

NASA CR-116, 200

NASA Contractor Report 172257

NASA-CR-172257
19840003129

STS-8 BET RESULTS

John T. Findlay, G. Mel Kelly,
Michael L. Heck, and Judy G. McConnell

ANALYTICAL MECHANICS ASSOCIATES, INC.
17 Research Road
Hampton, Virginia 23666

Contract NAS1-16087
November 1983

LIBRARY COPY

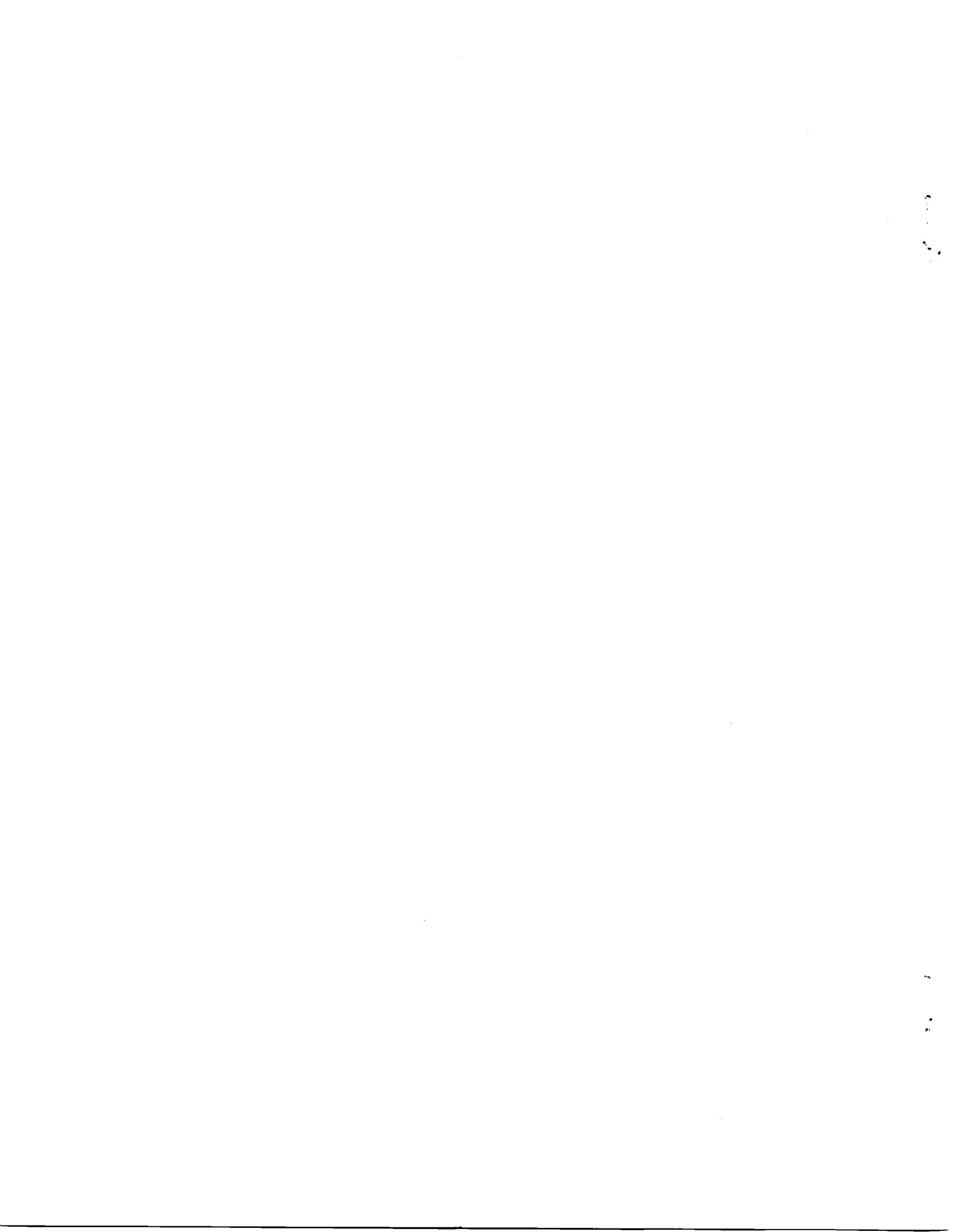
NOV 29 1983

LANGLEY RESEARCH CENTER
LIBRARY, NASA
HAMPTON, VIRGINIA



National Aeronautics and
Space Administration

Langley Research Center
Hampton, Virginia 23665



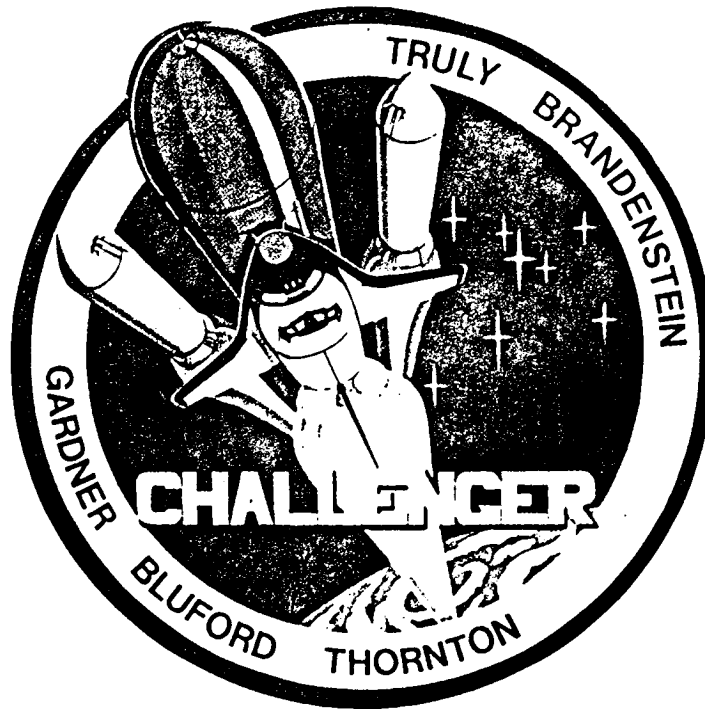


TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
	ABSTRACT	ii
I	ENTRY TRAJECTORY RECONSTRUCTION	1
	I.a. Dynamic data	1
	I.b. Tracking data	2
	I.c. Reconstruction results	2
II	EXTENDED BET	18
III	AEROBET DEVELOPMENT	27
IV	MMLE INPUT FILES	64
	APPENDIX A - Spacecraft and Physical Constants	66
	APPENDIX B - Final Residuals for STS-8 Trajectory Reconstruction	73
	APPENDIX C - Listing of STS8BET Air Relative Parameters.	83
	APPENDIX D - STS-8 Source and Output Products for Archival	167

N84-11197 #

ABSTRACT

This report documents the final Best Estimate Trajectory (BET) products, i.e., the reconstructed trajectory, the Extended BET, AEROBET and MMLE input files, generated for the eighth NASA Space Shuttle flight. Section I discusses the reconstructed trajectory (inertial BET) for this "Challenger" flight, the first night landing. The results are available as BET8T06 under user catalog 169750N. State (position, velocity, and attitude) plus three accelerometer scale factors were determined from fitting the Guam S-band data, seven C-band passes, and pseudo Doppler and altimeter during rollout on Runway 22. The anchor epoch utilized for the batch weighted-least-squares determination was Sept. 5, 1983 7^h1^m50^s.0 (25310 GMT seconds). The spacecraft altitude at epoch is ~617 kft. IMU2 data were selected for the reconstruction.

The Extended BET, STS8BET/UN=274885C, is based on merging the inertial parameters with the final adopted LAIRS file, LAIRJ8/UN=476250C. This file is the LaRC LAIRS file, STS8MET/712662N, with subsonic winds replaced by jimsphere measurements as discussed in Section II. The AEROBET file is on physical nine track reel NX0483 (duplicated on NX0484 for back-up purposes). Plots of the relevant data from the AEROBET are included in Section III. These include spacecraft configuration and dynamics, as well as flight/data base comparisons.

MMLE input files (25 Hz GTFILES) were generated based on the IMU2 data as well as ACIP data. The latter file is on NX0943 and was generated for 15 maneuver periods as discussed in Section IV. The IMU2 file is on NX0844 and covers the time span from epoch to main gear touchdown.

Attached as appendices are:

APPENDIX A - Spacecraft and physical constants utilized,
APPENDIX B - Final residual plots for the tracking data,
APPENDIX C - 1 second listing of the air relative information,
and APPENDIX D - A data (source and output) archival.

Relevant times and events for STS-8 are:

<u>(Event)</u>	<u>Time (sec from epoch)</u>
Main Gear	2309.
Weight on Wheels (WOW)	2330.
Weight on Nose Gear (WONG)	2339.
Stop time	2386.

I. Entry Trajectory Reconstruction

I.a. Dynamic data

Time homogeneous ~1 Hz measurements from IMU2 of the tri-redundant set were selected as the dynamic data source for STS-8 entry reconstruction. Figure 1 presents strip charts over five hundred (500) second intervals of the Shuttle Challenger dynamics during the eighth entry flight. Plotted are body axes rates and accelerations derived from the IMU measured ΔV_{M50} and quaternions. Time zero on these charts corresponds to the processing epoch of 25310 GMT seconds (h~617 kft). Selection of IMU2 was arbitrary since the performance of each IMU was excellent as expected. Relative IMU comparisons showed that IMU2 was selected as the mid-value generally as frequent as the other units as shown in the following table:

Accelerometer Comparisons Based on 2422 Points

	<u>Percentage mid-value measurement</u>		
	<u>IMU1</u>	<u>IMU2</u>	<u>IMU3</u>
$\Delta V_{X_{M50}}$	48.6	34.4	17.0
$\Delta V_{Y_{M50}}$	36.4	40.9	22.7
$\Delta V_{Z_{M50}}$	36.2	38.4	25.4

Gyro Comparisons Based on 2429 Points

	<u>Percentage mid-value measurement</u>		
	<u>IMU1</u>	<u>IMU2</u>	<u>IMU3</u>
Euler ψ	11.3	30.2	58.5
Euler θ	20.0	52.7	27.3
Euler ϕ	14.9	41.9	43.2
Total angle, Ω	42.4	46.0	11.6
Total angular rate, $\dot{\Omega}$	33.3	34.2	32.5

In terms of the total sensed ΔV (magnitude) measurement, IMU1 and IMU2 compared to within 1.1 fps. IMU3 was essentially within 3 fps of the other two instruments.

There were no major data gaps in the Operational Instrumentation (OI) recorded data. Of the data gaps noted, the following list summarizes the major IMU data losses:

<u>time</u> (sec from epoch)	<u>loss of ΔV's</u> (seconds)	<u>loss of quaternions</u> (seconds)
~355	8.0	----
~338	---	3.84
~665	10.9	10.60

I.b. Tracking data

Tracking coverage for the 8th mission was provided by an S-band pass from Guam (~12° max elevation) and seven C-band radars: Pt. Pillar, St. Nicolas Island, two Vandenberg stations, and three from the Edwards complex (including the Dryden station). Since this was a night landing, no cine-theodolite data were available. Thus, pseudo Doppler and altimeter data were processed during rollout through post stop on Runway 22 at EAFB. Tracking coverages are depicted in Figures 2 and 3. Figure 2 shows the entire ground track for STS-8 with stations (complexes) as noted. Time ticks every 500 seconds and correspondingly, the altitude, are superimposed thereon. Figure 3 shows (a) the uppermost altitude portion to C-band acquisition, (b) C-band coverages from acquisition to final approach, and (c) the final approach and landing segment. Times and altitudes are as indicated. Tracking station locations with respect to the ground track are also shown. Acronyms and locations utilized for the various trackers are given in Table I.

I.c. Reconstruction results

The final BET solution for STS-8 is presented in Table II. The final solution, BET8T06, was obtained solving for state and three accelerometer scale factors. The three extended parameters were determined to be -63, 96, and -24 ppm for the X, Y, and Z accelerometers, respectively. For information in Table II, the initial state (the JSC Guam only solution), and a state only estimate from ENTREE (BET8T05) are included. It is seen that the included terms result in a minimal change to the state (and attitude) estimate while improving the fit from 2.2σ to 1.2σ (weighted root-mean-square). Similarly, the weighted mean, μ_w , is significantly reduced.

Quality of the data fit in general is seen in Appendix B which shows the resulting residuals, by station and data type, for the solution. Composite range, azimuth, and elevation residuals are included in this section as Figures 4, 5, and 6, respectively. Table III presents a summary of the residuals by station.

Comparisons of the final BET position and velocity after rollout on Runway 22 versus post-landed survey values are given below:

END CONDITIONS AT VEHICLE STOP (Runway #22 Coordinates)

	<u>Survey</u>	<u>BET8T06</u>
X, ft	+12172	+12122
Y, ft	0	+12
h-h _{RW} , ft	+16	+22
\dot{X} , fps	0	+0.02
\dot{Y} , fps	0	-0.01
\dot{h} , fps	0	-0.13

Figure 7 presents plots of the BET during rollout on Runway 22. Surveyed values are depicted thereon. Vehicle stop occurs 2386 seconds after epoch.

N84-11197#

TYPE	TYPE	STATION NO.	STATION NAME	LATITUDE (GEOD) (deg)	LONGITUDE (deg)	ALT (ABOVE REF.) (ft)	MODULUS OF REFRACTION	SCALE HEIGHT (m)
S-band	...	1	GWMS	13.31063	144.73681	380.4000		
C-band	..., FPQ-6	2	PTPC	37.49784	237.50039	-27.0341	380	5795
C-band	..., TPQ-18	3	VDBC	34.66587	239.41865	203.5433	334	6821
C-band	..., FPS-16	5	VDSC	34.58276	239.43853	1972.1457	338	6507
C-band	..., FPS-16	9	FRCC	34.96083	242.08856	2480.3478	319	6049
C-band	..., FPS-16	10	EAFC	34.96962	242.06974	2521.7192	299	7387
C-band	..., FPS-16	15	SNFC	33.24771	240.47935	732.1522	299	7366
C-band	..., FPS-16	20	EFFC	34.97046	242.06858	2540.2200	335	6263
							299	7356

GWMS mounted N/S, frequency .21941732E8 Hz

Table 1. SFS-8 station locations and refraction data

EPOCH: 9/15/83 7^h1^m50^s (25310^s) GMT

DATA TYPES: S-band, 1 radar (GWMS)
 C-band, 7 radars (PTPC, VDSC, SNFC, FRCC, EFFC, EAFC)
 Pseudo altimeter post WONG
 Pseudo Doppler post STOP (3 stations)

INITIAL CONDITIONS (ENTREE coordinates)

<u>Parameter</u>	<u>Initial Estimate, JSC</u>	<u>BET8T05⁽¹⁾</u>	<u>BET8T06⁽²⁾</u>
V_R , fps	24014.000	24014.269	24013.984
γ_R , deg	-0.79972395	-0.79866979	-0.79864150
ψ_R , deg	59.877752	59.876210	59.876667
h_D , ft	617233.31	617348.70	617298.91
ϕ_D , deg	2.9698077	2.9697235	2.9697829
λ , deg	138.00891	138.00893	138.00896
ψ , deg	55.9754853	55.952864	55.956986
θ , deg	25.9242803	25.909712	25.907480
ϕ , deg	-4.4844149	-4.5529199	-4.5498941
	} see Appendix B		
ΔS_{F_X} , ppm	N/A	N/A	-63
ΔS_{F_Y} , ppm	N/A	N/A	96
ΔS_{F_Z} , ppm	N/A	N/A	-24
μ_W	N/A	-1.095	-0.092
σ_W	N/A	2.203	1.198

(1) state only

(2) state and scale factors

Table II. STS-8 solution and comparisons

OBSERVATION STATISTICS BASED ON FINAL STATE

STATION NO.	OBSERVATION NAME	OBSERVATIONS ACCEPTED	AVERAGE WEIGHT. RES.	AVERAGE RESIDUAL	STANDARD STAND. DEV.	WEIGHTED STAND. DEV.
0	ALTIMETER	91 OF 91	-.77204884E+00	-.37058344E+01	.25965168E+01	.54094099E+00
1	GWMS RANGE	225 OF 225	-.19756968E-01	-.29373263E+00	.50101900E+01	.77224750E+00
1	GWMS DOPPLER	224 OF 224	-.45216445E+00	-.19388201E+00	.37895684E+00	.10113330E+01
1	GWMS X-ANGLE	123 OF 123	-.69244435E+00	-.14005260E-01	.13681095E-01	.66120566E+00
1	GWMS Y-ANGLE	225 OF 225	.18037699E-01	.45518133E-03	.10437638E-01	.83293941E+00
2	PTPC RANGE	75 OF 75	-.36134681E+00	-.11109389E+02	.19037424E+02	.62007853E+00
2	PTPC AZIMUTH	79 OF 79	-.12953872E+00	-.14844044E-02	.33567539E-02	.29293204E+00
2	PTPC ELEVATION	79 OF 79	.46628325E+00	.84770225E-02	.60134231E-02	.32795937E+00
3	VDBC RANGE	176 OF 176	-.57120683E+00	-.17274352E+02	.27132177E+02	.89081111E+00
3	VDBC AZIMUTH	201 OF 201	-.22781985E-01	-.26106232E-03	.61447491E-02	.53623051E+00
3	VDBC ELEVATION	201 OF 201	-.24269130E+00	-.35126028E-02	.63455691E-02	.44466307E+00
5	VDSC RANGE	169 OF 169	-.10043910E+01	-.30318654E+02	.30106150E+02	.99397271E+00
5	VDSC AZIMUTH	194 OF 194	.74406279E+00	.85263315E-02	.10762957E-01	.93924516E+00
5	VDSC ELEVATION	195 OF 195	-.97187872E+00	-.14615235E-01	.13071974E-01	.78697406E+00
9	FRCC RANGE	162 OF 162	-.40824539E+00	-.12424459E+02	.42289658E+02	.13990441E+01
9	FRCC AZIMUTH	182 OF 182	.68074982E+00	.78008183E-02	.21417365E-01	.18690177E+01
9	FRCC ELEVATION	182 OF 182	.30410287E+00	.35092542E-02	.15551533E-01	.10791428E+01
10	EAFC RANGE	196 OF 196	-.41272305E-01	-.12416994E+01	.22847545E+02	.76054453E+00
10	EAFC AZIMUTH	201 OF 201	-.84628198E+00	-.96976771E-02	.25500986E-01	.22253809E+01
10	EAFC ELEVATION	199 OF 199	.10198195E+01	.11888793E-01	.98173153E-02	.85084720E+00
15	SNFC RANGE	148 OF 148	-.99522606E+00	-.30219590E+02	.20833987E+02	.68530486E+00
15	SNFC AZIMUTH	174 OF 174	.27647137E+00	.31681285E-02	.53161245E-02	.46391938E+00
15	SNFC ELEVATION	174 OF 174	-.71411457E+00	-.11131039E-01	.82618199E-02	.50839482E+00
17	PSBV DOPPLER	55 OF 55	.20317776E+01	.60953328E+00	.12049951E+00	.40166503E+00
18	PSBN DOPPLER	55 OF 55	-.26795091E+00	-.80385272E-01	.56403073E-01	.18801024E+00
19	PSBE DOPPLER	55 OF 55	-.11944688E+00	-.35834065E-01	.65843470E-01	.21947823E+00
20	EFFC RANGE	255 OF 255	.10032791E+00	.30836247E+01	.36044036E+02	.11943508E+01
20	EFFC AZIMUTH	277 OF 277	.27572593E+00	.31595864E-02	.18922442E-01	.16512945E+01
20	EFFC ELEVATION	277 OF 277	.26975904E+00	.25759168E-02	.12261990E-01	.99148896E+00

TOTAL WEIGHTED FIT STATISTICS--- NOBS = 4849 WGT. MEAN = -.91742587E-01 WGT. STD. DEV. = .11978897E+01

TABLE III. STS-8 residual summary.

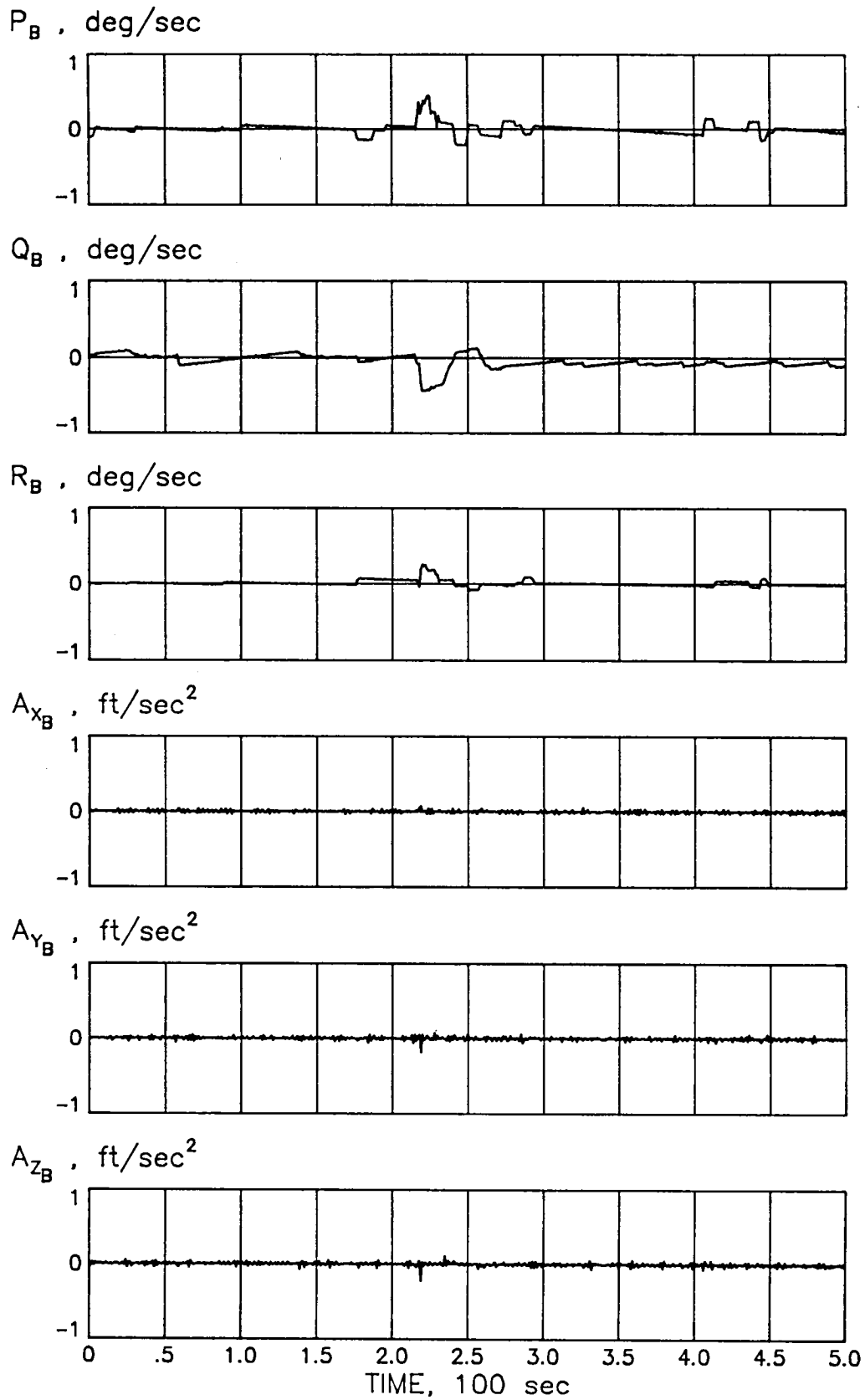


Figure 1. STS-8 Dynamic data , IMU 2.

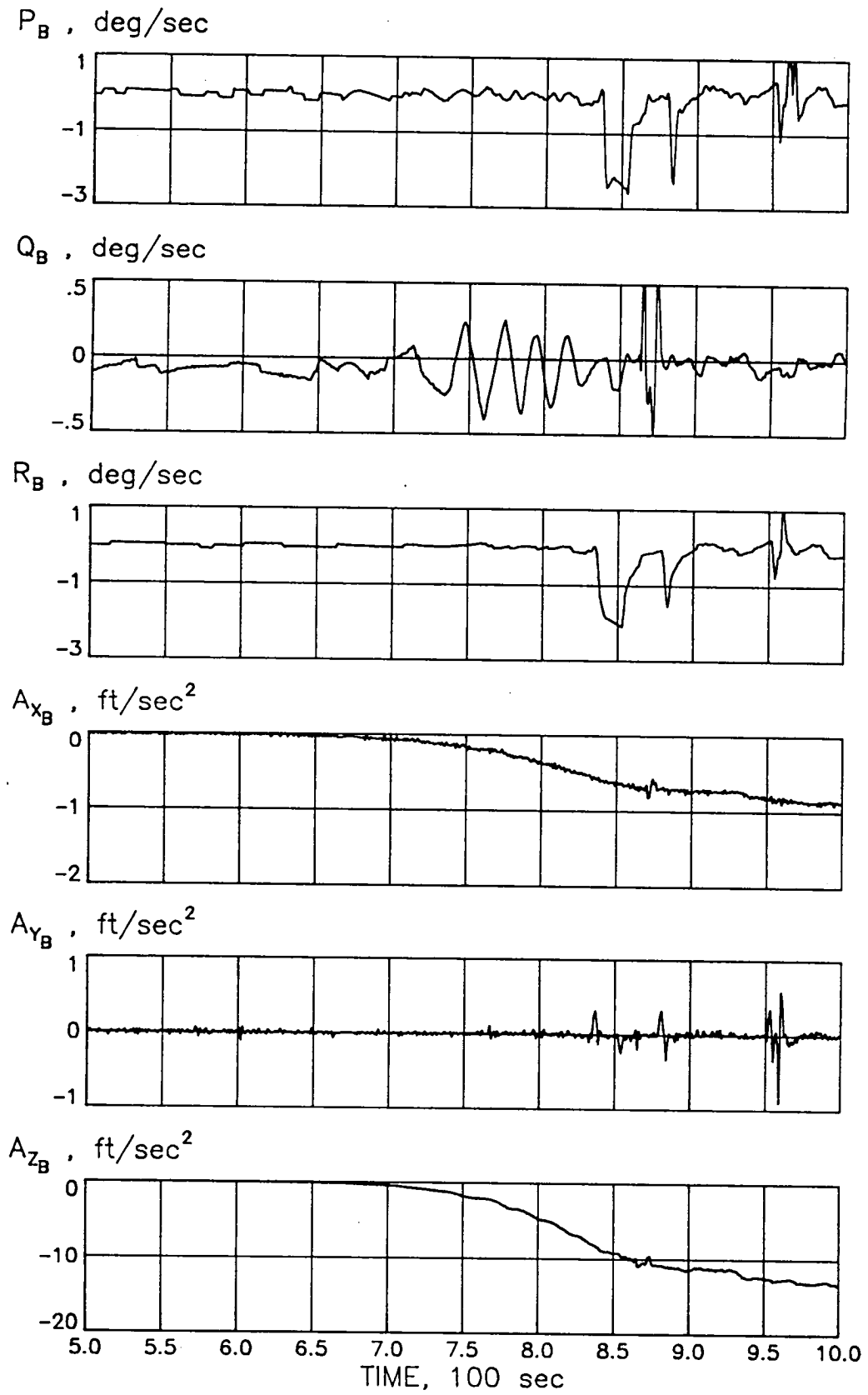


Figure 1. (continued)

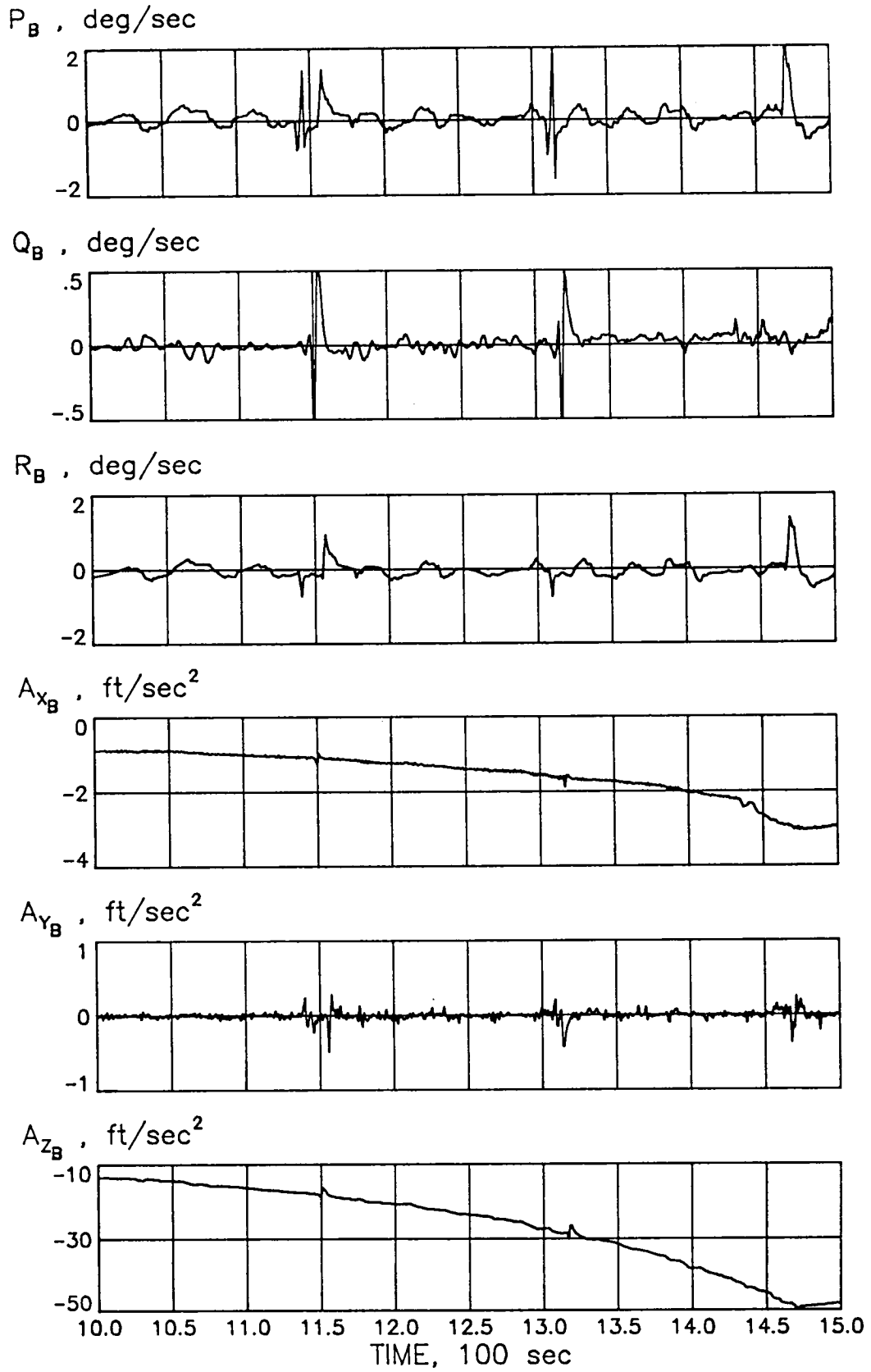


Figure 1. (continued)

