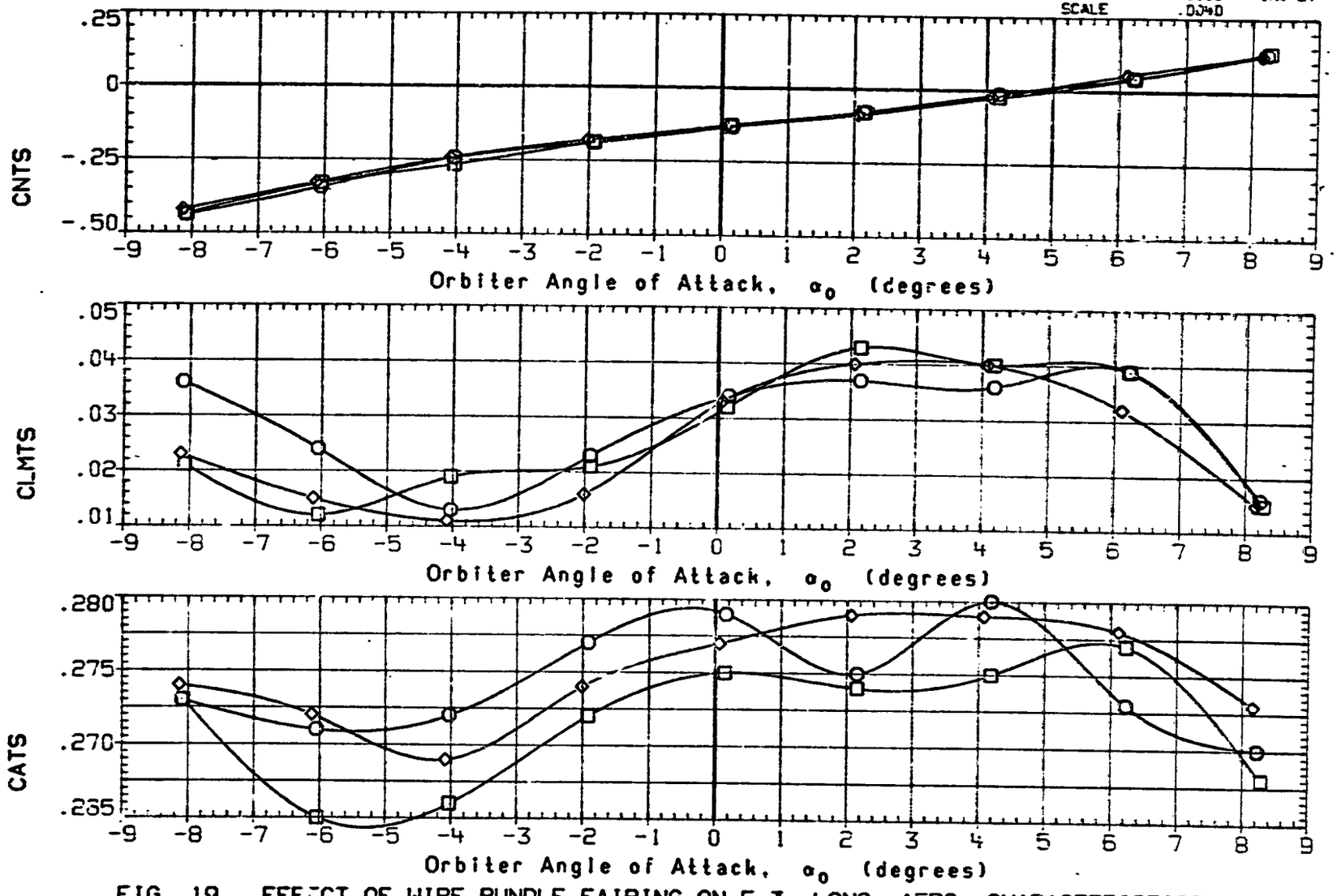

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(E)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

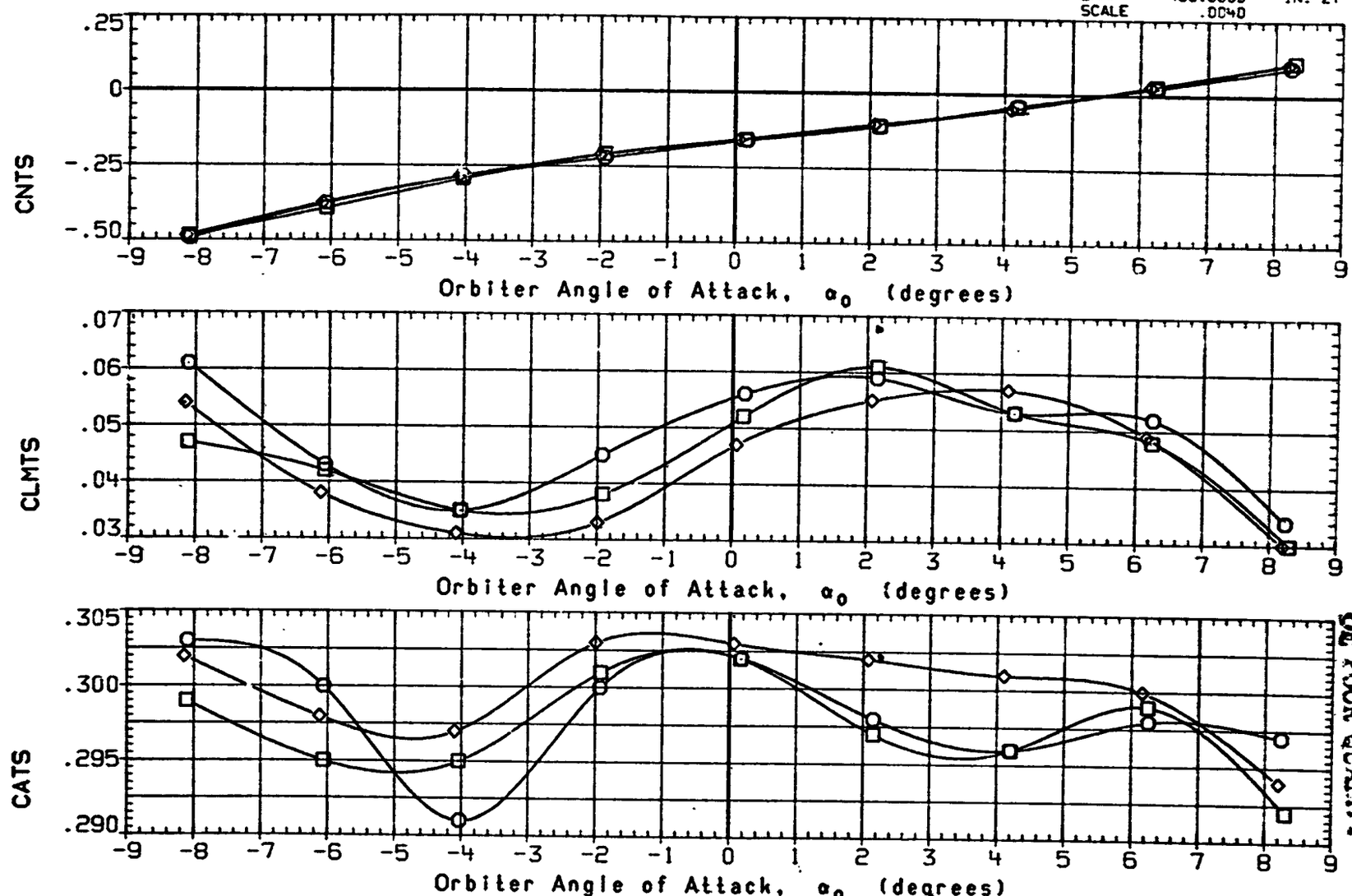

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(F)MACH = 1.10

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DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

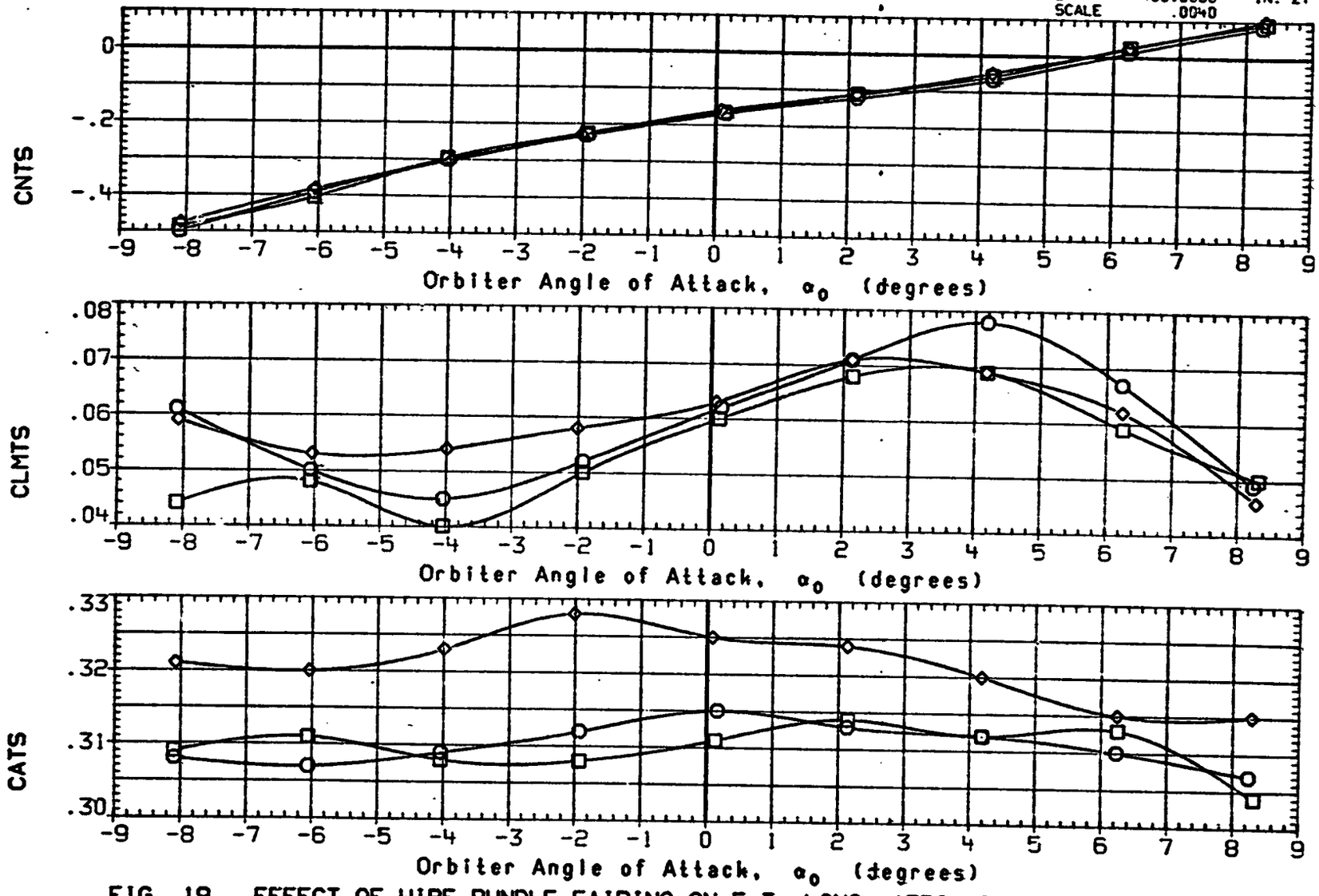

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(G)MACH = 1.15

DATA SET	SYMBOL	CONFIGURATION	BETA	IB-ELV	OB-ELV	STINGS
S1X028	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X032	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X034	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

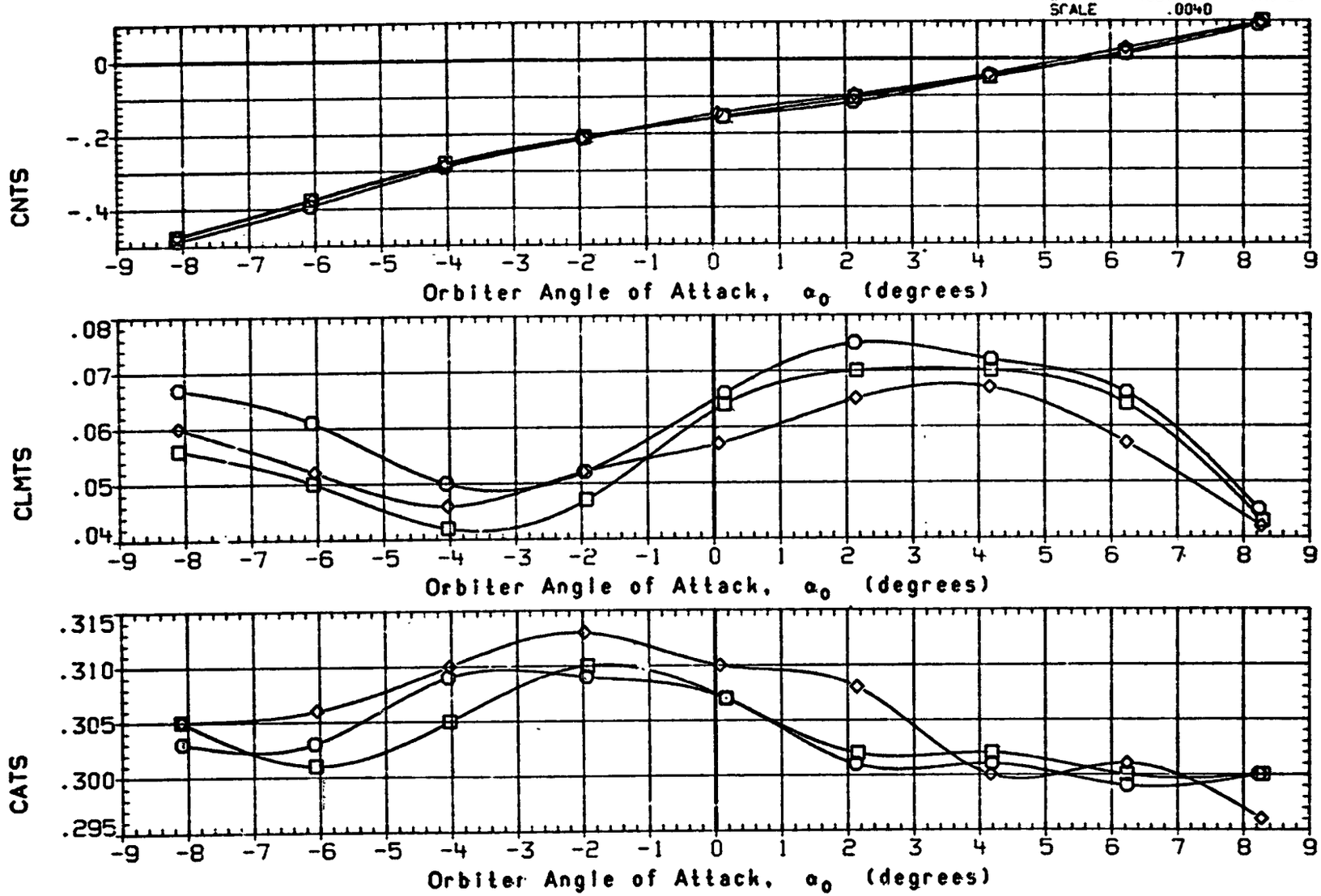

FIG. 19 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LONG. AERO. CHARACTERISTICS

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2 (TS)	.000	10.000	10.000	2.000
S1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2 (TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

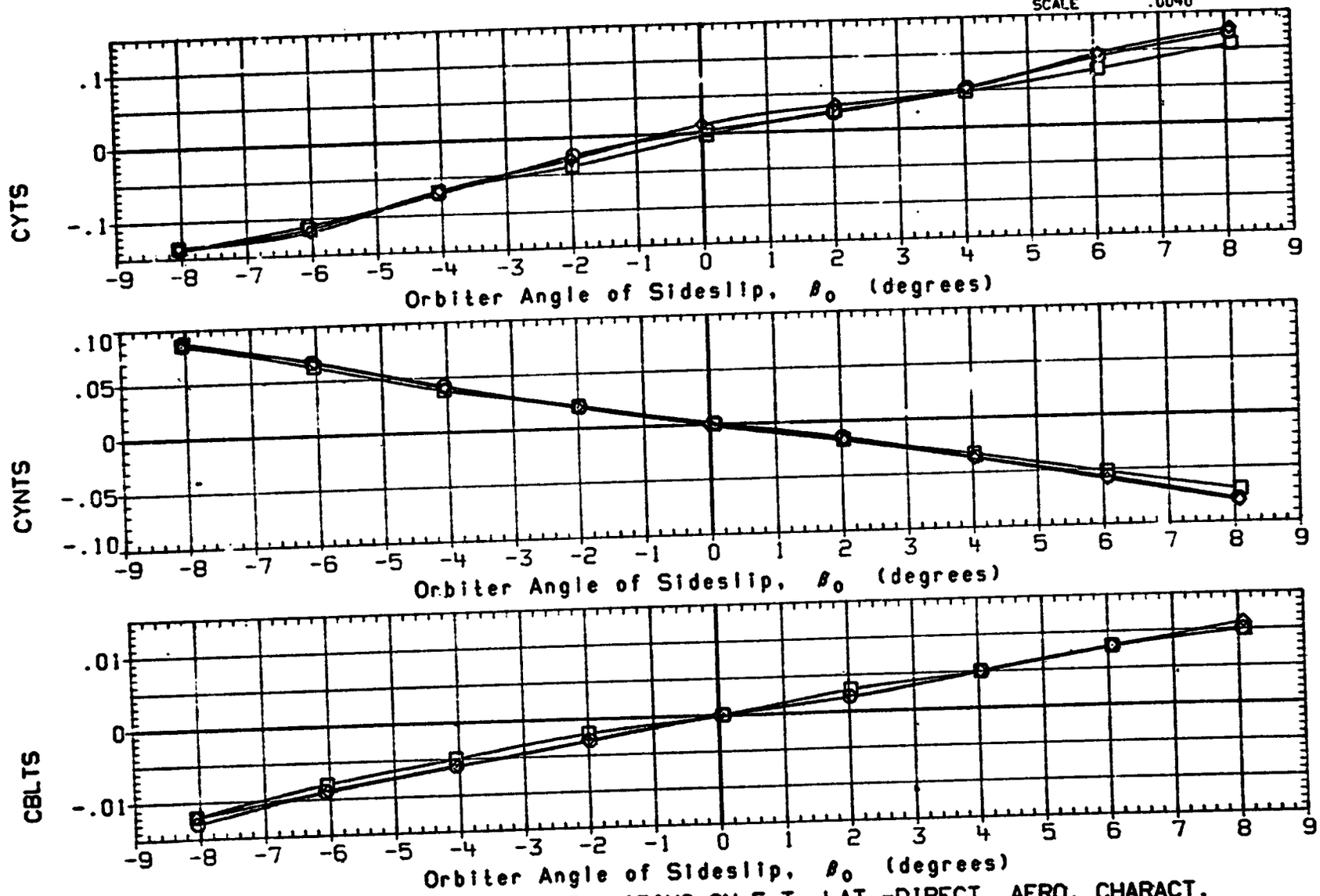

FIG. 20 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LAT.-DIRECT. AERO. CHARACT.

(A) MACH = .60

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

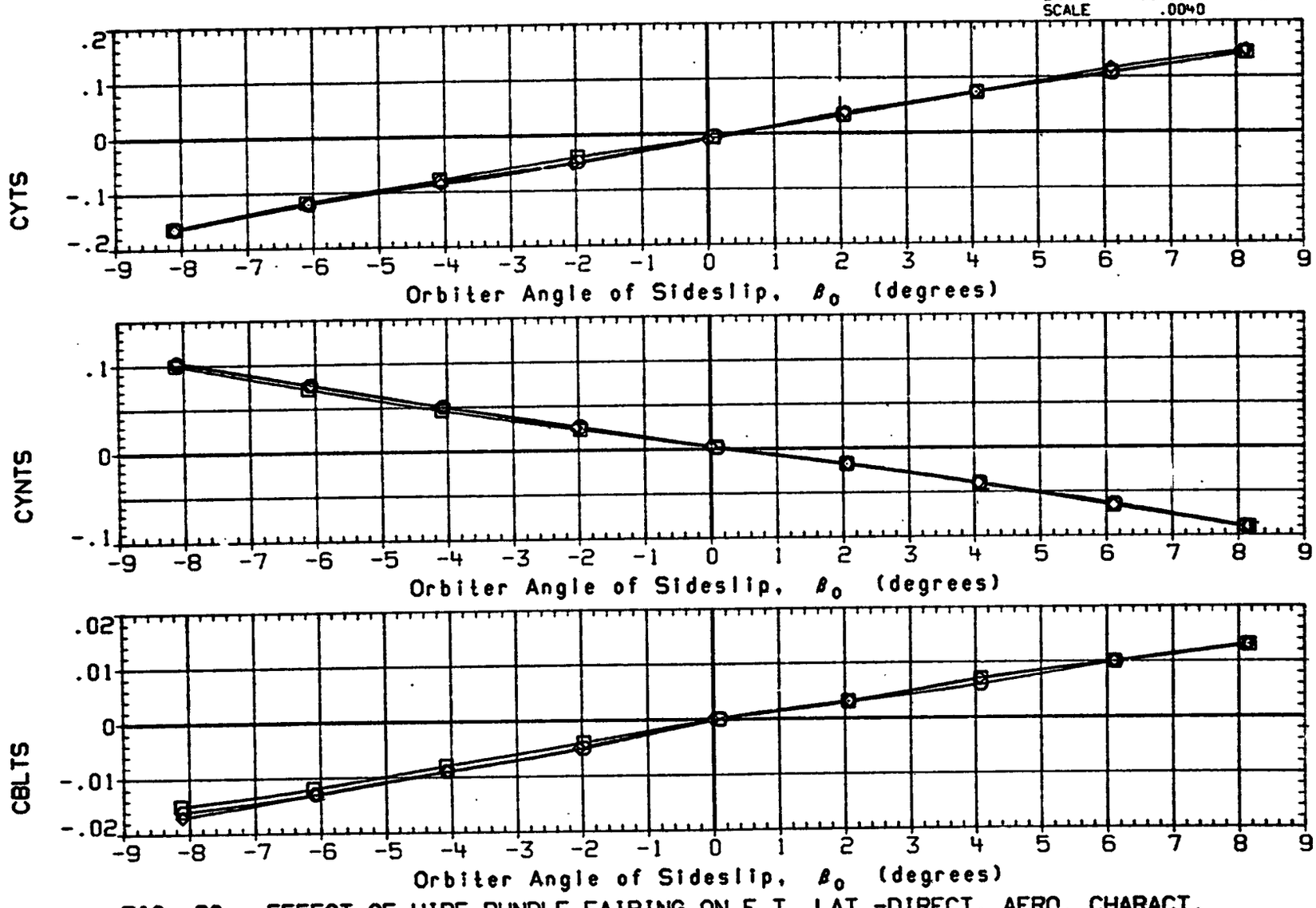

FIG. 20 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LAT.-DIRECT. AERO. CHARACT.

(B)MACH = .95

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

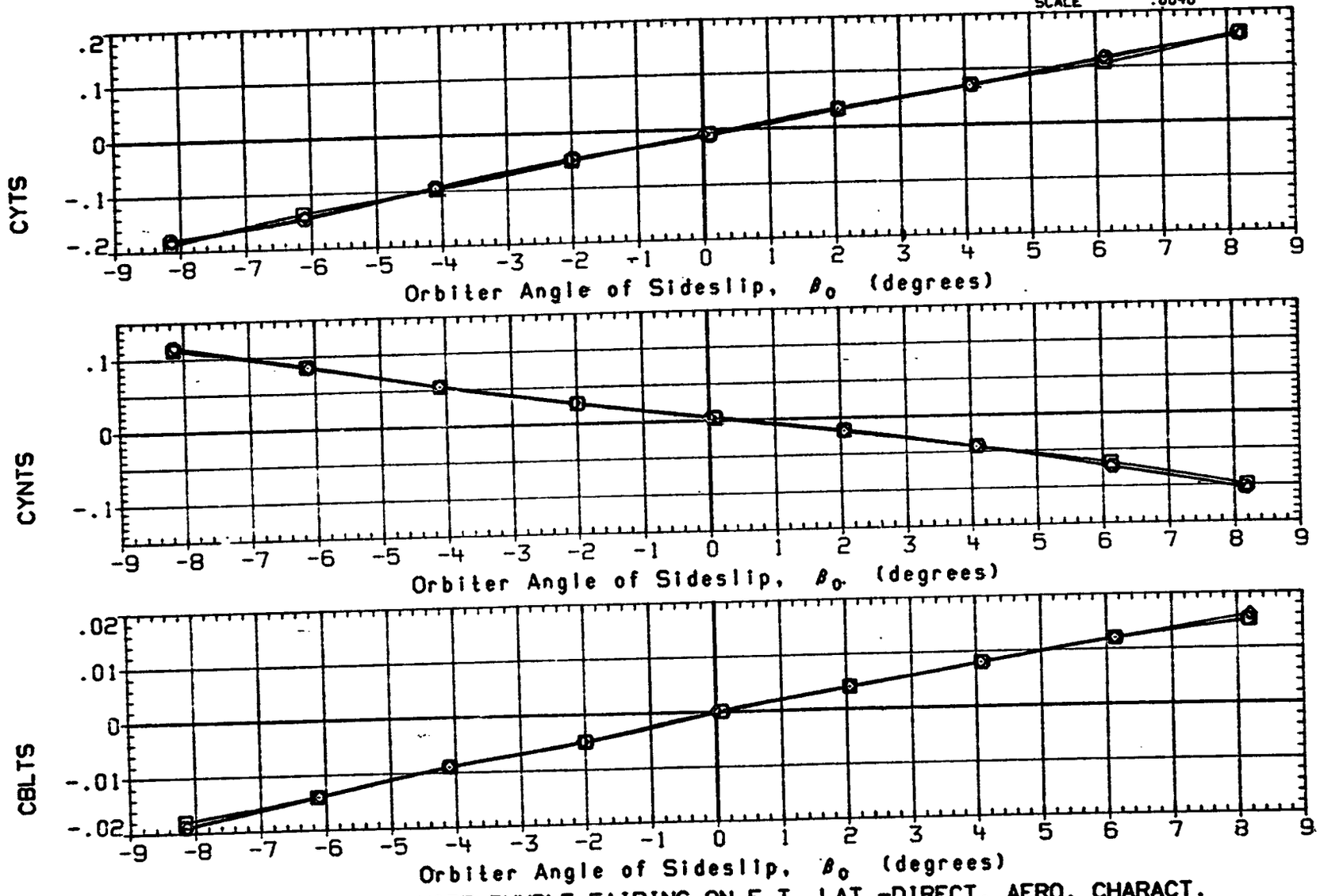

FIG. 20 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LAT.-DIRECT. AERO. CHARACT.

(C)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	(A25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X033	□	DATA NOT AVAILABLE	.000	10.000	10.000	2.000
S1X035	◇	DATA NOT AVAILABLE	.000	10.000	10.000	2.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

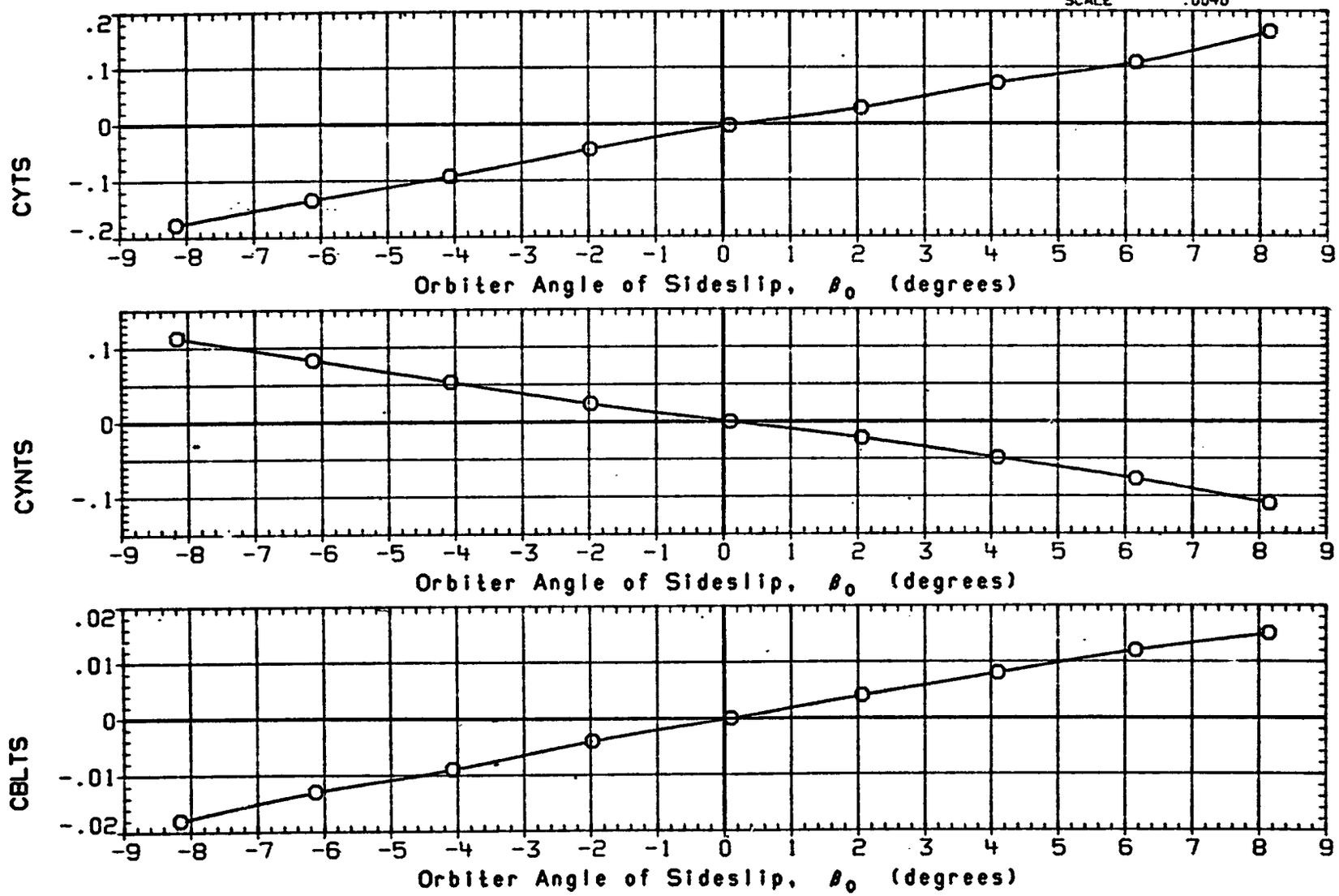

FIG. 20 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LAT.-DIRECT. AERO. CHARACT.

(D)MACH = 1.15

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DATA SET	SYMBOL	CONFIGURATION	ALPHA	IB-ELV	OB-ELV	STINGS
S1X029	○	FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS)	.000	10.000	10.000	2.000
S1X033	□	FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS)	.000	10.000	10.000	2.000
S1X035	◇	FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS)	.000	10.000	10.000	2.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

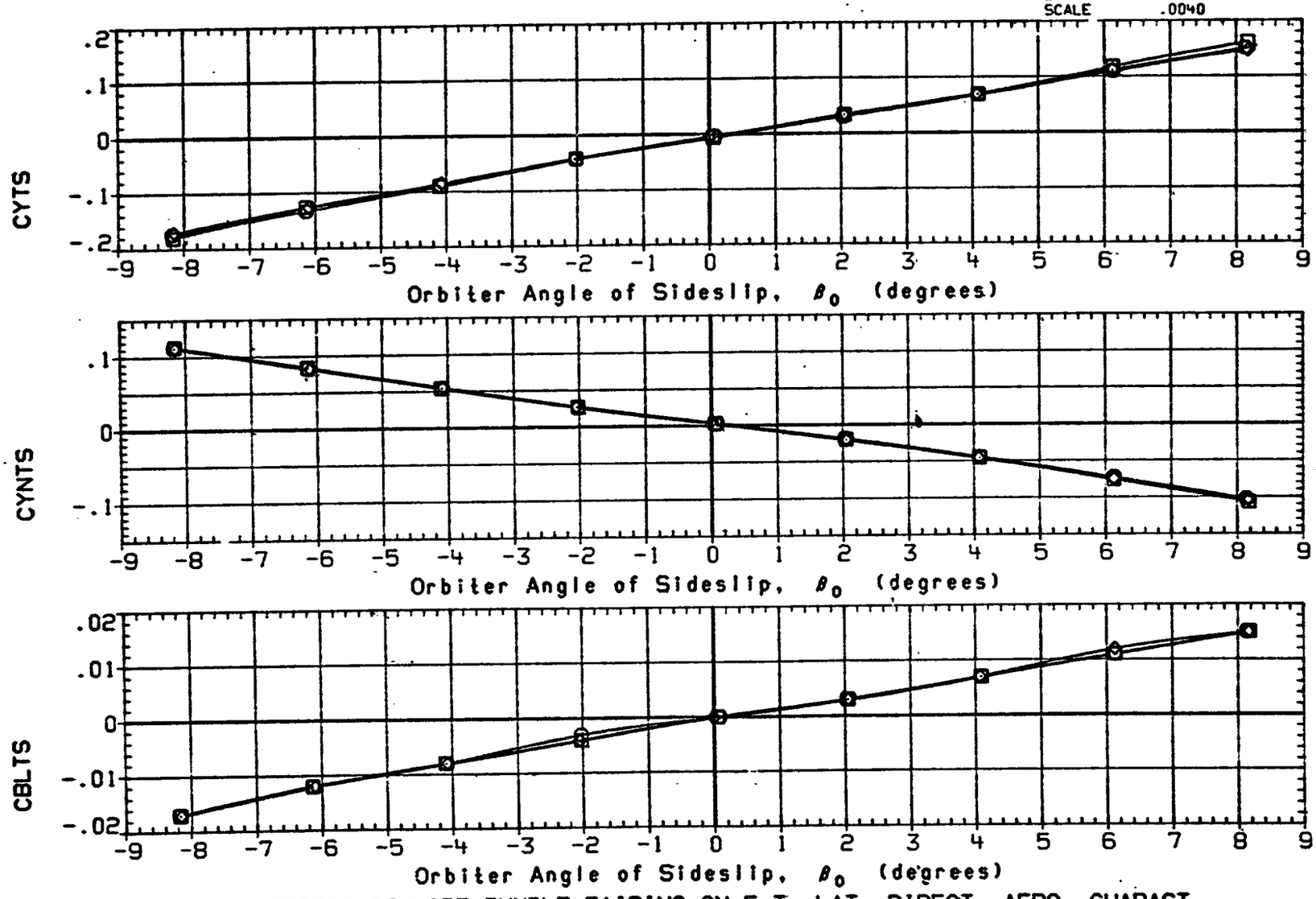

FIG. 20 EFFECT OF WIRE BUNDLE FAIRING ON E.T. LAT.-DIRECT. AERO. CHARACT.

(E)MACH = 1.25

DATA SET	SYMBOL	CONFIGURATION		PHI	BETA	IB-ELV	OB-ELV	STINGS
M1X016	○	FA25, MSFC TWT 652, CONFIG. 01ATPTTIS1	(0)	.000	.000	10.000	10.000	3.000
M1X024	□	FA25, MSFC TWT 652, CONFIG. 01ATPTTIS1	(0)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2698.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

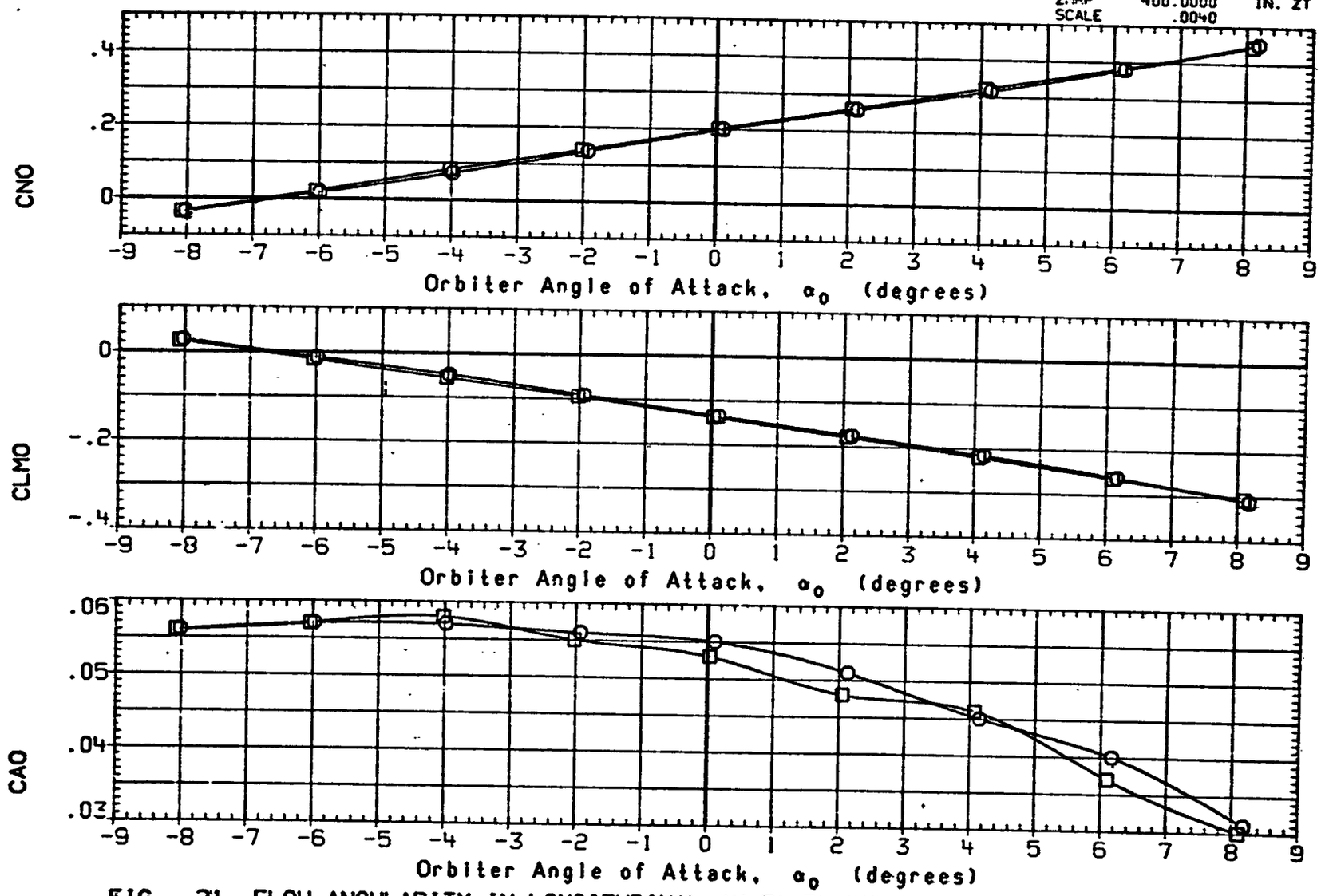

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(A) MACH = .60

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DATA SET	SYMBOL	CONFIGURATION		PHI	BETA	IB-ELV	OB-ELV	STINGS
M1X016	○	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(0)	.000	.000	10.000	10.000	3.000
M1X024	□	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(0)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

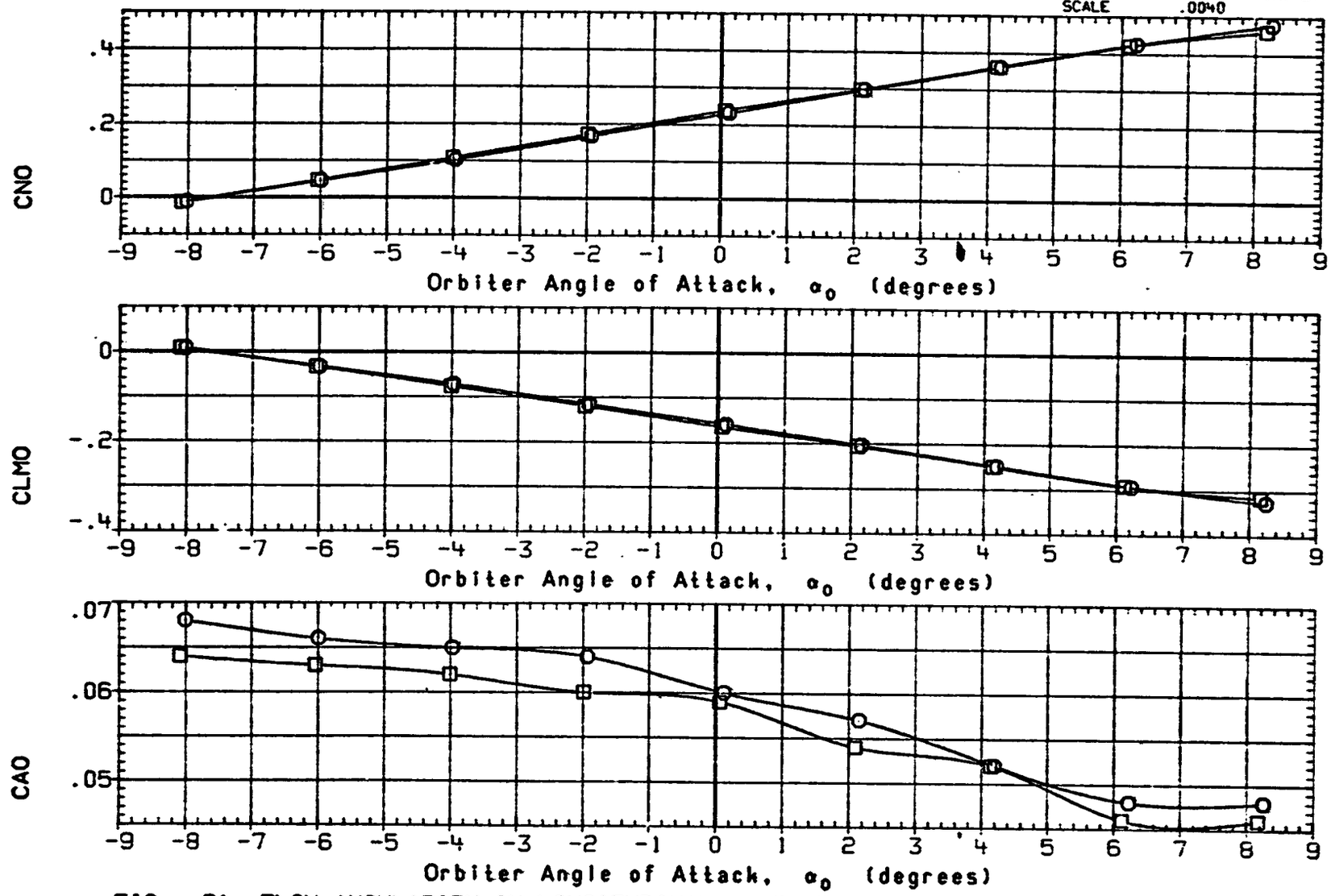

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION		PHI	BETA	IB-ELV	OB-ELV	STINGS
M1X016	○	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	.000	10.000	10.000	3.000
M1X024	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

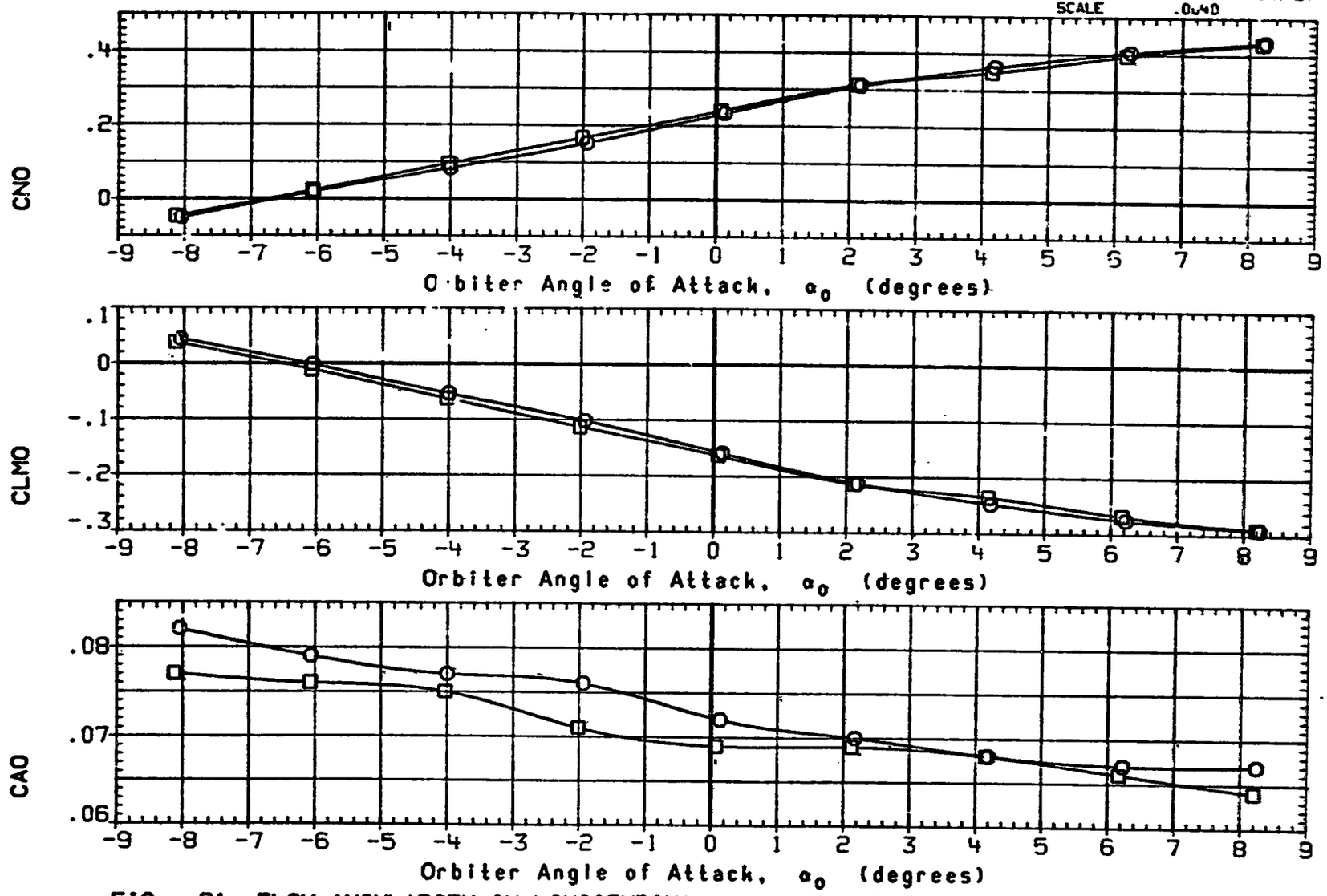

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(C)MACH = .90

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DATA SET	SYMBOL	CONFIGURATION		PHI	BETA	IB-ELV	OB-ELV	STINGS
MIXC16	○	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(0)	.000	.000	10.000	10.000	3.000
MIXO24	□	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(0)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2590.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

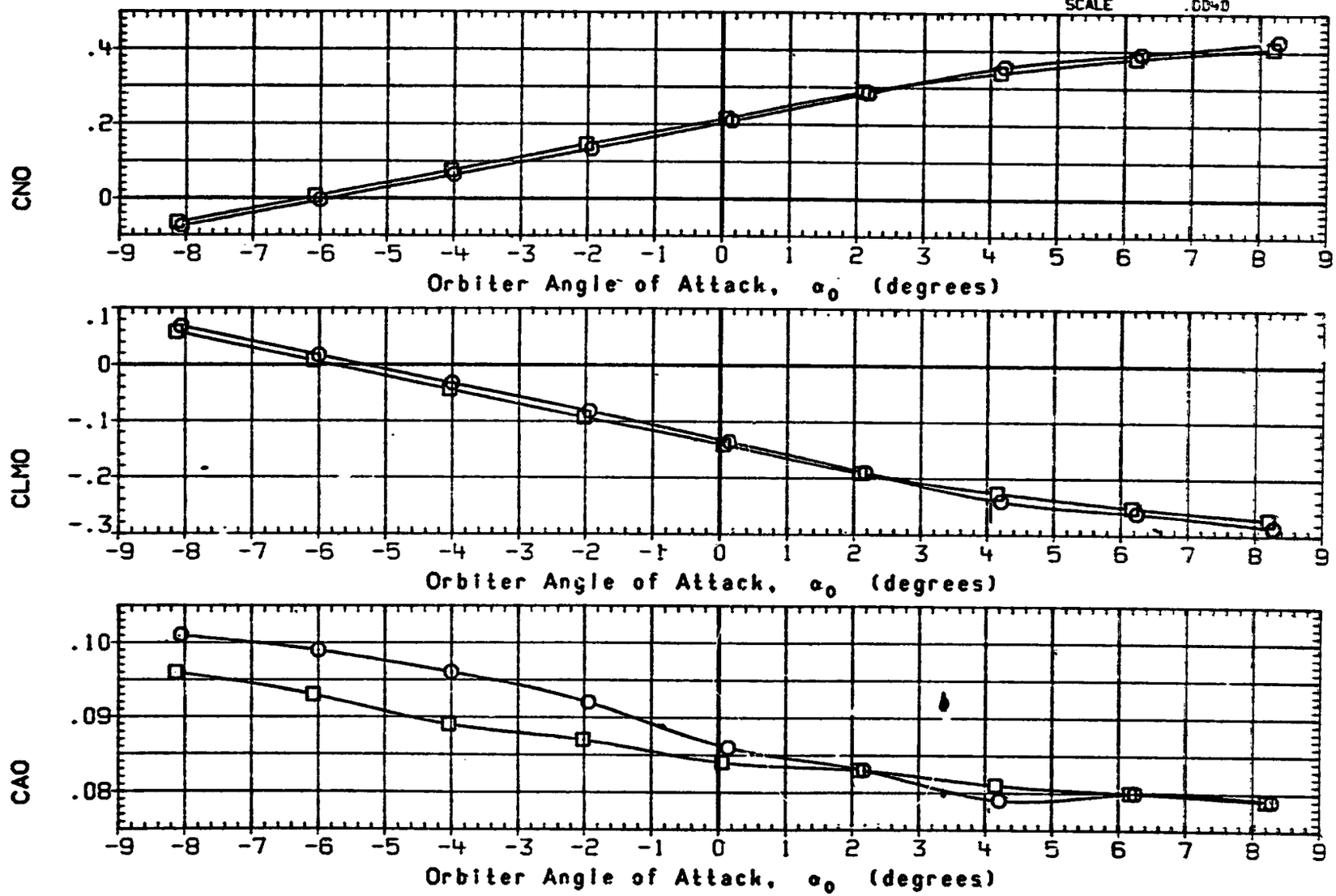

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		PHI	BETA	IB-ELV	OB-ELV	STINGS
M1X016	○	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	.000	.000	10.000	10.000	3.000
M1X024	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

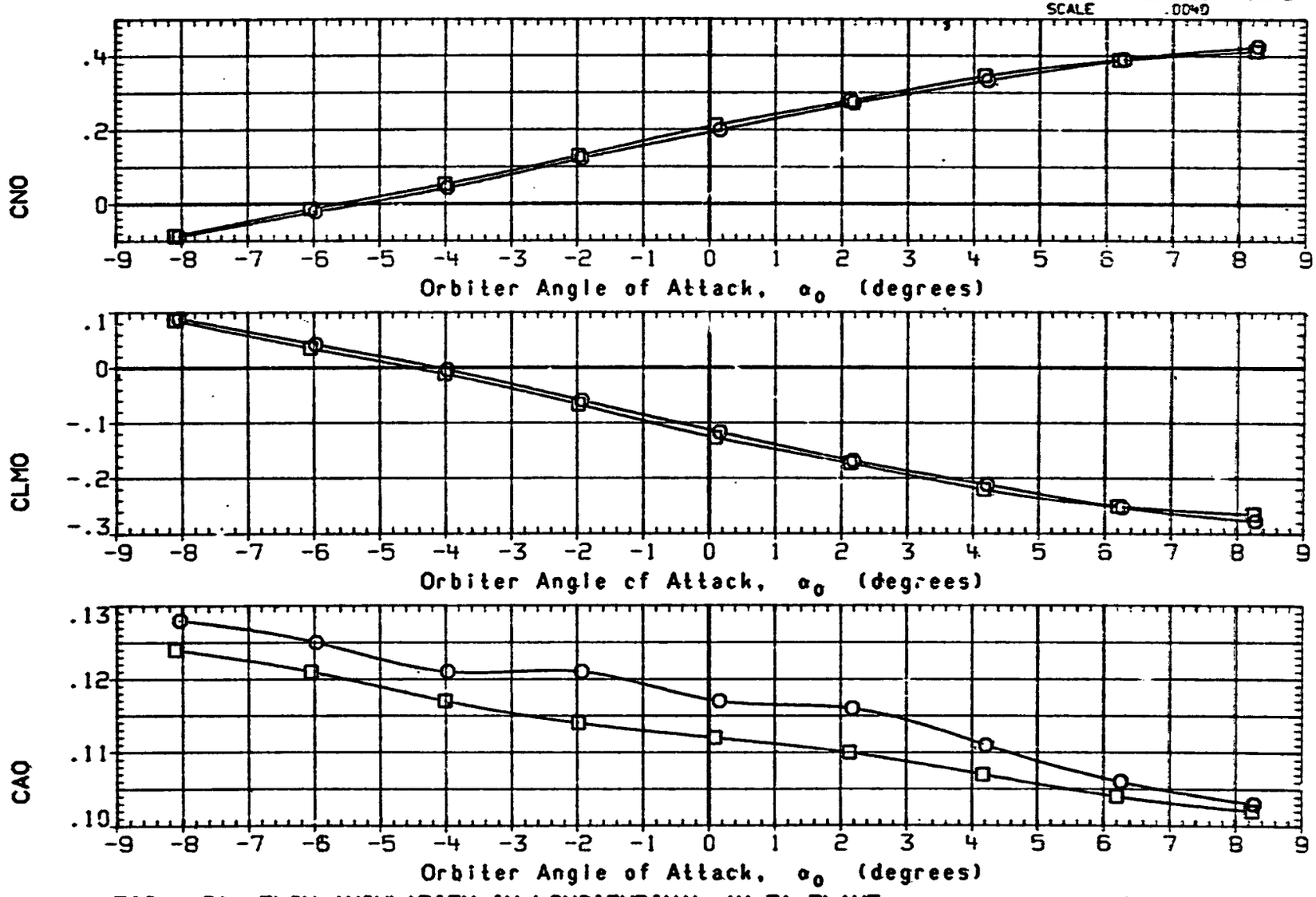

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(E)MACH = 1.05

DATA SET	SYMBOL	CONFIGURATION		PHI	BETA	IB-ELV	OB-ELV	STINGS
M1X016	○	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	.000	.000	10.000	10.000	3.000
M1X024	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	975.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

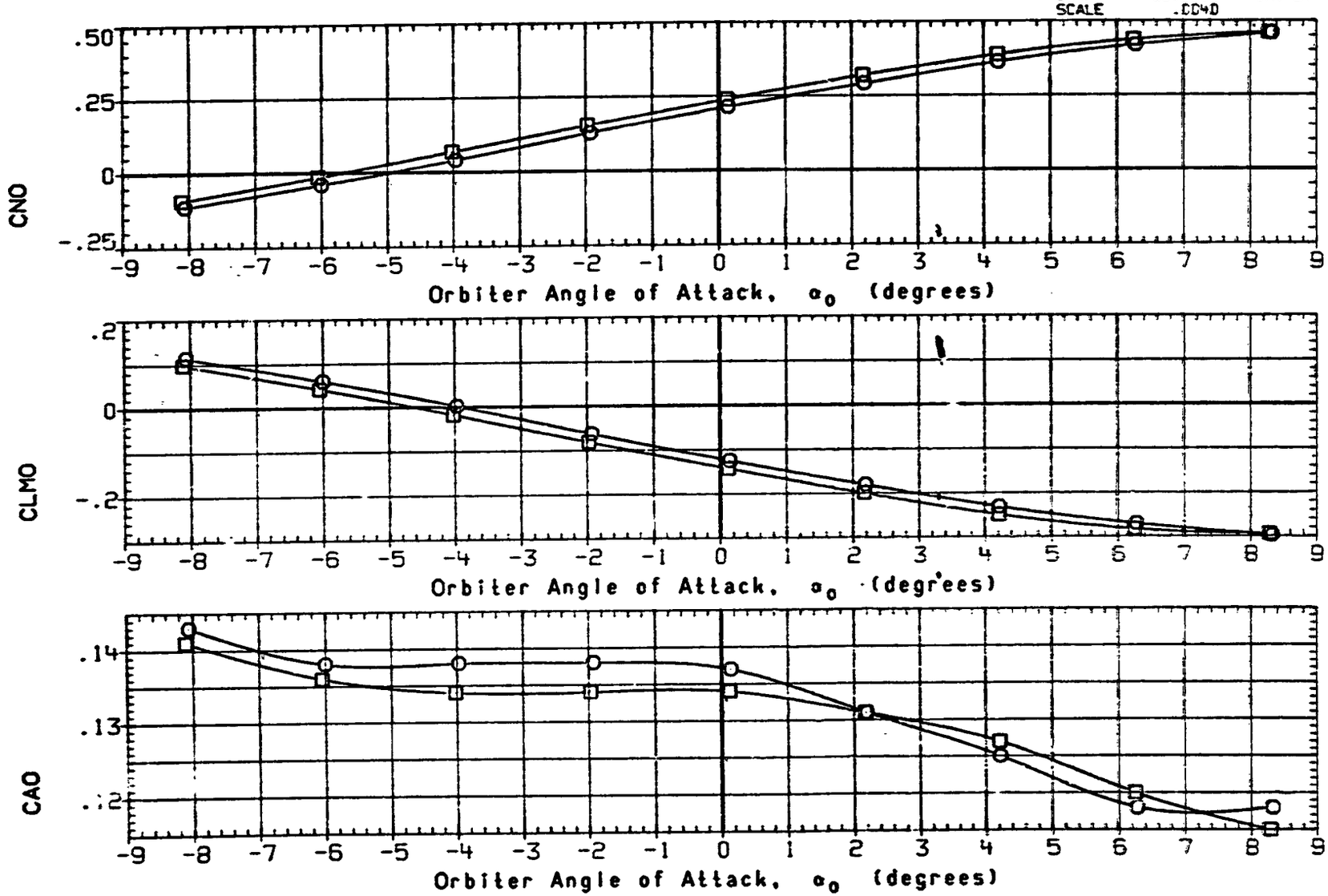

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(F)MACH = 1.09

DATA SET	SYMBOL	CONFIGURATION		PHI	BETA	IB-ELV	OB-ELV	STINGS
MIX016	○	FA25, MSFC TWT 652, CONFIG. 01ATPTTISI	(O)	.000	.000	10.000	10.000	3.000
MIX024	□	FA25, MSFC TWT 652, CONFIG. 01ATPTTISI	(O)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.6040	

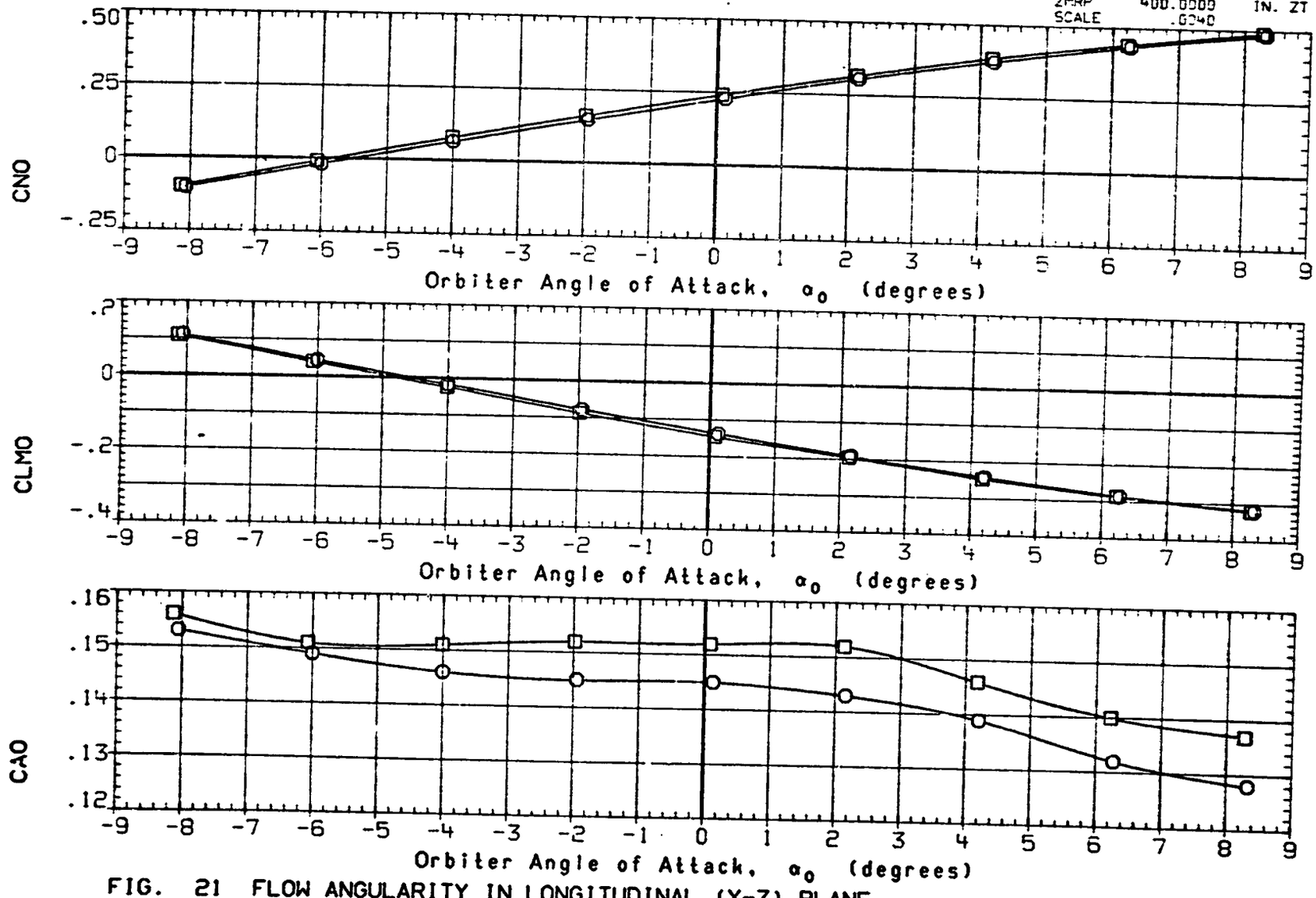

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(G)MACH = 1.15

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DATA SET	SYMBOL	CONFIGURATION	PHI	BETA	IB-ELV	OB-ELV	STINGS
M1X016	○	FA25, MSFC TWT 652, CONFIG. O1ATPTTIS1 (O)	.000	.000	10.000	10.000	3.000
M1X024	□	FA25, MSFC TWT 652, CONFIG. O1ATPTTIS1 (O)	180.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

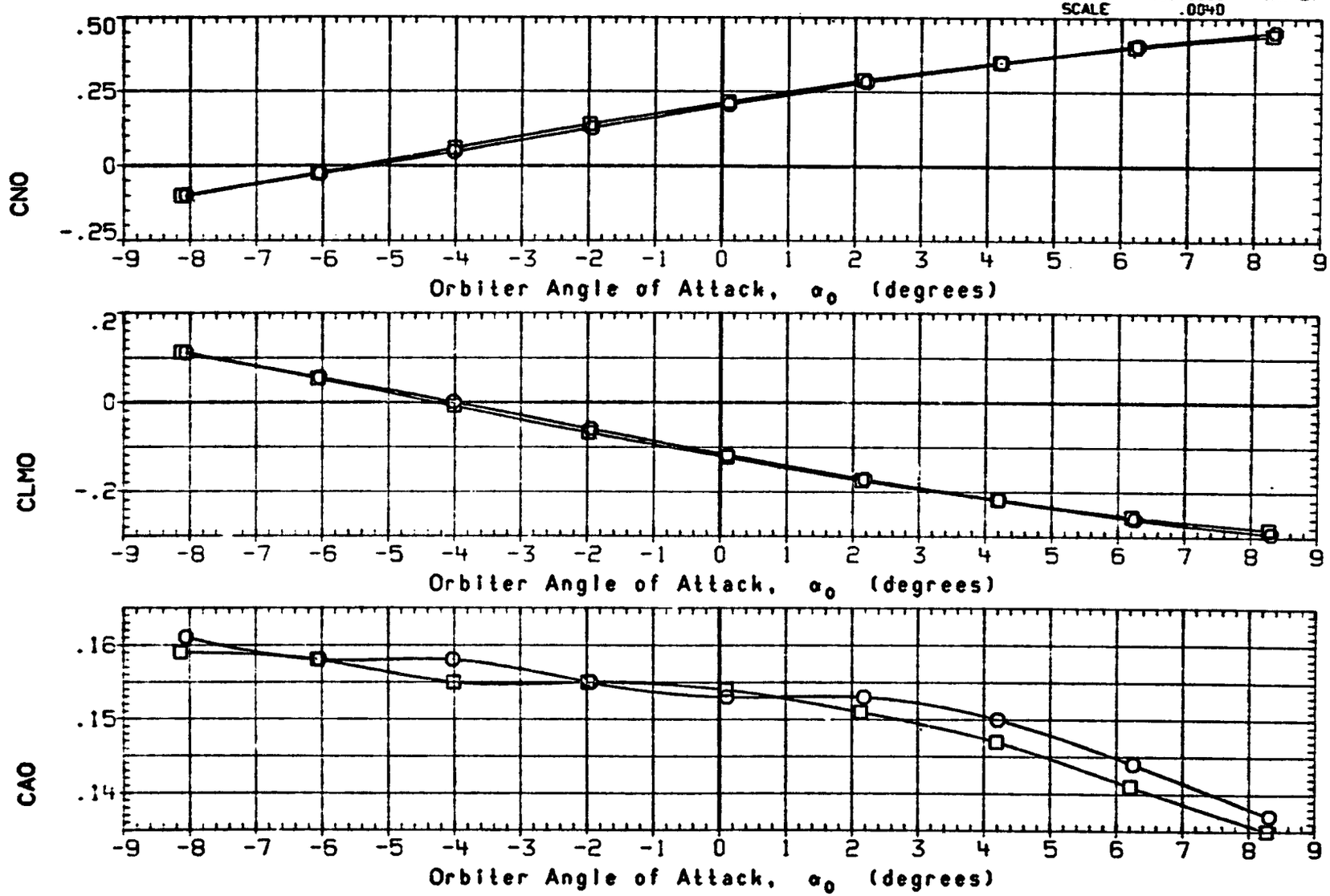

FIG. 21 FLOW ANGULARITY IN LONGITUDINAL (X-Z) PLANE

(H)MACH = 1.24

DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV	OB-ELV	STINGS
M1X025	○	FA25, MSFC TWT 652, CONFIG. 01ATPTT131	(0)	270.000	.000	10.000	10.000	3.000
M1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT151	(0)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

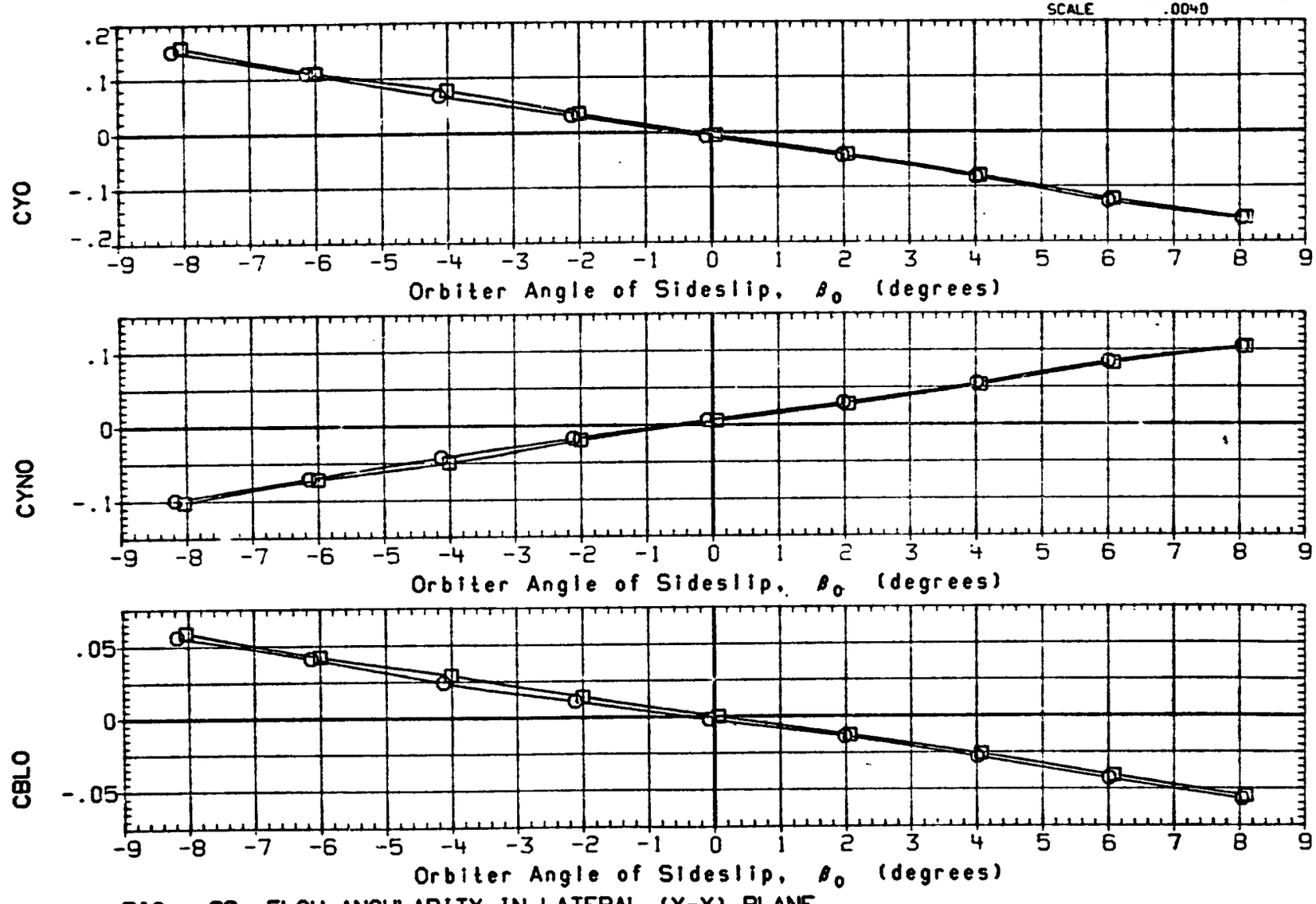

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(A)MACH = .60

DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV	OB-ELV	STINGS
M1X025	○	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(O)	270.000	.000	10.000	10.000	3.000
M1X017	□	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(O)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

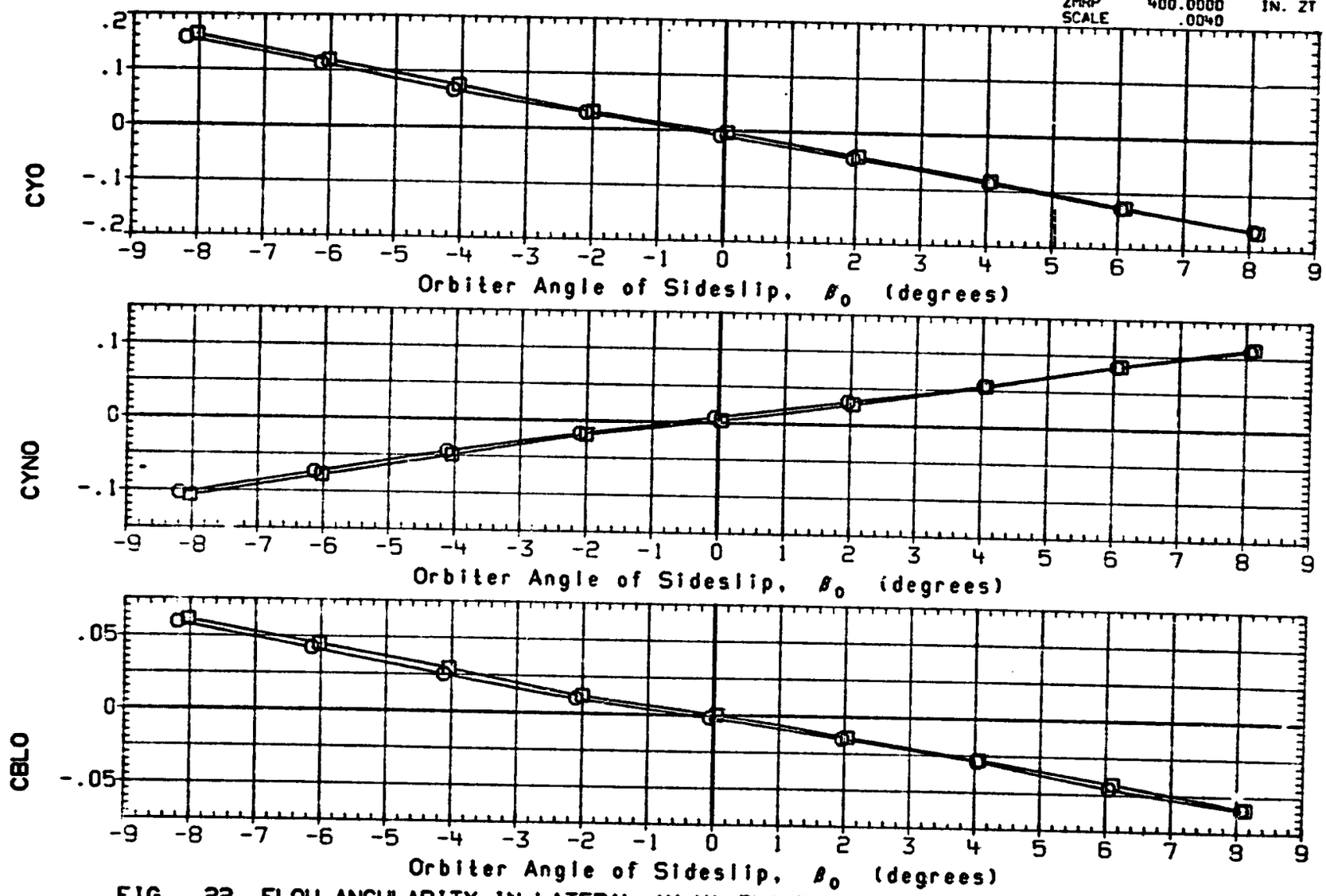

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(B)MACH = .80

DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV.	OB-ELV	STINGS
M1X025	○	FA25 MSFC TWT 652, CONFIG. O1ATPTTIS1	(O)	270.000	.000	10.000	10.000	3.000
M1X017	□	FA25, MSFC TWT 652, CONFIG. O1ATPTTIS1	(O)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

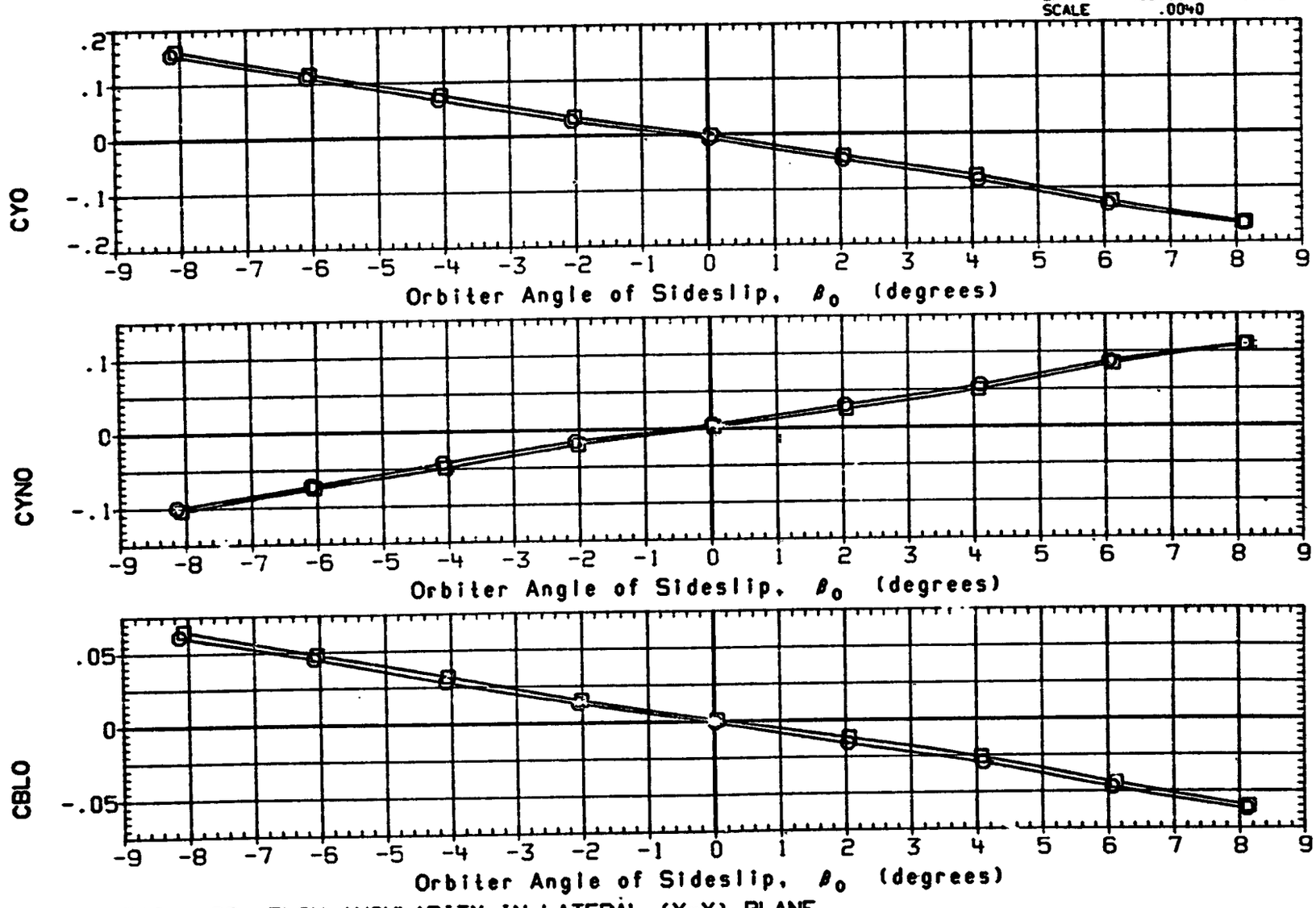

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(C)MACH = .90

DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV	OB-ELV	STINGS
M1X025	○	FA25. MSFC TWT 652. CONFIG. 01ATPTTISI	(0)	270.000	.000	10.000	10.000	3.000
M1X017	□	FA25. MSFC TWT 652. CONFIG. 01ATPTTISI	(0)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

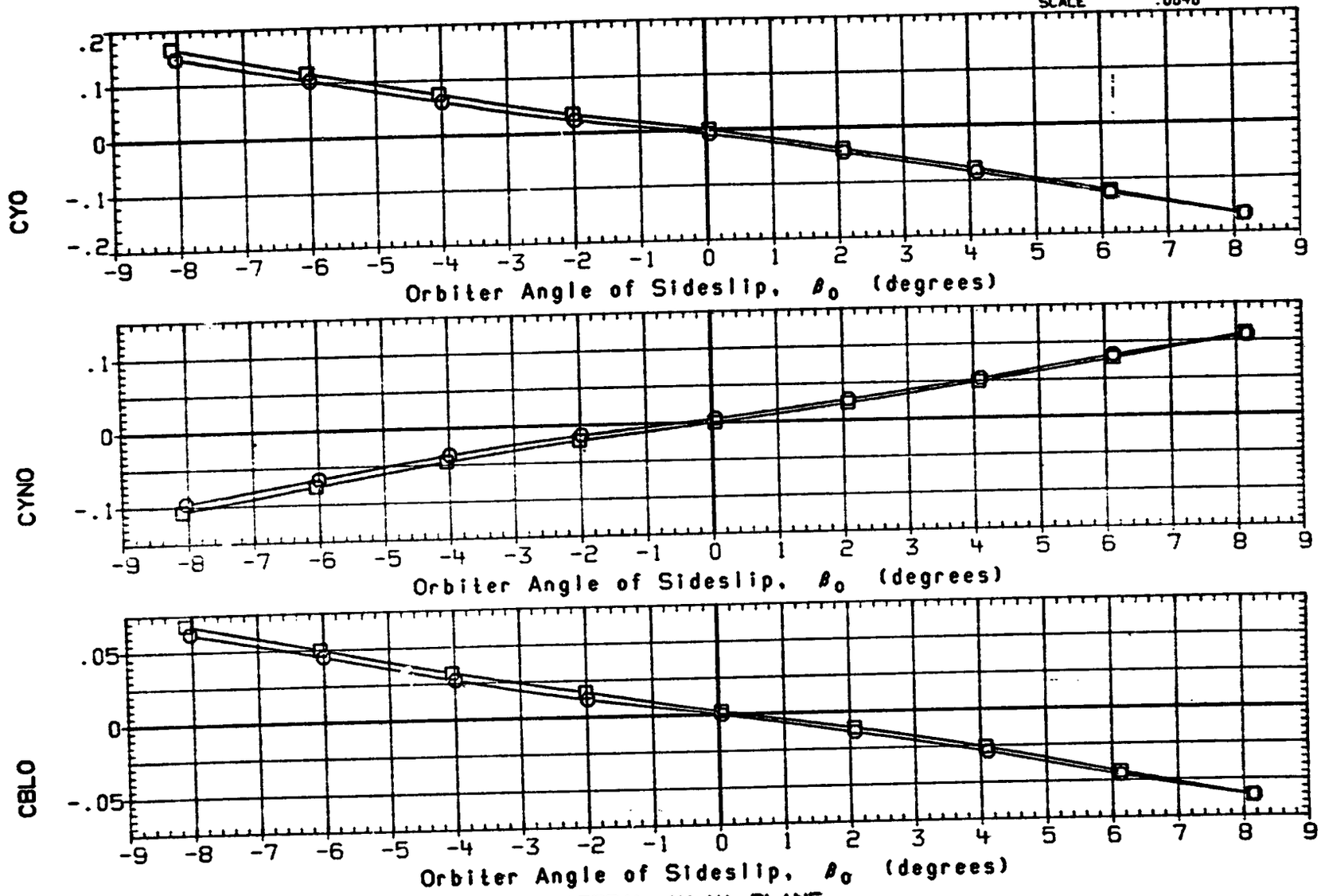

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(D)MACH = .95

DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV	OB-ELV	STINGS
M1X025	○	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	270.000	.000	10.000	10.000	3.000
M1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(0)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

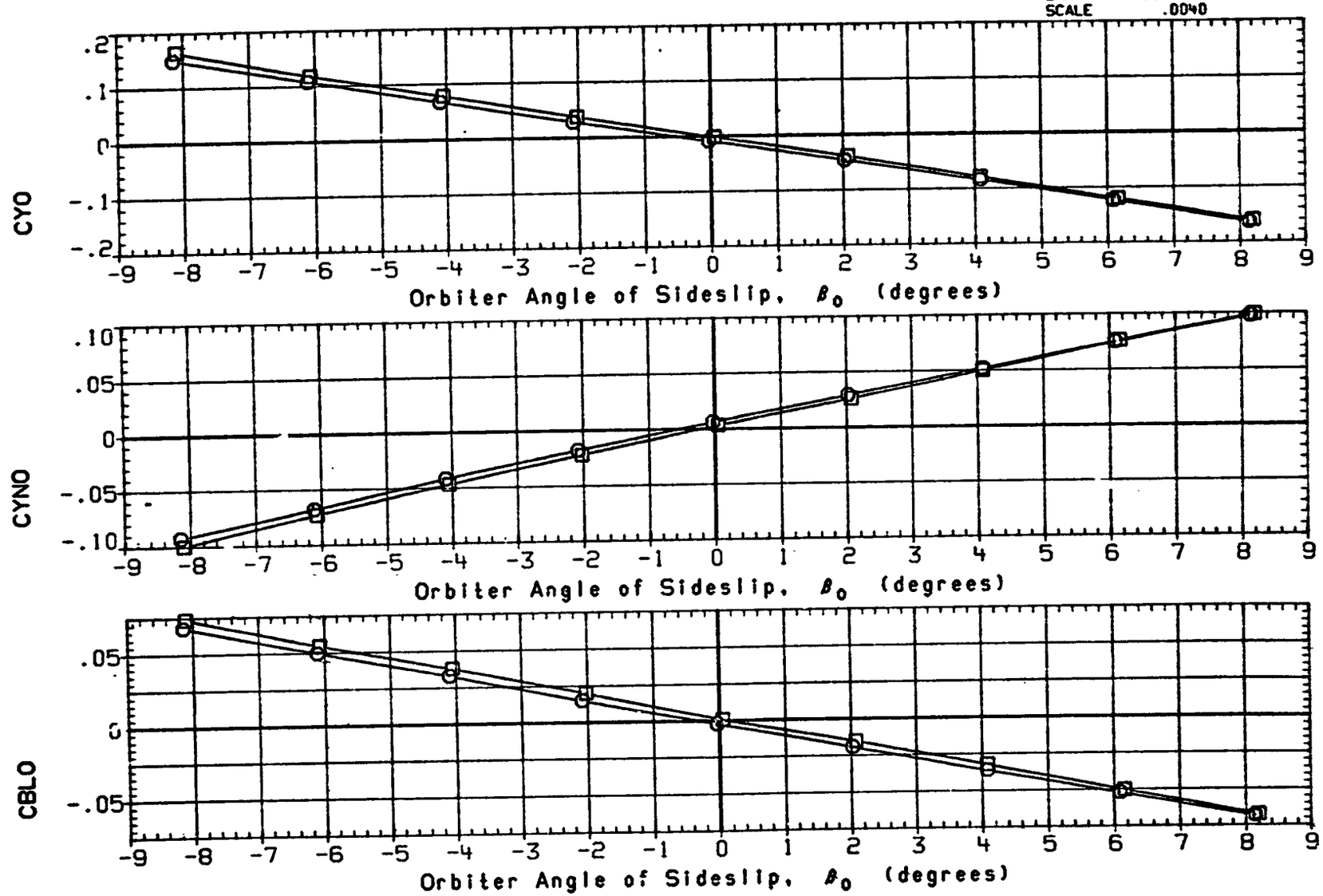

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(E)MACH = 1.05

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DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV	OB-ELV	STINGS
M1X025	○	FA25. MSFC TWT 652. CONFIG. 01ATPTTIS1	(0)	270.000	.000	10.000	10.000	3.000
M1X017	□	FA25. MSFC TWT 652. CONFIG. 01ATPTTIS1	(0)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

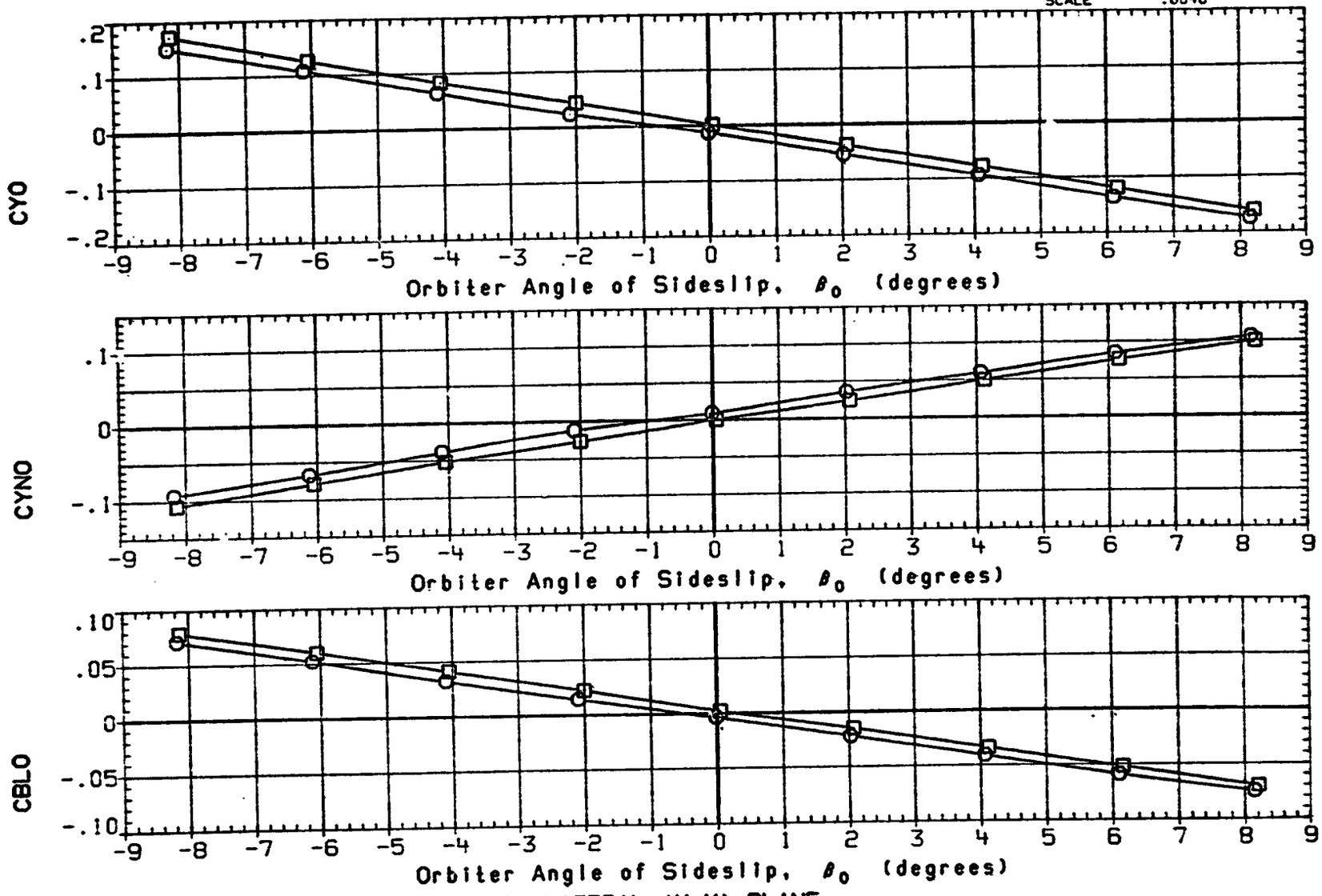

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(F)MACH = 1.10

DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV	OB-ELV	STINGS
M1X025	○	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(O)	270.000	.000	10.000	10.000	3.000
M1X017	□	FA25, MSFC TWT 652, CONFIG. O1ATPTT1S1	(O)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION

SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

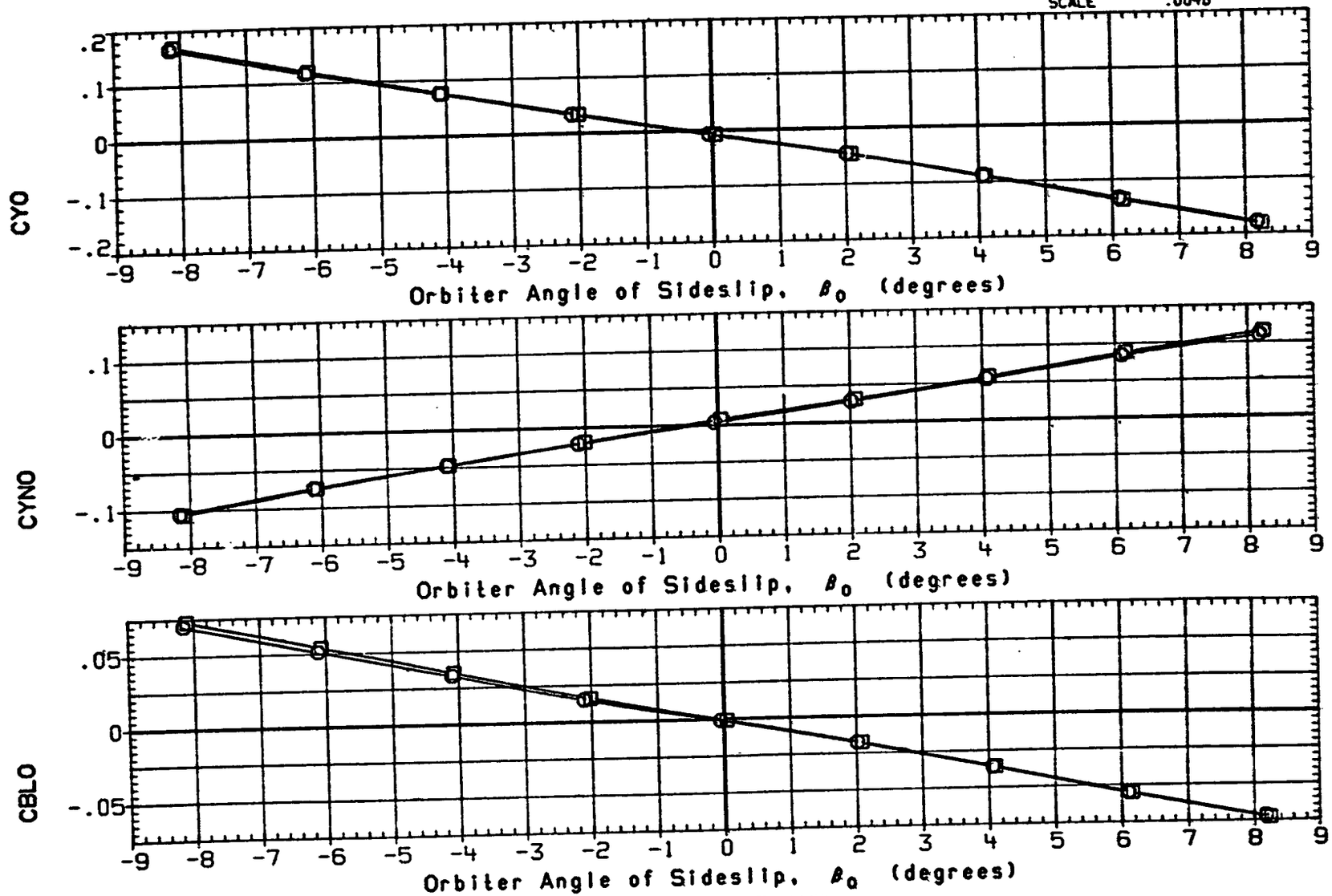

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(G)MACH = 1.14

DATA SET	SYMBOL	CONFIGURATION		PHI	ALPHA	IB-ELV	OB-ELV	STINGS
M1X025	○	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	270.000	.000	10 000	10.000	3.000
M1X017	□	FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1	(O)	90.000	.000	10.000	10.000	3.000

REFERENCE INFORMATION		
SREF	2690.0000	SQ.FT.
LREF	1290.3000	INCHES
BREF	1290.3000	INCHES
XMRP	976.0000	IN. XT
YMRP	.0000	IN. YT
ZMRP	400.0000	IN. ZT
SCALE	.0040	

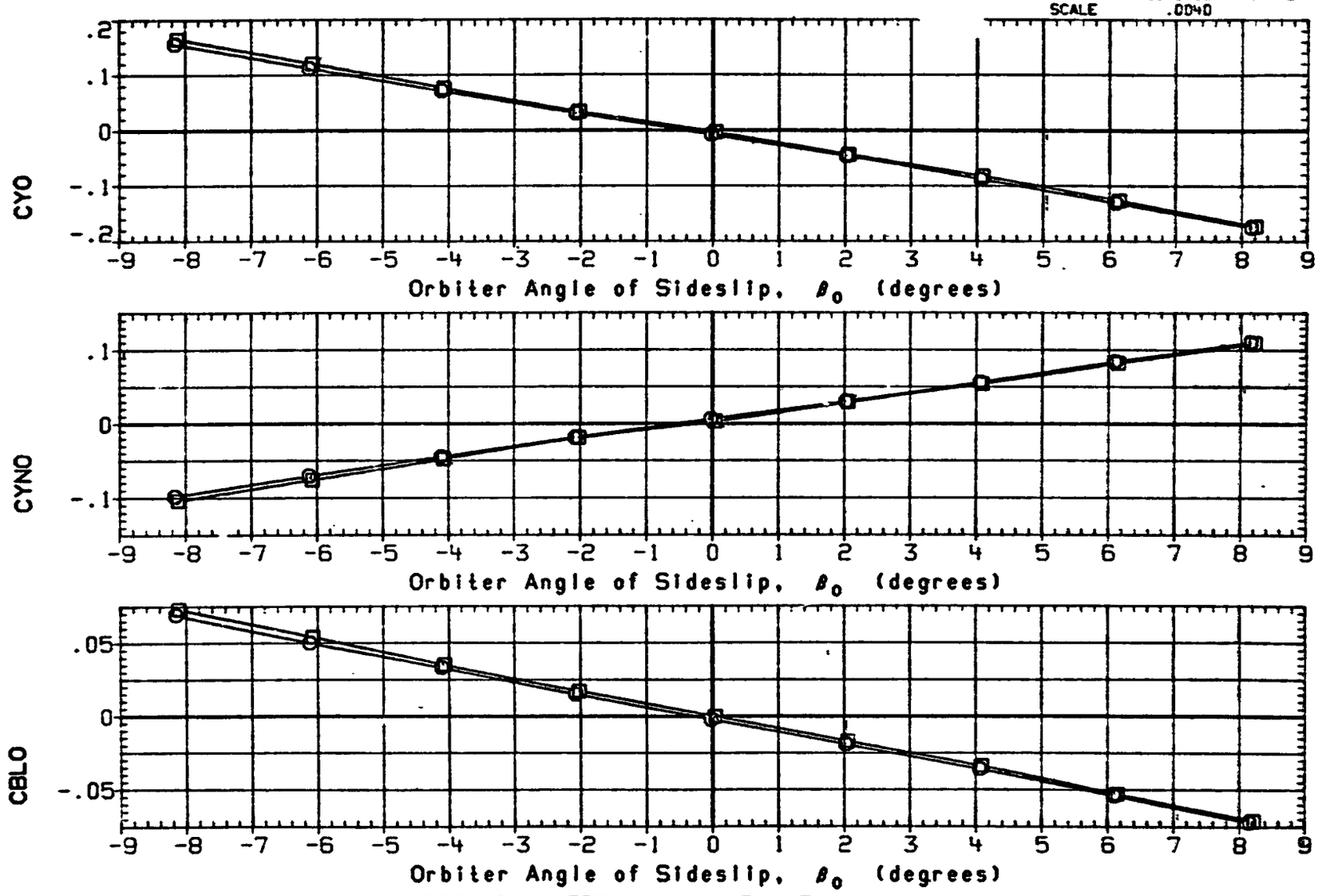

FIG. 22 FLOW ANGULARITY IN LATERAL (X-Y) PLANE

(H)MACH = 1.25

APPENDIX

TABULATED SOURCE DATA

Calculated summary coefficients listed in the Data Reduction section are retained on DATAMAN database files and are available upon request.

FA25, MSFC TWT 652, CONFIG. 02ATPTTIS1 (O) (R1X001) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 130/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.598	-8.020	-.02600	.01700	.06100	-.00800	.00900	-.00100	-.16400	-.26500	-.25500	-.28100
.598	-6.000	.02500	-.01900	.06100	-.01300	.01100	-.00100	-.15500	-.24600	-.23100	-.25300
.598	-4.020	.06100	-.05600	.06100	-.00900	.00600	-.00100	-.15700	-.24000	-.22100	-.24100
.598	-1.990	.14400	-.09900	.06000	-.01100	.00700	-.00100	-.14800	-.22400	-.20700	-.23000
.598	.050	.20700	-.14200	.05700	-.01400	.01000	-.00200	-.14700	-.2.300	-.19800	-.22400
.598	2.130	.27200	-.18700	.05500	-.01300	.01000	-.00200	-.14700	-.21100	-.19500	-.21800
.598	4.110	.33300	-.23000	.04900	-.01100	.00700	-.00100	-.14200	-.20000	-.19300	-.21600
.598	6.140	.40000	-.27600	.04400	-.01400	.00900	-.00200	-.14700	-.19700	-.20200	-.22300
.598	8.160	.46600	-.32200	.03500	-.01500	.01000	-.00200	-.14000	-.18400	-.20500	-.23300
	GRADIENT	.03103	-.02140	-.00142	-.00030	.00025	-.00005	.00152	.00456	.00334	.00305

RUN NO. 120/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.796	-8.070	.00300	-.00400	.07400	-.01100	.00700	-.00100	-.18800	-.25100	-.24900	-.26400
.796	-6.070	.05600	-.04200	.07200	-.01400	.00900	-.00200	-.18800	-.24200	-.23600	-.25100
.796	-4.010	.11600	-.08400	.07000	-.01400	.01100	-.00200	-.18400	-.23300	-.22000	-.23300
.796	-1.960	.18200	-.12600	.06700	-.01500	.01200	-.00200	-.16800	-.21800	-.20[illegible]00	-.22100
.796	.100	.24500	-.17100	.06400	-.01900	.01300	-.00300	-.16100	-.21200	-.19500	-.21600
.796	2.180	.31500	-.21800	.06000	-.01200	.00800	-.00100	-.15500	-.2[illegible]00	-.18600	-.21000
.796	4.190	.37700	-.26200	.05500	-.01200	.00800	-.00300	-.16300	-.20900	-.19500	-.21600
.796	6.200	.44100	-.30500	.05300	-.01400	.00900	-.00300	-.15400	-.20100	-.20000	-.22100
.796	8.230	.48500	-.33200	.05300	-.01700	.01100	-.00300	-.15200	-.19500	-.20500	-.23100
	GRADIENT	.03189	-.02171	-.00180	.00034	-.00049	-.00005	.00263	.00283	.00322	.00220

RUN NO. 110/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.896	-8.090	-.03700	.03300	.09400	-.01000	.00700	-.00100	-.24600	-.29900	-.27100	-.27800
.896	-6.040	.02600	-.01400	.09100	-.01200	.00700	-.00100	-.23800	-.28300	-.25700	-.26200
.896	-4.020	.09600	-.06500	.08700	-.01200	.00700	.00000	-.23000	-.26300	-.24100	-.24300
.896	-1.980	.17100	-.11700	.08700	-.01200	.00800	.00000	-.21400	-.25300	-.22500	-.23500
.896	.080	.24600	-.16800	.08400	-.01200	.00700	.00000	-.20300	-.24200	-.22100	-.24000
.896	2.150	.32500	-.22300	.08000	-.01100	.00600	-.00100	-.19300	-.23100	-.21700	-.23900
.896	4.190	.37900	-.25900	.07900	-.01400	.00800	-.00100	-.19800	-.23500	-.22400	-.24400
.896	6.190	.41300	-.28100	.07800	-.01400	.01000	-.00100	-.19300	-.24300	-.23700	-.25700
.896	8.240	.45000	-.31200	.07500	-.01200	.00700	-.00300	-.19100	-.23400	-.23700	-.26400
	GRADIENT	.03507	-.02407	-.00112	-.00015	-.00000	-.00015	.00385	.00390	.00205	-.00029

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FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1 (0) (R1X001) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 140/ 0 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.944	-8.100	-.05900	.05600	.11700	-.00900	.00800	.00000	-.28400	-.33000	-.29500	-.29700
.944	-6.070	.00600	.00700	.11300	-.01300	.01000	-.00100	-.27100	-.31200	-.28400	-.28500
.944	-4.029	.07800	-.04400	.11200	-.01300	.00900	.00000	-.26100	-.29600	-.26700	-.27300
.944	-1.970	.14900	-.09500	.10800	-.01300	.00800	-.00100	-.24900	-.28400	-.25700	-.26600
.944	.100	.22000	-.14400	.10200	-.01200	.00700	-.00100	-.23400	-.28200	-.25100	-.26700
.944	2.180	.29500	-.19700	.09800	-.01100	.00600	-.00100	-.22200	-.26900	-.24600	-.27000
.944	4.180	.37100	-.25200	.09200	-.01000	.00500	.00000	-.22700	-.25500	-.25500	-.27400
.944	6.210	.41000	-.27700	.08900	-.01200	.00700	-.00100	-.21400	-.26400	-.25900	-.28000
.944	8.240	.43800	-.29400	.08800	-.01200	.00800	-.00200	-.21000	-.25900	-.26600	-.29500
	GRADIENT	.03559	-.02519	-.00243	.00039	-.00049	-.00000	.00463	.00471	.00171	-.00029

RUN NO. 150/ 0 RN/L = 6.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.035	-8.080	-.07200	.07400	.13700	-.00800	.00700	-.00100	-.30300	-.37900	-.33800	-.34700
1.035	-6.050	-.01200	.03100	.13400	-.01100	.00800	-.00200	-.29100	-.27600	-.31400	-.32400
1.035	-4.020	.04900	-.01000	.13200	-.01100	.00800	-.00200	-.28100	-.27600	-.29700	-.30800
1.035	-1.960	.12000	-.06100	.12800	-.01000	.00700	-.00100	-.26900	-.28000	-.29700	-.30600
1.035	.060	.19100	-.11300	.12500	-.01100	.00800	-.00200	-.26700	-.28100	-.30000	-.31700
1.035	2.190	.26300	-.16300	.12500	-.01100	.00800	-.00300	-.27900	-.28200	-.30400	-.30900
1.035	4.210	.33000	-.21000	.12000	-.01000	.00700	-.00200	-.27200	-.27900	-.31500	-.32300
1.035	6.220	.38700	-.25300	.11400	-.01200	.00800	-.00300	-.26200	-.28000	-.32500	-.33900
1.035	8.250	.42300	-.27700	.11100	-.01100	.00700	-.00100	-.26900	-.27400	-.30200	-.33200
	GRADIENT	.03421	-.02436	-.00131	.00005	-.00005	-.00010	.00038	-.00039	-.00208	-.00159

RUN NO. 160/ 0 RN/L = 7.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.089	-8.090	-.11600	.11800	.16100	-.00900	.00700	-.00100	-.38100	-.38700	-.41200	-.42700
1.089	-6.050	-.03800	.06000	.15500	-.01300	.01000	-.00200	-.36700	-.37800	-.39500	-.41300
1.089	-4.020	.04100	.00200	.15300	-.00700	.00500	-.00100	-.35600	-.37000	-.37700	-.39400
1.089	-1.980	.12700	-.06100	.15300	-.01000	.00800	-.00200	-.35200	-.35600	-.38000	-.39300
1.089	.110	.21200	-.12400	.15100	-.01200	.00700	-.00300	-.34500	-.34800	-.38100	-.40200
1.089	2.200	.29500	-.18400	.14700	-.01300	.01000	-.00300	-.34300	-.34300	-.39300	-.39600
1.089	4.230	.37000	-.23700	.14000	-.01200	.01000	-.00300	-.33000	-.33500	-.41700	-.40400
1.089	6.250	.43200	-.28100	.13500	-.01300	.01000	-.00300	-.31900	-.32100	-.41900	-.42400
1.089	8.290	.47300	-.30700	.12700	-.01600	.01100	-.00300	-.32500	-.30500	-.42800	-.44200
	GRADIENT	.03034	-.02906	-.00155	-.00063	.00058	-.00024	.00295	.00401	-.00449	-.00111

FA25, MSFC TWT 652, CONFIG. 02ATPTTISI (0) (R1X001) (31 OCT 78)

REFERENCE DATA

SREF = 2600.0000 SQ.FT. XMRP = 376.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 170/ 0 RN/L = 7.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.138	-8.090	-.10600	.11500	.17000	-.00900	.00900	-.00200	-.42700	-.42200	-.45600	-.46200
1.138	-6.060	-.01000	.04100	.16900	-.01100	.00800	-.00300	-.41400	-.41100	-.43300	-.44500
1.138	-4.020	.07400	-.02200	.16600	-.01200	.01000	-.00200	-.40400	-.40200	-.40700	-.42600
1.138	-1.950	.15500	-.08100	.16800	-.01500	.01200	-.00400	-.39200	-.39900	-.39300	-.41400
1.138	.110	.23000	-.13500	.16600	-.01400	.01000	-.00400	-.39500	-.40500	-.39300	-.42500
1.138	2.200	.30700	-.18900	.16300	-.01800	.01300	-.00500	-.39100	-.39500	-.38700	-.41900
1.138	4.230	.37700	-.24000	.15700	-.01700	.01200	-.00500	-.38400	-.38700	-.42600	-.42600
1.138	6.250	.44000	-.28600	.14900	-.02000	.01400	-.00600	-.37000	-.37400	-.44600	-.44900
1.138	8.300	.49800	-.32500	.14600	-.01600	.01300	-.00500	-.37200	-.36600	-.45300	-.47400
	GRADIENT	.03671	-.02634	-.00111	-.00063	.00024	-.00034	.00198	.00165	-.00153	-.00024

RUN NO. 180/ 0 RN/L = 8.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.242	-8.070	-.10300	.11300	.17200	-.00500	.00400	.00000	-.35700	-.35000	-.39400	-.40600
1.242	-6.050	-.03400	.06300	.17500	-.01000	.00900	-.00200	-.36000	-.35200	-.39600	-.40100
1.242	-4.029	.04000	.00800	.17600	-.01100	.00900	-.00200	-.35900	-.34800	-.38700	-.38300
1.242	-1.950	.12000	-.05100	.17200	-.00700	.00900	-.00100	-.34700	-.33400	-.37500	-.37600
1.242	.080	.20200	-.11300	.17000	-.01500	.01400	-.00400	-.33900	-.32700	-.35900	-.38700
1.242	2.170	.27300	-.16300	.16800	-.00900	.00900	-.00300	-.34200	-.33100	-.37000	-.38600
1.242	4.200	.34100	-.21200	.16500	-.01100	.00900	-.00300	-.33400	-.32400	-.39700	-.39100
1.242	6.240	.40100	-.25500	.16100	-.01600	.01200	-.00500	-.32800	-.31100	-.41200	-.41400
1.242	8.300	.44900	-.28800	.15600	-.01500	.01300	-.00500	-.31200	-.30000	-.40900	-.42200
	GRADIENT	.03667	-.02681	-.00126	-.00609	.00005	-.00019	.00257	.00248	-.00072	-.00126

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 02ATPTTIS1 (0) (R1X002) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 190/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.601	-8.040	.24300	-.17200	.05100	.15500	-.10200	.05800	-.17700	-.23200	-.23800	-.17700
.601	-6.030	.23500	-.16500	.05500	.11700	-.07500	.04400	-.15800	-.23700	-.23700	-.17000
.601	-4.029	.22300	-.15600	.05700	.07400	-.04800	.02800	-.14500	-.23500	-.22300	-.17800
.601	-2.020	.21400	-.14900	.05900	.03100	-.01800	.01300	-.14100	-.22700	-.21100	-.20500
.601	.040	.20700	-.14200	.05800	-.00900	.00700	-.00100	-.13000	-.23100	-.17500	-.21000
.601	2.030	.21400	-.14900	.06100	-.04400	.02100	-.01300	-.13800	-.21400	-.17500	-.24700
.601	4.050	.21500	-.15200	.05800	-.08100	.05300	-.02700	-.15200	-.23300	-.17100	-.25500
.601	6.080	.21000	-.15000	.05870	-.12500	.08400	-.04200	-.16900	-.25500	-.17900	-.27900
.601	8.120	.20000	-.14400	.05800	-.16700	.11100	-.05600	-.16200	-.27100	-.17400	-.28900
	GRADIENT	-.00080	.00040	.00025	-.01905	.01242	-.00673	-.00054	.00084	.00669	-.00969

RUN NO. 200/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.798	-8.070	.27900	-.19600	.06100	.16600	-.11000	.06200	-.19100	-.24800	-.26100	-.17400
.798	-6.030	.26600	-.19100	.05100	.12100	-.08000	.04600	-.16800	-.24100	-.23500	-.15000
.798	-4.040	.25900	-.18400	.06300	.07600	-.04900	.03000	-.15500	-.22700	-.22200	-.17100
.798	-2.020	.25000	-.17700	.06200	.03200	-.02000	.01200	-.14500	-.22900	-.21000	-.19300
.799	.020	.23600	-.16100	.06300	-.00700	.00600	-.00100	-.13800	-.22700	-.18400	-.20900
.799	2.040	.25200	-.17900	.05700	-.04500	.03000	-.01400	-.15400	-.22100	-.16500	-.23900
.799	4.060	.25500	-.18300	.05700	-.08700	.05900	-.02800	-.17000	-.22700	-.17000	-.24500
.799	6.100	.25200	-.18200	.06500	-.13300	.09100	-.04500	-.18900	-.24100	-.17300	-.26900
.799	8.120	.24000	-.17600	.06000	-.17300	.11600	-.06100	-.18400	-.26300	-.17100	-.29800
	GRADIENT	-.00080	.00000	.00074	-.01985	.01310	-.00699	-.00182	.00039	.00536	-.00951

RUN NO. 210/ 0 RN/L = 5.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.896	-8.090	.27000	-.18600	.08100	.15600	-.10000	.06200	-.22200	-.28400	-.28500	-.18300
.896	-6.040	.26500	-.18300	.07900	.11600	-.07400	.04700	-.20600	-.26600	-.26600	-.17400
.895	-4.029	.26400	-.18400	.08100	.07200	-.04600	.03000	-.19300	-.25100	-.25400	-.19600
.895	-2.010	.25200	-.17500	.07800	.03100	-.01800	.01500	-.17400	-.24300	-.24300	-.21100
.895	.070	.24200	-.16700	.07900	-.00400	.00200	.00100	-.18500	-.25100	-.23400	-.23900
.895	2.070	.25600	-.17700	.06400	-.03800	.02300	-.01200	-.19500	-.24700	-.22000	-.24100
.896	4.059	.26200	-.18400	.08600	-.07800	.05000	-.02700	-.22000	-.25100	-.21500	-.26900
.896	6.120	.25600	-.19000	.09800	-.12300	.08100	-.04400	-.23800	-.25900	-.20400	-.26600
.896	8.150	.24200	-.17000	.09000	-.16600	.10900	-.06000	-.25200	-.26900	-.20200	-.31100
	GRADIENT	-.00002	-.00009	.00079	-.01820	.01149	-.00695	-.00369	-.00020	.00498	-.00967

FA25, MSFC TWT 652, CONFIG. 02ATPTTISI (0) (R1X002) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 220/ 0 RN/L = 6.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.949	-9.120	.26300	-.17[illegible]00	.10200	.16000	-.10300	.06600	-.26400	-.31300	-.30600	-.20200
.949	-6.070	.25500	-.17300	.09[illegible]	.11300	-.07100	.04800	-.23400	-.30500	-.28800	-.20200
.949	-4.050	.24600	-.16600	.09000	.07200	-.04400	.03200	-.22700	-.29300	-.26700	-.21600
.949	-2.010	.22600	-.15000	.09700	.03200	-.01900	.01600	-.20100	-.28300	-.25100	-.24000
.949	.060	.21100	-.13600	.10000	-.00600	.00400	.00000	-.20100	-.27900	-.23300	-.25100
.949	2.070	.22700	-.15100	.10300	-.03900	.02400	-.01200	-.22800	-.26800	-.22900	-.27100
.949	4.100	.24000	-.16200	.10700	-.07600	.04700	-.02600	-.24600	-.27400	-.21300	-.28000
.949	6.130	.23500	-.15900	.11300	-.12300	.08000	-.04400	-.29400	-.29400	-.22400	-.31400
.949	8.160	.22400	-.15300	.10900	-.16600	.10600	-.05900	-.28800	-.29000	-.20400	-.32900
	GRADIENT	-.00056	.00036	.00117	-.0[illegible]/09	.01103	-.00706	-.00316	.00260	.00647	-.00780

RUN NO. 230/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.150	.26700	-.17200	.12700	.15700	-.09500	.07200	-.28900	-.32700	-.35600	-.24800
1.047	-6.080	.25100	-.16000	.12400	.11200	-.06800	.05300	-.26400	-.32310	-.35400	-.24900
1.047	-4.069	.23400	-.14700	.12100	.07100	-.04200	.03500	-.24100	-.31100	-.34400	-.26600
1.047	-2.010	.21900	-.13500	.11900	.03100	-.01800	.01700	-.22700	-.30500	-.33200	-.29500
1.047	.060	.21200	-.12800	.12300	-.00700	.00600	.00000	-.24000	-.29400	-.31000	-.31100
1.047	2.090	.21800	-.13400	.12500	-.04300	.02800	-.01700	-.24700	-.30400	-.30100	-.32000
1.047	4.110	.21900	-.13500	.12900	-.08700	.05700	-.03500	-.27300	-.30900	-.27700	-.33900
1.047	6.150	.22[illegible]00	-.14300	.13200	-.12600	.07900	-.05400	-.28800	-.31400	-.27000	-.37100
1.047	8.190	.22400	-.14500	.13400	-.16600	.10300	-.07000	-.30700	-.32400	-.26100	-.39500
	GRADIENT	-.00152	.00123	.00107	-.01857	.01144	-.00850	-.00409	.00025	.00906	-.00836

RUN NO. 240/ 0 RN/L = 7.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.095	-8.160	.24400	-.15700	.15600	.17100	-.10500	.07600	-.36800	-.41500	-.41700	-.33100
1.095	-6.070	.25200	-.15400	.14800	.12300	-.07700	.05700	-.33200	-.38200	-.39600	-.32000
1.095	-4.069	.24300	-.14900	.14400	.08000	-.05000	.03800	-.30400	-.36800	-.39500	-.34800
1.095	-2.040	.22300	-.13900	.14300	.03700	-.02200	.01900	-.28900	-.35600	-.38800	-.36500
1.095	.020	.22400	-.13400	.14500	-.00300	.00300	.00000	-.29600	-.35100	-.37700	-.37800
1.095	2.050	.22500	-.13500	.14800	-.04000	.02600	-.01700	-.32200	-.35200	-.37000	-.39300
1.095	4.069	.22300	-.13400	.15100	-.08200	.05200	-.03500	-.33500	-.36000	-.34100	-.40700
1.095	6.130	.22300	-.13700	.15000	-.12600	.07900	-.05400	-.34100	-.37100	-.32600	-.42300
1.095	8.180	.21[illegible]00	-.14[illegible]00	.1[illegible]400	-.16900	.10900	-.07[illegible]00	-.3[illegible]400	-.37200	-.3[illegible]000	-.43500
	GRADIENT	-.00211	.00167	.00093	-.01969	.01237	-.00894	-.00466	.00099	.00628	-.00717

FA25, MSFC TWT 652, CONFIG. O2ATPTTIS1 (0) (R1X002) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 250/ 0 RN/L = 7.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.144	-8.139	.25200	-.15500	.16000	.17000	-.10600	.07300	-.38800	-.44900	-.44000	-.39200
1.144	-6.090	.24400	-.15200	.15500	.12200	-.07600	.05300	-.35800	-.42700	-.42900	-.37100
1.144	-4.069	.23500	-.14500	.15400	.07500	-.04600	.03400	-.33900	-.42200	-.42000	-.37700
1.144	-2.030	.22000	-.13300	.15200	.03500	-.02100	.01700	-.32600	-.41400	-.40500	-.36600
1.144	.020	.21400	-.12700	.15600	-.00800	.00700	-.00200	-.34800	-.41200	-.38400	-.39400
1.144	2.060	.21400	-.12900	.15600	-.04900	.03100	-.01900	-.35100	-.40900	-.37800	-.40600
1.144	4.100	.21100	-.12500	.16000	-.09200	.05200	-.03600	-.37900	-.42400	-.36900	-.42600
1.144	6.140	.20900	-.12600	.16400	-.13800	.08600	-.05500	-.38600	-.43200	-.36000	-.45400
1.144	8.180	.20200	-.12300	.16200	-.18200	.11500	-.07300	-.39700	-.44500	-.35500	-.48100
	GRADIENT	-.00264	.00220	.00098	-.02041	.01283	-.00862	-.00514	.00005	.00632	-.00578

RUN NO. 250/ 0 RN/L = 8.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.242	-8.139	.25500	-.16100	.15300	.16700	-.10500	.07200	-.31500	-.34600	-.40300	-.31000
1.242	-6.070	.24500	-.15200	.15900	.12000	-.07500	.05200	-.31400	-.33600	-.39900	-.30500
1.242	-4.069	.23500	-.14600	.15400	.07600	-.04800	.03400	-.31100	-.32600	-.39700	-.30900
1.242	-2.040	.22700	-.13800	.14900	.03400	-.02000	.01600	-.27800	-.32000	-.36500	-.32700
1.242	.040	.22200	-.13600	.15200	-.00600	.00500	-.00100	-.28500	-.32100	-.34500	-.34000
1.242	2.060	.21800	-.13200	.15600	-.04400	.02900	-.01700	-.30300	-.32500	-.33600	-.35700
1.242	4.090	.21400	-.12800	.15900	-.08600	.05600	-.03500	-.32000	-.33700	-.32700	-.37500
1.242	6.130	.21000	-.13000	.15600	-.12900	.08300	-.05300	-.32200	-.34600	-.31500	-.40000
1.242	8.180	.20100	-.12500	.15600	-.17500	.11100	-.07100	-.33600	-.36000	-.31500	-.42700
	GRADIENT	-.00250	.00206	.00093	-.01969	.01259	-.00837	-.00210	-.00132	.00730	-.00803

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0) (R1X003) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 350/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.050	-.04100	.04700	.08600	-.01000	.01000	-.00200	-.15200	-.20900	-.23100	-.24700
.600	-6.000	.02000	-.01000	.08800	-.01400	.00900	-.00300	-.14700	-.19500	-.21400	-.22300
.600	-4.000	.08000	-.05000	.08800	-.01200	.00900	-.00200	-.14400	-.19300	-.20100	-.20600
.600	-1.960	.14100	-.09100	.08500	-.01900	.01400	-.00400	-.14000	-.17900	-.19300	-.19900
.600	.100	.20500	-.13500	.08100	-.01400	.01000	-.00400	-.13600	-.18200	-.19300	-.19900
.600	2.110	.26900	-.18000	.08000	-.01500	.01200	-.00400	-.13700	-.18200	-.19400	-.19900
.600	4.130	.33100	-.22300	.07500	-.01900	.01400	-.00500	-.13400	-.17000	-.19300	-.20400
.600	6.150	.39200	-.26600	.06900	-.01100	.00900	-.00300	-.13900	-.16600	-.21900	-.22400
.600	8.170	.45400	-.30900	.06000	-.01200	.01100	-.00300	-.14200	-.15600	-.23600	-.24000
	GRADIENT	.03099	-.02140	-.00153	-.00049	.00039	-.00030	.00113	.00113	.00015	.00020

RUN NO. 360/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.798	-8.080	-.01100	.01100	.09900	-.01400	.01100	-.00400	-.16900	-.22700	-.22500	-.24600
.799	-5.990	.05000	-.03200	.09700	-.01300	.00900	-.00300	-.16000	-.21300	-.20400	-.22100
.798	-4.000	.11500	-.07700	.09500	-.01500	.01100	-.00300	-.15600	-.22200	-.19200	-.19900
.798	-1.940	.17700	-.11900	.09200	-.01600	.01200	-.00400	-.14900	-.21500	-.18400	-.19700
.798	.110	.24500	-.16600	.08900	-.01500	.01100	-.00400	-.14700	-.20500	-.18500	-.20300
.798	2.130	.31200	-.21200	.08600	-.01500	.01200	-.00300	-.14300	-.19500	-.17900	-.20300
.798	4.150	.37500	-.25600	.08000	-.01200	.00900	-.00400	-.14200	-.19000	-.17900	-.20500
.798	6.240	.43500	-.29700	.07800	-.01500	.01000	-.00500	-.14200	-.19500	-.18700	-.21200
.798	8.260	.47200	-.32100	.07500	-.01300	.01000	-.00300	-.13700	-.20000	-.21000	-.22300
	GRADIENT	.03212	-.02212	-.00176	.00034	-.00020	-.00005	.00167	.00412	.00152	-.00088

RUN NO. 370/ 0 RN/L = 5.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.889	-8.080	-.03400	.03300	.11900	-.01100	.00700	-.00300	-.20900	-.28400	-.25800	-.28500
.889	-5.980	.03600	-.01900	.11400	-.01300	.00800	-.00300	-.19900	-.25100	-.23900	-.25900
.889	-3.990	.10700	-.06900	.11200	-.01200	.00900	-.00100	-.19600	-.24000	-.22700	-.24100
.889	-1.950	.17900	-.11900	.11200	-.01000	.00700	-.00100	-.18900	-.23800	-.20600	-.23300
.889	.140	.25400	-.17000	.10900	-.00700	.00300	-.00100	-.18400	-.23800	-.20700	-.22100
.889	2.170	.32600	-.21900	.10500	-.00900	.00500	-.00300	-.18300	-.25100	-.21700	-.22700
.889	4.200	.37800	-.25500	.10100	-.01100	.00700	-.00200	-.16100	-.23500	-.20200	-.21500
.889	6.230	.43200	-.29100	.10000	-.01500	.01000	-.00200	-.17100	-.24200	-.23400	-.25400
.889	8.270	.46100	-.31100	.09800	-.01400	.00900	-.00300	-.16800	-.22700	-.24400	-.26500
	GRADIENT	.03302	-.02303	-.00141	.00015	-.00030	-.00020	.00370	-.00015	.00141	.00283

DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0)

(R1X003) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT.
LREF = 1290.3000 INCHES
BREF = 1290.3000 INCHES
SCALE = .0040

XMRP = 976.0000 IN. XT
YMRP = .0000 IN. YT
ZMRP = 400.0000 IN. ZT

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
CB-ELV = 10.000 STINGS = 3.000

RUN NO. 390/ 0 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.944	-8.110	-.04800	.05200	.15300	-.01400	.01100	-.00300	-.28100	-.32000	-.29000	-.26900
.944	-6.010	.02700	.00000	.14800	-.01300	.00800	-.00200	-.27800	-.30700	-.27700	-.25500
.944	-4.010	.09300	-.05000	.14500	-.01400	.01000	-.00200	-.28200	-.28700	-.26100	-.24900
.944	-1.970	.17000	-.10500	.14400	-.01700	.01200	-.00300	-.27700	-.26400	-.24300	-.23700
.944	.110	.23000	-.14800	.12900	-.01100	.00700	-.00200	-.21500	-.28000	-.23700	-.24200
.944	2.140	.30200	-.19900	.12100	-.01100	.00700	-.00300	-.19500	-.28000	-.24400	-.24300
.944	4.180	.37300	-.24900	.11400	-.01100	.00600	-.00200	-.19000	-.26900	-.25000	-.24300
.944	6.250	.41800	-.27900	.11500	-.01300	.00900	-.00300	-.19100	-.26000	-.25500	-.25700
.944	8.270	.44400	-.29500	.11100	-.01200	.00700	-.00300	-.19100	-.26000	-.27400	-.27300
	GRADIENT	.03377	-.07396	-.00415	.00059	-.00064	.00000	.01295	.00097	.00103	.00029

RUN NO. 330/ 0 RN/L = 6.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.046	-8.070	-.06700	.07900	.17700	-.01100	.00900	-.00100	-.31400	-.31100	-.36500	-.33800
1.046	-5.990	.00400	.02600	.17300	-.01000	.00900	-.00200	-.31200	-.29700	-.33600	-.32000
1.046	-3.980	.07700	-.02500	.17000	-.01200	.01000	-.00200	-.30800	-.28500	-.30700	-.29900
1.046	-1.940	.15500	-.08200	.16900	-.01500	.01100	-.00300	-.31700	-.26700	-.31400	-.31100
1.046	.150	.27400	-.13000	.16600	-.01200	.00900	-.00300	-.30500	[illegible]	-.31100	-.30800
1.046	2.170	.30400	-.19300	.16000	-.01600	.01200	-.00[illegible]	-.29300	[illegible]	-.31600	-.31300
1.046	4.190	.36200	-.23100	.15300	-.01400	.00900	-.00400	-.25400	-.31600	-.32100	-.31200
1.046	6.251	.42300	-.27400	.14900	-.01200	.00800	-.00300	-.26500	-.31000	-.34600	-.34900
1.046	8.260	.45000	-.29200	.14000	-.01400	.01000	-.00200	-.24400	-.26900	-.35500	-.35300
	GRADIENT	.02[illegible]	-.02544	-.00200	-.00024	-.00005	-.00024	.00644	-.00415	-.00146	-.00137

RUN NO. 400/ 0 RN/L = 7.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.094	-8.070	-.03600	.10900	.19300	-.00900	.00900	-.00100	-.36300	-.37300	-.41900	-.40400
1.094	-6.010	-.01800	.05000	.18900	-.01200	.00900	-.00200	-.35900	-.35200	-.39800	-.38800
1.094	-3.990	.06200	-.00800	.18600	-.01200	.00900	-.00200	-.34700	-.33100	-.37500	-.36700
1.094	-1.940	.15100	-.07400	.18900	-.01200	.01000	-.00300	-.35700	-.32100	-.37200	-.37100
1.094	.170	.24000	-.13900	.18600	-.01300	.00900	-.00300	-.36400	-.32100	-.37400	-.38300
1.094	2.160	.31600	-.19600	.18200	-.01400	.01200	-.00300	-.35300	-.31900	-.36900	-.37700
1.094	4.200	.39200	-.24900	.17400	-.01400	.01000	-.00300	-.33200	-.32200	-.38600	-.38500
1.094	6.260	.45400	-.29400	.16900	-.01300	.00900	-.00300	-.31100	-.32400	-.40200	-.41400
1.094	8.300	.49800	-.32500	.16100	-.01000	.00800	-.00100	-.31100	-.31300	-.41500	-.44000
	GRADIENT	.04039	-.02950	-.00151	-.00029	.00020	-.00010	.00165	.00099	-.00093	-.00205

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0) (R1X003) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 410/ 0 RN/L = 7.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.144	-8.080	-.07200	.09400	.20200	-.00900	.00800	-.00100	-.40900	-.40100	-.46000	-.43100
1.144	-6.020	.01700	.02400	.20100	-.00900	.01000	-.00200	-.40100	-.38200	-.44100	-.42100
1.144	-3.980	.10000	-.03900	.19900	-.01400	.01000	-.00300	-.39300	-.36600	-.41400	-.40500
1.144	-1.920	.18300	-.09900	.20000	-.01300	.01100	-.00300	-.39300	-.36100	-.40500	-.39900
1.144	.170	.26300	-.15700	.19900	-.01500	.01000	-.00400	-.39300	-.36300	-.39800	-.40500
1.144	2.200	.33500	-.20800	.19800	-.01600	.01200	-.00400	-.39500	-.37200	-.39300	-.40300
1.144	4.240	.40100	-.25500	.18900	-.01700	.01200	-.00400	-.37600	-.39000	-.42100	-.41000
1.144	6.280	.45900	-.29700	.18400	-.01500	.01300	-.00400	-.36100	-.38400	-.43500	-.43300
1.144	8.330	.50900	-.33100	.17200	-.01600	.01100	-.00400	-.32200	-.36900	-.44400	-.46300
	GRADIENT	.03668	-.02642	-.00107	-.00044	.00024	-.00015	.00155	-.00286	-.00008	-.00068

RUN NO. 420/ 0 RN/L = 8.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.241	-8.090	-.07400	.09400	.19700	-.00800	.00700	-.00100	-.30600	-.31300	-.36400	-.37400
1.241	-6.010	.00100	.03600	.19500	-.00800	.00800	-.00180	-.29600	-.31000	-.35800	-.37200
1.241	-3.990	.07400	-.01700	.19400	-.01000	.00700	-.00200	-.30000	-.30900	-.35200	-.35200
1.241	-1.940	.15400	-.07600	.19400	-.01100	.00900	-.00300	-.29700	-.30400	-.34100	-.34500
1.241	.120	.23600	-.13800	.19200	-.01100	.00500	-.00300	-.29900	-.29300	-.33000	-.34700
1.241	2.150	.30500	-.18500	.19300	-.01100	.01200	-.00300	-.30000	-.30100	-.32500	-.34500
1.241	4.190	.37000	-.23300	.18700	-.01400	.01100	-.00400	-.29500	-.29500	-.34300	-.35500
1.241	6.250	.42500	-.27300	.17800	-.01500	.01200	-.00400	-.28500	-.28600	-.36000	-.38300
1.241	8.310	.46500	-.30100	.17000	-.01500	.01200	-.00400	-.25400	-.26500	-.37500	-.41000
	GRADIENT	.03634	-.02646	-.00073	-.00039	.00054	-.00020	.00034	.00152	.00167	-.00029

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0) (R1X004) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 340/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.040	.24400	-.16700	.07800	.15900	-.10500	.05800	-.17400	-.19900	-.26800	-.18800
.600	-6.030	.23500	-.16300	.07900	.12400	-.08200	.04400	-.16300	-.19400	-.24800	-.17500
.600	-4.010	.22400	-.15300	.08100	.07800	-.05100	.02800	-.15500	-.19100	-.23400	-.18400
.600	-1.970	.20500	-.13600	.08400	.03300	-.02200	.01200	-.14500	-.18000	-.21200	-.19700
.600	.060	.20000	-.13300	.08100	-.00500	.00400	-.00100	-.15000	-.17800	-.19900	-.22700
.600	2.090	.20700	-.14000	.08000	-.04600	.03100	-.01500	-.14200	-.17100	-.17700	-.23800
.600	4.069	.21100	-.14500	.07900	-.09000	.06100	-.03000	-.14400	-.18200	-.17200	-.25500
.600	6.080	.21200	-.14800	.07900	-.13100	.08300	-.04[illegible]	-.15000	-.19200	-.17000	-.26900
.600	8.100	.20700	-.14800	.07500	-.17100	.11500	-.05800	-.16500	-.21600	-.17300	-.28100
	GRADIENT	-.00120	.00063	-.00039	-.02054	.01371	-.00708	.00124	.00134	.00787	-.00906

RUN NO. 330/ 0 RN/L = 4.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.800	-8.070	.28900	-.19900	.08600	.16700	-.11100	.06000	-.18400	-.20800	-.27200	-.17600
.800	-6.010	.27700	-.19300	.08900	.12300	-.08100	.04500	-.17000	-.19700	-.25000	-.16600
.800	-4.029	.26700	-.18400	.09100	.08200	-.05400	.03000	-.15900	-.18500	-.22700	-.16900
.800	-2.000	.25200	-.17100	.09100	.03600	-.02200	.01300	-.15200	-.19600	-.20600	-.17600
.800	.060	.23700	-.16200	.08600	-.01000	.00800	-.00200	-.14200	-.18900	-.18800	-.19500
.800	2.060	.24700	-.17000	.09000	-.04900	.03500	-.01600	-.15400	-.18700	-.18400	-.22600
.800	4.060	.25100	-.17500	.09100	-.09400	.06400	-.03100	-.15300	-.20400	-.17700	-.24200
.800	6.110	.24700	-.17300	.08900	-.13700	.09300	-.04600	-.16600	-.21500	-.17600	-.26600
.800	8.129	.24400	-.17500	.08700	-.17900	.12100	-.05600	-.18800	-.23200	-.17500	-.29100
	GRADIENT	-.00184	.00095	-.00005	-.02159	.01448	-.00746	-.00058	-.00143	.00604	-.00968

RUN NO. 320/ 0 RN/L = 5.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.897	-8.070	.28500	-.19200	.10900	.16400	-.10700	.06200	-.20700	-.25500	-.28600	-.18800
.897	-6.040	.27700	-.18900	.10800	.11800	-.07600	.04500	-.19900	-.24700	-.26600	-.18700
.897	-4.050	.27600	-.18900	.10700	.07500	-.04700	.03000	-.17900	-.23400	-.23200	-.18000
.897	-2.010	.25900	-.17600	.10700	.03400	-.02100	.01500	-.18200	-.25100	-.23200	-.20000
.897	.040	.24500	-.16400	.10700	.00000	.00000	.00200	-.18100	-.25700	-.22500	-.21000
.897	2.070	.25400	-.17400	.10800	-.04200	.02700	-.01300	-.18500	-.23700	-.21700	-.24200
.897	4.080	.26200	-.18300	.11100	-.08000	.05200	-.02800	-.19700	-.24800	-.21300	-.26000
.897	6.100	.25500	-.17600	.11000	-.12300	.08100	-.04400	-.20700	-.27200	-.20400	-.27800
.897	8.150	.24700	-.17100	.11100	-.16800	.11100	-.05900	-.21500	-.27500	-.19700	-.30200
	GRADIENT	-.00163	.00099	.00044	-.01898	.01209	-.00708	-.00191	-.00069	.00261	-.00993

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0) (R1X004) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 310/ 0 RN/L = 6.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.947	-8.100	.27800	-.18400	.12800	.16700	-.10700	.06600	-.24100	-.30700	-.31100	-.19300
.947	-6.050	.26600	-.17800	.12400	.11900	-.07600	.04900	-.21000	-.26600	-.27900	-.18400
.947	-4.080	.25400	-.16900	.12900	.07800	-.04900	.03200	-.21800	-.29000	-.27700	-.20900
.947	-2.030	.23700	-.15500	.12400	.03700	-.02200	.01700	-.20900	-.27100	-.25900	-.22600
.947	.020	.22100	-.14200	.12600	-.00300	.00200	.00100	-.20500	-.29800	-.24500	-.23300
.947	.050	.23000	-.15000	.12400	-.04100	.02600	-.01300	-.19700	-.26600	-.23900	-.26300
.947	.100	.24000	-.15900	.12700	-.07700	.04800	-.02700	-.21000	-.27400	-.22300	-.28000
.947	6.150	.24000	-.16000	.12900	-.12300	.07900	-.04400	-.22400	-.29800	-.20400	-.29200
.947	8.160	.23300	-.15600	.12900	-.16600	.10700	-.05900	-.24200	-.33600	-.20600	-.31700
	GRADIENT	-.00172	.00123	-.00020	-.01898	.01184	-.00724	.00137	.00083	.00626	-.00875

RUN NO. 300/ 0 RN/L = 6.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.129	.28700	-.18000	.16500	.16600	-.10300	.07400	-.30900	-.32700	-.38500	-.25500
1.047	-6.070	.26700	-.16500	.16300	.12000	-.07400	.05500	-.29100	-.31500	-.37600	-.26000
1.047	-4.069	.25000	-.15300	.16100	.07900	-.04900	.03700	-.28800	-.28900	-.35500	-.27400
1.047	-2.030	.24000	-.14500	.16200	.03400	-.02000	.01800	-.30300	-.26600	-.33500	-.30000
1.047	.040	.22900	-.13800	.15800	-.00700	.00700	.00000	-.28500	-.27800	-.32700	-.31000
1.047	2.090	.22600	-.13600	.15100	-.04600	.03000	-.01800	-.23800	-.28800	-.30400	-.33400
1.047	4.110	.23000	-.14100	.15200	-.08600	.05500	-.03600	-.24300	-.30700	-.28400	-.34700
1.047	6.170	.23400	-.14500	.15300	-.12900	.08200	-.05300	-.25500	-.34000	-.27100	-.36800
1.047	8.190	.23300	-.14800	.15300	-.16900	.10600	-.06900	-.27100	-.34200	-.26000	-.38700
	GRADIENT	-.00264	.00162	-.00142	-.02002	.01260	-.00889	.00758	-.00283	.00944	-.00879

RUN NO. 290/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.099	-8.139	.28000	-.16900	.18600	.17800	-.11200	.07800	-.37000	-.39400	-.44400	-.33000
1.099	-6.070	.26800	-.16100	.18100	.13200	-.08300	.05900	-.34100	-.35600	-.42300	-.32100
1.099	-4.050	.25500	-.15300	.17900	.08600	-.05500	.04000	-.33100	-.33900	-.41000	-.34000
1.099	-2.020	.25000	-.14800	.18200	.04000	-.02400	.02000	-.35600	-.31000	-.39400	-.35500
1.099	.040	.24300	-.14300	.18500	-.00400	.00400	.00000	-.36800	-.31500	-.38800	-.37100
1.099	2.070	.24500	-.14700	.17700	-.04300	.02900	-.01800	-.34400	-.32200	-.37700	-.39500
1.099	4.090	.24300	-.14500	.17600	-.08600	.05600	-.03600	-.34300	-.32700	-.35500	-.40200
1.099	6.130	.23800	-.14300	.18000	-.13300	.08600	-.05500	-.33100	-.34308	-.33300	-.40700
1.099	8.170	.22600	-.13600	.18200	-.18200	.11600	-.07300	-.34900	-.39500	-.34100	-.43000
	GRADIENT	-.00143	.00084	-.00054	-.02096	.01350	-.00933	-.00060	.00059	.00623	-.00805

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0) (R1X004) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 280/ 0 RN/L = 7.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.147	-8.139	.27800	-.17200	.19000	.17800	-.11200	.07400	-.38100	-.41100	-.42900	-.34300
1.147	-6.080	.27100	-.16800	.18700	.12700	-.08000	.05400	-.36400	-.39000	-.41500	-.34000
1.147	-4.080	.26000	-.16200	.18300	.08100	-.05000	.03500	-.34300	-.38600	-.39600	-.34200
1.147	-2.020	.25200	-.15500	.18300	.03400	-.01900	.01600	-.35000	-.34700	-.38100	-.35700
1.147	.040	.25000	-.15100	.18800	-.01100	.00900	-.00200	-.37000	-.34200	-.36500	-.37000
1.147	2.070	.24500	-.15000	.18100	-.05000	.03400	-.01900	-.33600	-.35300	-.36300	-.39100
1.147	4.090	.24200	-.14900	.18300	-.09600	.06300	-.03700	-.33700	-.36100	-.35300	-.40900
1.147	6.150	.23800	-.14700	.18400	-.14200	.09200	-.05500	-.34500	-.37700	-.34000	-.42300
1.147	8.200	.23100	-.14500	.18200	-.18900	.12100	-.07300	-.34800	-.40500	-.32500	-.43900
	GRADIENT	-.00211	.00152	-.00010	-.02144	.01366	-.00876	.00125	.00021	.00510	-.00822

RUN NO. 270/ 0 RN/L = 8.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.244	-8.139	.27200	-.16900	.19000	.17400	-.11100	.07300	-.33700	-.34200	-.40300	-.30600
1.244	-6.070	.26500	-.16300	.19000	.12600	-.08000	.05400	-.33200	-.32700	-.39700	-.30600
1.244	-4.069	.25400	-.15500	.19100	.08000	-.05000	.03500	-.32000	-.31200	-.38700	-.31400
1.244	-2.040	.24400	-.14800	.18700	.03500	-.02100	.01600	-.31500	-.29700	-.36800	-.32800
1.244	.040	.24100	-.14500	.18800	-.00700	.00600	-.00100	-.31900	-.29100	-.34000	-.34700
1.244	2.070	.23700	-.14300	.18600	-.04900	.03300	-.01800	-.30400	-.30100	-.33200	-.36600
1.244	4.090	.23400	-.14100	.18500	-.09200	.06200	-.03500	-.30100	-.31100	-.32600	-.38300
1.244	6.130	.22900	-.14000	.18400	-.13900	.09200	-.05400	-.31000	-.32800	-.32300	-.39900
1.244	8.200	.22100	-.13700	.18300	-.18600	.12100	-.07200	-.31100	-.34700	-.31200	-.42000
	GRADIENT	-.00230	.00162	-.00054	-.02095	.01361	-.00852	.00239	-.00009	.00774	-.00862

DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (0)

(R1X005) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 503/ 0 RN/L = 2.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.050	-.02000	.02500	.08400	.00100	-.00300	.00000	-.14200	-.17100	-.23300	-.25100
.600	-5.980	.04000	-.01500	.08500	-.00600	.00100	.00000	-.13400	-.16300	-.20800	-.22200
.600	-3.990	.09200	-.05700	.08600	-.00400	.00500	.00000	-.13000	-.16200	-.19400	-.20100
.600	-1.970	.14900	-.09600	.08300	-.00800	.00600	.00000	-.12900	-.15700	-.18300	-.20100
.600	.090	.21100	-.13200	.08100	-.00900	.00700	-.00100	-.12400	-.14900	-.17800	-.20000
.600	2.110	.27200	-.18000	.07700	-.01400	.01100	-.00200	-.12700	-.14800	-.17500	-.19800
.600	4.120	.33900	-.22600	.07200	-.01600	.01000	-.00300	-.12500	-.14600	-.17800	-.19800
.600	6.160	.40300	-.27000	.06600	-.00600	.00500	.00000	-.12200	-.14300	-.19400	-.20800
.600	8.180	.46300	-.31300	.05900	-.01200	.00700	-.00100	-.12400	-.14000	-.21800	-.22500
	GRADIENT	.03039	-.02079	-.00167	-.00148	.00074	-.00039	.00059	.00202	.00197	.00044

RUN NO. 491/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.797	-8.020	.00000	.00300	.09700	-.01400	.01000	-.00400	-.16000	-.19200	-.23800	-.24700
.797	-5.960	.06100	-.03900	.09700	-.01300	.01100	-.00300	-.15400	-.18700	-.22000	-.22600
.797	-3.950	.12400	-.08300	.09400	-.01400	.01000	-.00300	-.14700	-.19500	.20000	-.20400
.797	-1.940	.18600	-.12500	.09300	-.01700	.01200	-.00400	-.14500	-.19300	-.19100	-.20500
.797	.140	.25200	-.17100	.08700	-.01500	.01200	-.00300	-.14500	-.18500	-.18700	-.20400
.797	2.160	.32300	-.21900	.08600	-.01600	.01200	-.00400	-.14300	-.19200	-.18600	-.20500
.797	4.190	.38500	-.26200	.08000	-.01500	.01200	-.00400	-.13900	-.18600	-.18500	-.20100
.797	6.220	.44400	-.30400	.07600	-.01200	.00700	-.00400	-.13600	-.18800	-.19700	-.21300
.797	8.240	.48500	-.33900	.07000	-.01500	.01000	-.00300	-.13700	-.19200	-.21800	-.22500
	GRADIENT	.03[illegible]	-.02218	-.00172	-.00005	.00020	-.00010	.00088	.00103	.00172	.00029

RUN NO. 481/ 0 RN/L = 5.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.897	-8.040	-.01500	.01900	.12600	-.01200	.00900	-.00200	-.25500	-.26300	-.24700	-.24800
.897	-5.960	.05700	-.03400	.12200	-.01200	.00900	-.00100	-.25400	-.24600	-.23100	-.23500
.897	-3.940	.12400	-.08100	.11800	-.01500	.01100	-.00100	-.23400	-.22600	-.21700	-.21400
.897	-1.920	.19300	-.12800	.11500	-.01100	.00700	-.00100	-.22000	-.23000	-.21200	-.21700
.897	.160	.26400	-.17900	.11100	-.01200	.00700	-.00200	-.20400	-.22500	-.20000	-.20100
.897	2.180	.33000	-.22400	.10700	-.00900	.00500	-.00100	-.17600	-.24000	-.19400	-.19400
.897	4.210	.38600	-.24700	.10000	-.01000	.00400	-.00200	-.17000	-.24400	-.19800	-.20100
.897	6.270	.41500	-.28100	.09500	-.01300	.00700	-.00300	-.16100	-.21900	-.20900	-.21500
.897	8.290	.44900	-.30300	.09500	-.01200	.00800	-.00300	-.16400	-.21700	-.23300	-.23400
	GRADIENT	.03050	-.02102	-.00241	.00059	-.00078	-.00010	.00045	-.00226	.00275	.00241