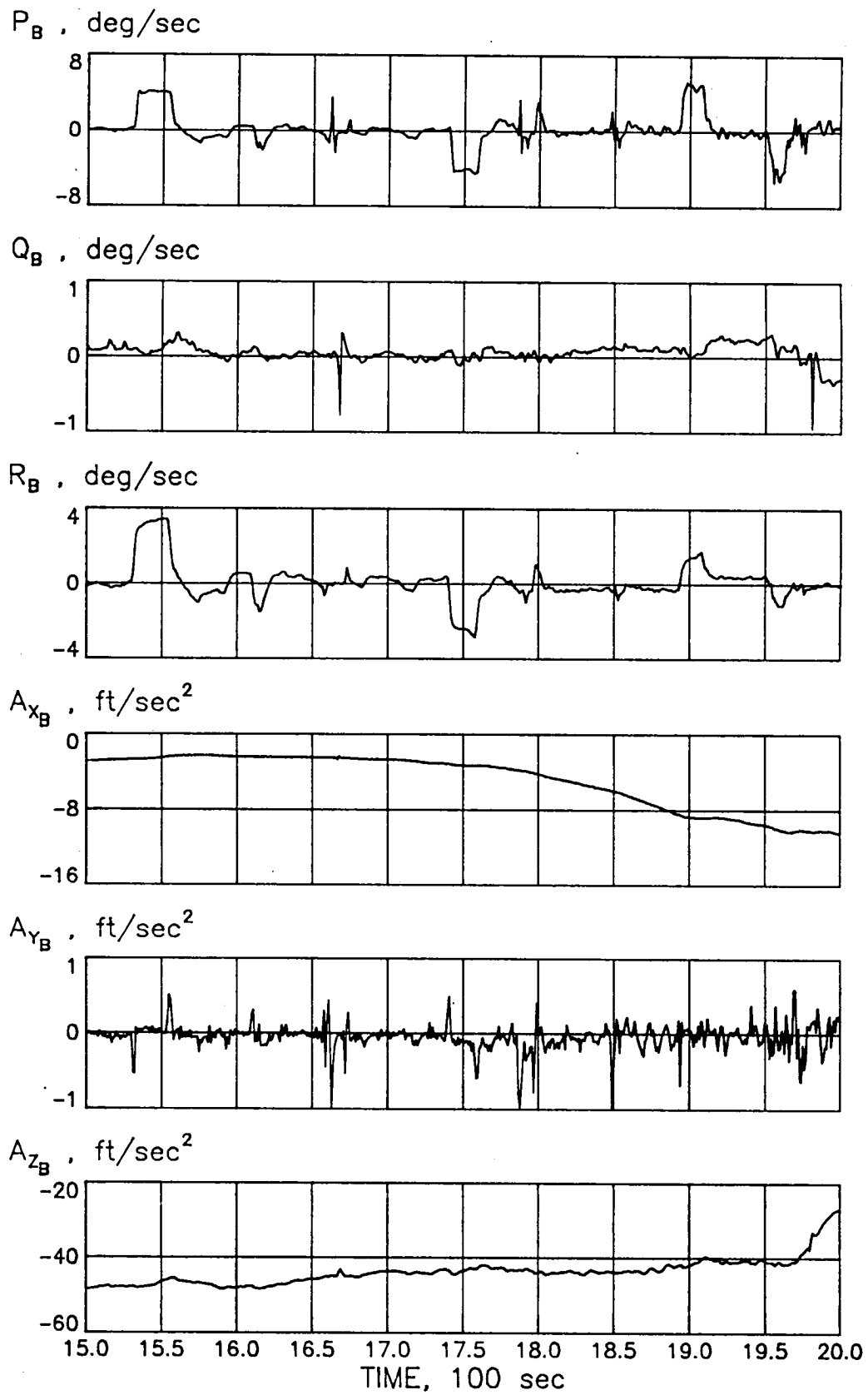


Figure 1. (continued)

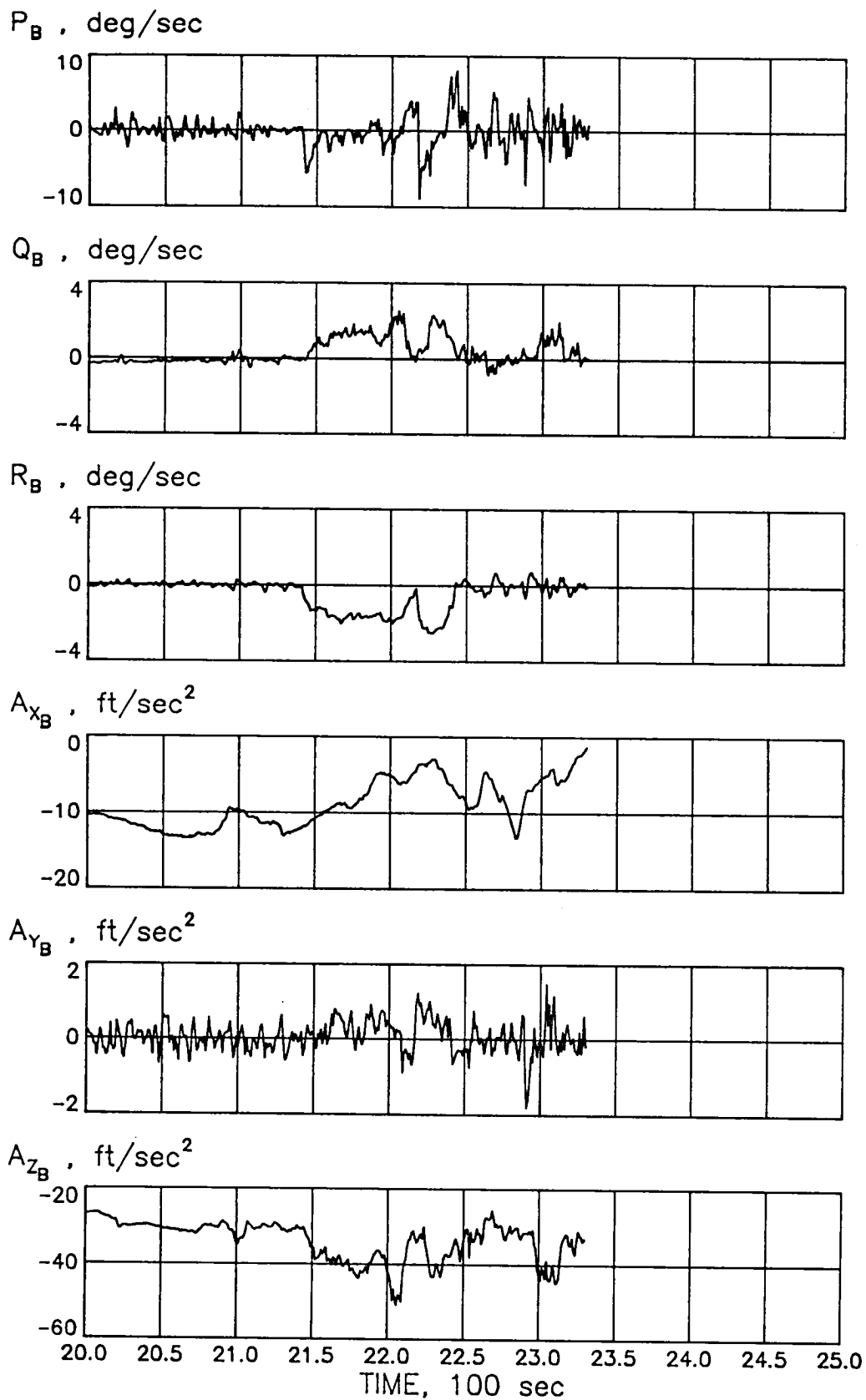


Figure 1. (concluded)

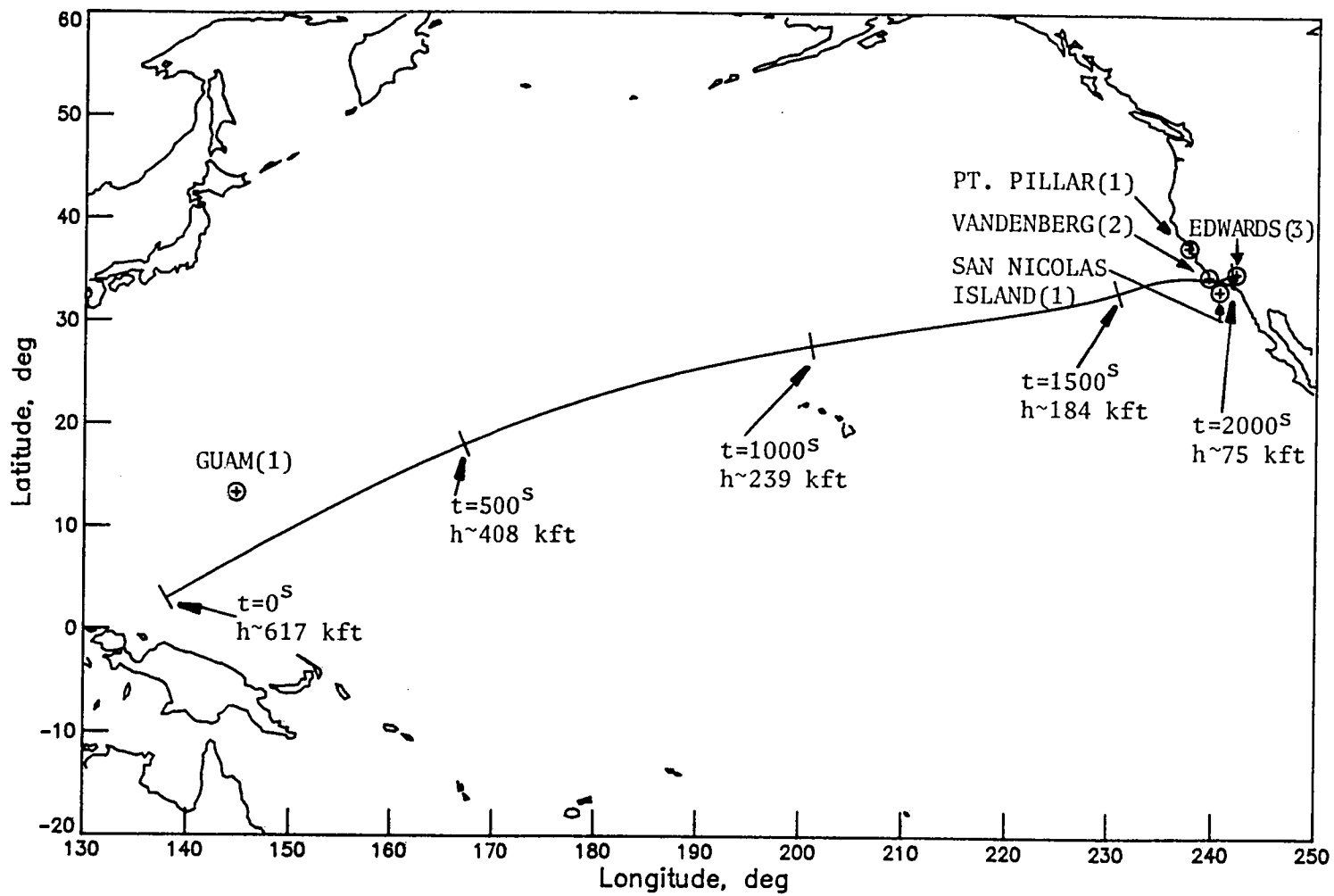
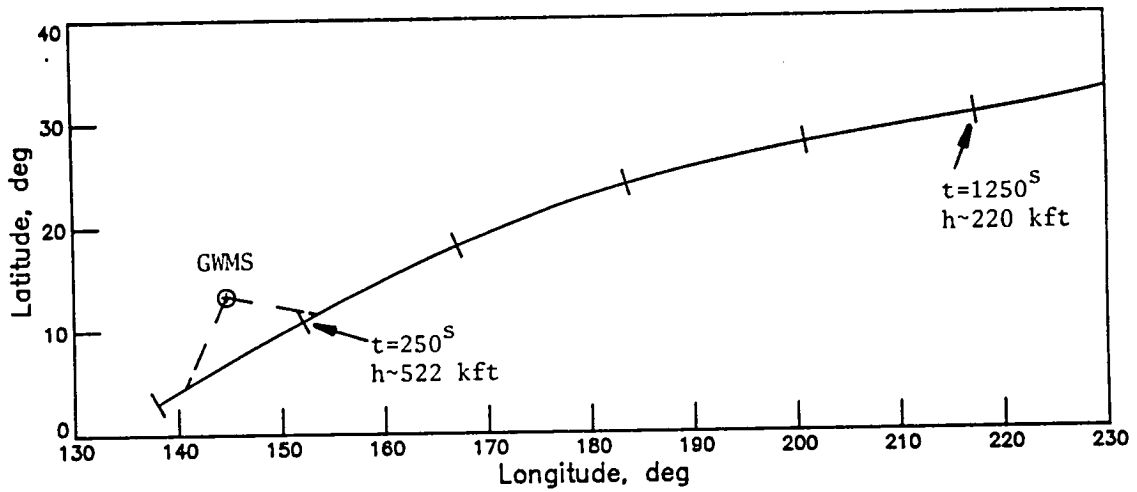
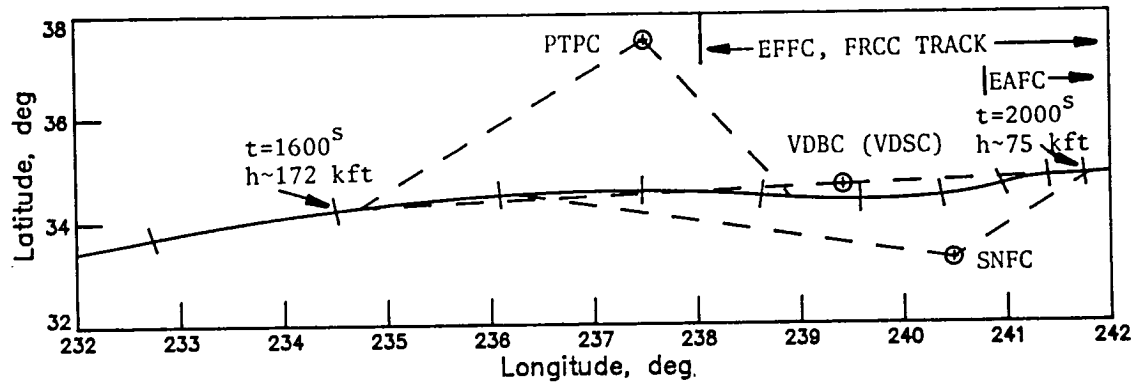


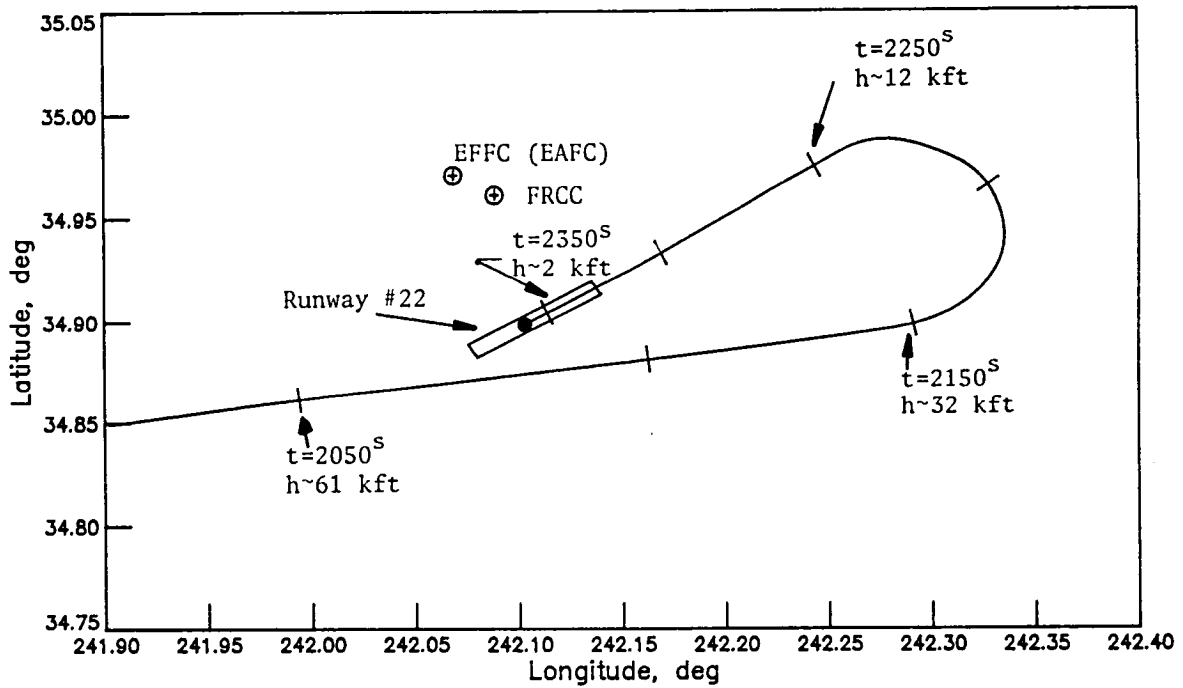
Figure 2. STS-8 ground track from epoch to touchdown.



(a) Entry to C-band acquisition



(b) C-band acquisition to final approach



(c) Final approach and landing

Figure 3. Detailed tracking coverage for STS-8.

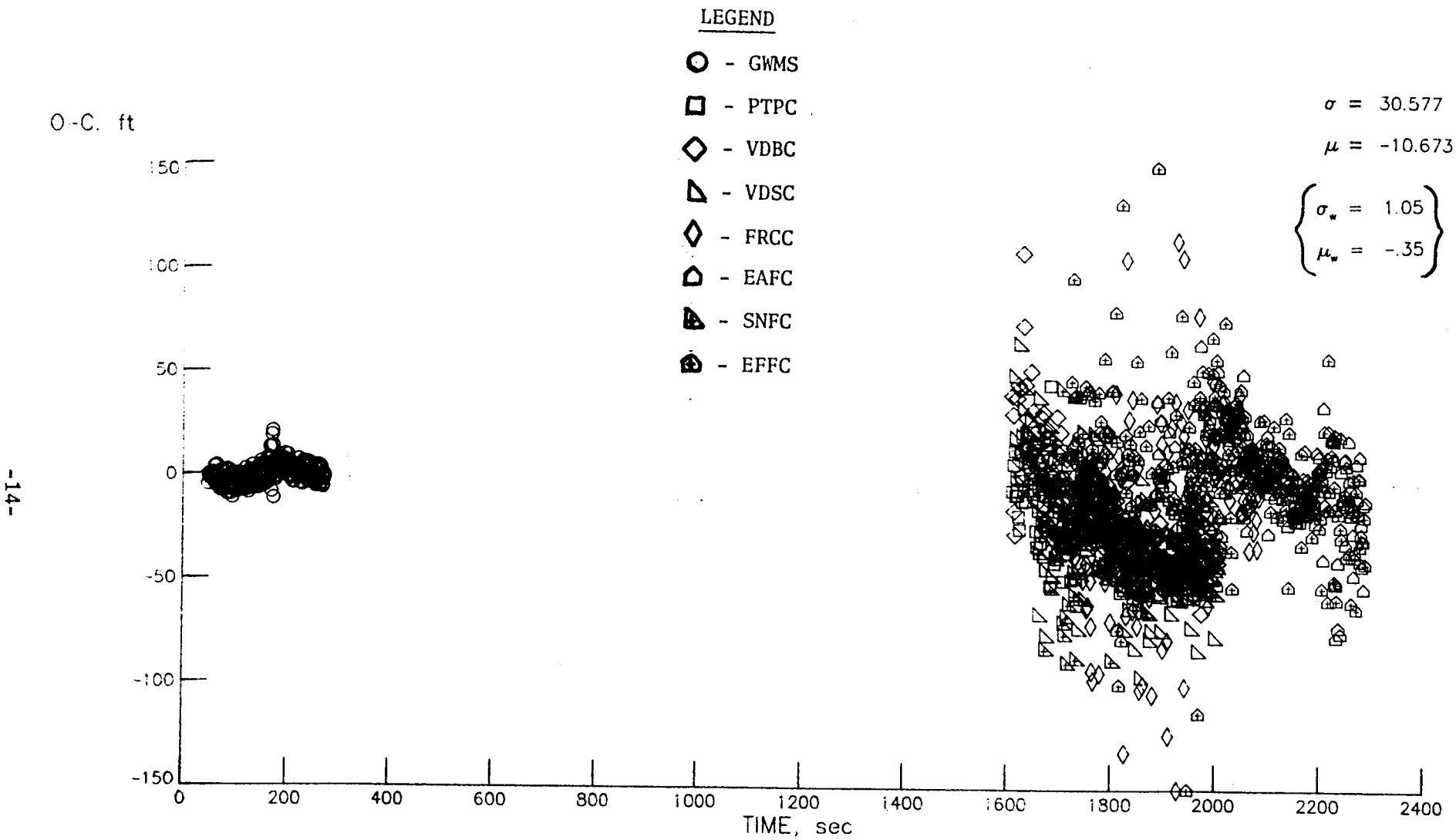


Figure 4. STS-8 composite range residuals.

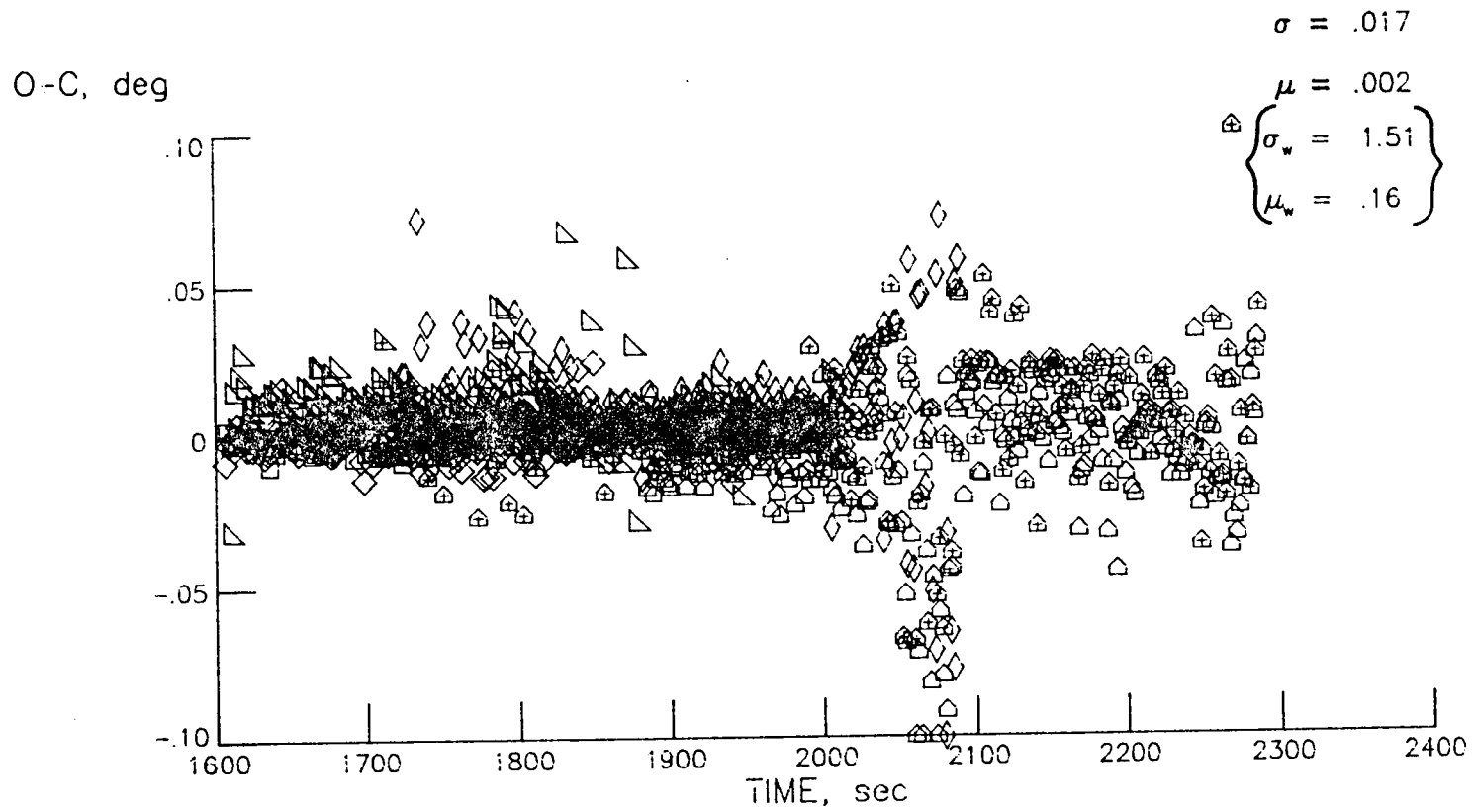


Figure 5. STS-8 composite azimuth residuals.

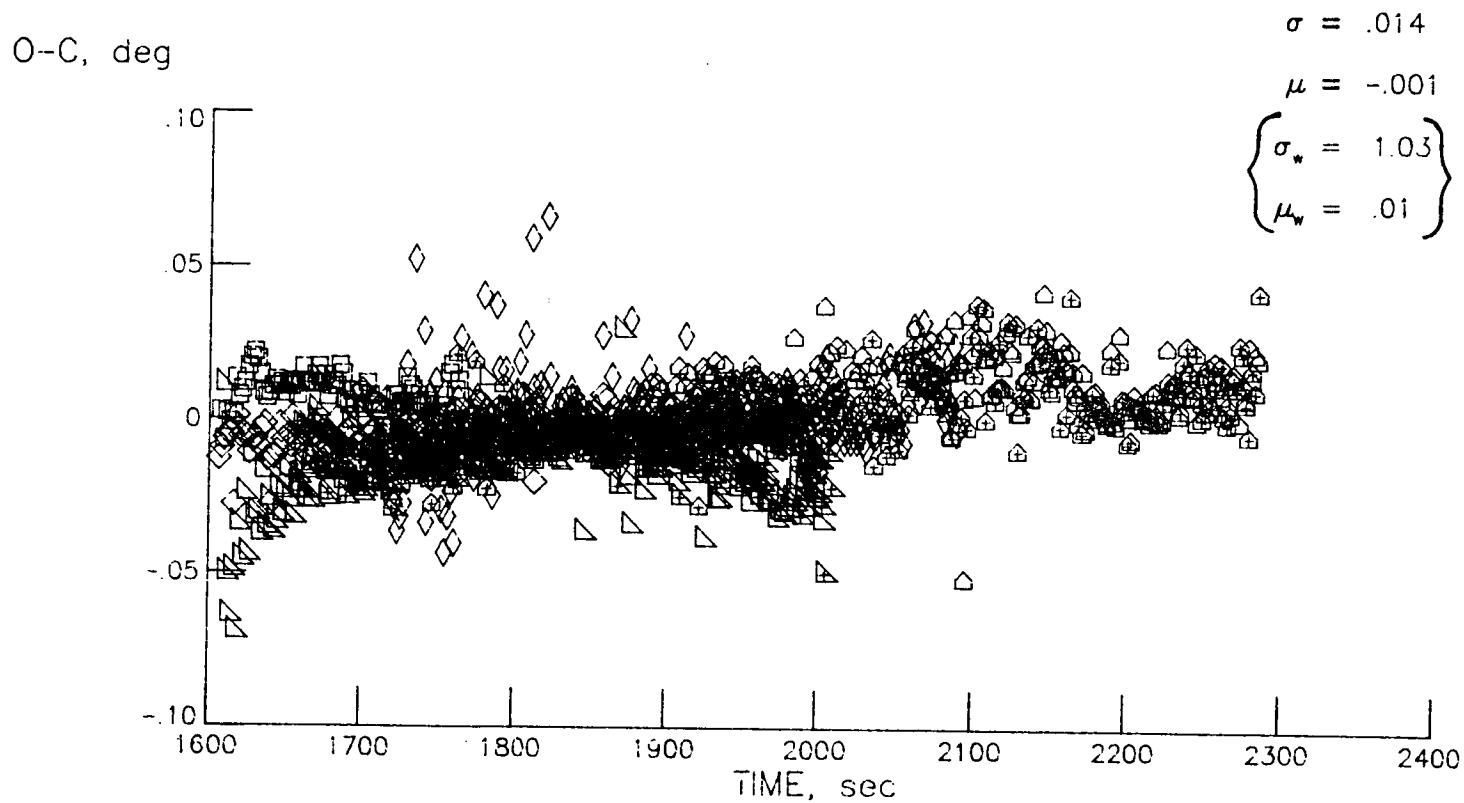


Figure 6. STS-8 composite elevation residuals.

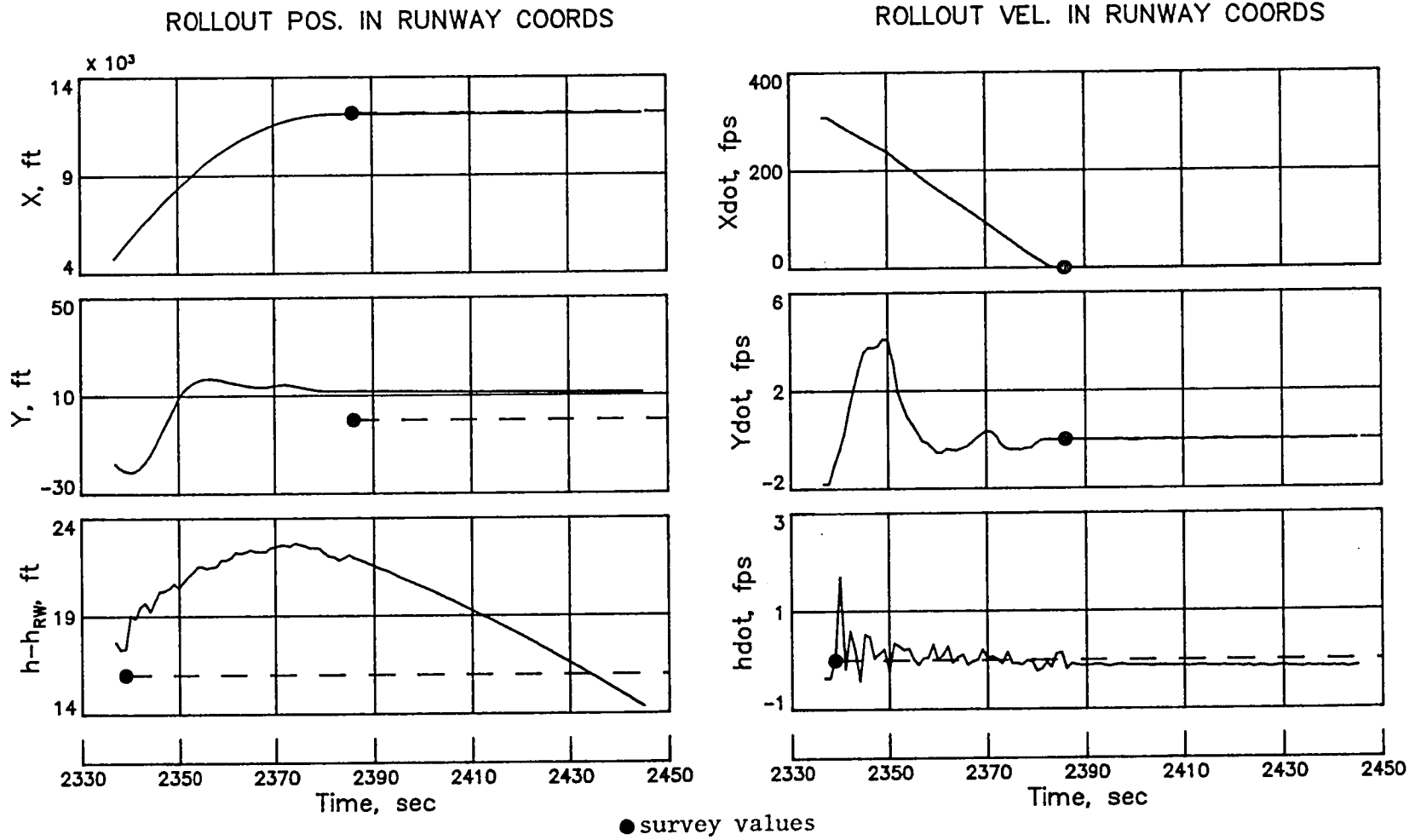


Figure 7. Rollout position and velocity plots for STS-8.