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 471/ 0 RN/L = 5.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.947	-8.059	-.03700	.04300	.14400	-.01700	.01200	-.00400	-.29500	-.29100	-.26900	-.26100
.947	-5.990	.03100	-.00700	.14300	-.01500	.01000	-.00300	-.29600	-.26800	-.25100	-.24200
.947	-3.990	.09900	-.05500	.13900	-.01300	.00800	-.00200	-.28500	-.25000	-.23500	-.22600
.947	-1.950	.16800	-.10500	.13500	-.01500	.01000	-.00200	-.26600	-.25100	-.23000	-.23000
.947	.130	.23800	-.15400	.13000	-.01300	.00800	-.00200	-.25700	-.27000	-.23700	-.23700
.947	2.200	.30900	-.20500	.12100	-.00800	.00500	-.00200	-.22300	-.26300	-.21900	-.22000
.947	4.260	.37500	-.25100	.11400	-.01100	.00600	-.00100	-.20100	-.26200	-.23000	-.22200
.947	6.310	.41100	-.27600	.10900	-.01100	.00700	-.00200	-.19500	-.25900	-.23700	-.24000
.947	8.330	.43600	-.29100	.10500	-.01300	.00800	-.00300	-.16400	-.25000	-.26000	-.26500
	GRADIENT	.03366	-.02383	-.00310	.00053	-.00044	.00010	.01022	-.00174	.00102	.00087

RUN NO. 461/ 0 RN/L = 5.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.046	-8.030	-.05900	.07100	.17400	-.01300	.01000	-.00200	-.34100	-.28400	-.33400	-.32000
1.046	-5.990	.01200	.01900	.17000	-.01400	.01100	-.00300	-.34000	-.26800	-.30400	-.29900
1.046	-3.990	.08100	-.02800	.16900	-.01400	.01100	-.00300	-.33900	-.26000	-.28200	-.28400
1.046	-1.860	.15300	-.08000	.16500	-.01400	.01000	-.00300	-.31800	-.24700	-.27300	-.27300
1.046	.210	.23300	-.13800	.16100	-.01300	.01000	-.00300	-.31100	-.26200	-.29700	-.29700
1.046	2.230	.30000	-.18700	.15300	-.01400	.01100	-.00400	-.28100	-.29200	-.30200	-.30300
1.046	4.250	.35100	-.23000	.14500	-.01200	.00900	-.00300	-.25400	-.30000	-.30800	-.30700
1.046	6.310	.41400	-.27000	.14000	-.01400	.01000	-.00400	-.23900	-.26500	-.33200	-.32900
1.046	8.320	.44500	-.29000	.13300	-.01300	.00800	-.00200	-.23900	-.27100	-.34400	-.35300
	GRADIENT	.03468	-.02507	-.00294	.00020	-.00015	-.00005	.01014	-.00612	-.00398	-.00373

RUN NO. 451/ 0 RN/L = 7.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.097	-8.090	-.09200	.10300	.18700	-.01400	.00900	-.00300	-.35600	-.33500	-.38700	-.37300
1.097	-5.990	-.01500	.04700	.18500	-.01300	.00900	-.00200	-.37000	-.31800	-.37000	-.36000
1.097	-3.930	.06500	-.01200	.18300	-.00800	.00700	-.00100	-.37100	-.30600	-.34700	-.34200
1.097	-1.880	.14700	-.07200	.18100	-.01300	.01000	-.00200	-.37100	-.30[illegible]00	-.35000	-.34400
1.097	.210	.23200	-.13400	.17800	-.01300	.00900	-.00300	-.36200	-.30100	-.35300	-.34200
1.097	2.220	.30900	-.19000	.17400	-.01300	.01000	-.00300	-.35100	-.30600	-.35200	-.35000
1.097	4.260	.38000	-.24100	.16600	-.01400	.01100	-.00400	-.31200	-.32400	-.38300	-.36600
1.097	6.330	.43900	-.28300	.15900	-.01300	.00900	-.00300	-.29500	-.31700	-.39900	-.36600
1.097	8.320	.46800	-.30200	.14500	-.01500	.01100	-.00200	-.27000	-.29300	-.39800	-.38000
	GRADIENT	.03968	-.02813	-.00200	-.00059	.00039	-.00034	.00573	-.00199	-.00361	-.00263

DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (0)

(R1X005) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 441/ 0 RN/L = 7.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.145	-8.040	-.08700	.10600	.19700	-.01900	.01500	-.00500	-.40700	-.38000	-.41000	-.40300
1.145	-5.980	.00600	.03300	.19500	-.02400	.01900	-.00600	-.40500	-.36100	-.39200	-.39400
1.145	-3.980	.09500	-.03300	.19700	-.02500	.02100	-.00700	-.40400	-.34900	-.36700	-.37700
1.145	-1.910	.17000	-.09600	.19300	-.02300	.01900	-.00700	-.39300	-.34600	-.36000	-.37600
1.145	.150	.25400	-.15100	.18900	-.02400	.01800	-.00800	-.37900	-.35300	-.36600	-.37900
1.145	2.180	.32700	-.20300	.18800	-.02200	.01700	-.00700	-.37400	-.35800	-.36600	-.38000
1.145	4.270	.39200	-.25000	.17600	-.02200	.01600	-.00700	-.33700	-.37600	-.39700	-.39900
1.145	6.350	.45000	-.29100	.17000	-.02300	.01600	-.00700	-.32300	-.37200	-.42200	-.41800
1.145	8.390	.49900	-.32300	.16900	-.02300	.01800	-.00700	-.32200	-.36000	-.43000	-.44400
	GRADIENT	.03604	-.02627	-.00229	.00034	-.00058	-.00000	.00744	-.00321	-.00292	-.00136

RUN NO. 431/ 0 RN/L = 8.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.245	-8.040	-.07600	.09600	.19400	-.01000	.00800	-.00200	-.31900	-.29700	-.35200	-.34900
1.245	-5.940	.00200	.03600	.19400	-.00700	.00800	-.00100	-.31800	-.29900	-.35100	-.34600
1.245	-3.920	.07900	-.02100	.19200	-.00700	.00600	-.00100	-.31700	-.29700	-.33900	-.32500
1.245	-1.980	.15300	-.07500	.19100	-.00700	.00700	-.00200	-.29900	-.28300	-.31700	-.30200
1.245	.210	.23200	-.13500	.18700	-.01000	.00700	-.00300	-.30200	-.28900	-.32200	-.31200
1.245	2.210	.30100	-.18400	.18500	-.01200	.00900	-.00400	-.29500	-.29500	-.31900	-.31600
1.245	4.260	.36400	-.22800	.17900	-.01400	.01300	-.00400	-.27500	-.29700	-.34800	-.32300
1.245	6.320	.42000	-.27000	.17200	-.01500	.01200	-.00400	-.26600	-.28800	-.36300	-.34900
1.245	8.330	.46000	-.29600	.16200	-.01100	.00700	-.00300	-.24900	-.26500	-.37400	-.38300
	GRADIENT	.03511	-.02558	-.00156	-.00093	.00078	-.00039	.00430	-.00063	-.00097	-.00049

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OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1 (0) (R1XDCB) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
CB-ELV = 10.000 STINGS = 3.000

RUN NO. 720/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNC	CBLO	CPBO	CPBT	CPBLS	CPBRS
.897	-8.020	-.05600	.04800	.10200	-.01000	.00600	-.00200	-.18100	-.25100	-.25700	-.28100
.897	-5.990	.01000	.00000	.09900	-.01100	.00700	-.00200	-.17100	-.25100	-.23600	-.24600
.897	-3.990	.07800	-.04700	.09800	-.01000	.00700	-.00100	-.16400	-.23500	-.21900	-.22700
.897	-1.950	.15200	-.09900	.09500	-.01100	.00700	-.00200	-.16000	-.22600	-.20800	-.23100
.897	.140	.23100	-.15400	.09100	-.00900	.00600	-.00100	-.15800	-.22200	-.21100	-.22600
.897	2.160	.30700	-.20700	.09000	-.01300	.00700	-.00300	-.15100	-.21500	-.20300	-.21800
.897	4.200	.35800	-.24000	.09000	-.00900	.00600	.00000	-.15300	-.21800	-.20500	-.21100
.897	6.250	.40400	-.27200	.08800	-.01500	.00900	-.00300	-.15800	-.22500	-.21600	-.23500
.897	8.270	.43800	-.29400	.08800	-.01100	.00800	-.00300	-.15200	-.21200	-.22700	-.24100
	GRADIENT	.03490	-.02411	-.00103	.00000	-.00010	.00005	.00151	.00220	.00161	.00219

RUN NO. 710/ 0 RN/L = 8.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.049	-.09300	.10800	.18600	-.00700	.00700	-.00100	-.32000	-.31100	-.36900	-.36400
1.243	-6.010	-.01600	.04900	.18300	-.00900	.00800	-.00100	-.30600	-.31600	-.36500	-.35600
1.243	-3.980	.05900	-.00600	.18200	-.01200	.01000	-.00200	-.30500	-.32100	-.35300	-.33700
1.243	-1.920	.14100	-.06600	.18100	-.01400	.01200	-.00300	-.29300	-.31400	-.34300	-.33300
1.243	.140	.22000	-.12600	.17900	-.01200	.01200	-.00200	-.28700	-.30400	-.33300	-.33200
1.243	2.190	.29100	-.17700	.17700	-.01600	.01300	-.00300	-.28100	-.31500	-.32800	-.33500
1.243	4.220	.35600	-.22200	.17400	-.01200	.01100	-.00300	-.27600	-.31200	-.35700	-.34600
1.243	6.280	.40300	-.26100	.16600	-.01200	.00900	-.00400	-.25300	-.29400	-.36000	-.37000
1.243	8.290	.44900	-.28900	.16000	-.01600	.01200	-.00400	-.25000	-.27200	-.37000	-.38400
	GRADIENT	.03628	-.02648	-.00097	-.00010	.00015	-.00010	.00366	.00093	.00035	-.00097

FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1 (0) !R1X007! (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
CB-ELV = 10.000 STINGS = 3.000

RUN NO. 800/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-7.980	.23300	-.16100	.06600	.15000	-.09800	.05500	-.15700	-.21700	-.23900	-.15200
.600	-5.960	.22600	-.15500	.05900	.11200	-.07300	.04100	-.15200	-.20900	-.23200	-.14800
.600	-4.010	.21300	-.14600	.07200	.07300	-.04700	.02600	-.13700	-.20000	-.21500	-.15000
.600	-1.990	.19700	-.13400	.07300	.03200	-.01900	.01200	-.12700	-.20500	-.20900	-.17100
.600	.060	.18700	-.12600	.07300	.00000	.00000	.00000	-.12700	-.18600	-.19400	-.19300
.600	2.060	.18400	-.12400	.07500	-.03900	.02600	-.01300	-.13200	-.17300	-.18500	-.22600
.600	4.069	.18700	-.12800	.07300	-.07900	.05300	-.02700	-.14100	-.18000	-.18100	-.24700
.600	6.080	.18600	-.13100	.07300	-.12700	.08500	-.04300	-.14600	-.18300	-.17100	-.25500
.600	8.100	.18500	-.13400	.07200	-.16400	.10900	-.05500	-.16500	-.22100	-.17500	-.26500
	GRADIENT	-.00322	.00228	.00020	-.01856	.01213	-.00649	-.00054	.00357	.00456	-.01233

RUN NO. 790/ 0 RN/L = 4.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.799	-8.010	.27100	-.18900	.07400	.16600	-.11000	.06000	-.17100	-.22000	-.25000	-.16000
.799	-6.010	.26100	-.18300	.07800	.12100	-.09000	.04400	-.15400	-.20700	-.23100	-.14900
.799	-4.020	.25000	-.17400	.07900	.07700	-.05000	.02900	-.14500	-.20500	-.22200	-.16400
.799	-1.980	.23200	-.16100	.07700	.03100	-.01900	.01300	-.13400	-.19900	-.20700	-.18600
.799	.060	.21400	-.14500	.07900	-.00400	.00300	-.00100	-.13400	-.17300	-.18400	-.21200
.799	2.060	.22100	-.15000	.08500	-.04200	.02900	-.01400	-.13900	-.17700	-.16700	-.22400
.799	4.090	.22700	-.15800	.09300	-.08500	.05600	-.02900	-.15600	-.20000	-.17200	-.24500
.799	6.110	.22500	-.15900	.08300	-.12800	.08600	-.04300	-.15600	-.21600	-.16700	-.25900
.799	8.150	.22200	-.15900	.08100	-.17200	.11400	-.05900	-.17400	-.23600	-.17500	-.28700
	GRADIENT	-.00282	.00213	.00079	-.01960	.01283	-.00706	-.00133	.00169	.00591	-.00988

RUN NO. 730/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.070	.27500	-.18600	.09500	.16300	-.10500	.06300	-.20000	-.27400	-.28100	-.18000
.898	-6.040	.26700	-.18300	.09300	.11800	-.07600	.04600	-.17800	-.24600	-.25400	-.17200
.898	-4.029	.25800	-.17700	.09200	.07400	-.04600	.03000	-.16300	-.22900	-.23300	-.17800
.898	-2.010	.23300	-.16200	.09100	.03300	-.01900	.01500	-.15600	-.22500	-.22400	-.20200
.898	.060	.22400	-.14900	.09200	-.00300	.00100	.00000	-.15500	-.22500	-.21100	-.22100
.898	2.050	.23300	-.15700	.09300	-.04200	.02800	-.01400	-.16200	-.22400	-.20500	-.24000
.898	4.090	.23500	-.16000	.09300	-.08300	.05400	-.02800	-.17500	-.22500	-.19600	-.25500
.898	6.160	.23200	-.15900	.09900	-.12800	.08500	-.04500	-.19200	-.24300	-.18600	-.27900
.898	8.170	.22400	-.15600	.09800	-.16900	.11200	-.05900	-.20100	-.26900	-.18700	-.30000
	GRADIENT	-.00257	.00193	.00069	-.01916	.01217	-.00714	-.00148	.00034	.00458	-.00946

FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1 (0) (R1X007) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. X1
LREF = 1290.3000 INCHES YMRP = 0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 100.0000 IN. Z*
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 [illegible] 10.000
OB-ELV = 10.000 ST [illegible] 3.000

RUN NO. 730/ 0 RN/L = 6.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.070	.25700	-.16900	.11200	.16800	-.10700	.06600	-.22100	-.30700	-.29600	-.17900
.948	-5.050	.24700	-.16300	.10900	.11900	-.07600	.04900	-.20300	-.28900	-.28600	-.18800
.948	-4.240	.23500	-.15400	.10800	.07400	-.04600	.03100	-.19000	-.27200	-.28600	-.20700
.948	-2.010	.21300	-.13800	.10500	.03300	-.01900	.01600	-.17500	-.25800	-.24700	-.23000
.948	.060	.19600	-.12300	.10700	-.00200	.00100	.00000	-.17400	-.26800	-.22400	-.24400
.948	2.110	.20400	-.13000	.11000	-.03900	.02500	-.01300	-.18300	-.25900	-.21900	-.26000
.948	4.120	.21300	-.13800	.11700	-.08000	.05100	-.02800	-.20300	-.26700	-.21400	-.28300
.948	6.150	.21100	-.13800	.11500	-.12600	.08100	-.04500	-.21200	-.28000	-.20000	-.30800
.948	8.180	.20400	-.13500	.11900	-.16600	.10800	-.05900	-.22600	-.29900	-.18400	-.31600
	GRADIENT	-.00260	.00196	.00112	-.01859	.01164	-.00719	-.00166	.00044	.00546	-.00890

RUN NO. 770/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.049	-8.110	.26500	-.16500	.14100	.16500	-.10100	.07200	-.27100	-.32800	-.37900	-.24500
1.049	-6.050	.24200	-.14900	.14100	.11800	-.07300	.05300	-.26200	-.31100	-.36200	-.24300
1.049	-4.029	.22800	-.13800	.14300	.07600	-.04500	.03500	-.25500	-.30400	-.35100	-.26400
1.049	-1.980	.20400	-.12000	.13400	.03300	-.01900	.01700	-.21500	-.28500	-.37100	-.28600
1.049	.100	.19100	-.10800	.14000	-.00300	.00400	.00000	-.24500	-.30200	-.29400	-.30300
1.049	2.090	.20500	-.12100	.14100	-.04400	.03000	-.01800	-.24700	-.29000	-.28800	-.32600
1.049	4.120	.20800	-.12400	.14600	-.08400	.05400	-.03500	-.25500	-.28600	-.27200	-.34400
1.049	6.160	.21000	-.12800	.14600	-.12700	.08100	-.05200	-.27100	-.31100	-.27200	-.37900
1.049	8.230	.20500	-.12700	.14600	-.16600	.10300	-.06700	-.28900	-.32300	-.25700	-.39300
	GRADIENT	-.00194	.00135	.00064	-.01949	.01213	-.00859	-.00157	.00151	.00939	-.00982

RUN NO. 760/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.097	-8.139	.27500	-.16900	.16400	.17500	-.10900	.07800	-.33000	-.37800	-.42300	-.30000
1.097	-6.080	.26100	-.16100	.16200	.13000	-.08100	.05900	-.32500	-.35700	-.40600	-.29500
1.097	-4.040	.24800	-.15000	.16000	.08500	-.05300	.03900	-.30800	-.34500	-.39400	-.30600
1.097	-1.980	.23700	-.14200	.15900	.03900	-.02400	.01900	-.30100	-.32400	-.38700	-.33700
1.097	.080	.22300	-.13000	.15900	.00000	.00000	.00100	-.29800	-.32400	-.35600	-.35000
1.097	2.090	.22300	-.13100	.15900	-.04000	.02700	-.01700	-.29600	-.32300	-.34100	-.36300
1.097	4.120	.22500	-.13400	.16100	-.08400	.05500	-.03500	-.30500	-.33200	-.32900	-.38600
1.097	6.170	.22100	-.13300	.16100	-.12700	.08100	-.05400	-.31300	-.34300	-.32100	-.40200
1.097	8.240	.21600	-.13200	.16500	-.17000	.10500	-.07100	-.33600	-.36300	-.31500	-.42200
	GRADIENT	-.00295	.00212	.00010	-.02045	.01309	-.00902	.00054	.00133	.00663	-.00913

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FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1 (0) (R1X007) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 750/ 0 RN/L = 7.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.147	-8.110	.27200	-.17200	.16700	.17400	-.10800	.07300	-.34200	-.39900	-.40900	-.31600
1.147	-6.060	.26500	-.16700	.16600	.12500	-.07800	.05400	-.32600	-.37300	-.38900	-.30500
1.147	-4.060	.25200	-.15800	.16300	.07900	-.04800	.03500	-.31100	-.36000	-.38500	-.31600
1.147	-2.070	.24400	-.15100	.16500	.03200	-.01800	.01600	-.31800	-.34300	-.38100	-.34000
1.147	.060	.23000	-.14000	.16400	-.00700	.00700	.00000	-.31800	-.34000	-.35400	-.35100
1.147	2.070	.22700	-.13900	.16200	-.04600	.03100	-.01700	-.30500	-.36100	-.33700	-.36900
1.147	4.090	.22900	-.14100	.16600	-.09100	.05900	-.03500	-.31500	-.36700	-.33100	-.38500
1.147	6.150	.22400	-.13900	.16700	-.13600	.08800	-.05400	-.33500	-.37900	-.32800	-.40000
1.147	8.220	.21600	-.13500	.16500	-.18100	.11400	-.07100	-.33900	-.39900	-.31800	-.41700
	GRADIENT	-.00310	.00226	.00015	-.02050	.01290	-.00848	.00024	-.00156	.00746	-.00819

RUN NO. 740/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.120	.25400	-.15200	.17500	.17000	-.10600	.07300	-.29700	-.32800	-.37700	-.28100
1.243	-6.030	.24300	-.14600	.17700	.12300	-.07800	.05300	-.29600	-.31800	-.36200	-.27800
1.243	-4.029	.23000	-.13500	.17600	.07700	-.04800	.03400	-.28300	-.30500	-.35300	-.29100
1.243	-2.000	.22000	-.12900	.17500	.03200	-.01800	.01600	-.28000	-.28900	-.34700	-.30200
1.243	.080	.20400	-.11600	.17600	-.00700	.00600	-.00100	-.28300	-.29600	-.33100	-.32200
1.243	2.090	.20700	-.11900	.17500	-.04700	.04100	-.01800	-.27100	-.30500	-.30900	-.34000
1.243	4.130	.20600	-.11800	.17700	-.08900	.05900	-.03500	-.28100	-.30800	-.30300	-.35400
1.243	6.170	.20300	-.11800	.17700	-.13300	.08700	-.05400	-.29600	-.31200	-.30200	-.37400
1.243	8.240	.19500	-.11500	.17400	-.17800	.11400	-.07100	-.29900	-.32100	-.29300	-.39100
	GRADIENT	-.00299	.00221	.00010	-.02014	.01289	-.00843	.00063	-.00108	.00676	-.00941

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DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1 (0) (R1X008) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT.
LREF = 1290.3000 INCHES
BREF = 1290.3000 INCHES
SCALE = .0040

XMRP = 976.0000 IN. XT
YMRP = .0000 IN. YT
ZMRP = 400.0000 IN. ZT

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 820/ 0 RN/L = 5.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.040	-.05200	.04700	.10400	-.00900	.00600	.00000	-.19500	-.28200	-.25100	-.26900
.899	-6.000	.01200	.00000	.10100	-.01000	.00800	.00000	-.19000	-.27200	-.23200	-.24400
.899	-4.010	.06600	-.03700	.09500	-.01100	.00600	-.00100	-.16000	-.27700	-.22100	-.22700
.899	-1.950	.13200	-.08300	.09300	-.00600	.00500	.00000	-.15300	-.25800	-.20600	-.22300
.899	.120	.20800	-.13400	.09100	-.00900	.00500	.00000	-.15300	-.23600	-.19900	-.21700
.899	2.140	.28700	-.19000	.08900	-.00800	.00600	-.00100	-.15200	-.23900	-.18900	-.20300
.899	4.180	.33600	-.22200	.08800	-.01200	.00700	-.00100	-.14600	-.24200	-.18400	-.19300
.899	6.200	.37900	-.25100	.08700	-.01200	.00800	-.00200	-.15100	-.24700	-.20400	-.21700
.899	8.230	.41900	-.27700	.08800	-.01200	.00900	-.00300	-.16000	-.24300	-.22400	-.23500
	GRADIENT	.03395	-.02330	-.00088	-.00019	.00015	-.00005	.00142	.00436	.00445	.00429

RUN NO. 810/ 0 RN/L = 8.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.242	-8.070	-.10400	.11700	.18200	-.00500	.00600	.00000	-.30700	-.31500	-.36000	-.35900
1.242	-5.990	-.02700	.05900	.18100	-.00700	.00700	-.00100	-.30200	-.32100	-.35700	-.35700
1.242	-3.980	.04800	.00300	.18000	-.01400	.01100	-.00200	-.29700	-.32200	-.34400	-.33900
1.242	-1.940	.12700	-.05500	.17800	-.01100	.01000	-.00200	-.28800	-.31500	-.33300	-.33400
1.242	.130	.20600	-.11400	.17500	-.01200	.01000	-.00200	-.28000	-.30900	-.33600	-.33700
1.242	2.170	.27900	-.16600	.17500	-.01500	.01200	-.00300	-.27600	-.30700	-.32500	-.33800
1.242	4.220	.34600	-.21500	.16900	-.01500	.01000	-.00400	-.26900	-.30100	-.35700	-.34900
1.242	6.260	.40200	-.25500	.16400	-.01200	.01000	-.00300	-.26300	-.28900	-.36300	-.37400
1.242	8.310	.44700	-.28700	.15700	-.01300	.01100	-.00300	-.25100	-.27400	-.37300	-.39400
	GRADIENT	.03647	-.02667	-.00122	-.00029	-.00000	-.00024	.00332	.00244	-.00088	-.00117

FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1 (0) (R1X009) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 830/ 0 RN/L = 5.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.897	-8.110	.27100	-.18400	.09800	.16600	-.10800	.06400	-.23700	-.25600	-.27900	-.19400
.897	-6.060	.26300	-.18000	.09600	.12200	-.07900	.04700	-.21800	-.25100	-.26400	-.17600
.897	-4.069	.25300	-.17300	.09400	.07500	-.04900	.03000	-.20200	-.24400	-.25400	-.18300
.897	-2.010	.22200	-.14800	.08600	.03300	-.02000	.01500	-.15300	-.23200	-.23500	-.19700
.897	.040	.20400	-.13300	.08900	-.00300	.00100	.00100	-.15300	-.22600	-.20500	-.20500
.897	2.050	.21600	-.14400	.08900	-.04400	.02900	-.01400	-.15100	-.22500	-.19400	-.22400
.897	4.069	.21900	-.14700	.09200	-.08300	.03500	-.02900	-.17200	-.24200	-.20500	-.26100
.897	6.120	.22100	-.14900	.10000	-.13000	.08600	-.04600	-.19900	-.24200	-.19400	-.28200
.897	8.120	.21300	-.14600	.09400	-.16900	.11200	-.06000	-.20400	-.27500	-.19200	-.29700
	GRADIENT	-.00366	.00277	-.00005	-.01932	.01254	-.00723	.00308	.00055	.00685	-.00899

RUN NO. 840/ 0 RN/L = 8.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.244	-8.139	.23800	-.14200	.16800	.17100	-.10800	.07400	-.27600	-.33800	-.36200	-.29200
1.244	-6.060	.22600	-.13200	.17200	.12500	-.07900	.05500	-.27800	-.32700	-.35200	-.28500
1.244	-4.080	.21400	-.12300	.17500	.07900	-.04900	.03500	-.28400	-.30700	-.35100	-.29000
1.244	-2.020	.20300	-.11500	.17300	.03400	-.02000	.01700	-.27900	-.28800	-.33800	-.30500
1.244	.040	.19700	-.11000	.17300	-.00500	.00400	.00000	-.27100	-.29900	-.31700	-.31900
1.244	2.070	.19400	-.11000	.17200	-.04400	.03000	-.01700	-.26900	-.31000	-.30200	-.34400
1.244	4.110	.19300	-.10800	.17700	-.08600	.05600	-.03400	-.27900	-.31400	-.29000	-.35900
1.244	6.150	.19000	-.10800	.17400	-.13100	.08600	-.05300	-.28900	-.32600	-.29600	-.37500
1.244	8.220	.17800	-.10200	.17400	-.17500	.11200	-.07100	-.31000	-.33500	-.29500	-.39800
	GRADIENT	-.00249	.00171	.00015	-.01993	.01270	-.00840	.00098	-.00175	.00772	-.00864

FA25, MSFC TWT 652, CONFIG. 01A03P0T151 (0) (R1X01C (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = 000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 880/ 0 RN/L = 5.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.049	-.05100	.04700	.10600	-.00700	.00600	-.00200	-.20100	-.27000	-.27400	-.28300
.899	-6.000	.01500	.00000	.10300	-.01000	.00600	-.00200	-.18400	-.24700	-.24500	-.24300
.899	-4.000	.08300	-.04800	.10200	-.00900	.00600	-.00100	-.17800	-.24600	-.22500	.21900
.899	-1.940	.15200	-.09700	.09800	-.01000	.00700	.00200	-.17400	-.25700	-.22300	.21700
.899	.130	.22800	-.14900	.09500	-.00700	.00500	.00000	-.16500	-.23300	-.22400	-.20800
.899	2.170	.30600	-.20300	.09100	-.00700	.00500	.00000	-.16300	-.22000	-.22300	.21200
.899	4.180	.35800	-.23900	.09100	-.01100	.00700	.00100	-.15900	-.21300	.21300	.20200
.899	6.210	.40900	-.27400	.09100	-.00900	.00600	-.00200	-.17300	.23100	.23300	-.22600
.899	8.280	.46600	-.31400	.09100	-.01000	.00600	-.00400	-.17000	-.22700	-.25100	-.22900
	GRADIENT	.03440	-.02385	-.00142	-.00005	-.00000	.00010	.00240	.00503	.00126	.00190

RUN NO. 890/ 0 RN/L = 8.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.244	-8.059	-.08600	.10100	.18200	-.01100	.00800	-.00200	.29900	.32000	.37900	.35400
1.244	-6.020	-.00600	.04100	.17900	-.01200	.06900	-.00300	.28500	.32200	.35600	.35600
1.244	4.020	.06900	.01400	.18000	-.01300	.00900	.00300	-.28100	.31900	-.34100	.33800
1.244	-1.970	.15000	-.07300	.17900	.01200	.01000	.00300	.29900	.31400	.33500	.33600
1.244	.110	.22900	.13300	.17900	-.01200	.01100	.00300	.29900	.30100	.32900	.34000
1.244	2.160	.30000	.18300	.17800	-.01200	.01100	.00300	.29900	.30700	.32400	.33200
1.244	4.180	.36300	.22900	.17100	-.01500	.01200	.00400	.25700	.30600	.35700	-.34700
1.244	6.240	.41100	.26200	.16500	.01500	.01100	-.00400	.24700	.29400	.36700	.35900
1.244	8.280	.45700	-.29400	.15900	.01500	.01300	.00500	.24700	.29800	.37500	-.39700
	GRADIENT	.03595	-.02631	.00092	-.00019	.00034	.00010	.00287	.00161	-.00101	-.00068

FA25, MSFC TWT 652, CONFIG. 01A03P0T1S1 (0) (R1Y011) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 910/ 0 RN/L = 5.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.090	.28500	-.19200	.09900	.16200	-.10400	.06200	-.21000	-.31300	-.27700	-.20200
.899	-6.060	.27800	-.18900	.09900	.11900	-.07700	.04500	-.19900	-.27600	-.25500	-.19000
.899	-4.080	.26800	-.18100	.10100	.07400	-.04500	.02900	-.19000	-.26000	-.24100	-.19200
.899	-2.010	.25400	-.17200	.09800	.03200	-.01800	.01300	-.18200	.26000	-.23800	-.20700
.899	.040	.24200	-.16200	.09400	-.00400	.00200	.00000	-.16500	-.23800	-.22600	-.21300
.899	2.050	.25100	-.16900	.09600	-.04200	.02800	-.01200	-.17200	-.23700	-.21900	-.22600
.899	4.069	.25200	-.17200	.10200	-.08100	.05400	-.02600	-.19300	-.25300	-.21200	-.24200
.899	6.100	.24700	-.16900	.10300	-.13000	.08600	-.04400	-.20600	-.28500	-.19500	-.26000
.899	8.120	.23800	-.16300	.10500	-.16900	.11200	-.05700	-.21300	-.31100	-.19400	-.28200
	GRADIENT	-.00173	.00104	.00009	-.01886	.01198	-.00663	.00022	.00183	.00378	-.00584

RUN NO. 900/ 0 RN/L = 8.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.245	-8.139	.26500	-.16200	.17600	.17000	-.10700	.07300	-.28000	-.32700	-.37800	-.28300
1.245	-6.070	.25500	-.15400	.17700	.12100	-.07600	.05300	-.27900	-.31300	-.36900	-.28700
1.245	-4.080	.24400	-.14600	.17800	.07600	-.04700	.03500	-.27600	-.29900	-.35900	-.29600
1.245	-2.040	.23200	-.13800	.17400	.03200	-.01800	.01600	-.27100	-.28700	-.34800	-.30900
1.245	.040	.22100	-.12800	.17500	-.00600	.00600	.00000	-.26100	-.29300	-.32600	-.32400
1.245	2.050	.22200	-.12800	.17600	-.04700	.03200	-.01800	-.27000	-.29100	-.30700	-.34700
1.245	4.090	.22200	-.12900	.18000	-.08900	.06000	-.03500	-.28400	-.29900	-.30400	-.36200
1.245	6.130	.21800	-.12800	.17900	-.13300	.08800	-.05400	-.29200	-.30500	-.30300	-.37400
1.245	8.170	.21100	-.12700	.17600	-.17700	.11500	-.07100	-.29700	-.31800	-.29500	-.38200
	GRADIENT	-.00265	.00216	.00029	-.02002	.01292	-.00852	-.00072	-.00020	.00739	-.00832

FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0) (R1X012) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 940/ 0 RN/L = 2.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.000	-.03700	.02900	.07500	-.01000	.00700	-.00300	-.14100	-.21800	-.23400	-.23800
.600	-6.000	.01400	-.00700	.07700	-.01200	.01000	-.00300	-.13800	-.20200	-.21700	-.22200
.600	-3.980	.07000	-.04400	.07700	-.00900	.00600	-.00200	-.13800	-.19500	-.20000	-.21100
.600	-1.960	.12900	-.08400	.07400	-.01100	.00700	-.00300	-.13300	-.18900	-.18300	-.19500
.600	.080	.19300	-.12800	.07400	-.01100	.00700	-.00300	-.13500	-.20200	-.18200	-.18800
.600	2.080	.25200	-.16800	.07000	-.01100	.00700	-.00300	-.12500	-.19800	-.17800	-.18100
.600	4.110	.31200	-.21100	.06300	-.00900	.00600	-.00200	-.12300	-.18700	-.18500	-.19400
.600	6.130	.37500	-.25400	.05700	-.01100	.00700	-.00300	-.12500	-.17700	-.19000	-.20500
.600	8.150	.44500	-.30500	.04900	-.00900	.00600	-.00200	-.12400	-.17300	-.19600	-.20300
	GRADIENT	.03002	-.02067	-.00159	-.00000	.00000	-.00000	.00188	.00034	.00173	.00237

RUN NO. 950/ 0 RN/L = 4.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.798	-5.970	.03500	-.02100	.08600	-.01100	.01100	-.00300	-.16300	-.18400	-.22700	-.23600
.798	-4.020	.09300	-.06100	.08500	-.01400	.01100	-.00400	-.15300	-.18700	-.20000	-.19300
.798	-1.970	.15400	-.10200	.08300	-.01200	.01000	-.00300	-.14900	-.19000	-.19400	-.18800
.798	.110	.22200	-.14900	.08100	-.00900	.00800	-.00300	-.15100	-.18500	-.19600	-.19600
.798	2.130	.28500	-.19300	.07400	-.01100	.00700	-.00300	-.14100	-.17000	-.18000	-.18900
.798	4.140	.34600	-.23500	.07100	-.01100	.00800	-.00300	-.14400	-.17300	-.17900	-.19200
.798	6.190	.41000	-.28000	.06500	-.00800	.00700	-.00300	-.13100	-.16700	-.18000	-.18600
.798	8.220	.46500	-.31500	.06400	-.01000	.00700	-.00200	-.13200	-.17900	-.20100	-.19900
	GRADIENT	.03120	-.02150	-.00181	.00035	-.00044	.00010	.00127	.00235	.00274	.00005

RUN NO. 930/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.040	-.05300	.04800	.10100	-.01100	.00700	-.00200	-.19000	-.23500	-.24900	-.25400
.898	-6.000	.01100	.00100	.09900	-.01400	.01000	-.00300	-.18300	-.22500	-.23200	-.22900
.898	-4.000	.07900	-.04700	.09700	-.01000	.00600	-.00100	-.17100	-.22400	-.21400	-.20700
.898	-1.950	.15000	-.09700	.09500	-.01100	.00600	-.00200	-.16900	-.24800	-.21300	-.20800
.898	.120	.22700	-.15000	.09100	-.01200	.00700	-.00200	-.16000	-.23700	-.20600	-.20100
.898	2.150	.30400	-.20400	.08900	-.00900	.00500	-.00200	-.15700	-.23100	-.19800	-.19700
.898	4.180	.35100	-.23500	.08600	-.01100	.00600	-.00100	-.15500	-.23000	-.19500	-.18700
.898	6.210	.39600	-.26500	.08600	-.01100	.00600	-.00200	-.15300	-.23400	-.21200	-.20800
.898	8.270	.43200	-.28900	.08600	-.01200	.00700	-.00200	-.15800	-.22800	-.23300	-.23300
	GRADIENT	.03412	-.02361	-.00137	-.00000	-.00005	-.00000	.00215	.00024	.00259	.00249

FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0) (R1X012) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 960/ 0 RN/L = 6.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.040	-.07200	.06800	.12000	-.01100	.00900	-.00100	-.21000	-.31700	-.27800	-.27900
.948	-6.010	-.00800	.02100	.11700	-.01100	.00900	-.00100	-.20400	-.29700	-.27100	-.27100
.948	-4.029	.05900	-.02600	.11300	-.01400	.00800	-.00200	-.19500	-.27100	-.24500	-.25300
.948	-1.970	.12700	-.07500	.11100	-.01200	.00800	-.00200	-.18900	-.26800	-.23200	-.24300
.948	.140	.20100	-.12700	.10600	-.01000	.00700	-.00200	-.18300	-.27400	-.22800	-.22800
.948	2.160	.27600	-.17900	.10300	-.01100	.00600	-.00200	-.17600	-.26800	-.22600	-.22600
.948	4.180	.34200	-.22600	.09800	-.00900	.00600	.00000	-.17700	-.25100	-.23000	-.22400
.948	6.210	.38800	-.25800	.09800	-.00900	.00400	-.00100	-.18400	-.25100	-.24000	-.23500
.948	8.230	.41700	-.27600	.00700	-.00000	.00400	-.00100	-.18700	-.24800	-.24700	-.24800
	GRADIENT	.03489	-.02453	-.00185	.00054	-.00029	.00019	.00239	.00193	.00176	.00366

RUN NO. 970/ 0 RN/L = 6.83 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.044	-8.070	-.09900	.09900	.14700	-.01000	.00800	-.00100	-.26100	-.30800	-.35900	-.34800
1.044	-6.010	-.03100	.05100	.14500	-.01200	.00900	-.00200	-.25500	-.28900	-.32400	-.32600
1.044	-3.990	.03500	.00300	.14200	-.01200	.00800	-.00300	-.25700	-.27700	-.30200	-.31000
1.044	-1.940	.11000	-.04900	.14000	-.01000	.00800	-.00200	-.25100	-.27800	-.29000	-.29600
1.044	.120	.19100	-.10800	.13900	-.00900	.00700	-.00200	-.25500	-.28900	-.29900	-.29400
1.044	2.150	.25600	-.15200	.13600	-.01100	.00800	-.00300	-.24100	-.28900	-.28700	-.27400
1.044	4.190	.31500	-.19500	.13100	-.01100	.00700	-.00300	-.22900	-.28200	-.29200	-.28700
1.044	6.220	.37100	-.23500	.12700	-.00700	.00400	-.00200	-.23300	-.26900	-.31400	-.32600
1.044	8.250	.40900	-.26000	.12200	-.00900	.00600	-.00300	-.22900	-.24700	-.30800	-.33300
	GRADIENT	.03453	-.02440	-.00127	.00005	-.00010	-.00005	.00322	-.00103	.00112	.00333

RUN NO. 990/ 0 RN/L = 7.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.095	-8.040	-.12100	.12300	.16500	-.00700	.00600	-.00100	-.31400	-.35200	-.39300	-.38800
1.095	-6.010	-.04800	.06900	.15900	-.01100	.00800	-.00200	-.29600	-.35800	-.36300	-.36800
1.095	-4.010	.02900	.01200	.15700	-.01100	.00700	-.00300	-.29400	-.35400	-.34200	-.34800
1.095	-1.960	.11830	-.05100	.15700	-.00800	.00700	-.00200	-.28900	-.33900	-.34100	-.34200
1.095	.130	.20800	-.11800	.15700	-.01100	.00800	-.00300	-.29300	-.32700	-.35100	-.35600
1.095	2.140	.28100	-.17000	.14800	-.01000	.00800	-.00300	-.28300	-.31300	-.33500	-.34000
1.095	4.180	.35600	-.22500	.14500	-.01100	.00700	-.00200	-.27900	-.30900	-.35600	-.35100
1.095	6.250	.41300	-.26400	.14300	-.01200	.00800	-.00300	-.27400	-.30100	-.37500	-.37300
1.095	8.280	.45000	-.28800	.13900	-.00600	.00600	-.00200	-.27100	-.28400	-.38600	-.40100
	GRADIENT	.03990	-.02896	-.00161	-.00010	.00005	.00005	.00175	.00567	-.00108	-.00020

FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0) (R1X012) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 990/ 0 RN/L = 7.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.145	-8.049	-.11900	.12400	.17100	-.01300	.01000	-.00300	-.33800	-.36500	-.39300	-.38600
1.145	-6.030	-.03700	.06200	.16600	-.01500	.01100	-.00300	-.31900	-.36800	-.36800	-.37500
1.145	-4.029	.05100	-.00400	.16500	-.01300	.01100	-.00300	-.31100	-.35700	-.34100	-.35700
1.145	-1.960	.14300	-.07200	.16700	-.01300	.01000	-.00300	-.31100	-.34500	-.33600	-.35500
1.145	.110	.22400	-.13300	.16300	-.01200	.01000	-.00300	-.29900	-.32500	-.33000	-.35100
1.145	2.160	.29900	-.18500	.16000	-.01400	.01000	-.00400	-.29100	-.33300	-.32100	-.33700
1.145	4.220	.36800	-.23500	.15400	-.01500	.01100	-.00400	-.28000	-.32900	-.35600	-.34300
1.145	6.260	.42700	-.27600	.15200	-.01300	.00900	-.00500	-.27300	-.32200	-.38000	-.37300
1.145	8.310	.47300	-.30700	.14600	-.01300	.00900	-.00500	-.27000	-.29300	-.37400	-.40000
	GRADIENT	.03832	-.02789	-.00141	-.00024	-.00000	-.00015	.00398	.00330	-.00072	.00223

RUN NO. 920/ 0 RN/L = 8.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.049	-.10500	.11600	.17800	-.00900	.00700	-.00200	-.29600	-.31700	-.37200	-.36200
1.243	-6.010	-.03100	.06000	.17600	-.00900	.00700	-.00200	-.28700	-.32200	-.36300	-.35500
1.243	-4.000	.04400	.00500	.17700	-.01100	.01000	-.00200	-.28800	-.32200	-.34900	-.35000
1.243	-1.960	.12400	-.05400	.17800	-.01300	.01100	-.00300	-.28400	-.31200	-.33900	-.34300
1.243	.100	.20700	-.11700	.17300	-.01200	.00800	-.00300	-.27400	-.29900	-.33200	-.3[illegible]230
1.243	2.150	.28100	-.17000	.17100	-.01300	.01000	-.00300	-.26600	-.30600	-.32700	-.33800
1.243	4.190	.34700	-.21700	.16800	-.01100	.01100	-.00300	-.26200	-.30000	-.36400	-.35200
1.243	6.230	.40000	-.25600	.16300	-.01200	.00900	-.00300	-.25500	-.28200	-.37100	-.36000
1.243	8.270	.44500	-.28500	.15700	-.01400	.01100	-.00400	-.25000	-.26800	-.38300	-.40100
	GRADIENT	.03724	-.02733	-.00122	-.00000	.00005	-.00010	.00342	.00244	-.00087	.00005

FA25, MSFC TWT 652, CONFIG. 01A04PQT1S1 (0) (R1X013) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1010/ 0 RN/L = 2.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.059	.22900	-.15600	.06600	.15800	-.10300	.05600	-.16500	-.20900	-.24300	-.17900
.600	-6.030	.22100	-.15200	.06700	.11800	-.07700	.04200	-.15200	-.19900	-.23300	-.17100
.600	-4.050	.21300	-.14600	.07100	.07500	-.04900	.02600	-.14500	-.19200	-.22400	-.16900
.600	-2.060	.19500	-.13100	.07400	.03600	-.02300	.01200	-.14200	-.18600	-.21200	-.18100
.600	-.020	.18900	-.12700	.07300	-.00200	.00100	.00000	-.13500	-.17800	-.19400	-.19100
.600	1.970	.19100	-.12900	.07500	-.04000	.02600	-.01300	-.14000	-.16700	-.18500	-.21000
.600	3.970	.19800	-.13600	.07400	-.07800	.05200	-.02600	-.14900	-.17300	-.18600	-.23100
.600	5.980	.20000	-.13900	.07300	-.12200	.08200	-.04100	-.15300	-.18100	-.18400	-.24200
.600	8.000	.19400	-.13800	.06900	-.16100	.10600	-.05400	-.16500	-.19500	-.18800	-.26300
	GRADIENT	-.00170	.00110	.00035	-.01903	.01251	-.00643	-.00029	.00284	.00514	-.00762

RUN NO. 1020/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.798	-8.070	.26200	-.17900	.07600	.16800	-.11100	.06000	-.17800	-.22100	-.26000	-.17300
.798	-6.050	.25000	-.17200	.07600	.12300	-.08200	.04400	-.16100	-.20000	-.23700	-.16200
.798	-4.040	.23900	-.16500	.07700	.07900	-.05300	.02800	-.15100	-.18900	-.22100	-.15800
.798	-2.040	.22200	-.15100	.07900	.03300	-.02000	.01200	-.14800	-.18900	-.20600	-.16900
.798	.000	.21300	-.14300	.07900	-.00400	.00300	-.00100	-.14300	-.18400	-.19000	-.18400
.798	2.020	.21900	-.14900	.08200	-.04500	.03000	-.01500	-.15200	-.18300	-.17800	-.20000
.798	4.050	.22600	-.15600	.08100	-.08700	.05800	-.03000	-.16200	-.19900	-.17500	-.22000
.798	6.090	.22200	-.15500	.08000	-.12900	.08600	-.04400	-.16400	-.21100	-.17600	-.24100
.798	8.110	.22000	-.15600	.08100	-.17000	.11400	-.05800	-.18500	-.24100	-.17100	-.26300
	GRADIENT	-.00143	.00098	.00054	-.02026	.01344	-.00706	-.00129	-.00069	.00553	-.00766

RUN NO. 1030/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.090	.26100	-.17400	.09200	.16300	-.10600	.06200	-.19900	-.27300	-.26600	-.18500
.898	-6.040	.25400	-.17200	.09100	.11700	-.07600	.04500	-.18400	-.24800	-.24800	-.17600
.898	-4.050	.24600	-.16600	.09200	.07400	-.04800	.02800	-.17500	-.23000	-.23400	-.18100
.898	-2.010	.22900	-.15300	.09100	.03300	-.02000	.01300	-.16500	-.22500	-.22600	-.19200
.898	.040	.22200	-.14700	.09000	-.00300	.00200	.00000	-.16000	-.21800	-.21300	-.20300
.898	2.050	.22900	-.15400	.09200	-.04200	.02800	-.01300	-.16900	-.23500	-.20300	-.21600
.898	4.060	.23400	-.16000	.09600	-.08400	.05400	-.02900	-.18500	-.26500	-.19900	-.23200
.898	6.100	.23000	-.15800	.09700	-.12500	.08300	-.04400	-.19300	-.28800	-.18200	-.25000
.898	8.110	.21800	-.14900	.10000	-.17100	.11300	-.06100	-.22900	-.26000	-.19300	-.29100
	GRADIENT	-.00119	.00055	.00044	-.01928	.01243	-.00690	-.00117	-.00403	.00459	-.00621

FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0) (R1X013) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1040/ 0 RN/L = 6.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	-CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.080	.25300	-.16600	.11200	.16800	-.10800	.06600	-.24100	-.29700	-.29100	-.19400
.948	-6.050	.24000	-.15800	.10800	.12100	-.07800	.04900	-.20700	-.28200	-.27800	-.19200
.948	-4.060	.22000	-.14200	.11000	.07500	-.04700	.03100	-.19900	-.27600	-.26700	-.20500
.948	-2.030	.20000	-.12600	.10700	.03400	-.02000	.01400	-.19000	-.29400	-.23900	-.21400
.948	.040	.19600	-.12400	.10400	-.00200	.00100	.00000	-.18000	-.25700	-.23100	-.22700
.948	2.050	.20200	-.12900	.10700	-.03900	.02400	-.01200	-.18500	-.26600	-.22000	-.23700
.948	4.060	.20300	-.13100	.11400	-.08000	.05100	-.02800	-.21500	-.27500	-.21300	-.25700
.948	6.110	.20500	-.13400	.11500	-.12600	.08300	-.04500	-.22900	-.28900	-.20500	-.28400
.948	8.139	.20900	-.13800	.11800	-.16900	.11000	-.05900	-.26300	-.28200	-.19700	-.30500
	GRADIENT	-.00158	.00094	.00039	-.01680	.01181	-.00709	-.00131	.00149	.00625	-.00625

RUN NO. 1050/ 0 RN/L = 6.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.048	-8.110	.25100	-.15300	.14200	.16500	-.10100	.07300	-.27900	-.33000	-.35200	-.25500
1.048	-6.070	.22800	-.13700	.14000	.11800	-.07300	.05300	-.26600	-.30800	-.34600	-.25.00
1.048	-4.069	.21300	-.12600	.14200	.07700	-.04700	.03500	-.26400	-.29700	-.34200	-.27300
1.048	-2.040	.19500	-.11200	.13900	.03500	-.02000	.01700	-.25500	-.28600	-.32500	-.29200
1.048	.020	.17800	-.09900	.13900	-.00300	.00400	.00000	-.24400	-.30000	-.30200	-.29000
1.048	2.030	.18500	-.10400	.14100	-.04500	.03000	-.01800	-.25900	-.28400	-.28800	-.31500
1.048	4.060	.19200	-.11000	.14500	-.08300	.05400	-.03400	-.26600	-.29700	-.27400	-.33700
1.048	6.090	.19200	-.11300	.14400	-.12200	.07900	-.05000	-.26700	-.30900	-.26300	-.35700
1.048	8.160	.19500	-.11700	.14500	-.16400	.10300	-.06700	-.29200	-.32300	-.25000	-.37800
	GRADIENT	-.00257	.00197	.00039	-.01968	.01240	-.00851	-.00039	.00009	.00851	-.00742

RUN NO. 1060/ 0 RN/L = 7.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.096	-6.080	.24900	-.14800	.15900	.17000	-.10600	.07700	-.31500	-.35900	-.38500	-.30400
1.096	-6.050	.23300	-.13700	.15800	.12500	-.07800	.05700	-.31800	-.34000	-.38000	-.30700
1.096	-4.050	.21900	-.12600	.15800	.08500	-.05400	.03900	-.31300	-.32700	-.37700	-.32100
1.096	-2.020	.20800	-.11900	.15500	.04000	-.02400	.01900	-.30300	-.31300	-.36600	-.33500
1.095	.060	.19400	-.10600	.15400	-.00100	.00200	.00000	-.29400	-.32100	-.34300	-.33900
1.096	2.070	.19600	-.10800	.15800	-.04200	.02800	-.01800	-.30800	-.31600	-.34100	-.36800
1.096	4.130	.19800	-.11100	.16100	-.08500	.05500	-.03600	-.31500	-.33100	-.33100	-.39100
1.096	6.120	.19900	-.11300	.16200	-.12600	.08200	-.05400	-.32000	-.35000	-.31700	-.40500
1.096	8.190	.19400	-.11300	.16100	-.17000	.10600	-.07200	-.32500	-.36100	-.29900	-.41000
	GRADIENT	-.00264	.00201	.00044	-.02064	.01320	-.00914	-.00043	-.00054	.00573	-.00845

FA25, MSFC TWT 652, CONFIG. 01A04P8T1S1 (0) (R1X013) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1070/ 0 RN/L = 7.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.145	-8.120	.25500	-.15500	.17100	.17500	-.10900	.07400	-.35200	-.39900	-.40900	-.35500
1.145	-6.050	.24800	-.15000	.17200	.12500	-.07900	.05400	-.35100	-.38200	-.40300	-.34600
1.145	-4.029	.23500	-.14100	.16800	.08000	-.05000	.03500	-.33500	-.36300	-.39200	-.33800
1.145	-2.000	.22500	-.13300	.16800	.03400	-.02000	.01600	-.33700	-.35800	-.39200	-.36100
1.145	.080	.21600	-.12500	.17000	-.00600	.00500	-.00100	-.33100	-.36500	-.37000	-.37800
1.145	2.100	.21500	-.12400	.17300	-.05200	.03500	-.01900	-.34300	-.36300	-.36900	-.40300
1.145	4.117	.21500	-.12500	.17300	-.09200	.06000	-.03600	-.34200	-.36800	-.35100	-.40500
1.145	6.180	.21100	-.12500	.17400	-.14000	.09100	-.05500	-.35700	-.39300	-.35800	-.42300
1.145	8.220	.20400	-.12300	.17200	-.18200	.11600	-.07200	-.35800	-.40600	-.34300	-.43300
	GRADIENT	-.00246	.00202	.00074	-.02110	.01349	-.00869	-.00098	-.00074	.00516	-.00864

RUN NO. 1000/ 0 RN/L = 8.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.080	.23900	-.14100	.17100	.16800	-.10600	.07200	-.29400	-.31200	-.36700	-.29900
1.243	-6.050	.22800	-.13300	.17400	.12300	-.07700	.05300	-.29400	-.29900	-.36000	-.29200
1.243	-4.050	.21600	-.12500	.17200	.07900	-.05000	.03500	-.29100	-.29000	-.35500	-.29500
1.243	-2.020	.20500	-.11800	.17100	.03500	-.02000	.01600	-.28000	-.28200	-.34500	-.31100
1.243	.040	.19600	-.10700	.17200	-.00600	.00500	.00000	-.27200	-.29100	-.32500	-.33600
1.243	2.050	.19500	-.10700	.17500	-.04500	.03100	-.01700	-.28600	-.28700	-.31200	-.35700
1.243	4.090	.19500	-.10800	.17600	-.08600	.05700	-.03400	-.29000	-.29700	-.30300	-.36500
1.243	6.130	.19200	-.10800	.17500	-.13100	.08500	-.05200	-.29300	-.31100	-.30500	-.37400
1.243	8.180	.18400	-.10700	.17200	-.17600	.11300	-.07100	-.29600	-.31800	-.29400	-.38000
	GRADIENT	-.00256	.00221	.00059	-.02015	.01302	-.00840	-.00019	-.00094	.00573	-.00914

FA25, MSFC TWT 652, CONFIG. 01A8P0T1S1 (0) (R1X014) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 520/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.040	-.04600	.04100	.10600	-.00700	.00500	-.00100	-.18600	-.26800	-.25900	-.27800
.899	-6.000	.01900	-.00500	.10400	-.00800	.00500	-.00100	-.17300	-.25500	-.23200	-.24200
.899	-3.990	.08500	-.05200	.10300	-.01100	.00700	-.00200	-.16600	-.23600	-.22400	-.23000
.899	-1.940	.15900	-.10300	.10100	-.01100	.00700	-.00200	-.16400	-.23400	-.21100	-.23600
.899	.140	.23600	-.15700	.09600	-.00800	.00400	-.00100	-.15800	-.23500	-.20200	-.22000
.899	2.170	.31400	-.21200	.09400	-.00800	.00500	-.00200	-.15000	-.24000	-.20100	-.21000
.899	4.180	.36800	-.24800	.09500	-.01000	.00700	-.00100	-.15200	-.23900	-.21200	-.21000
.899	6.230	.41000	-.27600	.09400	-.01300	.00900	-.00300	-.15300	-.23200	-.21300	-.22700
.899	8.250	.44400	-.29900	.09200	-.01400	.00900	-.00400	-.15500	-.23300	-.22900	-.24200
	GRADIENT	.03527	-.02451	-.00113	.00025	-.00010	.00010	.00206	-.00059	.00168	.00323

RUN NO. 510/ 0 RN/L = 8.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	AO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.080	-.08700	.10500	.18900	-.00600	.00600	-.00100	-.31600	-.30400	-.35700	-.35600
1.243	-6.000	-.01100	.04600	.18600	-.00900	.00700	-.00200	-.30800	-.30200	-.35800	-.35000
1.243	-4.000	.06500	-.00900	.18700	-.01300	.01100	-.00200	-.31000	-.29900	-.34600	-.33200
1.243	-1.960	.14500	-.06900	.18500	-.01100	.00800	-.00200	-.30100	-.29300	-.33500	-.32100
1.243	.110	.22500	-.12900	.18300	-.00900	.00700	-.00200	-.29500	-.29000	-.33000	-.32300
1.243	2.160	.29700	-.18000	.18100	-.01600	.01400	-.00400	-.28500	-.30200	-.32500	-.31800
1.243	4.220	.36100	-.22600	.17700	-.01400	.01200	-.00400	-.28000	-.29600	-.35000	-.32700
1.243	6.280	.41600	-.26600	.17000	-.01300	.01000	-.00400	-.27400	-.28800	-.36400	-.36300
1.243	8.290	.45400	-.29200	.16400	-.01200	.00900	-.00300	-.26400	-.26000	-.37300	-.38400
	GRADIENT	.03619	-.02651	-.00117	-.00034	.00039	-.00029	.00370	-.00015	.00010	.00063

FA25, MSFC TWT 652, CONFIG. 01A0P0T1S1 (0) (R1X015) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 530/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.120	.27500	-.18600	.09800	.16900	-.10900	.06500	-.19300	-.26300	-.27300	-.17200
.898	-6.060	.27000	-.18300	.09600	.12200	-.07900	.04800	-.18400	-.25300	-.25900	-.17300
.898	-4.050	.26200	-.17800	.09600	.07500	-.04800	.03100	-.17200	-.24000	-.24500	-.18300
.898	-2.030	.24700	-.16700	.09600	.03400	-.02000	.01600	-.16100	-.22500	-.22800	-.19900
.898	.040	.23000	-.15300	.09500	.00000	.00000	.00100	-.15600	-.22400	-.20900	-.21200
.898	2.070	.24100	-.16200	.09800	-.04000	.02600	-.01300	-.16400	-.24100	-.20500	-.22800
.898	4.110	.24200	-.16400	.10200	-.08200	.05400	-.02900	-.17600	-.23300	-.20000	-.24700
.898	6.140	.23600	-.16100	.10300	-.12800	.08500	-.04500	-.19100	-.24200	-.18600	-.27000
.898	8.170	.22700	-.15500	.10300	-.17000	.11200	-.06000	-.20000	-.25900	-.18000	-.28600
	GRADIENT	-.00226	.00162	.00069	-.01900	.01224	-.00730	-.00054	-.00010	.00554	-.00769

RUN NO. 540/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.244	-8.120	.25700	-.15400	.17700	.17100	-.10800	.07300	-.29500	-.32800	-.37600	-.28100
1.244	-6.080	.24900	-.15000	.18100	.12400	-.07800	.05400	-.29400	-.31700	-.36500	-.28000
1.244	-4.060	.23800	-.14000	.18100	.07700	-.04800	.03500	-.28500	-.29900	-.35400	-.28800
1.244	-2.000	.22800	-.13400	.18000	.03400	-.02000	.01600	-.28700	-.28400	-.34400	-.30500
1.244	.060	.22200	-.12700	.18100	-.00600	.00500	.00000	-.29400	-.27600	-.32000	-.31800
1.244	2.090	.21900	-.12600	.18100	-.04500	.03100	-.01800	-.28100	-.29300	-.30600	-.33900
1.244	4.150	.21400	-.12200	.17900	-.08900	.05900	-.03500	-.28300	-.30800	-.29800	-.35600
1.244	6.190	.21300	-.12400	.18000	-.13500	.08900	-.05400	-.28800	-.31700	-.29500	-.36900
1.244	8.210	.20400	-.12000	.17600	-.17900	.11600	-.07200	-.29300	-.33100	-.29200	-.38900
	GRADIENT	-.00278	.00215	-.00015	-.02004	.01292	-.00848	.00048	-.00131	.00731	-.00829

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (R1X016) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 700/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-9.020	-.03700	.02600	.05600	-.00100	.00300	.00000	-.14300	-.24900	-.25700	-.25800
.600	-5.980	.01700	-.01200	.05700	-.00700	.00700	-.00100	-.14300	-.23100	-.23700	-.24000
.600	-3.980	.07300	-.04900	.05700	-.00400	.00400	.00000	-.14000	-.22100	-.21600	-.22100
.600	-1.930	.13600	-.09200	.05600	-.01100	.00600	-.00200	-.13200	-.21100	-.20300	-.20900
.600	.110	.20000	-.13600	.05500	-.01100	.00800	-.00200	-.12900	-.20900	-.20300	-.21100
.600	2.130	.25900	-.17600	.05100	-.00600	.00500	-.00100	-.12500	-.19900	-.19600	-.21300
.600	4.150	.31400	-.21600	.04500	-.01000	.00800	-.00200	-.12700	-.19000	-.19000	-.21700
.600	6.170	.40000	-.26100	.04000	-.01000	.00800	-.00300	-.13500	-.19100	-.19400	-.21500
.600	8.180	.45200	-.31200	.03100	-.01000	.00800	-.00200	-.12200	-.19000	-.21200	-.21800
	GRADIENT	.02992	-.02057	-.00143	-.00035	.00035	-.00015	.00163	.00374	.00290	.00020

RUN NO. 690/ 0 RN/L = 4.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.798	-8.010	-.01200	.00700	.06800	-.00900	.00900	-.00200	-.17300	-.26900	-.26800	-.25800
.798	-5.990	.04500	-.03300	.06600	-.01100	.00900	-.00200	-.16900	-.25800	-.25100	-.24500
.798	-3.970	.10200	-.07200	.06500	-.01100	.00800	-.00200	-.16100	-.24100	-.23300	-.22700
.798	-1.940	.15700	-.11600	.06400	-.01300	.01000	-.00200	-.16100	-.23100	-.21700	-.23100
.798	.120	.23400	-.16000	.06400	-.01200	.00900	-.00200	-.15200	-.23000	-.20400	-.21800
.798	2.150	.29700	-.20400	.05700	-.01200	.00900	-.00300	-.14500	-.23400	-.20000	-.21300
.798	4.190	.36100	-.24900	.05200	-.01100	.00900	-.00300	-.14300	-.22300	-.20500	-.21900
.798	6.220	.40500	-.29400	.04800	-.01000	.00700	-.00300	-.14600	-.21400	-.21200	-.23300
.798	8.250	.47800	-.32700	.04800	-.01100	.00600	-.00300	-.15000	-.21800	-.22000	-.23500
	GRADIENT	.03175	-.02166	-.00162	.00005	.00005	-.00015	.00255	.00162	.00358	.00167

RUN NO. 561/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.897	-8.049	-.05200	.04400	.08200	-.00900	.00500	.00000	-.20500	-.28700	-.27700	-.28100
.897	-6.060	.01800	-.00200	.07900	.00900	.00600	.00000	-.18900	-.27000	-.25100	-.24500
.897	-4.000	.08300	-.05400	.07700	-.00800	.00500	.00000	-.18700	-.25900	-.23500	-.23500
.897	-1.940	.15300	-.10200	.07600	-.00800	.00500	.00000	-.17600	-.25100	-.21800	-.22900
.897	.130	.23400	-.15900	.07200	-.00900	.00600	.00000	-.17300	-.24300	-.21500	-.22400
.897	2.170	.31000	-.21200	.07000	-.00800	.00600	-.00100	-.16600	-.23100	-.20800	-.21900
.897	4.190	.36500	-.24700	.06800	-.01100	.00700	-.00100	-.16600	-.23800	-.21200	-.21800
.897	6.220	.40500	-.27500	.06700	-.00900	.00700	-.00100	-.16400	-.25100	-.22400	-.23200
.897	8.240	.43400	-.29100	.06700	-.01200	.00800	-.00200	-.16600	-.24500	-.24000	-.24400
	GRADIENT	.03500	-.02421	-.00117	-.00029	.00024	-.00015	.00254	.00303	.00274	.00215

FA25, MSFC TWT 652, CONFIG. 01ATPTTIS1 (0) (R1X016) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 680/ 0 RN/L = 6.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.947	-8.059	-.07500	.06800	.10100	-.00800	.00600	.00000	-.23100	-.30700	-.28600	-.29700
.947	-6.000	-.00500	.01700	.09900	-.00800	.00700	.00000	-.22400	-.29400	-.27400	-.27500
.947	-4.000	.06400	-.03300	.09600	-.01200	.00800	-.00100	-.21600	-.28200	-.25500	-.25500
.947	-1.940	.13400	-.08200	.09200	-.01100	.00600	-.00100	-.20300	-.27200	-.24600	-.26000
.947	.140	.20900	-.13600	.08600	-.01100	.00700	-.00100	-.19800	-.26700	-.24200	-.26300
.947	2.170	.28500	-.19000	.08200	-.01000	.00500	-.00100	-.18600	-.25700	-.22700	-.24200
.947	4.210	.35600	-.24100	.07900	-.00800	.00400	.00000	-.18100	-.24600	-.23200	-.23200
.947	6.240	.39100	-.26200	.08000	-.00900	.00600	.00000	-.18000	-.26300	-.24300	-.24500
.947	8.280	.42700	-.28600	.07900	-.01300	.00800	-.00300	-.18500	-.25500	-.25300	-.27000
	GRADIENT	.03580	-.02552	-.00210	.00044	-.00044	.00010	.00424	.00424	.00317	.00311

RUN NO. 670/ 0 RN/L = 6.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.040	-.08800	.08900	.12800	-.00900	.00600	-.00100	-.28100	-.30300	-.35200	-.37000
1.047	-5.970	-.02200	.04200	.12500	-.01400	.01000	-.00200	-.26100	-.28500	-.32100	-.33800
1.047	-3.970	.04300	-.00400	.12100	-.01200	.01000	-.00200	-.25300	-.27800	-.28800	-.31300
1.047	-1.930	.12200	-.06000	.12100	-.00900	.00700	-.00200	-.25900	-.28200	-.29000	-.31300
1.047	.160	.19900	-.11700	.11700	-.01000	.00700	-.00200	-.24800	-.27800	-.29700	-.30800
1.047	2.180	.27200	-.16900	.11600	-.01100	.00700	-.00300	-.25300	-.28200	-.29800	-.31100
1.047	4.220	.33300	-.21200	.11100	-.01200	.00800	-.00300	-.23600	-.27800	-.30000	-.30800
1.047	6.260	.39000	-.25300	.10500	-.01200	.00600	-.00300	-.23600	-.29300	-.32200	-.33600
1.047	8.280	.42500	-.27700	.10300	-.01300	.00800	-.00200	-.23200	-.26500	-.31500	-.34600
	GRADIENT	.03563	-.02563	-.00122	-.00010	-.00020	-.00015	.00195	.00000	-.00156	.00059

RUN NO. 660/ 0 RN/L = 7.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.094	-8.059	-.11400	.11400	.14300	-.00600	.00500	.00000	-.33100	-.35900	-.38700	-.41300
1.094	-6.000	-.04000	.06000	.13800	-.01000	.00800	-.00100	-.30600	-.34500	-.35400	-.38000
1.094	-3.970	.04000	.00200	.13800	-.01100	.00900	-.00200	-.30700	-.34500	-.33800	-.35200
1.094	-1.930	.12900	-.06300	.13800	-.01000	.00600	-.00300	-.30400	-.33200	-.33800	-.35100
1.094	.140	.21400	-.12500	.13700	-.00900	.00700	-.00200	-.29900	-.32600	-.35200	-.35600
1.094	2.190	.29100	-.19100	.13100	-.01100	.00700	-.00200	-.29100	-.31800	-.34300	-.35400
1.094	4.220	.36300	-.23200	.12500	-.01200	.00800	-.00300	-.27600	-.31300	-.35400	-.35900
1.094	6.280	.41900	-.27100	.11800	-.01100	.00700	-.00300	-.26700	-.31500	-.36600	-.37700
1.094	8.330	.45900	-.29800	.11800	-.01400	.01000	-.00200	-.26500	-.31000	-.38400	-.39900
	GRADIENT	.03942	-.02859	-.00161	-.00015	.00005	-.00005	.00366	.00381	-.00181	.00015

FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (R1X016) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 650/ 0 RN/L = 7.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.147	-8.059	-.10300	.10900	.15300	-.01200	.01100	-.00200	-.37200	-.37900	-.42500	-.44100
1.147	-6.000	-.01900	.04300	.14900	-.01200	.01200	-.00200	-.34400	-.37700	-.40000	-.42200
1.147	-4.000	.06400	-.01800	.14600	-.01700	.01400	-.00300	-.33400	-.37700	-.36100	-.39900
1.147	-1.950	.14700	-.07900	.14500	-.01600	.01300	-.00300	-.32400	-.37100	-.34400	-.38000
1.147	.130	.22800	-.13800	.14500	-.01700	.01400	-.00300	-.31900	-.36900	-.34600	-.37500
1.147	2.160	.30500	-.19300	.14300	-.02000	.01600	-.00400	-.31600	-.37500	-.34700	-.37500
1.147	4.210	.37300	-.24200	.13900	-.01700	.01400	-.00400	-.30400	-.37000	-.37300	-.37600
1.147	6.270	.43400	-.28600	.13200	-.01900	.01600	-.00500	-.28900	-.36000	-.38900	-.40700
1.147	8.330	.48200	-.31900	.12800	-.01700	.01400	-.00500	-.28400	-.34700	-.39600	-.42500
	GRADIENT	.03780	-.02738	-.00078	-.00019	.00015	-.00015	.00331	.00049	-.00131	.00249

RUN NO. 551/ 0 RN/L = 8.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.242	-8.059	-.10000	.11100	.16100	-.00900	.00700	-.00100	-.31800	-.31500	-.36400	-.36000
1.242	-6.040	-.02700	.05500	.15800	-.00700	.00600	-.00100	-.30300	-.30900	-.35400	-.35900
1.242	-4.020	.04700	.00000	.15800	-.01000	.00800	-.00200	-.29600	-.31600	-.34700	-.34200
1.242	-1.950	.12700	-.06000	.15500	-.01100	.01000	-.00200	-.28500	-.31200	-.32100	-.32800
1.242	.110	.20600	-.11800	.15300	-.00700	.01000	-.00100	-.27600	-.29800	-.31900	-.33300
1.242	2.180	.28200	-.17200	.15300	-.01200	.00800	-.00300	-.27500	-.30700	-.32200	-.33700
1.242	4.210	.34700	-.21800	.15000	-.01300	.01200	-.00400	-.27000	-.30900	-.34900	-.34400
1.242	6.250	.40600	-.26100	.14400	-.01600	.01100	-.00500	-.26000	-.29100	-.35400	-.36800
1.242	8.310	.45200	-.29300	.13700	-.01200	.01000	-.00300	-.24900	-.27800	-.37100	-.39800
	GRADIENT	.03667	-.02662	-.00087	-.00034	.00029	-.00024	.00301	.00093	-.00023	-.00063

FA25, MSFC TWT 652, CONFIG. O'ATPTT1S1 (Q) (R1X017) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 590/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.040	.23000	-.16100	.05000	.15800	-.10200	.05980	-.17700	-.24200	-.25800	-.17500
.602	-6.000	.22100	-.15600	.04900	.11000	-.07200	.04200	-.15500	-.22000	-.24400	-.16000
.602	-4.010	.21400	-.14900	.05100	.07700	-.05000	.02900	-.14700	-.21500	-.23800	-.17200
.602	-2.000	.20300	-.14000	.05400	.02300	-.02000	.01400	-.14000	-.20900	-.22300	-.19800
.602	.060	.19600	-.13500	.05400	-.00600	.00500	.00000	-.13900	-.21300	-.20500	-.21500
.602	2.060	.20300	-.14200	.05400	-.04100	.02700	-.01300	-.14300	-.21400	-.19400	-.23200
.602	4.059	.20600	-.14600	.05600	-.08000	.05300	-.02600	-.15300	-.21900	-.19300	-.24900
.602	6.090	.20200	-.14400	.05300	-.12300	.08200	-.04100	-.16200	-.23300	-.19300	-.26500
.602	8.100	.18500	-.13300	.05100	-.15800	.10400	-.05500	-.15700	-.25900	-.18300	-.27200
	GRADIENT	-.00080	.00020	.00049	-.01919	.01251	-.00678	-.00074	-.00064	.00589	-.00930

RUN NO. 600/ 0 RN/L = 4.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.799	-8.030	.26300	-.18500	.05400	.16300	-.10700	.06100	-.18300	-.24800	-.25300	-.16500
.799	-6.020	.25400	-.17900	.05600	.11800	-.07800	.04500	-.16600	-.23400	-.24900	-.15600
.799	-4.040	.24400	-.17200	.05700	.07500	-.04900	.02900	-.15200	-.22400	-.23500	-.16800
.799	-2.000	.24000	-.16700	.05000	.03000	-.01900	.01200	-.14500	-.21300	-.21500	-.18900
.799	.040	.22400	-.15600	.06000	-.00400	.00300	.00000	-.13900	-.21500	-.19700	-.20700
.799	2.040	.23700	-.16700	.06200	-.04300	.02800	-.01400	-.15500	-.21500	-.19300	-.22600
.799	4.060	.24200	-.17200	.06300	-.08300	.05500	-.02800	-.16800	-.21300	-.18200	-.23900
.799	6.110	.23800	-.17000	.06300	-.12700	.08600	-.04300	-.18300	-.23000	-.18400	-.26000
.799	8.129	.22400	-.16100	.05800	-.16800	.11200	-.05900	-.17200	-.26100	-.17300	-.27800
	GRADIENT	-.00035	.00001	.00069	-.01922	.01260	-.00692	-.00206	.00099	.00633	-.00885

RUN NO. 570/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.070	.26600	-.18300	.07300	.16100	-.10400	.06500	-.21200	-.27700	-.27000	-.17700
.898	-6.040	.26100	-.18100	.07200	.11600	-.07500	.04800	-.19700	-.25900	-.26000	-.17100
.898	-4.050	.25100	-.17500	.07100	.07600	-.04900	.03200	-.17600	-.24200	-.24000	-.17600
.898	-2.010	.23500	-.16200	.06900	.03300	-.02000	.01500	-.15700	-.23100	-.22100	-.19300
.898	.040	.22400	-.15300	.07000	-.00200	.00200	.00100	-.15000	-.24000	-.20500	-.21100
.898	2.050	.23700	-.16300	.07400	-.04000	.02500	-.01200	-.16600	-.23500	-.20400	-.22800
.898	4.069	.24300	-.16800	.07600	-.07700	.05000	-.02600	-.18800	-.24300	-.20100	-.24900
.898	6.120	.23700	-.16500	.08000	-.12500	.08400	-.04400	-.21400	-.25100	-.19300	-.26900
.898	8.139	.22300	-.15400	.08100	-.16500	.10900	-.06000	-.23300	-.26100	-.18600	-.29100
	GRADIENT	-.00070	.00065	.00074	-.01867	.01197	-.00705	-.00161	-.00029	.00469	-.00892

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (R1X017) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 610/ 0 RN/L = 6.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.100	.25400	-.17100	.09100	.16500	-.10700	.06800	-.25500	-.31400	-.29900	-.18900
.948	-6.050	.24200	-.16300	.08900	.11800	-.07600	.05000	-.23300	-.30900	-.28700	-.19500
.948	-4.040	.23200	-.15500	.08800	.07400	-.04600	.03200	-.21700	-.29500	-.27100	-.20700
.948	-2.010	.20800	-.13600	.08500	.03300	-.02100	.01700	-.18900	-.26000	-.25900	-.23200
.948	.040	.19900	-.12900	.08700	.00000	.00000	.00200	-.18700	-.28100	-.24100	-.24880
.948	2.070	.21300	-.14000	.08900	-.03900	.02300	-.01100	-.20400	-.27800	-.23800	-.26500
.948	4.080	.22200	-.14800	.09600	-.07800	.04900	-.02600	-.23500	-.28600	-.22900	-.28000
.948	6.130	.21900	-.14700	.10200	-.12200	.07800	-.04400	-.27100	-.29300	-.21900	-.29300
.948	8.139	.20600	-.14100	.10000	-.16800	.10900	-.06100	-.28200	-.29000	-.20700	-.31200
	GRADIENT	-.00075	.00050	.00098	-.01850	.01151	-.00709	-.00250	.00099	.00517	-.00881

RUN NO. 620/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.049	-8.110	.24400	-.15000	.12300	.16400	-.10000	.07400	-.28200	-.33900	-.36600	-.25700
1.049	-6.070	.22800	-.13900	.11900	.11800	-.07300	.05500	-.26700	-.32800	-.35900	-.26100
1.049	-4.050	.21000	-.12500	.11000	.07800	-.04700	.03800	-.24700	-.31800	-.35200	-.27100
1.049	-2.020	.19200	-.11200	.11500	.03700	-.02200	.02000	-.22800	-.30600	-.34200	-.29500
1.049	.050	.18500	-.10500	.11800	-.00200	.00300	.00100	-.24100	-.30600	-.32200	-.31000
1.049	2.070	.18700	-.10800	.11900	-.03900	.02600	-.01500	-.24700	-.30300	-.31000	-.32100
1.049	4.080	.19000	-.11100	.12400	-.07900	.05000	-.03200	-.28000	-.30300	-.29100	-.34100
1.049	6.130	.19300	-.11500	.12600	-.12000	.07600	-.05000	-.28900	-.31300	-.27800	-.37100
1.049	8.200	.18900	-.11500	.12700	-.16100	.09900	-.06700	-.29700	-.33300	-.26500	-.38800
	GRADIENT	-.00222	.00158	.00078	-.01916	.01189	-.00860	-.00417	.00162	.00757	-.00816

RUN NO. 630/ 0 RN/L = 7.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.095	-8.139	.24000	-.14300	.13800	.17300	-.10700	.07900	-.32400	-.37300	-.38900	-.30500
1.095	-6.050	.22400	-.13200	.13600	.12600	-.07900	.06000	-.31200	-.36000	-.38000	-.30300
1.095	-4.050	.20900	-.12100	.13300	.08300	-.05200	.04100	-.29400	-.35200	-.37200	-.30800
1.095	-2.000	.19700	-.11100	.13300	.04300	-.02700	.02200	-.28700	-.34700	-.37400	-.34000
1.095	.050	.18500	-.10100	.13500	.00100	.00000	.00200	-.28700	-.34000	-.35900	-.34800
1.095	2.070	.18300	-.09900	.13700	-.03800	.02400	-.01500	-.30000	-.34800	-.35400	-.36600
1.095	4.120	.18100	-.09900	.14000	-.07800	.05000	-.03400	-.32200	-.35200	-.32600	-.38700
1.095	6.160	.18600	-.10500	.14000	-.12000	.07600	-.05200	-.32300	-.36200	-.31700	-.41300
1.095	8.210	.18700	-.10500	.14400	-.16200	.10000	-.07000	-.33400	-.37700	-.30900	-.42700
	GRADIENT	-.00343	.00275	.00088	-.01975	.01249	-.00916	-.00338	-.00005	.00549	-.00902

FA25, MSFC TWT 652, CONFIG. 01ATPTTISI (0) (R1X017) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 640/ 0 RN/L = 7.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.144	-8.110	.25000	-.15200	.15400	.16900	-.10600	.07300	-.37000	-.41000	-.42800	-.34700
1.144	-6.070	.24500	-.15100	.14800	.12000	-.07500	.05400	-.34600	-.39600	-.41100	-.33700
1.144	-4.069	.23700	-.14500	.14500	.07600	-.04700	.03500	-.32800	-.38600	-.40200	-.34400
1.144	-2.010	.22400	-.13500	.14800	.03300	-.02000	.01600	-.33400	-.36900	-.39600	-.36700
1.144	.040	.21300	-.12400	.15200	-.00800	.00700	-.00100	-.33800	-.37700	-.37600	-.37600
1.144	2.080	.21400	-.12600	.15100	-.04700	.03100	-.01800	-.34300	-.38800	-.38100	-.39500
1.144	4.100	.21000	-.12200	.15500	-.09100	.05800	-.03600	-.36600	-.40100	-.35800	-.41400
1.144	6.160	.21000	-.12500	.15400	-.13700	.08800	-.05500	-.37100	-.41000	-.35600	-.43800
1.144	8.240	.20000	-.12100	.15300	-.18200	.11500	-.07300	-.37100	-.42800	-.35200	-.45700
	GRADIENT	-.00314	.00270	.00113	-.02027	.01278	-.00862	-.00416	-.00239	.00504	-.00822

RUN NO. 581/ 0 RN/L = 8.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.120	.23800	-.14300	.14900	.16500	-.10400	.07300	-.28800	-.33100	-.36800	-.28500
1.243	-6.070	.22800	-.13800	.14800	.12000	-.07600	.05400	-.29000	-.32000	-.36100	-.27900
1.243	-4.069	.21600	-.12700	.15100	.07600	-.04800	.03500	-.28600	-.30200	-.35900	-.28400
1.243	-2.020	.20700	-.12100	.14700	.03300	-.01900	.01700	-.26100	-.30000	-.34500	-.30500
1.243	.040	.20000	-.11400	.15100	-.00400	.00300	.00000	-.26800	-.29900	-.32200	-.31900
1.243	2.050	.19400	-.11000	.15300	-.04400	.02900	-.01700	-.28100	-.31900	-.31000	-.34700
1.243	4.090	.18800	-.10500	.15600	-.08300	.05400	-.03400	-.30200	-.32300	-.29800	-.36100
1.243	6.150	.18800	-.10700	.15500	-.12700	.08200	-.05300	-.30300	-.33100	-.28900	-.37800
1.243	8.220	.17800	-.10300	.15200	-.17300	.10900	-.07100	-.30000	-.34500	-.29300	-.39100
	GRADIENT	-.00339	.00270	.00078	-.01937	.01236	-.00844	-.00254	-.00298	.00770	-.00961

FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (R1X018) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINOS = 3.000

RUN NO. 1170/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.000	-.03900	.03000	.07500	-.00900	.00700	-.00200	-.15000	-.19600	-.22500	-.24300
.600	-5.980	.01700	-.00900	.07400	-.01100	.00800	-.00200	-.14500	-.19800	-.21500	-.22100
.600	-4.000	.07100	-.04500	.07600	-.00800	.00600	-.00100	-.14000	-.18800	-.20800	-.21500
.600	-1.980	.12900	-.08400	.07400	-.01000	.00900	-.00200	-.13700	-.16900	-.19100	-.20900
.600	.060	.19000	-.12600	.07200	-.00800	.00700	-.00100	-.13800	-.17000	-.18000	-.19600
.600	2.080	.25200	-.16900	.06600	-.00800	.00500	-.00100	-.13200	-.17800	-.18100	-.18800
.600	4.090	.31700	-.21500	.06200	-.00900	.00800	-.00200	-.12900	-.17000	-.19000	-.20400
.600	6.130	.37900	-.25800	.05500	-.01000	.00700	-.00200	-.12700	-.15300	-.18800	-.21200
.600	8.160	.44800	-.30600	.04800	-.00800	.00600	-.00200	-.12900	-.16600	-.19600	-.21000
	GRADIENT	.03038	-.02100	-.00178	.00000	-.00000	-.00005	.00133	.00133	.00228	.00213

RUN NO. 1180/ 0 RN/L = 4.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.798	-8.020	-.01900	.01600	.08600	-.01600	.01200	-.00500	-.15900	-.20900	-.22600	-.23000
.798	-5.990	.03800	-.02500	.08500	-.01700	.01200	-.00500	-.15400	-.19700	-.21000	-.21500
.798	-4.000	.09600	-.06300	.08400	-.01100	.00900	-.00300	-.15200	-.18500	-.19800	-.20100
.798	-1.960	.15600	-.10400	.08200	-.01400	.00900	-.00400	-.14900	-.18000	-.18600	-.19500
.798	.090	.22000	-.14700	.07900	-.00900	.00800	-.00300	-.14300	-.17500	-.17200	-.18300
.798	2.150	.28900	-.19500	.07300	-.01000	.00700	-.00300	-.14100	-.18300	-.17400	-.18100
.798	4.180	.35200	-.23900	.06900	-.01000	.00600	-.00300	-.13500	-.17200	-.18100	-.18600
.798	6.220	.41800	-.28600	.06500	-.00700	.00400	-.00200	-.13000	-.17500	-.19100	-.20100
.798	8.250	.46500	-.31600	.06200	-.00900	.00500	-.00400	-.12700	-.18500	-.19500	-.20300
	GRADIENT	.03146	-.02164	-.00191	.00029	-.00039	.00005	.00205	.00112	.00225	.00215

RUN NO. 1190/ 0 RN/L = 5.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-7.990	-.04400	.03900	.09600	-.01100	.00600	-.00300	-.17500	-.28600	-.26400	-.27000
.898	-5.980	.01500	-.00300	.09300	-.01000	.00800	-.00200	-.16300	-.26900	-.23900	-.24300
.898	-3.980	.08300	-.05200	.09100	-.01000	.00600	-.00200	-.15500	-.24700	-.22000	-.22500
.898	-1.940	.15000	-.09800	.08900	-.01000	.00700	-.00200	-.15300	-.23600	-.20800	-.22300
.898	.140	.22800	-.15100	.08600	-.01200	.00700	-.00200	-.15000	-.22100	-.19500	-.20600
.898	2.170	.30100	-.20200	.08500	-.00900	.00600	-.00100	-.15200	-.22900	-.20100	-.20000
.898	4.180	.35200	-.23600	.08400	-.01100	.00600	-.00200	-.14100	-.22000	-.20200	-.19200
.898	6.210	.39700	-.26700	.08300	-.01200	.00800	-.00300	-.14600	-.21400	-.21100	-.21300
.898	8.230	.43400	-.29100	.08100	-.01300	.00800	-.00300	-.14700	-.20800	-.21400	-.22000
	GRADIENT	.03374	-.02311	-.00088	-.00005	-.00005	.00005	.00142	.00299	.00211	.00436

FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (R1X018) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINOS = 3.000

RUN NO. 1200/ 0 RN/L = 6.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.946	-8.000	-.07100	.06600	.11300	-.01000	.00700	-.00200	-.19400	-.33300	-.27400	-.29600
.946	-5.960	-.00300	.01700	.11000	-.00800	.00500	-.00200	-.17600	-.31000	-.25500	-.27000
.946	-3.970	.06200	-.03000	.10700	-.01200	.00900	-.00300	-.17100	-.28700	-.23600	-.25900
.946	-1.950	.13000	-.07800	.10500	-.01100	.00700	-.00300	-.17000	-.27600	-.22500	-.25500
.946	.140	.19700	-.12300	.10400	-.01100	.00600	-.00200	-.17100	-.27700	-.21000	-.23100
.946	2.160	.27200	-.17700	.09900	-.01100	.00600	-.00200	-.16700	-.26800	-.21000	-.22400
.946	4.180	.34400	-.22800	.09700	-.01000	.00600	-.00100	-.16900	-.24900	-.20900	-.22400
.946	6.210	.39200	-.26100	.09400	-.01100	.00500	-.00200	-.16500	-.24900	-.22000	-.23300
.946	8.230	.42300	-.28100	.09500	-.01100	.00600	-.00200	-.17100	-.25800	-.23700	-.25100
	GRADIENT	.03459	-.02425	-.00127	.00020	-.00034	.00025	.00034	.00411	.00339	.00496

RUN NO. 1210/ 0 RN/L = 6.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.046	-8.020	-.08300	.08700	.14400	-.01100	.00900	-.00200	-.24100	-.31200	-.33600	-.33600
1.046	-5.980	-.02000	.04200	.14300	-.00800	.00500	-.00100	-.25100	-.29300	-.30800	-.31700
1.046	-3.960	.04000	.00000	.13900	-.00900	.00600	-.00200	-.23900	-.29700	-.28300	-.30300
1.046	-1.930	.10900	-.04800	.13500	-.00800	.00700	-.00200	-.22100	-.29600	-.26700	-.28800
1.046	.150	.19000	-.10700	.13200	-.01000	.00800	-.00300	-.22600	-.30800	-.26300	-.28800
1.046	2.170	.25700	-.15300	.13200	-.01100	.00800	-.00300	-.21900	-.31900	-.26500	-.26900
1.046	4.200	.32000	-.19800	.12700	-.01100	.00800	-.00300	-.21000	-.30000	-.26200	-.27600
1.046	6.230	.37500	-.23800	.12200	-.00800	.00500	-.00300	-.21400	-.28200	-.29200	-.32200
1.046	8.260	.41400	-.26400	.11900	-.00900	.00500	-.00300	-.21800	-.26300	-.29000	-.33600
	GRADIENT	.03468	-.02454	-.00132	-.00034	.00025	-.00015	.00293	-.00143	.00216	.00357

RUN NO. 1220/ 0 RN/L = 7.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.096	-8.010	-.10700	.11200	.16300	-.00700	.00500	.00000	-.31300	-.36100	-.38800	-.37500
1.096	-5.980	-.03300	.05800	.15800	-.01000	.00700	-.00200	-.29600	-.34900	-.36200	-.36600
1.096	-3.980	.04200	.00100	.15200	-.01100	.00900	-.00200	-.28500	-.33600	-.33700	-.34600
1.096	-1.960	.13000	-.06100	.15700	-.00900	.00700	-.00300	-.30100	-.32200	-.33100	-.34500
1.096	.130	.21500	-.12400	.15600	-.00900	.00700	-.00200	-.30100	-.32300	-.34000	-.35100
1.096	2.160	.28200	-.17000	.14900	-.01100	.00800	-.00300	-.27100	-.31600	-.32500	-.32800
1.096	4.210	.35400	-.22200	.14400	-.01300	.00900	-.00300	-.25500	-.32600	-.34800	-.34800
1.096	6.250	.41000	-.26200	.13900	-.01000	.00700	-.00300	-.24800	-.30600	-.36400	-.36900
1.096	8.290	.45000	-.28600	.13000	-.01000	.00800	-.00300	-.25400	-.27700	-.36800	-.39700
	GRADIENT	.03785	-.02707	-.00117	-.00029	.00005	-.00010	.00439	.00127	-.00078	.00063

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (R1X01B) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1230/ 0 RN/L = 7.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.145	-8.000	-.09700	.11000	.17000	-.01300	.00900	-.00300	-.36000	-.42100	-.42400	-.41300
1.145	-5.980	-.01400	.04500	.16900	-.01000	.00800	-.00200	-.35300	-.38200	-.38800	-.39500
1.145	-3.980	.07500	-.02100	.17200	-.01400	.01100	-.00300	-.35900	-.37600	-.37900	-.39300
1.145	-1.930	.15800	-.08300	.17200	-.01400	.01200	-.00300	-.35700	-.36700	-.36600	-.38500
1.145	.150	.23500	-.13900	.17100	-.01500	.01200	-.00300	-.34400	-.36400	-.35900	-.37700
1.145	2.180	.30900	-.19100	.16700	-.01700	.01400	-.00400	-.33700	-.37300	-.35200	-.37200
1.145	4.210	.37300	-.23600	.16200	-.01500	.01200	-.00400	-.32300	-.37700	-.38100	-.37900
1.145	6.250	.43100	-.27700	.15800	-.01300	.01000	-.00400	-.31200	-.36500	-.40100	-.40700
1.145	8.290	.48700	-.31600	.14900	-.01200	.00700	-.00400	-.30400	-.33300	-.41100	-.43400
	GRADIENT	.03646	-.02626	-.00122	-.00024	.00020	-.00015	.00449	-.00038	.00050	.00201

RUN NO. 1160/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.242	-8.059	-.09700	.11000	.17400	-.00700	.00600	-.00100	-.28900	-.33500	-.35000	-.34900
1.242	-6.000	-.02000	.05300	.17500	-.01000	.00800	-.00100	-.29000	-.32600	-.33400	-.35400
1.242	-3.980	.05600	-.00400	.17500	-.01000	.00900	-.00200	-.29100	-.31700	-.31400	-.33300
1.242	-1.940	.13400	-.06200	.17600	-.00700	.00800	-.00100	-.28500	-.30700	-.30200	-.32600
1.242	.110	.21400	-.12100	.17200	-.01100	.01000	-.00300	-.27300	-.30200	-.30900	-.33000
1.242	2.150	.28500	-.17200	.17200	-.01100	.01100	-.00300	-.26700	-.30700	-.30500	-.32900
1.242	4.200	.35000	-.21000	.16500	-.01300	.01200	-.00400	-.25300	-.30000	-.34400	-.34300
1.242	6.240	.40500	-.26000	.15700	-.01300	.01000	-.00500	-.23900	-.28200	-.35500	-.35400
1.242	8.280	.45100	-.29000	.15100	-.01300	.00900	-.00400	-.23000	-.25700	-.35800	-.38100
	GRADIENT	.03614	-.02641	-.00117	-.00049	.00044	-.00029	.00460	.00166	-.00308	-.00113

FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (R1X019) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1090/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.000	.23000	-.15700	.06600	.15500	-.10100	.05700	-.15900	-.25100	-.23800	-.17200
.600	-6.010	.22300	-.15400	.06700	.11300	-.07200	.04100	-.14700	-.22900	-.23000	-.16300
.600	-4.029	.21500	-.14700	.07000	.06700	-.04300	.02500	-.14000	-.21200	-.22100	-.16500
.600	-2.020	.19900	-.13400	.06900	.03300	-.02100	.01300	-.13600	-.20200	-.20500	-.17600
.600	.020	.19000	-.12600	.07000	-.00600	.00500	-.00200	-.12500	-.20200	-.18500	-.18900
.600	2.040	.19400	-.13300	.06900	-.04100	.02600	-.01400	-.12700	-.21000	-.17700	-.20700
.600	4.029	.19400	-.13300	.07300	-.08300	.05500	-.02700	-.14200	-.19100	-.17800	-.22400
.600	6.100	.19400	-.13500	.06900	-.12500	.08400	-.04200	-.15100	-.23400	-.17400	-.24200
.600	8.120	.18900	-.13500	.06900	-.16200	.10700	-.05500	-.16100	-.25500	-.16700	-.24800
	GRADIENT	-.00233	.00144	.00030	-.01854	.01204	-.00649	.00026	.00168	.00566	-.00738

RUN NO. 1100/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.798	-8.030	.26600	-.18400	.07200	.16300	-.10800	.05900	-.16500	-.23400	-.24400	-.15900
.798	-6.020	.25400	-.17500	.07500	.11700	-.07800	.04400	-.16400	-.22200	-.23700	-.15800
.798	-4.040	.24300	-.16800	.07500	.07400	-.04900	.02800	-.15400	-.21500	-.22400	-.16200
.798	-2.020	.22800	-.15600	.07700	.03100	-.01900	.01300	-.14100	-.20900	-.20700	-.17400
.798	.020	.21500	-.14600	.07500	-.00600	.00408	-.00280	-.12900	-.20900	-.18600	-.19200
.798	2.050	.22100	-.15100	.07700	-.04400	.02800	-.01500	-.13600	-.21300	-.17400	-.20900
.798	4.090	.22400	-.15500	.07800	-.08300	.05500	-.02800	-.14800	-.22700	-.17000	-.22100
.798	6.130	.22100	-.15600	.07600	-.12800	.08500	-.04400	-.15700	-.24600	-.16600	-.24100
.798	8.150	.21600	-.15500	.07600	-.16800	.11200	-.05700	-.16900	-.25700	-.16200	-.25500
	GRADIENT	-.00221	.00152	.00029	-.01913	.01254	-.00689	.00083	-.00138	.00693	-.00753

RUN NO. 1110/ 0 RN/L = 5.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.090	.26900	-.18100	.09100	.16300	-.10500	.06400	-.20600	-.27600	-.27380	-.18600
.898	-6.040	.26200	-.17600	.08800	.11600	-.07500	.04700	-.18900	-.24600	-.25400	-.17600
.898	-4.060	.25500	-.17400	.09000	.07500	-.04600	.03100	-.18300	-.23300	-.24100	-.18600
.898	-2.030	.24100	-.16200	.08900	.03000	-.01800	.01500	-.16500	-.23000	-.22800	-.19500
.898	.020	.21700	-.14200	.08900	-.00500	.00400	.00000	-.16200	-.25400	-.21300	-.21200
.898	2.050	.23000	-.15500	.08900	-.04000	.02600	-.01400	-.16300	-.24000	-.19800	-.23200
.898	4.060	.23100	-.15700	.09300	-.08200	.05200	-.02800	-.18000	-.25100	-.19400	-.24500
.898	6.100	.22700	-.15400	.09500	-.12800	.08500	-.04500	-.19100	-.26800	-.17900	-.26100
.898	8.129	.22000	-.15100	.09400	-.17000	.11200	-.05900	-.20200	-.28900	-.18000	-.28200
	GRADIENT	-.00291	.00202	.00029	-.01890	.01181	-.00723	.00040	-.00227	.00611	-.00763

FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (R1X019) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1121/ 0 RN/L = 6.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.947	-8.080	.25100	-.16600	.10300	.16400	-.10600	.06600	-.21100	-.28600	-.26300	-.17000
.947	-6.040	.24400	-.16200	.10400	.11500	-.07500	.04800	-.19800	-.27300	-.26100	-.17800
.947	-4.060	.23500	-.15600	.10000	.07400	-.04500	.03200	-.18200	-.25800	-.24900	-.18900
.947	-2.030	.21400	-.13800	.10100	.03400	-.02000	.01600	-.16700	-.24900	-.23400	-.20700
.947	.020	.18900	-.11800	.10100	-.00300	.00100	.00100	-.16800	-.27400	-.21800	-.21400
.947	2.050	.20400	-.13200	.10200	-.04000	.02500	-.01300	-.16600	-.26000	-.20200	-.23600
.947	4.080	.21300	-.13900	.10400	-.07800	.04800	-.02700	-.17800	-.27500	-.19500	-.25300
.947	6.110	.20900	-.13800	.10600	-.12100	.07800	-.04300	-.19100	-.29100	-.18500	-.27500
.947	8.139	.20500	-.13600	.10700	-.16500	.10600	-.05800	-.20500	-.29700	-.17100	-.28500
	GRADIENT	-.00266	.00197	.00044	-.01857	.01135	-.00722	.00044	-.00221	.00688	-.00771

RUN NO. 1130/ 0 RN/L = 6.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.045	-8.139	.25100	-.15400	.13800	.16500	-.10100	.07400	-.27100	-.33200	-.33500	-.25800
1.045	-6.070	.23100	-.14100	.13600	.11700	-.07200	.05400	-.26000	-.31500	-.32900	-.25800
1.045	-4.050	.21400	-.12700	.13700	.07400	-.04500	.03600	-.24300	-.30900	-.32200	-.26900
1.045	-2.040	.19900	-.11500	.13100	.03400	-.02000	.01800	-.22500	-.30300	-.31400	-.28800
1.045	.020	.17800	-.09700	.13500	-.00400	.00400	.00000	-.22800	-.32400	-.28500	-.29000
1.045	2.050	.18900	-.10800	.13200	-.04300	.02800	-.01800	-.21700	-.30400	-.28000	-.32200
1.045	4.080	.19200	-.11200	.13600	-.08200	.05300	-.03400	-.23300	-.31400	-.26600	-.34600
1.045	6.120	.19400	-.11500	.13600	-.12300	.07700	-.05100	-.24400	-.32400	-.25100	-.35900
1.045	8.139	.19100	-.11700	.13600	-.16100	.10000	-.06600	-.25300	-.33800	-.23600	-.36700
	GRADIENT	-.00266	.00182	-.00005	-.01911	.01199	-.00865	.00137	-.00055	.00718	-.00923

RUN NO. 1140/ 0 RN/L = 7.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.096	-8.120	.25000	-.15100	.15300	.17200	-.10700	.07700	-.31000	-.36600	-.36700	-.31000
1.096	-6.070	.23700	-.14100	.15500	.12900	-.08200	.05900	-.31000	-.35500	-.36600	-.31400
1.096	-4.069	.22300	-.13000	.15200	.08400	-.05300	.03900	-.29600	-.34200	-.36100	-.32000
1.096	-2.020	.21000	-.12000	.15000	.04100	-.02500	.02000	-.27900	-.33300	-.35300	-.33700
1.096	.040	.19800	-.10800	.15500	-.00100	.00100	.00000	-.29400	-.33400	-.34100	-.35000
1.096	2.070	.20000	-.11300	.14900	-.04000	.02600	-.01700	-.26700	-.34600	-.33500	-.37100
1.096	4.090	.19900	-.11300	.15200	-.08300	.05300	-.03600	-.28400	-.35700	-.31800	-.39500
1.096	6.130	.19300	-.11500	.15200	-.12500	.08000	-.05400	-.28800	-.36000	-.30800	-.40200
1.096	8.190	.19600	-.11500	.15500	-.17000	.10500	-.07200	-.30500	-.37800	-.30100	-.41900
	GRADIENT	-.00285	.00202	-.00005	-.02034	.01289	-.00916	.00177	-.00210	.00509	-.00901

FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (R1X319) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1080/ 0 RN/L = 7.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.145	-8.110	.25800	-.15700	.17000	.17100	-.10800	.07300	-.35300	-.40800	-.41300	-.36300
1.145	-6.070	.25000	-.15200	.16900	.12600	-.08000	.05500	-.34700	-.38900	-.41000	-.34400
1.145	-4.090	.24100	-.14600	.16700	.07900	-.04900	.03600	-.33500	-.37400	-.40500	-.34600
1.145	-2.020	.23000	-.13900	.16200	.03500	-.02000	.01700	-.31700	-.36700	-.39200	-.36000
1.145	.080	.21600	-.12400	.16900	-.00900	.00700	-.00100	-.32900	-.35900	-.36700	-.37000
1.145	2.100	.21100	-.12300	.16300	-.05100	.03300	-.01900	-.31100	-.38600	-.35900	-.39500
1.145	4.120	.21400	-.12500	.16300	-.09300	.06100	-.03600	-.32300	-.39600	-.34700	-.41100
1.145	6.160	.21000	-.12400	.16500	-.13600	.09700	-.05400	-.32900	-.40600	-.35000	-.42700
1.145	8.230	.20500	-.12500	.16300	-.17900	.11200	-.07100	-.33000	-.41600	-.33200	-.43500
	GRADIENT	-.00357	.00284	-.00034	-.02094	.01329	-.00876	.00146	-.00305	.00726	-.00802

RUN NO. 1150/ 0 RN/L = 8.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.120	.24300	-.14500	.16700	.16900	-.10700	.07300	-.26900	-.32100	-.34000	-.28200
1.243	-6.070	.23400	-.13900	.17200	.12300	-.07800	.05400	-.28600	-.30600	-.33900	-.27400
1.243	-4.050	.22200	-.12900	.17100	.07700	-.04800	.03500	-.28300	-.29600	-.33900	-.28100
1.243	-2.040	.21400	-.12500	.16700	.03400	-.02000	.01600	-.27000	-.28000	-.33400	-.29600
1.243	.040	.20200	-.11400	.17000	-.00500	.00500	.00000	-.27400	-.26700	-.30900	-.32000
1.243	2.060	.19700	-.11100	.16700	-.04500	.03000	-.01800	-.26900	-.30200	-.28700	-.34700
1.243	4.090	.19300	-.11400	.16900	-.08300	.05500	-.03400	-.27100	-.31300	-.27900	-.36000
1.243	6.130	.19300	-.11200	.16800	-.13000	.08400	-.05300	-.27000	-.32600	-.29200	-.36800
1.243	8.200	.18700	-.10900	.16300	-.17400	.11000	-.07100	-.2[illegible]400	-.33800	-.26[illegible]	-.37900
	GRADIENT	-.00309	.00216	-.00029	-.01958	.01256	-.00844	.00127	-.00275	.00910	-.01026

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (R1X020) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1290/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.020	-.04100	.03300	.07700	-.01200	.00800	-.00300	-.15800	-.23300	-.22200	-.23700
.600	-6.040	.00800	-.00100	.07800	-.00900	.00600	-.00500	-.14900	-.22800	-.20400	-.21700
.600	-4.020	.06500	-.03900	.07800	-.00300	.00300	-.00100	-.15200	-.22500	-.19600	-.20800
.600	-2.000	.12100	-.07600	.07600	-.01300	.01000	-.00300	-.14800	-.20200	-.18100	-.19500
.600	.060	.18300	-.11900	.07300	-.00900	.00600	-.00200	-.14500	-.20300	-.17100	-.18900
.600	2.080	.24700	-.16300	.07100	-.01000	.00800	-.00300	-.13800	-.19800	-.16600	-.18700
.600	4.069	.30500	-.20300	.06600	-.01100	.00800	-.00300	-.14200	-.19500	-.17300	-.19500
.600	6.110	.36700	-.24700	.05900	-.01000	.00900	-.00200	-.13500	-.18500	-.17800	-.19600
.600	8.129	.42600	-.29000	.05100	-.00900	.00400	-.00200	-.12900	-.18400	-.20500	-.21200
	GRADIENT	.02991	-.02049	-.00143	-.00064	.00039	-.00020	.00148	.00316	.00302	.00169

RUN NO. 1280/ 0 RN/L = 5.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.059	-.05900	.05200	.10300	-.01300	.01000	-.00200	-.19300	-.26800	-.27600	-.24600
.899	-6.090	.00100	.00800	.10000	-.00800	.00500	-.00100	-.18500	-.24600	-.21500	-.22800
.898	-4.050	.06800	-.03900	.09700	-.01200	.00800	-.00200	-.18400	-.23800	-.19900	-.21000
.898	-2.010	.14000	-.08800	.09500	-.01200	.00700	-.00200	-.17300	-.26000	-.18500	-.19800
.899	.060	.21100	-.13900	.09100	-.01300	.00800	-.00200	-.16800	-.26700	-.19700	-.19300
.899	2.100	.29100	-.19400	.08900	-.01300	.00700	-.00200	-.16700	-.27100	-.19200	-.19400
.898	4.080	.34500	-.23000	.08800	-.01100	.00700	-.00100	-.16200	-.25300	-.17800	-.17900
.898	6.180	.38900	-.25900	.08300	-.01200	.00800	-.00200	-.16700	-.25800	-.19500	-.21000
.893	8.123	.43600	-.29100	.03500	-.01100	.00700	-.00300	-.15800	-.24000	-.19700	-.21000
	GRADIENT	.03462	-.02396	-.00118	.00005	-.00010	.00010	.00246	-.00204	.00171	.00324

RUN NO. 1270/ 0 RN/L = 6.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.947	-8.059	-.07700	.07200	.12200	-.01200	.00800	-.00200	-.21400	-.32800	-.26300	-.27600
.947	-6.070	-.01300	.02600	.11800	-.01300	.00900	-.00200	-.20600	-.31900	-.23700	-.25300
.947	-4.029	.05300	-.02100	.11400	-.01500	.01000	-.00300	-.19300	-.30400	-.22000	-.23800
.947	-1.990	.12000	-.06800	.11300	-.01400	.01000	-.00300	-.19100	-.31700	-.21400	-.23700
.947	.070	.19100	-.11900	.10800	-.01100	.00700	-.00200	-.19400	-.33000	-.21200	-.23000
.947	2.140	.26900	-.17400	.10200	-.01000	.00600	-.00200	-.19200	-.30500	-.21100	-.21900
.947	4.150	.33800	-.22200	.10200	-.01000	.00600	-.00200	-.18700	-.28600	-.20600	-.20900
.947	6.210	.38000	-.25000	.09900	-.01200	.00700	-.00200	-.18800	-.28100	-.21300	-.22300
.947	8.240	.42400	-.28100	.09700	-.01000	.00500	-.00300	-.18800	-.26300	-.23000	-.24800
	GRADIENT	.03506	-.02477	-.00171	.00068	-.00059	.00015	.00103	.00234	.00151	.00371

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (R1X020) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1260/ 0 RN/L = 6.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.046	-8.049	-.10400	.10400	.15200	-.00900	.00700	-.00200	-.27900	-.32500	-.33500	-.32800
1.046	-6.010	-.03800	.05800	.14900	-.00900	.00700	-.00200	-.26200	-.29700	-.30700	-.29800
1.046	-4.010	.02600	.01200	.14500	-.01300	.00900	-.00300	-.26700	-.30700	-.28800	-.29800
1.046	-1.940	.09900	-.03900	.14100	-.01200	.00900	-.00300	-.25100	-.29800	-.28100	-.28400
1.046	.160	.18100	-.10000	.13800	-.01000	.00700	-.00300	-.23800	-.29800	-.28900	-.28200
1.046	2.210	.25400	-.15100	.13600	-.01000	.00800	-.00300	-.22200	-.31800	-.28100	-.28200
1.046	4.250	.31800	-.19600	.13200	-.01200	.00700	-.00400	-.21800	-.31000	-.28900	-.28200
1.046	6.270	.37300	-.23500	.12900	-.00900	.00600	-.00300	-.22700	-.29400	-.30400	-.31200
1.046	8.290	.40400	-.25600	.12300	-.00900	.00500	-.00200	-.22200	-.29100	-.30100	-.32700
	GRADIENT	.03576	-.02555	-.00150	.00020	-.00024	-.00010	.00615	-.00125	-.00010	.00165

RUN NO. 1250/ 0 RN/L = 7.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.094	-8.059	-.13000	.13200	.16900	-.00800	.00600	-.00100	-.31600	-.42000	-.37500	-.37500
1.094	-5.010	-.05500	.07700	.16600	-.00800	.00600	-.00200	-.31800	-.39200	-.36100	-.36600
1.094	-3.990	.02400	.01800	.16100	-.01100	.00900	-.00300	-.31600	-.35500	-.34400	-.34700
1.094	-1.940	.11000	-.04400	.15900	-.01000	.00900	-.00300	-.30600	-.34100	-.33500	-.34400
1.094	.130	.19400	-.10600	.15900	-.01100	.00800	-.00300	-.29500	-.33300	-.33100	-.35000
1.094	2.190	.27300	-.16300	.15400	-.01200	.00800	-.00300	-.27900	-.33400	-.32400	-.34600
1.094	4.270	.34900	-.21700	.14800	-.00900	.00700	-.00300	-.26500	-.33500	-.34700	-.35400
1.094	6.310	.40300	-.25400	.14400	-.01100	.00800	-.00300	-.26000	-.32900	-.34800	-.37600
1.094	8.340	.44000	-.27800	.13500	-.01000	.00700	-.00400	-.25300	-.32600	-.34700	-.39700
	GRADIENT	.03937	-.02852	-.00150	.00010	-.00019	.00000	.00625	.00227	.00024	-.00078

RUN NO. 1240/ 0 RN/L = 7.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.147	-8.059	-.10600	.11700	.18000	-.01400	.01100	-.00400	-.38700	-.43800	-.41000	-.41200
1.147	-6.000	-.01500	.04800	.17900	-.01400	.01200	-.00300	-.37900	-.42200	-.39100	-.40700
1.147	-4.000	.06600	-.01300	.17700	-.01300	.01300	-.00300	-.36200	-.40200	-.37600	-.39800
1.147	-1.960	.14900	-.07500	.17300	-.01500	.01200	-.00300	-.34700	-.37200	-.36100	-.38700
1.147	.170	.22900	-.13300	.17200	-.01600	.01300	-.00400	-.33400	-.36900	-.34600	-.38200
1.147	2.200	.30300	-.18500	.17000	-.01700	.01300	-.00400	-.32800	-.37900	-.33700	-.38000
1.147	4.250	.37200	-.23500	.16500	-.01700	.01300	-.00400	-.31900	-.38600	-.37800	-.38000
1.147	6.290	.43000	-.27500	.16100	-.01700	.01400	-.00400	-.32100	-.37900	-.39700	-.41000
1.147	8.340	.47000	-.30900	.15500	-.01600	.01400	-.00400	-.30400	-.38700	-.37800	-.43900
	GRADIENT	.03708	-.02682	-.00131	-.00048	.00005	-.00015	.00509	.00122	.00099	.00208

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (R1X020) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1300/ 0 RN/L = 8.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.242	-8.070	-.10300	.11500	.18200	-.00800	.00600	-.00200	-.39400	-.30400	-.33300	-.34800
1.242	-6.070	-.03300	.06200	.17900	-.00900	.00800	-.00200	-.28900	-.30800	-.32800	-.34700
1.242	-4.029	.04400	.00400	.17700	-.01100	.00800	-.00300	-.28200	-.31000	-.31000	-.33100
1.242	-1.950	.12580	-.05500	.17500	-.01400	.01000	-.00300	-.26600	-.30000	-.28900	-.32100
1.242	.100	.20500	-.11500	.17100	-.01300	.01000	-.00300	-.25000	-.29400	-.27200	-.32300
1.242	2.150	.27900	-.16800	.17200	-.01300	.00900	-.00400	-.25100	-.30500	-.26000	-.32100
1.242	4.170	.34700	-.21700	.16600	-.01100	.01000	-.00300	-.24000	-.29400	-.28700	-.32700
1.242	6.230	.40200	-.25700	.16000	-.01400	.01200	-.00400	-.23400	-.27700	-.29600	-.34000
1.242	8.270	.44700	-.28700	.15400	-.01700	.01200	-.00500	-.23300	-.26300	-.30200	-.37400
	GRADIENT	.03706	-.02707	-.00122	.00005	.00015	-.00005	.00483	.00132	.00368	.00040

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (R1X021) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1320/ 0 RN/L = 2.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.601	-8.059	.21700	-.14700	.06600	.15900	-.10400	.05600	-.17000	-.24100	-.24900	-.18400
.601	-6.110	.20900	-.14300	.06700	.11800	-.07700	.04200	-.15800	-.22900	-.23700	-.17400
.601	-4.110	.20200	-.13600	.07200	.07700	-.04900	.02700	-.14800	-.22000	-.22200	-.17000
.601	-2.070	.18900	-.12600	.07400	.03500	-.02200	.01100	-.14500	-.21100	-.20800	-.18000
.601	-.020	.17900	-.11600	.07400	-.00300	.00300	.00000	-.14200	-.18400	-.18600	-.19100
.601	2.040	.17900	-.11700	.07600	-.04200	.02800	-.01400	-.16000	-.18100	-.18500	-.21900
.601	3.990	.18600	-.12500	.07500	-.08000	.05400	-.02700	-.15600	-.17900	-.17500	-.22600
.601	6.020	.18700	-.12700	.07600	-.12200	.08100	-.04100	-.16500	-.19800	-.18400	-.25000
.601	9.020	.18300	-.12700	.07300	-.16400	.10800	-.05400	-.17200	-.20600	-.17900	-.26700
	GRADIENT	-.00208	.00154	.00040	-.01925	.01260	-.00655	-.00153	.00553	.00577	-.00744

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (R1X021) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1330/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.110	.25300	-.16900	.09200	.16600	-.10900	.06300	-.19500	-.27900	-.26200	-.18000
.899	-6.120	.24600	-.16500	.09100	.12100	-.07900	.04700	-.18500	-.27500	-.24400	-.17600
.899	-4.120	.23400	-.15700	.09200	.08000	-.05100	.03100	-.17600	-.26900	-.22700	-.17700
.899	-2.090	.21700	-.14300	.09300	.03500	-.02200	.01500	-.16800	-.26800	-.21800	-.18600
.899	-.020	.20300	-.13300	.09100	-.00100	.00100	.00100	-.17100	-.25100	-.20500	-.20200
.899	2.010	.21600	-.14400	.09400	-.04100	.02700	-.01200	-.17700	-.26200	-.19700	-.20800
.899	4.020	.22100	-.14900	.09800	-.08200	.05300	-.02700	-.19200	-.29200	-.19600	-.22300
.899	6.040	.22000	-.15000	.09900	-.12700	.08300	-.04400	-.19800	-.30000	-.18800	-.24600
.899	8.070	.20200	-.13700	.10100	-.16600	.10900	-.05800	-.21800	-.29000	-.17600	-.27800
	GRADIENT	-.00134	.00074	.00064	-.01963	.01261	-.00702	-.00201	-.00194	.00408	-.00559

RUN NO. 1340/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.949	-8.110	.23900	-.15500	.11400	.17300	-.11100	.06700	-.23900	-.30600	-.29700	-.18800
.949	-6.110	.22500	-.14500	.10900	.12500	-.08100	.04900	-.20400	-.32000	-.26000	-.17700
.949	-4.080	.21000	-.13400	.10900	.07800	-.04900	.03200	-.19400	-.30900	-.25000	-.19400
.949	-2.030	.19000	-.11800	.11000	.03600	-.02300	.01500	-.19100	-.29300	-.23700	-.21000
.949	.040	.17900	-.10900	.11000	-.00100	.00000	.00100	-.19700	-.28600	-.22600	-.22200
.949	2.050	.18500	-.11500	.11000	-.04000	.02500	-.01300	-.19300	-.28100	-.21000	-.22200
.949	4.040	.19700	-.12600	.11800	-.08100	.05200	-.02800	-.22500	-.27400	-.21200	-.23800
.949	6.090	.20400	-.13200	.12400	-.12800	.08300	-.04600	-.25700	-.26500	-.20700	-.27000
.949	8.120	.19500	-.12800	.11700	-.16700	.10700	-.05900	-.24100	-.30500	-.18000	-.29400
	GRADIENT	-.00155	.00096	.00088	-.01939	.01230	-.00728	-.00313	.00404	.00508	-.00492

RUN NO. 1350/ 0 RN/L = 6.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.046	-8.129	.24800	-.15000	.14000	.16600	-.10300	.07200	-.[illegible]400	-.34800	-.36000	-.25400
1.046	-6.130	.22900	-.13700	.14000	.12500	-.07800	.05600	-.25500	-.32300	-.34300	-.25100
1.046	-4.090	.20900	-.12200	.13800	.08000	-.04900	.03600	-.24300	-.30800	-.32800	-.26300
1.046	-2.040	.18500	-.10600	.13500	.03600	-.02100	.01700	-.23700	-.30600	-.30600	-.28000
1.046	.020	.17400	-.09400	.13600	-.00500	.00400	.00000	-.22000	-.32700	-.28000	-.28500
1.046	2.070	.18800	-.10600	.14400	-.04700	.03200	-.01900	-.27100	-.29100	-.27900	-.30000
1.046	4.060	.19400	-.11300	.14500	-.08300	.05500	-.03400	-.28100	-.28400	-.26600	-.32300
1.046	6.060	.20400	-.12200	.14800	-.13000	.08400	-.05400	-.28900	-.30900	-.26500	-.35600
1.046	8.110	.19500	-.11800	.13800	-.16600	.10400	-.06800	-.25700	-.34400	-.23400	-.36100
	GRADIENT	-.00153	.00090	.00113	-.02004	.01279	-.00862	-.00538	.00307	.00740	-.00685

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (R1X021) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1360/ 0 RN/L = 7.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.095	-8.139	.25600	-.15500	.16000	.17600	-.11000	.07800	-.31900	-.38200	-.38300	-.30600
1.095	-6.110	.24200	-.14500	.15800	.13300	-.08400	.06000	-.31400	-.36500	-.37800	-.30500
1.095	-4.100	.22700	-.13300	.15600	.08700	-.05500	.04000	-.29500	-.35100	-.36800	-.31100
1.095	-2.040	.21400	-.12300	.15400	.04300	-.02700	.02000	-.28100	-.34300	-.35900	-.33500
1.095	.040	.20100	-.11300	.15500	.00100	.00000	.00100	-.27500	-.34700	-.34900	-.34500
1.095	2.070	.20500	-.11500	.15700	-.04200	.02800	-.01800	-.30600	-.32500	-.34200	-.36300
1.095	4.069	.20600	-.11700	.15800	-.08600	.05600	-.03600	-.31100	-.33600	-.32300	-.38600
1.095	6.130	.20800	-.12100	.16300	-.13200	.08500	-.05500	-.32300	-.35400	-.32100	-.40100
1.095	8.170	.19900	-.11800	.16000	-.17400	.10900	-.07200	-.31400	-.38100	-.30500	-.41100
	GRADIENT	-.00251	.00197	.00034	-.02108	.01355	-.00929	-.00277	.00235	.00523	-.00870

RUN NO. 1370/ 0 RN/L = 7.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.143	-8.110	.24900	-.15100	.17200	.17800	-.11400	.07500	-.35300	-.41700	-.39800	-.35800
1.143	-6.110	.24000	-.14500	.17000	.13300	-.08500	.05600	-.34700	-.40100	-.39800	-.34700
1.143	-4.100	.22700	-.13600	.16900	.08600	-.05400	.03700	-.32900	-.38700	-.39300	-.34900
1.143	-2.040	.21500	-.12700	.16600	.03800	-.02300	.01700	-.30900	-.37700	-.37900	-.35800
1.143	.020	.20500	-.11700	.16900	-.00300	.00300	.00000	-.31900	-.38700	-.36200	-.37300
1.143	2.060	.20600	-.11700	.17300	-.05000	.03300	-.01900	-.34000	-.37500	-.35900	-.39500
1.143	4.100	.20600	-.11900	.17100	-.09400	.06100	-.03600	-.34500	-.38600	-.35300	-.41400
1.143	6.140	.20300	-.11900	.17300	-.14200	.09200	-.05500	-.34600	-.40100	-.35600	-.42700
1.143	8.180	.19800	-.12000	.16900	-.18600	.11800	-.07300	-.34300	-.41400	-.34300	-.43600
	GRADIENT	-.00249	.00215	.00054	-.02185	.01395	-.00888	-.00307	.00020	.00488	-.00814

RUN NO. 1310/ 0 RN/L = 8.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.139	.24100	-.14200	.17200	.17300	-.11000	.07400	-.27900	-.32900	-.35000	-.28800
1.243	-6.130	.22900	-.13500	.17400	.12700	-.08100	.05500	-.28000	-.31500	-.34500	-.28300
1.243	-4.100	.21500	-.12500	.17200	.08200	-.05100	.03600	-.27000	-.30100	-.33900	-.28700
1.243	-2.040	.20300	-.11500	.17000	.03600	-.02100	.01700	-.25400	-.30000	-.33000	-.30200
1.243	.020	.19300	-.10300	.17200	-.00500	.00500	.00000	-.25000	-.29100	-.30700	-.31600
1.243	2.050	.19500	-.10800	.17200	-.04600	.03100	-.01800	-.27100	-.28900	-.29700	-.34800
1.243	4.069	.19600	-.11000	.17400	-.08800	.05900	-.03500	-.27800	-.29700	-.28600	-.36200
1.243	6.130	.19300	-.11000	.17300	-.13500	.08900	-.05400	-.27700	-.30900	-.29200	-.36700
1.243	8.170	.18800	-.10900	.17000	-.18000	.11600	-.07200	-.27400	-.32400	-.29100	-.37200
	GRADIENT	-.00236	.00182	.00029	-.02066	.01332	-.00866	-.00160	.00094	.00681	-.00959

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (R1X022) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1460/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.000	-.04000	.03100	.07700	-.01100	.00800	-.00300	-.15100	-.20100	-.24000	-.26500
.600	-6.020	.01200	-.00500	.07700	-.01400	.01000	-.00400	-.14900	-.19900	-.21500	-.23000
.600	-4.020	.06500	-.04100	.07900	-.01600	.01200	-.00400	-.15100	-.17900	-.21100	-.23500
.600	-2.000	.12700	-.08100	.07600	-.00600	.00600	-.00100	-.14800	-.18400	-.19400	-.21600
.600	.060	.18800	-.12400	.07400	-.01200	.00900	-.00300	-.14700	-.16200	-.19000	-.22600
.600	2.080	.25000	-.16600	.07200	-.01000	.00900	-.00200	-.14100	-.17200	-.18700	-.20900
.600	4.090	.31100	-.20800	.06600	-.01300	.01100	-.00300	-.14700	-.15900	-.19000	-.22700
.600	6.110	.37700	-.25300	.06000	-.01100	.01000	-.00200	-.13100	-.16200	-.20200	-.22200
.600	8.160	.44600	-.30300	.05100	-.01100	.00900	-.00200	-.13400	-.14700	-.20700	-.22500
	GRADIENT	.03020	-.02064	-.00148	.00010	.00005	.00005	.00074	.00257	.00242	.00113

RUN NO. 1470/ 0 RN/L = 5.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.898	-8.040	-.05200	.04600	.10100	-.01300	.00900	-.00200	-.19100	-.24000	-.25900	-.26300
.898	-6.040	.00900	.00200	.09900	-.01300	.00700	-.00100	-.18500	-.21500	-.23300	-.24300
.898	-4.029	.07700	-.04600	.09700	-.01300	.00900	-.00100	-.17700	-.22000	-.21300	-.21300
.898	-1.960	.15200	-.09800	.09600	-.01500	.01100	-.00200	-.17500	-.23800	-.20700	-.21700
.898	.100	.22600	-.14800	.09200	-.00800	.00500	-.00100	-.16900	-.25900	-.20200	-.20500
.898	2.150	.30600	-.20400	.09200	-.01000	.00600	-.00100	-.17000	-.26000	-.19300	-.21100
.898	4.160	.36000	-.24200	.09100	-.01300	.00800	-.00100	-.17200	-.26600	-.20100	-.20500
.898	6.210	.40200	-.26900	.09000	-.01700	.01100	-.00400	-.17400	-.24600	-.21100	-.23100
.898	8.230	.43800	-.29200	.08900	-.01600	.01100	-.00300	-.16800	-.24200	-.23100	-.24300
	GRADIENT	.03515	-.02431	-.00078	.00025	-.00034	.00005	.00074	-.00557	.00186	.00107

RUN NO. 1480/ 0 RN/L = 6.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.059	-.07200	.06800	.12100	-.01100	.01000	-.00100	-.21900	-.32100	-.27800	-.27700
.948	-6.070	-.00700	.02100	.11600	-.01200	.00800	-.00100	-.20600	-.29400	-.26100	-.25500
.948	-4.029	.05800	-.02500	.11600	-.01300	.00800	-.00100	-.19900	-.27900	-.24200	-.24300
.948	-1.970	.12000	-.07500	.11300	-.01400	.00900	-.00200	-.19900	-.29600	-.24000	-.24300
.948	.100	.20300	-.12600	.11000	-.01100	.00800	-.00100	-.20300	-.31800	-.23900	-.24100
.948	2.160	.27900	-.18000	.10500	-.01300	.00900	-.00200	-.19700	-.31400	-.22900	-.23500
.948	4.180	.34800	-.22900	.10100	-.01400	.00800	-.00200	-.18600	-.28800	-.22000	-.22300
.948	6.210	.39300	-.25900	.10200	-.01100	.00700	-.00100	-.19400	-.28900	-.23800	-.24000
.948	8.240	.42300	-.27900	.10100	-.01200	.00800	-.00100	-.20200	-.27000	-.26000	-.27200
	GRADIENT	.03553	-.02497	-.00185	-.00005	.00000	-.00010	.00136	-.00177	.00267	.00233

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (R1X022) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1490/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.046	-8.070	-.09700	.09900	.14700	-.01100	.00800	-.00200	-.26000	-.31900	-.36300	-.36400
1.046	-6.050	-.03800	.05700	.14300	-.01300	.00900	-.00300	-.23600	-.31300	-.31600	-.30700
1.046	-4.020	.03100	.00800	.14300	-.01100	.00800	-.00200	-.24800	-.31600	-.30400	-.30200
1.046	-1.960	.10500	-.04400	.14000	-.01200	.00900	-.00300	-.24100	-.30700	-.28800	-.28700
1.046	.110	.18600	-.10200	.13800	-.01300	.01000	-.00300	-.24800	-.31900	-.28900	-.30000
1.046	2.180	.25900	-.15400	.13600	-.01400	.01000	-.00300	-.23900	-.32600	-.29400	-.29500
1.046	4.170	.32200	-.19900	.13200	-.01300	.00800	-.00300	-.22800	-.31700	-.30000	-.29700
1.046	6.230	.37300	-.23600	.12800	-.01100	.00700	-.00300	-.21900	-.28200	-.29500	-.31100
1.046	8.260	.41400	-.26300	.12400	-.01100	.00700	-.00100	-.23400	-.27600	-.32000	-.33500
	GRADIENT	.03588	-.02554	-.00127	-.00029	.00005	-.00010	.00204	-.00103	.00011	.00010

RUN NO. 1500/ 0 RN/L = 7.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.094	-8.070	-.11800	.12100	.16600	-.00900	.00800	-.00100	-.32500	-.36700	-.40600	-.40700
1.094	-6.050	-.04600	.06800	.16200	-.01000	.00700	-.00200	-.30900	-.35900	-.38400	-.38100
1.094	-4.029	.03100	.01100	.15700	-.01100	.00900	-.00200	-.29600	-.35000	-.35700	-.35700
1.094	-1.960	.11900	-.05300	.15700	-.01200	.00600	-.00300	-.28800	-.33600	-.34600	-.35000
1.094	.130	.20300	-.11500	.15600	-.01000	.00800	-.00200	-.28500	-.33700	-.34400	-.35100
1.094	2.180	.28300	-.17100	.15100	-.01100	.00800	-.00300	-.26700	-.33400	-.34200	-.34300
1.094	4.210	.35400	-.22200	.14800	-.01100	.00900	-.00200	-.25800	-.33000	-.36700	-.35300
1.094	6.250	.40400	-.25500	.14200	-.01000	.00900	-.00200	-.25500	-.31700	-.37300	-.37400
1.094	8.290	.45000	-.28600	.13700	-.01200	.00800	-.00200	-.26500	-.29800	-.38000	-.40200
	GRADIENT	.03929	-.02833	-.00116	.00005	-.00000	-.00000	.00470	.00204	-.00076	.00073

RUN NO. 1510/ 0 RN/L = 7.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.144	-8.070	-.10200	.11400	.17900	-.00900	.00700	-.00200	-.38600	-.38600	-.44600	-.44100
1.144	-6.070	-.01600	.04700	.17600	-.00900	.00600	-.00200	-.37200	-.37700	-.42300	-.42500
1.144	-4.020	.06700	-.01500	.17300	-.01100	.00900	-.00200	-.35400	-.37300	-.39300	-.40000
1.144	-1.960	.14900	-.07600	.17100	-.01300	.01000	-.00300	-.33400	-.38100	-.37800	-.39500
1.144	.110	.22600	-.13200	.17000	-.01600	.01300	-.00400	-.33200	-.38400	-.36900	-.36700
1.144	2.180	.30100	-.18500	.16700	-.01400	.01100	-.00300	-.32400	-.38200	-.36900	-.38700
1.144	4.200	.37000	-.23300	.16500	-.01400	.01100	-.00300	-.31800	-.37600	-.40200	-.38600
1.144	6.250	.42800	-.27500	[illegible]	-.01500	.01200	-.00400	-.31700	-.37800	-.42300	-.41800
1.144	8.290	.48300	-.31200	[illegible]	-.01000	.00800	-.00200	-.31000	-.35200	-.41900	-.44400
	GRADIENT	.03684	-.02649	-.00097	-.00034	.00024	-.00010	.00399	-.00034	-.00042	.00175

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (R1X022) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1450/ 0 RN/L = 8.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.070	-.10000	.11300	.18200	-.00900	.00800	-.00100	-.30500	-.31100	-.37600	-.36700
1.243	-6.070	-.02600	.05700	.17900	-.00800	.00600	-.00100	-.29700	-.29900	-.36800	-.36800
1.243	-4.029	.04600	.00300	.17700	-.01100	.00900	-.00200	-.28400	-.30600	-.35000	-.34300
1.243	-1.960	.12600	-.05600	.17500	-.01300	.00900	-.00300	-.26600	-.30500	-.33700	-.33700
1.243	.120	.20600	-.11600	.17400	-.01300	.01000	-.00300	-.25800	-.29100	-.32500	-.33700
1.243	2.170	.28100	-.16900	.17100	-.01700	.01200	-.00400	-.25400	-.29700	-.31900	-.33600
1.243	4.200	.34700	-.21600	.16700	-.01400	.01300	-.00300	-.24900	-.29000	-.35700	-.34200
1.243	6.240	.40500	-.25800	.16400	-.01500	.01100	-.00500	-.25100	-.27400	-.36100	-.36400
1.243	8.280	.44800	-.28700	.15700	-.01500	.01300	-.00400	-.24200	-.26600	-.37400	-.38800
	GRADIENT	.03677	-.02677	-.00116	-.00049	.00053	-.00015	.00399	.00195	.00022	.00015

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (R1X023) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1430/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.600	-8.040	.22700	-.15400	.06800	.15700	-.10200	.05600	-.16400	-.25100	-.24700	-.17700
.600	-6.070	.21900	-.14900	.06800	.11600	-.07500	.04100	-.15300	-.24400	-.24400	-.17400
.600	-4.029	.21100	-.14200	.07100	.07400	-.04700	.02500	-.14300	-.22500	-.22200	-.17000
.600	-2.010	.19800	-.13200	.07200	.03000	-.01600	.01000	-.14500	-.21200	-.21300	-.18300
.600	.040	.19000	-.12700	.07200	-.00600	.00400	-.00100	-.14100	-.18500	-.19300	-.20600
.600	2.060	.19400	-.13000	.07400	-.04600	.03100	-.01500	-.15100	-.17800	-.18800	-.22800
.600	4.050	.19500	-.13300	.07500	-.07800	.05100	-.02600	-.15400	-.16800	-.19000	-.25000
.600	6.070	.19600	-.13700	.07000	-.12900	.08600	-.04300	-.16100	-.17700	-.18500	-.26000
.600	8.080	.19400	-.13800	.07200	-.16400	.11000	-.05500	-.17400	-.19100	-.19000	-.27900
	GRADIENT	-.00179	.00099	.00049	-.01879	.01211	-.00628	-.00138	.00732	.00441	-.01013

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (R1X023) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1420/ 0 RN/L = 5.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.998	-8.070	.26600	-.17800	.09300	.16600	-.10900	.06200	-.19800	-.26300	-.27100	-.18300
.898	-6.100	.25800	-.17300	.09200	.12100	-.07900	.04600	-.18800	-.23900	-.25000	-.19000
.898	-4.069	.24900	-.16800	.09200	.07700	-.05000	.03800	-.17300	-.21600	-.22500	-.17700
.898	-2.050	.23700	-.15800	.09200	.03400	-.02000	.01400	-.16900	-.21300	-.22000	-.19300
.898	.040	.22500	-.14900	.09100	-.00300	.00100	.00000	-.17100	-.21800	-.20800	-.20500
.898	2.070	.23200	-.15500	.09400	-.04300	.02700	-.01300	-.18200	-.28500	-.20600	-.22600
.898	4.069	.23500	-.15800	.09600	-.08200	.05300	-.02700	-.19000	-.29600	-.19800	-.24100
.898	6.100	.23400	-.16100	.09900	-.12300	.08500	-.04400	-.20500	-.30300	-.20000	-.27100
.898	8.129	.22400	-.15500	.09700	-.17100	.11300	-.06000	-.21400	-.30400	-.19200	-.29800
	GRADIENT	-.00163	.00114	.00049	-.01936	.01240	-.00691	-.00230	-.01136	.00334	-.00789

RUN NO. 1410/ 0 RN/L = 6.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.100	.25400	-.16600	.11000	.16600	-.10700	.06500	-.22600	-.31800	-.29600	-.18500
.948	-6.090	.24200	-.15700	.10900	.11900	-.07600	.04800	-.20700	-.28300	-.26700	-.18600
.948	-4.060	.22900	-.14700	.11100	.07600	-.04800	.03100	-.20100	-.27000	-.25800	-.20400
.948	-2.030	.21000	-.13200	.10800	.03600	-.02200	.01500	-.19400	-.25500	-.24300	-.21800
.948	.040	.20000	-.12600	.10800	-.00200	.00200	.00100	-.19100	-.25500	-.23500	-.23200
.948	2.070	.20400	-.12900	.11000	-.04100	.02600	-.01300	-.19700	-.32300	-.22500	-.25000
.948	4.080	.21200	-.13700	.11300	-.08100	.05200	-.02700	-.20900	-.35200	-.21900	-.27200
.948	6.110	.21200	-.13900	.11300	-.12600	.08100	-.04500	-.21400	-.35800	-.20400	-.29100
.948	8.139	.20600	-.13700	.11400	-.16800	.10900	-.05900	-.22300	-.35000	-.19400	-.31600
	GRADIENT	-.00197	.00114	.00029	-.01918	.01217	-.00707	-.00093	-.01136	.00471	-.00824

RUN NO. 1400/ 0 RN/L = 6.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.046	-8.129	.24900	-.15100	.14100	.16400	-.10100	.07200	-.28000	-.33200	-.35600	-.25000
1.046	-6.120	.22600	-.13500	.13900	.12000	-.07500	.05500	-.26600	-.31800	-.34800	-.25000
1.046	-4.090	.21200	-.12500	.13800	.07600	-.04600	.03600	-.24600	-.31300	-.33900	-.26800
1.046	-2.040	.19200	-.10700	.13800	.03600	-.02100	.01800	-.23500	-.31600	-.31000	-.29100
1.046	.020	.18500	-.10200	.13600	-.00500	.00500	.00080	-.23600	-.30700	-.29600	-.30500
1.046	2.090	.18500	-.10300	.14000	-.04500	.03100	-.01800	-.24900	-.29900	-.28600	-.32300
1.046	4.080	.19200	-.10900	.14500	-.08500	.05600	-.03500	-.27600	-.30200	-.27400	-.34500
1.046	6.120	.19900	-.11800	.14600	-.12900	.08300	-.05200	-.28400	-.30300	-.27000	-.36600
1.046	8.170	.19500	-.11700	.14500	-.16900	.10600	-.06800	-.29000	-.31800	-.25800	-.38200
	GRADIENT	-.00231	.00177	.00078	-.01969	.01251	-.00870	-.00360	.00191	.00753	-.00908

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (R1X023) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1390/ 0 RN/L = 7.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.095	-8.139	.25500	-.15300	.16200	.17500	-.10900	.07800	-.32500	-.37100	-.39300	-.31000
1.095	-6.140	.24200	-.14400	.15900	.13100	-.08300	.05900	-.32400	-.35900	-.39300	-.31400
1.095	-4.120	.22600	-.13100	.15700	.08800	-.05500	.04000	-.30500	-.34400	-.38000	-.32200
1.095	-2.040	.21200	-.12200	.15300	.04300	-.02600	.02000	-.28300	-.34400	-.36900	-.34400
1.095	.040	.20600	-.11500	.15500	.00000	.00000	.00100	-.27600	-.34000	-.35300	-.35400
1.095	2.070	.20800	-.11700	.16100	-.04200	.02800	-.01700	-.31800	-.32700	-.35000	-.37700
1.095	4.080	.20700	-.11700	.16200	-.08500	.05600	-.03600	-.32500	-.33800	-.33500	-.39300
1.095	6.130	.21000	-.12200	.16500	-.13000	.08400	-.05400	-.33400	-.34400	-.32700	-.41100
1.095	8.170	.20100	-.11900	.16300	-.17400	.10900	-.07200	-.33700	-.36900	-.31900	-.42200
	GRADIENT	-.00206	.00162	.00087	-.02101	.01346	-.00922	-.00362	.00142	.00532	-.00853

RUN NO. 1380/ 0 RN/L = 7.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.143	-8.120	.24900	-.14900	.17600	.17800	-.11300	.07400	-.37600	-.41800	-.41500	-.36800
1.143	-6.110	.23900	-.14400	.17200	.12900	-.08300	.05500	-.36300	-.40200	-.40800	-.35300
1.143	-4.090	.22700	-.13500	.17000	.08200	-.05200	.03600	-.34100	-.39100	-.40000	-.34900
1.143	-2.040	.21400	-.12500	.16500	.03600	-.02200	.01700	-.31400	-.38100	-.38500	-.36000
1.143	.020	.21100	-.12100	.16700	-.00700	.00600	.00000	-.31400	-.38400	-.36900	-.37400
1.143	2.050	.21000	-.12000	.17300	-.04900	.03300	-.01800	-.35100	-.37100	-.36700	-.39500
1.143	4.069	.20700	-.11900	.17500	-.09300	.06100	-.03500	-.35700	-.39600	-.35900	-.41100
1.143	6.120	.20300	-.11900	.17500	-.14100	.09100	-.05400	-.36100	-.40400	-.35600	-.42900
1.143	8.180	.19800	-.11800	.17200	-.18800	.12000	-.07300	-.36400	-.41700	-.34500	-.43900
	GRADIENT	-.00216	.00182	.00088	-.02132	.01377	-.00867	-.00337	.00001	.00490	-.00779

RUN NO. 1440/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.240	-8.139	.24000	-.14100	.17300	.17200	-.10900	.07300	-.29500	-.32100	-.35400	-.29500
1.240	-6.110	.22800	-.13300	.17500	.12700	-.08100	.05500	-.29600	-.32000	-.35300	-.28800
1.240	-4.090	.21600	-.12600	.17100	.08000	-.05000	.03500	-.27200	-.30500	-.34900	-.29300
1.240	-2.040	.20100	-.11400	.17000	.03500	-.02000	.01700	-.26400	-.29800	-.33300	-.30400
1.240	.040	.19500	-.10800	.17100	-.00500	.00500	.00000	-.25700	-.29700	-.31900	-.32100
1.240	2.070	.19400	-.10700	.17600	-.04800	.03200	-.01800	-.28600	-.28400	-.31000	-.34900
1.240	4.090	.19200	-.10700	.17600	-.08800	.05800	-.03500	-.28500	-.30700	-.29200	-.35600
1.240	6.130	.18900	-.10600	.17600	-.13300	.08700	-.05300	-.28800	-.32000	-.29900	-.36900
1.240	8.180	.18200	-.10400	.17200	-.17800	.11500	-.07100	-.29800	-.33100	-.29300	-.38100
	GRADIENT	-.00269	.00220	.00078	-.02047	.01309	-.00855	-.00233	.00050	.00669	-.00835

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. U1ATPTTIS1 (0) (R1X024) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1590/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.080	-.03700	.02400	.05600	.00100	.00100	.00000	-.12900	-.25300	-.23700	-.24300
.602	-6.040	.02100	-.01600	.05700	-.00100	.00400	.00000	-.12500	-.23400	-.21800	-.22200
.602	-4.020	.08200	-.05600	.05900	-.00600	.00400	.00000	-.12200	-.22300	-.20500	-.21100
.602	-2.020	.13900	-.09500	.05500	-.00400	.00300	.00000	-.12100	-.20700	-.19500	-.20700
.602	.030	.20100	-.13900	.05300	-.00300	.00300	.00000	-.12300	-.20500	-.19000	-.21000
.602	2.050	.25100	-.17900	.04800	-.00600	.00400	.00000	-.11700	-.19200	-.17800	-.20200
.602	4.069	.32200	-.22000	.04600	-.00900	.00600	-.00100	-.12000	-.18500	-.18100	-.21500
.602	6.100	.38200	-.26300	.03700	-.00500	.00300	.00000	-.12500	-.18200	-.18700	-.22200
.602	8.100	.44400	-.30600	.03000	-.00500	.00400	.00000	-.12300	-.18000	-.19200	-.21800
	GRADIENT	.02973	-.02035	-.00153	-.00040	.00025	-.00010	.00039	.00449	.00321	-.00015

RUN NO. 1580/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.800	-8.090	-.01400	.00800	.06400	-.00100	.00000	.00000	-.14700	-.23600	-.24100	-.23300
.800	-6.040	.04600	-.03400	.06300	-.00300	.00300	.00000	-.13700	-.22300	-.21400	-.20300
.800	-4.010	.10800	-.07700	.06200	-.00600	.00600	-.00100	-.14100	-.22000	-.20800	-.19400
.800	-1.990	.17200	-.12000	.06000	-.00300	.00300	.00000	-.13300	-.20800	-.19900	-.19000
.800	.060	.23800	-.16500	.05900	-.00300	.00300	.00000	-.13400	-.21100	-.19500	-.19300
.800	2.090	.29800	-.20600	.05400	-.00200	.00100	.00000	-.13100	-.20300	-.18500	-.18800
.800	4.130	.36200	-.25000	.05200	-.00400	.00300	.00000	-.13600	-.19800	-.19400	-.20000
.800	6.120	.42200	-.29200	.04600	-.00400	.00300	.00000	-.13500	-.18700	-.19900	-.20500
.800	8.170	.46100	-.31600	.04600	-.00500	.00100	-.00100	-.13300	-.19100	-.19700	-.19900
	GRADIENT	.03114	-.02122	-.00128	.00025	-.00039	.00010	.00059	.00240	.00201	-.00049

RUN NO. 1570/ 0 RN/L = 5.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.129	-.04800	.03900	.07700	.00200	.00000	.00200	-.18000	-.28200	-.26100	-.27300
.899	-6.070	.02200	-.01100	.07600	.00300	-.00100	.00300	-.17500	-.26500	-.24000	-.24600
.899	-4.029	.09500	-.06300	.07500	-.00100	.00200	.00100	-.16500	-.24100	-.21600	-.22700
.899	-2.010	.16700	-.11300	.07100	.00000	.00100	.00100	-.15600	-.24100	-.20700	-.22100
.899	.070	.24000	-.16300	.06900	-.00300	.00300	.00000	-.15400	-.23700	-.19800	-.21400
.899	2.120	.31300	-.21300	.06900	-.00200	.00300	.00000	-.16500	-.23700	-.20300	-.21600
.899	4.150	.34900	-.23500	.06800	-.00400	.00300	.00000	-.15300	-.24400	-.19400	-.20600
.899	6.170	.39600	-.26800	.06600	-.00700	.00400	.00000	-.15500	-.24100	-.21600	-.22400
.899	8.200	.43000	-.29000	.06400	-.00900	.00700	.00000	-.14900	-.23300	-.22400	-.22600
	GRADIENT	.03193	-.02168	-.00078	-.00039	.00020	-.00015	.00073	-.00010	.00234	.00229

FA25, MSFC TWT 652, CONFIG. 01ATPTTIS1 (0) (R1X024) (31 OCT 78)

REFERENCE DATA

SREF = 2650.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1560/ 0 RN/L = 6.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.139	-.06600	.05800	.09600	-.00100	.00100	.00200	-.22000	-.32200	-.28900	-.28200
.948	-6.080	.00500	.00700	.09300	.00000	.00000	.00200	-.19900	-.29400	-.26500	-.26200
.948	-4.040	.07600	-.04400	.08900	-.00100	.00100	.00200	-.18900	-.27600	-.24500	-.24800
.948	-2.020	.14600	-.09300	.08700	.00000	.00000	.00200	-.18200	-.27900	-.23400	-.23900
.948	.050	.21600	-.14100	.08400	.00000	.00000	.00200	-.18100	-.26900	-.22900	-.23100
.948	2.090	.28800	-.19100	.08300	-.00300	.00200	.00000	-.18700	-.25300	-.22900	-.22400
.948	4.150	.34000	-.22600	.08100	-.00300	.00200	.00000	-.18700	-.25500	-.22700	-.22200
.948	6.170	.37900	-.25200	.08000	-.00400	.00300	.00000	-.18500	-.26400	-.23400	-.23600
.948	8.200	.40800	-.27200	.07900	-.00500	.00200	.00000	-.18400	-.24000	-.25800	-.24900
	GRADIENT	.03270	-.02255	-.00098	-.00034	.00020	-.00029	-.00005	.00332	.00200	.00327

RUN NO. 1550/ 0 RN/L = 6.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.120	-.08700	.08600	.12400	.00000	.00100	.00200	-.26400	-.30400	-.33100	-.34900
1.047	-6.050	-.01500	.03500	.12100	-.00300	.00300	.00000	-.25300	-.30600	-.31900	-.32900
1.047	-4.010	.05300	-.01200	.11700	-.00300	.00400	.00000	-.23800	-.29600	-.29800	-.31400
1.047	-1.980	.12900	-.06700	.11400	-.00400	.00400	.00000	-.23000	-.28900	-.29800	-.31200
1.047	.090	.21200	-.12700	.11200	-.00500	.00400	.00000	-.23100	-.30300	-.30400	-.31700
1.047	2.130	.27800	-.17300	.11000	-.00500	.00400	.00000	-.22600	-.29100	-.30100	-.30600
1.047	4.170	.34500	-.22100	.10700	-.00400	.00200	.00000	-.23800	-.30000	-.32100	-.33000
1.047	6.200	.38800	-.25100	.10400	-.00600	.00500	.00000	-.22000	-.27500	-.31300	-.33800
1.047	8.250	.41300	-.26500	.10200	-.00400	.00100	.00000	-.23000	-.27400	-.31900	-.33500
	GRADIENT	.03581	-.02560	-.00117	-.00015	-.00020	.00000	.00020	-.00049	-.00239	-.00127

RUN NO. 1540/ 0 RN/L = 6.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.098	-8.110	-.09300	.09800	.14100	.00000	.00100	.00200	-.31400	-.36300	-.37800	-.39500
1.098	-6.050	-.01500	.04200	.13600	-.00400	.00400	.00100	-.29400	-.35600	-.34900	-.36300
1.098	-4.020	.06800	-.01800	.13400	-.00300	.00300	.00100	-.28000	-.34100	-.32300	-.34000
1.098	-1.970	.15400	-.08200	.13400	-.00400	.00300	.00100	-.27700	-.33700	-.33200	-.34400
1.098	.120	.23900	-.14300	.13400	-.00300	.00200	.00100	-.27700	-.34200	-.33600	-.35200
1.098	2.170	.31100	-.20000	.13100	-.00500	.00400	.00000	-.26500	-.34400	-.34700	-.35100
1.098	4.210	.38700	-.25000	.12700	-.00300	.00200	.00000	-.25800	-.34100	-.36800	-.36700
1.098	6.250	.43700	-.28300	.12000	-.00600	.00300	.00000	-.25100	-.32000	-.36300	-.38900
1.098	8.290	.46100	-.29500	.11500	-.00900	.00600	.00000	-.25900	-.31000	-.36500	-.38500
	GRADIENT	.03899	-.02826	-.00082	-.00005	-.00005	-.00015	.00272	-.00034	-.00509	-.00296