II. Extended BET

The Extended BET, STS8BET under user catalog 274885C, was developed by merging the previously discussed inertial trajectory (BET8T06) and the revised LAIRS file, LAIRJ8. The revised LAIRS file is the Langley developed STS8MET/UN=712662N, with jimsphere winds below ~55 kft. Separately, density and wind evaluations were performed. The former simply involved comparison of the LAIRS density with a representative variation suggested by the various soundings launched in support of the mission. This included four Barking Sands, Hawaii and two Pt. Mugu, California firings. The Hawaiian soundings consisted of two ROBIN spheres and two thermistors. One of each was deployed from Pt. Mugu on the day of entry. All soundings agreed to approximately ± 5 percent. It is noteworthy that seven additional Pt. Mugu soundings, two launched on 8/30, three on 9/1, and two on 9/3, also showed virtually the same agreement. Figure 8 shows a composite density plot used to evaluate the LAIRS profile. Shown are the LAIRS density (ratioed to the '76 Standard), the measurement spread previously discussed (as the dashed lines), and the derived density based on the measured normal acceleration and the predicted normal force coefficient. Also shown thereon is the NOAA profile extracted from the JSC BET. Certainly no major systematic differences are suggested. A rather sharp, erratic, signature is seen in the C_N derived density. Based on a recent analysis⁽¹⁾, if one assumes such density to be real, convectively unstable air masses are suggested in very local regions, namely $h \sim 245$ kft and $h \sim 235$ kft. Though these preliminary results are interesting, more research is required in this area.

Figures 9 through 12 depict the LAIRJ8 data versus altitude, units changed to conform to those adopted for the BET. Figure 9 shows the temperature profile. Pressure and density profiles are given in Figs. 10 and 11, respectively. Finally, winds are presented as Figure 12. The subsonic winds shown thereon ($h < 55$ kft) are jimsphere measurements based on a balloon deployed 15 minutes after landing. Evidence supporting the need for wind replacement is described below.

Alternate wind measurements used for subsonic wind evaluation were available from three jimsphere balloons deployed over an approximate four(4) hour interval. Figure 13 shows a composite of the measured winds, jimsphere

⁽¹⁾ Findlay, J. T., Kelly, G. M., McConnell, J. G., Compton, H. R., "Shuttle 'Challenger' Aerodynamic Performance From Flight Data - Comparisons with Predicted Values and 'Columbia' Experience," AIAA Paper No. 84-0485, to be presented January 1984.

and rawinsonde, in both magnitude and direction. As shown, very large differences between the rawinsonde and jimsphere measurements exist over the altitude range $22 \text{ kft} < h < 32 \text{ kft}$. The large differences have since been attributed to very erratic rawinsonde wind measurements used as inputs to LAIRS. Subject to additional verification via the Rockwell ADS file, a revised LAIRS file (LAIRJ8) was developed by replacing rawinsonde winds below 54,750 feet with winds obtained from the most timely jimsphere balloon, launched ~15 minutes after touchdown. The revised LAIRS file also incorporates the measured surface winds at touchdown, 10 fps from 210° , which were obtained from D. Richardson, AFFTC. Estimated winds, batch and deterministic, obtained from the Rockwell post-flight calibrated ADS file are shown together with the rawinsonde and most timely jimsphere winds as Figure 14. Particularly in the altitude region of concern, the estimated winds are in good agreement with the jimsphere measurements. Therefore, the revised LAIRS file LAIRJ8 was adopted as the atmospheric file for STS-8.

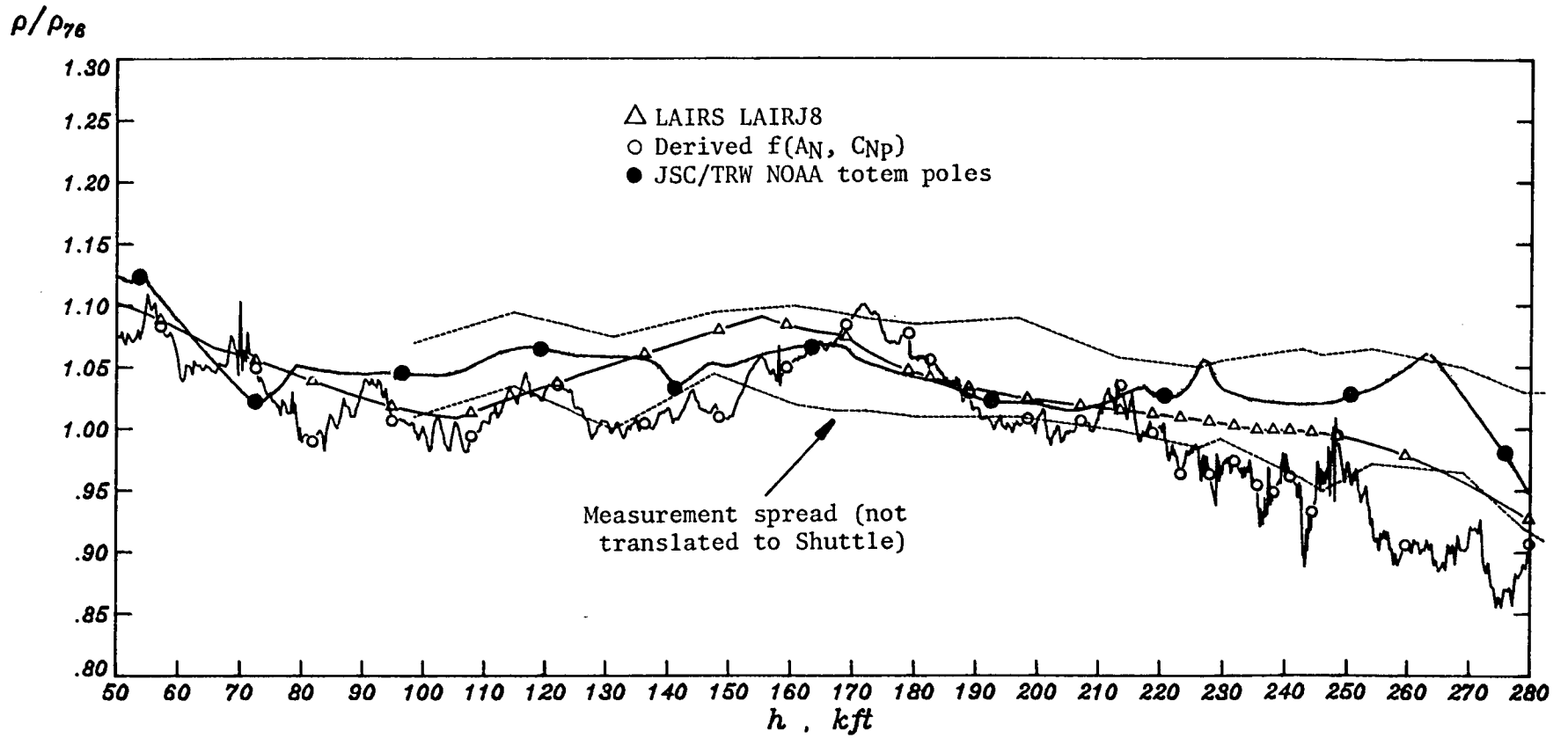


Figure 8. STS-8 density comparisons.

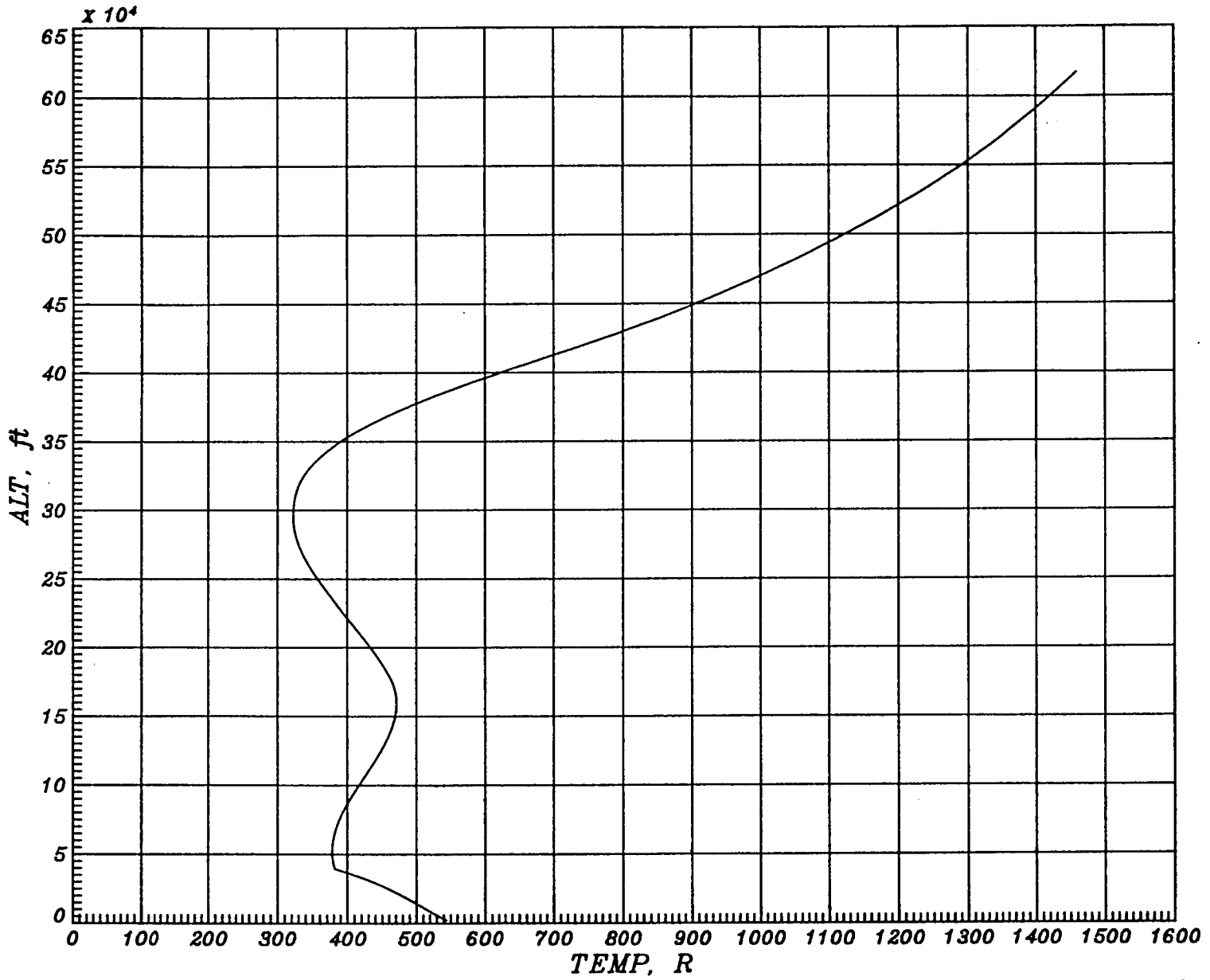


Figure 9. STS-8 temperature profile.

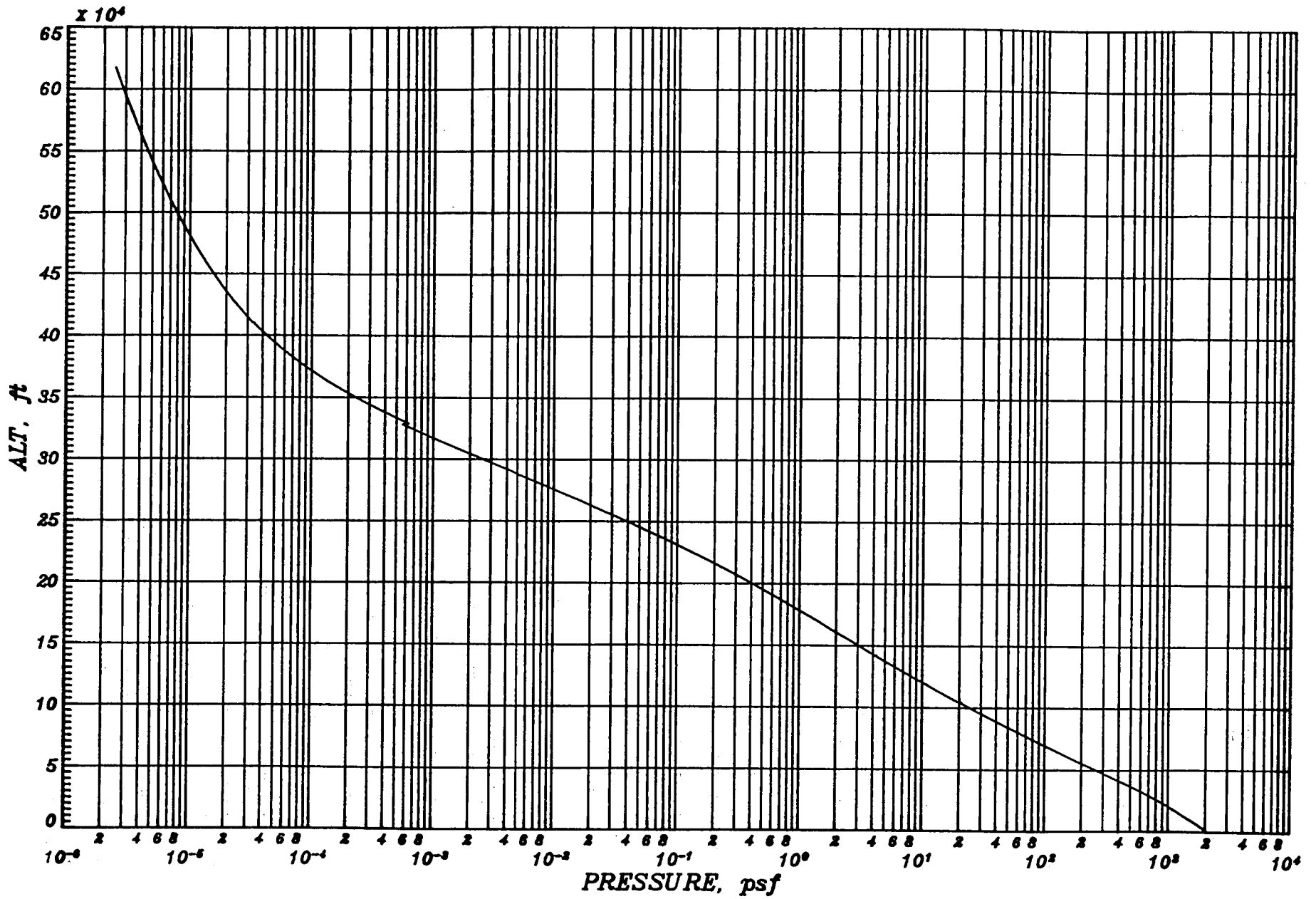


Figure 10. STS-8 pressure profile.

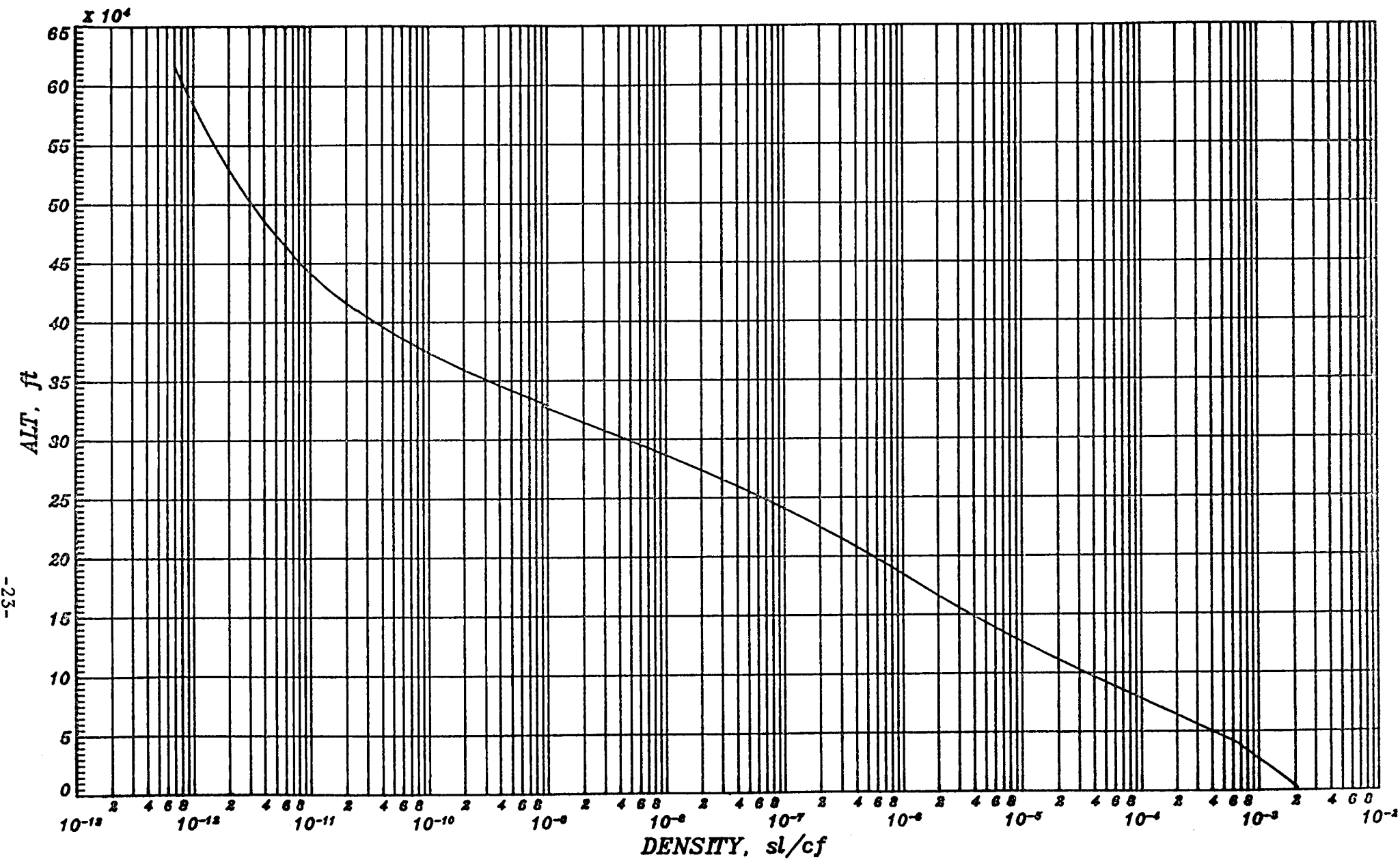


Figure 11. STS-8 density profile.

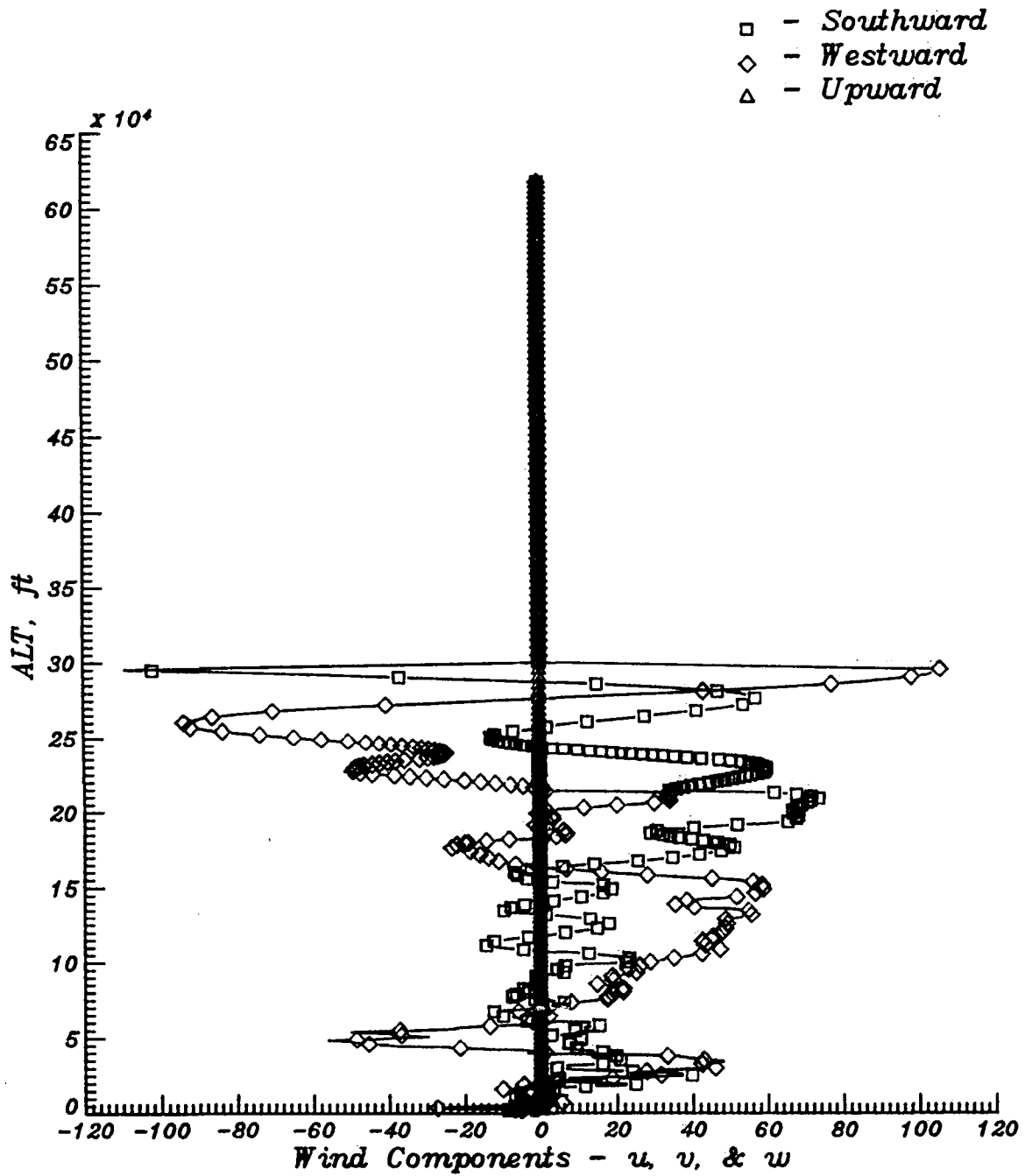
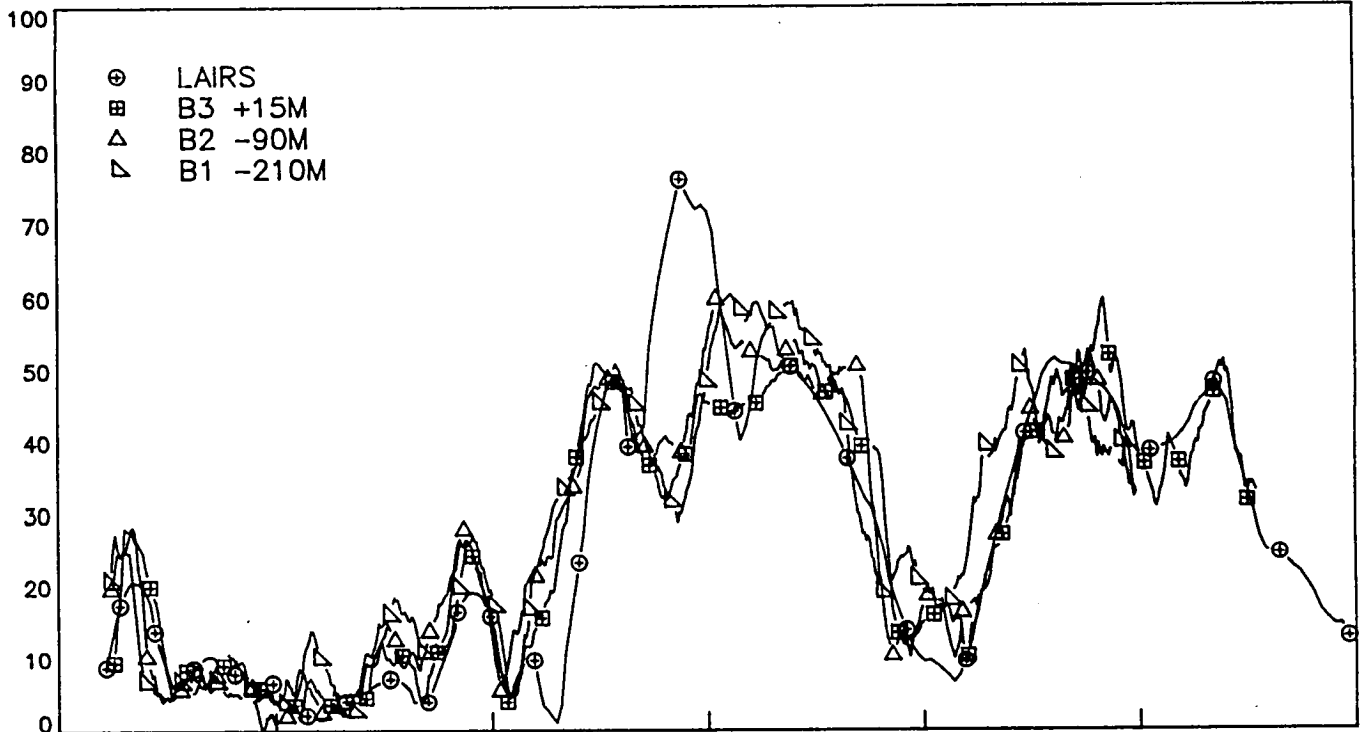


Figure 12. STS-8 atmospheric winds versus altitude.

Wind Magnitude, fps



Wind Direction, deg

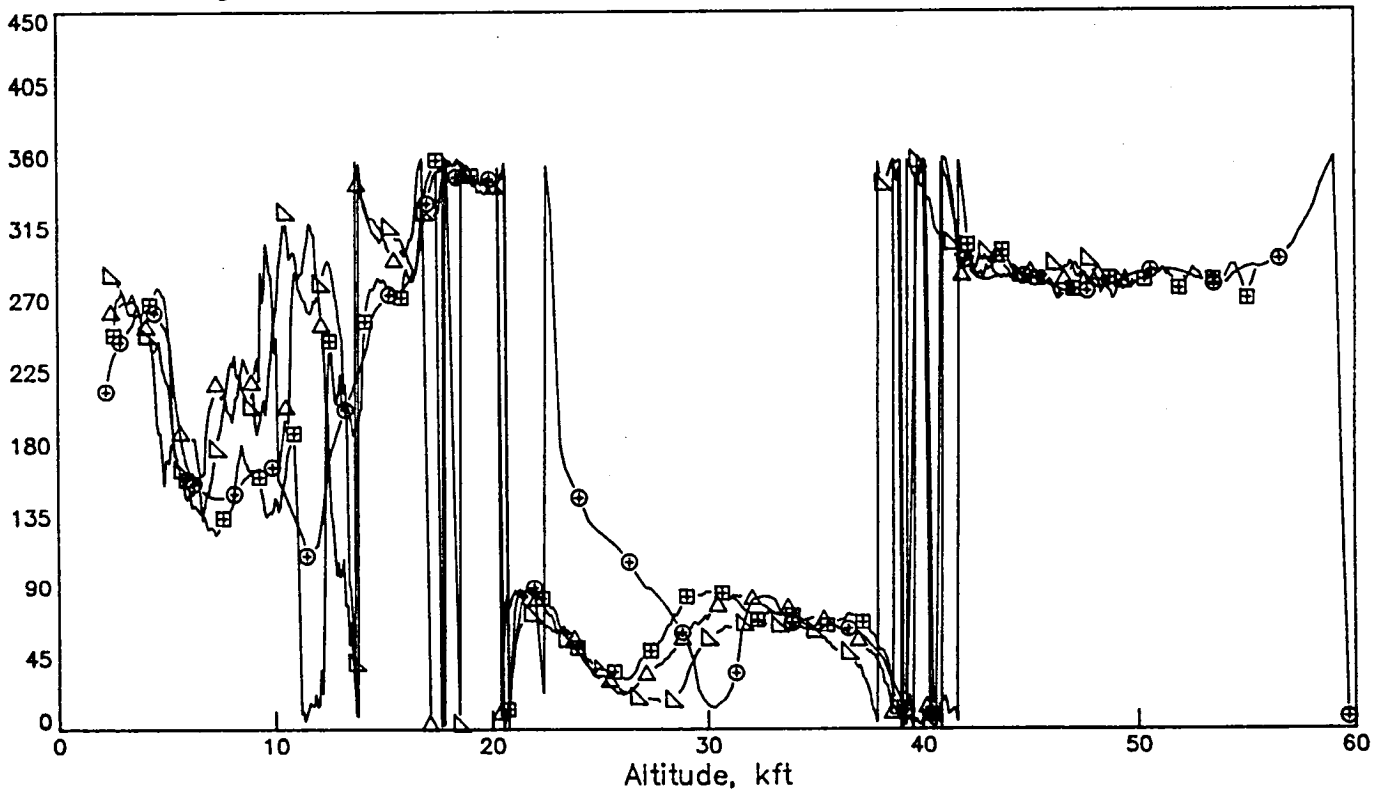
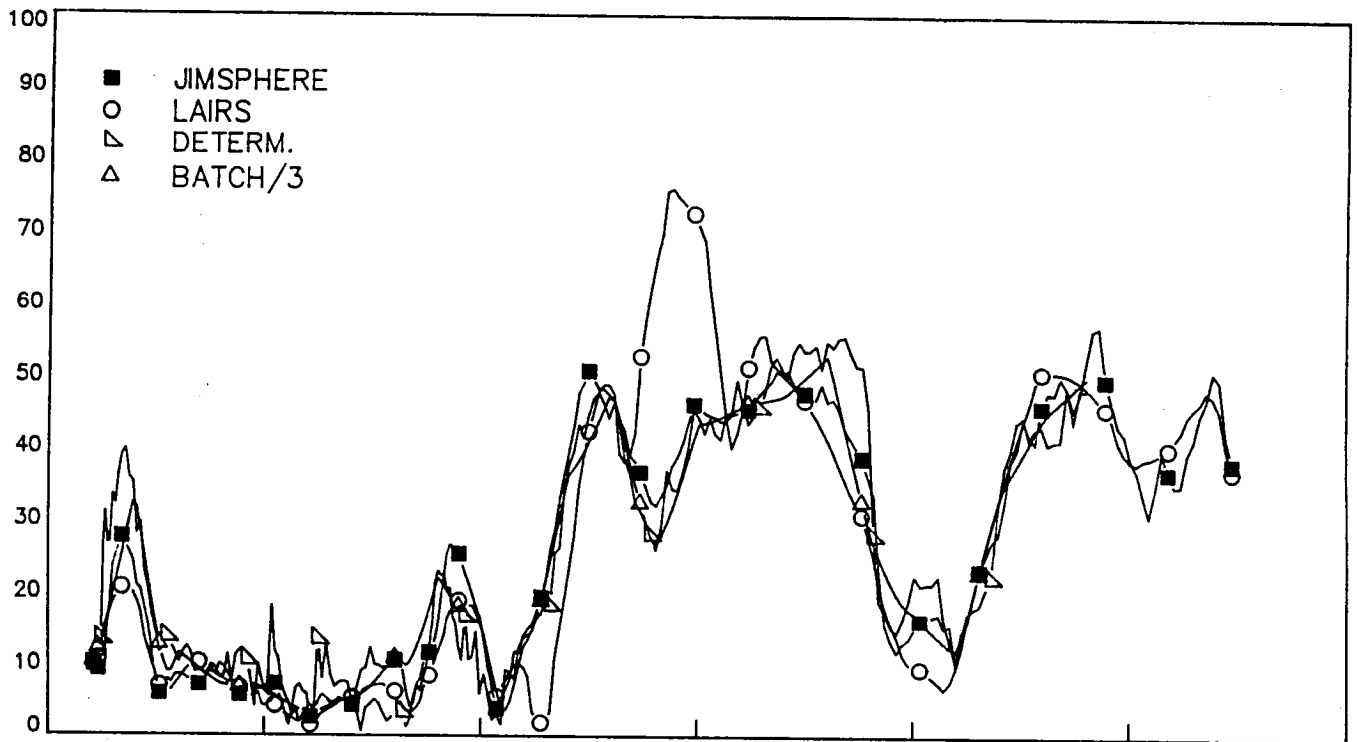


Fig. 13. STS-8 Rawinsonde (LAIRS) and Jimsphere Winds.