FA25, MSFC TWT 652, CONFIG. 01ATPTTISI (0) (RIX024) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1530/ 0 RN/L = 7.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.147	-8.139	-.10000	.10800	.15600	.00100	.00000	.00200	-.38000	-.39900	-.43000	-.43700
1.147	-6.070	-.01000	.03900	.15100	.00100	-.00100	.00200	-.36300	-.39700	-.41800	-.41800
1.147	-4.010	.07800	-.02500	.15100	.00000	.00000	.00100	-.35000	-.38600	-.39200	-.39300
1.147	-1.980	.16100	-.08800	.15200	.00000	.00100	.00100	-.34300	-.38700	-.38000	-.38700
1.147	.080	.24100	-.14600	.15200	.00000	.00000	.00100	-.34100	-.39300	-.37900	-.38300
1.147	2.130	.31500	-.19600	.15200	-.00100	.00000	.00000	-.33400	-.39300	-.37200	-.37900
1.147	4.180	.39500	-.24700	.14600	.00000	.00000	.00000	-.32400	-.38800	-.39800	-.39600
1.147	6.220	.44100	-.28700	.14000	.00000	.00000	.00000	-.31300	-.37600	-.41300	-.41700
1.147	8.280	.49000	-.32000	.13700	-.00100	.00100	.00000	-.31300	-.35700	-.42000	-.43200
	GRADIENT	.03748	-.02694	-.00049	-.00005	-.00005	-.00015	.00298	-.00049	-.00020	.00010

RUN NO. 1520/ 0 RN/L = 7.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.245	-8.139	-.10200	.11200	.15900	-.00100	.00000	.00000	-.32100	-.31800	-.36900	-.37000
1.245	-6.070	-.02400	.05300	.15800	.00000	.00000	.00100	-.30100	-.31800	-.35400	-.35500
1.245	-4.010	.05900	-.00900	.15500	-.00300	.00200	.00000	-.29100	-.31300	-.32900	-.32800
1.245	-1.980	.13900	-.06800	.15500	-.00100	.00100	.00100	-.27900	-.30400	-.31900	-.32600
1.245	.100	.21400	-.12300	.15400	.00000	.00100	.00100	-.26700	-.30000	-.31100	-.32000
1.245	2.130	.28800	-.17500	.15100	-.00300	.00200	.00000	-.26200	-.30500	-.31600	-.32800
1.245	4.190	.34800	-.21800	.14700	.00000	-.00100	.00000	-.25100	-.30300	-.34700	-.34500
1.245	6.210	.40100	-.25600	.14100	-.00500	.00000	-.00100	-.24200	-.28900	-.35300	-.36500
1.245	8.270	.44100	-.28300	.13500	-.00300	.00000	.00000	-.23200	-.27000	-.36100	-.37600
	GRADIENT	.03544	-.02560	-.00098	.00020	-.00024	-.00005	.00473	.00093	-.00161	-.00175

FA25, MSFC TWT 652, CONFIG. 01ATPTTI51 (0) (R1X025) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1670/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.601	-8.180	.22700	-.15800	.04700	.15100	-.09900	.05600	-.16200	-.24600	-.24100	-.15100
.601	-6.140	.21800	-.15400	.05000	.10900	-.07100	.04100	-.14600	-.23400	-.22900	-.14500
.601	-4.130	.21200	-.14800	.05300	.06700	-.04300	.02400	-.14100	-.22300	-.21100	-.15600
.601	-2.120	.20700	-.14500	.05300	.03000	-.01800	.01100	-.13300	-.21600	-.20600	-.17000
.601	-.080	.20300	-.14000	.05300	-.00800	.00600	-.00200	-.12700	-.20300	-.20600	-.19600
.601	1.980	.20800	-.14400	.05300	-.04300	.02900	-.01400	-.12700	-.18900	-.18200	-.22700
.601	4.010	.20400	-.14600	.05300	-.08200	.05500	-.02800	-.15500	-.19600	-.17500	-.24000
.601	6.010	.19900	-.14200	.05300	-.12700	.08400	-.04300	-.16100	-.21800	-.17700	-.24700
.601	8.040	.18300	-.13400	.04800	-.15800	.10400	-.05700	-.15900	-.24300	-.18100	-.24200
	GRADIENT	-.00073	.00024	.00000	-.01820	.01192	-.00633	-.00108	.00403	.00472	-.01104

RUN NO. 1660/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.799	-8.190	.26600	-.18700	.05400	.15700	-.10400	.05900	-.17200	-.24700	-.25500	-.14100
.799	-6.140	.25600	-.18000	.05700	.11300	-.07400	.04200	-.16100	-.24000	-.23900	-.14200
.799	-4.120	.25900	-.18200	.05700	.06600	-.04400	.02500	-.14800	-.23000	-.22200	-.15600
.799	-2.100	.24400	-.17100	.05600	.02900	-.01800	.01000	-.13800	-.21100	-.20100	-.17400
.799	-.060	.23800	-.16600	.05900	-.00900	.00700	-.00200	-.13400	-.19700	-.18400	-.19700
.799	1.960	.24800	-.17400	.06100	-.04600	.03100	-.01500	-.15000	-.19300	-.18100	-.22400
.799	4.029	.24700	-.17700	.06100	-.08600	[illegible]	-.02900	-.17300	-.20000	-.17200	-.23900
.799	6.050	23300	-.16700	.05700	-.12800	[illegible]	-.04600	-.16000	-.23200	-.16300	-.25000
.799	8.070	.22700	-.16600	.05500	-.16500	.10900	-.05900	-.17100	-.24800	-.16400	-.25300
	GRADIENT	-.00098	.00034	.00064	-.01862	.01223	-.00653	-.00206	.00382	.00589	-.01061

RUN NO. 1651/ 0 RN/L = 5.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.139	.27500	-.19000	.07200	.15400	-.10000	.06100	-.21500	-.27700	-.27100	-.17600
.899	-6.090	.27300	-.18900	.07200	.11000	-.07200	.04500	-.19600	-.26500	-.25900	-.17600
.899	-4.090	.26600	-.18400	.07000	.06700	-.04300	.02800	-.17700	-.24800	-.24100	-.18600
.899	-2.060	.25200	-.17300	.06900	.02600	-.01600	.01300	-.16300	-.23700	-.21900	-.20300
.899	.010	.25000	-.17000	.07000	-.00800	.00500	-.00100	.1590:	-.23400	[illegible]	-.21800
.899	2.030	.26000	-.17900	.07500	-.04700	.03000	-.01600	-.18700	-.23300	[illegible]	-.23900
.899	4.100	.25700	-.17900	.07600	-.08600	.05600	-.03000	-.20800	-.23800	-.19500	-.25800
.899	6.060	.24500	-.17200	.07500	-.13100	.08700	-.04700	-.21300	-.26000	-.19200	-.28100
.899	8.110	.22900	-.16100	.07100	-.16700	.10900	-.06200	-.20200	-.28400	-.18109	-.29200
	GRADIENT	-.00049	.00020	.00088	-.01851	.01192	-.00708	-.00420	.00117	.00513	-.00879

FA25, MSFC TWT 652, CONFIG. 01ATPTT151 (0) (R1X025) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1640/ 0 RN/L = 6.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.030	.26400	-.17800	.09900	.14800	-.09600	.06200	-.23500	-.31200	-.28800	-.18200
.948	-6.000	.25600	-.17300	.08900	.10400	-.06600	.04500	-.21600	-.29900	-.27600	-.19800
.948	-3.990	.24600	-.16500	.08500	.06000	-.03700	.02700	-.19300	-.27800	-.25500	-.20300
.948	-1.980	.22600	-.14900	.08300	.02200	-.01400	.01200	-.18000	-.27400	-.23700	-.22600
.948	.050	.22200	-.14600	.08600	-.00800	.00500	.00000	-.18600	-.27400	-.22100	-.24700
.948	2.080	.23500	-.15800	.09000	-.04500	.02800	-.01400	-.20800	-.25500	-.21500	-.26400
.948	4.110	.24200	-.16300	.09300	-.08500	.05300	-.02900	-.23400	-.26900	-.21400	-.28500
.948	6.130	.22200	-.14800	.09400	-.12600	.08200	-.04600	-.24200	-.28600	-.20400	-.29900
.948	8.170	.21100	-.14400	.08700	-.16700	.10700	-.06100	-.21800	-.30800	-.18000	-.30300
	GRADIENT	.00006	-.00025	.00114	-.01762	.01096	-.00681	-.00544	.00143	.00513	-.00997

RUN NO. 1630/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.048	-8.150	.25900	-.16400	.11700	.14900	-.09300	.06900	-.27700	-.33800	-.34400	-.24800
1.048	-6.110	.23900	-.14800	.11400	.10800	-.06800	.05000	-.25400	-.32300	-.33600	-.25100
1.048	-4.100	.21700	-.13200	.11200	.06700	-.04200	.03300	-.23600	-.31400	-.32100	-.26800
1.048	-2.080	.21000	-.12600	.11000	.02800	-.01800	.01500	-.23300	-.30000	-.30200	-.30100
1.048	-.030	.21100	-.12600	.11600	-.00900	.00600	-.00200	-.23800	-.28600	-.28800	-.31100
1.048	2.020	.21300	-.12900	.11700	-.04600	.02900	-.01900	-.24600	-.28200	-.27300	-.32900
1.048	4.080	.21500	-.13100	.11700	-.08400	.05200	-.03500	-.23600	-.30000	-.25300	-.34400
1.048	6.090	.20800	-.12900	.11300	-.12300	.07500	-.05200	-.23200	-.31000	-.23700	-.35200
1.048	8.139	.20400	-.12900	.11200	-.16400	.09800	-.06900	-.24500	-.33000	-.23500	-.36500
	GRADIENT	-.00005	-.00005	.00083	-.01838	.01149	-.00841	-.00083	.00224	.00906	-.00679

RUN NO. 1620/ 0 RN/L = 7.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.098	-8.180	.26400	-.16400	.13500	.15100	-.09300	.07100	-.31100	-.37600	-.38300	-.30300
1.098	-6.120	.25100	-.15500	.13200	.10800	-.06700	.05200	-.29600	-.36200	-.37400	-.30300
1.098	-4.100	.23300	-.14600	.12800	.06400	-.03900	.03200	-.27000	-.34400	-.35400	-.31000
1.098	-2.090	.23000	-.13800	.12900	.02300	-.01200	.01400	-.25000	-.33700	-.34700	-.33900
1.098	-.010	.22200	-.13600	.13300	-.01300	.00900	-.00400	-.28300	-.31800	-.33300	-.34300
1.098	2.020	.23100	-.13800	.13500	-.05400	.03500	-.02200	-.30300	-.32600	-.32900	-.36800
1.098	4.060	.23000	-.14000	.13200	-.09400	.06070	-.04100	-.29100	-.34400	-.31000	-.38400
1.098	6.100	.22400	-.13700	.13200	-.13600	.08500	-.05900	-.29200	-.35200	-.29700	-.39000
1.098	8.150	.21200	-.13100	.13200	-.17500	.10600	-.07500	-.30200	-.36800	-.28500	-.39800
	GRADIENT	-.00083	.00059	.00069	-.01923	.01204	-.00891	-.00417	.00054	.00519	-.00866

FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (R1X025) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1610/ 0 RN/L = 7.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.145	-8.160	.27900	-.17900	.14500	.16500	-.10500	.07000	-.34100	-.41800	-.41200	-.33100
1.145	-6.120	.26600	-.17100	.14100	.11700	-.07400	.05100	-.31900	-.40100	-.39600	-.32700
1.145	-4.100	.25600	-.16400	.13900	.07500	-.04800	.03300	-.29600	-.39200	-.38000	-.33400
1.145	-2.110	.24800	-.15500	.14200	.03300	-.02200	.01500	-.30700	-.36900	-.37100	-.35200
1.145	-.050	.24300	-.15000	.14400	-.00700	.00300	-.00100	-.30900	-.36700	-.35500	-.36800
1.145	2.010	.24000	-.14900	.14500	-.04600	.02800	-.01800	-.32000	-.37000	-.34600	-.38100
1.145	4.060	.24300	-.15300	.14200	-.08900	.05500	-.03600	-.31300	-.39600	-.33300	-.39500
1.145	6.100	.23500	-.14800	.14200	-.13300	.08400	-.05500	-.32300	-.39300	-.32500	-.40500
1.145	8.180	.22700	-.14500	.14500	-.17900	.11000	-.07200	-.34400	-.41600	-.32000	-.42200
	GRADIENT	-.00166	.00136	.00044	-.01991	.01252	-.00837	-.00229	.00052	.00582	-.00738

RUN NO. 1600/ 0 RN/L = 7.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.245	-8.160	.24700	-.14700	.15000	.15600	-.09800	.06900	-.28900	-.33900	-.36400	-.28600
1.245	-6.120	.23700	-.14400	.15000	.11200	-.07100	.05000	-.27800	-.32500	-.35300	-.27900
1.245	-4.110	.22300	-.13300	.14800	.07100	-.04500	.03300	-.27100	-.31900	-.34500	-.29000
1.245	-2.070	.21600	-.12700	.14900	.03100	-.01900	.01500	-.27.00	-.29900	-.33500	-.30600
1.245	-.020	.21200	-.12200	.15200	-.00800	.00600	-.00200	-.26700	-.28500	-.31300	-.32200
1.245	2.020	.20900	-.12100	.15200	-.04600	.03000	-.01900	-.27700	-.29300	-.30000	-.34000
1.245	4.060	.20600	-.12000	.15300	-.08800	.05600	-.03600	-.28400	-.31100	-.28800	-.34700
1.245	6.100	.20400	-.12100	.15000	-.13100	.08400	-.05400	-.28500	-.32100	-.28700	-.36400
1.245	8.150	.19900	-.11900	.14900	-.17500	.11000	-.07200	-.28700	-.33400	-.28300	-.37000
	GRADIENT	-.00201	.00157	.00064	-.01933	.01229	-.00842	-.00157	.00108	.00729	-.00724

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01ATPTT252 (0) (R1X026) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1681/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.040	-.03200	.02200	.06400	-.01000	.00700	-.00300	-.18900	-.20500	-.33300	-.33300
.602	-6.000	.01200	-.00800	.06500	-.00800	.00400	-.00200	-.18400	-.24300	-.31200	-.30800
.602	-3.980	.06500	-.04300	.06700	-.01200	.00900	-.00300	-.18200	-.24900	-.28900	-.30000
.602	-1.940	.12900	-.08600	.06600	-.00500	.00500	-.00100	-.17900	-.23900	-.28600	-.00300
.602	.100	.19700	-.13300	.06400	-.01200	.01000	-.00300	-.17900	-.23700	-.28900	-.30300
.602	2.150	.25500	-.17300	.05900	-.01200	.00800	-.00200	-.16800	-.22500	-.27300	-.28900
.602	4.170	.31700	-.21600	.05600	-.01100	.00900	-.00200	-.17400	-.23000	-.29000	-.30200
.602	6.200	.39600	-.26300	.04700	-.01400	.00800	-.00300	-.16800	-.22100	-.29900	-.30600
.602	8.260	.45500	-.31200	.04000	-.01400	.00800	-.00300	-.16800	-.21200	-.31400	-.31900
	GRADIENT	.03090	-.02124	-.00142	-.00025	.00015	.00005	.00133	.00255	.00054	-.01423

RUN NO. 1691/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.800	-8.040	-.00300	.00000	.07600	-.01100	.00800	-.00300	-.22300	-.18400	-.34000	-.33200
.800	-6.010	.04400	-.03200	.07500	-.01000	.00900	-.00200	-.20200	-.20200	-.31000	-.30500
.800	-3.960	.09700	-.06600	.07400	-.00900	.00700	-.00200	-.19800	-.23200	-.29200	-.28900
.800	-1.920	.16300	-.11100	.07200	-.00900	.00700	-.00200	-.19200	-.23400	-.28400	-.29400
.800	.140	.23100	-.15900	.07000	-.01000	.00800	-.00200	-.18700	-.23200	-.28400	-.29800
.800	2.190	.29700	-.20300	.06600	-.01100	.00900	-.00200	-.18700	-.24000	-.28600	-.29600
.800	4.230	.35900	-.24500	.06300	-.01200	.01000	-.00300	-.18300	-.24200	-.28800	-.29800
.800	6.260	.41700	-.28500	.05800	-.00700	.00600	-.00100	-.18000	-.23900	-.29300	-.30100
.800	8.290	.47100	-.32100	.05800	-.01000	.00700	-.00200	-.18200	-.23800	-.30600	-.31200
	GRADIENT	.03211	-.02196	-.00137	-.00039	.00039	-.00010	.00171	-.00127	.00029	-.00098

RUN NO. 1701/ 0 RN/L = 5.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.900	-8.080	-.05500	.04700	.09300	-.01200	.00600	-.00100	-.26100	-.25500	-.37800	-.36700
.900	-6.020	.01100	-.00100	.09000	-.00900	.00600	.00000	-.25000	-.24000	-.35200	-.33800
.900	-3.980	.07900	-.05000	.08800	-.01000	.00700	.00000	-.23800	-.23200	-.32800	-.31800
.900	-1.920	.15000	-.09900	.08500	-.01200	.00700	-.00100	-.22200	-.24400	-.31900	-.32100
.900	.140	.22600	-.15100	.08100	-.01000	.00600	.00000	.00000	.00000	.00000	.00000
.900	2.210	.30200	-.20400	.08000	-.01000	.00600	-.00100	-.20800	-.25500	-.31800	-.32800
.900	4.260	.35400	-.23700	.08100	-.01200	.00800	.00000	-.20800	-.26300	-.32300	-.33300
.900	6.290	.39600	-.26600	.08000	-.01000	.00600	.00000	-.20800	-.27800	-.33500	-.34700
.900	8.320	.43800	-.29300	.07800	-.01300	.00900	-.00100	-.20400	-.28400	-.34200	-.34400
	GRADIENT	.03406	-.02329	-.00092	-.00010	.00005	-.00000	.00358	-.00355	.00052	-.00181

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (R1X026) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1711/ 0 RN/L = 6.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.949	-8.080	-.07900	.07300	.11300	-.01100	.00900	-.00100	-.28400	-.31900	-.40000	-.39000
.949	-6.030	-.01400	.02500	.10900	-.01400	.00900	-.00100	-.27300	-.30700	-.38800	-.37600
.949	-3.970	.05500	-.02400	.10600	-.01200	.00800	-.00100	-.26300	-.28000	-.36600	-.36100
.949	-1.930	.12300	-.07200	.10300	-.01200	.00800	-.00200	-.25100	-.28100	-.36000	-.35700
.949	.140	.19600	-.12300	.10000	-.00900	.00700	-.00100	-.24400	-.29100	-.35800	-.36000
.949	2.200	.26900	-.17400	.09600	-.01000	.00600	-.00100	-.24100	-.29600	-.35500	-.36300
.949	4.240	.33800	-.22200	.09500	-.01000	.00600	.00000	-.23900	-.30500	-.35500	-.36800
.949	6.270	.38200	-.25200	.09300	-.01000	.00500	.00000	-.23500	-.30900	-.36400	-.36600
.949	8.300	.42100	-.27700	.09300	-.00800	.00400	.00000	-.24000	-.32300	-.37700	-.38600
	GRADIENT	.03465	-.02423	-.00141	.00029	-.00029	.00015	.00282	-.00316	.00131	-.00097

RUN NO. 1720/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.080	-.10000	.09900	.13400	-.01000	.00500	-.00200	-.31800	-.30200	-.48600	-.48400
1.047	-6.040	-.03500	.05300	.13400	-.00900	.00600	-.00200	-.30300	-.29800	-.45900	-.45400
1.047	-4.020	.02900	.00000	.13100	-.01100	.00700	-.00200	-.30300	-.30900	-.44400	-.44200
1.047	-1.970	.10200	-.04300	.13000	-.01100	.00700	-.00300	-.30300	-.30600	-.43700	-.44300
1.047	.090	.17900	-.09800	.13100	-.01200	.00900	-.00300	-.30600	-.31300	-.43400	-.44600
1.047	2.160	.26100	-.15600	.13000	-.01100	.00700	-.00300	-.31200	-.31500	-.44800	-.44400
1.047	4.220	.32400	-.20000	.12800	-.01300	.00900	-.00300	-.30900	-.31000	-.44500	-.45500
1.047	6.230	.37400	-.23500	.12400	-.01500	.01100	-.00300	-.29800	-.31000	-.44100	-.45200
1.047	8.270	.42000	-.26600	.12100	-.01500	.01000	-.00200	-.30900	-.32500	-.45500	-.46200
	GRADIENT	.03634	-.02537	.00029	-.00019	.00019	-.00010	-.00102	-.00053	-.00063	-.00131

RUN NO. 1730/ 0 RN/L = 7.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.096	-8.090	-.12600	.12600	.15100	-.00800	.00500	-.00100	-.35800	-.33700	-.50200	-.50600
1.096	-6.030	-.05400	.07300	.14800	-.01100	.00700	-.00200	-.35800	-.34700	-.49500	-.49400
1.096	-4.000	.02200	.01800	.14700	-.01000	.00600	-.00200	-.35000	-.34600	-.47200	-.47800
1.096	-1.950	.10800	-.04400	.14700	-.01100	.00700	-.00300	-.35400	-.34300	-.47200	-.47900
1.096	.090	.19300	-.10600	.14800	-.01000	.00700	-.00300	[illegible]	-.32800	-.46900	-.48200
1.096	2.160	.28000	-.16800	.14700	-.01000	.00700	-.00200	[illegible]	-.32500	-.47400	-.47600
1.096	4.210	.35400	-.22100	.14300	-.01100	.00700	-.00200	[illegible]	-.31300	-.48400	-.47800
1.096	6.250	.41000	-.26000	.13900	-.01300	.00900	-.00300	[illegible]	-.31900	-.49700	-.49700
1.096	8.300	.45700	-.29000	.13600	-.01400	.01100	-.00200	-.34800	-.32900	-.50700	-.50800
	GRADIENT	.04072	-.02932	-.00039	-.00005	.00010	.00005	-.00054	.00409	-.00127	.00015

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (R1X026) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1740/ 0 RN/L = 7.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.146	-8.080	-.11700	.12400	.16400	-.01200	.00900	-.00300	-.42900	-.38800	-.53700	-.54200
1.146	-6.020	-.02500	.05400	.16200	-.01100	.00800	-.00300	-.42600	-.37800	-.52100	-.52900
1.146	-3.980	.06000	-.00900	.16400	-.01100	.00900	-.00200	-.41700	-.37300	-.50500	-.51500
1.146	-1.930	.14100	-.06900	.16400	-.01400	.01000	-.00300	-.41100	-.37800	-.49400	-.50300
1.146	.110	.21700	-.12400	.16400	-.01700	.01300	-.00400	-.41400	-.38000	-.48900	-.50300
1.146	2.160	.29700	-.18100	.16500	-.01500	.01200	-.00400	-.41400	-.37900	-.49200	-.49900
1.146	4.210	.36300	-.22800	.16100	-.01400	.01200	-.00300	-.41600	-.37900	-.50100	-.50200
1.146	6.230	.42900	-.27400	.15800	-.01500	.01300	-.00400	-.40800	-.37700	-.51400	-.50500
1.146	8.300	.48600	-.31200	.15600	-.01700	.01300	-.00400	-.40600	-.38600	-.51500	-.53100
	GRADIENT	.03722	-.02687	-.00024	-.00034	.00039	-.00015	-.00005	-.00063	.00049	.00147

RUN NO. 1750/ 0 RN/L = 8.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.244	-8.080	-.11300	.12300	.16800	-.00900	.00700	-.00200	-.35900	-.30800	-.44800	-.46000
1.244	-6.020	-.03500	.06300	.16700	-.00900	.00700	-.00200	-.35200	-.29500	-.43300	-.44500
1.244	-3.980	.04200	.00600	.16900	-.01100	.00900	-.00200	-.35800	-.29900	-.42900	-.43800
1.244	-1.910	.12200	-.05100	.16900	-.01400	.01000	-.00300	-.35600	-.29200	-.42200	-.43200
1.244	.150	.19900	-.11000	.16800	-.01400	.01100	-.00300	-.34900	-.28100	-.41600	-.41900
1.244	2.220	.27600	-.16500	.16600	-.01400	.01200	-.00400	-.34000	-.28100	-.40900	-.40900
1.244	4.280	.34500	-.21500	.16100	-.01200	.00900	-.00300	-.34300	-.26700	-.41900	-.41300
1.244	6.320	.40100	-.25400	.15900	-.01600	.01300	-.00400	-.34000	-.26300	-.44200	-.43000
1.244	8.360	.45100	-.28800	.15500	-.01400	.01300	-.00400	-.32900	-.27100	-.45100	-.43500
	GRADIENT	.03680	-.02693	-.00092	-.00010	.00010	-.00015	.00223	.00363	.00160	.00354

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (R1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1770/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.059	.23200	-.16200	.05400	.16100	-.10500	.05800	-.20300	-.22700	-.35800	-.26500
.602	-6.030	.22400	-.15600	.05900	.12200	-.08100	.04400	-.19600	-.23500	-.34500	-.25700
.602	-3.990	.21500	-.15000	.05900	.07500	-.04900	.02700	-.18700	-.23600	-.32800	-.25900
.602	-1.970	.20300	-.14000	.06200	.03300	-.02100	.01200	-.18200	-.23300	-.31100	-.26900
.602	.080	.19600	-.13200	.06300	-.00700	.00500	-.00100	-.17900	-.22500	-.29600	-.29000
.602	2.090	.19400	-.13400	.06300	-.04200	.03100	-.01300	-.17600	-.22000	-.27000	-.31100
.602	4.110	.19900	-.13900	.06100	-.08300	.05600	-.02700	-.18500	-.21700	-.25800	-.33100
.602	6.140	.19600	-.13900	.05900	-.12700	.08600	-.04300	-.19900	-.22100	-.25100	-.35380
.602	8.180	.19200	-.14000	.05800	-.16400	.10900	-.05500	-.21000	-.23000	-.25800	-.36900
	GRADIENT	-.00203	.00139	.00025	-.01930	.01293	-.00656	.00050	.00252	.00893	-.00918

RUN NO. 1780/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.802	-8.090	.26300	-.18100	.06600	.16800	-.11100	.06300	-.22900	-.23400	-.36900	-.26600
.802	-6.030	.25700	-.17900	.06500	.12400	-.08100	.04600	-.20900	-.26500	-.34500	-.25100
.802	-4.000	.25000	-.17400	.06700	.07700	-.05100	.02900	-.19600	-.25100	-.32300	-.25300
.802	-1.960	.24000	-.16600	.07000	.03300	-.02000	.01300	-.19400	-.24800	-.30900	-.27300
.802	.080	.22300	-.15300	.07200	-.00600	.00500	-.00100	-.18500	-.23400	-.28500	-.28500
.802	2.100	.22900	-.15900	.06900	-.04200	.02800	-.01400	-.18700	-.22600	-.26500	-.30600
.802	4.120	.23300	-.16500	.07100	-.08500	.05700	-.02900	-.21100	-.22900	-.25800	-.33600
.802	6.160	.23000	-.16500	.06800	-.12800	.08600	-.04400	-.22200	-.23400	-.25100	-.35400
.802	8.190	.21000	-.15200	.06500	-.17100	.11500	-.06000	-.21300	-.26100	-.25400	-.37000
	GRADIENT	-.00222	.00124	.00035	-.01966	.01301	-.00704	-.00113	.00325	.00857	-.00980

RUN NO. 1790/ 0 RN/L = 5.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.900	-8.090	.25800	-.17200	.08200	.16300	-.10600	.06500	-.26600	-.29500	-.40400	-.29500
.900	-6.040	.24700	-.16600	.08200	.12200	-.08000	.05000	-.24000	-.29000	-.37600	-.28800
.900	-4.020	.24600	-.16800	.08300	.07500	-.04700	.03100	-.23100	-.26900	-.34600	-.28500
.900	-1.980	.23400	-.15800	.08300	.03400	-.02100	.01500	-.22200	-.26200	-.33300	-.30900
.900	.080	.22300	-.15000	.08100	-.00500	.00400	.00100	-.20300	-.24300	-.31200	-.31400
.900	2.130	.22600	-.15300	.08300	-.04100	.03600	-.01300	-.21800	-.25000	-.30700	-.33700
.900	4.140	.22500	-.15400	.08600	-.08100	.05200	-.02700	-.24000	-.26200	-.28900	-.35400
.900	6.160	.21500	-.14800	.08200	-.12600	.08300	-.04500	-.22800	-.29200	-.28100	-.38300
.900	8.210	.20400	-.14200	.08000	-.16700	.10900	-.06000	-.23500	-.31500	-.28700	-.40900
	GRADIENT	-.00245	.00162	.00029	-.01894	.01199	-.00705	-.00067	.00128	.00685	-.00812

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (R1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1800/ 0 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.949	-8.100	.24100	-.15500	.10300	.17000	-.11100	.06900	-.29600	-.33600	-.43700	-.30400
.949	-6.050	.22700	-.14600	.09900	.12200	-.07800	.05200	-.26700	-.33300	-.41500	-.30600
.949	-4.020	.21500	-.13800	.10000	.07600	-.04700	.03300	-.25000	-.32400	-.38700	-.30700
.949	-2.000	.19500	-.12200	.09700	.03500	-.02000	.01700	-.24100	-.32000	-.37500	-.33700
.949	.080	.19000	-.11900	.09600	-.00200	.00200	.00000	-.24000	-.29200	-.35000	-.35700
.949	2.120	.19800	-.12700	.09800	-.04000	.02400	-.01300	-.24600	-.28400	-.33700	-.37000
.949	4.140	.20500	-.13300	.10600	-.07900	.05000	-.02700	-.27300	-.28600	-.31500	-.39400
.949	6.170	.20100	-.13300	.10800	-.12300	.07900	-.04400	-.30800	-.30500	-.30600	-.41800
.949	8.220	.19000	-.12700	.10500	-.16600	.10700	-.06000	-.31300	-.31400	-.30000	-.42900
	GRADIENT	-.00083	.00025	.00063	-.01883	.01164	-.00734	-.00249	.00549	.00891	-.01012

RUN NO. 1810/ 0 RN/L = 6.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.049	-8.129	.23400	-.13800	.12700	.16400	-.10100	.07400	-.31600	-.35400	-.48500	-.37600
1.049	-6.090	.21800	-.12800	.12800	.12000	-.07500	.05600	-.30600	-.34400	-.48700	-.38400
1.049	-4.029	.19900	-.11300	.12800	.07500	-.04600	.03700	-.29900	-.34400	-.47500	-.39800
1.049	-1.990	.18200	-.09800	.13100	.03300	-.01900	.01700	-.31200	-.33400	-.45900	-.41300
1.049	.060	.17700	-.09600	.13100	-.00500	.00500	.00000	-.30200	-.32800	-.44200	-.44400
1.049	2.110	.18200	-.10100	.13200	-.04600	.03100	-.01900	-.32400	-.32100	-.43100	-.48000
1.049	4.170	.17900	-.10100	.13400	-.08500	.05500	-.03500	-.33200	-.29800	-.39000	-.47500
1.049	6.200	.18300	-.10700	.13500	-.12600	.08000	-.05300	-.34900	-.32100	-.38200	-.49400
1.049	8.250	.17900	-.10700	.13400	-.16900	.10500	-.07000	-.35800	-.33400	-.37700	-.49600
	GRADIENT	-.00195	.00102	.00063	-.01946	.01229	-.00878	-.00381	.00512	.00966	-.01078

RUN NO. 1820/ 0 RN/L = 7.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.096	-8.120	.23900	-.13700	.15200	.17600	-.11100	.08000	-.39500	-.37600	-.52200	-.42800
1.096	-6.080	.22300	-.12500	.15400	.13100	-.08300	.06100	-.39300	-.36200	-.51900	-.43300
1.096	-4.040	.20900	-.11500	.15400	.08600	-.05400	.04000	-.38700	-.35500	-.51100	-.44200
1.096	-2.000	.19200	-.10100	.15400	.04100	-.02600	.02000	-.37300	-.35500	-.50100	-.45800
1.096	.080	.19000	-.10100	.15100	.00000	.00100	.00100	-.37200	-.34800	-.49200	-.49600
1.096	2.120	.18200	-.09700	.14900	-.04200	.02700	-.01800	-.36900	-.33600	-.46000	-.50000
1.096	4.170	.18200	-.09800	.14900	-.08200	.05200	-.03600	-.37100	-.34000	-.43800	-.51100
1.096	6.190	.18600	-.10400	.15200	-.12500	.07900	-.05500	-.38800	-.35100	-.43100	-.52400
1.096	8.260	.18300	-.10600	.15400	-.17000	.10600	-.07300	-.40900	-.37000	-.43400	-.53400
	GRADIENT	-.00311	.00185	-.00073	-.02040	.01290	-.00925	.00175	.00239	.00910	-.00877

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (R1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1830/ 0 RN/L = 7.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.146	-8.120	.24300	-.14300	.16300	.17700	-.11200	.07600	-.43000	-.41400	-.52300	-.44600
1.146	-6.070	.23100	-.13500	.16200	.12700	-.08100	.05600	-.42400	-.39400	-.51700	-.44000
1.146	-4.029	.21900	-.12700	.16200	.08200	-.05200	.03600	-.41300	-.38900	-.50800	-.44300
1.146	-2.000	.20200	-.11400	.16200	.03300	-.02000	.01600	-.39900	-.39700	-.49400	-.46300
1.146	.080	.19700	-.11100	.16300	-.00600	.00400	.00000	-.40800	-.38600	-.48700	-.48900
1.146	2.120	.19700	-.11200	.16100	-.04800	.03100	-.01800	-.40800	-.38600	-.46700	-.50100
1.146	4.160	.19600	-.11300	.16300	-.09100	.05800	-.03600	-.42000	-.39000	-.44400	-.50800
1.146	6.220	.19200	-.11300	.16000	-.13600	.08700	-.05500	-.41100	-.40400	-.43900	-.51800
1.146	8.290	.18500	-.11100	.15900	-.18500	.11600	-.07400	-.41600	-.41500	-.43500	-.52700
	GRADIENT	-.00249	.00146	.00005	-.02083	.01322	-.00868	-.00112	.00044	.00756	-.00820

RUN NO. 1760/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.246	-8.160	.23300	-.13500	.15900	.17000	-.10700	.07500	-.34000	-.31500	-.45300	-.37400
1.246	-6.070	.22200	-.12700	.16100	.12300	-.07800	.05500	-.33900	-.29200	-.43800	-.36500
1.246	-4.029	.21000	-.11300	.16300	.07800	-.04900	.03600	-.34200	-.28800	-.43300	-.36800
1.246	-2.000	.19300	-.10500	.16300	.03300	-.01900	.01700	-.33800	-.28700	-.42100	-.38500
1.246	.080	.18900	-.10200	.16500	-.00500	.00500	.00000	-.34000	-.27800	-.41000	-.40800
1.246	2.110	.18500	-.10100	.16400	-.04500	.03100	-.01800	-.34300	-.28400	-.39900	-.43400
1.246	4.170	.18300	-.10000	.16500	-.08600	.05600	-.03400	-.34700	-.29400	-.37800	-.44000
1.246	6.190	.18400	-.10300	.16200	-.13000	.08400	-.05400	-.34600	-.30300	-.37300	-.44800
1.246	8.280	.17300	-.09900	.16000	-.17500	.11100	-.07200	-.35200	-.32500	-.37800	-.46100
	GRADIENT	-.00302	.00195	.00024	-.01980	.01268	-.00853	-.00073	-.00044	.00644	-.00941

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (R1X028) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1990/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.049	-.04500	.03600	.09800	-.01100	.00600	-.00300	-.19400	-.16100	-.33200	-.23500
.602	-6.030	.00200	.00300	.08900	-.01100	.00700	-.00300	-.18900	-.18400	-.30700	-.20600
.602	-4.010	.05900	-.03400	.08900	-.01400	.01000	-.00300	-.18900	-.19900	-.29300	-.19300
.602	-1.940	.12000	-.07400	.08900	-.01000	.00800	-.00300	-.18400	-.20100	-.28500	-.18300
.602	.140	.18300	-.11800	.08400	-.01100	.00800	-.00300	-.18700	-.20000	-.28800	-.18500
.602	2.080	.24600	-.16100	.08000	-.01500	.01100	-.00500	-.18100	-.19000	-.28100	-.18300
.602	4.100	.30200	-.20100	.07600	-.01300	.01100	-.00400	-.17300	-.18800	-.28600	-.19200
.602	6.130	.37300	-.25000	.07000	-.01500	.01000	-.00500	-.17200	-.18800	-.29900	-.19600
.602	8.110	.44200	-.29900	.06200	-.01300	.01100	-.00300	-.16600	-.17600	-.31200	-.20300
	GRADIENT	.03023	-.02080	-.00173	-.00014	.00024	-.00020	.00172	.00162	.00089	.00061

RUN NO. 1980/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.800	-8.070	-.03000	.02500	.10000	-.01300	.00800	-.00400	-.21100	-.20800	-.32700	-.31000
.800	-6.060	.02600	-.01300	.09900	-.01200	.01000	-.00400	-.20600	-.22400	-.30800	-.30300
.800	-4.029	.08400	-.05300	.09900	-.01200	.00800	-.00300	-.20000	-.22100	-.28800	-.27400
.800	-1.950	.14900	-.09700	.09700	-.01500	.01200	-.00400	-.19400	-.20200	-.27800	-.26400
.800	.170	.21700	-.14200	.09400	-.01500	.01100	-.00500	-.19200	-.20000	-.28300	-.25500
.800	2.120	.28200	-.18800	.09000	-.01500	.01000	-.00400	-.19500	-.21700	-.28800	-.25500
.800	4.160	.34600	-.23100	.08400	-.01400	.00900	-.00400	-.19000	-.20300	-.28900	-.26300
.800	6.190	.41000	-.27600	.08000	-.01400	.00900	-.00400	-.18500	-.20200	-.29400	-.25400
.800	8.180	.46000	-.30900	.07900	-.01400	.01000	-.00400	-.18400	-.21000	-.31100	-.27200
	GRADIENT	.03213	-.02186	-.00181	-.00020	.00000	-.00010	.00094	.00105	-.00058	.00154

RUN NO. 1970/ 0 RN/L = 5.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.899	-8.090	-.07600	.06800	.11600	-.01000	.00800	.00000	-.23700	-.27000	-.35600	-.07800
.899	-6.050	-.01400	.02300	.11300	-.01000	.00600	-.00100	-.23000	-.26400	-.33300	-.06900
.899	-4.040	.05600	-.02600	.11100	-.01000	.00700	.00000	-.21900	-.25400	-.31300	-.05000
.899	-1.930	.13100	-.08000	.10800	-.01300	.00900	-.00100	-.21200	-.26700	-.31000	-.03800
.899	.160	.21500	-.13800	.10600	-.01000	.00700	-.00100	-.20400	-.27600	-.31500	-.04400
.899	2.140	.29400	-.19300	.10300	-.01000	.00600	-.00100	-.20000	-.27200	-.31200	-.04600
.899	4.170	.34600	-.22800	.10300	-.01100	.00600	.00000	-.20600	-.27800	-.31900	-.06200
.899	6.200	.38700	-.25500	.10100	-.01200	.00700	-.00200	-.20000	-.27700	-.33400	-.08700
.899	8.190	.43200	-.28500	.09900	-.01300	.00800	-.00300	-.20400	-.28200	-.34400	-.09100
	GRADIENT	.03627	-.02524	-.00103	.00005	-.00024	-.00000	.00187	-.00260	-.00068	-.00154

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (R1X028) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1960/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.947	-8.090	-.09800	.09400	.13500	-.01200	.00700	-.00200	-.26500	-.35000	-.37400	-.08100
.947	-6.080	-.03600	.04800	.13100	-.01100	.00700	-.00100	-.26100	-.34700	-.36600	-.06200
.947	-4.040	.03200	.00000	.12900	-.01100	.00700	-.00200	-.24700	-.31000	-.33800	-.03600
.947	-1.960	.10500	-.05200	.12600	-.01100	.00700	-.00100	-.23500	-.31600	-.33900	-.02200
.947	.150	.18100	-.10600	.12100	-.01200	.00700	-.00200	-.22900	-.32600	-.33900	-.02300
.947	2.110	.25700	-.16000	.11800	-.01000	.00600	-.00200	-.22200	-.32300	-.34000	-.02300
.947	4.170	.33000	-.21300	.11400	-.01000	.00600	-.00100	-.22300	-.31900	-.34300	-.03100
.947	6.210	.37500	-.24300	.11400	-.01200	.00800	-.00200	-.23200	-.34200	-.36200	-.07000
.947	8.190	.41500	-.26900	.11100	-.01400	.00800	-.00100	-.23200	-.32300	-.37200	-.06200
	GRADIENT	.03650	-.02606	-.00186	.00014	-.00015	.00005	.00298	-.00123	-.00054	.00045

RUN NO. 1950/ 0 RN/L = 6.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.100	-.10600	.10700	.1570[illegible]	.01000	.00700	-.00200	-.31000	-.29100	-.48700	.02400
1.047	-6.050	-.03900	.05900	.15600	-.01000	.00800	-.00200	-.30200	-.28000	-.46300	.04100
1.047	-4.029	.02400	.01400	.15100	-.01000	.00800	-.00200	-.29600	-.29900	-.44500	.04400
1.047	-1.920	.10100	-.03900	.15000	-.01100	.00800	-.00200	-.28900	-.29800	-.44600	.05900
1.047	.160	.17900	-.09400	.15200	-.01100	.00800	-.00200	-.29900	-.31600	-.43900	.05100
1.047	2.150	.25400	-.14800	.15000	-.01100	.00900	-.00300	-.30900	-.31600	-.43600	.05600
1.047	4.190	.31400	-.19000	.14900	-.01400	.00900	-.00400	-.29700	-.32200	-.43900	.05600
1.047	6.230	.37700	-.23400	.14500	-.01100	.00800	-.00300	-.30000	-.31700	-.44900	.02400
1.047	8.220	.41400	-.25800	.14200	-.01300	.00900	-.00200	-.30600	-.31000	-.45800	.01500
	GRADIENT	.03575	-.02521	-.00019	-.00039	.00015	-.00024	-.00063	-.00312	.00107	.00103

RUN NO. 1940/ 0 RN/L = 7.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.098	-8.100	-.12900	.13100	.17400	-.01100	.00800	-.00300	-.35900	-.33900	-.51700	.27600
1.098	-6.060	-.05500	.07600	.17200	-.00800	.00300	-.00200	-.35300	-.33100	-.50000	.28900
1.098	-4.029	.02300	.01900	.16900	-.00900	.00600	-.00200	-.35300	-.33200	-.48500	.29100
1.098	-1.930	.11400	-.04800	.17000	-.00900	.00600	-.00200	-.35600	-.31100	-.47800	.29900
1.098	.180	.19700	-.10700	.17000	-.01100	.00800	-.00300	-.35200	-.30900	-.47400	.30700
1.098	2.150	.28400	-.16900	.17000	-.01000	.00800	-.00200	-.35900	-.33000	-.47700	.30600
1.098	4.200	.35400	-.21900	.16600	-.01200	.00800	-.00300	-.35100	-.32200	-.48200	.30500
1.098	6.250	.41400	-.26000	.16000	-.01400	.01100	-.00300	-.34400	-.32500	-.49600	.29400
1.098	8.240	.46400	-.29500	.15600	-.01200	.00800	-.00200	-.33700	-.32700	-.51100	.29700
	GRADIENT	.04051	-.02907	-.00029	-.00034	.00029	-.00010	.00005	.00008	.00035	.00172

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0T252 (0) (R1X028) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1930/ 0 RN/L = 7.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.146	-8.100	-.11000	.11800	.18100	-.01400	.01100	-.00300	-.40200	-.35400	-.52600	.22400
1.146	-6.060	-.02600	.05300	.17700	-.01600	.01300	-.00400	-.38700	-.34400	-.51000	.23800
1.146	-4.040	.05400	-.00700	.17700	-.01700	.01600	-.00300	-.37500	-.34300	-.48800	.25500
1.146	-1.930	.13900	-.06900	.17700	-.01900	.01500	-.00400	-.37700	-.35500	-.48100	.26600
1.146	.160	.22100	-.12800	.18000	-.01800	.01600	-.00300	-.38000	-.35700	-.47300	.27500
1.146	2.130	.29700	-.19200	.17800	-.02100	.01600	-.00500	-.37700	-.37300	-.48600	.27200
1.146	4.190	.36600	-.23000	.17600	-.02200	.01800	-.00500	-.37700	-.37000	-.48400	.26400
1.146	6.230	.43000	-.27700	.17200	-.02000	.01700	-.00500	-.36900	-.37000	-.50500	.27000
1.146	8.240	.48200	-.31100	.16400	-.02000	.01500	-.00500	-.34300	-.36000	-.48900	.27700
	GRADIENT	.03812	-.02725	-.00004	-.00058	.00024	-.00024	-.00020	-.00351	.00017	.00119

RUN NO. 1920/ 0 RN/L = 8.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.090	-.11400	.12600	.19000	-.00900	.00600	-.00200	-.34700	-.30100	-.45000	.05600
1.243	-6.080	-.03800	.06800	.18900	-.00900	.00700	-.00100	-.34300	-.29600	-.43800	.05100
1.243	-4.050	.03700	.01200	.19000	-.01000	.00700	-.00100	-.34600	-.30500	-.43400	.05200
1.243	-1.950	.11900	-.04700	.19000	-.01000	.00800	-.00200	-.34500	-.30100	-.42600	.08900
1.243	.160	.20200	-.11000	.18800	-.01200	.01000	-.00200	-.34100	-.27800	-.41800	.09700
1.243	2.120	.27300	-.16300	.18600	-.01300	.01100	-.00300	-.33900	-.28900	-.42100	.10100
1.243	4.190	.34200	-.21100	.18400	-.01200	.01200	-.00300	-.33400	-.27500	-.41900	.09600
1.243	6.230	.40100	-.25200	.18000	-.01500	.01400	-.00400	-.33200	-.27200	-.44700	.09000
1.243	8.230	.44600	-.28200	.17400	-.01600	.01300	-.00300	-.32300	-.28300	-.45600	.10100
	GRADIENT	.03733	-.02736	-.00078	-.00034	.00063	-.00024	.00146	.00353	.00172	.00392

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (R1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1900/ 0 RN/L = 2.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.040	.23500	-.15900	.07600	.16200	-.10700	.05700	-.19600	-.18800	-.37200	-.23500
.602	-6.070	.21800	-.14700	.08000	.12200	-.08100	.04300	-.18500	-.18400	-.35100	-.22000
.602	-4.050	.20800	-.14000	.08200	.07600	-.05100	.02600	-.18100	-.19000	-.33300	-.22300
.602	-1.970	.19800	-.13000	.08400	.03100	-.02100	.01000	-.18700	-.19400	-.31600	-.23400
.602	.080	.18900	-.12300	.08700	-.00700	.00700	-.00200	-.18000	-.19900	-.29100	-.23600
.602	2.010	.19400	-.12700	.08700	-.04400	.03100	-.01400	-.18800	-.19500	-.27300	-.24500
.602	4.050	.19700	-.13300	.08700	-.08400	.05700	-.02600	-.19300	-.18300	-.26000	-.25700
.602	6.080	.19800	-.13600	.08400	-.13100	.09000	-.04400	-.20400	-.18500	-.25300	-.29000
.602	8.059	.19200	-.13500	.08200	-.17200	.11600	-.05700	-.21900	-.19400	-.26200	-.30500
	GRADIENT	-.00131	.00086	.00065	-.01958	.01328	-.00654	-.00123	.00063	.00937	-.00391

RUN NO. 1890/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.799	-8.070	.26800	-.18200	.08600	.17500	-.11700	.06200	-.20800	-.25300	-.36600	-.25800
.799	-6.050	.25200	-.17000	.08900	.12600	-.08400	.04600	-.19800	-.22800	-.34500	-.24100
.799	-4.060	.23900	-.16100	.09000	.08300	-.05500	.02900	-.19200	-.20700	-.32800	-.23800
.799	-1.960	.22600	-.15000	.09400	.03000	-.02300	.01200	-.18700	-.20400	-.30500	-.23400
.799	.100	.21600	-.14300	.09200	-.00500	.00400	-.00100	-.19100	-.21200	-.28600	-.23100
.799	2.040	.22100	-.14700	.09400	-.04500	.03100	-.01500	-.19500	-.21000	-.26400	-.23900
.799	4.080	.22500	-.15400	.09500	-.09180	.06200	-.03000	-.20900	-.22000	-.25500	-.26900
.799	6.110	.22300	-.15480	.09280	-.13600	.09200	-.04600	-.21600	-.23600	-.24300	-.26900
.799	8.070	.22000	-.15300	.09300	-.17900	.12200	-.06000	-.23700	-.25400	-.25100	-.29200
	GRADIENT	-.00165	.00086	.00049	-.02116	.01420	-.00715	-.00206	-.00158	.00922	-.00328

RUN NO. 1880/ 0 RN/L = 5.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.900	-8.090	.26100	-.17000	.10600	.16800	-.10900	.06400	-.23500	-.30400	-.39700	-.09600
.900	-6.060	.24900	-.16300	.10600	.12800	-.08400	.04900	-.22700	-.29100	-.38000	-.10800
.900	-4.069	.23800	-.15600	.10700	.07800	-.05000	.03100	-.21400	-.28400	-.35900	-.09900
.900	-1.990	.22300	-.14400	.10600	.03500	-.02200	.01500	-.20500	-.27400	-.33600	-.08600
.900	.100	.21200	-.13600	.10400	-.00300	.00300	.00100	-.20000	-.27500	-.31300	-.07700
.900	2.050	.21300	-.13800	.10700	-.04100	.02700	-.01300	-.20600	-.28900	-.29800	-.08000
.900	4.080	.21600	-.14200	.11100	-.08200	.05300	-.02700	-.22300	-.30500	-.28900	-.09100
.900	6.120	.21300	-.14200	.10900	-.12700	.08500	-.04300	-.23500	-.32000	-.27600	-.11200
.900	8.090	.20700	-.13800	.10900	-.17000	.11308	-.05800	-.25000	-.32400	-.28400	-.11200
	GRADIENT	-.00268	.00169	.00044	-.01947	.01254	-.00708	-.00091	-.00277	.00877	.00111

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (R1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1870/ 0 RN/L = 5.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.947	-8.100	.24300	-.15400	.12400	.17100	-.11100	.06800	-.27200	-.33500	-.43800	-.27100
.947	-6.070	.22600	-.14200	.12100	.12500	-.08100	.05100	-.25300	-.33100	-.41500	-.28400
.947	-4.060	.21400	-.13200	.12200	.07900	-.04900	.03300	-.2350[illegible]	-.31800	-.38400	-.28600
.947	-1.970	.19000	-.11300	.12000	.03500	-.02100	.01600	-.2326[illegible]	-.31100	-.36900	-.30200
.947	.100	.18700	-.11100	.12200	-.00400	.00300	.00000	-.23200	-.32300	-.34600	-.31100
.947	2.050	.18200	-.10900	.12200	-.04000	.02500	-.01300	-.23400	-.33900	-.32400	-.23800
.947	4.080	.18700	-.11400	.12500	-.07900	.04900	-.02700	-.24500	-.34400	-.30600	-.26400
.947	6.130	.18800	-.11800	.12500	-.12500	.08000	-.04400	-.25700	-.35100	-.29700	-.29500
.947	8.100	.19100	-.12500	.12500	-.16800	.10900	-.05900	-.28800	-.33300	-.30500	-.30300
	GRADIENT	-.00308	.00199	.00039	-.01927	.01193	-.00734	-.00107	-.00392	.00990	.00524

RUN NO. 1861/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.129	.25000	-.14700	.15500	.16800	-.10300	.07500	-.32400	-.35300	-.49400	-.27400
1.047	-6.090	.22800	-.13200	.15200	.12400	-.07700	.05700	-.30800	-.34300	-.48900	-.27600
1.047	-4.069	.20700	-.11600	.15300	.08000	-.05000	.03800	-.29800	-.33800	-.47700	-.28200
1.047	-1.980	.18700	-.10100	.15000	.03500	-.02000	.01800	-.29200	-.32700	-.46[illegible]00	-.30200
1.047	.100	.18000	-.09600	.15100	-.00700	.00600	.00000	-.29500	-.29800	-.44200	-.37800
1.047	2.050	.17500	-.09400	.14900	-.04400	.02900	-.01800	-.29100	-.31100	-.41900	-.40600
1.047	4.080	.18000	-.09900	.15100	-.08400	.05500	-.03500	-.29700	-.31700	-.40100	-.41400
1.047	6.140	.18400	-.10600	.15300	-.12800	.08200	-.05300	-.31200	-.31800	-.38400	-.41000
1.047	8.129	.18300	-.10800	.15300	-.16900	.10600	-.06900	-.32900	-.34000	-.37200	-.37300
	GRADIENT	-.00322	.00203	-.00030	-.02003	.01275	-.00895	.00015	.00290	.00963	-.01813

RUN NO. 1850/ 0 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.096	-8.160	.25500	-.14900	.17100	.17900	-.11200	.08000	-.36100	-.37900	-.51400	-.42300
1.096	-6.110	.23900	-.13400	.17300	.13400	-.08500	.06100	-.36700	-.37200	-.51800	-.44100
1.096	-4.100	.22300	-.12500	.17300	.08600	-.05400	.04000	-.35700	-.35700	-.51000	-.44000
1.096	-1.900	.20700	-.11300	.17200	.03900	-.02400	.01900	-.35000	-.36700	-.50200	-.45700
1.096	.100	.20200	-.10900	.17100	-.00300	.00300	.00000	-.34300	-.33300	-.48000	-.47900
1.096	2.050	.19400	-.10500	.16500	-.04000	.02700	-.01700	-.33600	-.33300	-.45700	-.49800
1.096	4.110	.19300	-.10600	.16900	-.08400	.05300	-.03600	-.34200	-.34700	-.43800	-.50700
1.096	6.150	.19700	-.11300	.16900	-.12900	.08100	-.05500	-.36000	-.35500	-.43700	-.52200
1.096	8.160	.19100	-.11100	.17000	-.17100	.10600	-.07200	-.36800	-.37500	-.42900	-.52700
	GRADIENT	-.00358	.00226	-.00073	-.02050	.01296	-.00920	.00216	.00265	.00922	-.00956

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (R1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1840/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.146	-8.160	.24900	-.14600	.18500	.18100	-.11500	.07600	-.41500	-.42800	-.52700	-.46200
1.146	-6.130	.23600	-.13800	.18300	.13300	-.08500	.05700	-.40600	-.41000	-.51500	-.44500
1.146	-4.069	.22200	-.12900	.18500	.08400	-.05300	.03700	-.39400	-.39200	-.50600	-.44300
1.146	-1.970	.20500	-.11300	.18200	.03500	-.02100	.01600	-.38900	-.40200	-.49800	-.46100
1.146	.100	.20200	-.11200	.18400	-.00800	.00600	.00000	-.38800	-.38900	-.48400	-.48200
1.146	2.060	.19900	-.11100	.18200	-.04800	.03200	-.01800	-.38400	-.38400	-.46500	-.49800
1.146	4.100	.19900	-.11300	.18300	-.09400	.06000	-.03600	-.38700	-.38900	-.44300	-.50500
1.146	6.160	.19300	-.11000	.18400	-.13900	.08900	-.05400	-.40000	-.41200	-.44400	-.51500
1.146	8.150	.18700	-.11000	.17800	-.18500	.11600	-.07200	-.38700	-.42800	-.44000	-.52100
	GRADIENT	-.00257	.00168	-.00020	-.02156	.01370	-.00884	.00054	.00117	.00779	-.00791

RUN NO. 1910/ 0 RN/L = 8.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.244	-8.180	.23900	-.13700	.18200	.17500	-.11000	.07500	-.33400	-.32600	-.45600	-.08500
1.244	-6.140	.22500	-.12800	.18600	.12800	-.08100	.05500	-.33500	-.31000	-.44300	.10400
1.244	-4.090	.21100	-.11900	.18600	.07900	-.05000	.03500	-.33400	-.29700	-.43600	.12100
1.244	-2.020	.19400	-.10600	.18400	.03300	-.02000	.01600	-.32900	-.29600	-.42600	.09600
1.244	.080	.19100	-.10200	.18500	-.00700	.00600	.00000	-.33300	-.28800	-.41500	.10400
1.244	2.030	.18400	-.09800	.18500	-.04500	.03000	-.01700	-.33900	-.28200	-.40600	.13000
1.244	4.090	.18400	-.10000	.18700	-.08700	.05700	-.03400	-.34300	-.28600	-.39400	.08300
1.244	6.130	.17800	-.09500	.18700	-.132[illegible]	.08600	-.05300	-.33900	-.30600	-.38200	.04800
1.244	8.139	.17100	-.09500	.18200	-.17800	.11300	-.07100	-.33800	-.33100	-.39200	.05000
	GRADIENT	-.00309	.00226	.00015	-.02009	.01294	-.00838	-.00136	.00176	.00607	-.00208

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (R1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2000/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.040	-.03400	.02600	.08200	-.01200	.00900	-.00300	-.18300	-.16800	-.33700	-.23400
.602	-6.020	.01600	-.00800	.08300	-.01400	.01000	-.00300	-.17800	-.17300	-.31600	-.21100
.602	-4.020	.07300	-.04500	.08600	-.01100	.00800	-.00300	-.17300	-.18700	-.29400	-.19700
.602	-1.950	.17200	-.11200	.08400	-.01100	.00800	-.00300	-.17100	-.20000	-.29200	-.19100
.602	.120	.23900	-.13100	.08100	-.01200	.01000	-.00300	-.17000	-.20300	-.29400	-.18200
.602	2.070	.25900	-.17100	.07800	-.01300	.00900	-.00300	-.17000	-.19300	-.28700	-.18400
.602	4.090	.31900	-.21300	.07100	-.01000	.00700	-.00200	-.17100	-.19500	-.29400	-.20000
.602	6.130	.38700	-.26000	.06500	-.00900	.00500	-.00300	-.16800	-.20100	-.30800	-.20100
.602	8.120	.44900	-.30300	.06000	-.01500	.00900	-.00300	-.16700	-.18000	-.31900	-.21100
	GRADIENT	.02862	-.01952	-.00178	-.00000	-.00005	.00010	.00025	-.00046	.00024	.00007

RUN NO. 2011/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.800	-8.059	-.01700	.01400	.09200	-.01300	.01100	-.00400	-.18900	-.20800	.33100	-.33300
.800	-6.060	.03700	-.02400	.09200	-.01500	.01300	-.00400	-.19200	-.21900	-.31800	-.32300
.800	-4.040	.09500	-.06300	.09200	-.01500	.01200	-.00400	-.18700	-.22100	-.29600	-.29800
.800	-1.950	.16300	-.10900	.09100	-.01500	.01100	-.00400	-.18200	-.22900	-.29200	-.28400
.800	.150	.22700	-.15200	.08700	-.01400	.01000	-.00400	-.17600	-.22800	-.28800	-.26600
.800	2.100	.29500	-.19900	.08500	-.01400	.01100	-.00400	-.18300	-.23300	-.29300	-.26200
.800	4.160	.35700	-.24200	.07900	-.01200	.00900	-.00300	-.18300	-.22500	-.29600	-.26500
.800	6.210	.42200	-.28700	.07500	-.01200	.00700	-.00400	-.17800	-.21800	-.29900	-.25800
.800	8.180	.47100	-.31800	.07600	-.01300	.00700	-.00400	-.18200	-.22900	-.31800	-.27700
	GRADIENT	.03207	-.02190	-.00156	.00034	-.00030	.00010	.00036	-.00059	-.00004	.00393

RUN NO. 2020/ 0 RN/L = 5.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.900	-8.080	-.05600	.05000	.10700	-.01100	.00800	-.00100	-.22500	-.27600	-.37600	-.08100
.900	-6.050	.00200	.00700	.10400	-.01300	.00900	-.00200	-.21200	-.26500	-.35000	-.06800
.900	-4.029	.07000	-.04000	.10300	-.01300	.00700	-.00100	-.20100	-.26800	-.32600	-.03900
.900	-1.930	.14300	-.09400	.10200	-.01100	.00700	-.00100	-.20000	-.27600	-.32300	-.03600
.900	.160	.23000	-.15000	.10000	-.01300	.00900	-.00200	-.19900	-.27500	-.32500	-.05700
.900	2.120	.30400	-.20300	.09600	-.01300	.00800	-.00300	-.18900	-.26300	-.31500	-.06000
.900	4.180	.35800	-.23900	.09700	-.01400	.00900	-.00100	-.19800	-.26800	-.32200	-.07800
.900	6.210	.41700	-.28300	.09800	-.01300	.01000	-.00200	-.19600	-.27300	-.33200	-.10800
.900	8.170	.43900	-.29100	.09700	-.01800	.01300	-.00300	-.20300	-.27900	-.34700	-.11000
	GRADIENT	.03577	-.02477	-.00088	-.00019	.00025	-.00010	.00082	.00062	.00079	-.00498

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (R1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2030/ 0 RN/L = 6.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.948	-8.110	-.08000	.07500	.12400	-.01100	.00700	-.00100	-.24700	-.32400	-.39200	-.40300
.948	-6.070	-.01700	.03000	.12100	-.01200	.00700	.00000	-.24000	-.31000	-.37200	-.38600
.948	-4.029	.04800	-.01500	.12000	-.01100	.00600	-.00100	-.22500	-.30500	-.35000	-.36400
.948	-1.950	.12100	-.06700	.11700	-.01100	.00700	-.00200	-.22200	-.30600	-.35200	-.36000
.948	.140	.19600	-.11900	.11400	-.01000	.00600	-.00100	-.21500	-.30800	-.34700	-.35600
.948	2.120	.26700	-.16900	.11100	-.00800	.00500	-.00100	-.22000	-.31400	-.35000	-.36100
.948	4.160	.33700	-.21900	.11000	-.01100	.00700	.00000	-.21800	-.30700	-.35100	-.36400
.948	6.190	.38300	-.25000	.10900	-.01300	.00800	-.00200	-.22000	-.31400	-.36400	-.36800
.948	8.170	.41900	-.27400	.10800	-.01500	.00900	-.00100	-.22500	-.31200	-.37500	-.36500
	GRADIENT	.03541	-.02494	-.00127	.00015	.00000	.00015	.00079	-.00059	.00000	-.00004

RUN NO. 2040/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.047	-8.110	-.10300	.10600	.15500	-.01100	.00700	-.00280	-.29300	-.32700	-.47000	-.48300
1.047	-6.070	-.03900	.05900	.15100	-.01200	.00900	-.00200	-.29600	-.32100	-.46200	-.46900
1.047	-4.050	.02500	.01500	.14900	-.01200	.00800	-.00200	-.29100	-.31800	-.43800	-.44900
1.047	-1.940	.09900	-.03700	.14800	-.01000	.00700	-.00200	-.28400	-.31200	-.43900	-.44400
1.047	.150	.17800	-.09400	.14700	-.01000	.00800	-.00200	-.29000	-.32200	-.43600	-.44800
1.047	2.150	.25300	-.14600	.14600	-.01300	.00900	-.00300	-.29100	-.33100	-.43400	-.43900
1.047	4.170	.31400	-.18900	.14400	-.01200	.00900	-.00300	-.29600	-.33300	-.43600	-.44400
1.047	6.210	.37200	-.23100	.14100	-.01400	.01000	-.00400	-.29900	-.32800	-.44800	-.45700
1.047	8.260	.41400	-.26000	.13700	-.01200	.00800	-.00200	-.30000	-.32200	-.45400	-.45400
	GRADIENT	.03566	-.02519	-.00058	-.00014	.00019	-.00015	-.00082	-.00238	.00044	.00073

RUN NO. 2050/ 0 RN/L = 7.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.097	-8.100	-.11700	.12100	.17100	-.01200	.00900	-.00200	-.36300	-.41900	-.50300	-.52000
1.097	-6.070	-.04700	.07000	.16600	-.00900	.00500	-.00100	-.35300	-.32500	-.49000	-.50500
1.097	-4.050	.02400	.01800	.16300	-.01400	.01000	-.00300	-.33800	-.32000	-.46400	-.47200
1.097	-1.940	.11100	-.04400	.16400	-.01000	.00700	-.00200	-.34200	-.31700	-.46100	-.46600
1.097	.130	.19500	-.10400	.16300	-.01000	.00700	-.00200	-.34600	-.32100	-.46800	-.47800
1.097	2.140	.27900	-.16500	.16300	-.01200	.00900	-.00300	-.34100	-.33300	-.46600	-.46700
1.097	4.190	.34700	-.21300	.15800	-.01200	.00800	-.00300	-.32880	-.33000	-.47400	-.47300
1.097	6.240	.40600	-.25500	.15400	-.01300	.00900	-.00300	-.32800	-.32530	-.49500	-.49200
1.097	8.290	.45200	-.28300	.15000	-.01200	.00900	-.00200	-.33900	-.34000	-.50800	-.50700
	GRADIENT	.03960	-.02836	-.00053	.00010	-.00010	-.00005	.00101	-.00096	-.00121	-.00015

FA25, MSFC TWT 552, CONFIG. 01A04PTT2S2 (0) (R1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2060/ 0 RN/L = 7.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.145	-8.110	-.11200	.12200	.18000	-.00900	.00700	-.00200	-.41900	-.36000	-.52700	-.54000
1.145	-6.070	-.02200	.05200	.17900	-.01100	.00900	-.00200	-.40900	-.34800	-.51100	-.52700
1.145	-4.029	.06400	-.01100	.17900	-.01400	.01100	-.00300	-.39000	-.35400	-.49500	-.51100
1.145	-1.940	.14500	-.07200	.17800	-.01600	.01300	-.00300	-.39100	-.36600	-.48500	-.50200
1.145	.120	.22500	-.13000	.18000	-.01600	.01200	-.00300	-.39400	-.37600	-.48200	-.49600
1.145	2.140	.29900	-.18000	.17900	-.01600	.01100	-.00400	-.39800	-.39200	-.49000	-.49100
1.145	4.180	.36400	-.2[illegible]	.17[illegible]	-.01800	.01400	-.00400	-.39400	-.39500	-.49600	-.49600
1.145	6.240	.42300	-.[illegible]	.17[illegible]	-.01500	.01200	-.00400	-.38500	-.39100	-.51100	-.49500
1.145	8.290	.48100	-.30700	.16300	-.01500	.01300	-.00300	-.38500	-.39600	-.50700	-.52700
	GRADIENT	.03520	-.02625	-.00029	-.00039	.00020	-.00015	.00005	-.00527	-.00033	.00201

RUN NO. 2070/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.245	-8.110	-.10500	.11800	.18400	-.01100	.00900	-.00200	-.34100	-.29500	-.44400	-.44900
1.245	-6.070	-.03000	.06100	.18500	-.00900	.00600	-.00100	-.34100	-.29900	-.43700	-.44400
1.245	-4.050	.04300	.00600	.18500	-.01100	.00900	-.00200	-.33900	-.30200	-.42800	-.43100
1.245	-1.940	.12400	-.05200	.18600	-.01300	.01100	-.00300	-.33900	-.30100	-.42200	-.42400
1.245	.120	.20300	-.11100	.18500	-.01100	.01100	-.00200	-.33200	-.27500	-.41300	-.41300
1.245	2.130	.28000	-.16600	.18300	-.01200	.01100	-.00200	-.33400	-.28700	-.41200	-.40900
1.245	4.170	.34500	-.21300	.18300	-.01400	.01200	-.00300	-.33100	-.27500	-.41600	-.41000
1.245	6.210	.40400	-.25500	.17600	-.01500	.01200	-.00400	-.32700	-.27400	-.44200	-.42700
1.245	8.280	.45100	-.28600	.17100	-.01500	.01300	-.00300	-.31600	-.28400	-.45300	-.44400
	GRADIENT	.03706	-.02692	-.00063	-.00024	.00029	-.00005	.00103	.00332	.00167	.00278

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (R1X031) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2110/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-3.059	.23000	-.15600	.07300	.15800	-.10300	.05800	-.19300	-.20600	-.35200	-.29700
.602	-6.040	.21800	-.14700	.07600	.12000	-.08000	.04400	-.18200	-.22300	-.35000	-.28500
.602	-4.050	.21200	-.14200	.07800	.07300	-.04700	.02700	-.17900	-.23900	-.33600	-.28300
.602	-1.990	.20000	-.13400	.07900	.03200	-.02000	.01200	-.17000	-.23400	-.31600	-.28600
.602	.060	.19500	-.12900	.08000	-.00400	.00300	.00000	-.17200	-.21400	-.30400	-.30100
.602	2.040	.19600	-.13100	.08100	-.04200	.02700	-.01300	-.17600	-.18300	-.27300	-.31300
.602	4.050	.19600	-.13500	.08000	-.08500	.05600	-.02800	-.18200	-.17300	-.26500	-.33400
.602	6.060	.19500	-.13500	.07700	-.12800	.08800	-.04300	-.18700	-.19800	-.26200	-.35300
.602	8.100	.18800	-.13300	.07600	-.16200	.11000	-.05500	-.19700	-.23000	-.26800	-.36500
	GRADIENT	-.00159	.00085	.00030	-.01928	.01250	-.00667	-.00058	.00903	.00914	-.00637

RUN NO. 2100/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.949	-8.120	.24500	-.15500	.11700	.17200	-.11200	.06900	-.26000	-.33900	-.44300	-.32500
.949	-6.090	.23100	-.14500	.11700	.12400	-.08000	.05200	-.24300	-.34000	-.41800	-.32800
.949	-4.100	.21700	-.13500	.11700	.07900	-.04900	.03300	-.23300	-.33600	-.38800	-.32400
.949	-2.010	.20000	-.12200	.11700	.03600	-.02200	.01700	-.22800	-.32700	-.36900	-.33600
.949	.040	.18900	-.11500	.11600	-.00200	.00100	.00200	-.22400	-.31100	-.35100	-.35100
.949	2.030	.19100	-.11800	.11500	-.03700	.02300	-.01300	-.21900	-.31700	-.33500	-.37400
.949	4.060	.19500	-.12200	.11800	-.07500	.04700	-.02700	-.21800	-.31600	-.31300	-.39100
.949	6.110	.19300	-.12300	.12100	-.12200	.07900	-.04400	-.24100	-.33500	-.30500	-.42500
.949	8.160	.18900	-.12300	.12100	-.16400	.10500	-.05800	-.25500	-.35100	-.30400	-.43900
	GRADIENT	-.00262	.00149	-.00000	-.01872	.01164	-.00737	.00192	.00247	.00904	-.00844

RUN NO. 2090/ 0 RN/L = 7.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.097	-8.160	.24800	-.14300	.16600	.17500	-.10900	.08000	-.36400	-.37900	-.52400	-.43300
1.097	-6.120	.23000	-.13100	.16700	.13000	-.08100	.06100	-.36000	-.36600	-.51800	-.44200
1.097	-4.100	.21200	-.11800	.16600	.08600	-.05300	.04100	-.35200	-.36100	-.51100	-.44900
1.097	-2.020	.19900	-.10600	.16500	.03700	-.02200	.02000	-.34800	-.35700	-.49800	-.44800
1.097	.060	.19400	-.10200	.16600	-.00100	.00200	.00100	-.34400	-.34500	-.48100	-.47800
1.097	2.050	.18200	-.09400	.16400	-.00000	.02700	-.01700	-.33500	-.34400	-.45900	-.49100
1.097	4.090	.18300	-.09700	.16900	-.08400	.05400	-.03600	-.34400	-.34800	-.44700	-.50100
1.097	6.130	.18600	-.10200	.16800	-.12800	.08200	-.05500	-.35300	-.37000	-.44200	-.51500
1.097	8.170	.18300	-.10400	.16500	-.17000	.10600	-.07200	-.35400	-.38700	-.43300	-.52100
	GRADIENT	-.00362	.00265	.00019	-.02039	.01286	-.00934	.00142	.00192	.00816	-.00719

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (R1X031) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2080/ 0 RN/L = 8.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.245	-8.180	.23800	-.13800	.17700	.17200	-.10900	.07400	-.32700	-.31300	-.44300	-.37500
1.245	-6.130	.22800	-.13100	.18100	.12500	-.08000	.05500	-.33000	-.30300	-.44300	-.37600
1.245	-4.110	.20900	-.11700	.18000	.08000	-.05000	.03600	-.33100	-.29200	-.43400	-.37500
1.245	-2.020	.19900	-.10800	.18100	.03400	-.01900	.01700	-.32500	-.28800	-.42100	-.38400
1.245	.060	.19400	-.10400	.18200	-.00600	.00500	.00000	-.32300	-.28200	-.40800	-.40000
1.245	2.050	.18800	-.10000	.18100	-.04400	.02900	-.01700	-.32800	-.27600	-.39800	-.42300
1.245	4.090	.18600	-.10200	.18200	-.08700	.05700	-.03400	-.33700	-.29000	-.39100	-.44100
1.245	6.130	.18300	-.10200	.18000	-.13200	.08600	-.05300	-.33800	-.30500	-.38700	-.44600
1.245	8.180	.17800	-.10100	.17700	-.17700	.11300	-.07100	-.33200	-.32300	-.38900	-.45300
	GRADIENT	-.00279	.00186	.00020	-.02013	.01280	-.00850	-.00072	.00079	.00533	-.00834

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (R1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2230/ 0 RN/L = 3.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.606	-8.049	-.06800	.05400	.08500	-.01100	.00700	-.00300	-.18900	-.19000	-.32300	-.32700
.606	-6.050	-.01000	.01400	.08800	-.01700	.01100	-.00500	-.18800	-.21200	-.31100	-.30600
.606	-4.050	.04000	-.02600	.09800	-.01400	.00700	-.00500	-.18400	-.20200	-.29100	-.29200
.606	-1.970	.10900	-.06800	.08700	-.01300	.01000	-.00300	-.18600	-.18900	-.28700	-.29600
.606	.100	.17200	-.10900	.08500	-.01200	.00800	-.00400	-.18800	-.18700	-.29600	-.30000
.606	2.080	.23400	-.15200	.08100	-.01500	.01200	-.00400	-.17700	-.18000	-.28200	-.28700
.606	4.100	.29700	-.19600	.07600	-.01500	.01300	-.00400	-.17300	-.17700	-.28300	-.29100
.606	6.130	.36100	-.24100	.06800	-.02000	.01300	-.00500	-.16800	-.17900	-.30200	-.29900
.606	8.170	.42300	-.28500	.06000	-.01700	.01200	-.00400	-.16400	-.17800	-.31400	-.31600
	GRADIENT	.03051	-.02083	-.00147	-.00019	.00069	.00005	.00151	.00290	.00102	.00053

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (R1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2220/ 0 RN/L = 4.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.804	-8.070	-.05000	.04100	.09800	-.01100	.00800	-.00400	-.21200	-.23300	-.31900	-.32500
.804	-6.040	.01000	-.00100	.09800	-.01300	.01200	-.00400	-.20300	-.23800	-.29700	-.30000
.804	-4.029	.07300	-.04300	.09700	-.01500	.01000	-.00600	-.19900	-.23200	-.28000	-.28300
.804	-1.930	.13800	-.08800	.09500	-.01600	.01100	-.00400	-.19500	-.20800	-.27400	-.28100
.804	.120	.20300	-.13200	.09400	-.01500	.01100	-.00400	-.19400	-.21100	-.28600	-.28600
.804	2.120	.27000	-.17800	.08900	-.01400	.01000	-.00400	-.19100	-.21300	-.28300	-.28900
.804	4.150	.33100	-.22000	.08500	-.01300	.01100	-.00400	-.18300	-.20100	-.28000	-.29200
.804	6.190	.39700	-.26600	.08000	-.01300	.00800	-.00400	-.18300	-.20400	-.29400	-.29400
.804	8.240	.44300	-.29500	.08000	-.01800	.01400	-.00400	-.17600	-.20300	-.29600	-.30600
	GRADIENT	.03175	-.02175	-.00147	.00029	.00005	.00010	.00176	.00281	-.00044	-.00127

RUN NO. 2210/ 0 RN/L = 5.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.904	-8.110	-.09400	.09100	.11400	-.01100	.00600	-.00100	-.22700	-.30100	-.34700	-.36400
.904	-6.080	-.03000	.03600	.11100	-.01200	.00800	-.00100	-.21800	-.28800	-.32100	-.34000
.904	-4.040	.04100	-.01500	.10800	-.01000	.00500	-.00100	-.21200	-.28200	-.30500	-.31700
.904	-1.940	.11700	-.06700	.10700	-.01000	.00600	-.00100	-.20600	-.28300	-.30300	-.31600
.904	.130	.19500	-.12100	.10700	-.01100	.00700	-.00100	-.20400	-.28600	-.31400	-.32600
.904	2.130	.27600	-.18000	.10300	-.00900	.00600	-.00100	-.19700	-.27500	-.30800	-.32000
.904	4.170	.33300	-.21800	.10300	-.01300	.00800	-.00100	-.20900	-.28700	-.31900	-.33400
.904	6.200	.38100	-.25100	.10100	-.01300	.00900	-.00100	-.20000	-.29300	-.33800	-.33700
.904	8.250	.42200	-.27700	.10200	-.01200	.00700	.00000	-.20300	-.28100	-.33200	-.34800
	GRADIENT	.03526	-.02533	-.00068	-.00024	.00029	-.00000	.00074	-.00010	-.00161	-.00185

RUN NO. 2200/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.952	-8.080	-.11500	.10500	.13500	-.01300	.00700	-.00200	-.25800	-.36700	-.39300	-.41000
.952	-6.040	-.04700	.05600	.13000	-.01100	.00600	-.00100	-.25000	-.34700	-.35700	-.38900
.952	-4.040	.02000	.00800	.12800	-.01100	.00800	-.00200	-.24100	-.32200	-.33700	-.36500
.952	-1.940	.09000	-.04000	.12700	-.01000	.00600	-.00200	-.23100	-.32100	-.34000	-.35800
.952	.130	.16600	-.09400	.12400	-.01000	.00500	-.00200	-.23900	-.33600	-.35200	-.36800
.952	2.130	.24300	-.14900	.11800	-.01300	.00800	-.00200	-.22800	-.31900	-.33900	-.35200
.952	4.170	.31700	-.20200	.11700	-.01100	.00700	-.00100	-.23300	-.31600	-.34400	-.35800
.952	6.200	.36300	-.23300	.11400	-.01200	.00800	.00000	-.23100	-.31300	-.35700	-.36100
.952	8.250	.40300	-.26000	.11300	-.01500	.00900	-.00100	-.23300	-.31100	-.37100	-.37700
	GRADIENT	.03645	-.02581	-.00151	-.00014	-.00000	.00010	.00093	.00067	-.00065	.00097

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (R1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2190/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.051	-8.080	-.10700	.10800	.15900	-.00800	.00600	-.00100	-.32200	-.28100	-.48100	-.48700
1.051	-6.040	-.04000	.06000	.15700	-.01200	.00800	-.00200	-.31900	-.26900	-.45400	-.46300
1.051	-4.029	.02600	.01300	.15300	-.01200	.00700	-.00200	-.30700	-.25900	-.43700	-.44100
1.051	-1.920	.10400	-.04100	.15400	-.01300	.00900	-.00300	-.31100	-.26900	-.43700	-.44200
1.051	.140	.18100	-.09600	.15600	-.01200	.00900	-.00300	-.31700	-.29200	-.43800	-.45400
1.051	2.150	.25300	-.14700	.15200	-.01200	.00900	-.00300	-.30400	-.30400	-.42900	-.43000
1.051	4.190	.31600	-.19000	.15000	-.01300	.00900	-.00300	-.30100	-.30500	-.43300	-.43300
1.051	6.230	.38200	-.23900	.14600	-.01300	.00900	-.00300	-.30700	-.30000	-.44300	-.45800
1.051	8.280	.41200	-.25700	.14100	-.01400	.01000	-.00200	-.29800	-.30700	-.44400	-.44500
	GRADIENT	.03555	-.02497	-.00039	-.00005	.00020	-.00010	.00091	-.00620	.00078	.00135

RUN NO. 2180/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.100	-8.110	-.13500	.13600	.17600	-.00900	.00700	-.00200	-.36900	-.32200	-.51300	-.51800
1.100	-6.060	-.05800	.07900	.17100	-.01300	.00900	-.00200	-.35600	-.30600	-.49200	-.49600
1.100	-4.040	.01900	.02200	.16900	-.01200	.01000	-.00200	-.34800	-.30300	-.47300	-.48000
1.100	-1.920	.11100	-.04400	.17000	-.01100	.00800	-.00200	-.34700	-.30800	-.47000	-.47500
1.100	.160	.19500	-.10600	.17000	-.01000	.00700	-.00200	-.35000	-.31600	-.47100	-.47800
1.100	2.150	.27800	-.16500	.16900	-.01200	.00800	-.00300	-.34900	-.32000	-.46900	-.46700
1.100	4.200	.35400	-.21300	.16700	-.01100	.00800	-.00200	-.34200	-.30700	-.48400	-.46100
1.100	6.240	.42000	-.26600	.16400	-.01200	.01000	-.00100	-.34100	-.30500	-.50100	-.49800
1.100	8.300	.46300	-.29400	.15900	-.01200	.00900	-.00200	-.34400	-.32800	-.50700	-.50100
	GRADIENT	.04074	-.02935	-.00024	.00005	-.00020	-.00005	.00048	-.00098	-.00101	.00223

RUN NO. 2170/ 0 RN/L = 7.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.149	-8.100	-.11900	.12300	.18000	-.01400	.01200	-.00300	-.41100	-.38400	-.53800	-.54100
1.149	-6.060	-.03300	.05400	.17700	-.01700	.01300	-.00400	-.37900	-.33600	-.50300	-.51000
1.149	-4.040	.05000	-.00500	.17500	-.01900	.01500	-.00400	-.36800	-.33500	-.48500	-.50300
1.149	-1.930	.13400	-.06500	.17600	-.02100	.01700	-.00500	-.36400	-.34200	-.47000	-.49100
1.149	.130	.21200	-.12200	.17700	-.01900	.01600	-.00400	-.36400	-.33700	-.46100	-.47500
1.149	2.140	.29200	-.17800	.17800	-.02100	.01800	-.00500	-.37200	-.34900	-.46100	-.47000
1.149	4.190	.36300	-.22800	.17500	-.01900	.01600	-.00500	-.36700	-.34200	-.46900	-.46200
1.149	6.250	.42800	-.27500	.17100	-.02100	.01800	-.00500	-.36600	-.34700	-.49500	-.48600
1.149	8.320	.48300	-.31300	.16300	-.02000	.01600	-.00500	-.35300	-.34600	-.48600	-.49500
	GRADIENT	.03819	-.02723	.00010	-.00000	.00015	-.00010	-.00029	-.00102	.00201	.00502

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (R1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2160/ 0 RN/L = 8.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.245	-8.100	-.11800	.12800	.18900	-.00900	.00700	-.00200	-.34700	-.29400	-.45100	-.45800
1.245	-6.060	-.03900	.06900	.18800	-.01100	.00900	-.00200	-.33700	-.27500	-.42700	-.43600
1.245	-4.029	.03700	.01200	.18800	-.01300	.01100	-.00200	-.34100	-.28200	-.42400	-.42800
1.245	-1.930	.11800	-.04700	.18900	-.01300	.01000	-.00200	-.33900	-.28900	-.41700	-.42000
1.245	.160	.19700	-.10600	.18800	-.01400	.01100	-.00300	-.33000	-.27300	-.40800	-.40700
1.245	2.150	.27500	-.16100	.18800	-.01300	.01100	-.00300	-.33300	-.27700	-.40500	-.40200
1.245	4.190	.34300	-.21100	.18300	-.01600	.01500	-.00400	-.33000	-.26900	-.41800	-.40700
1.245	6.230	.40300	-.25400	.18000	-.01400	.01200	-.00300	-.32700	-.25700	-.43500	-.41900
1.245	8.290	.45000	-.28400	.17600	-.01600	.01400	-.00300	-.32600	-.27700	-.45200	-.44300
	GRADIENT	.03748	-.02730	-.00053	-.00029	.00044	-.00024	.00137	.00185	.00118	.00294

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (R1X033) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2120/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.602	-8.059	.21400	-.14200	.07300	.16000	-.10500	.05700	-.19400	-.18200	-.35700	-.28200
.602	-6.040	.19700	-.13100	.07400	.12000	-.08000	.04300	-.18400	-.18400	-.34600	-.27100
.602	-4.050	.18500	-.11900	.07900	.07500	-.04900	.02700	-.17600	-.18700	-.32700	-.27700
.602	-1.990	.18000	-.11600	.08200	.03200	-.02100	.01100	-.18700	-.19500	-.31500	-.28500
.602	.060	.17200	-.10900	.08400	-.00600	.00500	-.00100	-.18800	-.19300	-.29400	-.30000
.602	2.030	.17300	-.11200	.08400	-.04300	.03000	-.01300	-.19300	-.19000	-.27600	-.32200
.602	4.029	.17500	-.11500	.08100	-.08700	.05900	-.02800	-.19600	-.19300	-.26700	-.33900
.602	6.060	.17400	-.11900	.08000	-.12900	.08700	-.04200	-.19500	-.17800	-.24500	-.34700
.602	8.100	.17400	-.12000	.07700	-.16700	.11200	-.05400	-.21000	-.18300	-.25300	-.36900
	GRADIENT	-.00135	.00060	.00030	-.01977	.01323	-.00664	-.00228	-.00035	.00788	-.00797

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (R1X033) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2130/ 0 RN/L = 6.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.949	-8.129	.23600	-.14800	.12600	.17800	-.11600	.07000	-.29500	-.33500	-.43100	-.31700
.949	-6.110	.22000	-.13700	.12500	.12800	-.08400	.05200	-.28400	-.32600	-.41800	-.31600
.949	-4.080	.20800	-.12800	.12500	.07900	-.05100	.03300	-.27600	-.31500	-.39500	-.31900
.949	-1.970	.19000	-.11600	.12300	.03400	-.01900	.01600	-.25800	-.30700	-.37400	-.33300
.949	.080	.16500	-.09600	.12000	-.00200	.00200	.00100	-.22800	-.32000	-.34700	-.34900
.949	2.050	.17300	-.10500	.11600	-.03800	.02400	-.01200	-.22900	-.31200	-.32700	-.37400
.949	4.080	.18200	-.11200	.12100	-.07700	.04800	-.02700	-.24600	-.32200	-.31800	-.40300
.949	6.110	.18200	-.11400	.12000	-.12800	.08300	-.04500	-.24500	-.33200	-.29900	-.41100
.949	8.160	.17700	-.11300	.12100	-.16800	.10800	-.05900	-.25800	-.35900	-.29700	-.43200
	GRADIENT	-.00343	.00214	-.00074	-.01688	.01186	-.00728	.00441	-.00093	.00989	-.01026

RUN NO. 2140/ 0 RN/L = 7.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.095	-8.160	.24200	-.13800	.17100	.18000	-.11300	.08100	-.36900	-.36500	-.51700	-.42200
1.095	-6.130	.22600	-.12500	.17600	.13500	-.08600	.06100	-.37800	-.35800	-.51800	-.44100
1.095	-4.090	.20600	-.11100	.17200	.08700	-.05600	.04100	-.37000	-.34100	-.50800	-.44300
1.095	-2.000	.19100	-.10000	.17100	.04200	-.02600	.02000	-.36100	-.34400	-.49800	-.45000
1.095	.080	.18500	-.09600	.16900	-.00100	.00100	.00100	-.35400	-.33500	-.48100	-.47800
1.095	2.050	.18100	-.09400	.17200	-.04400	.02900	-.01800	-.37800	-.32300	-.45600	-.49100
1.095	4.080	.18400	-.09800	.17200	-.08600	.05700	-.03600	-.37900	-.33400	-.44100	-.50300
1.095	6.130	.19200	-.09700	.17500	-.13200	.08500	-.05600	-.38300	-.35700	-.43700	-.51000
1.095	8.190	.17400	-.09500	.17400	-.17500	.11000	-.07400	-.37900	-.37500	-.43000	-.51800
	GRADIENT	-.00266	.00158	.00004	-.02119	.01378	-.00942	-.00168	.00171	.00862	-.00790

RUN NO. 2151/ 0 RN/L = 8.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.243	-8.170	.24400	-.13800	.18800	.18300	-.11600	.07800	-.33600	-.31100	-.44800	-.37600
1.243	-6.140	.23100	-.13400	.18600	.13400	-.08600	.05800	-.33300	-.29800	-.43600	-.37000
1.243	-4.100	.21600	-.12300	.18700	.08500	-.05300	.03700	-.32900	-.29000	-.42700	-.37300
1.243	-2.020	.20500	-.11400	.18800	.03600	-.02200	.01700	-.32900	-.28600	-.42000	-.38800
1.243	.050	.19900	-.10900	.16700	-.00700	.00500	.00000	-.32500	-.27100	-.40600	-.39900
1.243	2.050	.19300	-.10500	.18800	-.04900	.03400	-.01800	-.33200	-.27400	-.39300	-.41600
1.243	4.090	.19200	-.10600	.18800	-.09400	.06200	-.03600	-.33400	-.28700	-.38000	-.42700
1.243	6.130	.18900	-.10600	.18700	-.14300	.09500	-.05600	-.33900	-.31500	-.37200	-.43500
1.243	8.180	.17900	-.10000	.18500	-.18900	.12100	-.07500	-.34200	-.34100	-.37600	-.44800
	GRADIENT	-.00294	.00211	.00010	-.02166	.01399	-.00885	-.00063	.00090	.00591	-.00665

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0) (R1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0800 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2240/ 0 RN/L = 3.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.607	-8.070	-.06400	.05100	.08300	-.01200	.01000	-.00300	-.18100	-.15900	-.30900	-.31000
.607	-6.070	-.01200	.01500	.08400	-.01300	.00800	-.00300	-.17900	-.17300	-.29800	-.29400
.607	-4.069	.04300	-.02200	.08600	-.01300	.00900	-.00200	-.17000	-.17300	-.27000	-.27400
.607	-1.990	.10700	-.06500	.08500	-.01100	.01000	-.00100	-.17300	-.17100	-.27000	-.28700
.607	.060	.17000	-.10900	.08300	-.01100	.01000	-.00200	-.17400	-.17000	-.27600	-.29200
.607	2.040	.23200	-.15100	.07900	-.01100	.01100	-.00100	-.16600	-.16500	-.26800	-.28100
.607	4.060	.29500	-.19500	.07200	-.01200	.00900	-.00200	-.15700	-.15800	-.27000	-.28100
.607	6.110	.36400	-.24300	.06600	-.01400	.01100	-.00200	-.15300	-.16100	-.28600	-.28900
.607	8.160	.43600	-.29300	.06000	-.01200	.01000	-.00100	-.15700	-.18700	-.31000	-.31300
	GRADIENT	.03100	-.02129	-.00167	.00010	.00005	.00000	.00161	.00177	.00009	-.00041

RUN NO. 2250/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.803	-8.090	-.04700	.03900	.09700	-.01500	.01100	-.00600	-.20500	-.19700	-.31300	-.30800
.803	-6.080	.01000	.00000	.09800	-.01700	.01500	-.00500	-.19700	-.19400	-.29000	-.28600
.803	-4.050	.07100	-.04200	.09800	-.01800	.01300	-.00600	-.19700	-.19100	-.27500	-.27300
.803	-1.950	.13900	-.08900	.09500	-.01700	.01100	-.00500	-.19300	-.18600	-.27000	-.27700
.803	.080	.20500	-.13400	.09100	-.01500	.01200	-.00500	-.18900	-.19100	-.27400	-.28400
.803	2.080	.27000	-.17800	.08900	-.01500	.01100	-.00500	-.18800	-.19500	-.27400	-.28200
.803	4.110	.33400	-.22400	.08400	-.01700	.01100	-.00500	-.18900	-.18900	-.28400	-.28800
.803	6.170	.39600	-.26600	.08000	-.01500	.01100	-.00500	-.18200	-.19300	-.29100	-.29300
.803	8.200	.45000	-.30200	.07900	-.01800	.01000	-.00500	-.16900	-.21100	-.29100	-.29900
	GRADIENT	.03229	-.02226	-.00167	.00020	-.00020	.00010	.00104	-.00024	-.00107	-.00172

RUN NO. 2260/ 0 RN/L = 5.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.901	-8.110	-.08800	.07700	.11300	-.01400	.00800	-.00300	-.23200	-.28500	-.35200	-.35600
.901	-6.070	-.02300	.03000	.11000	-.01200	.00800	-.00200	-.21900	-.26500	-.32000	-.32000
.901	-4.060	.04500	-.01800	.10700	-.01200	.00800	-.00100	-.21400	-.24000	-.30600	-.30500
.901	-1.950	.12500	-.07400	.10900	-.01400	.01100	-.00200	-.21600	-.27500	-.31200	-.31300
.901	.090	.20200	-.12700	.10500	-.01400	.00900	-.00200	-.20600	-.27300	-.30800	-.31200
.901	2.090	.28100	-.18400	.10400	-.01300	.01000	-.00300	-.19900	-.25900	-.30800	-.31500
.901	4.130	.33600	-.22100	.10100	-.01500	.00900	-.00200	-.20200	-.26700	-.31500	-.32000
.901	6.180	.38000	-.25000	.10100	-.01600	.01000	-.00300	-.19800	-.27100	-.33900	-.33600
.901	8.200	.41700	-.27400	.10000	-.01800	.01300	-.00300	-.19300	-.26300	-.33000	-.34800
	GRADIENT	.03515	-.02527	-.00083	-.00025	.00005	-.00015	.00200	-.00190	-.00069	-.00157

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0) (R1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2270/ 0 RN/L = 6.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.952	-8.139	-.11100	.10200	.13300	-.01000	.00700	-.00200	-.25500	-.36200	-.37100	-.38100
.952	-6.120	-.04400	.05300	.13100	-.01300	.01000	-.00200	-.25000	-.35200	-.36100	-.37100
.952	-4.100	.02200	.00600	.12900	-.01200	.00900	-.00200	-.24300	-.31200	-.34200	-.35400
.952	-2.000	.09300	-.04400	.12600	-.01100	.00800	-.00300	-.22900	-.30900	-.33500	-.34700
.952	.040	.16700	-.09500	.12400	-.01200	.00800	-.00200	-.23000	-.32200	-.33800	-.34900
.952	2.030	.24000	-.14600	.12000	-.01300	.00800	-.00300	-.23200	-.31600	-.34100	-.34700
.952	4.069	.31300	-.19900	.11500	-.01100	.00800	-.00100	-.21600	-.29500	-.32700	-.34000
.952	6.100	.36300	-.23400	.11500	-.01300	.01000	-.00200	-.22800	-.32400	-.35700	-.35600
.952	8.129	.40000	-.25800	.11000	-.01700	.01100	-.00200	-.23100	-.31100	-.37200	-.37500
	GRADIENT	.03579	-.02513	-.00157	.00000	-.00010	.00010	.00251	.00132	.00118	.00138

RUN NO. 2280/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.051	-8.139	-.11400	.11100	.15400	-.01100	.01000	-.00200	-.29900	-.29900	-.48400	-.48900
1.051	-6.120	-.04900	.06600	.15200	-.01200	.00900	-.00200	-.28700	-.29500	-.45400	-.46000
1.051	-4.090	.01600	.02000	.15000	-.01200	.00900	-.00200	-.28300	-.29600	-.43300	-.44100
1.051	-2.010	.08900	-.03000	.15000	-.01200	.00900	-.00300	-.27700	-.28500	-.43000	-.42900
1.051	.060	.17000	-.08000	.15100	-.01400	.01100	-.00300	-.28700	-.32200	-.42900	-.44200
1.051	2.060	.24400	-.14100	.14800	-.01500	.01100	-.00400	-.28200	-.31400	-.42700	-.43000
1.051	4.080	.31100	-.18800	.14800	-.01500	.01100	-.00500	-.28700	-.32600	-.43600	-.44300
1.051	6.120	.36600	-.22800	.14300	-.01600	.01200	-.00400	-.28800	-.31500	-.44000	-.45000
1.051	8.160	.41500	-.26000	.14100	-.01500	.01200	-.00200	-.30300	-.30700	-.45400	-.45800
	GRADIENT	.03650	-.02592	-.00029	-.00044	.00029	-.00034	-.00064	-.00437	-.00014	-.00024

RUN NO. 2290/ 0 RN/L = 7.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.099	-8.150	-.14000	.13900	.17000	-.01200	.00800	-.00300	-.34800	-.34100	-.51100	-.51900
1.099	-6.120	-.06700	.09500	.17000	-.01300	.01000	-.00380	-.34000	-.33700	-.49300	-.49900
1.099	-4.100	.00900	.02900	.16300	-.01300	.01000	-.00300	-.32600	-.32100	-.46700	-.47400
1.099	-1.990	.09900	-.03500	.16600	-.01200	.00900	-.00300	-.33200	-.31600	-.47000	-.46900
1.099	.060	.18300	-.09600	.16700	-.01300	.00900	-.00300	-.33400	-.33000	-.47000	-.47100
1.099	2.070	.26800	-.15300	.16400	-.01500	.01100	-.00380	-.32900	-.33100	-.46900	-.46500
1.099	4.100	.34900	-.21500	.16300	-.01300	.00900	-.00300	-.32500	-.32400	-.48200	-.46200
1.099	6.160	.40900	-.25900	.15900	-.01300	.01100	-.00300	-.32400	-.32300	-.50200	-.48200
1.099	8.200	.45200	-.29400	.15600	-.01200	.00900	-.00200	-.32900	-.31600	-.50300	-.49900
	GRADIENT	.04150	-.02986	-.00009	-.00015	-.00000	.00000	.00023	-.00103	-.00141	.00137

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0) (R1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2300/ 0 RN/L = 7.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.150	-8.080	-.12600	.13400	.18500	-.01200	.01200	-.00300	-.41100	-.38400	-.53800	-.54100
1.150	-6.040	-.03400	.06200	.18400	-.01300	.01100	-.00400	-.40300	-.37600	-.51900	-.52600
1.150	-3.990	.04900	.00000	.18500	-.01600	.01200	-.00300	-.39800	-.37600	-.50600	-.51800
1.150	-2.010	.12700	-.05600	.18300	-.01600	.01300	-.00400	-.38700	-.37900	-.49200	-.50000
1.150	.080	.20800	-.11500	.18400	-.01700	.01400	-.00400	-.38700	-.38700	-.48100	-.48900
1.150	2.130	.28800	-.17200	.18100	-.01700	.01500	-.00400	-.38200	-.38500	-.47700	-.48400
1.150	4.180	.35700	-.22100	.18000	-.02000	.01600	-.00400	-.38200	-.39000	-.48100	-.48200
1.150	6.240	.42500	-.26900	.17500	-.01900	.01400	-.00500	-.37500	-.37900	-.50000	-.48300
1.150	8.290	.48500	-.31000	.17300	-.02000	.01700	-.00400	-.38300	-.38200	-.50800	-.51400
	GRADIENT	.03794	-.02724	-.00059	-.00044	.00049	-.00010	.00180	-.00166	.00317	.00429

RUN NO. 231 1/ 0 RN/L = 8.45 GRADIENT INTE; AL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.248	-8.100	-.12200	.13100	.18700	-.01100	.00900	-.00200	-.33200	-.30000	-.44600	-.45000
1.248	-6.040	-.04400	.07200	.18600	-.01200	.00600	-.00300	-.32800	-.29200	-.43100	-.43700
1.248	-4.029	.03000	.01700	.18700	-.01200	.01000	-.00200	-.33200	-.29800	-.43700	-.42800
1.248	-1.970	.11100	-.04100	.18700	-.01400	.01100	-.00300	-.33200	-.29000	-.44000	-.41800
1.248	.070	.18700	-.09800	.18600	-.01400	.01000	-.00300	-.32500	-.28200	-.43700	-.40800
1.248	2.140	.26800	-.15600	.18600	-.01600	.01300	-.00400	-.32300	-.28200	-.43800	-.40000
1.248	4.170	.33500	-.20500	.18100	-.01500	.01400	-.00400	-.31700	-.27600	-.43700	-.39700
1.248	6.230	.39500	-.24800	.17700	-.01600	.01400	-.00400	-.31100	-.26600	-.43300	-.41300
1.248	8.270	.44600	-.28400	.17200	-.01500	.01200	-.00400	-.31200	-.26700	-.43900	-.43300
	GRADIENT	.03740	-.02726	-.00063	-.00039	.00049	-.00024	.00190	.00253	.00010	.00390

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0) (R1X035) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2350/ 0 RN/L = 3.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.606	-8.059	.21700	-.14500	.07300	.16460	-.10800	.05800	-.18300	-.16900	-.35600	-.27100
.606	-6.030	.20000	-.13300	.07700	.12500	-.08200	.04400	-.16900	-.16400	-.33500	-.25400
.606	-4.029	.18300	-.12500	.08000	.07500	-.04800	.02600	-.16600	-.17400	-.31600	-.26000
.606	-2.010	.18000	-.11700	.08300	.03100	-.01900	.01100	-.17300	-.16900	-.30300	-.26300
.606	.000	.17400	-.11200	.08300	-.00700	.00500	-.00100	-.17700	-.17700	-.28500	-.26500
.606	2.040	.17700	-.11600	.08400	-.04500	.03000	-.01500	-.17200	-.16200	-.25800	-.30300
.606	4.029	.18200	-.12200	.08300	-.08800	.05900	-.02900	-.18200	-.16400	-.26100	-.32400
.606	6.060	.18200	-.12600	.07900	-.13400	.09200	-.04500	-.18500	-.18500	-.25000	-.33600
.606	8.080	.18200	-.12800	.07900	-.17100	.11400	-.05700	-.19900	-.20480	-.25100	-.35400
	GRADIENT	-.00084	.00035	.00035	-.01993	.01304	-.00674	-.00153	.00134	.00769	-.00833

RUN NO. 2340/ 0 RN/L = 6.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
.952	-8.110	.23400	-.14600	.12000	.17600	-.11400	.06900	-.26300	-.32500	-.43100	-.31300
.952	-6.070	.22100	-.13700	.12100	.12900	-.08300	.05200	-.24800	-.31300	-.40900	[illegible]
.952	-4.060	.20800	-.12700	.12200	.07900	-.05000	.03300	-.24500	-.30480	-.38500	[illegible]
.952	-2.040	.18300	-.11000	.12000	.03700	-.02200	.01600	-.22900	-.29700	-.36400	[illegible]
.952	.000	.16800	-.09700	.12100	-.00100	.00000	.00100	-.22700	-.31500	-.34000	-.34100
.952	2.070	.17000	-.09900	.12100	-.04400	.03000	-.01400	-.21900	-.30900	-.31900	-.36400
.952	4.060	.17600	-.10700	.12300	-.08100	.05200	-.02800	-.24300	-.31100	-.31000	-.39800
.952	6.110	.17700	-.11000	.12300	-.12700	.08200	-.04500	-.24100	-.31900	-.29500	-.41200
.952	8.150	.17200	-.11000	.12100	-.17000	.10900	-.06000	-.24700	-.32800	-.29600	-.42500
	GRADIENT	-.00379	.00251	.00015	-.01971	.01258	-.00747	.00070	-.00128	.00959	-.00997

RUN NO. 2330/ 0 RN/L = 7.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.098	-8.139	.25300	-.14800	.16800	.18100	-.11300	.08100	-.35500	-.38400	-.51300	-.42200
1.098	-6.100	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-.50500	[illegible]
1.098	-4.100	.21800	-.12200	.17000	.08800	.05500	.04000	-.34200	-.34800	-.49900	-.43600
1.098	-2.040	.20200	-.11100	.16900	.04300	-.02700	.02100	-.34200	-.35600	-.50000	-.44600
1.098	.000	.19500	-.10400	.16700	-.00100	.00100	.00100	-.33000	-.34800	-.47500	-.46700
1.098	2.050	.19000	-.10200	.16700	-.04400	.02900	-.01800	-.34500	-.33900	-.44400	-.47600
1.098	4.070	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-.43000	-.49300
1.098	6.130	.19500	-.11000	.16900	-.13400	.08600	-.05600	-.35600	-.36500	-.43400	-.50200
1.098	8.200	.18800	-.10800	.16700	-.17900	.11200	-.07500	-.35500	-.37900	-.42300	-.51400
	GRADIENT	-.00275	.00172	-.00020	-.02129	.01361	-.00835	-.00161	.00279	.00949	-.00705

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0) (R1X035) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2320/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
1.247	-8.160	.22900	-.13000	.18200	.17800	-.11300	.07600	-.31400	-.31000	-.44800	-.37300
1.247	-6.100	.21700	-.12300	.18400	.12800	-.08200	.05600	-.31500	-.30800	-.43700	-.36800
1.247	-4.069	.20300	-.11100	.18400	.08200	-.05200	.03600	-.31900	-.29600	-.42800	-.37100
1.247	-2.040	.19000	-.10300	.18300	.03600	-.02200	.01700	-.32100	-.28400	-.42200	-.39300
1.247	.000	.18100	-.09400	.18400	-.00500	.00500	.00000	-.31800	-.27700	-.40900	-.40000
1.247	2.050	.17600	-.09000	.18700	-.04900	.03300	-.01800	-.33000	-.28500	-.39600	-.42000
1.247	4.069	.17600	-.09300	.18700	-.09100	.06000	-.03500	-.34400	-.29500	-.38900	-.43700
1.247	6.130	.17200	-.09100	.18700	-.14000	.09100	-.05500	-.32900	-.30900	.37700	-.43300
1.247	8.180	.16600	-.09100	.18400	-.18400	.11900	-.07300	-.34800	-.32700	-.38800	-.44900
	GRADIENT	-.00334	.00241	.00049	-.02116	.01370	-.00869	-.00290	-.00005	.00511	-.00830

FA25, MSFC TWT 652, CONFIG. 01ATPTT2 (0) (R1X036) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2370/ 0 RN/L = 26.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
4.960	-8.020	-.10900	.09300	.11800	-.00600	.00500	-.00200	-.02400	-.02600	.25900	.25900
4.960	-6.020	-.08900	.07700	.10900	-.00700	.00500	-.00200	-.02800	-.03000	.25900	.25900
4.960	-3.990	-.06700	.05800	.09900	-.00300	.00400	-.00100	-.02900	-.03000	.25900	.25900
4.960	-2.010	-.03800	.03500	.08700	-.00700	.00500	-.00200	-.03100	-.03100	.25900	.25900
4.960	.020	-.01300	.01600	.07600	-.00900	.00600	-.00200	-.03100	-.03100	.25900	.25900
4.960	2.010	.01400	-.00500	.07300	-.00800	.00500	-.00200	-.03400	-.03100	.25900	.25900
4.960	4.029	.03800	-.02300	.06700	-.00800	.00600	-.00200	-.03400	-.02900	.25900	.25900
4.960	6.020	.06700	-.04200	.06400	-.00900	.00500	-.00200	-.03500	-.02900	.25900	.25900
4.960	8.059	.09200	-.06300	.06000	-.00500	.00500	-.00100	-.03500	-.02800	.25900	.25900
	GRADIENT	.01306	-.01007	-.00389	-.00055	.00020	-.00010	-.00065	.00010	-.00000	-.00000

DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 01ATPTT2 (O) (R1X037) (31 OCT 78)

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

RUN NO. 2360/ 0 RN/L = 26.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNO	CLMO	CAO	CYO	CYNO	CBLO	CPBO	CPBT	CPBLS	CPBRS
4.960	-8.010	.02900	-.01300	.08500	.11800	-.07700	.03700	-.02600	-.02200	.25900	.25900
4.960	-5.980	.01200	-.00100	.09200	.08400	-.05300	.02600	-.02900	-.02500	.25900	.25900
4.960	-4.000	.00000	.00700	.08300	.05500	-.03400	.01600	-.03100	-.02800	.25900	.25900
4.960	-1.990	-.00900	.01400	.08200	.02300	-.01400	.00600	-.03100	-.02800	.25900	.25900
4.960	.040	-.01100	.01400	.07900	-.00300	.00300	-.00100	-.03100	-.03100	.25900	.25900
4.960	2.030	-.00700	.01100	.07800	-.03300	.02100	-.01000	-.03100	-.03000	.25900	.25900
4.960	4.060	-.00900	.01300	.08400	-.06300	.04100	-.01900	-.03300	-.03100	.25900	.25900
4.960	6.050	.00300	.00400	.08500	-.09400	.06100	-.02900	-.03500	-.03100	.25900	.25900
4.960	8.120	.01300	-.00200	.08900	-.12800	.08300	-.04000	-.03400	-.03300	.25900	.25900
	GRADIENT	-.00090	.00045	-.00010	-.01450	.00919	-.00427	-.00020	-.00040	-.00000	-.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTT252 (TS) (S1X026) (31 OCT 78)

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

RUN NO. 1681/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.602	-8.040	-.34100	.04600	.17800	.00000	.00100	.00100	-8.37000	.00000
.602	-6.000	-.28400	.04800	.18100	-.00500	.00300	.00000	-6.27000	.00000
.602	-3.980	-.21300	.03600	.18400	-.00800	.00200	.00000	-4.20000	.00000
.602	-1.940	-.16900	.04100	.18800	-.00100	.00000	.00000	-2.11000	.00000
.602	.100	-.14000	.05100	.18700	.01500	-.00100	.00000	-.03000	.00000
.602	2.150	-.08100	.04900	.19100	-.00200	.00000	.00000	2.07000	.00000
.602	4.170	-.02500	.04700	.18200	.00000	-.00100	.00000	4.14000	.00000
.602	6.200	.01600	.04900	.18700	.00600	-.00300	.00000	6.20000	.00000
.602	8.260	.05500	.05500	.18200	.01400	-.00600	.00000	8.30000	.00000
	GRADIENT	.02275	.00147	-.00005	.00074	-.00029	.00000	1.02305	.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (TS) (S1X026) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1691/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.800	-8.040	-.38700	.06200	.19600	-.00200	.00000	.00100	-8.57000	.00000
.800	-6.010	-.30000	.04600	.19600	-.00400	.00200	.00100	-6.44000	.00000
.800	-3.960	-.24500	.04300	.19900	.00800	-.00100	.00000	-4.32000	.00000
.800	-1.920	-.20600	.05400	.20100	-.00300	.00000	.00000	-2.21000	.00000
.800	.140	-.14100	.04500	.20000	.00000	-.00100	.00000	-.09000	.00000
.800	2.190	-.09300	.05100	.20400	.00400	-.00200	.00000	2.04000	.00000
.800	4.230	-.03000	.05200	.20000	.00300	-.00300	.00000	4.17000	.00000
.800	6.260	.03600	.04500	.20100	.00100	-.00400	.00000	6.28000	.00000
.800	8.290	.05800	.05100	.19600	.00600	-.00500	.00000	8.36000	.00000
	GRADIENT	.02635	.00073	.00024	-.00015	-.00029	.00000	1.03611	.00000

RUN NO. 1701/ 0 RN/L = 5.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.900	-8.080	-.42600	.07300	.22100	.00100	.00000	.00100	-8.73000	.00000
.900	-6.020	-.33200	.05700	.21900	-.00300	.00100	.00100	-6.54000	.00000
.900	-3.980	-.26200	.05200	.21600	.00000	.00000	.00000	-4.40000	.00000
.900	-1.920	-.20200	.04800	.22000	.00300	-.00100	.00000	-2.26000	.00000
.900	.140	-.15900	.04600	.22000	-.00500	-.00100	.00000	-.15000	.00000
.900	2.210	-.11100	.05000	.22000	.00500	-.00300	.00000	1.99000	.00000
.900	4.260	-.04400	.05000	.22100	.00600	-.00200	.00000	4.17000	.00000
.900	6.290	.03200	.05000	.22300	-.00400	-.00200	.00000	6.34000	.00000
.900	8.320	.09600	.04400	.21700	.00700	-.00300	.00000	8.44000	.00000
	GRADIENT	.02557	-.00010	.00049	.00068	-.00029	.00000	1.03784	.00000

RUN NO. 1711/ 0 RN/L = 6.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.949	-8.090	-.43600	.07000	.24600	.00500	-.00200	.00100	-8.80000	.00000
.949	-6.030	-.33600	.05500	.24200	-.01300	.00100	.00000	-6.59000	.00000
.949	-3.970	-.27600	.05600	.24100	.00500	-.00200	.00000	-4.43000	.00000
.949	-1.930	-.21400	.05600	.24500	.00500	-.00200	.00000	-2.28000	.00000
.949	.140	-.15700	.04900	.24700	.00000	-.00200	.00000	-.14000	.00000
.949	2.200	-.10000	.04800	.24700	-.00100	-.00200	.00000	2.01000	.00000
.949	4.240	-.05100	.05100	.24300	.00500	-.00400	.00000	4.14000	.00000
.949	6.270	.03100	.04800	.24600	.01000	-.00600	.00000	6.32000	.00000
.949	8.300	.11900	.03100	.24000	.00600	-.00600	.00000	8.47000	.00000
	GRADIENT	.02745	-.00088	.00029	-.00029	-.00019	.00000	1.04282	.00000

FA25, MSFC TWT 552, CONFIG. 01ATPTT2S2 (TS) (S1X026) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1720/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.047	-8.080	-.43900	.04000	.29900	.00000	.00100	.00100	-8.99000	.00000
1.047	-6.040	-.32500	.02000	.29300	.00200	.00000	.00100	-6.77000	.00000
1.047	-4.020	-.24400	.01500	.29100	.00000	.00000	.00000	-4.59000	.00000
1.047	-1.970	-.17100	.02100	.29500	-.01200	.00100	.00000	-2.38000	.00000
1.047	.090	-.13900	.04200	.29700	.00200	-.00100	.00000	-.20000	.00000
1.047	2.160	-.08300	.04500	.29900	.00000	-.00200	.00000	1.97000	.00000
1.047	4.220	-.01600	.04100	.29800	.00700	-.00500	.00000	4.15000	.00000
1.047	6.230	.05800	.03800	.29400	-.00500	-.00300	.00000	6.32000	.00000
1.047	8.270	.11600	.02400	.29500	.00000	-.00700	.00000	8.41000	.00000
	GRADIENT	.02639	.00369	.00087	.00126	-.00063	.00000	1.05919	.00000

RUN NO. 1730/ 0 RN/L = 7.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.096	-8.090	-.47200	.05400	.32400	.00300	.00000	.00100	-9.05000	.00000
1.096	-6.030	-.35500	.03500	.32200	-.00600	.00100	.00100	-6.79000	.00000
1.096	-4.000	-.29800	.03800	.32400	.00000	.00000	.00000	-4.62000	.00000
1.096	-1.950	-.21100	.04000	.32200	.00000	.00000	.00000	-2.41000	.00000
1.096	.090	-.14800	.04700	.32500	.00400	-.00200	.00000	-.21000	.00000
1.096	2.160	-.10100	.05600	.32100	.00200	-.00200	.00000	1.97000	.00000
1.096	4.210	-.02900	.05100	.31900	-.00100	-.00300	.00000	4.14000	.00000
1.096	6.250	.03400	.04600	.32200	-.00100	-.00300	.00000	6.30000	.00000
1.096	8.300	.10200	.03100	.31600	.00000	-.00600	.00000	8.42000	.00000
	GRADIENT	.03059	.00205	-.00063	-.00000	-.00039	00000	1.06672	.00000

RUN NO. 1740/ 0 RN/L = 7.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.146	-8.080	-.50200	.07400	.35000	.00900	.00000	.00100	-9.09000	.00000
1.146	-6.020	-.38500	.06000	.34300	.00000	.00100	.00000	-6.80000	.00000
1.146	-3.980	-.29300	05300	.34500	-.00200	.00000	.00000	-4.57000	.00000
1.146	-1.930	-.22400	.05900	.34800	.00100	.00100	.00000	-2.36000	.00000
1.146	.110	-.16300	.06800	.34800	.00100	.00000	.00000	-.16000	.00000
1.146	2.160	-.11000	.07400	.34200	-.00200	.00000	.00000	2.01000	.00000
1.146	4.210	-.05500	.07700	.34400	.00700	-.00300	.00000	4.18000	.00000
1.146	6.230	.02800	.06100	.34100	.00100	-.00300	.00000	6.32000	.00000
1.146	8.300	.10900	.04200	.33800	-.00500	-.00300	.00000	8.49000	.00000
	GRADIENT	.02882	.00308	-.00039	.00073	-.00034	.00000	1.06839	.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (TS) (S1X026) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1750/ 0 RN/L = 8.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.244	-8.080	-.48100	.06500	.33000	.00300	.00000	.00100	-9.10000	.00000
1.244	-6.020	-.36500	.04900	.32900	.00200	.00000	.00000	-6.82000	.00000
1.244	-3.980	-.29100	.05300	.33000	.00000	.00000	.00000	-4.59000	.00000
1.244	-1.910	-.20000	.04700	.33000	-.00900	.00100	.00000	-2.33000	.00000
1.244	.150	-.15400	.06500	.32800	.00000	-.00200	.00000	-.11000	.00000
1.244	2.220	-.10200	.07000	.32600	.00200	-.00300	.00000	2.08000	.00000
1.244	4.290	-.03800	.06800	.32100	.00000	-.00400	.00000	4.27000	.00000
1.244	6.320	.02900	.05800	.31900	.00000	-.00300	.00000	6.43000	.00000
1.244	8.360	.03800	.04400	.31800	.00000	-.00700	.00000	8.57000	.00000
	GRADIENT	.02925	.00257	-.00107	.00053	-.00058	.00000	1.07167	.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (TS) (S1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1770/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.602	-8.059	-.08900	.02700	.19300	-.13900	.08700	-.01300	.00000	-8.03000
.602	-6.030	-.07300	.02100	.18900	-.11800	.06400	-.00900	.00000	-5.97000
.602	-3.990	-.10000	.03400	.19000	-.05800	.04000	-.00600	.00000	-3.97000
.602	-1.970	-.11600	.04200	.19200	-.02400	.01900	-.00300	.00000	-1.97000
.602	.080	-.12900	.04900	.18400	.00000	.00000	.00000	.00000	.08000
.602	2.090	-.12500	.04600	.18500	.03300	-.01800	.00300	.00000	2.08000
.602	4.110	-.16200	.06900	.18700	.06000	-.03700	.00500	.00000	4.09000
.602	6.140	-.16800	.07100	.19400	.09400	-.05600	.00700	.00000	6.11000
.602	8.180	-.16200	.07000	.19000	.11900	-.07500	.01000	.00000	8.15000
	GRADIENT	-.00656	.00355	-.00064	.01570	-.00943	.00138	.00000	.99656

FA25. MSFC TWT 652. CONFIG. 01ATPTT2S2 (TS) (S1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1780/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.802	-8.090	-.09600	.02300	.21400	-.15000	.09300	-.01500	.00000	-8.04000
.802	-6.030	-.11200	.03800	.20900	-.12200	.06800	-.01100	.00000	-5.95000
.802	-4.000	-.12700	.04400	.20800	-.06800	.04300	-.00700	.00000	-3.99000
.802	-1.950	-.13100	.04500	.20600	-.03900	.02300	-.00400	.00000	-1.94000
.802	.080	-.13600	.04500	.20000	.00200	.00100	.00000	.00000	.07000
.802	2.100	-.14400	.05400	.20300	.02700	-.01800	.00200	.00000	2.10000
.802	4.120	-.17800	.07200	.20300	.07300	-.03600	.00500	.00000	4.06000
.802	6.160	-.17900	.07600	.20700	.09100	-.05800	.00800	.00000	6.13000
.802	8.190	-.19300	.08200	.21100	.13900	-.08600	.01200	.00000	8.13900
	GRADIENT	-.00565	.00320	-.00064	.01714	-.00980	.00148	.00000	.99213

RUN NO. 1790/ 0 RN/L = 5.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.900	-8.090	-.10500	.02200	.23400	-.16300	.10100	-.01700	.00000	-8.03000
.900	-6.040	-.11500	.02600	.23600	-.11600	.07300	-.01300	.00000	-6.00000
.900	-4.020	-.13900	.04100	.22900	-.07600	.04700	-.00800	.00000	-3.98000
.900	-1.980	-.13900	.04000	.23000	-.04800	.02500	-.00400	.00000	-1.95000
.900	.080	-.15400	.04700	.21800	-.00100	.00100	.00000	.00000	.08000
.900	2.130	-.17300	.05800	.22100	.03400	-.02100	.00300	.00000	2.11000
.900	4.140	-.16900	.05900	.22300	.06200	-.04200	.00600	.00000	4.12000
.900	6.160	-.19700	.07600	.23500	.11000	-.06600	.01000	.00000	6.10000
.900	8.210	-.20900	.08400	.24100	.15200	-.09200	.01300	.00000	8.13900
	GRADIENT	-.00451	.00264	-.00103	.01753	-.01096	.00171	.00000	.99167

RUN NO. 1800/ 0 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.949	-8.100	-.10600	.02900	.25700	-.17500	.10600	-.01600	.00000	-8.02000
.949	-6.050	-.12000	.03400	.25900	-.12300	.07800	-.01300	.00000	-6.01000
.949	-4.020	-.12200	.03600	.25200	-.09500	.05100	-.00900	.00000	-3.95000
.949	-2.000	-.12700	.03700	.25400	-.05100	.02600	-.00500	.00000	-1.94000
.949	.080	-.14700	.04800	.24000	-.00500	.00300	.00000	.00000	.08000
.949	2.120	-.15700	.05600	.24700	.03300	-.02000	.00300	.00000	2.09000
.949	4.140	-.18100	.07200	.24800	.07300	-.04200	.00600	.00000	4.09000
.949	6.170	-.19500	.08100	.25300	.10600	-.06700	.00900	.00000	6.12000
.949	8.220	-.16900	.07900	.25300	.14900	-.09400	.01200	.00000	8.16000
	GRADIENT	-.00724	.00445	-.00074	.02055	-.01135	.00186	.00000	.98384

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (TS) (S1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1810/ 0 RN/L = 6.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.049	-8.129	-.08200	.01400	.30800	-.18200	.10700	-.01700	.00000	-8.01000
1.049	-6.090	-.09200	.02100	.30900	-.13800	.08000	-.01300	.00000	-5.99000
1.049	-4.029	-.09400	.02100	.30500	-.09700	.05100	-.00900	.00000	-3.94000
1.049	-1.990	-.11000	.02800	.30300	-.04900	.02500	-.00500	.00000	-1.95000
1.049	.080	-.11900	.03300	.30200	-.00600	.00300	.00000	.00000	.06000
1.049	2.110	-.14900	.05200	.30400	.04100	-.01900	.00300	.00000	2.05000
1.049	4.170	-.15900	.06000	.29800	.07400	-.04300	.00700	.00000	4.11000
1.049	6.200	-.17500	.06800	.29800	.11900	-.07000	.01000	.00000	6.12000
1.049	8.250	-.20400	.08400	.30100	.16400	-.10000	.01400	.00000	8.15000
	GRADIENT	-.00824	.00498	-.00063	.02102	-.01132	.00195	.00000	.98059

RUN NO. 1820/ 0 RN/L = 7.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.096	-8.120	-.10200	.02600	.33800	-.19100	.11300	-.01900	.00000	-8.00000
1.096	-6.080	-.10800	.03500	.33200	-.14600	.08300	-.01400	.00000	-5.97000
1.096	-4.040	-.11600	.03500	.33000	-.09800	.05300	-.00900	.00000	-3.95000
1.096	-2.000	-.12400	.04100	.33400	-.05200	.02800	-.00500	.00000	-1.95000
1.096	.080	-.13500	.04600	.33100	-.00500	.00300	.00000	.00000	.08000
1.096	2.120	-.16000	.06000	.32300	.03800	-.02000	.00400	.00000	2.07000
1.096	4.170	-.18100	.07400	.32800	.07900	-.04500	.00700	.00000	4.10000
1.096	6.190	-.19900	.08300	.32900	.12200	-.07200	.01100	.00000	6.10000
1.096	8.260	-.21400	.09300	.33300	.16400	-.10200	.01500	.00000	8.16000
	GRADIENT	-.00809	.00472	-.00044	.02152	-.01188	.00200	.00000	.97955

RUN NO. 1830/ 0 RN/L = 7.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.146	-8.120	-.11400	.03600	.34700	-.19000	.11200	-.01800	.00000	-7.99000
1.146	-6.070	-.12500	.04600	.34200	-.13600	.07900	-.01300	.00000	-5.98000
1.146	-4.029	-.13800	.05500	.34300	-.09000	.05000	-.00800	.00000	-3.95000
1.146	-2.000	-.15400	.06200	.34700	-.04300	.02500	-.00400	.00000	-1.97000
1.146	.080	-.16200	.06900	.34500	-.01000	.00000	.00000	.00000	.11000
1.146	2.120	-.18200	.07900	.34500	.03400	-.02400	.00400	.00000	2.11000
1.146	4.160	-.20800	.09400	.34400	.07600	-.04800	.00700	.00000	4.12000
1.146	6.220	-.22200	.09900	.34500	.12200	-.08100	.01200	.00000	6.18000
1.146	8.290	-.23100	.10400	.34800	.16800	-.11100	.01500	.00000	8.24000
	GRADIENT	-.00819	.00463	-.00000	.01995	-.01195	.00185	.00000	.98645

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (TS) (S1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1760/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.246	-8.160	-.12100	.05500	.32900	-.18300	.11200	-.01700	.00000	-8.05900
1.246	-6.070	-.13800	.06700	.32800	-.12800	.08000	-.01200	.00000	-6.01000
1.246	-4.020	-.13300	.06200	.32600	-.08800	.05200	-.00700	.00000	-3.98000
1.246	-2.000	-.15000	.07500	.33000	-.04400	.02600	-.00400	.00000	-1.97000
1.246	.080	-.16200	.08200	.32300	-.00300	.00100	.00000	.00000	.08000
1.246	2.110	-.18900	.09900	.32500	.03500	-.02100	.00300	.00000	2.09000
1.246	4.170	-.20600	.10600	.32800	.07600	-.04600	.00700	.00000	4.12000
1.246	6.190	-.22900	.12000	.32800	.11900	-.07300	.01100	.00000	6.12000
1.246	8.280	-.24000	.12300	.33200	.16600	-.10300	.01400	.00000	8.19000
	GRADIENT	-.00231	.00546	-.00005	.01965	-.01185	.00171	.00000	.98790

FA25, MSFC TWT 652, CONFIG. 01A04POT2S2 (TS) (S1X028) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1990/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.602	-8.040	-.33500	.03900	.16100	.00000	.00100	.00100	-8.38000	.00000
.602	-6.030	-.27200	.03400	.16100	-.00700	.00200	.00100	-6.30000	.00000
.602	-4.010	-.20700	.02900	.16500	.00000	.00000	.00000	-4.23000	.00000
.602	-1.990	-.15400	.02100	.16900	-.00100	.00000	.00000	-2.13000	.00000
.602	.140	-.12100	.03300	.17100	.00700	-.00100	.00000	.00000	.00000
.602	2.080	-.07100	.03600	.16700	.00900	-.00100	.00000	1.99000	.00000
.602	4.100	-.02000	.03900	.16600	-.00400	.00000	.00000	4.06900	.00000
.602	6.130	.01500	.04400	.16900	.01000	-.00200	.00000	6.13000	.00000
.602	8.110	.06300	.04700	.16400	.00900	-.00200	.00000	8.16000	.00000
	GRADIENT	.02257	.00202	.00001	.00011	-.00005	.00000	1.02359	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS) (S1X028) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1980/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.800	-8.070	-.37900	.04900	.17700	.00800	.00000	.00100	-8.61000	.00000
.800	-6.060	-.29100	.03000	.17700	.00400	.00000	.00100	-6.51000	.00000
.800	-4.029	-.23200	.03100	.17700	.00800	.00000	.00000	-4.39000	.00000
.800	-1.950	-.17000	.02800	.18100	-.00200	.00000	.00000	-2.24000	.00000
.800	.170	-.12400	.03300	.18100	-.00300	-.00100	.00000	-.06000	.00000
.800	2.120	-.08600	.03900	.18300	.00000	.00000	.00000	1.96000	.00000
.800	4.160	-.02500	.04000	.18100	.00500	-.00400	.00000	4.09000	.00000
.800	6.190	.03900	.04000	.17800	.00200	-.00300	.00000	6.21000	.00000
.800	8.180	.07900	.04100	.17500	.00800	-.00500	.00000	8.26000	.00000
	GRADIENT	.02435	.00141	.00049	-.00021	-.00039	.00000	1.03480	.00000

RUN NO. 1970/ 0 RN/L = 5.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.899	-8.090	-.39100	.04700	.20400	-.00800	.00000	.00200	-8.73000	.00000
.899	-6.050	-.31300	.03900	.20300	-.00400	.00000	.00100	-6.58000	.00000
.899	-4.040	-.26300	.04400	.20100	.00700	-.00100	.00000	-4.47000	.00000
.899	-1.930	-.21000	.04300	.20500	.00500	-.00200	.00000	-2.29000	.00000
.899	.160	-.14400	.03100	.20200	-.00100	-.00100	.00000	-.14000	.00000
.899	2.140	-.09900	.03400	.20200	.00400	-.00300	.00000	1.91000	.00000
.899	4.170	-.04700	.04600	.20200	.00100	-.00300	.00000	4.06000	.00000
.899	6.200	.02800	.04700	.20300	.00400	-.00400	.00000	6.24000	.00000
.899	8.190	.03300	.03500	.19700	.00700	-.00600	.00000	8.31000	.00000
	GRADIENT	.02651	-.00026	-.00005	-.00064	-.00024	.00000	1.03753	.00000

RUN NO. 1960/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.947	-8.090	-.40100	.04600	.23100	-.00100	-.00100	.00100	-8.80000	.00000
.947	-6.090	-.32200	.03900	.23000	-.00800	.00000	.00100	-6.65000	.00000
.947	-4.040	-.25900	.03900	.22900	.00600	-.00200	.00000	-4.50000	.00000
.947	-1.950	-.21600	.05000	.22800	.00600	-.00200	.00000	-2.32000	.00000
.947	.150	-.15000	.04000	.23100	.00000	-.00100	.00000	-.14000	.00000
.947	2.110	-.10200	.04300	.22800	.00100	-.00200	.00000	1.91000	.00000
.947	4.170	-.05400	.04500	.22500	.01200	-.00600	.00000	4.05000	.00000
.947	6.210	.03300	.04200	.22500	.00100	-.00400	.00000	6.25000	.00000
.947	8.190	.09400	.04000	.22000	.01300	-.00800	.00000	8.35000	.00000
	GRADIENT	.02548	.00024	-.00039	.00033	-.00039	.00000	1.04099	.00000

ORIGINAL PAGE IS OF POOR QUALITY

FA25 MSFC TWT 652 CONFIG. [illegible] (TS) [illegible]

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 0.000
CB-ELV = 10.000 STINGS = 2.000

RUN NO. 1950/ 0 RN/L = 6.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.047	-8.100	-.44000	.03600	.27300	.00600	.00000	.00100	-9.00000	.00000
1.047	-6.050	-.34500	.02400	.27100	.00600	.00000	.00000	-6.80000	.00000
1.047	-4.029	-.24300	.01300	.27200	-.00400	.00100	.00100	-4.60000	.00000
1.047	-1.920	-.19000	.02300	.27700	.00400	.00000	.00000	-2.37000	.00000
1.047	.160	-.13100	.03400	.27900	.00200	.00000	.00000	-.13000	.00000
1.047	2.150	-.07900	.03700	.27500	.00000	.00000	.00000	1.96000	.00000
1.047	4.190	-.01400	.03600	.28000	-.00500	-.00100	.00000	4.12000	.00000
1.047	6.230	.04600	.03900	.27300	-.00100	-.00200	.00000	6.29000	.00000
1.047	8.220	.12800	.01600	.27000	-.00300	-.00400	.00000	8.37000	.00000
	GRADIENT	.02774	.00294	.00069	-.00028	-.00020	-.00010	1.06156	.00000

RUN NO. 1940/ 0 RN/L = 7.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.098	-8.100	-.49400	.05100	.30300	.00700	.00000	.00100	-9.09000	.00000
1.098	-6.060	-.37700	.04300	.30000	.00000	.00000	.00100	-6.85000	.00000
1.098	-4.029	-.28600	.03500	.29100	.00200	.00000	.00100	-4.65000	.00000
1.098	-1.930	-.22200	.04500	.30000	.00000	.00000	.00100	-2.38000	.00000
1.098	.180	-.16000	.05600	.30200	.00100	.00000	.00000	-.11000	.00000
1.098	2.150	-.11000	.05900	.29800	.00000	-.00100	.00000	1.96000	.00000
1.098	4.200	-.04000	.05300	.29600	.00200	-.00300	.00000	4.12000	.00000
1.098	6.250	.02400	.05200	.29800	-.00700	.00000	.00000	6.29000	.00000
1.098	8.240	.09500	.03400	.29700	.00000	-.00500	.00000	8.37000	.00000
	GRADIENT	.02941	.00245	.00040	-.00000	-.00034	-.00015	1.06542	.00000

RUN NO. 1930/ 0 RN/L = 7.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.146	-8.100	-.50000	.06100	.30800	.00500	.00200	.00100	-9.13000	.00000
1.146	-6.060	-.39300	.05000	.30700	.00200	.00200	.00100	-6.88000	.00000
1.146	-4.040	-.30100	.04500	.30900	.00500	.00100	.00100	-4.66000	.00000
1.146	-1.930	-.23100	.05200	.31200	.00600	.00000	.00100	-2.39000	.00000
1.146	.160	-.16800	.06200	.31500	.00400	.00000	.00000	-.13000	.00000
1.146	2.130	-.12100	.07100	.31300	.00600	-.00100	.00100	1.95000	.00000
1.146	4.190	-.06700	.07800	.31200	.00300	-.00200	.00000	4.15000	.00000
1.146	6.230	.01100	.06700	.31000	.00100	-.00300	.00000	6.32000	.00000
1.146	8.240	.08300	.04900	.30700	.00600	-.00400	.00000	8.41000	.00000
	GRADIENT	.02819	.00414	.00035	-.00020	-.00034	-.00010	1.07022	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS) (S1X028) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1920/ 0 RN/L = 8.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.243	-8.000	-.40600	.06700	.30300	.00700	.00000	.00100	-9.11000	.00000
1.243	-6.080	-.39300	.06100	.30300	.00300	.00100	.00000	-6.89000	.00000
1.243	-4.050	-.28900	.05600	.30900	-.00600	.00200	.00000	-4.66000	.00000
1.243	-1.950	-.21200	.05200	.30900	.00000	.00000	.00000	-2.37000	.00000
1.243	.160	-.15600	.06600	.30700	.00600	-.00200	.00000	-.09000	.00000
1.243	2.120	-.11700	.07500	.30100	.00400	-.00100	.00000	1.98000	.00000
1.243	4.190	-.04800	.07200	.30100	-.00300	.00000	.00000	4.18000	.00000
1.243	6.270	.01200	.06600	.29900	.00000	-.00400	.00000	6.33000	.00000
1.243	8.230	.09000	.04500	.30000	-.00100	-.00400	.00000	8.43000	.00000
	GRADIENT	.02810	.00326	-.00116	.00011	-.00025	.00000	1.07210	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS) (S1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1900/ 0 RN/L = 2.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.602	-8.040	-.06400	.01000	.17400	-.13900	.08800	-.01300	.00000	-8.01000
.602	-6.070	-.09100	.02500	.17800	-.11000	.06700	-.00900	.00000	-6.04000
.602	-4.050	-.09500	.02700	.17000	-.07200	.04200	-.00600	.00000	-4.02900
.602	-1.970	-.09800	.02500	.17500	-.02500	.01900	-.00300	.00000	-1.98000
.602	.080	-.11800	.03700	.17600	.00400	.00100	.00000	.00000	.07000
.602	2.010	-.13200	.04600	.17100	.02400	-.01500	.00200	.00000	2.01000
.602	4.050	-.14400	.04600	.16400	.05400	-.04600	.00500	.00000	4.04000
.602	6.080	-.14700	.05800	.17700	.09200	-.05700	.00800	.00000	6.06000
.602	8.059	-.16300	.06700	.17200	.12100	-.07900	.01000	.00000	8.04000
	GRADIENT	-.00446	.00292	-.00029	.01484	-.00942	.00134	.00000	.99739

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS) (S1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 !B-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1890/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	PHAT	BETAT
.799	-8.070	-.08700	.01100	.18700	-.14300	.09100	-.01500	0000	-8.03000
.799	-6.050	-.10400	.02100	.19000	-.10200	.06600	-.01100	.00000	-6.02000
.799	-4.060	-.11500	.02800	.18400	-.06000	.04300	-.00700	.00000	-4.06900
.799	-1.960	-.12900	.03600	.18100	-.03000	.02000	-.00300	.00000	-1.96000
.799	.100	-.13000	.03500	.18000	.00100	.00100	.00000	.00000	.09000
.799	2.040	-.13700	.04200	.18000	.03400	-.01800	.00200	.00000	2.01000
.799	4.080	-.17300	.06100	.18200	.07400	-.04000	.00600	.00000	4.02900
.799	6.110	-.17800	.07000	.18500	.09500	-.05900	.00900	.00000	6.06000
.799	8.070	-.20500	.08600	.18800	.13400	-.08100	.01200	.00000	8.01000
	GRADIENT	-.00611	.00354	-.00025	.01636	-.01006	.00153	.00000	.99441

RUN NO. 1880/ 0 RN/L = 5.56 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.900	-8.090	-.09800	.01000	.21500	-.15700	.09700	-.01700	.00000	-8.03000
.900	-6.060	-.11700	.02100	.20900	-.11400	.07100	-.01300	.00000	-6.02000
.900	-4.069	-.12600	.02500	.20900	-.06800	.04600	-.00800	.00000	-4.06000
.900	-1.990	-.12400	.02400	.21000	-.03500	.02200	-.00400	.00000	-1.98000
.900	.100	-.12700	.02500	.20700	-.00200	.00100	.00000	.00000	.10000
.900	2.050	-.15400	.04200	.20200	.02700	-.01800	.00300	.00000	2.04000
.900	4.080	-.17400	.05600	.20700	.06300	-.04000	.00600	.00000	4.04000
.900	6.120	-.19100	.06900	.20800	.10100	-.06200	.01000	.00000	6.07000
.900	8.090	-.19300	.07300	.21100	.13700	-.08700	.01300	.00000	8.04000
	GRADIENT	-.00616	.00391	-.00059	.01593	-.01043	.00172	.00000	.99422

RUN NO. 1870/ 0 RN/L = 5.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.947	-8.100	-.10900	.02500	.23900	-.16300	.10200	-.01600	.00000	-8.04000
.947	-6.070	-.10500	.02100	.23300	-.12100	.07600	-.01300	.00000	-6.03000
.947	-4.050	-.11600	.02600	.23200	-.08200	.05000	-.00900	.00000	-4.02000
.947	-1.970	-.12100	.02800	.23000	-.04900	.02600	-.00500	.00000	-1.93000
.947	.100	-.14400	.04200	.22800	-.00500	.00100	.00000	.00000	.11000
.947	2.050	-.15300	.04700	.22700	.03200	-.01600	.00300	.00000	2.02000
.947	4.080	-.18700	.06700	.23000	.07300	-.04000	.00600	.00000	4.01000
.947	6.130	-.19100	.07400	.23400	.10700	-.06400	.01000	.00000	6.07000
.947	8.100	-.19900	.09200	.22700	.14300	-.09000	.01300	.00000	8.04000
	GRADIENT	-.00856	.00497	-.00035	.01926	-.01104	.00187	.00000	.98576

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS) (S1X029) (31 (CT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1861/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.047	-8.129	-.08800	.01300	.28500	-.17100	.10700	-.01700	.00000	-8.04900
1.047	-6.090	-.10100	.02400	.28100	-.13500	.07900	-.01300	.00000	-6.00000
1.047	-4.069	-.10300	.02600	.27800	-.09100	.05000	-.00900	.00000	-3.99000
1.047	-1.980	-.10600	.02700	.27900	-.05300	.02500	-.00500	.00000	-1.91000
1.047	.100	-.12300	.03200	.27900	-.00600	.00200	.00000	.00000	.10000
1.047	2.050	-.14100	.04400	.27700	.03800	-.01900	.00400	.00000	2.00000
1.047	4.080	-.16400	.05800	.27700	.07500	-.04200	.00800	.00000	4.02000
1.047	6.140	-.16700	.06300	.27700	.11000	-.06800	.01100	.00000	6.08000
1.047	8.129	-.20100	.08000	.27700	.15900	-.09900	.01500	.00000	8.04900
	GRADIENT	-.00751	.00397	-.00019	.02080	-.01122	.00212	.00000	.99043

RUN NO. 1850/ 0 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.096	-8.160	-.11000	.02800	.30900	-.18000	.11500	-.01900	.00000	-8.09000
1.096	-6.110	-.11300	.03400	.30700	-.14600	.08600	-.01400	.00000	-6.03000
1.096	-4.100	-.11900	.03500	.30600	-.09400	.05400	-.00900	.00000	-4.32000
1.096	-1.980	-.13500	.04400	.31200	-.04700	.02700	-.00500	.00000	-1.95000
1.096	.100	-.13600	.04500	.30600	-.01100	.00400	.00000	.00000	.11000
1.096	2.050	-.14300	.04800	.30000	.03100	-.01700	.00400	.00000	2.02000
1.096	4.110	-.18000	.07100	.30600	.07100	-.04300	.00800	.00000	4.06900
1.096	6.150	-.19400	.07800	.30400	.11500	-.07300	.01200	.00000	6.09000
1.096	8.160	-.21600	.09100	.30700	.15800	-.10400	.01500	.00000	8.10000
	GRADIENT	-.00635	.00371	-.00058	.01995	-.01164	.00210	.00000	.98522

RUN NO. 1840/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.146	-8.160	-.13100	.04200	.33400	-.17800	.11300	-.01800	.00000	-8.09000
1.146	-6.130	-.12500	.04200	.32200	-.13500	.08300	-.01300	.00000	-6.07000
1.146	-4.059	-.14400	.05500	.31700	-.09300	.05300	-.00900	.00000	-4.00000
1.146	-1.970	-.15200	.05900	.32300	-.04500	.02400	-.00400	.00000	-1.93000
1.146	.100	-.17100	.06800	.32700	-.00300	.00000	.00000	.00000	.11000
1.146	2.060	-.17900	.07500	.31900	.02800	-.02200	.00400	.00000	2.07000
1.146	4.100	-.19700	.08300	.31900	.07200	-.04900	.00800	.00000	4.08000
1.146	6.160	-.19900	.08500	.32500	.10800	-.07700	.01200	.00000	6.16000
1.146	8.150	-.23600	.10400	.33100	.16300	-.11000	.01500	.00000	8.11000
	GRADIENT	-.00653	.00353	.00001	.01980	-.01228	.00206	.00000	.98976

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (TS) (S1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1910/ 0 RN/L = 8.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.244	-8.180	-.13200	.05800	.31300	-.17400	.11200	-.01700	.00000	-8.12000
1.244	-6.140	-.12500	.05000	.30900	-.13300	.08300	-.01200	.00000	-6.08000
1.244	-4.090	-.14100	.07000	.30600	-.09000	.05400	-.00800	.00000	-4.05000
1.244	-2.020	-.14500	.07100	.30600	-.04400	.02600	-.00300	.00000	-1.99000
1.244	.080	-.16400	.08100	.30500	-.00400	.00200	.00000	.00000	.08000
1.244	2.030	-.17700	.08700	.30300	.03000	-.01900	.00300	.00000	2.02000
1.244	4.090	-.19600	.09800	.30500	.06800	-.04500	.00700	.00000	4.06900
1.244	6.130	-.21300	.10600	.30700	.10900	-.07300	.01100	.00000	6.11000
1.244	8.139	-.23000	.11500	.31200	.15000	-.10300	.01500	.00000	8.11000
	GRADIENT	-.00695	.00353	-.00024	.01912	-.01191	.00176	.00000	.99205

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (TS) (S1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2000/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.602	-8.040	-.36000	.05300	.16800	.00500	.00000	.00200	-8.36000	.00000
.602	-6.020	-.32200	.06300	.16800	.01700	-.00200	.00100	-6.31000	.00000
.602	-4.020	-.21100	.03400	.16600	-.00100	.00100	.00100	-4.24000	.00000
.602	-1.950	-.17200	.03600	.17100	.00300	-.00100	.00100	-2.14000	.00000
.602	.120	-.12700	.04500	.17100	-.00100	.00000	.00100	.00000	.00000
.602	2.070	-.07100	.04300	.17000	.00200	-.00100	.00100	1.99000	.00000
.602	4.090	-.03000	.04400	.17200	.00900	-.00200	.00100	4.05000	.00000
.602	6.130	.01300	.05000	.17100	.00100	-.00300	.00000	6.13000	.00000
.602	8.120	.06300	.04600	.16400	.00100	-.00600	.00000	8.16000	.00000
	GRADIENT	.02286	.00134	.00055	.00093	-.00030	-.00000	1.02323	.00000

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (TS) (S1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINOS = 2.000

RUN NO. 2011/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.800	-8.059	-.39200	.06200	.18600	.00600	.00100	.00100	-8.60000	.00000
.800	-6.060	-.32700	.05800	.18100	.00500	.00100	.00100	-6.51000	.00000
.800	-4.040	-.24900	.04500	.18300	.00200	.00100	.00100	-4.40000	.00000
.800	-1.950	-.18600	.04200	.18400	-.00500	.00100	.00100	-2.23000	.00000
.800	.150	-.14800	.04700	.16500	.00200	-.00100	.00000	-.08000	.00000
.800	2.100	-.10900	.05300	.18400	.01000	-.00200	.00000	1.94000	.00000
.800	4.160	-.04000	.05600	.18200	.01300	-.00400	.00000	4.10000	.00000
.800	6.210	.02100	.05100	.18000	.01200	-.00500	.00000	6.23000	.00000
.800	8.180	.07000	.04900	.17800	.00500	-.00300	.00000	8.26000	.00000
	GRADIENT	.02431	.00161	-.00009	.00180	-.00063	-.00015	1.03519	.00000

RUN NO. 2020/ 0 RN/L = 5.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.900	-8.090	-.41500	.06500	.21000	-.00300	.00000	.00200	-8.73000	.00000
.900	-6.050	-.34200	.06100	.20300	-.01200	.00100	.00100	-6.57000	.00000
.900	-4.029	-.27400	.05700	.20400	.00000	.00000	.00100	-4.45000	.00000
.900	-1.930	-.20300	.04800	.20800	.00000	-.00100	.00100	-2.26000	.00000
.900	.160	-.16400	.04800	.20600	.00300	-.00100	.00000	-.14000	.00000
.900	2.120	-.11200	.04900	.20500	-.00100	-.00100	.00000	1.91000	.00000
.900	4.160	-.05700	.05400	.20700	.00500	-.00400	.00000	4.00000	.00000
.900	6.210	.02500	.05300	.20500	.00000	-.00200	.00000	6.25000	.00000
.900	8.170	.08700	.03900	.20400	.00500	-.00400	.00000	8.29000	.00000
	GRADIENT	.02506	-.00015	.00015	.00044	-.00029	-.00015	1.03612	.00000

RUN NO. 2030/ 0 RN/L = 6.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.948	-8.110	-.43700	.07400	.22600	.00000	.00000	.00100	-8.81000	.00000
.948	-6.070	-.35100	.06200	.22600	.00600	.00000	.00100	-6.64000	.00000
.948	-4.029	-.27100	.05200	.22800	.00300	-.00100	.00000	-4.49000	.00000
.948	-1.950	-.22000	.05700	.22400	.00500	-.00200	.00100	-2.31000	.00000
.948	.140	-.15200	.04400	.22700	.00000	-.00100	.00100	-.15000	.00000
.948	2.120	-.10900	.05000	.22700	.00400	-.00200	.00000	1.91000	.00000
.948	4.160	-.05700	.05100	.22600	.00300	-.00300	.00000	4.04000	.00000
.948	6.190	.07400	.04900	.22700	.00700	-.00400	.00000	6.22000	.00000
.948	8.170	.09400	.04100	.21900	.01100	-.00500	.00000	8.33000	.00000
	GRADIENT	.02637	-.00045	-.00005	-.00005	-.00013	-.00005	1.04069	.00000