Wind Magnitude, fps



Wind Direction, deg

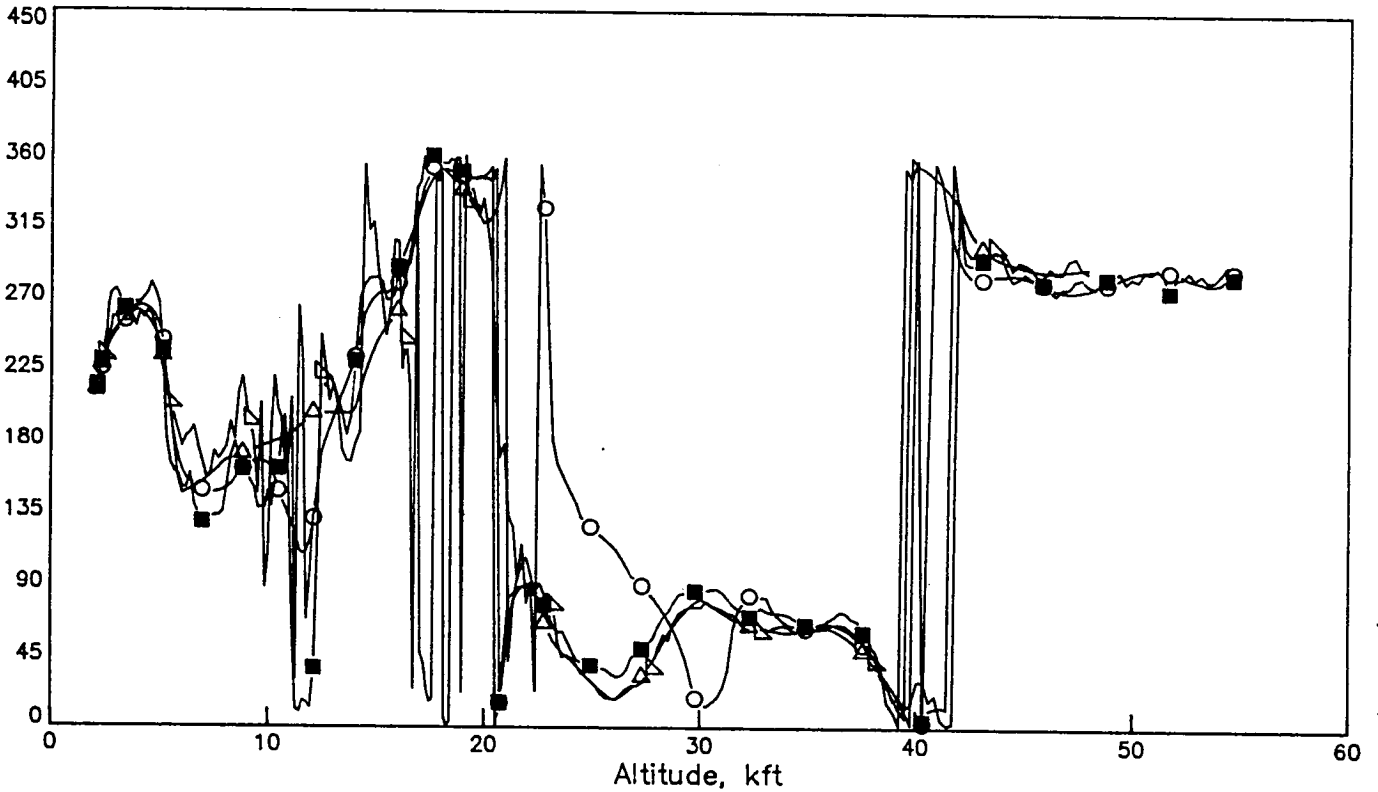


Fig. 14. STS-8 Measured and Derived Winds

III. AEROBET development

The STS-8 AEROBET is completed and the results are on NX0483. Reel NX0484 is provided for back-up purposes. The AEROBET was developed by merging STS8BET (which includes the LAIRJ8 atmosphere) with the recorded OI data to enable predicts generation for the LaRC version of the Orbiter data base. The recorded OI data, thinned to 1 Hz to conform to BET times, is on NX0479. This file defines spacecraft control surface deflections and reaction jet activity. Spacecraft mass properties are given in Appendix A, Table A-3. The remainder of this Section presents plots of most of the relevant parameters on the AEROBET for future analyses.

Figure 15 shows the altitude time history. Altitude rate, dynamic pressure, and Mach number are plotted versus both time and altitude in Figures 16, 17, and 18, respectively. Figure 19 presents the hypersonic viscous parameter versus altitude over the region, 180 kft h 300 kft. Air relative attitude angles (α , β , and σ) are presented versus time (Figure 20), Mach (Figure 21), and altitude (Figure 22). Spacecraft dynamics, body axes rates and accelerations derived from IMU2, are presented versus Mach and altitude as Figures 23 and 24, respectively. Control surface deflections are presented versus time, Mach, and altitude in Figures 25-27. RCS jet activity is plotted versus these same three variables in Figures 28, 29, and 30.

Data base comparisons are next presented. Figures 31a and 31b show L/D comparisons during the hypersonic region and below Mach 2, respectively. Here, flight and predicted values are plotted with variations superimposed. Figures 32 (a and b) are plots of these same data versus altitude over the respective Mach regions. Similarly, lift and drag comparisons (flight, predicts, and variations) versus both Mach and altitude are presented. The lift results are given as Figures 33 (a and b) and 34 (a and b) versus Mach and altitude, respectively. Drag comparisons are presented in Figures 35a through 36b.

Percentage equivalents of the above presented comparisons are next shown. Figures 37a and 37b show ΔC_L , ΔC_D , and $\Delta L/D$ versus Mach, using the definition of $((\text{flight-data base})/\text{flight})$. Superimposed on these figures are the ensemble Columbia comparisons. Percentage errors are shown versus altitude as Figures 38a and 38b. Figure 38a shows the hypersonic region

down to Mach 2. Figure 38b depicts percentage comparisons for altitudes between Mach 2 and landing.

The final figure is the pitching moment comparison versus Mach no. (see Fig. 39). These results are with respect to the flight c.g. and again reflect the large, real gas, offset.

h , kft

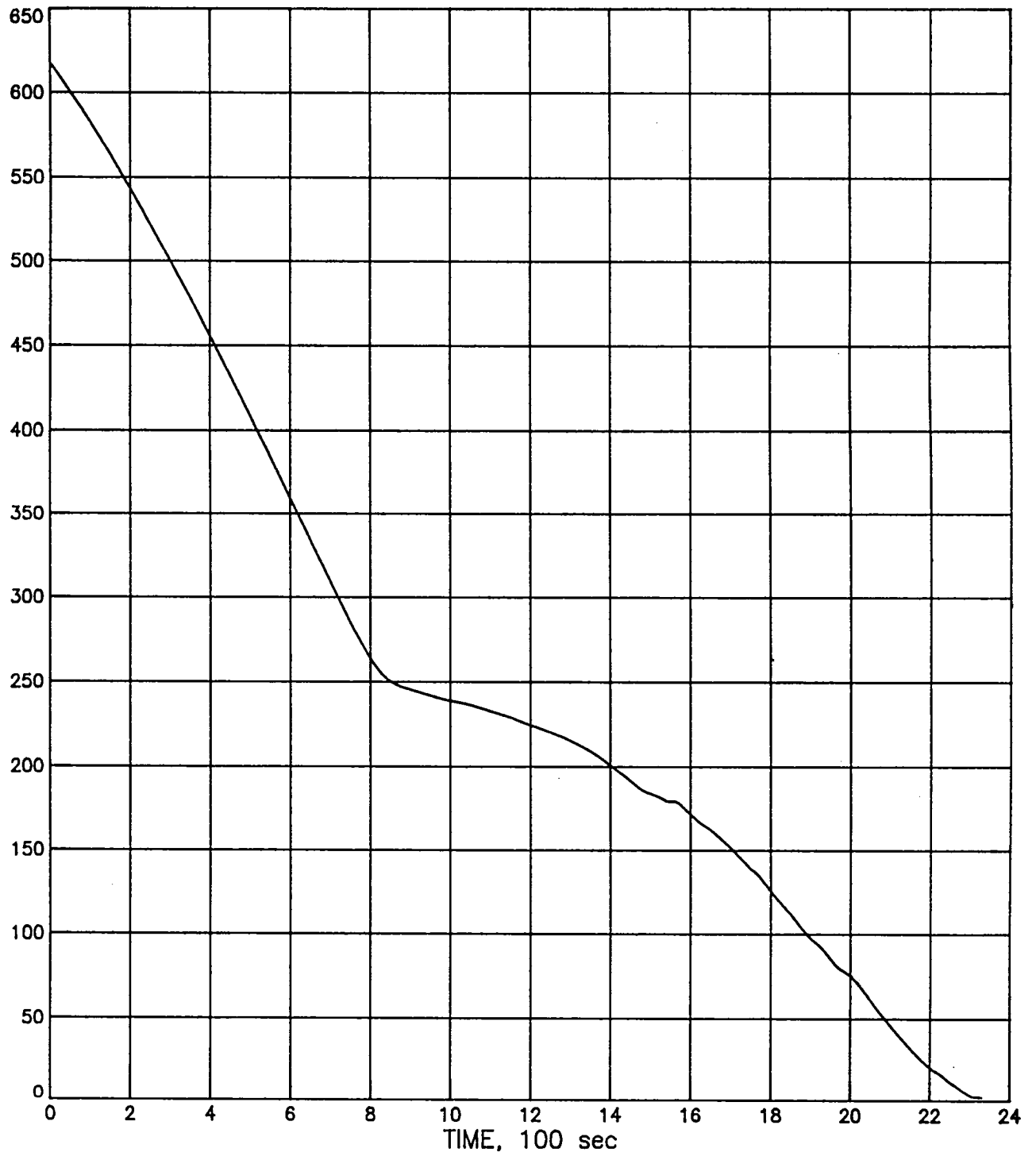
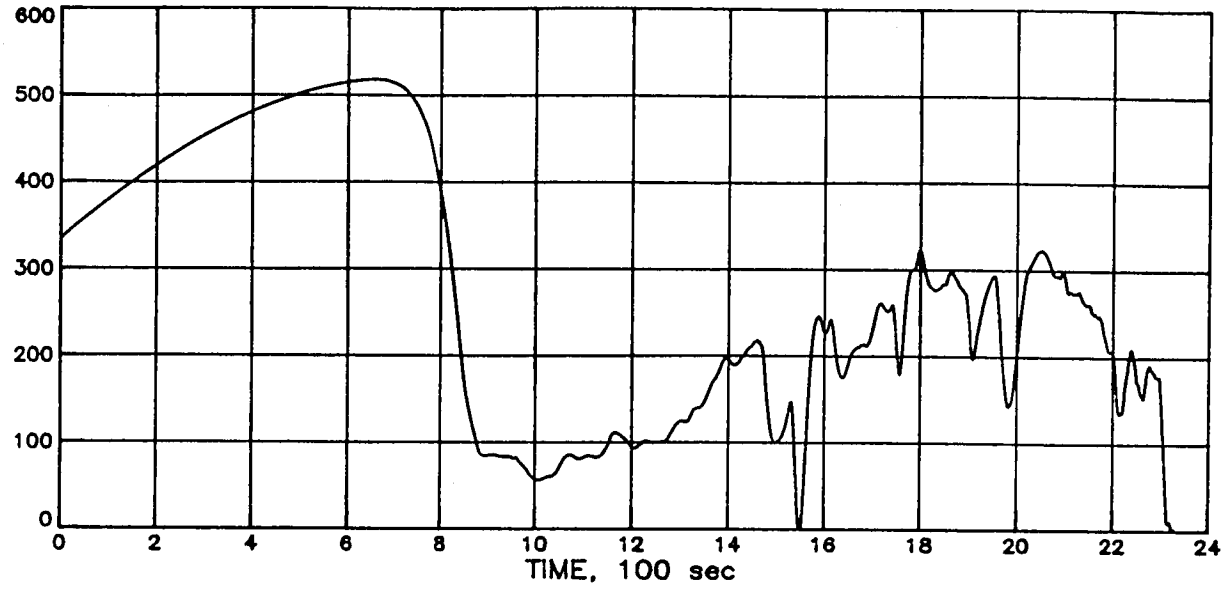


Figure 15. STS-8 altitude time history.

w , fps



w , fps

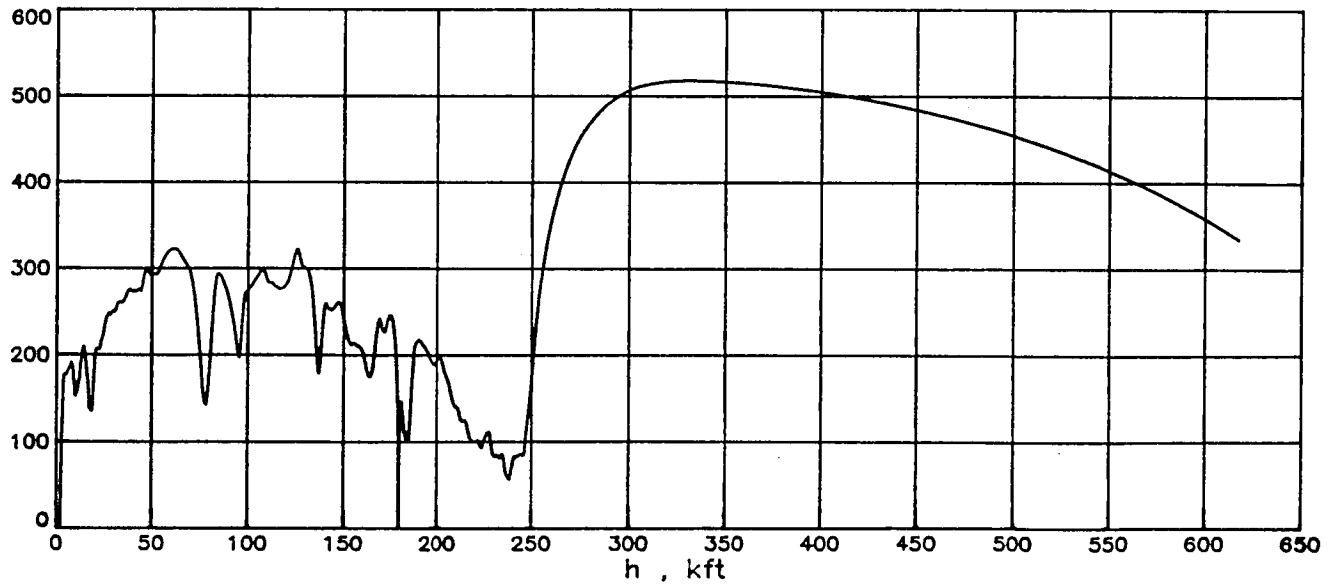
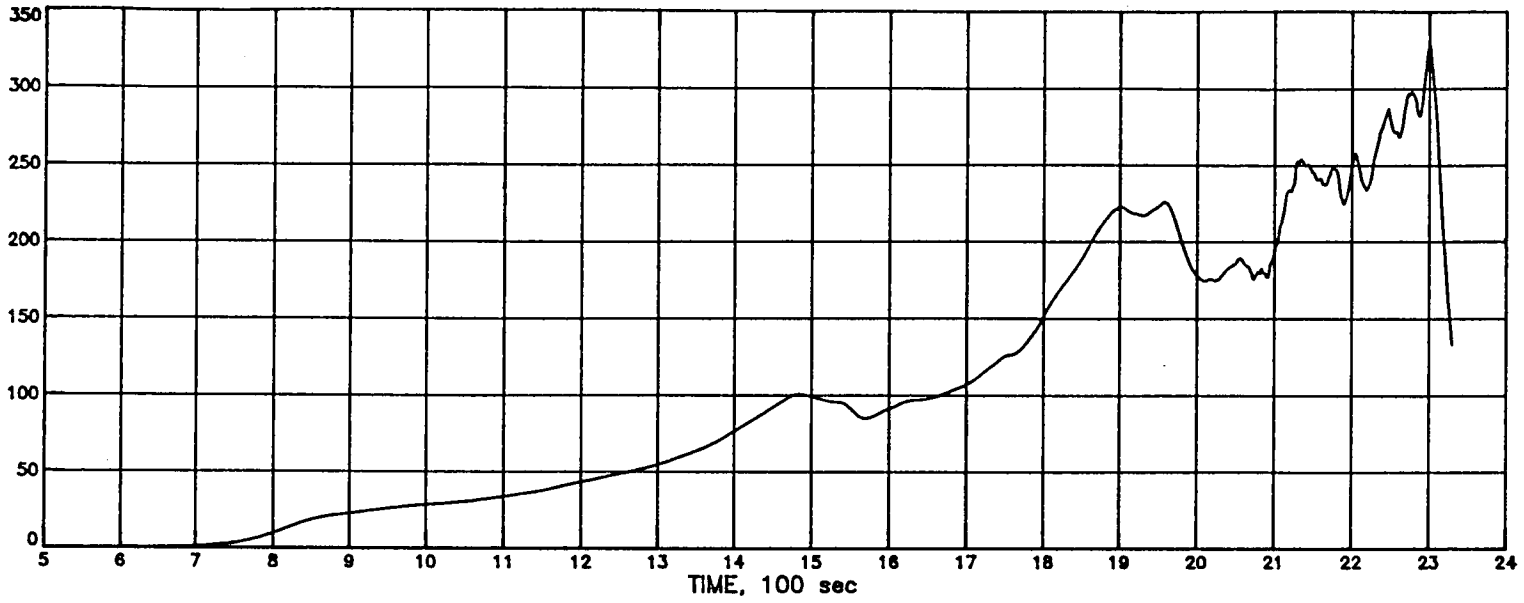


Figure 16. STS-8 descent rate ($\dot{h} = -w$) versus time and altitude.

q , psf



q , psf

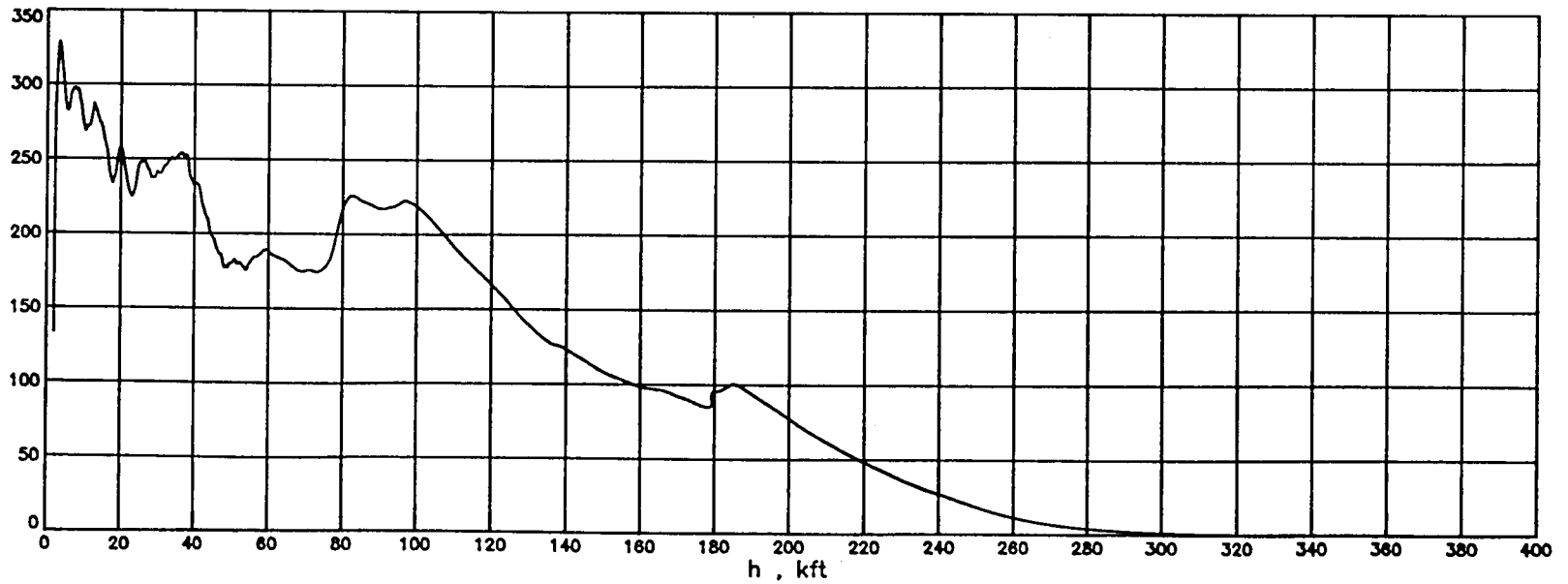
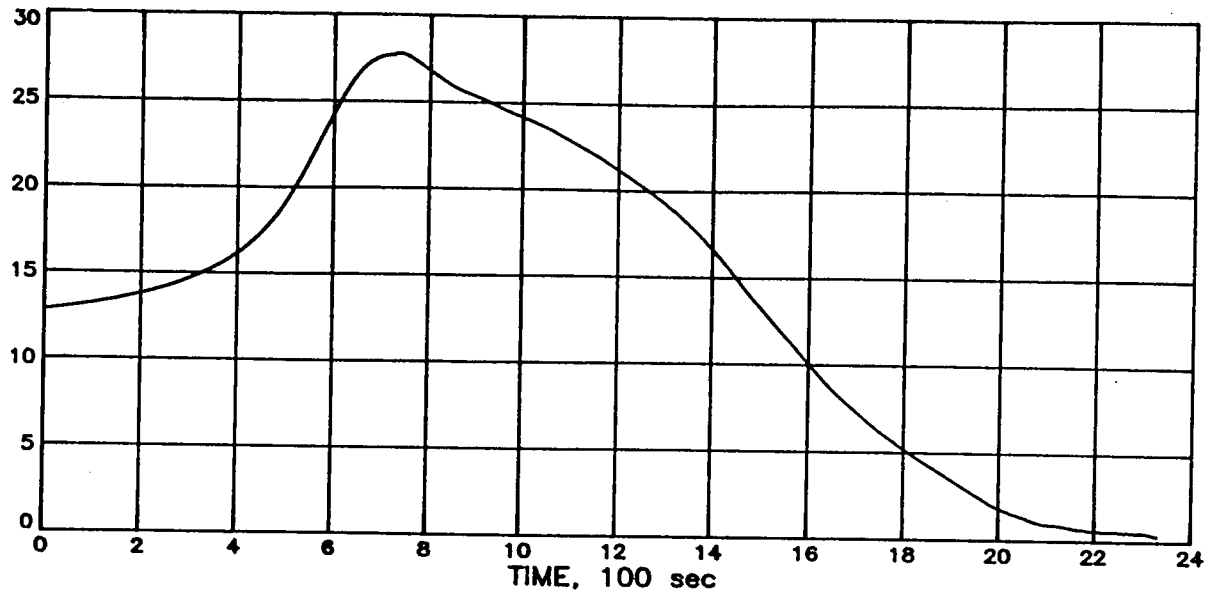


Figure 17. STS-8 dynamic pressure versus time and altitude.

Mach



Mach

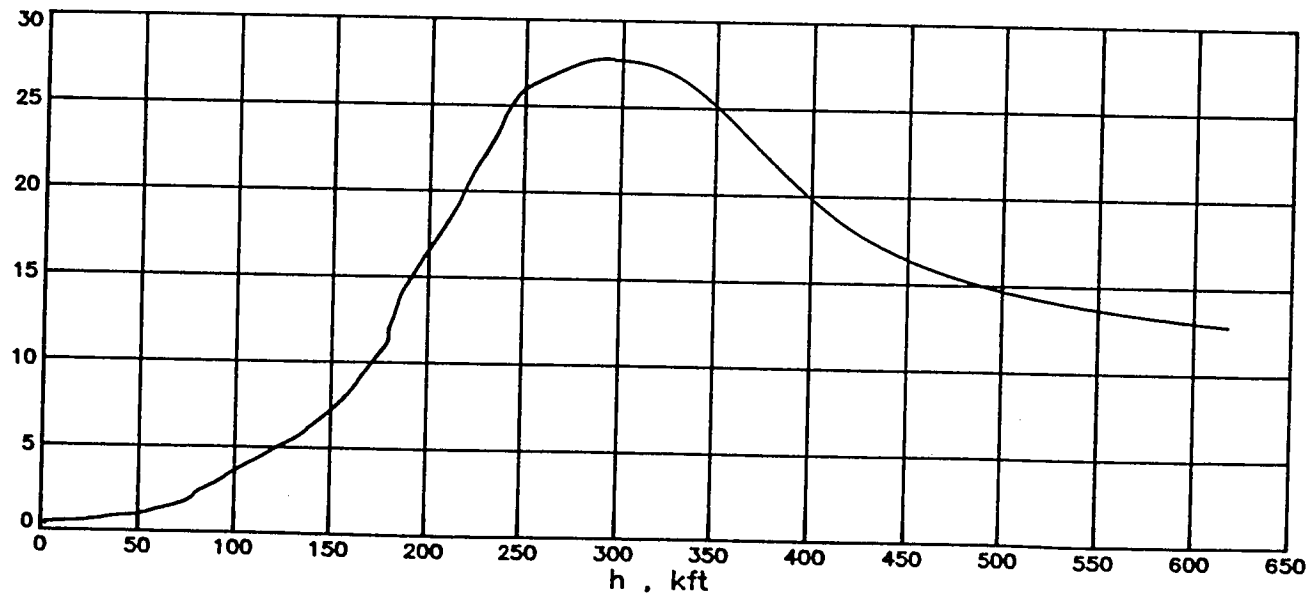


Figure 18. STS-8 Mach number versus time and altitude.

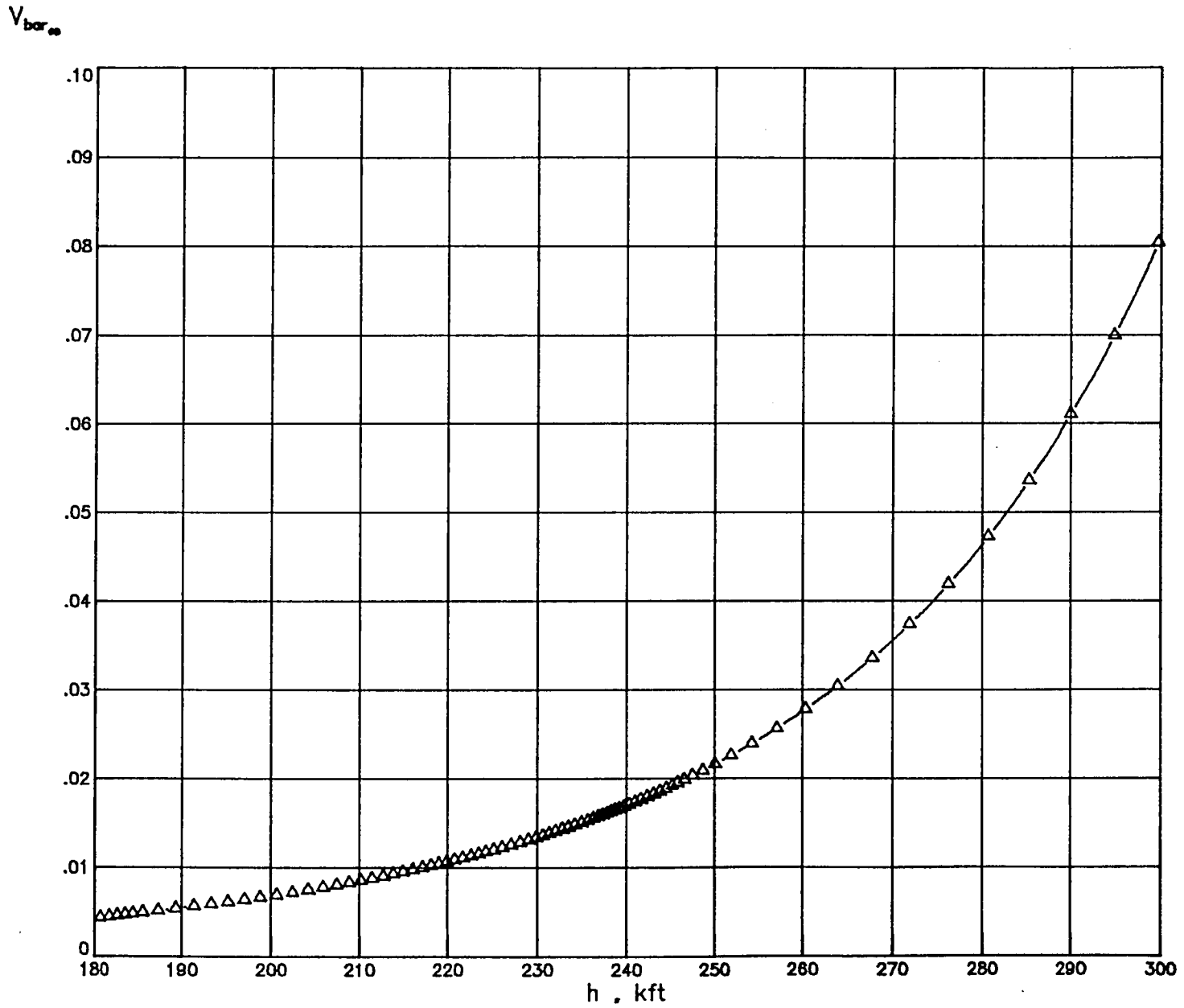


Figure 19. STS-8 V_{∞} versus altitude.

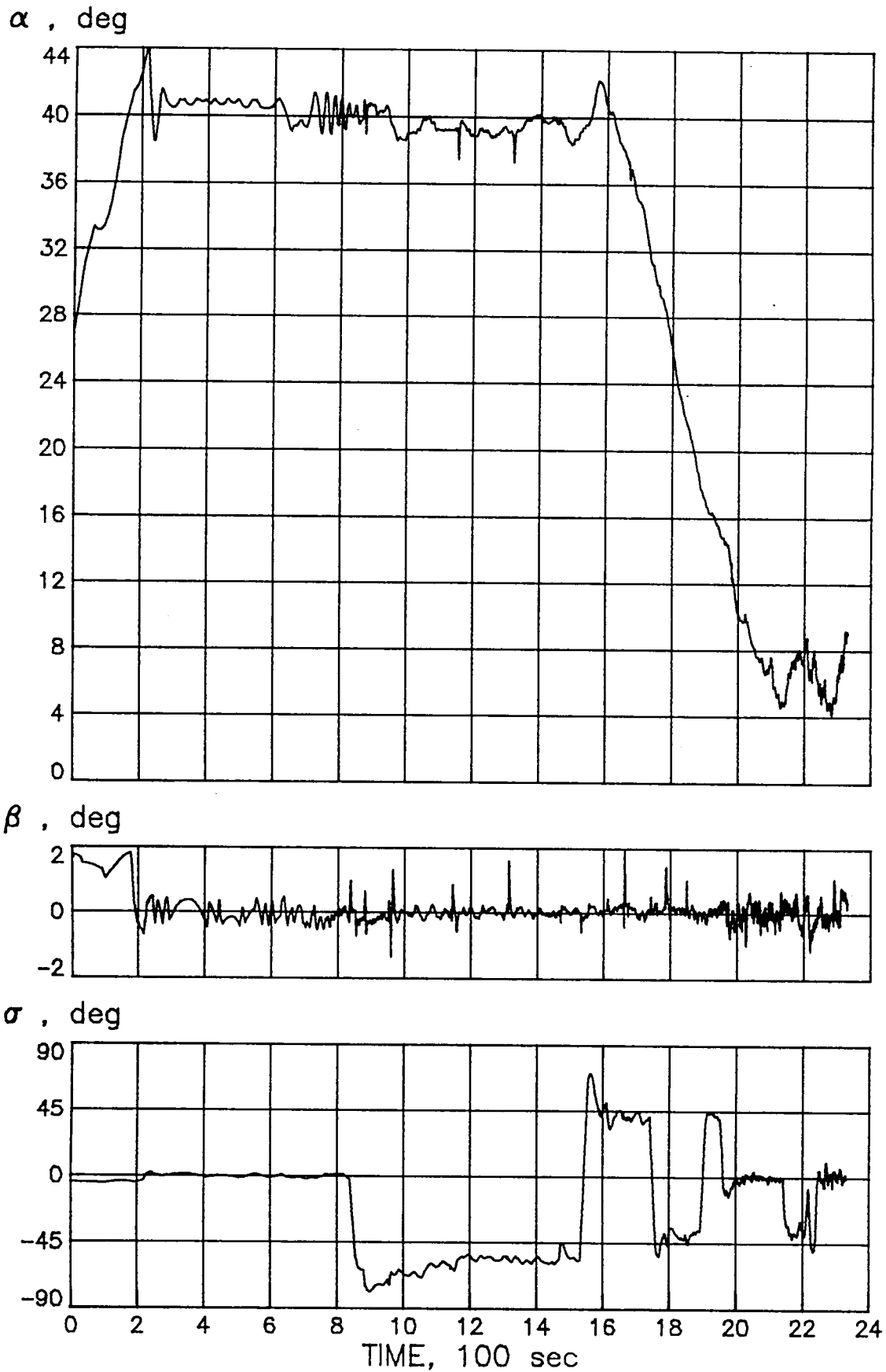


Figure 20. STS-8 α , β and σ vs. time.

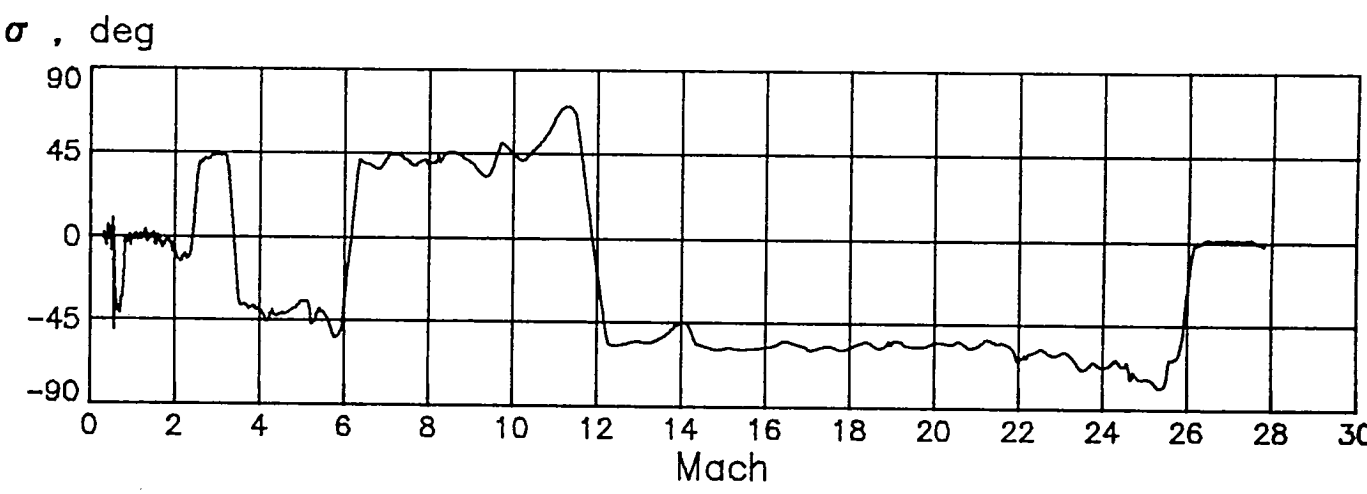
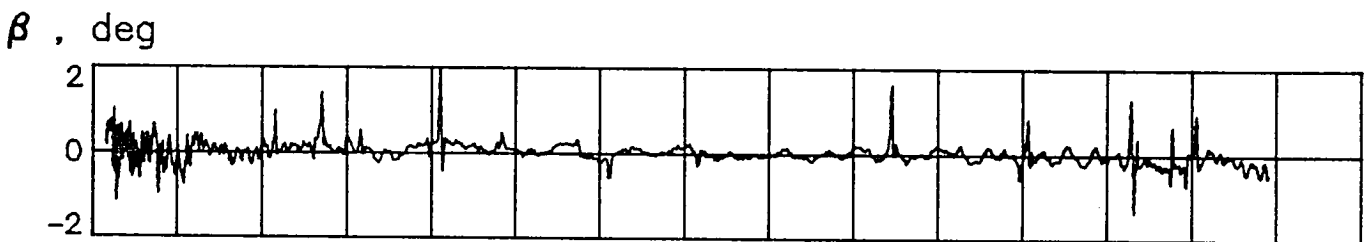
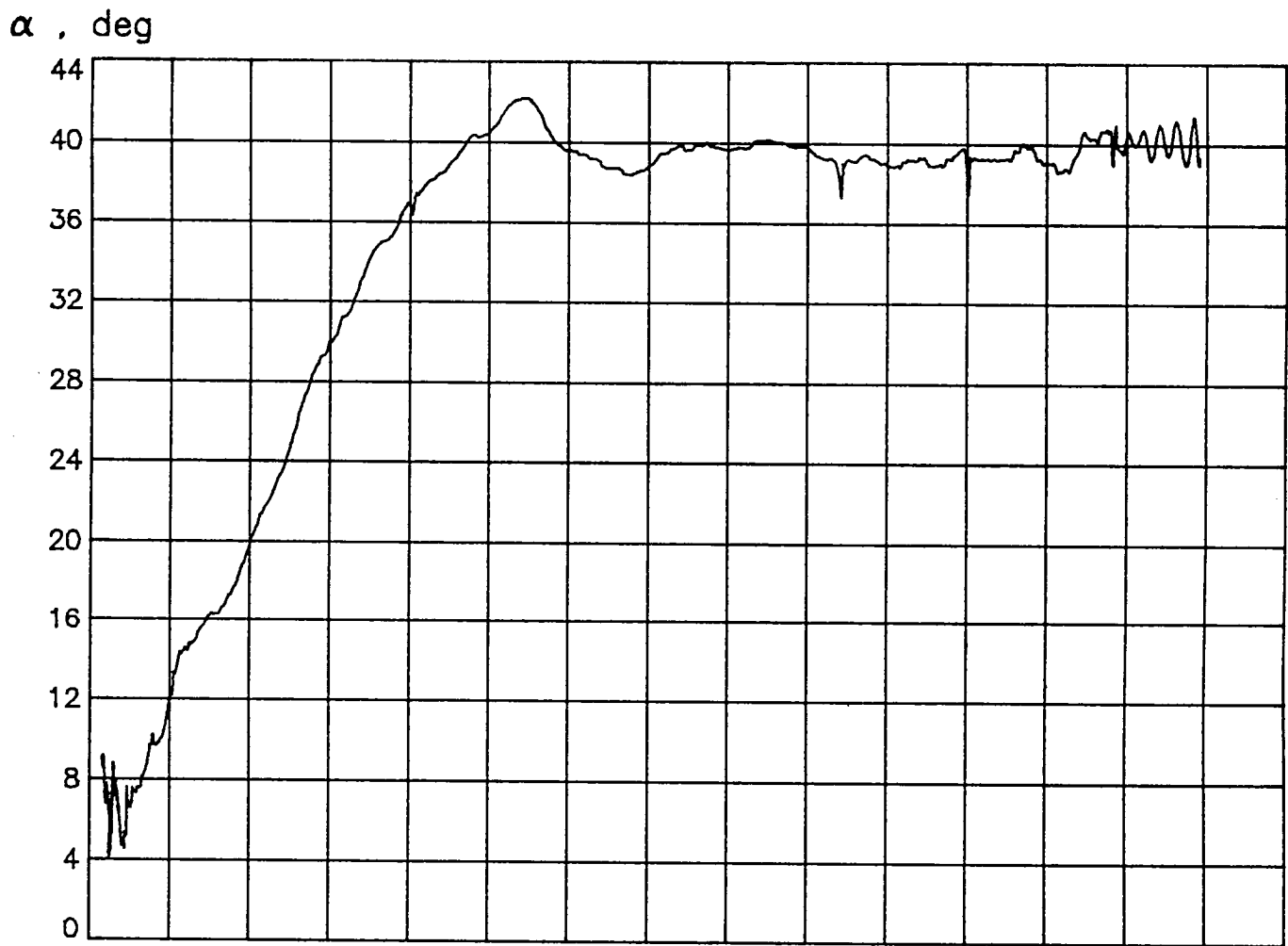


Figure 21. STS-8 α , β and σ vs. Mach.

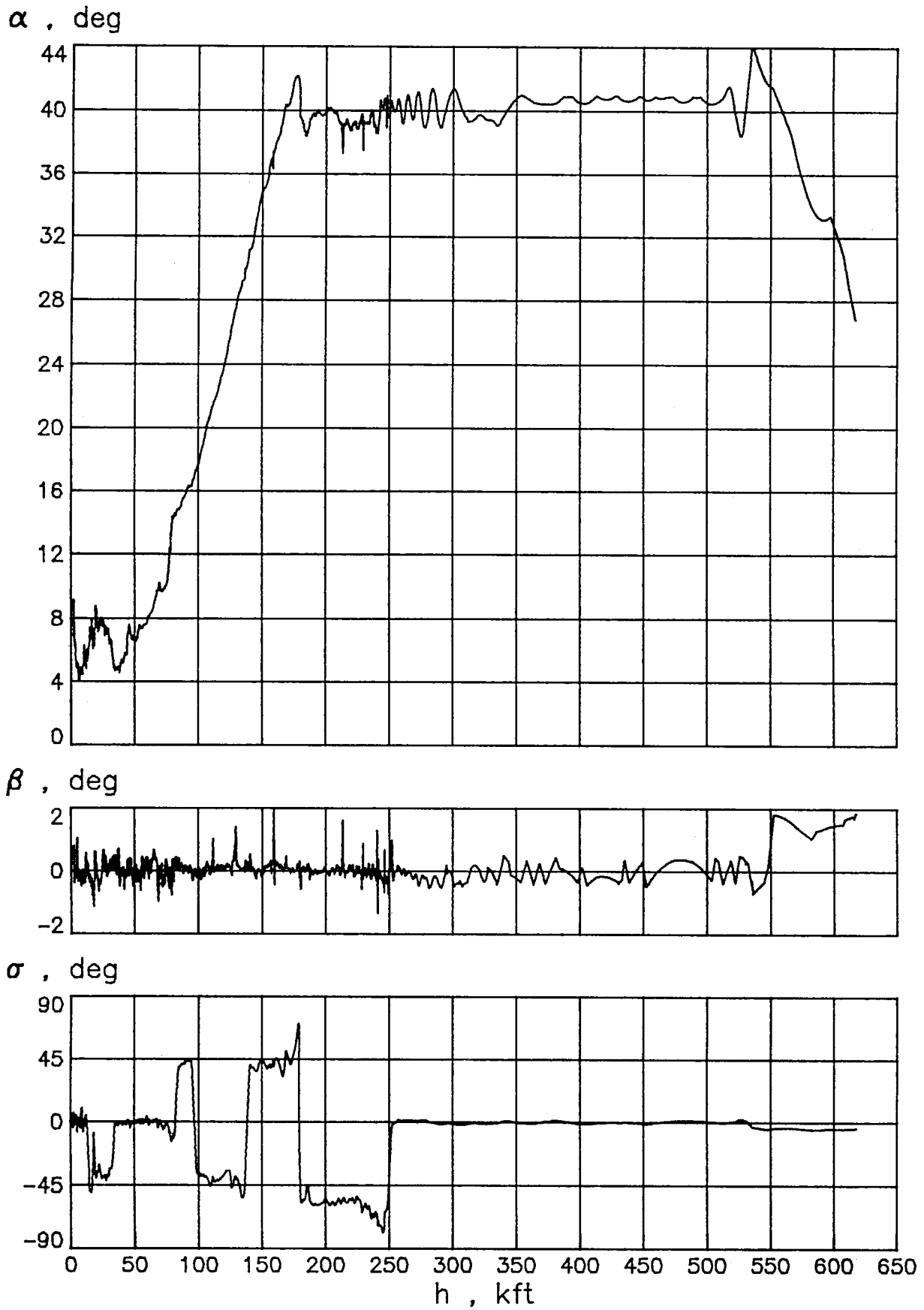
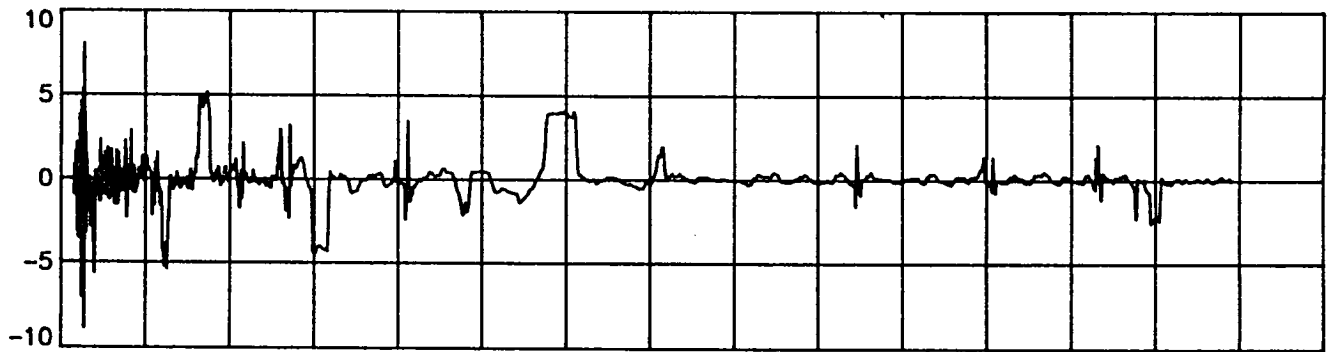
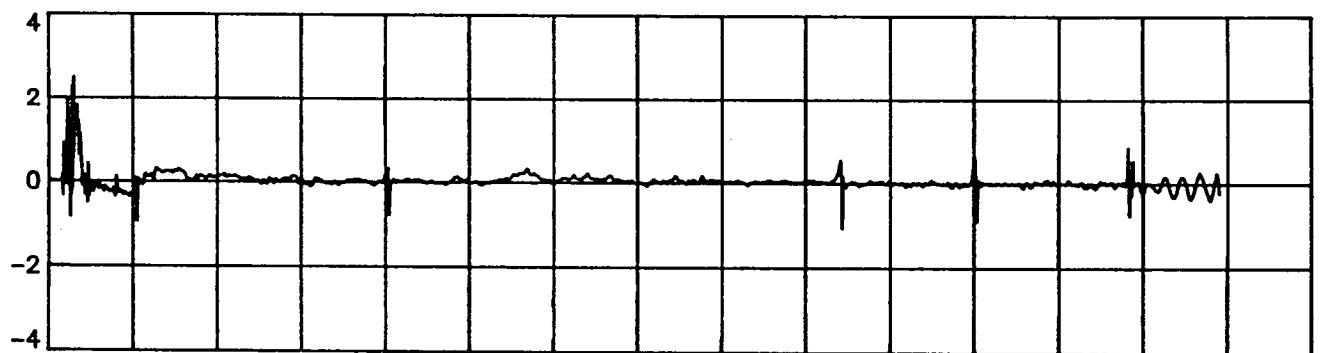


Figure 22. STS-8 α , β and σ vs. h ,

P_B , deg/sec



Q_B , deg/sec



R_B , deg/sec

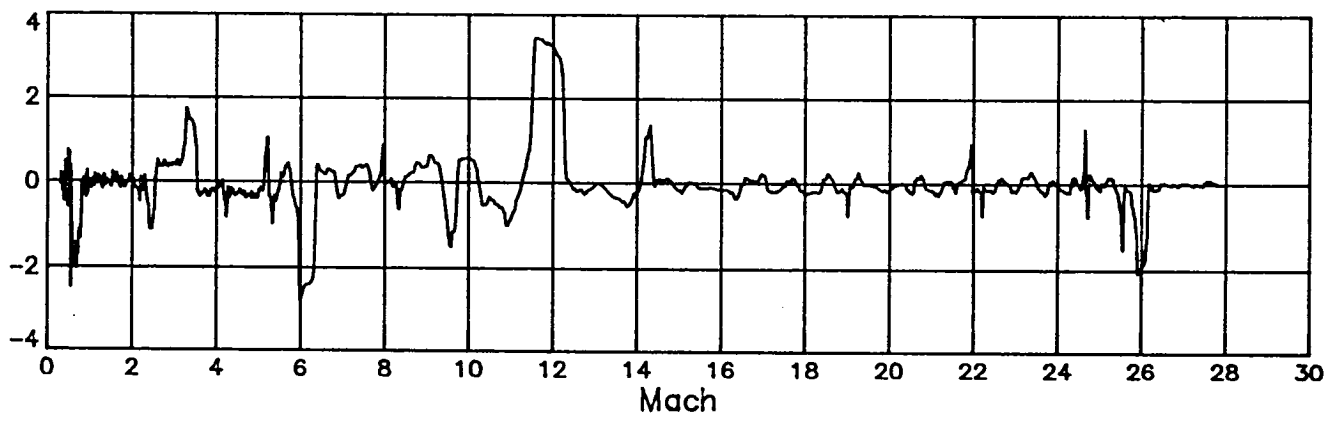


Figure 23. STS-8 dynamic data vs. Mach .

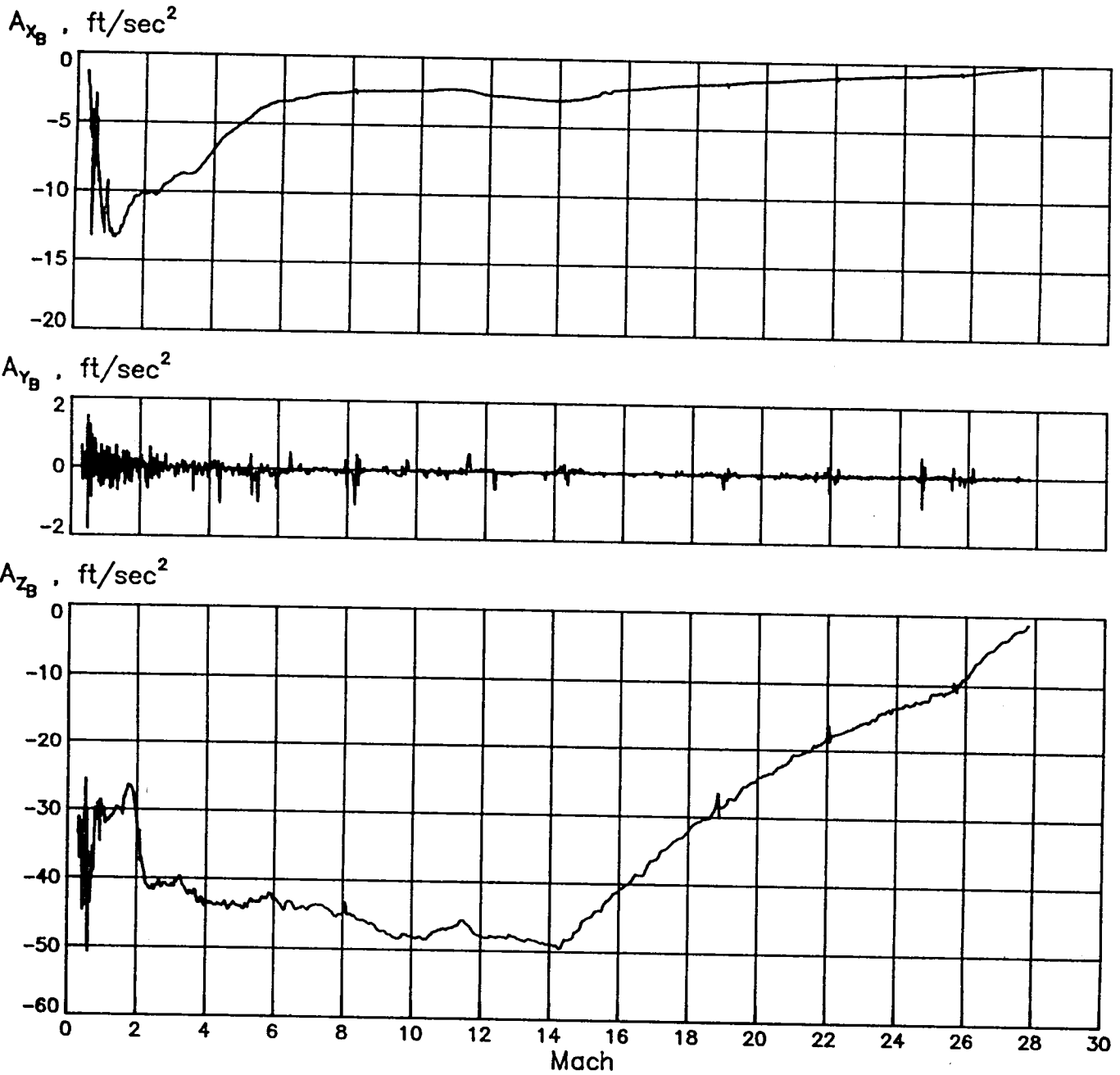


Figure 23. (concluded)

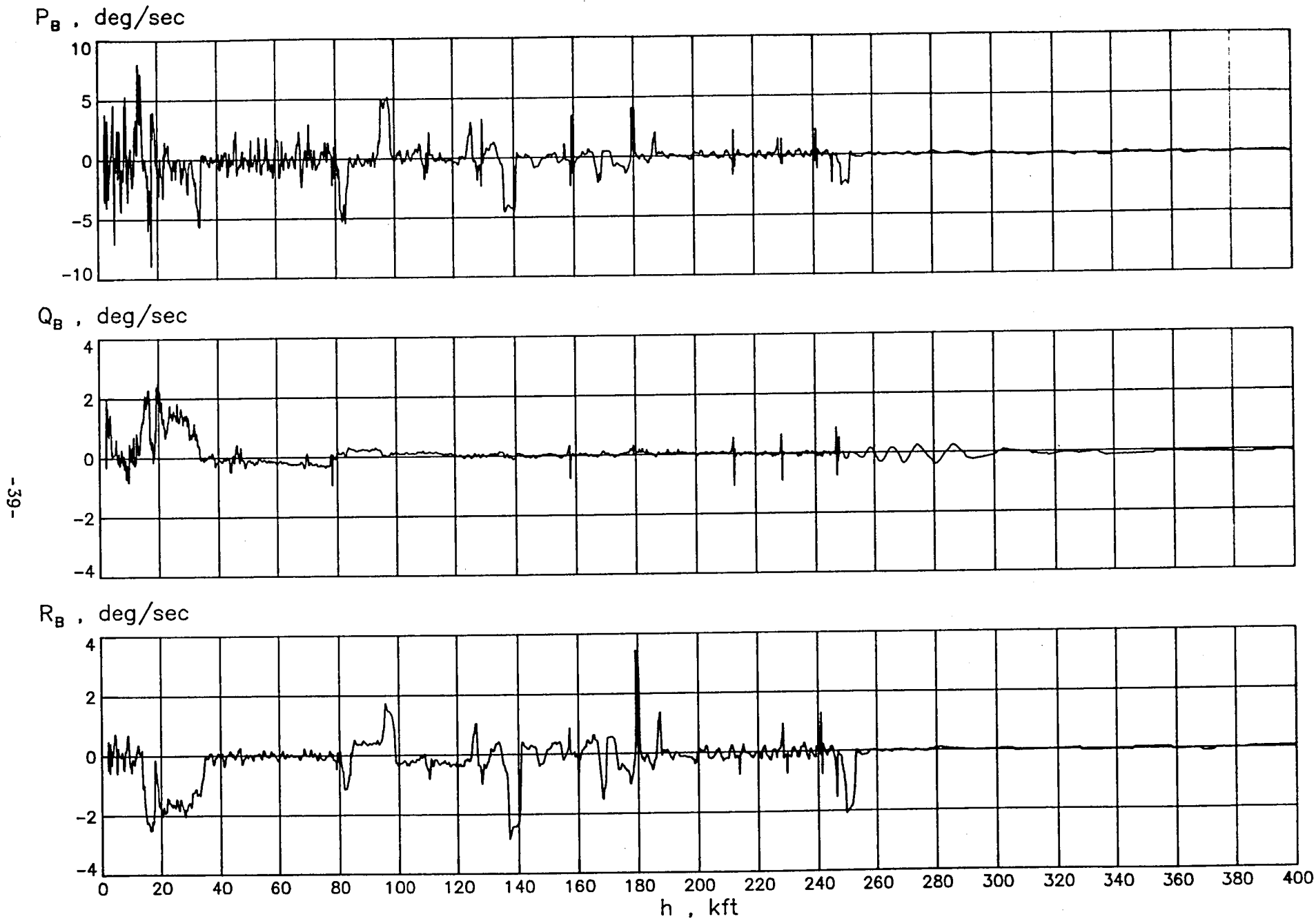


Figure 24. STS-8 dynamic data vs. altitude.

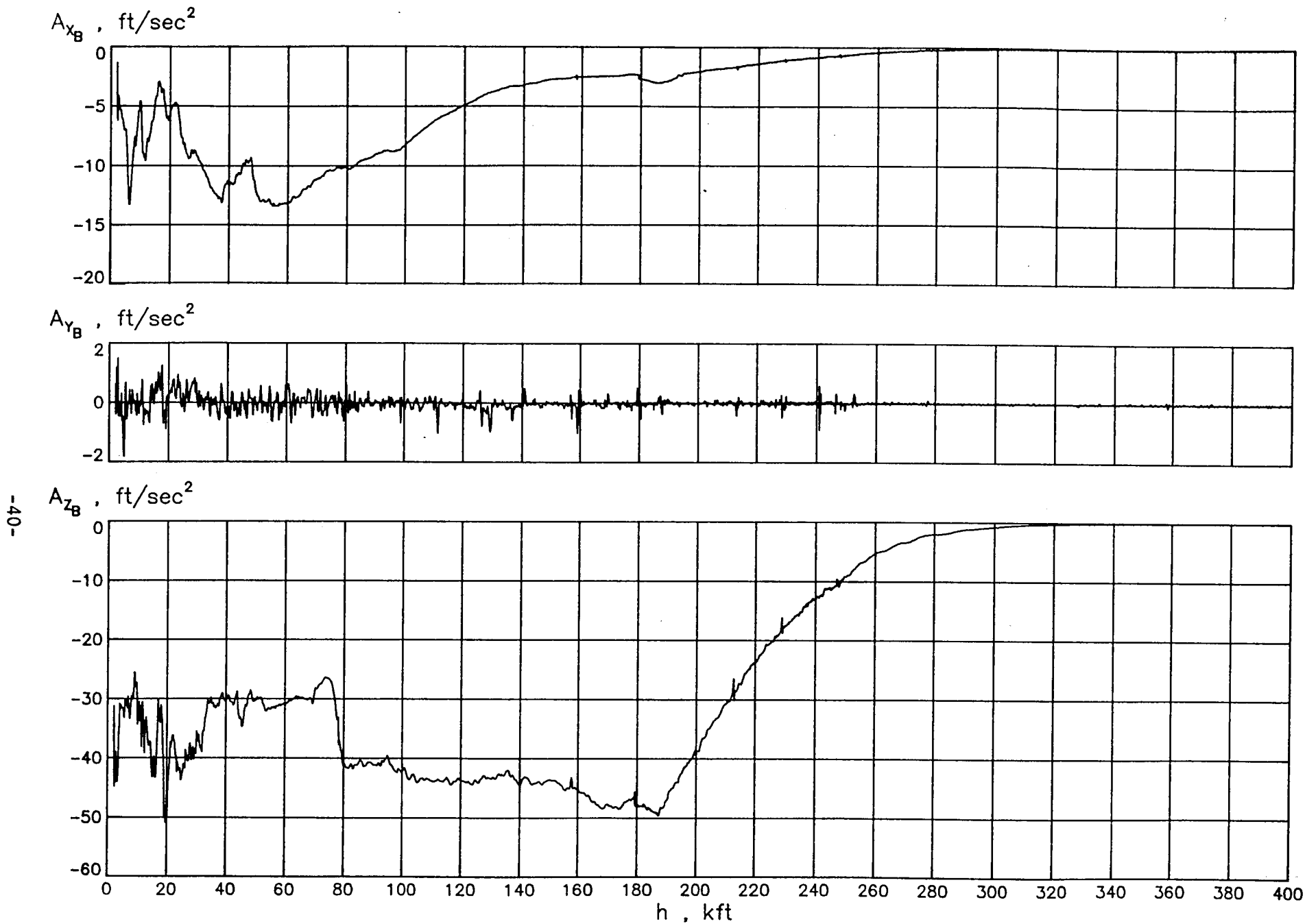


Figure 24. (concluded)

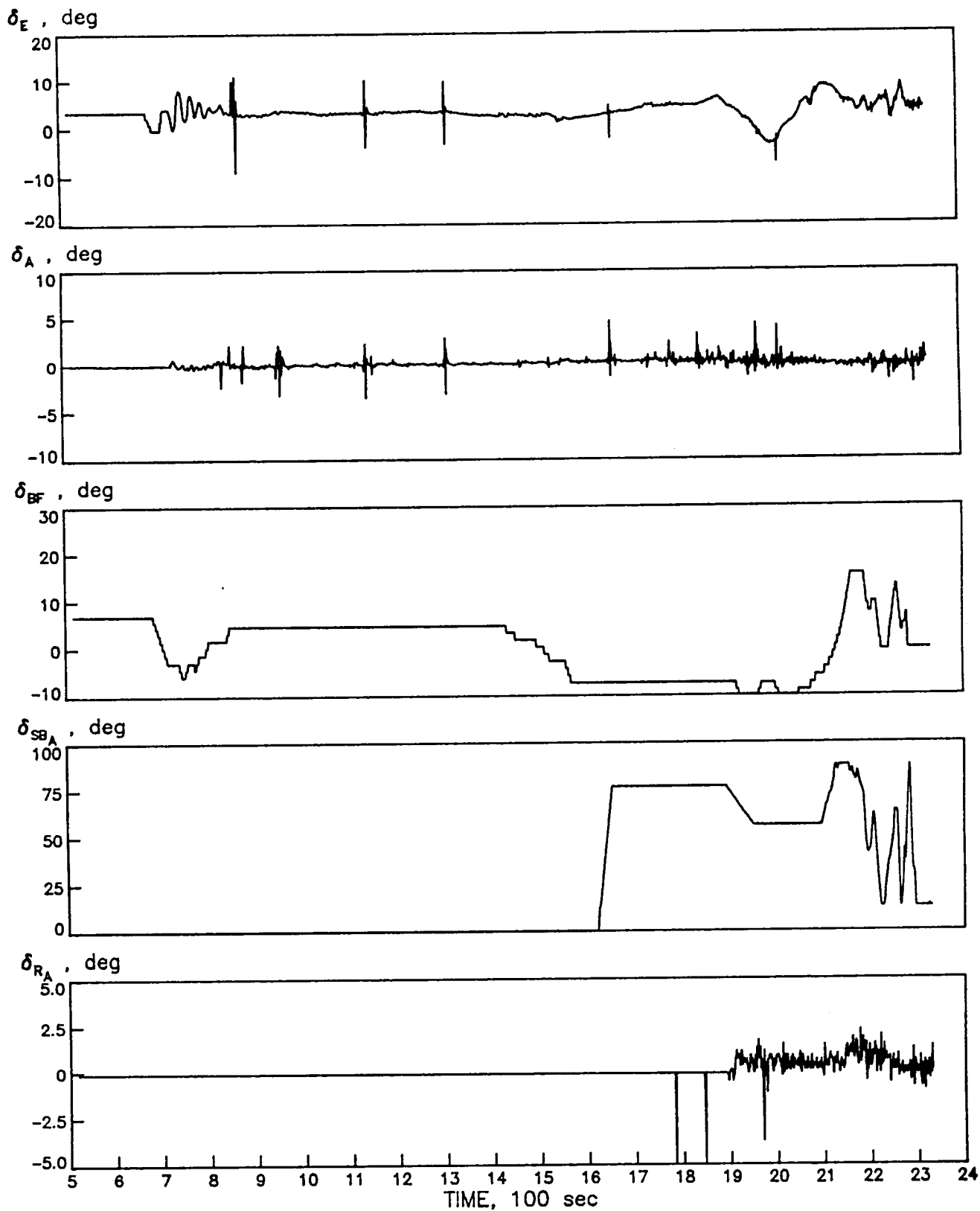


Figure 25. STS-8 control surfaces vs. time.