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (TS) (SIX030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2040/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.047	-8.110	-.43400	.03700	.27600	.00900	.00000	.00100	-9.01000	.00000
1.047	-6.070	-.34100	.02700	.27600	.00400	.00000	.00100	-6.80000	.00000
1.047	-4.050	-.27100	.03000	.27300	.00700	-.00100	.00000	-4.63000	.00000
1.047	-1.940	-.19300	.02900	.27900	.01000	-.00100	.00100	-2.37000	.00000
1.047	.150	-.12900	.03400	.28200	.00500	-.00100	.00000	-.15000	.00000
1.047	2.150	-.08400	.04200	.27900	.00100	-.00200	.00000	1.94000	.00000
1.047	4.170	-.01600	.03900	.27800	-.00200	-.00300	.00000	4.11000	.00000
1.047	6.210	.06000	.03400	.27900	-.00300	-.00100	.00000	6.29000	.00000
1.047	8.260	.11800	.02100	.27000	.00100	-.00500	.00000	9.41000	.00000
	GRADIENT	.03017	.00151	.00050	-.00131	-.00024	-.00005	1.05237	.00000

RUN NO. 2050/ 0 RN/L = 7.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.097	-8.100	-.48300	.05600	.30000	.00400	.00000	.00100	-9.08000	.00000
1.097	-6.070	-.37000	.03800	.29700	.00200	.00200	.00100	-6.85000	.00000
1.097	-4.050	-.29800	.04200	.29500	.00300	.00100	.00000	-4.57000	.00000
1.097	-1.940	-.21100	.03900	.29900	.00000	.00000	.00100	-2.40000	.00000
1.097	.130	-.15300	.04600	.30200	.00600	.00000	.00000	-.19000	.00000
1.097	2.140	-.11100	.06000	.30200	.00000	.00000	.00000	1.94000	.00000
1.097	4.190	-.04600	.05400	.30300	.00200	-.00300	.00000	4.09000	.00000
1.097	6.240	.02100	.05200	.30400	.00100	-.00100	.00000	6.25000	.00000
1.097	8.290	.10100	.03000	.29700	.00100	-.00400	.00000	8.41000	.00000
	GRADIENT	.02940	.00218	.00093	-.00010	-.00039	-.00005	1.06327	.00000

RUN NO. 2060/ 0 RN/L = 7.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.145	-8.110	-.49300	.07000	.31700	.00500	.00200	.00100	-9.10000	.00000
1.145	-6.070	-.38900	.05700	.31300	.00100	.00100	.00100	-6.85000	.00000
1.145	-4.029	-.29900	.05100	.31300	-.00900	.00200	.00100	-4.61000	.00000
1.145	-1.940	-.22900	.06000	.31900	.00700	-.00100	.00100	-2.37000	.00000
1.145	.120	-.16300	.06700	.31900	.00000	.00000	.00000	-.14000	.00000
1.145	2.140	-.12100	.08000	.31600	.00000	.00000	.00000	1.99000	.00000
1.145	4.180	-.06100	.07800	.32000	.00500	-.00300	.00000	4.15000	.00000
1.145	6.240	.00800	.07100	.31900	.00000	.00000	.00000	6.33000	.00000
1.145	8.290	.09800	.05400	.31700	.00100	-.00200	.00000	8.48000	.00000
	GRADIENT	.02752	.00361	.00054	.00103	-.00044	-.00015	1.06745	.00000

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (TS) (S1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2070/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.245	-9.110	-.49000	.06700	.30800	.00800	.00000	.00100	-9.11000	.00000
1.245	-6.070	-.37500	.05400	.31000	.00000	.00100	.00000	-6.87000	.00000
1.245	-4.050	-.29500	.05300	.30900	.00500	.00000	.00100	-4.66000	.00000
1.245	-1.940	-.22500	.05900	.31000	.01100	.00000	.00000	-2.38000	.00000
1.245	.120	-.15700	.05600	.30900	.00300	-.00100	.00000	-.13000	.00000
1.245	2.130	-.11900	.07700	.30600	.00400	-.00100	.00000	1.98000	.00000
1.245	4.170	-.05000	.07300	.30200	-.00100	.00000	.00000	4.16000	.00000
1.245	6.210	.01800	.06200	.30400	-.00300	-.00300	.00000	6.31000	.00000
1.245	8.280	.09200	.04600	.30200	-.00300	-.00300	.00000	8.48000	.00000
	GRADIENT	.02908	.00283	-.00087	-.00092	-.00005	-.00010	1.07270	.00000

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (TS) (S1X031) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2110/ 0 RN/L = 3.02 GRADIENT INTEPVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.602	-8.059	-.08000	.01600	.17200	-.12800	.08600	-.01300	.00000	-8.04900
.602	-6.040	-.07400	.01500	.17100	-.11600	.06700	-.01000	.00000	-6.00000
.602	-4.050	-.07800	.01500	.18200	-.06700	.04000	-.00600	.00000	-4.02900
.602	-1.990	-.02500	.02700	.16800	-.03900	.02000	-.00300	.00000	-1.98000
.602	.060	-.11200	.03800	.17100	-.01800	.00300	.00000	.00000	.08000
.602	2.040	-.14200	.05100	.16600	.03100	-.01700	.00200	.00000	2.02000
.602	4.050	-.16700	.07000	.17400	.05500	-.03700	.00500	.00000	4.04000
.602	6.060	-.19000	.09200	.17700	.09800	-.05800	.00800	.00000	6.03000
.602	8.100	-.16900	.07300	.16700	.11600	-.07700	.01100	.00000	8.08000
	GRADIENT	-.01106	.00652	-.00090	.01546	-.00944	.00134	.00000	.99547

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (TS) (S1X031) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-FLV = 10.000 STINGS = 2.000

RUN NO. 2100/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.949	-8.120	-.10100	.01700	.24100	-.15900	.10100	-.01700	.00000	-8.07000
.949	-6.090	-.12500	.03200	.23300	-.11800	.07500	-.01300	.00000	-6.05000
.949	-4.100	-.13500	.03700	.23500	-.07700	.04800	-.00900	.00000	-4.06900
.949	-2.010	-.13000	.03500	.23300	-.05100	.02600	-.00500	.00000	-1.96000
.949	.040	-.14300	.04000	.23300	-.00400	.00200	.00000	.00000	.04000
.949	2.030	-.16300	.05500	.22700	.03400	-.01700	.00300	.00000	1.99000
.949	4.060	-.18500	.07100	.23100	.06800	-.03900	.00700	.00000	4.00000
.949	6.110	-.19000	.07300	.23300	.10900	-.06400	.01000	.00000	6.04000
.949	8.160	-.21200	.09000	.24000	.13800	-.08900	.01300	.00000	8.10000
	GRADIENT	-.00661	.00431	-.00069	.01641	-.01066	.00197	.00000	.98668

RUN NO. 2090/ 0 RN/L = 7.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.097	-8.160	-.10600	.02900	.31400	-.18300	.11200	-.01800	.00000	-8.05900
1.097	-5.120	-.11700	.03900	.31000	-.14000	.08200	-.01400	.00000	-6.02000
1.097	-4.100	-.12000	.03900	.30900	-.09100	.05400	-.00900	.00000	-4.02900
1.097	-2.020	-.12600	.04300	.31300	-.05200	.02600	-.00500	.00000	-1.97000
1.097	.060	-.14300	.05100	.30700	-.01100	.00600	.00000	.00000	.06000
1.097	2.050	-.15400	.05600	.30600	.03400	-.01800	.00300	.00000	2.01000
1.097	4.090	-.18400	.07500	.30600	.07400	-.04200	.00800	.00000	4.02000
1.097	6.130	-.19100	.08000	.31200	.11100	-.06900	.01100	.00000	6.06000
1.097	8.170	-.21900	.09600	.30800	.16000	-.09800	.01500	.00000	8.07000
	GRADIENT	-.00762	.00415	-.00034	.00039	-.01164	.00205	.00000	.99191

RUN NO. 2080/ 0 RN/L = 8.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.245	-8.180	-.14000	.06100	.30900	-.17000	.10900	-.01600	.00000	-8.12000
1.245	-6.130	-.13300	.06700	.31400	-.14100	.08200	-.01100	.00000	-6.04000
1.245	-4.110	-.13800	.06600	.31000	-.09200	.05300	-.00700	.00000	-4.09000
1.245	-2.020	-.15400	.07700	.30800	-.04000	.02600	-.00300	.00000	-2.00000
1.245	.060	-.17000	.08700	.30700	-.00500	.00100	.00000	.00000	.07000
1.245	2.050	-.18400	.09400	.30300	.03200	-.02000	.00300	.00000	2.03000
1.245	4.090	-.21100	.10700	.30500	.07100	-.04300	.00700	.00000	4.04000
1.245	6.130	-.23100	.11700	.30900	.11400	-.07100	.01100	.00000	6.07000
1.245	8.180	-.24100	.12100	.31000	.15700	-.10300	.01500	.00000	8.12900
	GRADIENT	-.00859	.00484	-.00064	.01847	-.01153	.00166	.00000	.99124

FA25, MSFC TWT 652, CONFIG. 01A04PCF1F2T2S2(TS) (S1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2230/ 0 RN/L = 3.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.606	-8.049	-.33900	.03500	.16300	-.01100	.00000	.00300	-8.39000	.00000
.606	-6.050	-.28100	.02700	.16500	.00600	-.00100	.00300	-6.35000	.00000
.606	-4.050	-.21700	.02300	.16600	.01100	.00000	.00200	-4.29000	.00000
.606	-1.970	-.15600	.01800	.16900	-.00300	-.00200	.00100	-2.16000	.00000
.606	.100	-.10100	.02200	.17200	.00100	-.00100	.00100	-.03000	.00000
.606	2.090	-.05000	.02100	.17300	.00700	-.00300	.00100	1.98000	.00000
.606	4.100	-.02000	.03600	.17100	.00900	-.00800	.00000	4.06000	.00000
.606	6.130	.03100	.03800	.17100	.02100	-.00700	.00000	6.14000	.00000
.606	8.170	.10100	.03500	.16900	.00100	-.00500	.00000	8.25000	.00000
	GRADIENT	.02449	.00142	.00074	.00018	-.00064	-.00020	1.02458	.00000

RUN NO. 2220/ 0 RN/L = 4.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.804	-8.070	-.30300	.03400	.16000	-.00800	.00300	.00200	-8.63000	.00000
.804	-6.040	-.29500	.02000	.16100	.00000	.00000	.00200	-6.51000	.00000
.804	-4.029	-.24600	.02800	.17900	.01100	-.00400	.00100	-4.43000	.00000
.804	-1.930	-.16000	.01900	.16700	-.00300	-.00200	.00100	-2.24000	.00000
.804	.120	-.11700	.02400	.18400	.00800	-.00100	.00100	-.10000	.00000
.804	2.120	-.06300	.02000	.19500	.00500	-.00400	.00100	1.97000	.00000
.804	4.150	-.00100	.02600	.18600	.00300	-.00300	.00000	4.10000	.00000
.804	6.190	.04400	.03500	.18300	.01300	-.00600	.00000	6.21000	.00000
.804	8.240	.09200	.03600	.17800	.00200	-.00500	.00000	8.34000	.00000
	GRADIENT	.02922	.00014	.00059	-.00040	.00000	-.00010	1.04224	.00000

RUN NO. 2210/ 0 RN/L = 5.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.904	-8.110	-.39700	.04400	.20800	-.00100	.00000	.00200	-8.78000	.00000
.904	-6.080	-.32500	.03900	.20200	.00000	.00000	.00100	-6.63000	.00000
.904	-4.040	-.24700	.03000	.20300	-.00100	.00000	.00100	-4.48000	.00000
.904	-1.940	-.18800	.02900	.21000	.00500	-.00200	.00000	-2.29000	.00000
.904	.130	-.13600	.03000	.21300	.00500	-.00100	.00000	-.15000	.00000
.904	2.130	-.03200	.03300	.20900	.00600	-.00300	.00000	1.92000	.00000
.904	4.170	-.02300	.03100	.20500	.00500	-.00400	.00000	4.05900	.00000
.904	6.200	.03700	.03000	.20900	.01000	-.00600	.00000	6.21000	.00000
.904	8.250	.10600	.02300	.20400	.01000	-.00700	.00000	8.36000	.00000
	GRADIENT	.02655	.00029	.00016	.00064	-.00044	-.00010	1.03992	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS) (S1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2200/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.952	-8.020	-.43200	.05500	.23200	.00400	.00000	.00200	-8.82000	.00000
.952	-6.040	-.32900	.03800	.22900	.00000	.00000	.00100	-6.63000	.00000
.952	-4.040	-.25500	.03500	.23000	-.00200	.00000	.00100	-4.51000	.00000
.952	-1.940	-.18700	.03100	.23300	.00800	-.00200	.00100	-2.30000	.00000
.952	.130	-.14100	.03900	.23700	.00300	.00000	.00000	-.14000	.00000
.952	2.130	-.09500	.03200	.22900	-.00300	-.00100	.00000	1.93000	.00000
.952	4.170	-.04000	.03500	.22800	.00600	-.00400	.00000	4.04000	.00000
.952	6.200	.04000	.03100	.23100	.00500	-.00500	.00000	6.23000	.00000
.952	8.250	.11800	.02200	.22200	.00900	-.00600	.00000	8.40000	.00000
	GRADIENT	.02597	.00005	-.00038	.00025	-.00034	-.00015	1.04103	.00000

RUN NO. 2190/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.051	-8.080	-.43600	.02100	.27300	.00400	.00000	.00100	-9.04000	.00000
1.051	-6.040	-.33200	.01200	.26500	-.00100	.00000	.00100	-6.80000	.00000
1.051	-4.029	-.25600	.01900	.27600	.00100	.00000	.00000	-4.64000	.00000
1.051	-1.920	-.18700	.02100	.27200	.00300	.00000	.00000	-2.37000	.00000
1.051	.140	-.12800	.03200	.27500	.00000	.00000	.00000	-.15000	.00000
1.051	2.150	-.07700	.04300	.27400	-.00100	.00000	.00000	1.98000	.00000
1.051	4.190	-.02500	.04600	.27500	.00200	-.00400	.00000	4.11000	.00000
1.051	6.230	.04300	.03900	.27700	.00700	-.00500	.00000	6.28000	.00000
1.051	8.280	.13300	.01500	.26800	.00300	-.00700	.00000	8.45000	.00000
	GRADIENT	.02679	.00312	.00099	-.00000	-.00039	.00000	1.06549	.00000

RUN NO. 2180/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.100	-8.110	-.48700	.04700	.23900	.00000	.00100	.00100	-9.13000	.00000
1.100	-6.060	-.39300	.04200	.23500	.00500	.00100	.00100	-6.89000	.00000
1.100	-4.040	-.29400	.03300	.23500	.00200	.00000	.00100	-4.67000	.00000
1.100	-1.920	-.21000	.03800	.33100	.00400	.00000	.00000	-2.37000	.00000
1.100	.160	-.15900	.05200	.33200	.00300	.00000	.00000	-.14000	.00000
1.100	2.150	-.11000	.05100	.23700	.00600	-.00200	.00000	1.95000	.00000
1.100	4.200	-.04300	.05300	.23600	-.00400	-.00200	.00000	4.11000	.00000
1.100	6.240	.02800	.04800	.23300	-.00100	-.00400	.00000	6.29000	.00000
1.100	8.300	.11200	.03000	.23200	-.00400	-.00400	.00000	8.46000	.00000
	GRADIENT	.02832	.00287	-.00009	-.00048	-.00029	-.00010	1.06528	.00000

FA25, MSFC TWT 652, CONFIG. C1AC4P0F1F2T2S2(TS) (S1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2170/ 0 RN/L = 7.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.149	-8.100	-.49600	.04400	.30900	.00600	.00200	.00100	-9.17000	.00000
1.149	-6.060	-.40600	.04800	.31100	.01300	.00000	.00000	-6.93000	.00000
1.149	-4.040	-.23600	.04000	.30800	.00400	.00100	.00000	-4.67000	.00000
1.149	-1.930	-.22600	.05000	.30800	.00100	.00200	.00000	-2.38000	.00000
1.149	.130	-.16400	.05000	.31100	.00800	.00000	.00000	-.15000	.00000
1.149	2.140	-.11100	.06900	.31400	.00000	.00000	.00000	1.99000	.00000
1.149	4.190	-.05700	.06000	.31200	.00000	-.00300	.00000	4.14000	.00000
1.149	6.250	.02500	.05900	.31300	.00000	-.00400	.00000	6.35000	.00000
1.149	8.320	.09200	.05000	.30400	.00700	-.00500	.00000	8.52000	.00000
	GRADIENT	.02890	.00371	.00068	.00015	-.00049	.00000	1.07116	.00000

RUN NO. 2160/ 0 RN/L = 8.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.245	-8.100	-.47600	.05600	.30500	.00000	.00200	.00100	-9.13000	.00000
1.245	-6.060	-.37600	.05000	.30100	.00000	.00200	.00000	-6.87000	.00000
1.245	-4.029	-.27600	.04200	.30500	-.00600	.00100	.00100	-4.64000	.00000
1.245	-1.930	-.20800	.04700	.31000	.00000	.00000	.00100	-2.36000	.00000
1.245	.160	-.15400	.06400	.30700	.00300	-.00300	.00000	-.09000	.00000
1.245	2.150	-.10500	.07000	.30200	.00000	-.00100	.00000	2.01000	.00000
1.245	4.190	-.05100	.07000	.30200	-.00200	-.00100	.00000	4.17000	.00000
1.245	6.230	.01700	.06400	.30000	.00400	-.00500	.00000	6.34000	.00000
1.245	8.290	.10000	.04300	.30000	-.00200	-.00600	.00000	8.51000	.00000
	GRADIENT	.02716	.00386	-.00068	.00060	-.00025	-.00015	1.07182	.00000

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS) (S1X033) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2120/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.602	-8.059	-.05300	.00000	.16800	-.13600	.08600	-.01200	.00000	-8.03000
.602	-6.040	-.05100	.00000	.17300	-.11400	.06300	-.00800	.00000	-6.00000
.602	-4.050	-.06400	.00500	.16400	-.06900	.03800	-.00500	.00000	-4.02000
.602	-1.990	-.07900	.01300	.16900	-.03900	.02000	-.00200	.00000	-1.98000
.602	.050	-.10700	.02300	.16800	-.00200	.00000	.00000	.00000	.06000
.602	2.030	-.11400	.03300	.17000	.02600	-.01700	.00300	.00000	2.03000
.602	4.029	-.11700	.03700	.17300	.04800	-.03300	.00500	.00000	4.02000
.602	6.060	-.10600	.03400	.16300	.07500	-.05200	.00800	.00000	6.05000
.602	8.100	-.12600	.04700	.17100	.10600	-.07000	.01000	.00000	8.08000
	GRADIENT	-.00705	.00417	.00094	.01483	-.00897	.00124	.00000	.99562

RUN NO. 2130/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.949	-8.129	-.10800	.02300	.23500	-.16400	.10000	-.01500	.00000	-8.04900
.949	-6.110	-.10600	.02400	.23300	-.11800	.07200	-.01200	.00000	-6.05000
.949	-4.080	-.11800	.03400	.22800	-.07900	.04600	-.00800	.00000	-4.02900
.949	-1.970	-.12400	.03600	.22600	-.04000	.02000	-.00400	.00000	-1.94000
.949	.080	-.13100	.03700	.23000	-.00700	.00200	.00000	.00000	.09000
.949	2.050	-.14700	.04500	.22300	.03300	-.01800	.00300	.00000	2.02000
.949	4.080	-.16400	.05700	.22900	.07300	-.04100	.00700	.00000	4.02000
.949	6.110	-.18200	.06900	.23000	.10800	-.06600	.01000	.00000	6.05000
.949	8.160	-.18900	.07500	.22700	.14300	-.09100	.01300	.00000	8.11000
	GRADIENT	-.00564	.00269	-.00005	.01853	-.01057	.00182	.00000	.98616

RUN NO. 2140/ 0 RN/L = 7.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.095	-8.160	-.09500	.02100	.30800	-.18900	.11200	-.01800	.00000	-8.04000
1.095	-6.130	-.09800	.02300	.30900	-.13700	.09500	-.01400	.00000	-6.07000
1.095	-4.090	-.10700	.03300	.30200	-.09800	.05400	-.00900	.00000	-4.02000
1.095	-2.000	-.11500	.03500	.30900	-.05100	.02700	-.00500	.00000	-1.95000
1.095	.080	-.13700	.04900	.30500	-.00800	.00300	.00000	.00000	.09000
1.095	2.050	-.15000	.05500	.29800	.03200	-.01800	.00400	.00000	2.02000
1.095	4.080	-.16800	.06500	.30000	.07200	-.04200	.00800	.00000	4.04000
1.095	6.130	-.18600	.07600	.29600	.10700	-.06800	.01200	.00000	6.07000
1.095	8.190	-.20500	.08700	.30900	.15900	-.10000	.01500	.00000	8.11000
	GRADIENT	-.00770	.00412	-.00068	.02075	-.01172	.00211	.00000	.98529

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(TS) (S1X033) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2151/ 0 RN/L = 8.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.243	-8.170	-.13000	.05700	.32200	-.18000	.11300	-.01700	.00000	-8.09000
1.243	-6.140	-.13500	.06400	.30800	-.12700	.08400	-.01200	.00000	-6.11000
1.243	-4.100	-.13700	.07100	.30700	-.09100	.05400	-.00800	.00000	-4.04000
1.243	-2.020	-.15000	.07300	.30900	-.04300	.02700	-.00400	.00000	-2.00000
1.243	.060	-.16300	.08400	.30800	-.00700	.00300	.00000	.00000	.07000
1.243	2.050	-.18900	.09600	.30500	.03300	-.02000	.00300	.00000	2.03000
1.243	4.090	-.19200	.09900	.30400	.06900	-.04600	.00700	.00000	4.08000
1.243	6.130	-.21800	.11000	.31100	.11700	-.07600	.01100	.00000	6.09000
1.243	8.180	-.23700	.12000	.31200	.16100	-.10700	.01500	.00000	8.13900
	GRADILNT	-.00703	.00206	-.00049	.01927	-.01208	.00181	.00000	.99119

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS) (S1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2240/ 0 RN/L = 3.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.607	-8.070	-.30900	.02000	.15100	.00000	.00000	.00280	-8.40000	.00000
.607	-6.070	-.27300	.02500	.15600	.02200	-.00500	.00100	-6.36000	.00000
.607	-4.069	-.20900	.02300	.15400	.00200	.00000	.00100	-4.30000	.00000
.607	-1.990	-.15800	.02400	.15100	.00500	-.00200	.00100	-2.17000	.00000
.607	.060	-.11400	.02700	.15500	.00900	-.00300	.00100	-.08000	.00000
.607	2.040	-.07600	.03400	.16000	.01500	-.00500	.00100	1.94000	.00000
.607	4.060	-.00800	.02700	.15500	.00700	-.00600	.00100	4.02000	.00000
.607	6.110	.02400	.03400	.15900	.00500	-.00600	.00000	6.10000	.00000
.607	8.160	.07800	.03400	.15900	.01100	-.00700	.00000	8.19000	.00000
	GRADIENT	.02385	.00089	.00015	.00099	-.00074	.00000	1.02277	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P08:F3T2S2(TS) (S1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2250/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.803	-8.030	-.37000	.04100	.17600	.00700	.00000	.00100	-8.64000	.00000
.803	-6.080	-.25900	.01000	.17700	-.00200	.00000	.00100	-6.53000	.00000
.803	-4.050	-.20000	.01100	.18200	-.01200	.00200	.00000	-4.41000	.00000
.803	-1.950	-.16800	.02100	.17800	.00100	-.00200	.00000	-2.25000	.00000
.803	.080	-.11900	.02300	.18300	.00300	-.00100	.00000	-.15000	.00000
.803	2.080	-.06200	.02500	.18100	-.00500	-.00100	.00000	1.93000	.00000
.803	4.110	-.01800	.03300	.18300	.01200	-.00600	.00000	4.04000	.00000
.803	6.170	.04300	.03300	.17800	.01000	-.00600	.00000	6.19000	.00000
.803	8.200	.09200	.02900	.17700	.00300	-.00600	.00000	8.27000	.00000
	GRADIENT	.02308	.00236	.00024	.00207	-.00074	.00000	1.03585	.00000

RUN NO. 2260/ 0 RN/L = 5.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.901	-8.110	-.39500	.04000	.20500	-.00700	.00100	.00200	-8.76000	.00000
.901	-6.070	-.31500	.03500	.20100	.00000	.00100	.00100	-6.62000	.00000
.901	-4.060	-.23500	.02700	.20300	-.00700	.00000	.00000	-4.49000	.00000
.901	-1.950	-.18500	.02700	.20600	-.00100	.00000	.00000	-2.31000	.00000
.901	.090	-.14300	.02700	.20600	.00100	-.00100	.00000	-.22000	.00000
.901	2.090	-.07800	.02400	.20300	.00000	-.00100	.00000	1.89000	.00000
.901	4.130	-.02300	.03300	.20100	.00900	-.00500	.00000	4.02000	.00000
.901	6.180	.03800	.03700	.20400	.01000	-.00600	.00000	6.21000	.00000
.901	8.200	.10500	.02500	.20200	.00600	-.00600	.00000	8.32000	.00000
	GRADIENT	.02575	.00044	-.00034	.00162	-.00054	.00000	1.03855	.00000

RUN NO. 2270/ 0 RN/L = 6.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.952	-8.139	-.39500	.04200	.22900	-.01300	.00200	.00100	-8.84000	.00000
.952	-6.120	-.32800	.04100	.23200	-.00500	.00100	.00100	-6.70000	.00000
.952	-4.100	-.25200	.03400	.22900	.00000	.00000	.00000	-4.57000	.00000
.952	-2.000	-.21100	.04400	.23200	.00600	-.00100	.00000	-2.37000	.00000
.952	.040	-.14700	.03700	.23300	.00600	-.00100	.00000	-.24000	.00000
.952	2.050	-.09900	.03700	.23100	.01600	-.00400	.00000	1.81000	.00000
.952	4.080	-.04000	.03400	[illegible]	.00900	-.00300	.00000	3.94000	.00000
.952	6.100	.03600	.03100	.22700	.01700	-.00300	.00000	6.11000	.00000
.952	8.129	.11400	.02400	.22000	.00800	-.00600	.00000	8.28000	.00000
	GRADIENT	.02631	-.00043	-.00044	.00079	-.00044	.00000	1.04087	.00000

FA25. MSFC TWT 652. CONFIG. 01A04P0B1F3T2S2(TS) (S1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2280/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.051	-8.139	-.42200	.02300	.27400	-.00200	.00200	.00100	-9.05000	.00000
1.051	-6.120	-.33000	.01500	.27200	.00300	.00100	.00100	-6.95000	.00000
1.051	-4.090	-.24300	.01100	.26900	-.00100	.00000	.00100	-4.67000	.00000
1.051	-2.010	-.18100	.01600	.27400	.00400	.00000	.00100	-2.45000	.00000
1.051	.060	-.13200	.03300	.27700	-.00100	.00000	.00000	-.24000	.00000
1.051	2.060	-.08800	.04000	.27900	.01000	-.00200	.00000	1.86000	.00000
1.051	4.080	-.02300	.04000	.27900	.00500	-.00300	.00000	4.01000	.00000
1.051	6.120	.05500	.03200	.27800	.00400	-.00500	.00000	6.19000	.00000
1.051	8.160	.12300	.01500	.27300	.00000	-.00800	.00000	8.30000	.00000
	GRADIENT	.02612	.00402	.00123	.00088	-.00039	-.00015	1.05176	.00000

RUN NO. 2290/ 0 RN/L = 7.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.099	-8.150	-.48700	.05400	.30200	.00700	.00000	.00100	-9.14000	.00000
1.099	-6.120	-.37600	.03600	.29800	.00600	.00000	.00100	-6.92000	.00000
1.099	-4.100	-.28700	.03100	.29700	.00900	.00000	.00100	-4.73000	.00000
1.099	-1.990	-.21200	.03300	.30300	.00400	.00000	.00100	-2.46000	.00000
1.099	.060	-.15800	.04700	.30300	.00700	-.00100	.00000	-.26000	.00000
1.099	2.070	-.10500	.05500	.30200	.00300	.00000	.00000	1.87000	.00000
1.099	4.100	-.05100	.05700	.30100	.00000	-.00100	.00000	4.01000	.00000
1.099	6.160	.02800	.04900	.30000	-.00300	-.00300	.00000	6.21000	.00000
1.099	8.200	.10500	.03000	.29400	-.00300	-.00600	.00000	8.34000	.00000
	GRADIENT	.02832	.00362	.00035	-.00093	-.00010	-.00015	1.06602	.00000

RUN NO. 2300/ 0 RN/L = 7.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.150	-8.080	-.47600	.05900	.32100	.00000	.00300	.00100	-9.06000	.00000
1.150	-6.040	-.38300	.05300	.32000	.00500	.00300	.00000	-6.82000	.00000
1.150	-3.990	-.30300	.05400	.32300	.00000	.00100	.00100	-4.60000	.00000
1.150	-2.010	-.23000	.05800	.32800	.00300	.00100	.00100	-2.44000	.00000
1.150	.080	-.16000	.06300	.32500	-.00200	.00100	.00000	-.19000	.00000
1.150	2.130	-.11100	.07100	.32400	.00300	-.00200	.00100	1.98000	.00000
1.150	4.180	-.04900	.06900	.32000	.00200	-.00200	.00000	4.14000	.00000
1.150	6.240	.02400	.06200	.31500	.00300	-.00400	.00000	6.34000	.00000
1.150	8.290	.10000	.04600	.31500	.00000	-.00500	.00000	8.48000	.00000
	GRADIENT	.03061	.00210	-.00049	.00019	-.00044	-.00010	1.06930	.00000

ORIGINAL PAGE IS OF POOR QUALITY

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS) (S1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2310/ 0 RN/L = 8.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.248	-8.100	-.47400	.06000	.30500	.00400	.00200	.00100	-9.10000	.00000
1.248	-6.040	-.37600	.05200	.30600	.00300	.00100	.00000	-6.84000	.00000
1.248	-4.029	-.28300	.04600	.31000	-.00200	.00100	.00100	-4.64000	.00000
1.248	-1.970	-.21400	.05200	.31300	-.00300	.00100	.00100	-2.39000	.00000
1.248	.070	-.14600	.05700	.31000	.00000	-.00100	.00000	-.18000	.00000
1.248	2.140	-.09600	.06500	.30800	-.00700	.00000	.00000	2.01000	.00000
1.248	4.170	-.04300	.06700	.30000	-.00700	.00000	.00000	4.16000	.00000
1.248	6.230	.02700	.05700	.30100	-.00200	-.00300	.00000	6.34000	.00000
1.248	8.270	.09600	.04200	.29600	.00100	-.00600	.00000	8.47000	.00000
	GRADIENT	.02906	.00268	-.00122	-.00068	-.00015	-.00015	1.07276	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS) (S1X035) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2350/ 0 RN/L = 3.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.606	-8.059	-.06400	.00000	.17800	-.13500	.08500	-.01200	.00000	-8.03000
.606	-6.030	-.04400	-.00300	.17000	-.11800	.06700	-.00900	.00000	-5.99000
.606	-4.029	-.07400	.01100	.17000	-.06800	.04000	-.00600	.00000	-4.01000
.606	-2.010	-.08400	.01300	.16500	-.03000	.01900	-.00300	.00000	-2.01000
.606	.000	-.09500	.01200	.17100	.01200	-.00100	.00000	.00000	-.02000
.606	2.040	-.10100	.02400	.16500	.03400	-.01500	.00200	.00000	2.02000
.606	4.029	-.11200	.03400	.17400	.05300	-.03700	.00500	.00000	4.02000
.606	6.050	-.14100	.05000	.17400	.09600	-.05900	.00900	.00000	6.04000
.606	8.080	-.14500	.05300	.18600	.12700	-.08100	.01100	.00000	8.04900
	GRADIENT	-.00461	.00283	.00034	.01518	-.00947	.00134	.00000	.99623

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(TS) (S1X035) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2340/ 0 RN/L = 6.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
.952	-8.110	-.09500	.01700	.23600	-.16600	.10400	-.01700	.00000	-8.04000
.952	6.070	-.12200	.03000	.23000	-.12000	.07600	-.01300	.00000	-6.03000
.952	-4.060	-.12800	.03400	.22600	-.08600	.05000	-.00900	.00000	-4.01000
.952	-2.040	-.12100	.02900	.22800	-.05200	.02500	-.00500	.00000	-1.97000
.952	.000	-.12600	.02800	.22900	-.01000	.00300	.00000	.00000	.01000
.952	2.070	-.14900	.04500	.23100	.03700	-.01800	.00300	.00000	2.02000
.952	4.060	-.16400	.05500	.23100	.07300	-.04000	.00700	.00000	3.99000
.952	6.110	-.19300	.07400	.23500	.11500	-.06600	.01000	.00000	6.03000
.952	8.150	-.19300	.07400	.23600	.14700	-.09100	.01300	.00000	8.07000
	GRADIENT	-.00492	.00285	.00064	.02000	-.01096	.00197	.00000	.98229

RUN NO. 2330/ 0 RN/L = 7.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.098	-8.139	-.10500	.02500	.30900	-.18300	.11600	-.01900	.00000	-8.07000
1.098	-6.100	-.10000	.02300	.30200	-.14300	.08400	-.01400	.00000	-6.01000
1.098	-4.100	-.12500	.04200	.30800	-.09500	.05500	-.00900	.00000	-4.02900
1.098	-2.040	-.12200	.03700	.31000	-.05000	.02800	-.00500	.00000	-2.00000
1.098	.000	-.13800	.04500	.30700	-.00900	.00400	.00000	.00000	.01000
1.098	2.050	-.14800	.04900	.30100	.03400	-.01900	.00400	.00000	2.02000
1.098	4.069	-.16200	.05800	.30100	.07000	-.04300	.00800	.00000	4.02000
1.098	6.130	-.19700	.07900	.30100	.11700	-.07300	.01200	.00000	6.07000
1.098	8.200	-.20600	.08300	.30500	.15500	-.10500	.01600	.00000	8.16000
	GRADIENT	-.00489	.00215	-.00113	.02027	-.01190	.00211	.00000	.96492

RUN NO. 2320/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
1.247	-8.160	-.12800	.05400	.31200	-.17100	.11200	-.01700	.00000	-8.12000
1.247	-6.100	-.12700	.05700	.31000	-.12700	.08200	-.01200	.00000	-6.06000
1.247	-4.069	-.14400	.07000	.30500	-.08600	.05500	-.00800	.00000	-4.05000
1.247	-2.040	-.14000	.06800	.30400	-.04300	.02700	-.00400	.00000	-2.02000
1.247	.000	-.15900	.07700	.30400	-.00700	.00300	.00000	.00000	.01000
1.247	2.050	-.19100	.09400	.30700	.03300	-.02100	.00300	.00000	2.04000
1.247	4.069	-.20100	.10200	.30800	.06900	-.04500	.00700	.00000	4.05000
1.247	6.130	-.21800	.10500	.30900	.11200	-.07500	.01200	.00000	6.11000
1.247	8.180	-.22200	.10800	.31400	.14600	-.10400	.01500	.00000	8.18000
	GRADIENT	-.00811	.00442	.00044	.01895	-.01227	.00182	.00000	.99479

FA25, MSFC TWT 652, CONFIG. 01ATPTT2 (T) (S1X036) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
CB-ELV = 10.000 STINGS = 2.000

RUN NO. 2370/ 0 RN/L = 26.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
4.960	-8.020	-.13000	.00900	.10600	.01000	-.00300	.00000	-8.09000	.00000
4.960	-6.020	-.10600	.01000	.10000	.00000	.00000	.00000	-6.07000	.00000
4.960	-3.990	-.08900	.01200	.10300	-.00300	.00000	.00000	-4.02900	.00000
4.960	-2.010	-.05400	.01200	.09900	-.00500	.00000	.00000	-2.01000	.00000
4.960	.020	-.03600	.01800	.09500	.00000	.00000	.00000	.03000	.00000
4.960	2.010	-.01100	.01800	.09400	-.00600	.00000	.00000	2.03000	.00000
4.960	4.029	-.00100	.02300	.09000	-.00100	.00000	.00000	4.06900	.00000
4.960	6.020	.01900	.02800	.09500	-.00100	-.00100	.00000	6.08000	.00000
4.960	8.059	.04900	.02500	.09800	-.00600	.00000	.00000	8.13900	.00000
	GRADIENT	.01091	.00140	-.00155	.00015	.00000	.00000	1.00887	.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTT2 (T) (S1X037) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
CB-ELV = 10.000 STINGS = 2.000

RUN NO. 2360/ 0 RN/L = 26.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	CNTS	CLMTS	CATS	CYTS	CYNTS	CBLTS	ALPHAT	BETAT
4.960	-8.010	-.01800	.00700	.10400	-.11700	.08500	-.00100	.00000	-8.02000
4.960	-5.980	-.01200	.00400	.10300	-.08400	.06100	.00000	.00000	-5.99000
4.960	-4.000	-.01300	.00600	.09600	-.05000	.04200	.00000	.00000	-4.01000
4.960	-1.990	-.02200	.00600	.09900	-.03000	.02300	.00000	.00000	-1.99000
4.960	.040	-.02900	.01100	.09600	-.00700	.00300	.00000	.00000	.04000
4.960	2.030	-.04000	.01700	.09700	.02600	-.02000	.00000	.00000	2.03000
4.960	4.060	-.05800	.02900	.09900	.05300	-.03900	.00000	.00000	4.06000
4.960	6.050	-.07400	.04000	.10700	.07900	-.06000	.00100	.00000	6.06000
4.960	8.120	-.09400	.04500	.09400	.11500	-.09500	.00100	.00000	8.12900
	GRADIENT	-.00536	.00283	.00020	.01301	-.01318	.00000	.00000	1.00099

FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1 (0) (T1X001) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMPP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 130/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.598	-8.020	-7.98000	.00000
.598	-6.000	-5.98000	.00000
.598	-4.020	-4.02000	.00000
.598	-1.980	-2.00000	.00000
.599	.050	.00000	.00000
.598	2.130	2.06000	.00000
.598	4.110	4.02000	.00000
.599	6.140	6.02000	.00000
.598	8.160	8.02000	.00000
	GRADIENT	.99871	.00000

RUN NO. 120/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.796	-8.070	-8.02000	.00000
.795	-6.070	-6.04000	.00000
.796	-4.010	-4.02000	.00000
.796	-1.960	-2.00000	.00000
.796	.100	.02000	.00000
.795	2.180	2.06000	.00000
.796	4.190	4.04000	.00000
.796	6.200	6.02000	.00000
.796	8.230	8.02000	.00000
	GRADIENT	.98247	.00000

RUN NO. 110/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.896	-8.090	-8.02000	.00000
.896	-6.040	-6.00000	.00000
.895	-4.020	-4.02000	.00000
.896	-1.980	-2.02000	.00000
.896	.080	.00000	.00000
.896	2.150	2.02000	.00000
.895	4.180	4.02000	.00000
.896	6.190	6.00000	.00000
.896	8.240	8.02000	.00000
	GRADIENT	.99003	.00000

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FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1 (0)

(T1X001) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 140/ 0 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.944	-8.100	-8.02000	.00000
.944	-6.070	-6.02000	.00000
.944	-4.029	-4.02000	.00000
.944	-1.970	-2.00000	.00000
.944	.100	.02000	.00000
.944	2.180	2.06000	.00000
.944	4.180	4.02000	.00000
.944	6.210	6.02000	.00000
.944	8.240	8.02000	.00000
	GRADIENT	.97919	.00000

RUN NO. 150/ 0 RN/L = 6.81 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.035	-8.080	-8.00000	.00000
1.035	-6.050	-6.00000	.00000
1.035	-4.020	-4.02000	.00000
1.035	-1.960	-2.00000	.00000
1.035	.080	.00000	.00000
1.035	2.190	2.06000	.00000
1.035	4.210	4.04000	.00000
1.035	6.220	6.02000	.00000
1.035	8.250	8.02000	.00000
	GRADIENT	.97913	.00000

RUN NO. 160/ 0 RN/L = 7.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.089	-8.090	-8.00000	.00000
1.089	-6.050	-6.00000	.00000
1.089	-4.020	-4.02000	.00000
1.089	-1.980	-2.02000	.00000
1.089	.110	.02000	.00000
1.089	2.200	2.06000	.00000
1.089	4.230	4.04000	.00000
1.089	6.250	6.02000	.00000
1.089	8.290	8.02000	.00000
	GRADIENT	.97679	.00000

FA25, MSFC TWT 652, CONFIG. 02ATPTTIS1 (0) (T1X001) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 170/ 0 RN/L = 7.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.138	-8.030	-8.00000	.00000
1.138	-6.060	-6.02000	.00000
1.138	-4.020	-4.02000	.00000
1.138	-1.950	-2.00000	.00000
1.138	.110	.02000	.00000
1.138	2.200	2.06000	.00000
1.138	4.230	4.04000	.00000
1.138	6.250	6.02000	.00000
1.138	8.300	8.02000	.00000
	GRADIENT	.97724	.00000

RUN NO. 180/ 0 RN/L = 8.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.242	-8.070	-7.98000	.00000
1.242	-6.050	-6.00000	.00000
1.242	-4.029	-4.02000	.00000
1.242	-1.960	-2.00000	.00000
1.242	.080	.00000	.00000
1.242	2.170	2.04000	.00000
1.242	4.200	4.02000	.00000
1.242	6.240	6.02000	.00000
1.242	8.300	8.04000	.00000
	GRADIENT	.97727	.00000

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FA25, MSFC TWT 652, CONFIG. O2ATPTTISI (O) (T1X002) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 190/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.601	-8.040	.00000	-7.98000
.601	-6.030	.00000	-5.98000
.601	-4.029	.00000	-4.00000
.601	-2.020	.00000	-2.00000
.601	.040	.00000	.04000
.601	2.030	.00000	2.02000
.601	4.050	.00000	4.02000
.601	6.090	.00000	6.04000
.601	8.120	.00000	8.05900
	GRADIENT	.00000	.99267

RUN NO. 200/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.798	-8.070	.00000	-7.98000
.798	-6.050	.00000	-5.98000
.799	-4.040	.00000	-4.00000
.798	-2.020	.00000	-2.00000
.799	.020	.00000	.02000
798	2.040	.00000	2.02000
.798	4.090	.00000	4.04000
.798	6.100	.00000	6.04000
.798	8.170	.00000	8.08000
	GRADIENT	.00000	.99015

RUN NO. 210/ 0 RN/L = 5.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.896	-8.090	.00000	-7.98000
.896	-6.040	.00000	-5.98000
.896	-4.030	.00000	-3.98000
.896	-2.010	.00000	-1.98000
.895	.070	.00000	.06000
.896	2.070	.00000	2.04000
.896	4.069	.00000	4.02000
.896	6.120	.00000	6.04000
.896	8.150	.00000	8.04000
	GRADIENT	.00000	.99736

FA25, MSFC TWT 652, CONFIG. 02ATPTTISI (0) (T1X002) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 220/ 0 RN/L = 6.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.949	-8.120	.00000	-8.00000
.949	-6.070	.00000	-5.98000
.949	-4.050	.00000	-4.00000
.949	-2.010	.00000	-1.98000
.949	.060	.00000	.06000
.949	2.070	.00000	2.04000
.949	4.100	.00000	4.04000
.949	6.130	.00000	6.04000
.949	8.160	.00000	8.04000
	GRADIENT	.00000	.98529

RUN NO. 230/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.047	-8.150	.00000	-8.00000
1.047	-6.080	.00000	-5.98000
1.047	-4.069	.00000	-4.00000
1.047	-2.010	.00000	-1.98000
1.047	.060	.00000	.06000
1.047	2.090	.00000	2.06000
1.047	4.110	.00000	4.04000
1.047	6.150	.00000	6.04000
1.047	8.190	.00000	8.04000
	GRADIENT	.00000	.98348

RUN NO. 240/ 0 RN/L = 7.15 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.095	-8.160	.00000	-8.00000
1.095	-6.070	.00000	-5.96000
1.095	-4.069	.00000	-4.00000
1.095	-2.040	.00000	-2.00000
1.095	.020	.00000	.02000
1.095	2.050	.00000	2.02000
1.095	4.069	.00000	4.00000
1.095	6.130	.00000	6.02000
1.095	8.180	.00000	8.02000
	GRADIENT	.00000	.96301

FA25, MSFC TWT 652, CONFIG. 02ATPTT1S1 (0) (T1X002) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 250/ 0 RN/L = 7.52 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.144	-8.139	.00000	-7.98000
1.144	-6.090	.00000	-5.98000
1.144	-4.069	.00000	-4.00000
1.144	-2.030	.00000	-2.00000
1.144	.020	.00000	.02000
1.144	2.060	.00000	2.02000
1.144	4.100	.00000	4.02000
1.144	6.140	.00000	6.02000
1.144	8.180	.00000	8.02000
	GRADIENT	.00000	.98199

RUN NO. 260/ 0 RN/L = 8.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.242	-8.139	.00000	-7.98000
1.242	-6.070	.00000	-5.98000
1.242	-4.069	.00000	-4.00000
1.242	-2.040	.00000	-2.00000
1.242	.040	.00000	.04000
1.242	2.060	.00000	2.02000
1.242	4.090	.00000	4.02000
1.242	6.130	.00000	6.02000
1.242	8.180	.00000	8.02000
	GRADIENT	.00000	.98246

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FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0)

(T1X003) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 350/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.600	-8.059	-8.02000	.00000
.600	-6.000	-5.98000	.00000
.600	-4.000	-4.00000	.00000
.600	-1.960	-1.98000	.00000
.600	.100	.06000	.00000
.600	2.110	2.04000	.00000
.600	4.130	4.04000	.00000
.600	6.150	6.04000	.00000
.600	8.170	8.04000	.00000
	GRADIENT	.98869	.00000

RUN NO. 360/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.798	-8.080	-8.02000	.00000
.798	-5.990	-5.96000	.00000
.798	-4.000	-4.00000	.00000
.798	-1.940	-1.98000	.00000
.798	.110	.04000	.00000
.798	2.130	2.02000	.00000
.798	4.160	4.02000	.00000
.798	6.240	6.06000	.00000
.798	8.260	8.05900	.00000
	GRADIENT	.98283	.00000

RUN NO. 370/ 0 RN/L = 5.53 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.889	-8.080	-8.00000	.00000
.889	-5.980	-5.94000	.00000
.889	-3.990	-3.98000	.00000
.889	-1.950	-1.98000	.00000
.889	.140	.06000	.00000
.889	2.170	2.04000	.00000
.889	4.200	4.04000	.00000
.889	6.230	6.04000	.00000
.889	8.270	8.05900	.00000
	GRADIENT	.97653	.00000

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REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 380/ 0 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.944	-8.110	-8.02000	.00000
.944	-6.010	-5.96000	.00000
.944	-4.010	-4.00000	.00000
.944	-1.970	-2.00000	.00000
.944	.110	.04000	.00000
.944	2.140	2.02000	.00000
.944	4.180	4.02000	.00000
.944	6.250	6.06000	.00000
.944	8.270	8.05900	.00000
	GRADIENT	.97902	.00000

RUN NO. 390/ 0 RN/L = 6.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.046	-8.070	-7.98000	.00000
1.046	-5.990	-5.94000	.00000
1.046	-3.980	-3.98000	.00000
1.046	-1.940	-1.98000	.00000
1.046	.150	.06000	.00000
1.046	2.170	2.04000	.00000
1.0[illegible]	4.190	4.02000	.00000
1.0[illegible]	6.250	6.04000	.00000
1.046	8.260	8.02000	.00000
	GRADIENT	.97897	.00000

RUN NO. 400/ 0 RN/L = 7.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.094	-8.070	-7.98000	.00000
1.094	-6.010	-5.98000	.00000
1.094	-3.990	-3.98000	.00000
1.094	-1.940	-1.98000	.00000
1.094	.130	.04000	.00000
1.094	2.160	2.02000	.00000
1.094	4.200	4.02000	.00000
1.094	6.260	6.04000	.00000
1.094	8.300	8.04000	.00000
	GRADIENT	.97658	.00000

REFERENCE DATA

SREF = 2690.0000 SQ.FT.
LREF = 1290.3000 INCHES
BREF = 1290.3000 INCHES
SCALE = .0040

XMRP = 976.0000 IN. XT
YMRP = .0000 IN. YT
ZMRP = 400.0000 IN. ZT

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 410/ 0 RN/L = 7.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.144	-8.080	-8.00000	.00000
1.144	-6.020	-5.98000	.00000
1.144	-3.980	-3.98000	.00000
1.144	-1.920	-1.96000	.00000
1.144	.170	.08000	.00000
1.144	2.200	2.06000	.00000
1.144	4.240	4.06000	.00000
1.144	6.280	6.06000	.00000
1.144	8.330	8.05900	.00000
	GRADIENT	.97763	.00000

RUN NO. 420/ 0 RN/L = 8.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.241	-9.090	-8.00000	.00000
1.241	-6.010	-5.96000	.00000
1.241	-3.990	-3.98000	.00000
1.241	-1.940	-1.98000	.00000
1.241	120	.04000	.00000
1.241	2.150	2.02000	.00000
1.241	4.190	4.02000	.00000
1.241	6.250	6.04000	.00000
1.241	8.310	8.05900	.00000
	GRADIENT	.97800	.00000

FA25, MSFC TWT 652, CONFIG. 02A0P0F1F2T1S1 (0) (T1X004) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 340/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.600	-8.040	.00000	-7.98000
.600	-6.030	.00000	-5.98000
.600	-4.010	.00000	-3.98000
.600	-1.970	.00000	-1.96000
.600	.060	.00000	.06000
.600	2.080	.00000	2.06000
.600	4.069	.00000	4.04000
.600	6.080	.00000	6.04000
.600	8.100	.00000	8.04000
	GRADIENT	.00000	.99267

RUN NO. 330/ 0 RN/L = 4.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.800	-8.070	.00000	-7.98000
.800	-6.010	.00000	-5.94000
.800	-4.029	.00000	-3.98000
.800	-2.000	.00000	-1.98000
.800	.060	.00000	.06000
.800	2.060	.00000	2.04000
.800	4.060	.00000	4.02000
.800	6.110	.00000	6.04000
.800	8.129	.00000	8.04000
	GRADIENT	.00000	.99923

RUN NO. 320/ 0 RN/L = 5.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.897	-8.070	.00000	-7.95000
.897	-6.040	.00000	-5.95000
.897	-4.050	.00000	-4.00000
.897	-2.010	.00000	-1.98000
.897	.040	.00000	.04000
.897	2.070	.00000	2.04000
.897	4.080	.00000	4.02000
.897	6.100	.00000	6.02000
.897	8.150	.00000	8.04000
	GRADIENT	.00000	.99624

FA25. MSFC TWT 652. CONFIG. 02A0P0F1F2T1S1 (0) (T1X004) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 310/ 0 RN/L = 6.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.947	-8.100	.00000	-7.98000
.947	-6.050	.00000	-5.96000
.947	-4.080	.00000	-4.02000
.947	-2.030	.00000	-2.00000
.947	.020	.00000	.02000
.947	2.050	.00000	2.02000
.947	4.100	.00000	4.04000
.947	6.150	.00000	6.06000
.947	8.160	.00000	8.04000
	GRADIENT	.00000	.98532

RUN NO. 300/ 0 RN/L = 6.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.047	-8.129	.00000	-7.98000
1.047	-6.070	.00000	-5.96000
1.047	-4.069	.00000	-4.00000
1.047	-2.030	.00000	-2.00000
1.047	.040	.00000	.04000
1.047	2.090	.00000	2.06000
1.047	4.110	.00000	4.04000
1.047	6.170	.00000	6.06000
1.047	8.190	.00000	8.04000
	GRADIENT	.00000	.98350

RUN NO. 290/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.099	-8.139	.00000	-7.98000
1.099	-6.070	.00000	-5.96000
1.099	-4.050	.00000	-3.98000
1.099	-2.020	.00000	-1.98000
1.099	.040	.00000	.04000
1.099	2.070	.00000	2.04000
1.099	4.090	.00000	4.02000
1.099	6.130	.00000	6.02000
1.099	8.170	.00000	8.02000
	GRADIENT	.00000	.98282

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FA25, MSFC TWT 652, CONFIG. O2A0P0F1F2T1S1 (C) (T1X004) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 280/ 0 RN/L = 7.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.147	-8.139	.00000	-7.98000
1.147	-6.080	.00000	-5.96000
1.147	-4.080	.00000	-4.00000
1.147	-2.020	.00000	-1.98000
1.147	.040	.00000	.04000
1.147	2.070	.00000	2.04000
1.147	4.090	.00000	4.02000
1.147	6.150	.00000	6.04000
1.147	8.200	.00000	8.04000
	GRADIENT	.00000	.98189

RUN NO. 270/ 0 RN/L = 8.25 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.244	-8.139	.00000	-7.98000
1.244	-6.070	.00000	-5.96000
1.244	-4.069	.00000	-4.00000
1.244	-2.040	.00000	-2.00000
1.244	.040	.00000	.04000
1.244	2.070	.00000	2.04000
1.244	4.090	.00000	4.02000
1.244	6.130	.00000	6.02000
1.244	8.200	.00000	8.04000
	GRADIENT	.00000	.98296

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 503/ 0 RN/L = 2.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.600	-8.059	-8.02000	.00000
.600	-5.980	-5.96000	.00000
.600	-3.990	-4.00000	.00000
.600	-1.970	-2.00000	.00000
.600	.090	.04000	.00000
.600	2.110	2.04000	.00000
.600	4.120	4.02000	.00000
.600	6.160	6.04000	.00000
.600	8.180	8.04000	.00000
	GRADIENT	.98917	.00000

RUN NO. 491/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.797	-8.020	-7.96000	.00000
.797	-5.960	-5.94000	.00000
.797	-3.950	-3.96000	.00000
.797	-1.940	-1.98000	.00000
.797	.140	.06000	.00000
.797	2.160	2.04000	.00000
.797	4.190	4.04000	.00000
.797	6.220	6.04000	.00000
.797	8.240	8.04000	.00000
	GRADIENT	.98233	.00000

RUN NO. 481/ 0 RN/L = 5.49 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.897	-8.040	-7.96000	.00000
.897	-5.960	-5.92000	.00000
.897	-3.920	-3.92000	.00000
.897	-1.920	-1.96000	.00000
.897	.160	.08000	.00000
.897	2.180	2.06000	.00000
.897	4.210	4.06000	.00000
.897	6.270	6.08000	.00000
.897	8.290	8.06000	.00000
	GRADIENT	.98134	.00000

FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (0) (T1X0C5) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 471/ 0 RN/L = 5.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.947	-8.059	-7.99000	.00000
.947	-5.990	-5.94000	.00000
.947	-3.990	-3.98000	.00000
.947	-1.950	-1.98000	.00000
.947	.130	.06000	.00000
.947	2.200	2.08000	.00000
.947	4.260	4.10000	.00000
.947	6.310	6.12000	.00000
.947	8.330	8.12000	.00000
	GRADIENT	.97918	.00000

RUN NO. 461/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.046	-8.030	-7.94000	.00000
1.046	-5.920	-5.89000	.00000
1.046	-3.900	-3.90000	.00000
1.046	-1.860	-1.90000	.00000
1.046	.210	.12000	.00000
1.046	2.230	2.10000	.00000
1.046	4.250	4.08000	.00000
1.046	6.310	6.10000	.00000
1.046	8.320	8.08000	.00000
	GRADIENT	.97891	.00000

RUN NO. 451/ 0 RN/L = 7.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.097	-8.090	-6 00000	.00000
1.097	-5.990	-5.94000	.00000
1.097	-3.930	-3.92000	.00000
1.097	-1.880	-1.92000	.00000
1.097	.210	.12000	.00000
1.097	2.220	2.08000	.00000
1.097	4.260	4.08000	.00000
1.097	6.330	6.10000	.00000
1.097	8.320	8.05900	.00000
	GRADIENT	.97656	.00000

DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 03A0P0F1F2T1S1 (0)

(T1X005) (31 OCT 78)

REFERENCE DATA

SREF = 2590.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 441/ 0 RN/L = 7.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.145	-8.040	-7.96000	.00000
1.145	-5.980	-5.94000	.00000
1.145	-3.980	-3.98000	.00000
1.145	-1.910	-1.96000	.00000
1.145	.150	.06000	.00000
1.145	2.180	2.04000	.00000
1.145	4.270	4.08000	.00000
1.145	6.350	6.12000	.00000
1.145	8.390	8.12000	.00000
	GRADIENT	.97717	.00000

RUN NO. 431/ 0 RN/L = 8.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.245	-8.040	-7.96000	.00000
1.245	-5.940	-5.98000	.00000
1.245	-3.920	-3.92000	.00000
1.245	-1.880	-1.92000	.00000
1.245	.210	.12000	.00000
1.245	2.210	2.08000	.00000
1.245	4.[illegible]	4.08000	.00000
1.245	[illegible]	6.10000	.00000
1.245	6.3[illegible]	8.08000	.00000
	GRADIE[illegible]	.97799	.00000

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FA25, MSFC TWT 652, CONFIG. C1A01P0T1S1 (0) (T!X006) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 720/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.897	-8.020	-7.94000	.00000
.897	-5.990	-5.94000	.00000
.897	-3.990	-3.98000	.00000
.897	-1.950	-1.98000	.00000
.897	.140	.06000	.00000
.897	2.160	2.04000	.00000
.897	4.200	4.04000	.00000
.897	6.250	6.06000	.00000
.897	8.270	9.05900	.00000
	GRADIENT	.97901	.00000

RUN NO. 710/ 0 RN/L = 8.40 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.243	-8.049	-7.96000	.00000
1.243	-6.010	-5.96000	.00000
1.243	-3.980	-3.98000	.00000
1.243	-1.920	-1.96000	.00000
1.243	.140	.06000	.00000
1.243	2.190	2.06000	.00000
1.243	4.220	4.04000	.00000
1.243	6.280	6.06000	.00000
1.243	8.290	8.04000	.00000
	GRADIENT	.97806	.00000

FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1 (0) (T1X007) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 5.000

RUN NO. 800/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.600	-7.980	.00000	-7.92000
.600	-5.950	.00000	-5.92000
.600	-4.010	.00000	-3.98000
.600	-1.980	.00000	-1.96000
.600	.060	.00000	.06000
.600	2.060	.00000	2.04000
.600	4.069	.00000	4.04000
.600	6.080	.00000	6.04000
.600	8.100	.00000	8.04000
	GRADIENT	.00000	.99218

RUN NO. 790/ 0 RN/L = 4.75 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.799	-8.010	.00000	-7.92000
.799	-6.010	.00000	-5.94000
.799	-4.020	.00000	-3.98000
.799	-1.990	.00000	-1.96000
.799	.060	.00000	.06000
.799	2.060	.00000	2.04000
.799	4.090	.00000	4.04000
.799	6.110	.00000	6.04000
.799	8.150	.00000	8.05900
	GRADIENT	.00000	.98914

RUN NO. 730/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.898	-8.070	.00000	-7.96000
.898	-6.040	.00000	-5.96000
.898	-4.029	.00000	-3.98000
.898	-2.010	.00000	-1.98000
.898	.060	.00000	.06000
.898	2.050	.00000	2.02000
.898	4.090	.00000	4.04000
.898	6.160	.00000	6.08000
.898	8.170	.00000	8.05900
	GRADIENT	.00000	.98729

FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1 (0) (T1X007) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 780/ 0 RN/L = 6.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.948	-8.070	.00000	-7.94000
.948	-6.050	.00000	-5.96000
.948	-4.040	.00000	-3.98000
.948	-2.010	.00000	-1.98000
.948	.060	.00000	.06000
.948	2.110	.00000	2.08000
.948	4.120	.00000	4.06000
.948	6.150	.00000	6.06000
.948	8.180	.00000	8.05900
	GRADIENT	.00000	.98532

RUN NO. 770/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.049	[illegible].110	.00000	-7.96000
1.0[illegible]	.050	.00000	-5.94000
1.0[illegible]	-4.029	.00000	-3.96000
1.04[illegible]	-1.980	.00000	-1.94000
1.049	.100	.00000	.10000
1.049	2.090	.00000	2.06000
1.049	4.120	.00000	4.06000
1.049	6.160	.00000	6.06000
1.049	8.230	.00000	8.08000
	GRADIENT	.00000	.98389

RUN NO. 760/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.097	-8.139	.00000	-7.98000
1.097	-6.080	.00000	-5.96000
1.097	-4.040	.00000	-3.96000
1.097	-1.980	.00000	-1.94000
1.097	.080	.00000	.08000
1.097	2.090	.00000	2.06000
1.097	4.120	.00000	4.06000
1.097	6.170	.00000	6.06000
1.097	8.240	.00000	8.08000
	GRADIENT	.00000	.98283

FA25, MSFC TWT 652, CONFIG. 01A01P0T1S1 (0) (T1X007) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
L = 1290.3000 INCHES YMRP = .0000 IN. YT
BK = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 750/ 0 RN/L = 7.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.147	-8.110	.00000	-7.94000
1.147	-6.060	.00000	-5.94000
1.147	-4.060	.00000	-3.98000
1.147	-2.020	.00000	-1.98000
1.147	.060	.00000	.06000
1.147	2.070	.00000	2.04000
1.147	4.090	.00000	4.02000
1.147	6.150	.00000	6.04000
1.147	8.220	.00000	8.05900
	GRADIENT	.00000	.98185

RUN NO. 740/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.243	-8.120	.00000	-7.95000
1.243	-6.030	.00000	-5.92000
1.243	-4.029	.00000	-3.96000
1.243	-2.000	.00000	-1.96000
1.243	.080	.00000	.08000
1.243	2.090	.00000	2.06000
1.243	4.130	.00000	4.06000
1.243	6.170	.00000	6.06000
1.243	8.240	.00000	8.08000
	GRADIENT	.00000	.98295

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FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1 (0) (T1X008) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 820/ 0 RN/L = 5.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.899	-8.040	-7.96000	.00000
.899	-6.000	-5.96000	.00000
.899	-4.010	-4.00000	.00000
.899	-1.950	-1.98000	.00000
.899	.120	.04000	.00000
.899	2.140	2.02000	.00000
.899	4.180	4.02000	.00000
.899	6.200	6.02000	.00000
.899	8.230	8.02000	.00000
	GRADIENT	.97899	.00000

RUN NO. 810/ 0 RN/L = 8.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.242	-8.070	-7.98000	.00000
1.242	-5.990	-5.94000	.00000
1.242	-3.980	-3.98000	.00000
1.242	-1.940	-1.98000	.00000
1.242	.130	.04000	.00000
1.242	2.170	2.04000	.00000
1.242	4.220	4.04000	.00000
1.242	6.260	6.04000	.00000
1.242	8.310	8.05900	.00000
	GRADIENT	.97806	.00000

FA25, MSFC TWT 652, CONFIG. 01A02P0T1S1 (0) (T1X009) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 830/ 0 RN/L = 5.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.897	-8.110	.00000	-8.00000
.897	-6.060	.00000	-5.98000
.897	-4.069	.00000	-4.02000
.897	-2.010	.00000	-1.98000
.897	.040	.00000	.04000
.897	2.050	.00000	2.02000
.897	4.069	.00000	4.02000
.897	6.120	.00000	6.04000
.897	8.120	.00000	8.02000
	GRADIENT	.00000	.98741

RUN NO. 840/ 0 RN/L = 8.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.244	-8.139	.00000	-7.98000
1.244	-6.060	.00000	-5.94000
1.244	-4.080	.00000	-4.00000
1.244	-2.020	.00000	-1.98000
1.244	.040	.00000	.04000
1.244	2.070	.00000	2.04000
1.244	4.110	.00000	4.04000
1.244	6.150	.00000	6.04000
1.244	8.220	.00000	8.05900
	GRADIENT	.00000	.98192

FA25, MSFC TWT 652, CONFIG. 01A03P0T1S1 (0) (T1X01D) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 880/ 0 RN/L = 5.41 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.899	-8.049	-7.98000	.00000
.899	-6.000	-5.98000	.00000
.899	-4.000	-4.00000	.00000
.899	-1.940	-1.98000	.00000
.899	.130	.04000	.00000
.899	2.170	2.04000	.00000
.899	4.100	4.02000	.00000
.899	6.210	6.02000	.00000
.899	8.280	8.05900	.00000
	GRADIENT	.97996	.00000

RUN NO. 890/ 0 RN/L = 8.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.244	-8.059	-7.98000	.00000
1.244	-6.020	-5.98000	.00000
1.244	-4.020	-4.02000	.00000
1.244	-1.970	-2.02000	.00000
1.244	.110	.02000	.00000
1.244	2.160	2.02000	.00000
1.244	4.180	4.00000	.00000
1.244	6.240	6.02000	.00000
1.244	8.280	8.02000	.00000
	GRADIENT	.97808	.00000

FA25, MSFC TWT 652, CONFIG. 01A03P0T1S1 (0) (T1X011) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 910/ 0 RN/L = 5.57 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.899	-8.090	.00000	-7.98000
.899	-6.060	.00000	-5.98000
.899	-4.080	.00000	-4.02000
.899	-2.010	.00000	-1.98000
.899	.040	.00000	.04000
.899	2.050	.00000	2.02000
.899	4.069	.00000	4.02000
.899	6.100	.00000	6.02000
.899	8.120	.00000	8.02000
	GRADIENT	.00000	.98634

RUN NO. 900/ 0 RN/L = 8.18 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.245	-8.139	.00000	-7.98000
1.245	-6.070	.00000	-5.96000
1.245	-4.080	.00000	-4.00000
1.245	-2.040	.00000	-2.00000
1.245	.040	.00000	.04000
1.245	2.050	.00000	2.02000
1.245	4.090	.00000	4.02000
1.245	6.130	.00000	6.02000
1.245	8.170	.00000	8.02000
	GRADIENT	.00000	.98189

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REFERENCE DATA

SREF = 2690.0000 SQ.FT.
LREF = 1290.3000 INCHES
BREF = 1290.3000 INCHES
SCALE = .0040

XMRP = 976.0000 IN. XT
YMRP = .0000 IN. YT
ZMRP = 400.0000 IN. ZT

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 940/ 0 RN/L = 2.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.600	-8.000	-7.95000	.00000
.600	-6.000	-5.98000	.00000
.600	-3.980	-3.98000	.00000
.600	-1.960	-1.98000	.00000
.600	.080	.04000	.00000
.600	2.080	2.02000	.00000
.600	4.110	4.02000	.00000
.600	6.130	6.02000	.00000
.600	8.150	8.02000	.00000
	GRADIENT	.98912	.00000

RUN NO. 950/ 0 RN/L = 4.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.798	-5.970	-7.96000	.00000
.798	-4.020	-4.02000	.00000
.798	-1.970	-2.00000	.00000
.798	.110	.04000	.00000
.798	2.130	2.02000	.00000
.798	4.140	4.00000	.00000
.798	6.190	6.02000	.00000
.798	8.220	8.02000	.00000
	GRADIENT	.98237	.00000

RUN NO. 930/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.898	-8.040	-7.96000	.00000
.898	-6.000	-5.96000	.00000
.898	-4.000	-4.00000	.00000
.898	-1.950	-1.98000	.00000
.898	.120	.04000	.00000
.898	2.150	2.02000	.00000
.898	4.180	4.02000	.00000
.898	6.210	6.02000	.00000
.898	8.270	8.05900	.00000
	GRADIENT	.97947	.00000

DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0)

(T1X012) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT.
LREF = 1290.3000 INCHES
BREF = 1290.3000 INCHES
SCALE = .0040

XMRP = 976.0000 IN. XT
YMRP = .0000 IN. YT
ZMRP = 400.0000 IN. ZT

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 960/ 0 RN/L = 6.04 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.948	-8.040	-7.96000	.00000
.948	-6.010	-5.96000	.00000
.948	-4.029	-4.02000	.00000
.948	-1.970	-2.00000	.00000
.948	.140	.06000	.00000
.948	2.160	2.04000	.00000
.948	4.180	4.02000	.00000
.948	6.210	6.02000	.00000
.948	8.230	8.02000	.00000
	GRADIENT	.97917	.00000

RUN NO. 970/ 0 RN/L = 6.83 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.044	-8.070	-7.98000	.00000
1.044	-6.010	-5.96000	.00000
1.044	-3.970	-3.98000	.00000
1.044	-1.940	-1.90000	.00000
1.044	.120	.04000	.00000
1.044	2.150	2.02000	.00000
1.044	4.190	4.02000	.00000
1.044	6.220	6.02000	.00000
1.044	8.250	8.02000	.00000
	GRADIENT	.97800	.00000

RUN NO. 980/ 0 RN/L = 7.23 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.095	-8.048	-7.94000	.00000
1.095	-6.010	-5.96000	.00000
1.095	-4.010	-4.00000	.00000
1.095	-1.960	-2.00000	.00000
1.095	.130	.04000	.00000
1.095	2.140	2.00000	.00000
1.095	4.180	4.00000	.00000
1.095	6.250	6.02000	.00000
1.095	8.280	8.02000	.00000
	GRADIENT	.97056	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0) (T1X012) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 990/ 0 RN/L = 7.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.145	-8.049	-7.96000	.00000
1.145	-6.030	-5.96000	.00000
1.145	-4.029	-4.02000	.00000
1.145	-1.960	-2.00000	.00000
1.145	.110	.02000	.00000
1.145	2.160	2.02000	.00000
1.145	4.220	4.04000	.00000
1.145	6.260	6.04000	.00000
1.145	8.310	8.04000	.00000
	GRADIENT	.97682	.00000

RUN NO. 920/ 0 RN/L = 8.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.243	-8.049	-7.96000	.00000
1.243	-6.010	-5.96000	.00000
1.243	-4.000	-4.00000	.00000
1.243	-1.960	-2.00000	.00000
1.243	.100	.02000	.00000
1.243	2.150	2.02000	.00000
1.243	4.190	4.02000	.00000
1.243	6.230	6.02000	.00000
1.243	8.270	8.02000	.00000
	GRADIENT	.97901	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0T1S1 (0) (T1X013) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1010/ 0 RN/L = 2.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.600	-8.059	.00000	-8.00000
.600	-6.030	.00000	-5.98000
.600	-4.050	.00000	-4.02000
.600	-2.060	.00000	-2.04000
.600	-.020	.00000	-.02000
.600	1.970	.00000	1.96000
.600	3.970	.00000	3.94000
.600	5.980	.00000	5.94000
.600	8.000	.00000	7.94000
	GRADIENT	.00000	.99252

RUN NO. 1020/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.798	-8.070	.00000	-7.90000
.798	-6.050	.00000	-5.98000
.798	-4.040	.00000	-4.00000
.798	-2.040	.00000	-2.02000
.798	.000	.00000	.00000
.798	2.020	.00000	2.00000
.798	4.050	.00000	4.00000
.798	6.090	.00000	6.02000
.798	8.110	.00000	8.02000
	GRADIENT	.00000	.98913

RUN NO. 1030/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.898	-8.090	.00000	-7.98000
.898	-6.040	.00000	-5.98000
.898	-4.050	.00000	-4.00000
.898	-2.010	.00000	-1.98000
.898	.040	.00000	.04000
.898	2.050	.00000	2.02000
.898	4.080	.00000	4.00000
.898	6.100	.00000	6.02000
.898	8.110	.00000	8.00000
	GRADIENT	.00000	.98620

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FA25. MSFC TWT 652, CONFIG. 01A0420T1S1 (0) (T1X013) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1040/ 0 RN/L = 6.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.948	-8.080	.00000	-7.96000
.948	-6.050	.00000	-5.96000
.948	-4.060	.00000	-4.00000
.948	-2.030	.00000	-2.00000
.948	.040	.00000	.04000
.948	2.050	.00000	2.02000
.948	4.060	.00000	4.00000
.948	6.110	.00000	6.02000
.948	8.139	.00000	8.02000
	GRADIENT	.00000	.98524

RUN NO. 1050/ 0 RN/L = 6.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.048	-8.110	.00000	-7.96000
1.048	-6.070	.00000	-5.96000
1.048	-4.069	.00000	-4.00000
1.048	-2.040	.00000	-2.00000
1.048	.020	.00000	.02000
1.048	2.030	.00000	2.00000
1.048	4.060	.00000	4.00000
1.048	6.090	.00000	6.00000
1.048	8.160	.00000	8.02000
	GRADIENT	.00000	.98386

RUN NO. 1060/ 0 RN/L = 7.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.096	-8.080	.00000	-7.92000
1.096	-6.050	.00000	-5.94000
1.096	-4.050	.00000	-3.98000
1.096	-2.020	.00000	-1.98000
1.096	.060	.00000	.06000
1.096	2.070	.00000	2.04000
1.096	4.130	.00000	4.06000
1.096	6.120	.00000	6.02000
1.096	8.190	.00000	8.04000
	GRADIENT	.00000	.98288

FA25, MSFC TWT 652, CONFIG. 01A04R0T1S1 (0) (T1X013) (31 OCT 78)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1290.3000 INCHES	YMRP =	.0000 IN. YT		
BREF =	1290.3000 INCHES	ZMRP =	400.0000 IN. ZT		
SCALE =	.0040				

PARAMETRIC DATA

ALPHA =	.000	IB-ELV =	10.000
OB-ELV =	10.000	STINGS =	3.000

RUN NO. 1070/ 0 RN/L = 7.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.145	-8.120	.00000	-7.96000
1.145	-6.050	.00000	-5.94000
1.145	-4.029	.00000	-3.96000
1.145	-2.000	.00000	-1.96000
1.145	.080	.00000	.06000
1.145	2.100	.00000	2.06000
1.145	4.110	.00000	4.04000
1.145	6.150	.00000	6.06000
1.145	8.220	.00000	8.05900
	GRADIENT	.00000	.98243