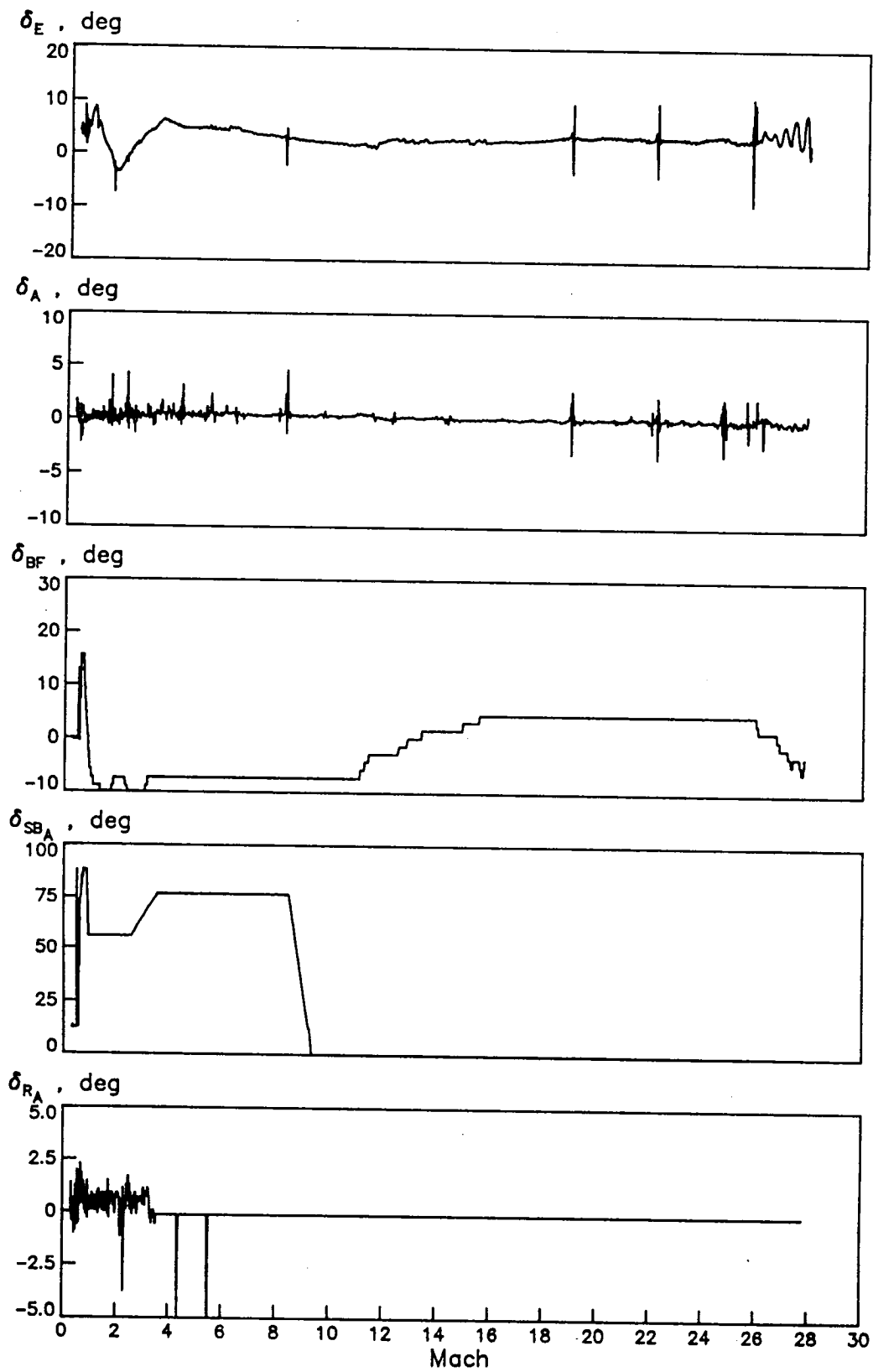


Figure 26. STS-8 control surfaces vs. Mach.

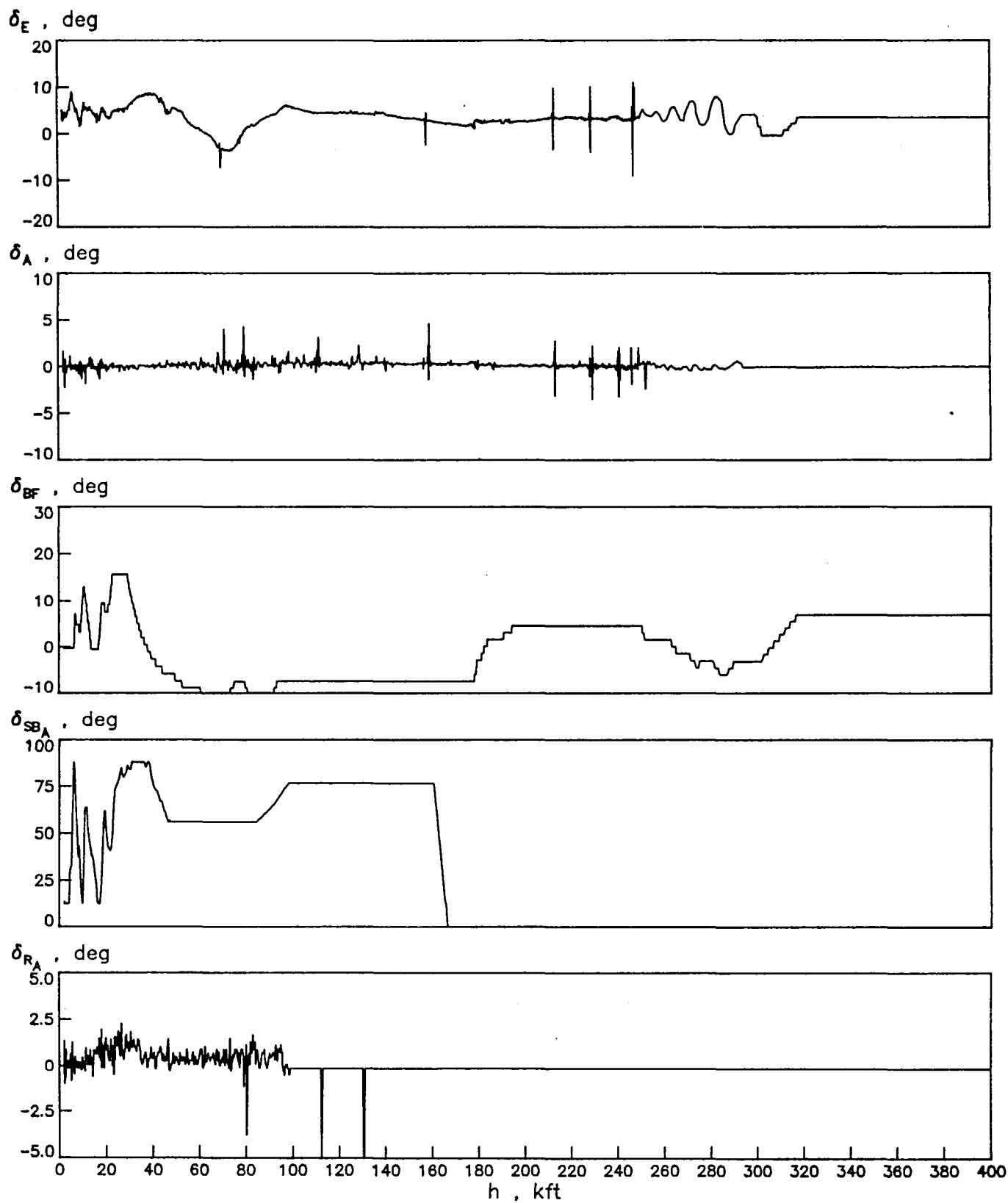


Figure 27. STS-8 control surfaces vs. altitude.

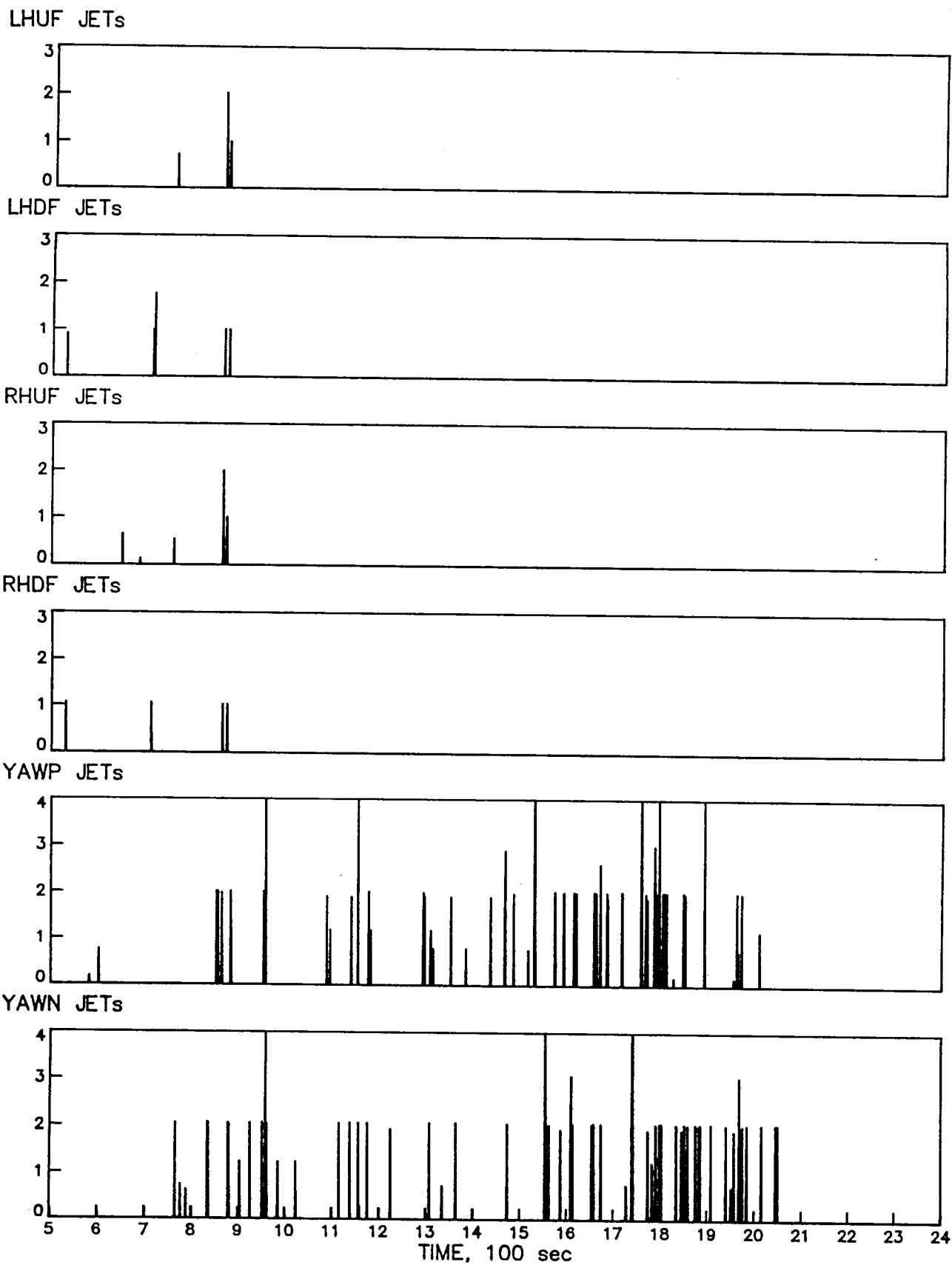


Figure 28. STS-8 RCS firings vs. time.

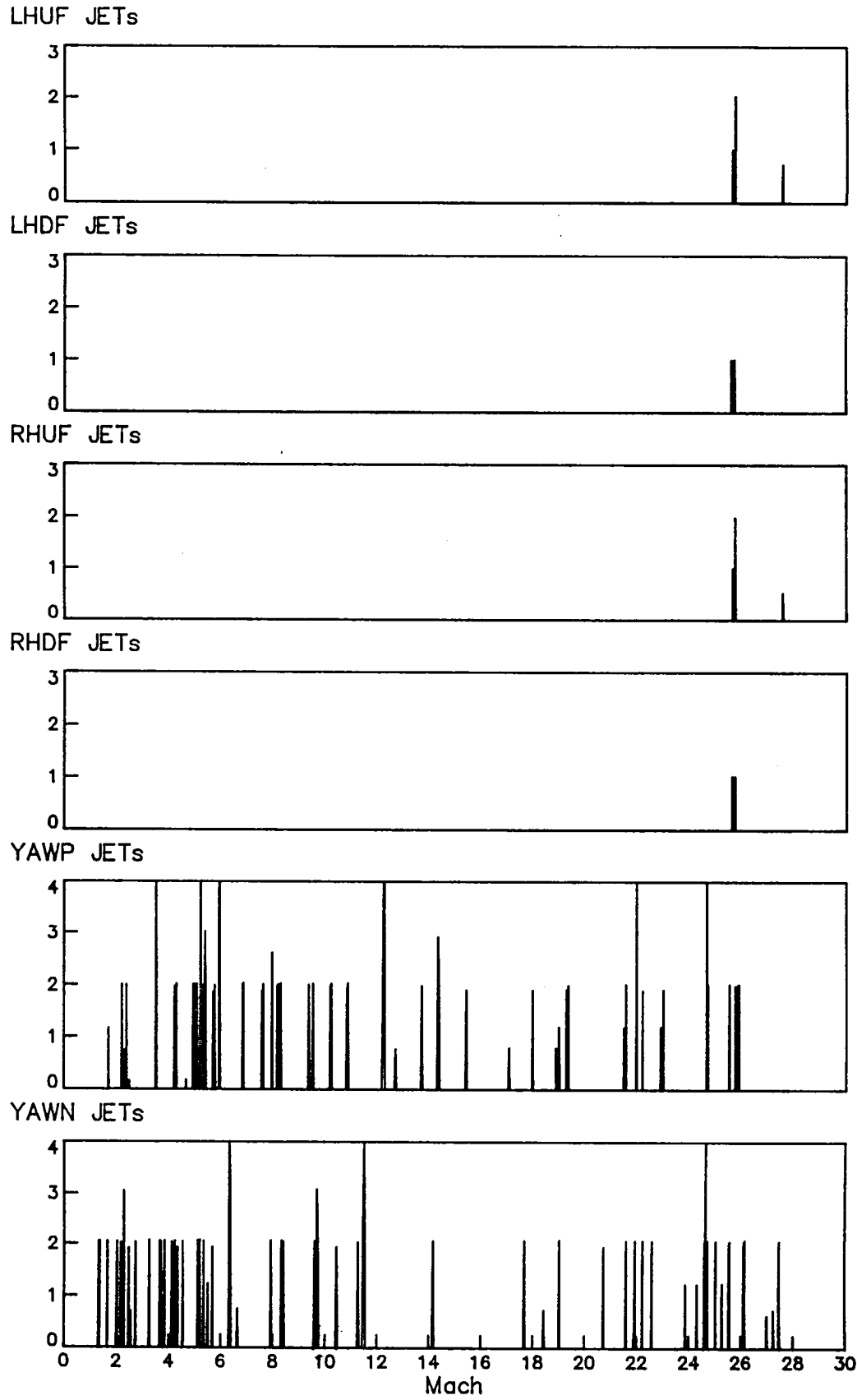
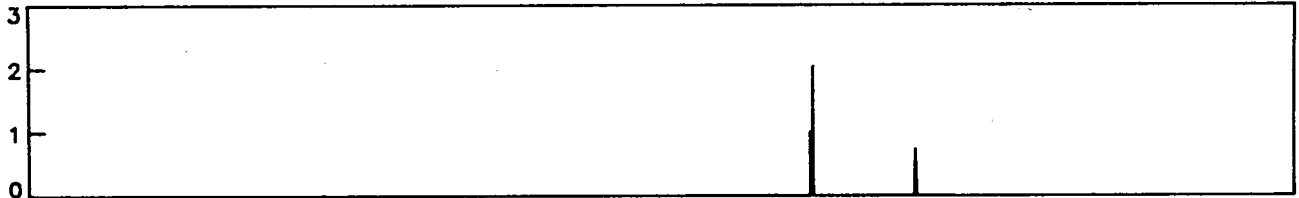
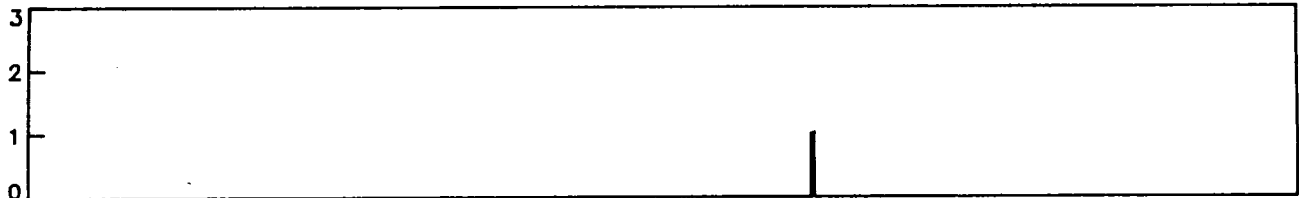


Figure 29. STS-8 RCS firings vs. Mach.

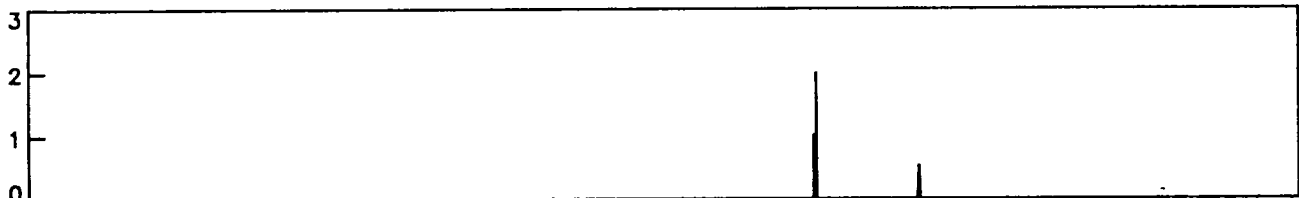
LHUF JETs



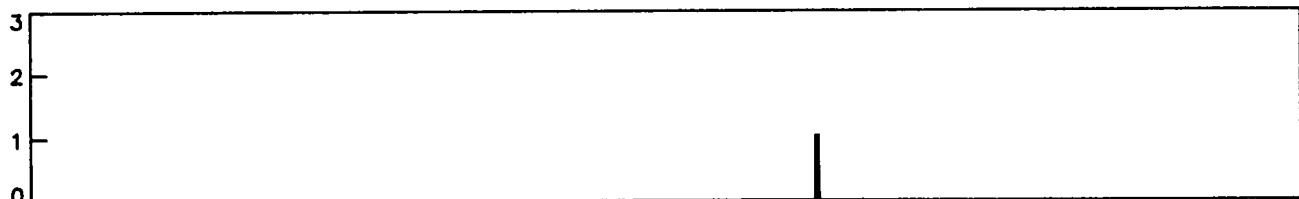
LHDF JETs



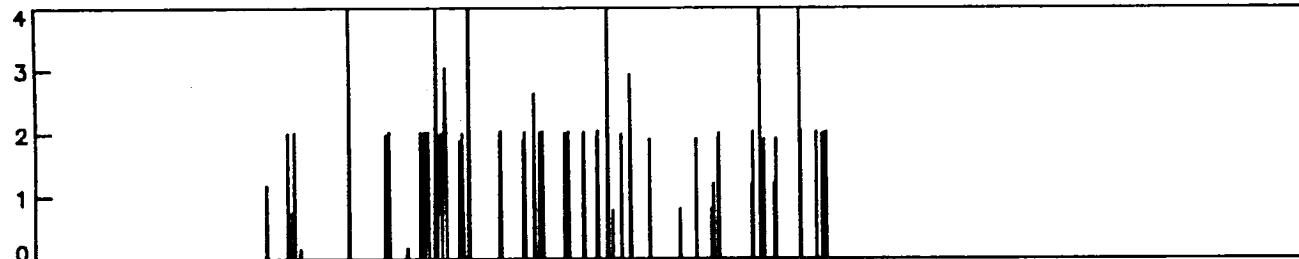
RHUF JETs



RHDF JETs



YAWP JETs



YAWN JETs

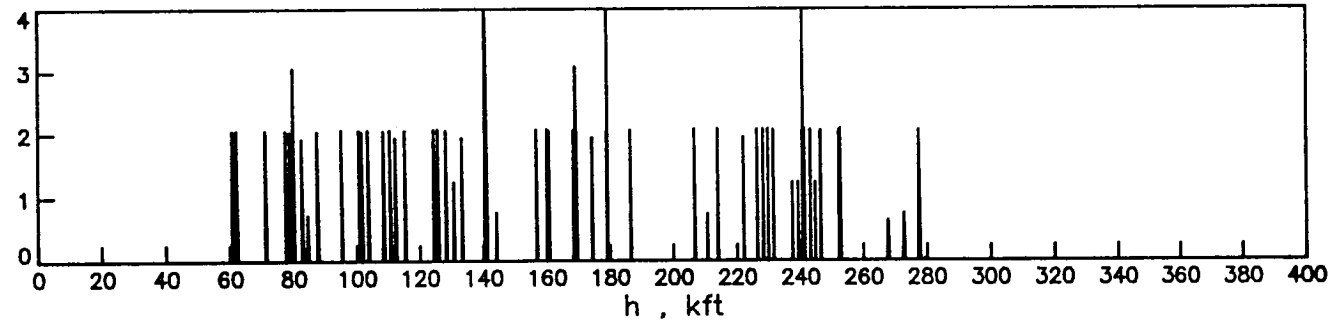
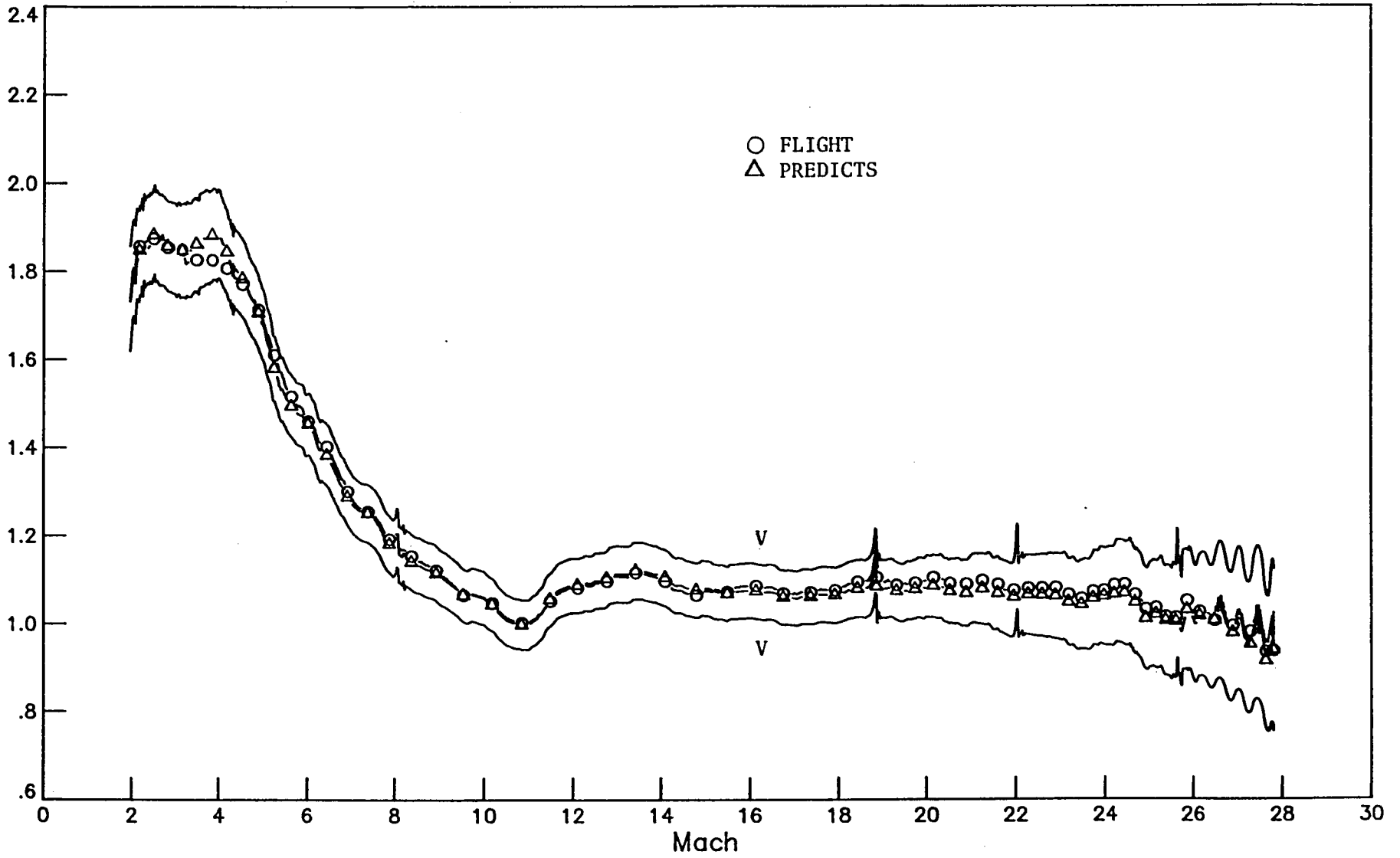


Figure 30. STS-8 RCS firings vs. altitude.

L/D



-47-

Figure 31a. STS-8 L/D comparisons vs. Mach.

L/D

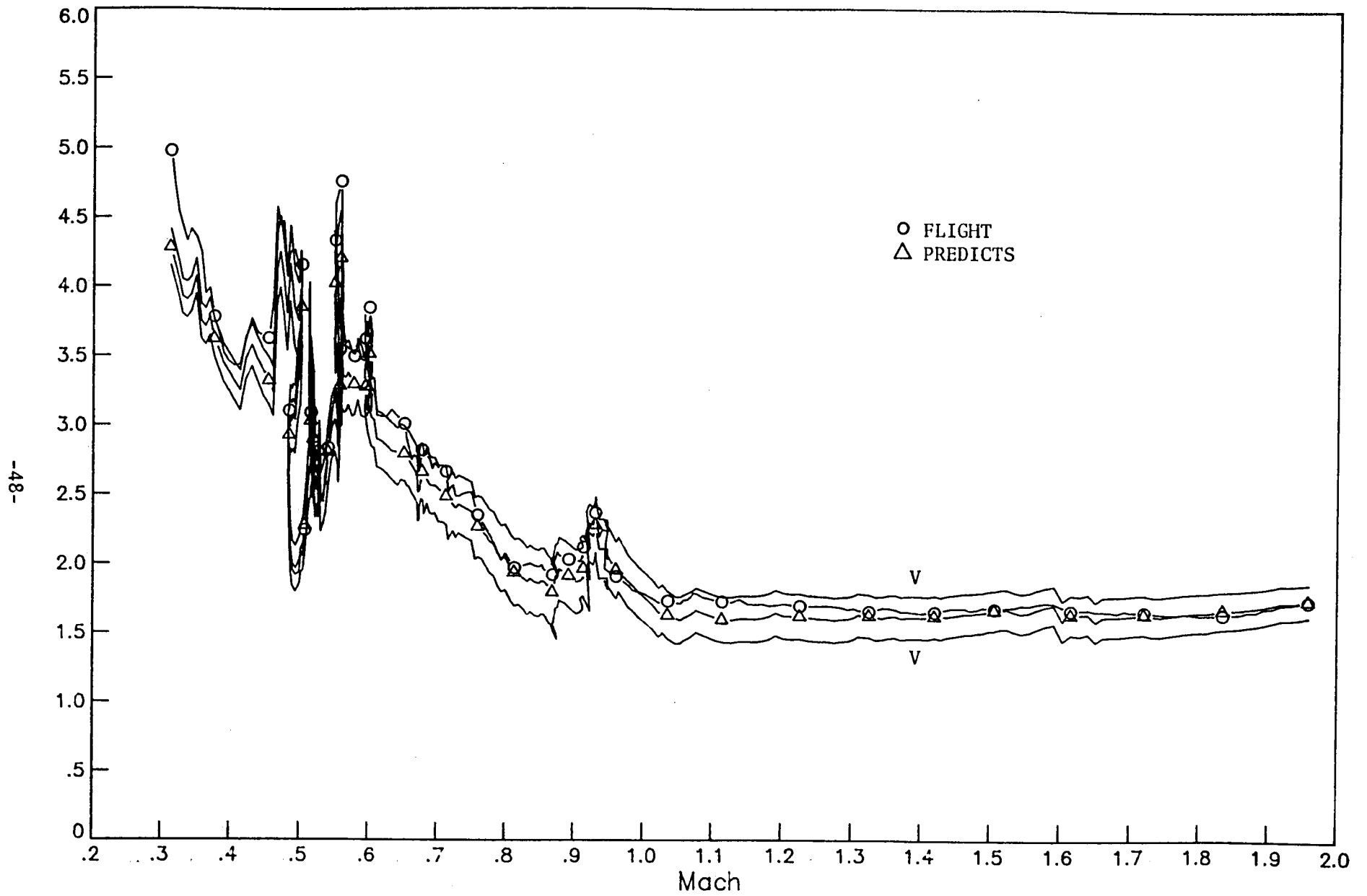
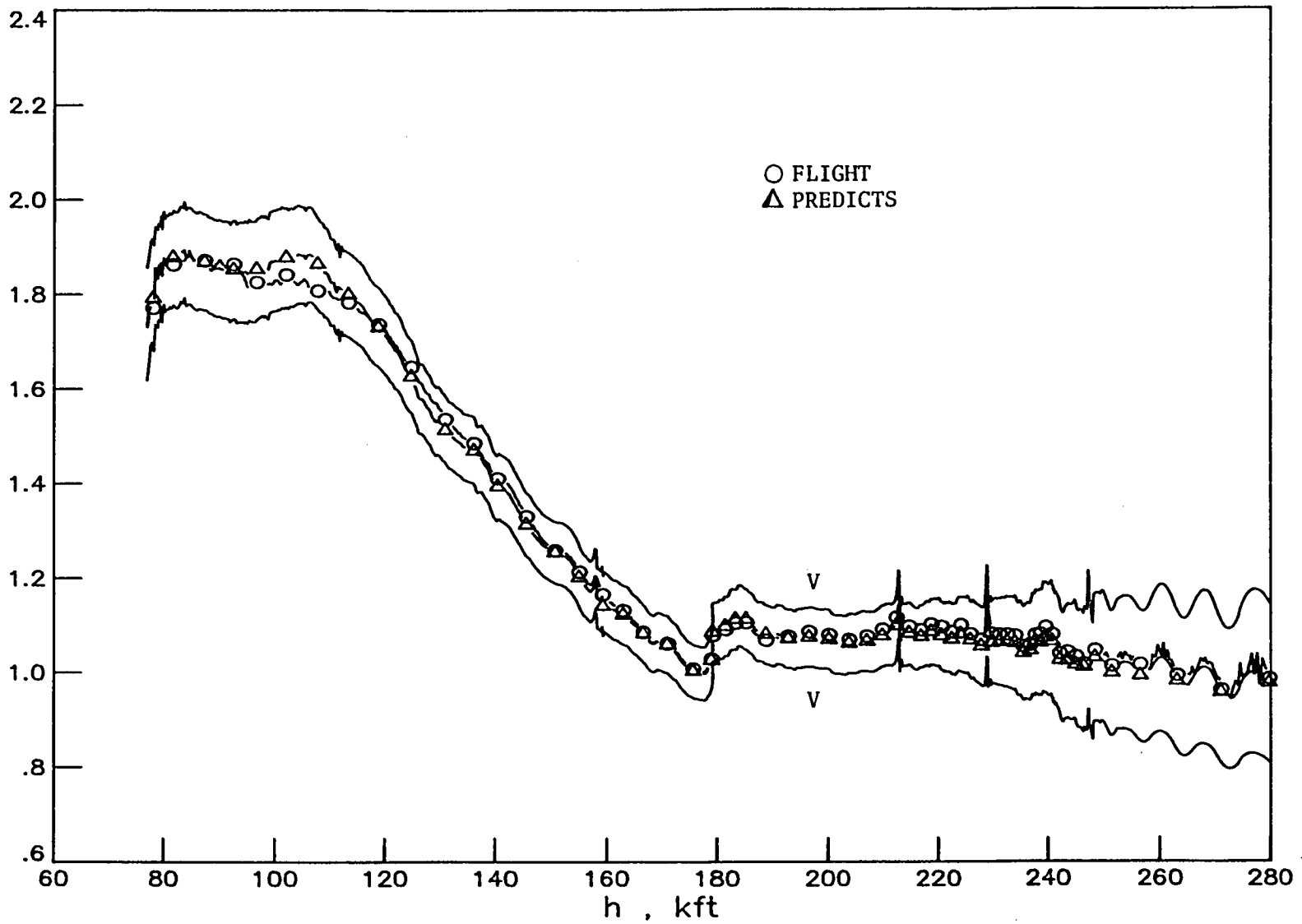


Figure 31b. STS-8 L/D comparisons vs. Mach.

L/D



-49-

Figure 32a. STS-8 L/D comparisons vs. altitude.

L/D

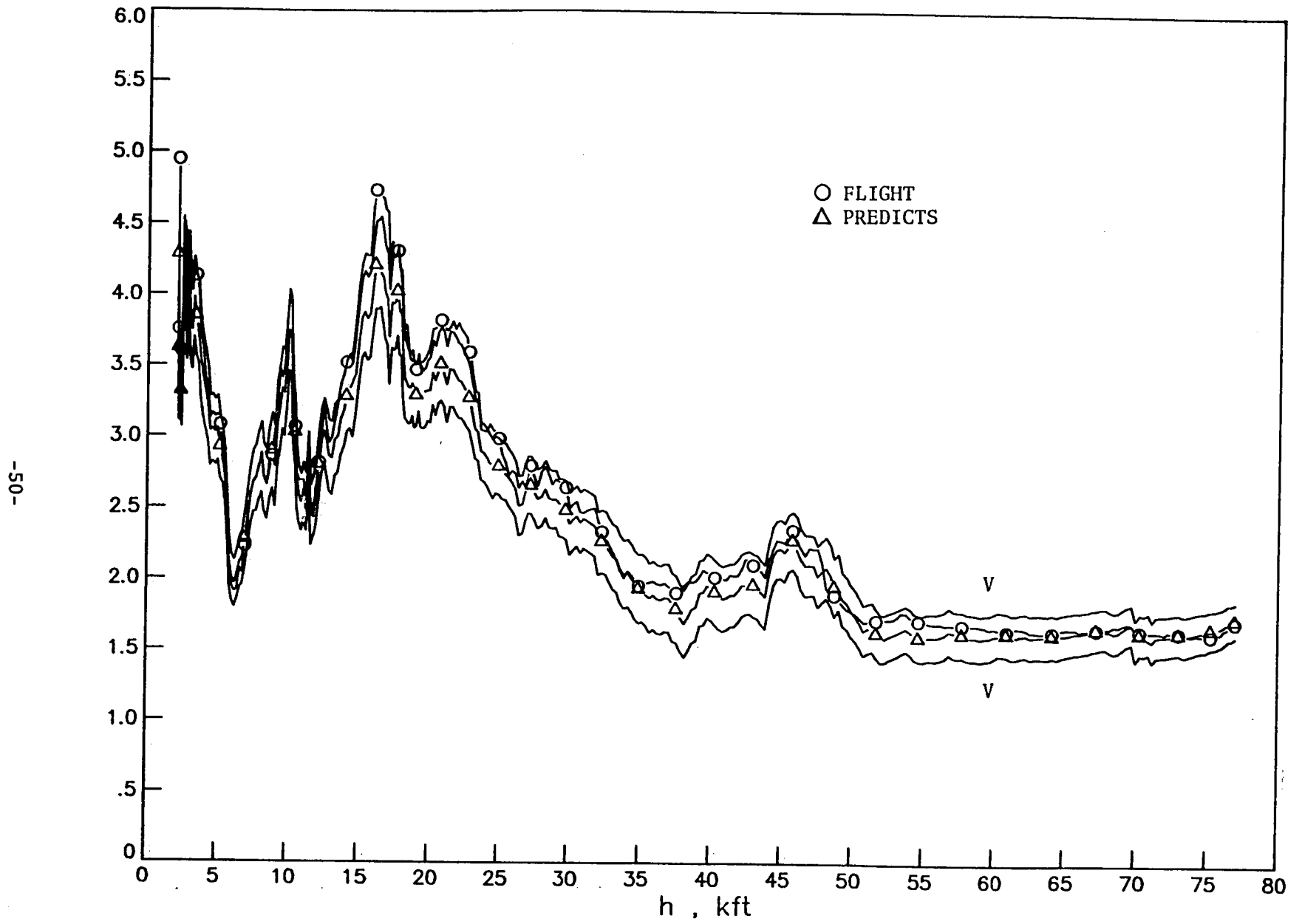


Figure 32b. STS-8 L/D comparisons vs. altitude.

C_L

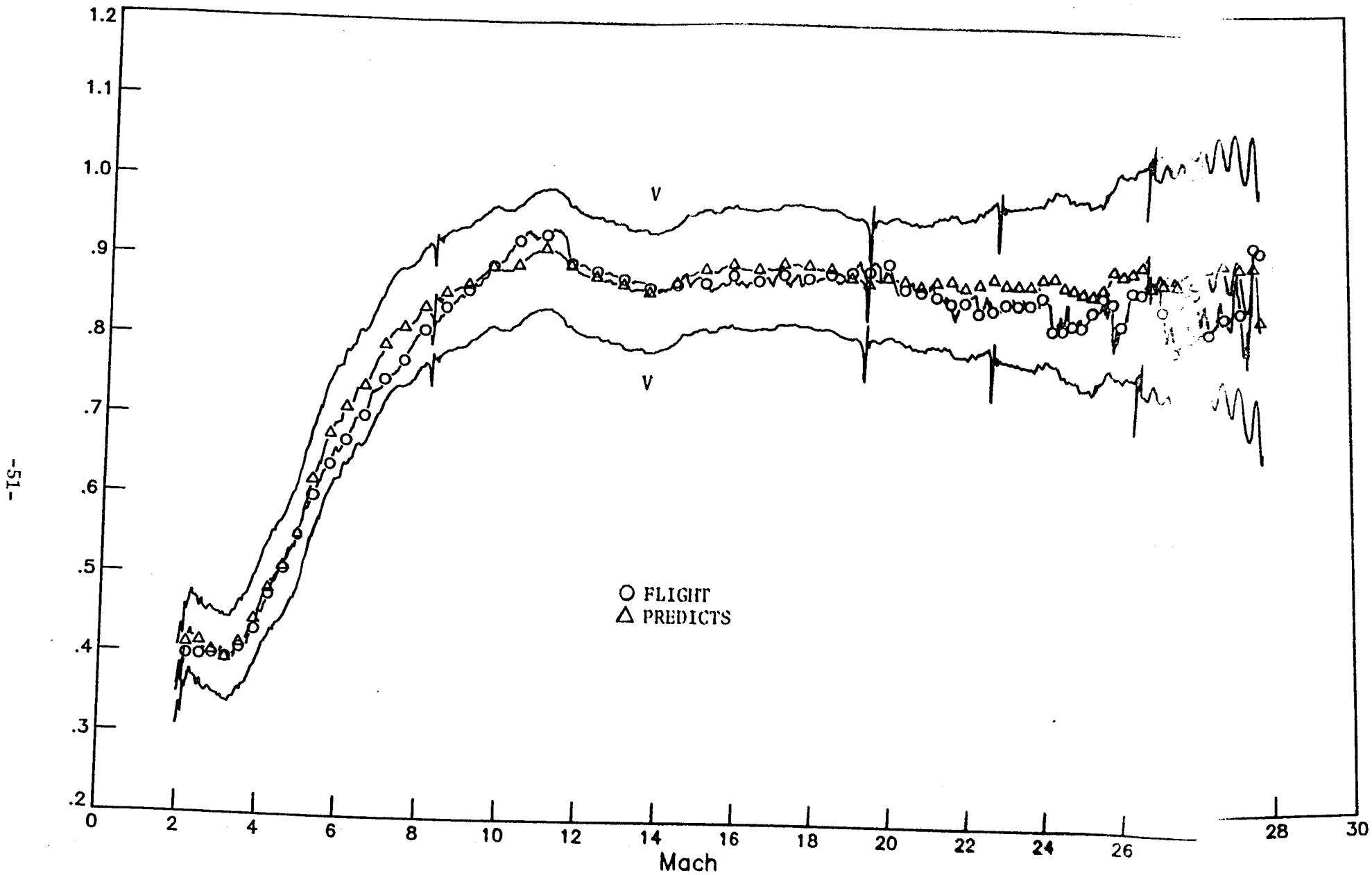


Figure 33a. STS-8 lift comparisons vs. Mach.

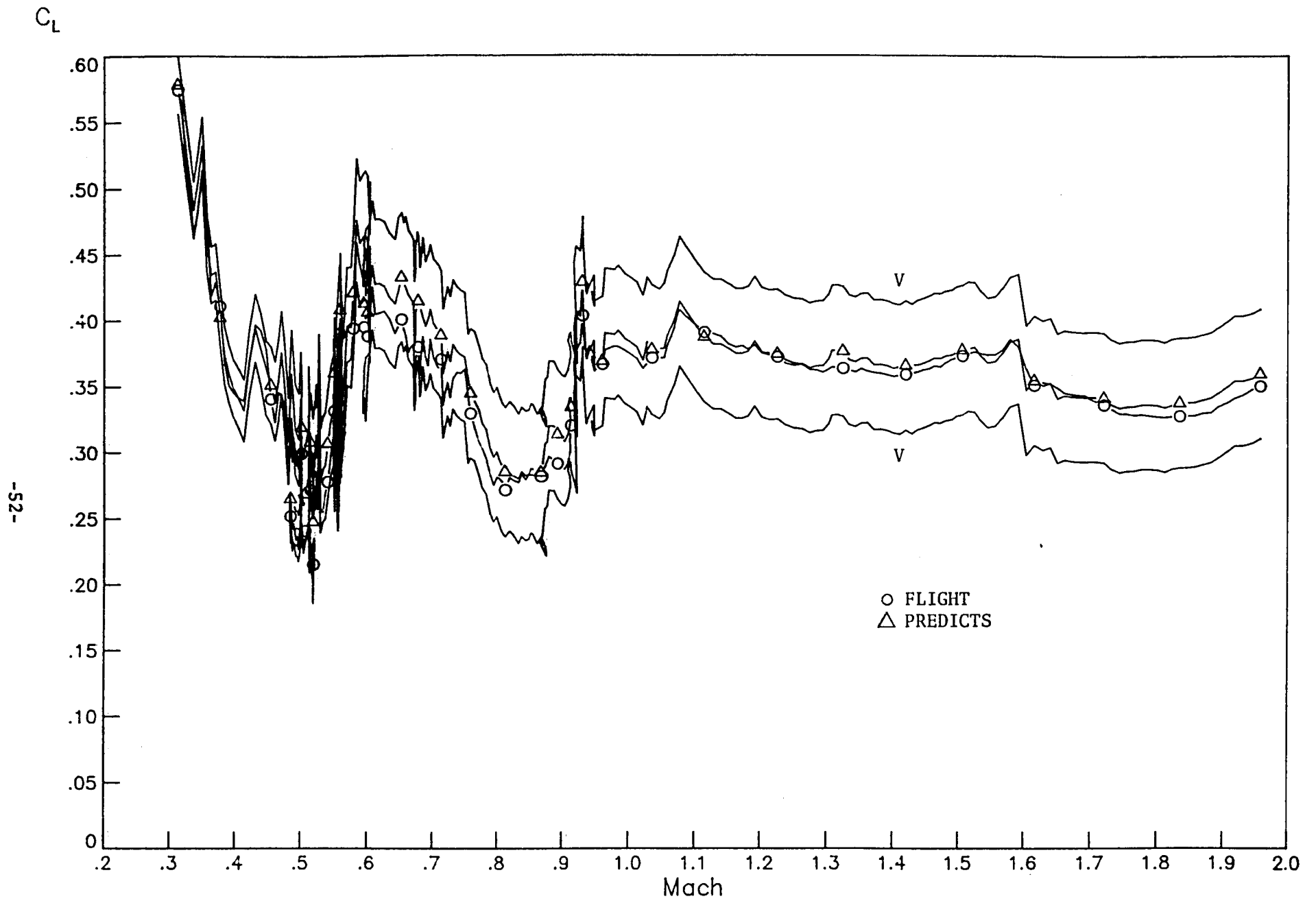


Figure 33b. STS-8 lift comparisons vs. Mach.

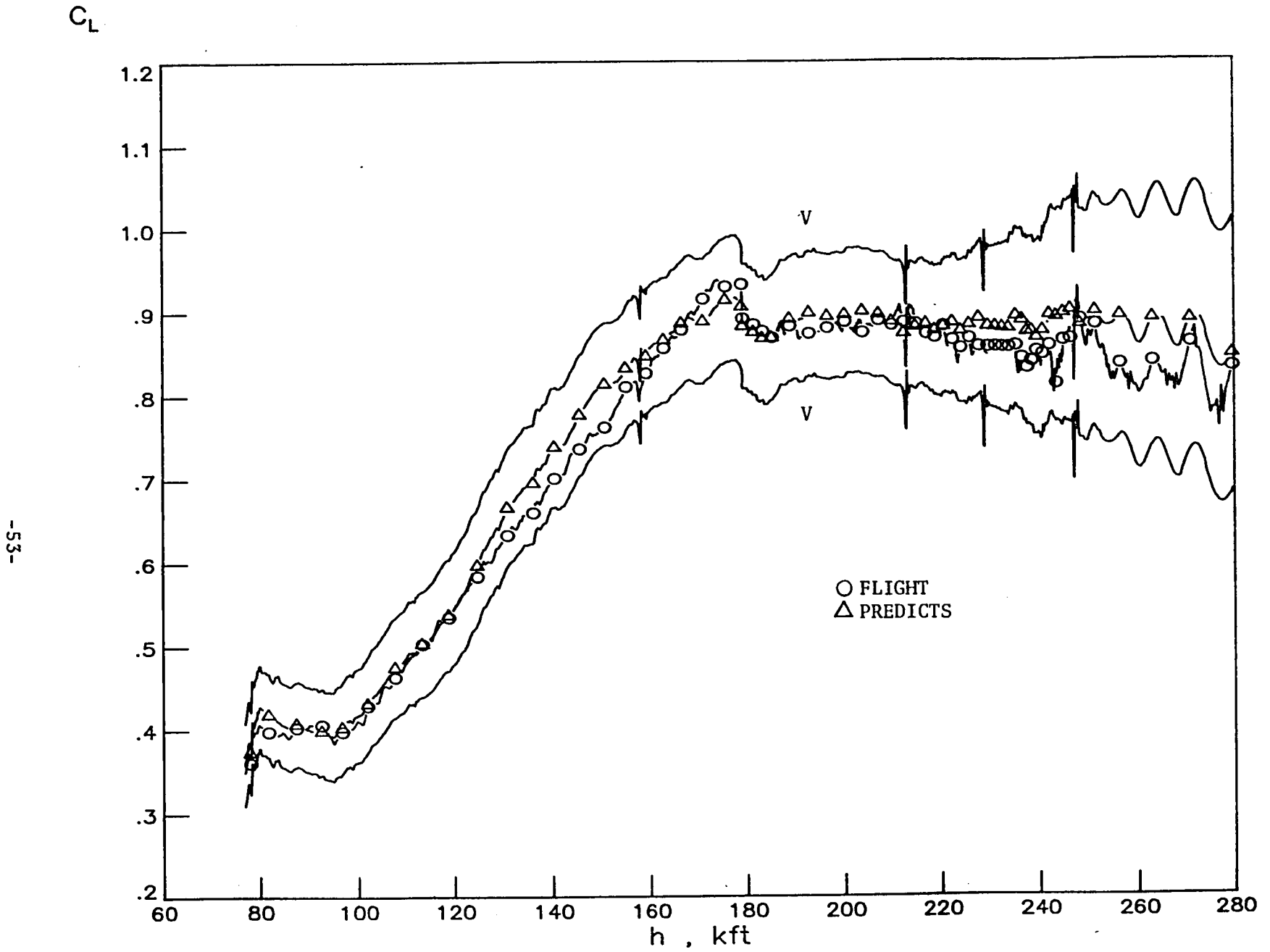


Figure 34a. STS-8 lift comparisons vs. altitude.

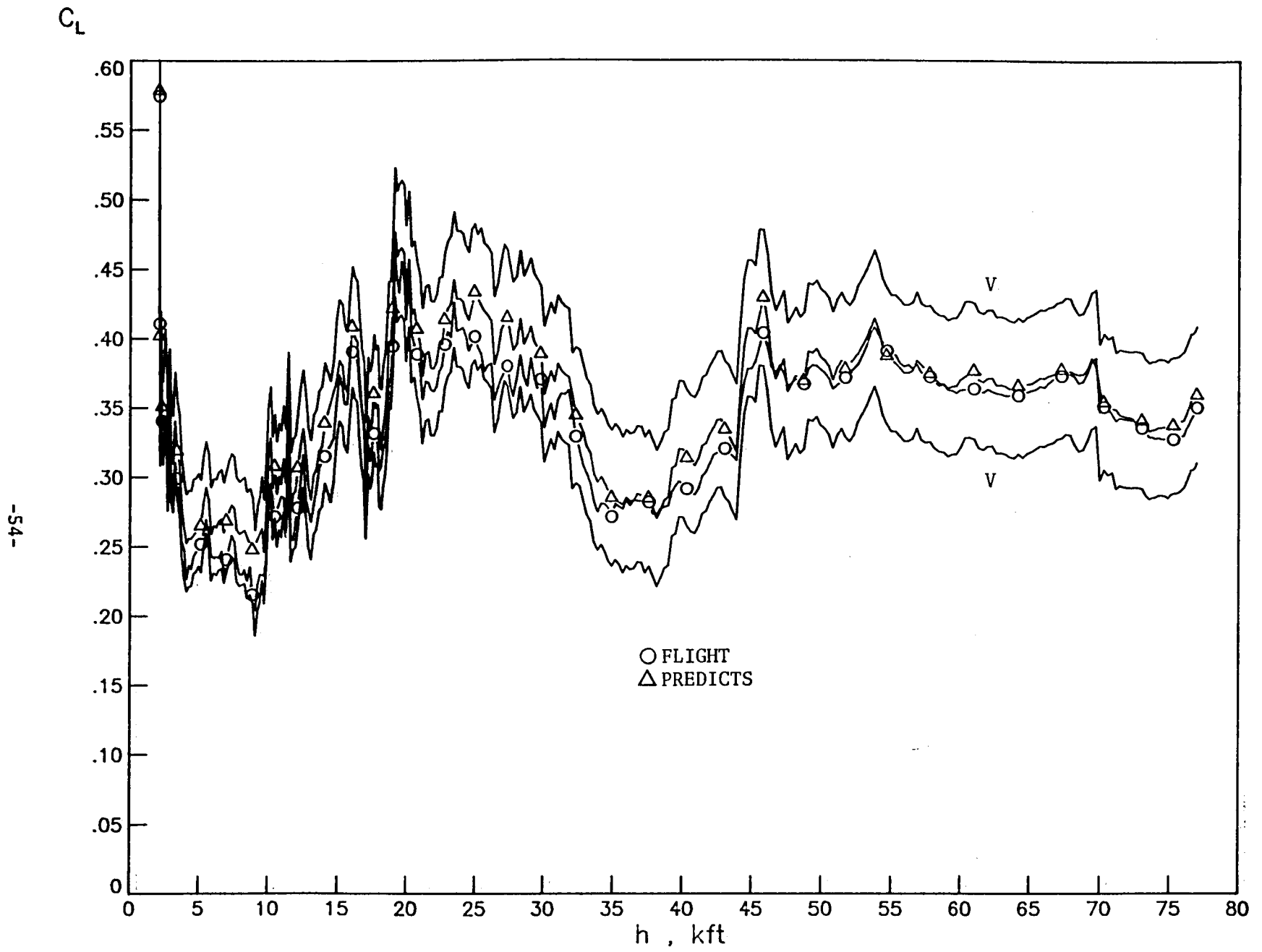
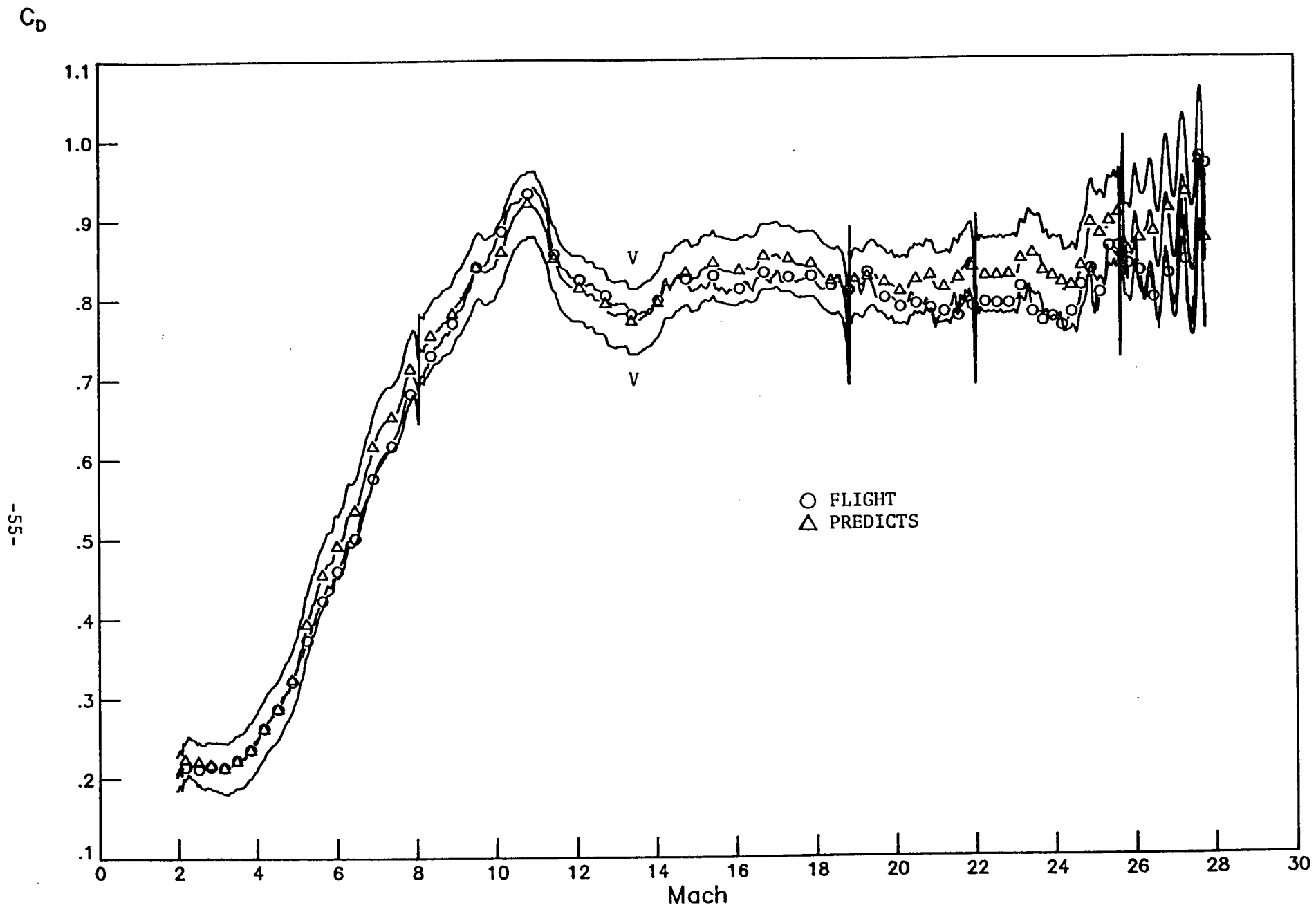


Figure 34b. STS-8 lift comparisons vs. altitude.



-55-

Figure 35a. STS-8 drag comparisons vs. Mach.

C_D

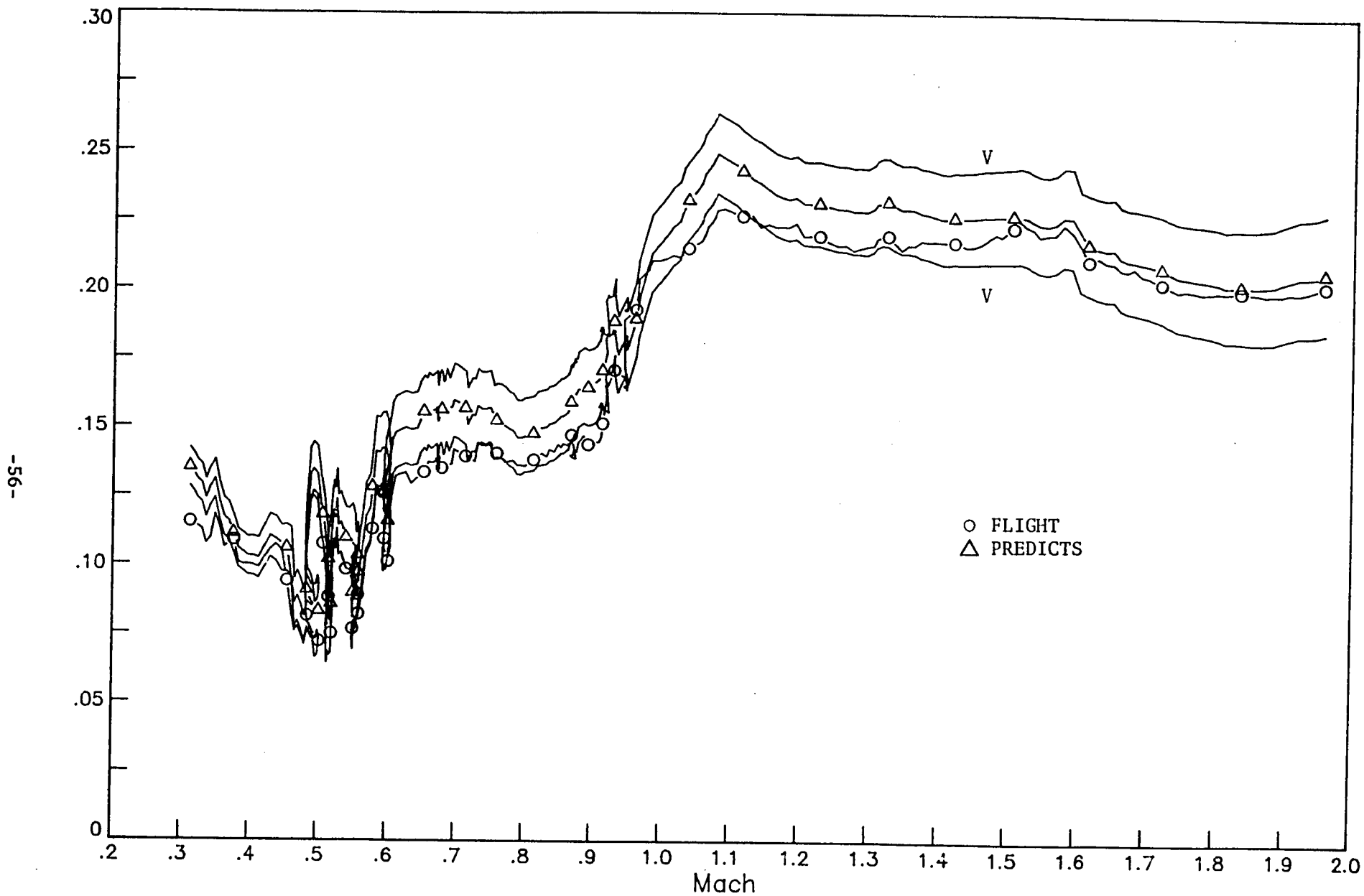


Figure 35b. STS-8 drag comparisons vs. Mach.

C_D

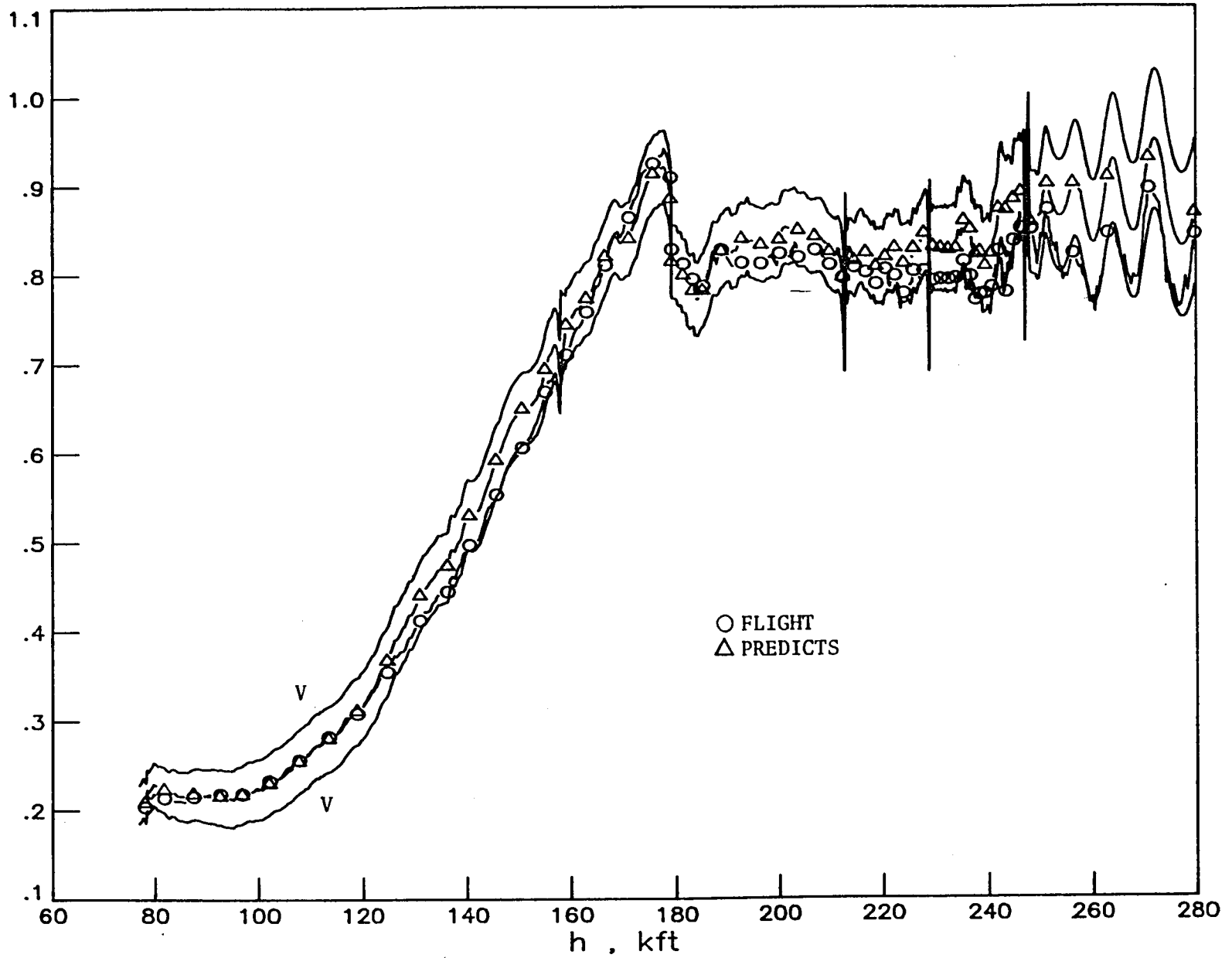


Figure 36a. STS-8 drag comparisons vs. altitude.