RUN NO. 1000/ 0 RN/L = 8.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.243	-8.080	.00000	-7.92000
1.243	-6.050	.00000	-5.94000
1.243	-4.050	.00000	-3.98000
1.243	-2.020	.00000	-1.98000
1.243	.040	.00000	.04000
1.243	2.050	.00000	2.02000
1.243	4.090	.00000	4.02000
1.243	6.130	.00000	6.02000
1.243	8.120	.00000	8.02000
	GRADIENT	.00000	.98280

FA25, MSFC TWT 652, CONFIG. 01A0P0T1S1 (0) (T1X014) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 520/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.899	-8.040	-7.96000	.00000
.899	-6.000	-5.96000	.00000
.899	-3.990	-3.98000	.00000
.899	-1.940	-1.98000	.00000
.899	.140	.06000	.00000
.899	2.170	2.04000	.00000
.899	4.180	4.02000	.00000
.899	6.230	6.04000	.00000
.899	8.250	8.04000	.00000
	GRADIENT	.97897	.00000

RUN NO. 510/ 0 RN/L = 8.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.243	-8.080	-8.00000	.00000
1.243	-6.000	-5.96000	.00000
1.243	-4.000	-4.00000	.00000
1.243	-1.960	-2.00000	.00000
1.243	.110	.02000	.00000
1.243	2.160	2.02000	.00000
1.243	4.220	4.04000	.00000
1.243	6.280	6.06000	.00000
1.243	8.290	8.04000	.00000
	GRADIENT	.97763	.00000

FA25, MSFC TWT 652, CONFIG. 01A0P0T1S1 (0) (T1X015) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 530/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.898	-8.120	.00000	-8.00000
.898	-6.060	.00000	-5.98000
.898	-4.050	.00000	-4.00000
.898	-2.030	.00000	-2.00000
.898	.040	.00000	.04000
.898	2.070	.00000	2.04000
.898	4.110	.00000	4.06000
.898	6.140	.00000	6.06000
.898	8.170	.00000	8.05900
	GRADIENT	.00000	.98727

RUN NO. 540/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.244	-8.120	.00000	-7.96000
1.244	-6.060	.00000	-5.96000
1.244	-4.060	.00000	-3.98000
1.244	-2.000	.00000	-1.96000
1.244	.060	.00000	.06000
1.244	2.090	.00000	2.06000
1.244	4.150	.00000	4.08000
1.244	6.190	.00000	6.08000
1.244	8.210	.00000	8.05900
	GRADIENT	.00000	.98196

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FA25, MSFC TWT 652, CONFIG. 01ATPTTIS1 (0) (T1X016) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 700/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.600	-8.020	-7.98000	.00000
.600	-5.980	-5.96000	.00000
.600	-3.980	-3.98000	.00000
.600	-1.930	-1.96000	.00000
.600	.110	.06000	.00000
.600	2.130	2.06000	.00000
.600	4.150	4.06000	.00000
.600	6.170	6.06000	.00000
.600	8.180	8.04000	.00000
	GRADIENT	.98917	.00000

RUN NO. 690/ 0 RN/L = 4.79 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.798	-8.010	-7.96000	.00000
.798	-5.990	-5.96000	.00000
.798	-3.970	-3.98000	.00000
.798	-1.940	-1.98000	.00000
.798	.120	.04000	.00000
.798	2.150	2.04000	.00000
.798	4.190	4.04000	.00000
.798	6.220	6.04000	.00000
.798	8.250	8.04000	.00000
	GRADIENT	.98285	.00000

RUN NO. 561/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.897	-8.049	-7.98000	.00000
.897	-6.060	-6.02000	.00000
.897	-4.000	-4.00000	.00000
.897	-1.940	-1.98000	.00000
.897	.130	.04000	.00000
.897	2.170	2.04000	.00000
.897	4.190	4.02000	.00000
.897	6.220	6.02000	.00000
.897	8.240	8.02000	.00000
	GRADIENT	.97901	.00000

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FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 01ATPTT151 (0)

(T1X016) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT.
LREF = 1290.3000 INCHES
BREF = 1290.3000 INCHES
SCALE = .0040

XMRP = 976.0000 IN. XT
YMRP = .0000 IN. YT
ZMRP = 400.0000 IN. ZT

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 680/ 0 RN/L = 6.07 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.947	-8.059	-7.98000	.00000
.947	-6.000	-5.96000	.00000
.947	-4.000	-4.00000	.00000
.947	-1.940	-1.98000	.00000
.947	.140	.06000	.00000
.947	2.170	2.04000	.00000
.947	4.210	4.04000	.00000
.947	6.240	6.04000	.00000
.947	8.280	8.04000	.00000
	GRADIENT	.97306	.00000

RUN NO. 670/ 0 RN/L = 6.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.047	-8.040	-7.96000	.00000
1.047	-5.970	-5.94000	.00000
1.047	-3.970	-3.98000	.00000
1.047	-1.930	-1.98000	.00000
1.047	.160	.06000	.00000
1.047	2.180	2.04000	.00000
1.047	4.220	4.04000	.00000
1.047	6.260	6.04000	.00000
1.047	8.280	8.04000	.00000
	GRADIENT	.97001	.00000

RUN NO. 660/ 0 RN/L = 7.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.094	-8.040	-7.94000	.00000
1.094	-6.000	-5.96000	.00000
1.094	-3.970	-3.98000	.00000
1.094	-1.940	-1.98000	.00000
1.094	.140	.04000	.00000
1.094	2.190	2.04000	.00000
1.094	4.220	4.02000	.00000
1.094	6.280	6.04000	.00000
1.094	8.330	8.05900	.00000
	GRADIENT	.97659	.00000

FA25, MSFC TWT 652, CONFIG. 01ATP'T1S1 (0) (T1X016) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 650/ 0 RN/L = 7.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.147	-8.059	-7.98000	.00000
1.147	-6.000	-5.96000	.00000
1.147	-4.000	-4.00000	.00000
1.147	-1.950	-2.00000	.00000
1.147	.130	.04000	.00000
1.147	2.160	2.02000	.00000
1.147	4.210	4.02000	.00000
1.147	6.270	6.04009	.00000
1.147	8.330	8.05900	.00000
	GRADIENT	.97711	.00000

RUN NO. 551/ 0 RN/L = 8.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.242	-8.059	-7.98000	.00000
1.242	-6.040	-6.00000	.00000
1.242	-4.020	-4.02000	.00000
1.242	-1.950	-2.00000	.00000
1.242	.110	.02000	.00000
1.242	2.180	2.04000	.00000
1.242	4.210	4.02000	.00000
1.242	6.250	6.02000	.00000
1.242	8.310	8.04000	.00000
	GRADIENT	.97717	.00000

FA25, MSFC TWT 652, CONFIG. D1ATPTT1S1 (0) (T1X017) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 590/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.602	-8.040	.00000	-7.98000
.602	-6.000	.00000	-5.96000
.602	-4.010	.00000	-3.98000
.602	-2.000	.00000	-1.98000
.602	.060	.00000	.06000
.602	2.060	.00000	2.04000
.602	4.069	.00000	4.04000
.602	6.090	.00000	6.04000
.602	8.100	.00000	8.04000
	GRADIENT	.00000	.99218

RUN NO. 600/ 0 RN/L = 4.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.799	-8.030	.00000	-7.94000
.799	-6.020	.00000	-5.96000
.799	-4.040	.00000	-4.00000
.799	-2.000	.00000	-1.98000
.799	.040	.00000	.04000
.799	2.040	.00000	2.02000
.799	4.060	.00000	4.02000
.799	6.110	.00000	6.04000
.799	8.129	.00000	8.04000
	GRADIENT	.00000	.99012

RUN NO. 570/ 0 RN/L = 5.62 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.898	-8.070	.00000	-7.96000
.898	-6.040	.00000	-5.96000
.898	-4.050	.00000	-4.00000
.898	-2.010	.00000	-1.98000
.898	.040	.00000	.04000
.898	2.050	.00000	2.02000
.898	4.069	.00000	4.02000
.898	6.120	.00000	6.04000
.898	8.139	.00000	8.04000
	GRADIENT	.00000	.98729

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FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (T1X017) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 610/ 0 RN/L = 6.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.948	-8.100	.00000	-7.98000
.948	-6.050	.00000	-5.96000
.948	-4.040	.00000	-3.98000
.948	-2.010	.00000	-1.98000
.948	.040	.00000	.04000
.948	2.070	.00000	2.04000
.948	4.080	.00000	4.02000
.948	6.130	.00000	6.04000
.948	8.139	.00000	8.02000
	GRADIENT	.00000	.98524

RUN NO. 620/ 0 RN/L = 6.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.049	-8.110	.00000	-7.96000
1.049	-6.070	.00000	-5.96000
1.049	-4.050	.00000	-3.98000
1.049	-2.020	.00000	-1.98000
1.049	.050	.00000	.06000
1.049	2.070	.00000	2.04000
1.049	4.080	.00000	4.02000
1.049	6.160	.00000	6.06000
1.049	8.200	.00000	8.05900
	GRADIENT	.00000	.98379

RUN NO. 630/ 0 RN/L = 7.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.095	-8.139	.00000	-7.98000
1.095	-6.050	.00000	-5.94000
1.095	-4.050	.00000	-3.98000
1.095	-2.000	.00000	-1.96000
1.095	.050	.00000	.06000
1.095	2.070	.00000	2.04000
1.095	4.120	.00000	4.06000
1.095	6.160	.00000	6.06000
1.095	8.210	.00000	8.05900
	GRADIENT	.00000	.98383

FA25, MSFC TWT 652, CONFIG. O!ATPTT1S1 (O) (T1X017) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 640/ 0 RN/L = 7.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.144	-8.110	.00000	-7.96000
1.144	-6.070	.00000	-5.96000
1.144	-4.069	.00000	-4.00000
1.144	-2.010	.00000	-1.98000
1.144	.040	.00000	.04000
1.144	2.080	.00000	2.04000
1.144	4.100	.00000	4.02000
1.144	6.160	.00000	6.04000
1.144	8.240	.00000	8.08000
	GRADIENT	.00000	.98199

RUN NO. 581/ 0 RN/L = 8.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.243	-8.120	.00000	-7.96000
1.243	-6.070	.00000	-5.96000
1.243	-4.069	.00000	-4.00000
1.243	-2.020	.00000	-1.98000
1.243	.040	.00000	.04000
1.243	2.050	.00000	2.02000
1.243	4.090	.00000	4.02000
1.243	6.150	.00000	6.04000
1.243	8.220	.00000	8.05900
	GRADIENT	.00000	.98293

FA25, MSFC TWT 652, CONFIG. 01A04PTT151 (0) (T1X01B) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1170/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.600	-8.000	-7.96000	.00000
.600	-5.980	-5.96000	.00000
.600	-4.000	-4.00000	.00000
.600	-1.980	-2.00000	.00000
.600	.060	.02000	.00000
.600	2.080	2.02000	.00000
.600	4.090	4.00000	.00000
.600	6.130	6.02000	.00000
.600	8.160	8.02000	.00000
	GRADIENT	.98913	.00000

RUN NO. 1180/ 0 RN/L = 4.74 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.798	-8.020	-7.96000	.00000
.798	-5.990	-5.96000	.00000
.798	-4.000	-4.00000	.00000
.798	-1.960	-2.00000	.00000
.798	.090	.02000	.00000
.798	2.150	2.04000	.00000
.798	4.180	4.04000	.00000
.798	6.220	6.04000	.00000
.798	8.250	8.04000	.00000
	GRADIENT	.98290	.00000

RUN NO. 1190/ 0 RN/L = 5.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.898	-7.990	-7.92000	.00000
.898	-5.980	-5.94000	.00000
.898	-3.980	-3.98000	.00000
.898	-1.940	-1.98000	.00000
.898	.140	.06000	.00000
.898	2.170	2.04000	.00000
.898	4.180	4.02000	.00000
.898	6.210	6.02000	.00000
.898	8.230	8.02000	.00000
	GRADIENT	.97993	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P,T151 (0) (T1X018) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINOS = 3.000

RUN NO. 1200/ 0 RN/L = 6.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.946	-8.000	-7.92000	.00000
.946	-5.960	-5.92000	.00000
.946	-3.970	-3.96000	.00000
.946	-1.950	-1.98000	.00000
.946	.140	.06000	.00000
.946	2.160	2.04000	.00000
.946	4.180	4.02000	.00000
.946	6.210	6.02000	.00000
.946	8.230	8.02000	.00000
	GRADIENT	.97893	.00000

RUN NO. 1210/ 0 RN/L = 6.85 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.046	-8.020	-7.94000	.00000
1.046	-5.980	-5.94000	.00000
1.046	-3.960	-3.96000	.00000
1.046	-1.930	-1.98000	.00000
1.046	.150	.06000	.00000
1.046	2.170	2.04000	.00000
1.046	4.200	4.02000	.00000
1.046	6.230	6.02000	.00000
1.046	8.260	8.02000	.00000
	GRADIENT	.97845	.00000

RUN NO. 1220/ 0 RN/L = 7.24 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.096	-8.010	-7.92000	.00000
1.096	-5.980	-5.94000	.00000
1.096	-3.980	-3.98000	.00000
1.096	-1.960	-2.00000	.00000
1.096	.130	.04000	.00000
1.096	2.160	2.02000	.00000
1.096	4.210	4.02000	.00000
1.096	6.250	6.02000	.00000
1.096	8.290	8.02000	.00000
	GRADIENT	.97658	.00000

FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (T1X018) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1230/ 0 RN/L = 7.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.145	-8.000	-7.92000	.00000
1.145	-5.980	-5.94000	.00000
1.145	-3.980	-3.98000	.00000
1.145	-1.930	-1.98000	.00000
1.145	.150	.06000	.00000
1.145	2.180	2.04000	.00000
1.145	4.210	4.02000	.00000
1.145	6.250	6.02000	.00000
1.145	8.290	8.02000	.00000
	GRADIENT	.97707	.00000

RUN NO. 1160/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.242	-8.059	-7.98000	.00000
1.242	-6.000	-5.96000	.00000
1.242	-3.980	-3.98000	.00000
1.242	-1.940	-1.98000	.00000
1.242	.110	.02000	.00000
1.242	2.150	2.02000	.00000
1.242	4.200	4.02000	.00000
1.242	6.240	6.02000	.00000
1.242	8.280	8.02000	.00000
	GRADIENT	.97799	.00000

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FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 01A04PTTIS1 (0)

(T1X0:9) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1090/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.600	-8.000	.00000	-7.94000
.600	-6.010	.00000	-5.96000
.600	-4.029	.00000	-4.00000
.600	-2.020	.00000	-2.00000
.600	.020	.00000	.02000
.600	2.040	.00000	2.02000
.600	4.029	.00000	4.00000
.600	6.100	.00000	6.06000
.600	8.120	.00000	8.05900
	GRADIENT	.00000	.99226

RUN NO. 1100/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.798	-8.030	.00000	-7.94000
.798	-6.020	.00000	-5.96000
.798	-4.040	.00000	-4.00000
.798	-2.020	.00000	-2.00000
.798	.020	.00000	.02000
.798	2.050	.00000	2.02000
.798	4.090	.00000	4.04000
.798	6.130	.00000	6.06000
.798	8.150	.00000	8.05900
	GRADIENT	.00000	.98869

RUN NO. 1110/ 0 RN/L = 5.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.898	-8.090	.00000	-7.98000
.898	-6.040	.00000	-5.96000
.898	-4.060	.00000	-4.00000
.898	-2.030	.00000	-2.00000
.898	.020	.00000	.02000
.898	2.050	.00000	2.02000
.898	4.060	.00000	4.00000
.898	6.100	.00000	6.02000
.898	8.129	.00000	8.02000
	GRADIENT	.00000	.96524

ORIGINAL PAGE IS
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FA25, MSFC TWT 652, CONFIG. 01A04PTT1S1 (0) (T1X019) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1121/ 0 RN/L = 6.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.947	-8.080	.00000	-7.96000
.947	-6.040	.00000	-5.96000
.947	-4.060	.00000	-4.00000
.947	-2.030	.00000	-2.00000
.947	.020	.00000	.02000
.947	2.050	.00000	2.02000
.947	4.080	.00000	4.02000
.947	6.110	.00000	6.02000
.947	8.139	.00000	8.02000
	GRADIENT	.00000	.98527

RUN NO. 1130/ 0 RN/L = 6.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.045	-3.139	.00000	-7.98000
1.045	-6.070	.00000	-5.96000
1.045	-4.050	.00000	-3.98000
1.045	-2.040	.00000	-2.00000
1.045	.020	.00000	.02000
1.045	2.050	.00000	2.02000
1.045	4.080	.00000	4.02000
1.045	6.120	.00000	6.02000
1.045	8.139	.00000	8.00000
	GRADIENT	.00000	.98378

RUN NO. 1140/ 0 RN/L = 7.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.096	-8.120	.00000	-7.96000
1.096	-6.070	.00000	-5.96000
1.096	-4.069	.00000	-4.00000
1.096	-2.020	.00000	-1.98000
1.096	.048	.00000	.04000
1.096	2.070	.00000	2.04000
1.096	4.090	.00000	4.02000
1.096	6.130	.00000	6.02000
1.096	8.190	.00000	8.04000
	GRADIENT	.00000	.98295

FA25, MSFC TWT 652, CONFIG. 01A04PTT151 (0) (T1X019) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1080/ 0 RN/L = 7.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.145	-8.110	.00000	-7.96000
1.145	-6.070	.00000	-5.96000
1.145	-4.090	.00000	-4.02000
1.145	-2.020	.00000	-1.98000
1.145	.080	.00000	.08000
1.145	2.100	.00000	2.06000
1.145	4.120	.00000	4.04000
1.145	6.160	.00000	6.04000
1.145	8.230	.00000	8.05900
	GRADIENT	.00000	.98151

RUN NO. 1150/ 0 RN/L = 8.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.243	-8.120	.00000	-7.95000
1.243	-6.070	.00000	-5.95000
1.243	-4.050	.00000	-3.98000
1.243	-2.040	.00000	-2.00000
1.243	.040	.00000	.04000
1.243	2.060	.00000	2.02000
1.243	4.090	.00000	4.02000
1.243	6.130	.00000	6.02000
1.243	8.200	.00000	8.04000
	GRADIENT	.00000	.98233

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (T1X020) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1290/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.600	-8.020	-7.98000	.00000
.600	-6.040	-6.02000	.00000
.600	-4.020	-4.02000	.00000
.600	-2.000	-2.02000	.00000
.600	.060	.02000	.00000
.600	2.080	2.02000	.00000
.600	4.069	3.98000	.00000
.600	6.110	6.00000	.00000
.600	8.129	8.00000	.00000
	GRADIENT	.98924	.00000

RUN NO. 1280/ 0 RN/L = 5.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.898	-8.059	-7.98000	.00000
.898	-6.090	-6.04000	.00000
.898	-4.050	-4.04000	.00000
.898	-2.010	-2.04000	.00000
.898	.060	-.02000	.00000
.898	2.100	1.98000	.00000
.898	4.080	3.92000	.00000
.898	6.180	6.00000	.00000
.898	8.129	7.92000	.00000
	GRADIENT	.97889	.00000

RUN NO. 1270/ 0 RN/L = 6.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.947	-8.059	-7.98000	.00000
.947	-6.070	-6.02000	.00000
.947	-4.029	-4.02000	.00000
.947	-1.990	-2.02000	.00000
.947	.070	.00000	.00000
.947	2.140	2.02000	.00000
.947	4.160	4.00000	.00000
.947	6.210	6.02000	.00000
.947	8.240	8.02000	.00000
	GRADIENT	.97913	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(Q) (T1X020) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LPEF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400 0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1260/ 0 RN/L = 6.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.046	-8.049	-7.96000	.00000
1.046	-6.010	-5.96000	.00000
1.046	-4.010	-4.00000	.00000
1.046	-1.940	-1.98000	.00000
1.046	.160	.08000	.00000
1.046	2.210	2.08000	.00000
1.046	4.250	4.08000	.00000
1.046	6.270	6.06000	.00000
1.046	8.290	8.05900	.00000
	GRADIENT	.97823	.00000

RUN NO. 1250/ 0 RN/L = 7.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.094	-8.059	-7.96000	.00000
1.094	-6.010	-5.96000	.00000
1.094	-3.990	-3.98000	.00000
1.094	-1.940	-1.92000	.00000
1.094	.130	.04000	.00000
1.094	2.190	2.06000	.00000
1.094	4.270	4.08000	.00000
1.094	6.310	6.08000	.00000
1.094	8.340	8.08000	.00000
	GRADIENT	.97627	.00000

RUN NO. 1240/ 0 RN/L = 7.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.147	-8.059	-7.98000	.00000
1.147	-6.000	-5.95000	.00000
1.147	-4.000	-4.00000	.00000
1.147	-1.960	-2.00000	.00000
1.147	.170	.09000	.00000
1.147	2.200	2.06000	.00000
1.147	4.250	4.06000	.00000
1.147	6.290	6.06000	.00000
1.147	8.330	8.05900	.00000
	GRADIENT	.97677	.00000

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FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (T1X020) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1300/ 0 RN/L = 8.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.242	-8.070	-7.99000	.00000
1.242	-6.070	-6.02000	.00000
1.242	-4.029	-4.02000	.00000
1.242	-1.960	-2.00000	.00000
1.242	.100	.02000	.00000
1.242	2.150	2.02000	.00000
1.242	4.170	4.00000	.00000
1.242	6.230	6.02000	.00000
1.242	8.270	8.02000	.00000
	GRADIENT	.97815	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (T1X021) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1320/ 0 RN/L = 2.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.601	-8.059	.00000	-8.00000
.601	-6.110	.00000	-6.06000
.601	-4.110	.00000	-4.08000
.601	-2.070	.00000	-2.06000
.601	-.020	.00000	-.02000
.601	2.040	.00000	2.02000
.601	3.990	.00000	3.96000
.601	6.020	.00000	5.98000
.601	8.020	.00000	7.96000
	GRADIENT	.00000	.99161

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1330/ 0 RN/L = 5.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.899	-8.110	.00000	-8.00000
.899	-6.120	.00000	-6.04000
.899	-4.120	.00000	-4.06000
.899	-2.090	.00000	-2.06000
.899	-.020	.00000	-.02000
.899	2.010	.00000	1.98000
.899	4.020	.00000	3.96000
.899	6.040	.00000	5.96000
.899	8.070	.00000	7.96000
	GRADIENT	.00000	.98528

RUN NO. 1340/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.949	-8.110	.00000	-7.98000
.949	-6.110	.00000	-6.02000
.949	-4.080	.00000	-4.02000
.949	-2.030	.00000	-2.00000
.949	.040	.00000	.04000
.949	2.050	.00000	2.020[illegible]
.949	4.040	.00000	3.98[illegible]
.949	6.090	.00000	6.00000
.949	8.120	.00000	8.00000
	GRADIENT	.00000	.98524

RUN NO. 1350/ 0 RN/L = 6.91 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.046	-8.129	.00000	-7.98000
1.046	-6.130	.00000	-6.02000
1.046	-4.090	.00000	-4.02000
1.046	-2.040	.00000	-2.00000
1.046	.020	.00000	.02000
1.046	2.070	.00000	2.04000
1.046	4.060	.00000	4.00000
1.046	6.060	.00000	5.96000
1.046	8.110	.00000	7.96000
	GRADIENT	.00000	.98383

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T1S1(0) (T1X021) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1360/ 0 RN/L = 7.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.095	-8.139	.00000	-7.98000
1.095	-6.110	.00000	-6.00000
1.095	-4.100	.00000	-4.02000
1.095	-2.040	.00000	-2.00000
1.095	.040	.00000	.04000
1.095	2.070	.00000	2.04000
1.095	4.069	.00000	4.00000
1.095	6.130	.00000	6.02000
1.095	8.170	.00000	8.02000
	GRADIENT	.00000	.98200

RUN NO. 1370/ 0 RN/L = 7.66 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.143	-8.110	.00000	-7.96000
1.143	-6.110	.00000	-6.00000
1.143	-4.100	.00000	-4.02000
1.143	-2.040	.00000	-2.00000
1.143	.020	.00000	.02000
1.143	2.060	.00000	2.02000
1.143	4.100	.00000	4.02000
1.143	6.140	.00000	6.02000
1.143	8.180	.00000	8.02000
	GRADIENT	.00000	.98049

RUN NO. 1310/ 0 RN/L = 8.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.243	-8.139	.00000	-7.98000
1.243	-6.130	.00000	-6.02000
1.243	-4.100	.00000	-4.02000
1.243	-2.040	.00000	-2.00000
1.243	.020	.00000	.02000
1.243	2.050	.00000	2.02000
1.243	4.069	.00000	4.00000
1.243	6.130	.00000	6.02000
1.243	8.170	.00000	8.02000
	GRADIENT	.00000	.98198

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1460/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.600	-8.000	-7.96000	.00000
.600	-6.020	-6.00000	.00000
.600	-4.020	-4.02000	.00000
.600	-2.000	-2.02000	.00000
.600	.060	.02000	.00000
.600	2.080	2.02000	.00000
.600	4.090	4.00000	.00000
.600	6.110	6.00000	.00000
.600	8.160	8.02000	.00000
	GRADIENT	.98917	.00000

RUN NO. 1470/ 0 RN/L = 5.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.898	-8.040	-7.96000	.00000
.898	-6.040	-6.00000	.00000
.898	-4.029	-4.02000	.00000
.898	-1.960	-2.00000	.00000
.898	.100	.02000	.00000
.898	2.158	2.02000	.00000
.898	4.160	4.00000	.00000
.898	6.210	6.02000	.00000
.898	8.230	8.02000	.00000
	GRADIENT	.97910	.00000

RUN NO. 1480/ 0 RN/L = 6.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.948	-8.059	-7.98000	.00000
.948	-6.070	-6.02000	.00000
.948	-4.029	-4.02000	.00000
.948	-1.970	-2.00000	.00000
.948	.100	.02000	.00000
.948	2.160	2.04000	.00000
.948	4.180	4.02000	.00000
.948	6.210	6.02000	.00000
.948	8.240	8.02000	.00000
	GRADIENT	.97317	.00000

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FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (T1X022) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1490/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.046	-8.070	-7.98000	.00000
1.046	-6.050	-6.00000	.00000
1.046	-4.020	-4.02000	.00000
1.046	-1.960	-2.00000	.00000
1.046	.110	.02000	.00000
1.046	2.180	2.04000	.00000
1.046	4.170	4.00000	.00000
1.046	6.230	6.02000	.00000
1.046	8.260	8.02000	.00000
	GRADIENT	.97855	.00000

RUN NO. 1500/ 0 RN/L = 7.31 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.094	-8.070	-7.98000	.00000
1.094	-6.050	-6.00000	.00000
1.094	-4.029	-4.02000	.00000
1.094	-1.960	-2.00000	.00000
1.094	.130	.04000	.00000
1.094	2.180	2.04000	.00000
1.094	4.210	4.02000	.00000
1.094	6.250	6.02000	.00000
1.094	8.290	8.02000	.00000
	GRADIENT	.97585	.00000

RUN NO. 1510/ 0 RN/L = 7.70 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.144	-8.070	-7.98000	.00000
1.144	-6.070	-6.02000	.00000
1.144	-4.020	-4.02000	.00000
1.144	-1.960	-2.00000	.00000
1.144	.110	.02000	.00000
1.144	2.180	2.04000	.00000
1.144	4.200	4.02000	.00000
1.144	6.250	6.02000	.00000
1.144	8.290	8.02000	.00000
	GRADIENT	.97765	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (T1X022) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1450/ 0 RN/L = 8.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.243	-8.070	-7.98000	.00000
1.243	-6.070	-6.02000	.00000
1.243	-4.029	-4.02000	.00000
1.243	-1.960	-2.00000	.00000
1.243	.120	.04000	.00000
1.243	2.170	2.04000	.00000
1.243	4.200	4.02000	.00000
1.243	6.240	6.02000	.00000
1.243	8.280	8.02000	.00000
	GRADIENT	.97727	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (T1X023) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1430/ 0 RN/L = 2.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.600	-8.040	.00000	-7.99000
.600	-6.070	.00000	-6.02000
.600	-4.029	.00000	-4.00000
.600	-2.010	.00000	-2.00000
.600	.040	.00000	.04000
.600	2.060	.00000	2.04000
.600	4.050	.00000	4.02000
.600	6.070	.00000	6.02000
.600	8.080	.00000	8.02000
	GRADIENT	.00000	.00000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1420/ 0 RN/L = 5.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.898	-8.070	.00000	-7.96000
.899	-6.100	.00000	-6.02000
.898	-4.069	.00000	-4.02000
.898	-2.050	.00000	-2.02000
.898	.040	.00000	.04000
.898	2.070	.00000	2.04000
.898	4.069	.00000	4.02000
.899	6.100	.00000	6.02000
.898	8.129	.00000	8.02000
	GRADIENT	.00000	.98744

RUN NO. 1410/ 0 RN/L = 6.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.948	-8.100	.00000	-7.98000
.948	-6.090	.00000	-6.00000
.948	-4.060	.00000	-4.00000
.948	-2.030	.00000	-2.00000
.948	.040	.00000	.04000
.948	2.070	.00000	2.04000
.948	4.080	.00000	4.02000
.948	6.110	.00000	6.02000
.948	8.139	.00000	8.02000
	GRADIENT	.00000	.98528

RUN NO. 1400/ 0 RN/L = 6.88 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.046	-8.129	.00000	-7.98000
1.046	-6.120	.00000	-6.02000
1.046	-4.090	.00000	-4.02000
1.046	-2.040	.00000	-2.00000
1.046	.020	.00000	.02000
1.046	2.090	.00000	2.06000
1.046	4.080	.00000	4.02000
1.046	6.120	.00000	6.02000
1.046	8.170	.00000	8.02000
	GRADIENT	.00000	.98388

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T1S1(0) (T1X023) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1390/ 0 RN/L = 7.26 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.095	-8.139	.00000	-7.98000
1.095	-6.140	.00000	-6.02000
1.095	-4.120	.00000	-4.04000
1.095	-2.040	.00000	-2.00000
1.095	.040	.00000	.04000
1.095	2.070	.00000	2.04000
1.095	4.080	.00000	4.02000
1.095	6.130	.00000	6.02000
1.095	8.170	.00000	8.02000
	GRADIENT	.00000	.98293

RUN NO. 1380/ 0 RN/L = 7.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.143	-8.120	.00000	-7.96000
1.143	-6.110	.00000	-6.00000
1.143	-4.030	.00000	-4.02000
1.143	-2.040	.00000	-2.00000
1.143	.020	.00000	.02000
1.143	2.050	.00000	2.02000
1.143	4.069	.00000	4.00000
1.143	6.120	.00000	6.00000
1.143	8.180	.00000	8.02000
	GRADIENT	.00000	.98295

RUN NO. 1440/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.240	-8.139	.00000	-7.98000
1.240	-6.110	.00000	-6.00000
1.240	-4.030	.00000	-4.02000
1.240	-2.040	.00000	-2.00000
1.240	.040	.00000	.04000
1.240	2.070	.00000	2.04000
1.240	4.090	.00000	4.02000
1.240	6.130	.00000	6.02000
1.240	8.180	.00000	8.02000
	GRADIENT	.00000	.98290

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FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 01A)PTTIS1 (G)

(T1X024) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1590/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.602	-8.080	8.04000	.00000
.602	-6.040	6.02000	.00000
.602	-4.020	4.02000	.00000
.602	-2.020	2.04000	.00000
.602	.030	.02000	.00000
.602	2.050	-1.98000	.00000
.602	4.069	-3.98000	.00000
.602	6.100	-5.98000	.00000
.602	8.100	-7.96000	.00000
	GRADIENT	-.96874	.00006

RUN NO. 1580/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.800	-8.090	8.04000	.00000
.800	-6.040	6.02000	.00000
.800	-4.010	4.02000	.00000
.800	-1.990	2.04000	.00000
.800	.060	.02000	.00000
.800	2.090	-1.98000	.00000
.800	4.130	-3.98000	.00000
.800	6.120	-5.94000	.00000
.800	8.170	-7.96000	.00000
	GRADIENT	-.99330	.00000

RUN NO. 1570/ 0 RN/L = 5.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.899	-8.129	8.05900	.00000
.899	-6.070	6.04000	.00000
.899	-4.029	4.04000	.00000
.899	-2.010	2.06000	.00000
.899	.070	.02000	.00000
.899	2.120	-1.98000	.00000
.899	4.150	-3.98000	.00000
.899	6.170	-5.98000	.00000
.899	8.200	-7.98000	.00000
	GRADIENT	-.98008	.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTTISI (0) 1X024) (31 OCT 78)

REFERENCE DATA

SREF = 2000.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINOS = 3.000

RUN NO. 1560/ 0 RN/L = 6.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.948	-8.139	8.05000	.00000
.948	-6.080	6.04000	.00000
.948	-4.040	4.04000	.00000
.948	-2.020	2.06000	.00000
.948	.050	.04000	.00000
.948	2.090	-1.96000	.00000
.948	4.150	-3.98000	.00000
.948	6.170	-5.98000	.00000
.948	8.200	-7.98000	.00000
	GRADIENT	-.97901	.00000

RUN NO. 1550/ 0 RN/L = 6.87 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.047	-8.120	8.04000	.00000
1.047	-6.050	6.02000	.00000
1.047	-4.010	4.02000	.00000
1.047	-1.980	2.04000	.00000
1.047	.090	.02000	.00000
1.047	2.130	-1.98000	.00000
1.047	4.170	-3.98000	.00000
1.047	6.200	-5.98000	.00000
1.047	8.250	-8.00000	.00000
	GRADIENT	-.97602	.00000

RUN NO. 1540/ 0 RN/L = 6.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.098	-8.110	8.04000	.00000
1.098	-6.058	6.02000	.00000
1.098	-4.020	4.04000	.00000
1.098	-1.970	2.04000	.00000
1.098	.120	.00000	.00000
1.098	2.170	-2.00000	.00000
1.098	4.210	-4.00000	.00000
1.098	6.250	-6.00000	.00000
1.098	8.290	-8.00000	.00000
	GRADIENT	-.97670	.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (T1X024) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1530/ 0 RN/L = 7.21 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.147	-8.139	8.05900	.00000
1.147	-6.070	6.04000	.00000
1.147	-4.010	4.02000	.00000
1.147	-1.980	2.04000	.00000
1.147	.080	.02000	.00000
1.147	2.130	-1.98000	.00000
1.147	4.180	-3.98000	.00000
1.147	6.220	-5.98000	.00000
1.147	8.260	-8.00000	.00000
	GRADIENT	-.97706	.00000

RUN NO. 1520/ 0 RN/L = 7.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.245	-8.139	8.05900	.00000
1.245	-6.070	6.04000	.00000
1.245	-4.010	4.02000	.00000
1.245	-1.980	2.04000	.00000
1.245	.100	.00000	.00000
1.245	2.130	-1.98000	.00000
1.245	4.190	-4.00000	.00000
1.245	6.210	-5.98000	.00000
1.245	8.270	-8.00000	.00000
	GRADIENT	-.97806	.00000

FA25, MSFC TWT 652, CONFIG. 01ATPTTIS1 (0) (T1X025) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1670/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.601	-8.180	.00000	8.12000
.601	-6.140	.00000	6.10000
.601	-4.130	.00000	4.10000
.601	-2.120	.00000	2.10000
.601	-.080	.00000	.08000
.601	1.980	.00000	-1.95000
.601	4.010	.00000	-3.92000
.601	6.010	.00000	-5.95000
.601	8.040	.00000	-7.98000
	GRADIENT	.00000	-.99215

RUN NO. 1660/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.799	-8.190	.00000	8.10000
.799	-6.140	.00000	6.08000
.799	-4.120	.00000	4.00000
.799	-2.100	.00000	2.08000
.799	-.060	.00000	.05000
.799	1.960	.00000	-1.94000
.799	4.029	.00000	-3.98000
.799	6.050	.00000	-5.98000
.799	8.070	.00000	-7.98000
	GRADIENT	.00000	-.99929

RUN NO. 1651/ 0 RN/L = 5.63 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.899	-8.139	.00000	8.04000
.899	-6.090	.00000	6.02000
.899	-4.090	.00000	4.04000
.899	-2.060	.00000	2.04000
.899	.010	.00000	.00000
.899	2.030	.00000	-2.00000
.899	4.100	.00000	-4.04000
.899	6.050	.00000	-5.98000
.899	8.110	.00000	-8.00000
	GRADIENT	.00000	-.99631

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FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (T1X025) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1640/ 0 RN/L = 6.12 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.948	-8.030	.00000	7.92000
.948	-6.000	.00000	5.92000
.948	-3.990	.00000	3.94000
.948	-1.980	.00000	1.96000
.948	.050	.00000	-.04000
.948	2.080	.00000	-2.04000
.948	4.110	.00000	-4.04000
.948	6.130	.00000	-6.04000
.948	8.170	.00000	-8.04000
	GRADIENT	.00000	-.98519

RUN NO. 1630/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.048	-8.150	.00000	8.02000
1.048	-6.110	.00000	6.02000
1.048	-4.100	.00000	4.04000
1.048	-2.080	.00000	2.06000
1.048	-.030	.00000	.04000
1.048	2.020	.00000	-1.99000
1.048	4.060	.00000	-4.00000
1.048	6.090	.00000	-5.98000
1.048	8.139	.00000	-7.98000
	GRADIENT	.00000	-.98338

RUN NO. 1620/ 0 RN/L = 7.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.098	-8.180	.00000	8.04000
1.099	-6.120	.00000	6.02000
1.099	-4.100	.00000	4.04000
1.098	-2.090	.00000	2.06000
1.098	-.010	.00000	.02000
1.098	2.020	.00000	-1.98000
1.098	4.060	.00000	-3.98000
1.098	6.100	.00000	-5.98000
1.096	8.150	.00000	-7.98000
	GRADIENT	.00000	-.98287

FA25, MSFC TWT 652, CONFIG. 01ATPTT1S1 (0) (T1X025) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 3.000

RUN NO. 1610/ 0 RN/L = 7.36 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.145	-8.160	.00000	8.02000
1.145	-6.120	.00000	6.02000
1.145	-4.100	.00000	4.04000
1.145	-2.110	.00000	2.08000
1.145	-.050	.00000	.06000
1.145	2.010	.00000	-1.96000
1.145	4.060	.00000	-3.93000
1.145	6.100	.00000	-5.98000
1.145	8.180	.00000	-8.00000
	GRADIENT	.00000	-.98238

RUN NO. 1600/ 0 RN/L = 7.99 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.245	-8.160	.00000	8.02000
1.245	-6.120	.00000	6.02000
1.245	-4.110	.00000	4.04000
1.245	-2.070	.00000	2.04000
1.245	-.020	.00000	.02000
1.245	2.020	.00000	-1.99000
1.245	4.060	.00000	-3.98000
1.245	6.100	.00000	-5.98000
1.245	8.150	.00000	-7.98000
	GRADIENT	.00000	-.98189

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (T;X026) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1681/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.602	-8.040	-8.00000	.00000
.602	-6.000	-5.98000	.00000
.602	-3.980	-3.98000	.00000
.602	-1.940	-1.95000	.00000
.602	.100	.06000	.00000
.602	2.150	2.08000	.00000
.602	4.170	4.08000	.00000
.602	6.200	6.08000	.00000
.602	8.260	8.12000	.00000
	GRADIENT	.98872	.00000

RUN NO. 1691/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.800	-8.040	-7.99000	.00000
.800	-6.010	-5.98000	.00000
.800	-3.960	-3.98000	.00000
.800	-1.920	-1.96000	.00000
.800	.140	.06000	.00000
.800	2.190	2.08000	.00000
.800	4.230	4.08000	.00000
.800	6.260	6.08000	.00000
.800	8.290	8.06000	.00000
	GRADIENT	.99194	.00000

RUN NO. 1701/ 0 RN/L = 5.67 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.900	-8.080	-8.00000	.00000
.900	-6.020	-5.98000	.00000
.900	-3.980	-3.98000	.00000
.900	-1.920	-1.96000	.00000
.900	.140	.06000	.00000
.900	2.210	2.08000	.00000
.900	4.260	4.10000	.00000
.900	6.290	6.10000	.00000
.900	8.320	8.10000	.00000
	GRADIENT	.99011	.00000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = 000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1711/ 0 RN/L = 6.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.949	-8.080	-8.00000	.00000
.949	-6.030	-5.99000	.00000
.949	-3.970	-3.95000	.00000
.949	-1.930	-1.95000	.00000
.949	.140	.06000	.00000
.949	2.200	2.08000	.00000
.949	4.240	4.08000	.00000
.949	6.270	6.08000	.00000
.949	8.300	8.08000	.00000
	GRADIENT	.97907	.00000

RUN NO. 1720/ 0 RN/L = 6.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.047	-8.080	-8.00000	.00000
1.047	-6.040	-6.00000	.00000
1.047	-4.020	-4.02000	.00000
1.047	-1.970	-2.02000	.00000
1.047	.090	.00000	.00000
1.047	2.160	2.02000	.00000
1.047	4.220	4.04000	.00000
1.047	6.230	6.02000	.00000
1.047	8.270	8.02000	.00000
	GRADIENT	.97817	.00000

RUN NO. 1730/ 0 RN/L = 7.11 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.096	-8.090	-8.00000	.00000
1.096	-6.030	-5.99000	.00000
1.096	-4.000	-4.00000	.00000
1.096	-1.950	-2.00000	.00000
1.096	.090	.00000	.00000
1.096	2.150	2.02000	.00000
1.096	4.210	4.02000	.00000
1.096	6.250	6.02000	.00000
1.096	8.300	8.02000	.00000
	GRADIENT	.97711	.00000

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FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (T1X02G) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1740/ 0 RN/L = 7.51 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.146	-8.080	-8.00000	.00000
1.146	-6.020	-5.98000	.00000
1.146	-3.990	-3.98000	.00000
1.146	-1.930	-1.98000	.00000
1.146	.110	.02000	.00000
1.146	2.160	2.02000	.00000
1.146	4.210	4.02000	.00000
1.146	6.230	6.00000	.00000
1.146	8.300	8.02000	.00000
	GRADIENT	.97704	.00000

RUN NO. 1750/ 0 RN/L = 8.29 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.244	-8.080	-8.00000	.00000
1.244	-6.020	-5.98000	.00000
1.244	-3.980	-3.98000	.00000
1.244	-1.910	-1.95000	.00000
1.244	.150	.06000	.00000
1.244	2.220	2.08000	.00000
1.244	4.280	4.10000	.00000
1.244	6.320	6.10000	.00000
1.244	8.360	8.10000	.00000
	GRADIENT	.97821	.00000

DATE 28 NOV 78

FA25, MSFC TWT 652, TABULATED SOURCE DATA

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0)

(T1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1770/ 0 RN/L = 3.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.602	-8.059	.00000	-8.00000
.602	-6.030	.00000	-5.98000
.602	-3.990	.00000	-3.96000
.602	-1.970	.00000	-1.96000
.602	.080	.00000	.08000
.602	2.090	.00000	2.08000
.602	4.110	.00000	4.08000
.602	6.140	.00000	6.10000
.602	8.180	.00000	8.12000
	GRADIENT	.00000	.99309

RUN NO. 1780/ 0 RN/L = 4.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.802	-8.090	.00000	-8.00000
.802	-6.030	.00000	-5.96000
.802	-4.000	.00000	-3.96000
.802	-1.960	.00000	-1.94000
.802	.080	.00000	.08000
.802	2.100	.00000	2.08000
.802	4.120	.00000	4.08000
.802	6.160	.00000	6.10000
.802	8.190	.00000	8.10000
	GRADIENT	.00000	.99015

RUN NO. 1790/ 0 RN/L = 5.60 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.900	-8.090	.00000	-7.98000
.900	-6.040	.00000	-5.96000
.900	-4.020	.00000	-3.96000
.900	-1.990	.00000	-1.96000
.900	.080	.00000	.08000
.900	2.130	.00000	2.10000
.900	4.140	.00000	4.06000
.900	6.160	.00000	6.08000
.900	8.210	.00000	8.10000
	GRADIENT	.00000	.98581

FA25, MSFC TWT 652, CONFIG. 01ATPTT2S2 (0) (T1X027) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1800/ 0 RN/L = 6.03 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.949	-8.100	.00000	-7.98000
.949	-6.050	.00000	-5.96000
.949	-4.020	.00000	-3.96000
.949	-2.000	.00000	-1.96000
.949	.080	.00000	.08000
.949	2.120	.00000	2.08000
.949	4.140	.00000	4.08000
.949	6.170	.00000	6.08000
.949	8.220	.00000	8.10000
	GRADIENT	.00000	.98434

RUN NO. 1810/ 0 RN/L = 6.86 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.049	-8.129	.00000	-7.98000
1.049	-6.090	.00000	-5.98000
1.049	-4.029	.00000	-3.96000
1.049	-1.990	.00000	-1.96000
1.049	.060	.00000	.06000
1.049	2.110	.00000	2.08000
1.049	4.170	.00000	4.10000
1.049	6.200	.00000	6.10000
1.049	8.250	.00000	8.10000
	GRADIENT	.00000	.98351

RUN NO. 1820/ 0 RN/L = 7.22 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.096	-8.120	.00000	-7.96000
1.096	-6.080	.00000	-5.96000
1.096	-4.040	.00000	-3.96000
1.096	-2.000	.00000	-1.96000
1.096	.080	.00000	.08000
1.096	2.120	.00000	2.08000
1.096	4.170	.00000	4.10000
1.096	6.190	.00000	6.08000
1.096	8.260	.00000	8.10000
	GRADIENT	.00000	.98150

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1830/ 0 RN/L = 7.59 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.146	-8.120	.00000	-7.96000
1.146	-6.070	.00000	-5.95000
1.146	-4.029	.00000	-3.96000
1.146	-2.000	.00000	-1.96000
1.146	.080	.00000	.08000
1.146	2.120	.00000	2.08000
1.146	4.160	.00000	4.08000
1.146	6.220	.00000	6.10000
1.146	8.290	.00000	8.12000
	GRADIENT	.00000	.98156

RUN NO. 1760/ 0 RN/L = 8.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.246	-8.160	.00000	-8.00000
1.246	-6.070	.00000	-5.96000
1.246	-4.029	.00000	-3.96000
1.246	-2.000	.00000	-1.96000
1.246	.080	.00000	.08000
1.246	2.110	.00000	2.08000
1.246	4.170	.00000	4.10000
1.246	6.190	.00000	6.08000
1.246	8.280	.00000	8.12000
	GRADIENT	.00000	.98303

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FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (T1X028) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1990/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.602	-8.049	-8.00000	.00000
.602	-6.030	-6.00000	.00000
.602	-4.010	-4.00000	.00000
.602	-1.940	-1.96000	.00000
.602	.140	.10000	.00000
.602	2.080	2.02000	.00000
.602	4.100	4.02000	.00000
.602	6.130	6.02000	.00000
.602	8.110	7.98000	.00000
	GRADIENT	.98912	.00000

RUN NO. 1980/ 0 RN/L = 4.77 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.800	-8.070	-8.00000	.00000
.800	-6.060	-6.02000	.00000
.800	-4.029	-4.02000	.00000
.800	-1.950	-1.96000	.00000
.800	.170	.10000	.00000
.800	2.120	2.02000	.00000
.800	4.160	4.02000	.00000
.800	6.190	6.02000	.00000
.800	8.180	7.98000	.00000
	GRADIENT	.98200	.00000

RUN NO. 1970/ 0 RN/L = 5.64 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.899	-8.090	-8.00000	.00000
.899	-6.050	-6.00000	.00000
.899	-4.040	-4.02000	.00000
.899	-1.930	-1.96000	.00000
.899	.160	.08000	.00000
.899	2.140	2.02000	.00000
.899	4.170	4.02000	.00000
.899	6.200	6.02000	.00000
.899	8.190	7.98000	.00000
	GRADIENT	.97900	.00000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1960/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.947	-8.090	-8.00000	.00000
.947	-6.080	-6.02000	.00000
.947	-4.040	-4.02000	.00000
.947	-1.960	-1.98000	.00000
.947	.150	.08000	.00000
.947	2.110	2.00000	.00000
.947	4.170	4.02000	.00000
.947	6.210	6.02000	.00000
.947	8.190	7.98000	.00000
	GRADIENT	.97901	.00000

RUN NO. 1950/ 0 RN/L = 6.95 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.047	-8.100	-8.00000	.00000
1.047	-6.050	-6.00000	.00000
1.047	-4.029	-4.02000	.00000
1.047	-1.920	-1.96000	.00000
1.047	.160	.08000	.00000
1.047	2.150	2.02000	.00000
1.047	4.190	4.02000	.00000
1.047	6.230	6.02000	.00000
1.047	8.220	7.98000	.00000
	GRADIENT	.97816	.00000

RUN NO. 1940/ 0 RN/L = 7.34 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.098	-8.100	-8.00000	.00000
1.098	-6.060	-6.00000	.00000
1.099	-4.029	-4.02000	.00000
1.098	-1.930	-1.96000	.00000
1.098	.180	.10000	.00000
1.098	2.150	2.02000	.00000
1.098	4.200	4.02000	.00000
1.098	6.250	6.02000	.00000
1.098	8.240	7.98000	.00000
	GRADIENT	.97674	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (T1X028) (31 OCT 78)

REFERENCE DATA

SREF =	2690.0000 SQ.FT.	XMRP =	976.0000 IN. XT		
LREF =	1290.3000 INCHES	YMRP =	.0000 IN. YT		
BREF =	1290.3000 INCHES	ZMRP =	400.0000 IN. ZT		
SCALE =	.0040				

PARAMETRIC DATA

BETA =	.000	IB-ELV =	10.000
OB-ELV =	10.000	STINGS =	2.000

RUN NO. 1930/ 0 RN/L = 7.73 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.146	-8.100	-8.00000	.00000
1.146	-6.060	-6.00000	.00000
1.146	-4.040	-4.02000	.00000
1.146	-1.930	-1.96000	.00000
1.146	.160	.08000	.00000
1.146	2.130	2.00000	.00000
1.146	4.190	4.02000	.00000
1.146	6.230	6.02000	.00000
1.146	8.240	7.98000	.00000
	GRADIENT	.97661	.00000

RUN NO. 1920/ 0 RN/L = 8.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.243	-8.090	-8.00000	.00000
1.243	-6.080	-6.02000	.00000
1.243	-4.050	-4.04000	.00000
1.243	-1.950	-1.98000	.00000
1.243	.160	.08000	.00000
1.243	2.120	2.00000	.00000
1.243	4.190	4.02000	.00000
1.243	6.230	6.02000	.00000
1.243	8.230	7.98000	.00000
	GRADIENT	.97810	.00000

FA25. MSFC TWT 652. CONFIG. 01A04P0T2S2 (0) (T1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1900/ 0 RN/L = 2.98 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.602	-8.040	.00000	-7.98000
.602	-6.070	.00000	-6.02000
.602	-4.050	.00000	-4.02000
.602	-1.970	.00000	-1.96000
.602	.080	.00000	.09000
.602	2.010	.00000	2.00000
.602	4.050	.00000	4.02000
.602	6.080	.00000	6.04000
.602	8.059	.00000	8.00000
	GRADIENT	.00000	.99306

RUN NO. 1890/ 0 RN/L = 4.71 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.799	-8.070	.00000	-7.99000
.799	-6.050	.00000	-5.99000
.799	-4.060	.00000	-4.02000
.799	-1.960	.00000	-1.94000
.799	.100	.00000	.10000
.799	2.040	.00000	2.02000
.799	4.080	.00000	4.04000
.799	6.110	.00000	6.04000
.799	8.070	.00000	7.98000
	GRADIENT	.00000	.99014

RUN NO. 1680/ 0 RN/L = 5.55 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.900	-8.090	.00000	-7.99000
.900	-6.060	.00000	-5.99000
.900	-4.069	.00000	-4.02000
.900	-1.930	.00000	-1.96000
.900	.100	.00000	.10000
.900	2.050	.00000	2.02000
.900	4.080	.00000	4.02000
.900	6.120	.00000	6.04000
.900	8.090	.00000	7.98000
	GRADIENT	.00000	.99634

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FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (T1X029) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1870/ 0 RN/L = 5.93 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.947	-8.100	.00000	-7.98000
.947	-6.070	.00000	-5.98000
.947	-4.060	.00000	-4.00000
.947	-1.970	.00000	-1.94000
.947	.100	.00000	.10000
.947	2.050	.00000	2.02000
.947	4.080	.00000	4.02000
.947	6.130	.00000	6.04000
.947	8.100	.00000	7.98000
	GRADIENT	.00000	.98522

RUN NO. 1861/ 0 RN/L = 6.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.047	-8.129	.00000	-7.96000
1.047	-6.050	.00000	-5.98000
1.047	-4.069	.00000	-4.00000
1.047	-1.980	.00000	-1.94000
1.047	.100	.00000	.10000
1.047	2.050	.00000	2.02000
1.047	4.080	.00000	4.02000
1.047	6.140	.00000	6.04000
1.047	8.129	.00000	7.98000
	GRADIENT	.00000	.98356

RUN NO. 1850/ 0 RN/L = 6.97 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.096	-8.160	.00000	-8.00000
1.096	-6.110	.00000	-6.00000
1.096	-4.100	.00000	-4.02000
1.096	-1.980	.00000	-1.94000
1.096	.100	.00000	.10000
1.096	2.050	.00000	2.02000
1.096	4.110	.00000	4.04000
1.096	6.150	.00000	6.04000
1.096	8.160	.00000	8.00000
	GRADIENT	.00000	.98199

FA25, MSFC TWT 652, CONFIG. 01A04P0T2S2 (0) (TIXD29) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 1840/ 0 RN/L = 7.27 GRADIENT INTC = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.146	-8.150	.00000	-8.00000
1.146	-6.130	.00000	-6.00000
1.146	-4.069	.00000	-4.00000
1.146	-1.970	.00000	-1.94000
1.146	.100	.00000	.10000
1.146	2.060	.00000	2.02000
1.146	4.100	.00000	4.02000
1.146	6.160	.00000	6.04000
1.146	8.150	.00000	7.99000
	GRADIENT	.00000	.99194

RUN NO. 1910/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.244	-8.180	.00000	-8.02000
1.244	-6.140	.00000	-6.02000
1.244	-4.090	.00000	-4.02000
1.244	-2.020	.00000	-1.98000
1.244	.080	.00000	.08000
1.244	2.030	.00000	2.00000
1.244	4.090	.00000	4.02000
1.244	6.130	.00000	6.02000
1.244	8.139	.00000	7.98000
	GRADIENT	.00000	.99285

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (T1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2000/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.602	-8.040	-8.00000	.00000
.602	-6.020	-6.00000	.00000
.602	-4.020	-4.02000	.00000
.602	-1.950	-1.98000	.00000
.602	.120	.09000	.00000
.602	2.070	2.00000	.00000
.602	4.090	4.00000	.00000
.602	6.130	6.02000	.00000
.602	8.120	7.98000	.00000
	GRADIENT	.98914	.00000

RUN NO. 2011/ 0 RN/L = 4.78 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.800	-8.059	-8.00000	.00000
.800	-6.060	-6.02000	.00000
.800	-4.040	-4.04000	.00000
.800	-1.950	-1.98000	.00000
.800	.150	.09000	.00000
.800	2.100	2.00000	.00000
.800	4.160	4.02000	.00000
.800	6.210	6.04000	.00000
.800	8.180	7.98000	.00000
	GRADIENT	.98289	.00000

RUN NO. 2020/ 0 RN/L = 5.69 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.900	-8.080	-8.00000	.00000
.900	-6.050	-6.00000	.00000
.900	-4.029	-4.02000	.00000
.900	-1.930	-1.98000	.00000
.900	.160	.09000	.00000
.900	2.120	2.00000	.00000
.900	4.180	4.02000	.00000
.900	6.210	6.02000	.00000
.900	8.170	7.96000	.00000
	GRADIENT	.97909	.00000

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (T1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2030/ 0 RN/L = 6.10 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.948	-8.110	-8.02000	.00000
.948	-6.070	-6.02000	.00000
.948	-4.029	-4.02000	.00000
.948	-1.950	-1.98000	.00000
.948	.140	.06000	.00000
.948	2.120	2.00000	.00000
.948	4.160	4.00000	.00000
.948	6.190	6.00000	.00000
.948	8.170	7.96000	.00000
	GRADIENT	.97907	.00000

RUN NO. 2040/ 0 RN/L = 6.92 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.047	-8.110	-8.02000	.00000
1.047	-6.070	-6.02000	.00000
1.047	-4.050	-4.04000	.00000
1.047	-1.940	-1.98000	.00000
1.047	.150	.06000	.00000
1.047	2.150	2.02000	.00000
1.047	4.170	4.00000	.00000
1.047	6.210	6.00000	.00000
1.047	8.250	8.02000	.00000
	GRADIENT	.97907	.00000

RUN NO. 2050/ 0 RN/L = 7.33 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.097	-8.100	-8.00000	.00000
1.097	-6.070	-6.02000	.00000
1.097	-4.050	-4.04000	.00000
1.097	-1.940	-1.98000	.00000
1.097	.130	.04000	.00000
1.097	2.140	2.00000	.00000
1.097	4.190	4.00000	.00000
1.097	6.240	6.02000	.00000
1.097	8.290	8.02000	.00000
	GRADIENT	.97569	.00000

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FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (T1X030) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2060/ 0 RN/L = 7.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.145	-8.110	-8.02000	.00000
1.145	-6.070	-6.02000	.00000
1.145	-4.029	-4.02000	.00000
1.145	-1.940	-1.99000	.00000
1.145	.120	.04000	.00000
1.145	2.140	2.00000	.00000
1.145	4.180	4.00000	.00000
1.145	6.240	6.02000	.00000
1.145	8.290	8.02000	.00000
	GRADIENT	.97668	.00000

RUN NO. 2070/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.245	-8.110	-8.02000	.00000
1.245	-6.070	-6.02000	.00000
1.245	-4.030	-4.04000	.00000
1.245	-1.940	-1.98000	.00000
1.245	.120	.04000	.00000
1.245	2.130	2.00000	.00000
1.245	4.170	4.00000	.00000
1.245	6.210	6.00000	.00000
1.245	8.280	8.02000	.00000
	GRADIENT	.97806	.00000

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (T1X031) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2110/ 0 RN/L = 3.02 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.602	-8.059	.00000	-8.00000
.602	-6.040	.00000	-6.00000
.602	-4.050	.00000	4.02000
.602	-1.990	.00000	-1.99000
.602	.060	.00000	.06000
.602	2.040	.00000	2.02000
.602	4.050	.00000	4.02000
.602	6.060	.00000	6.02000
.602	8.100	.00000	8.04000
	GRADIENT	.00000	.99258

RUN NO. 2100/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.949	-8.120	.00000	-8.00000
.949	-6.090	.00000	-6.00000
.949	-4.100	.00000	-4.04000
.949	-2.010	.00000	-1.98000
.949	.040	.00000	.04000
.949	2.030	.00000	2.00000
.949	4.060	.00000	4.00000
.949	6.110	.00000	6.02000
.949	8.160	.00000	8.04000
	GRADIENT	.00000	.98527

RUN NO. 2090/ 0 RN/L = 7.30 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.097	-8.160	.00000	-8.00000
1.097	-6.120	.00000	-6.00000
1.097	-4.180	.00000	-4.00000
1.097	-2.020	.00000	-1.98000
1.097	.060	.00000	.06000
1.097	2.050	.00000	2.02000
1.097	4.090	.00000	4.02000
1.097	6.130	.00000	6.02000
1.097	8.170	.00000	8.02000
	GRADIENT	.00000	.98190

FA25, MSFC TWT 652, CONFIG. 01A04PTT2S2 (0) (T1X031) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2080/ 0 RN/L = 8.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.245	-8.180	.00000	-8.02000
1.245	-6.130	.00000	-6.02000
1.245	-4.110	.00000	-4.04000
1.245	-2.020	.00000	-1.98000
1.245	.060	.00000	.06000
1.245	2.050	.00000	2.02000
1.245	4.090	.00000	4.02000
1.245	6.130	.00000	6.02000
1.245	8.180	.00000	8.02000
	GRADIENT	.00000	.98290

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (T1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2230/ 0 RN/L = 3.05 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.606	-9.049	-8.00000	.00000
.606	-6.050	-6.02000	.00000
.606	-4.050	-4.04000	.00000
.606	-1.970	-1.98000	.00000
.606	.100	.06000	.00000
.606	2.080	2.02000	.00000
.606	4.100	4.02000	.00000
.606	6.130	6.02000	.00000
.606	9.170	8.04000	.00000
	GRADIENT	.98869	.00000

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OD-ELV = 10.000 STINGS = 2.000

RUN NO. 2220/ 0 RN/L = 4.80 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.804	-8.070	-8.00000	.00000
.804	-6.040	-6.00000	.00000
.804	-4.029	-4.02000	.00000
.804	-1.930	-1.96000	.00000
.804	.120	.06000	.00000
.804	2.120	2.02000	.00000
.804	4.150	4.02000	.00000
.804	6.190	6.02000	.00000
.804	8.240	8.04000	.00000
	GRADIENT	.98295	.00000

RUN NO. 2210/ 0 RN/L = 5.68 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.904	-8.110	-8.02000	.00000
.904	-6.080	-6.02000	.00000
.904	-4.040	-4.02000	.00000
.904	-1.940	-1.96000	.00000
.904	.130	.06000	.00000
.904	2.130	2.02000	.00000
.904	4.170	4.02000	.00000
.904	6.200	6.02000	.00000
.904	8.250	8.04000	.00000
	GRADIENT	.97901	.00000

RUN NO. 2200/ 0 RN/L = 6.09 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.952	-8.080	-7.98000	.00000
.952	-6.040	-5.98000	.00000
.952	-4.040	-4.07000	.00000
.952	-1.940	-1.96000	.00000
.952	.130	.06000	.00000
.952	2.130	2.02000	.00000
.952	4.170	4.02000	.00000
.952	6.200	6.02000	.00000
.952	8.250	8.04000	.00000
	GRADIENT	.97901	.00000

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FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (T1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2630.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2190/ 0 RN/L = 5.89 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.051	-8.080	-7.98000	.00000
1.051	-6.040	-5.98000	.00000
1.051	-4.029	-4.02000	.00000
1.051	-1.920	-1.96000	.00000
1.051	.140	.06000	.00000
1.051	2.150	2.02000	.00000
1.051	4.190	4.02000	.00000
1.051	6.230	6.02000	.00000
1.051	8.280	8.04000	.00000
	GRADIENT	.97816	.00000

RUN NO. 2180/ 0 RN/L = 7.27 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.100	-8.110	-8.00000	.00000
1.100	-6.060	-6.00000	.00000
1.100	-4.040	-4.02000	.00000
1.100	-1.920	-1.96000	.00000
1.100	.160	.08000	.00000
1.100	2.150	2.02000	.00000
1.100	4.200	4.02000	.00000
1.100	6.240	6.02000	.00000
1.100	8.300	8.04000	.00000
	GRADIENT	.97615	.00000

RUN NO. 2170/ 0 RN/L = 7.65 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.149	-8.100	-8.00000	.00000
1.149	-6.060	-6.00000	.00000
1.149	-4.040	-4.02000	.00000
1.149	-1.930	-1.96000	.00000
1.149	.130	.06000	.00000
1.149	2.140	2.02000	.00000
1.149	4.190	4.02000	.00000
1.149	6.250	6.04000	.00000
1.149	8.320	8.05900	.00000
	GRADIENT	.97711	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (T1X032) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2160/ 0 RN/L = 8.43 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.245	-8.100	-8.00000	.00000
1.245	-6.060	-6.00000	.00000
1.245	-4.029	-4.02000	.00000
1.245	-1.930	-1.96000	.00000
1.245	.160	.08000	.00000
1.245	2.150	2.02000	.00000
1.245	4.190	4.02000	.00000
1.245	6.230	6.02000	.00000
1.245	8.290	8.04000	.00000
	GRADIENT	.97768	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (T1X033) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2120/ 0 RN/L = 3.01 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.602	-8.059	.00000	-8.00000
.602	-6.040	.00000	-6.00000
.602	-4.050	.00000	-4.02000
.602	-1.990	.00000	-1.98000
.602	.060	.00000	.06000
.602	2.030	.00000	2.02000
.602	4.029	.00000	4.00000
.602	6.060	.00000	6.02000
.602	8.100	.00000	8.04000
	GRADIENT	.00000	.99316

FA25, MSFC TWT 652, CONFIG. 01A04P0F1F2T2S2(0) (T1X033) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2130/ 0 RN/L = 6.08 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.949	-8.129	.00000	-8.00000
.949	-6.110	.00000	-6.02000
.949	-4.080	.00000	-4.02000
.949	-1.970	.00000	-1.94000
.949	.080	.00000	.08000
.949	2.050	.00000	2.02000
.949	4.080	.00000	4.02000
.949	6.110	.00000	6.02000
.949	8.160	.00000	8.04000
	GRADIENT	.00000	.98525

RUN NO. 2140/ 0 RN/L = 7.28 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.095	-8.160	.00000	-8.00000
1.095	-6.130	.00000	-6.02000
1.095	-4.090	.00000	-4.02000
1.095	-2.000	.00000	-1.96000
1.095	.080	.00000	.08000
1.095	2.050	.00000	2.02000
1.095	4.080	.00000	4.02000
1.095	6.130	.00000	6.02000
1.095	8.190	.00000	8.04000
	GRADIENT	.00000	.98301

RUN NO. 2151/ 0 RN/L = 8.42 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.243	-8.170	.00000	-8.00000
1.243	-6.140	.00000	-6.02000
1.243	-4.100	.00000	-4.02000
1.243	-2.020	.00000	-1.98000
1.243	.060	.00000	.06000
1.243	2.050	.00000	2.02000
1.243	4.090	.00000	4.02000
1.243	6.130	.00000	6.02000
1.243	8.180	.00000	8.02000
	GRADIENT	.00000	.98190

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0) (T1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 975.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2240/ 0 RN/L = 3.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.607	-8.070	-8.02000	.00000
.607	-6.070	-6.04000	.00000
.607	-4.069	-4.06000	.00000
.607	-1.990	-2.00000	.00000
.607	.060	.02000	.00000
.607	2.040	1.98000	.00000
.607	4.060	3.98000	.00000
.607	6.110	6.00000	.00000
.607	8.160	8.02000	.00000
	GRADIENT	.98876	.00000

RUN NO. 2250/ 0 RN/L = 4.84 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.803	-8.090	-8.02000	.00000
.803	-6.080	-6.04000	.00000
.803	-4.050	-4.04000	.00000
.803	-1.950	-1.98000	.00000
.803	.080	.02000	.00000
.803	2.080	1.98000	.00000
.803	4.110	3.98000	.00000
.803	6.170	6.00000	.00000
.803	8.200	8.00000	.00000
	GRADIENT	.98280	.00000

RUN NO. 2260/ 0 RN/L = 5.72 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.901	-8.110	-8.02000	.00000
.901	-6.070	-6.02000	.00000
.901	-4.060	-4.04000	.00000
.901	-1.950	-1.98000	.00000
.901	.090	.02000	.00000
.901	2.030	1.98000	.00000
.901	4.130	3.98000	.00000
.901	6.180	6.00000	.00000
.901	8.200	8.00000	.00000
	GRADIENT	.97943	.00000

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REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2270/ 0 RN/L = 6.17 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
.952	-8.139	-8.04000	00000
.952	-6.120	-6.06000	.00000
.952	-4.100	-4.08000	.00000
.952	-2.000	-2.02000	.00000
.952	.040	-.02000	.00000
.952	2.030	1.92000	.00000
.952	4.069	3.92000	.00000
.952	6.100	5.92000	.00000
.952	8.129	7.92000	.00000
	GRADIENT	.97899	.00000

RUN NO. 2280/ 0 RN/L = 7.00 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.051	-8.139	-8.04000	.00000
1.051	-6.120	-6.06000	.00000
1.051	-4.090	-4.06000	.00000
1.051	-2.010	-2.04000	.00000
1.051	.060	-.02000	.00000
1.051	2.060	1.94000	.00000
1.051	4.080	3.92000	.00000
1.051	6.120	5.92000	.00000
1.051	8.160	7.92000	.00000
	GRADIENT	.97893	.00000

RUN NO. 2290/ 0 RN/L = 7.38 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.099	-8.150	-8.04000	.00000
1.099	-6.120	-6.06000	.00000
1.099	-4.100	-4.08000	.00000
1.099	-1.990	-2.02000	.00000
1.099	.060	-.02000	.00000
1.099	2.070	1.94000	.00000
1.099	4.100	3.92000	.00000
1.099	6.160	5.94000	.00000
1.099	8.200	7.94000	.00000
	GRADIENT	.97556	.00000

FA25, MSFC TWT 652, CONFIG. 01A04P0B1F3T2S2(0) (T1X034) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2300/ 0 RN/L = 7.76 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.150	-8.080	-7.98000	.00000
1.150	-6.040	-5.98000	.00000
1.150	-3.990	-3.98000	.00000
1.150	-2.010	-2.04000	.00000
1.150	.080	.00000	.00000
1.150	2.130	2.00000	.00000
1.150	4.180	4.00000	.00000
1.150	6.240	6.02000	.00000
1.150	8.290	8.02000	.00000
	GRADIENT	.97655	.00000

RUN NO. 2310/ 0 RN/L = 8.45 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
1.248	-8.100	-8.00000	.00000
1.248	-6.040	-5.98000	.00000
1.248	-4.029	-4.02000	.00000
1.248	-1.970	-2.00000	.00000
1.248	.070	.00000	.00000
1.248	2.140	2.02000	.00000
1.248	4.170	4.00000	.00000
1.248	6.230	6.02000	.00000
1.248	8.270	8.02000	.00000
	GRADIENT	.97816	.00000

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FA25, MSFC TWT 652, CONFIG. 01A04PCB1F3T2S2(0) (T1X035) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OB-ELV = 10.000 STINGS = 2.000

RUN NO. 2350/ 0 RN/L = 3.06 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.606	-8.059	.00000	-8.00000
.606	-6.030	.00000	-5.99000
.606	-4.029	.00000	-4.00000
.606	-2.010	.00000	-2.00000
.606	.000	.00000	.00000
.606	2.040	.00000	2.02000
.606	4.029	.00000	4.00000
.606	6.060	.00000	6.02000
.606	8.080	.00000	8.02000
	GRADIENT	.00000	.99276

RUN NO. 2340/ 0 RN/L = 6.13 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
.952	-8.110	.00000	-7.98000
.952	-6.070	.00000	-5.98000
.952	-4.060	.00000	-4.00000
.952	-2.040	.00000	-2.00000
.952	.000	.00000	.00000
.952	2.070	.00000	2.04000
.952	4.060	.00000	4.00000
.952	6.110	.00000	6.02000
.952	8.150	.00000	8.02000
	GRADIENT	.00000	.98476

RUN NO. 2330/ 0 RN/L = 7.32 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.098	-8.139	.00000	-7.98000
1.098	-6.100	.00000	-5.98000
1.098	-4.100	.00000	-4.02000
1.098	-2.040	.00000	-2.00000
1.098	.000	.00000	.00000
1.098	2.050	.00000	2.02000
1.098	4.069	.00000	4.00000
1.098	6.130	.00000	6.02000
1.098	8.200	.00000	8.04000
	GRADIENT	.00000	.98199

FA25, MSFC TWT 652. CONFIG. 01ACHPOB1F3T252(0) (T1X035) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
OS-ELV = 10.000 STINGS = 2.000

RUN NO. 2320/ 0 RN/L = 8.39 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
1.247	-8.160	.00000	-8.00000
1.247	-6.100	.00000	-5.98000
1.247	-4.069	.00000	-4.00000
1.247	-2.040	.00000	-2.00000
1.247	.000	.00000	.00000
1.247	2.050	.00000	2.02000
1.247	4.069	.00000	4.00000
1.247	6.130	.00000	6.02000
1.247	8.180	.00000	8.03000
	GRADIENT	.00000	.99301

FA25, MSFC TWT 652. CONFIG. 01ATPT72 (0) (T1X035) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

BETA = .000 IB-ELV = 10.000
OS-ELV = 10.000 STINGS = 2.000

RUN NO. 2370/ 0 RN/L = 26.47 GRADIENT INTERVAL = -5.00/ 5.00

MACH	ALPHA	ALFNOM	BETNOM
4.960	-8.020	-7.98000	.00000
4.960	-6.020	-5.98000	.00000
4.960	-3.990	-3.98000	.00000
4.960	-2.010	-1.98000	.00000
4.960	.020	.04000	.00000
4.960	2.010	2.02000	.00000
4.960	4.029	4.04000	.00000
4.960	6.020	6.03000	.00000
4.960	8.059	8.05900	.00000
	GRADIENT	.99711	.00000

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FA25, MSFC TWT 652, CONFIG 01ATPTT2 (C) (T1X037) (31 OCT 78)

REFERENCE DATA

SREF = 2690.0000 SQ.FT. XMRP = 976.0000 IN. XT
LREF = 1290.3000 INCHES YMRP = .0000 IN. YT
BREF = 1290.3000 INCHES ZMRP = 400.0000 IN. ZT
SCALE = .0040

PARAMETRIC DATA

ALPHA = .000 IB-ELV = 10.000
CB-ELV = 10.000 STINGS = 2.000

RUN NO. 2360/ 0 RN/L = 26.61 GRADIENT INTERVAL = -5.00/ 5.00

MACH	BETA	ALFNOM	BETNOM
4.960	-8.010	.00000	-7.98000
4.960	-5.980	.00000	-5.96000
4.960	-4.000	.00000	-3.98000
4.960	-1.990	.00000	-1.98000
4.960	.040	.00000	.04000
4.960	2.030	.00000	2.02000
4.960	4.060	.00000	4.04000
4.960	6.050	.00000	6.02000
4.960	8.120	.00000	8.08000
	GRADIENT	.00000	.99503