C_D

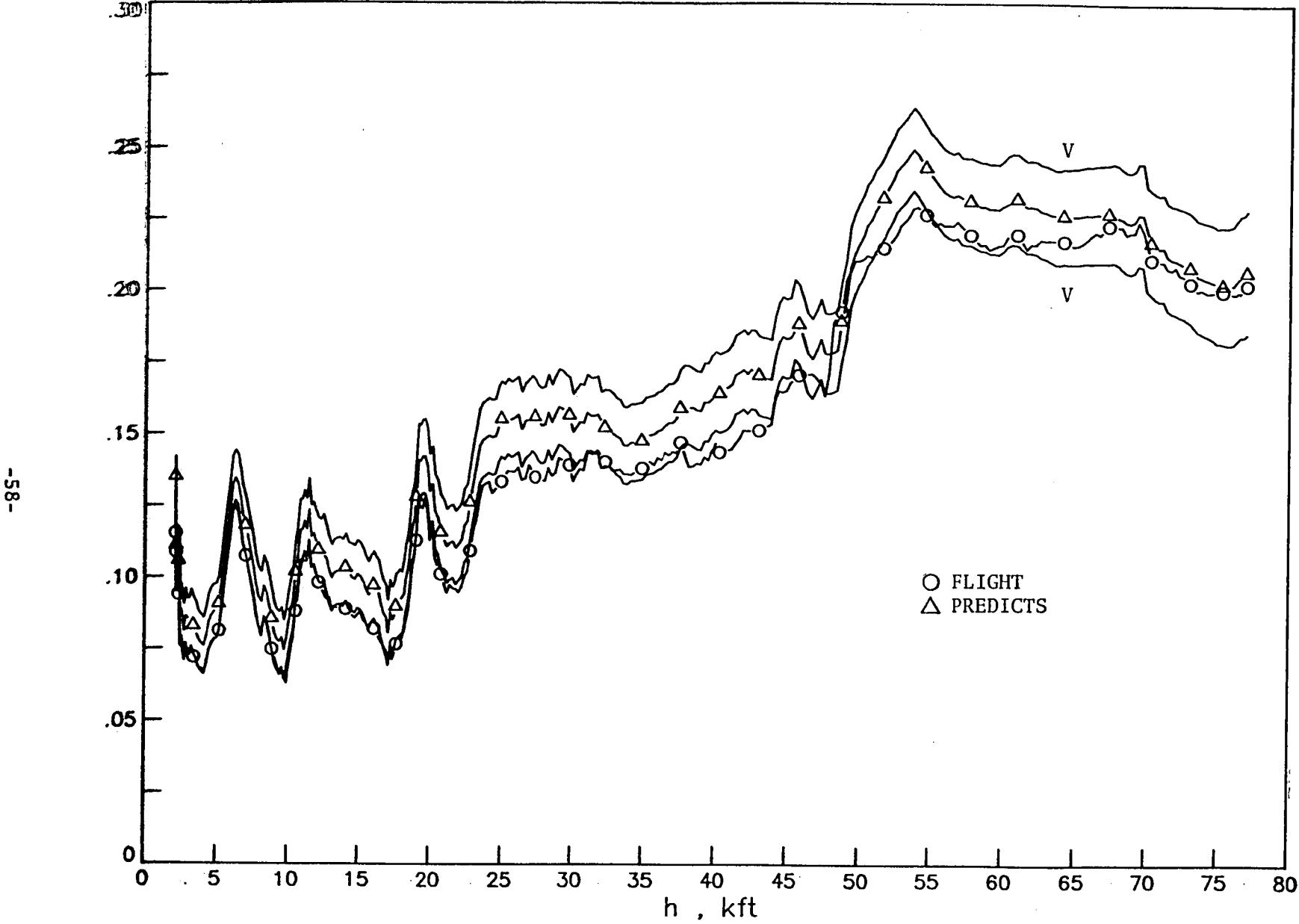
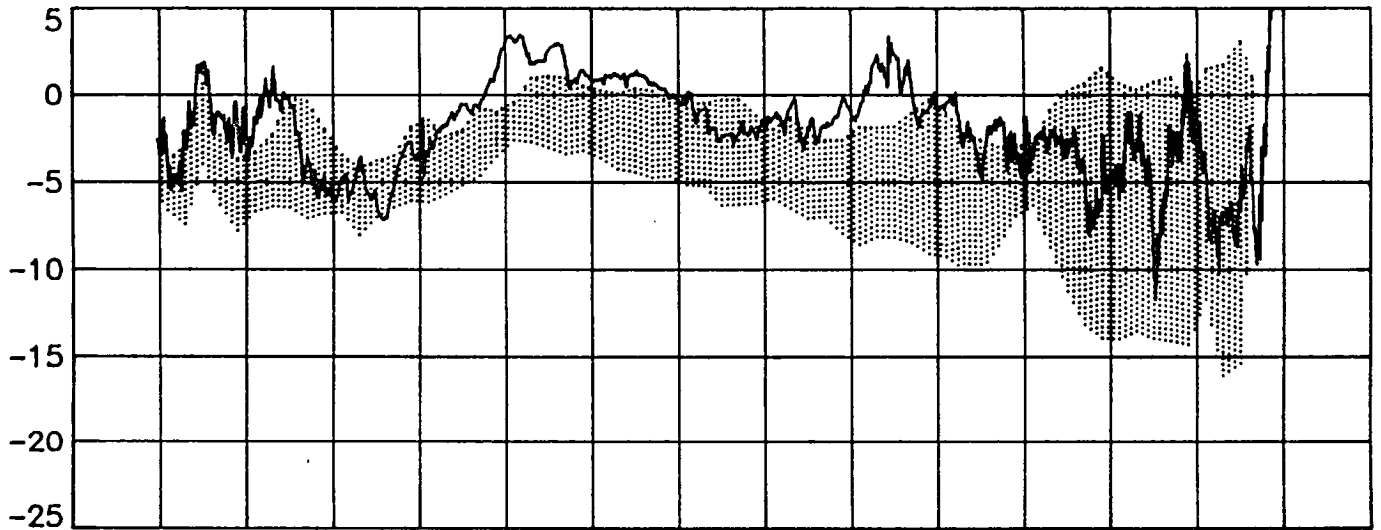
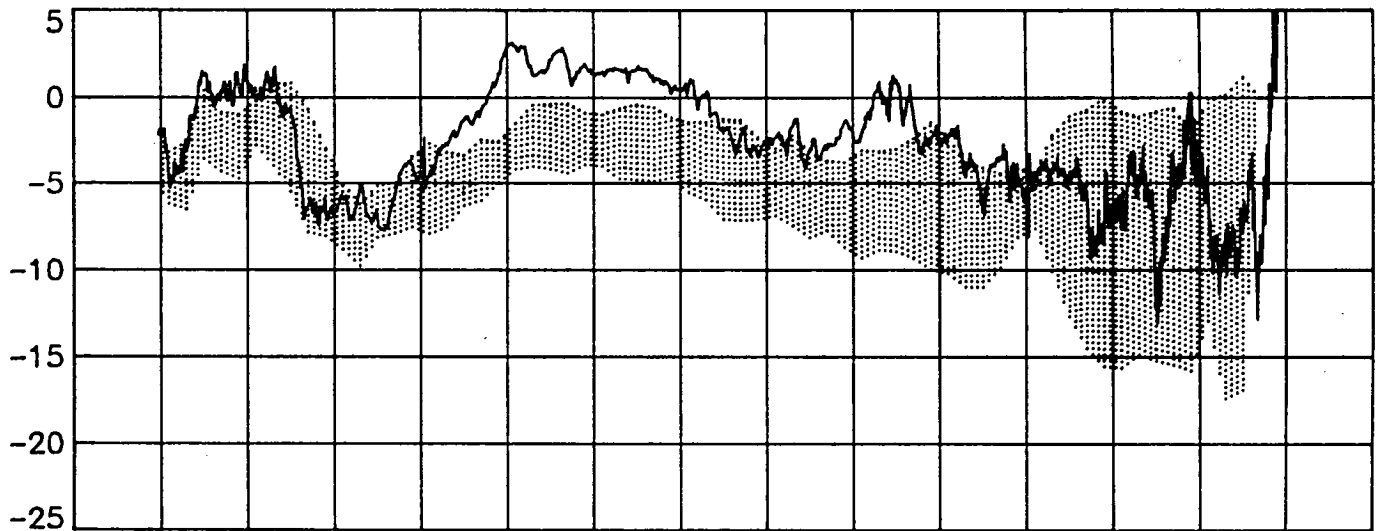


Figure 36b. STS-8 drag comparisons vs. altitude.

ΔC_L , percent



ΔC_D , percent



$\Delta(L/D)$, percent

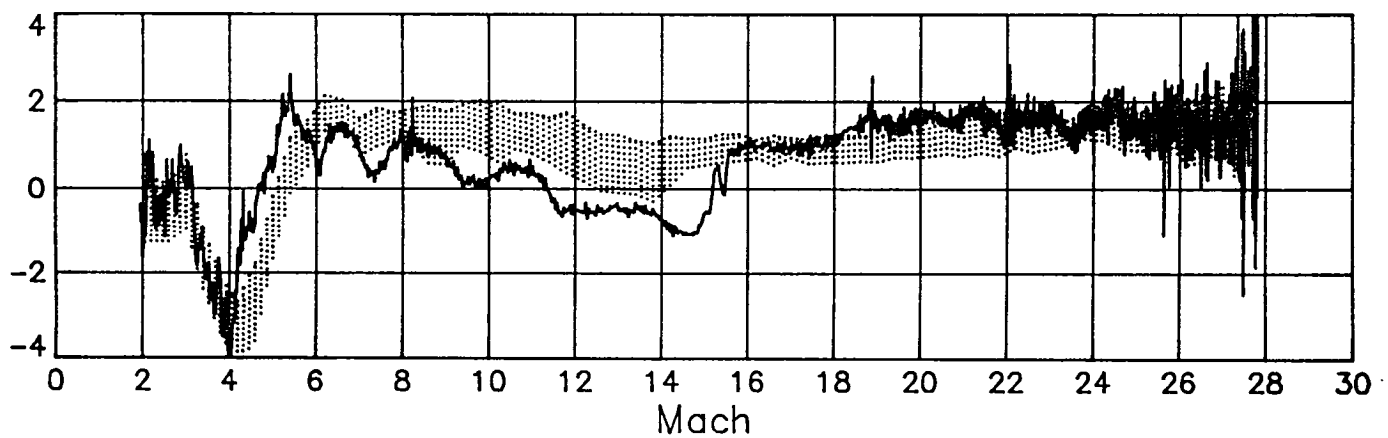
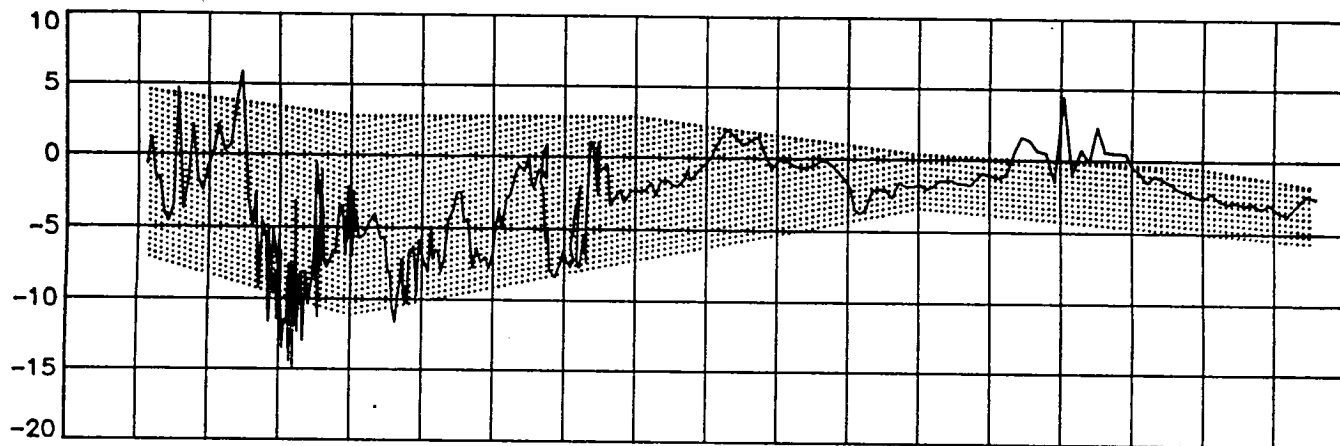
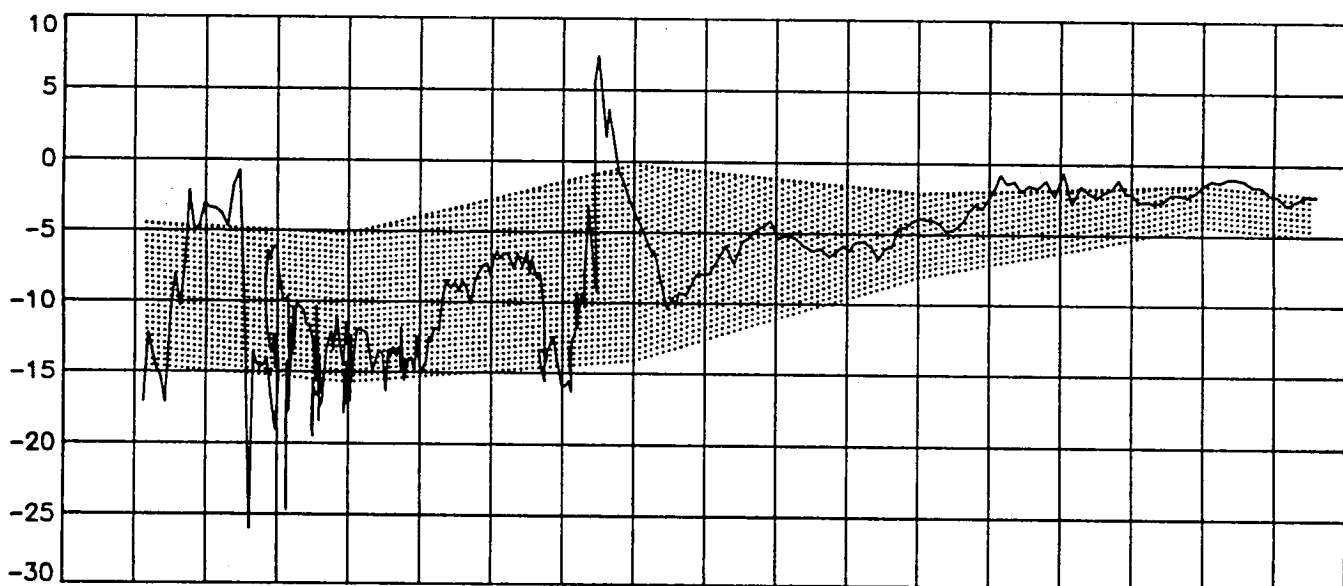


Figure 37a. STS-8 flight / data base differences vs. Mach.

ΔC_L , percent



ΔC_D , percent



$\Delta(L/D)$, percent

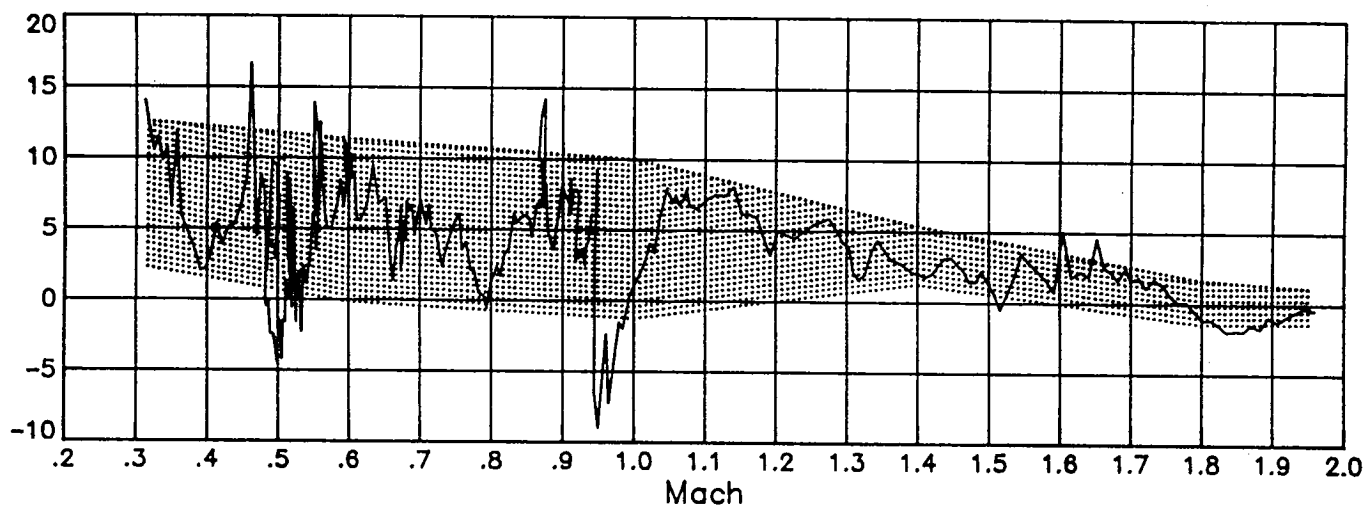
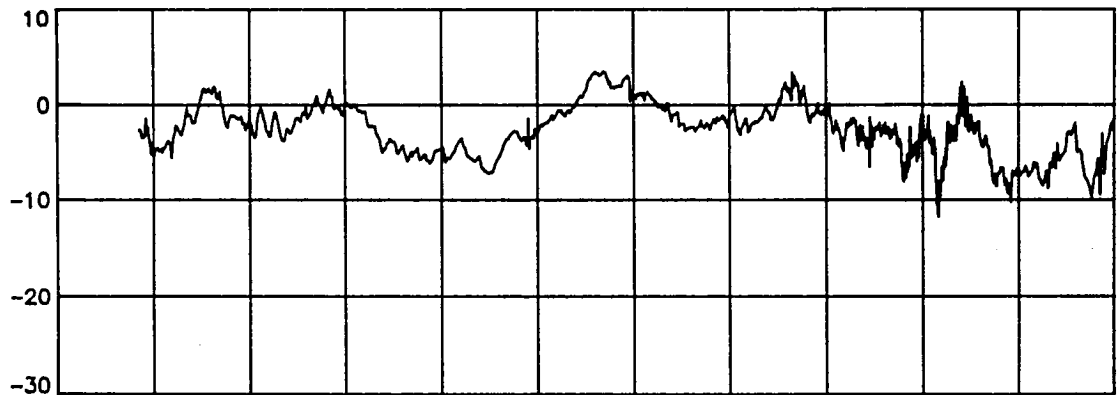
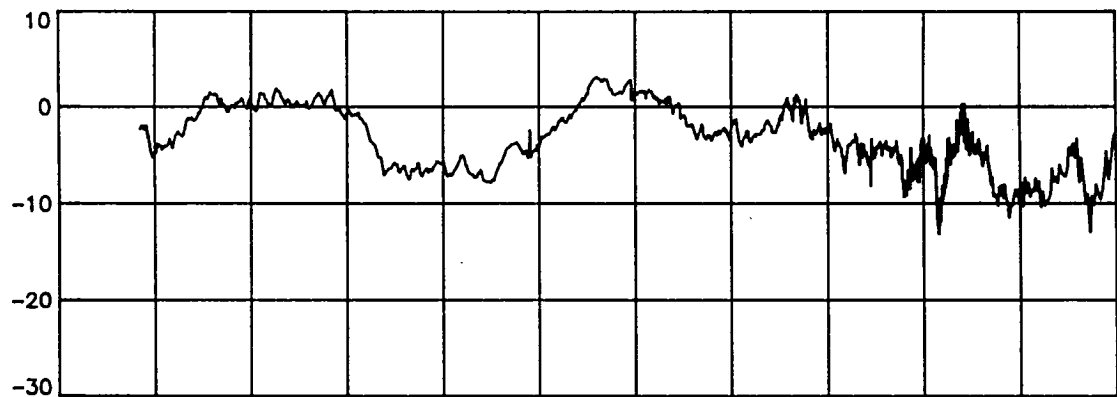


Figure 37b. STS-8 flight / data base differences vs. Mach.

ΔC_L , percent



ΔC_D , percent



$\Delta(L/D)$, percent

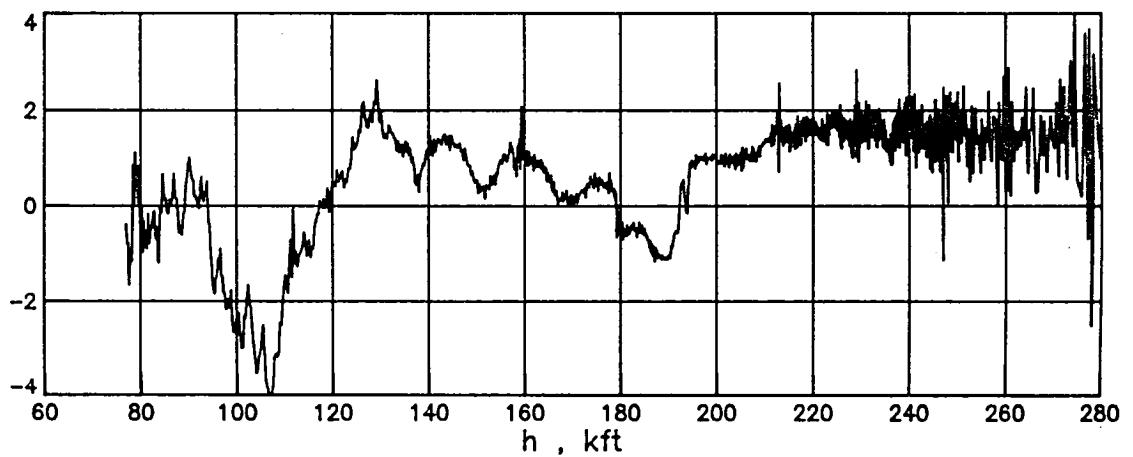
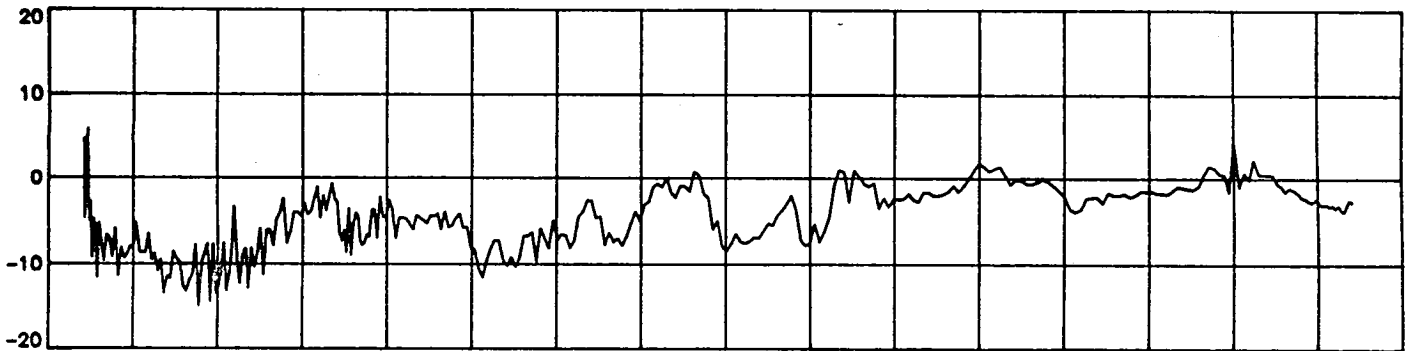
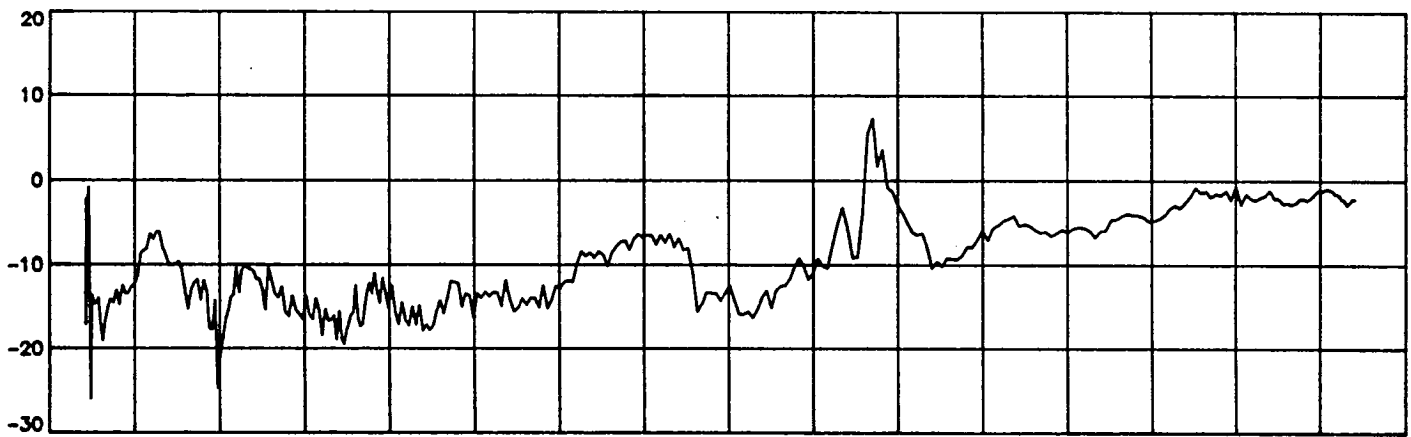


Figure 38a. STS-8 flight / data base differences vs. altitude.

ΔC_L , percent



ΔC_D , percent



$\Delta(L/D)$, percent

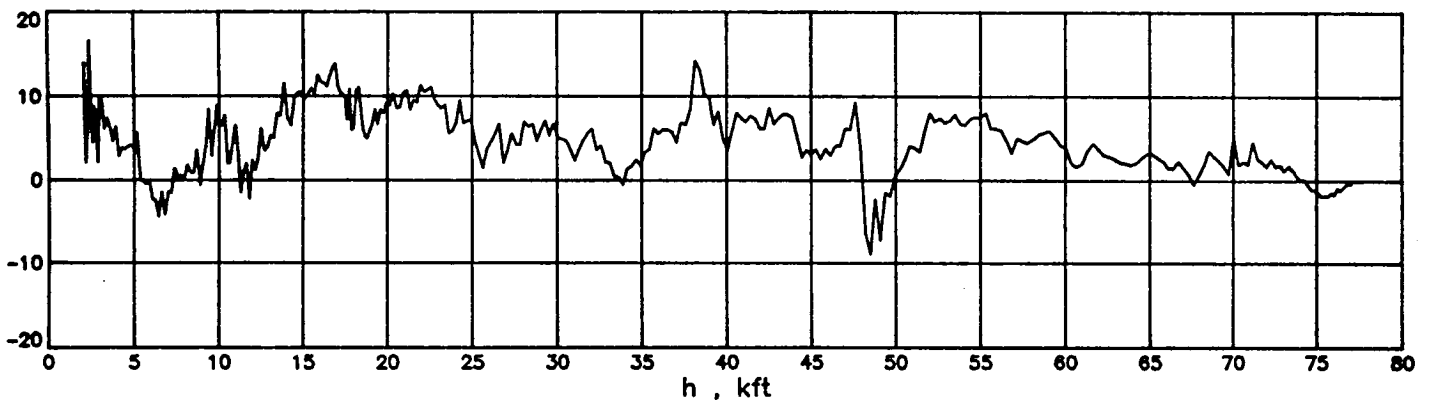
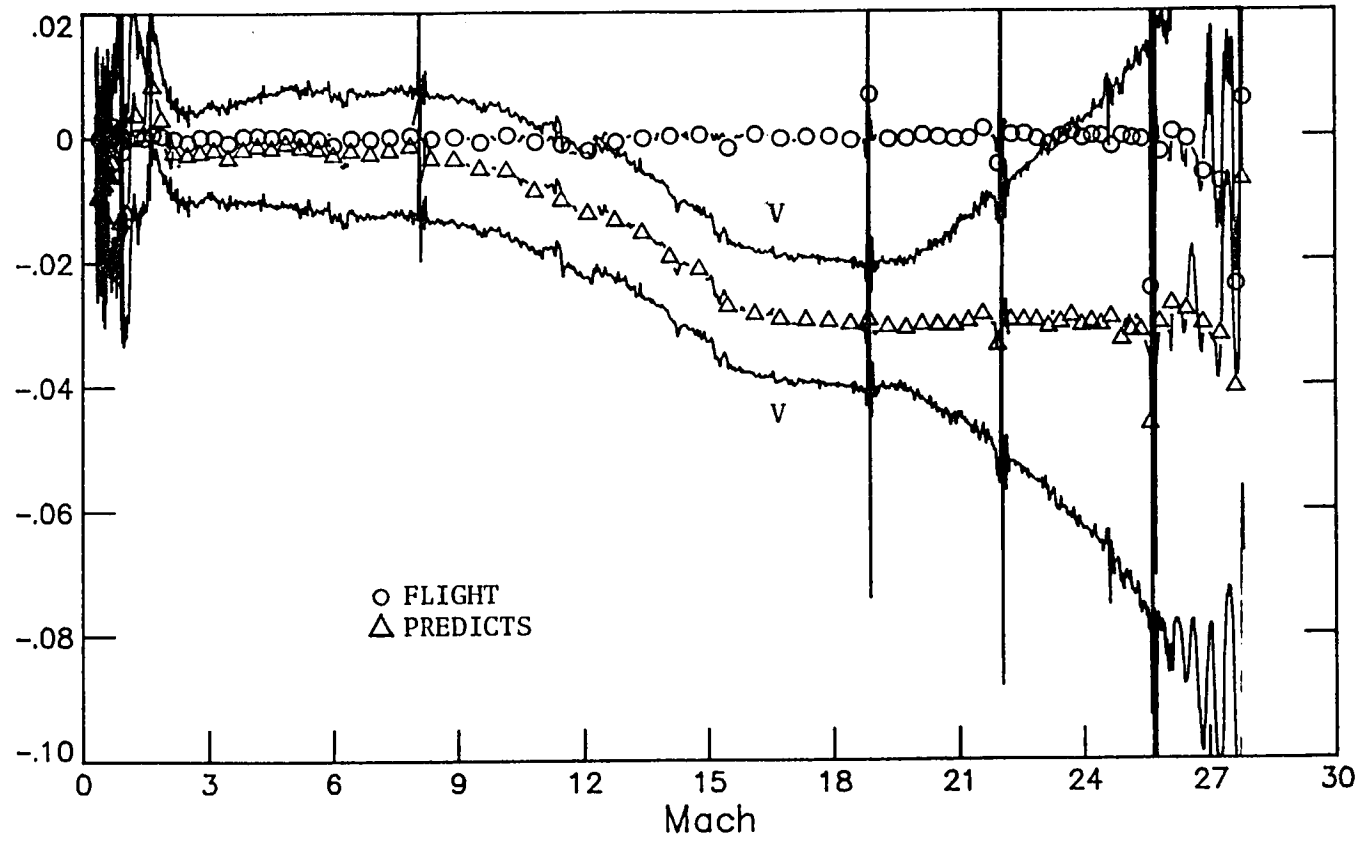


Figure 38b. STS-8 flight / data base differences vs. altitude.

C_m



-63-

Figure 39. STS-8 C_m comparisons vs. Mach.

IV. MMLE input files

GTFILES were generated using IMU2 and ACIP spacecraft dynamics. The 25 Hz IMU GTFILE is available on NX0844. The OI data required was the LaRC converted OI-2 tape, NM0543. IMU2 data necessary for the high frequency file generation is on NX0482. The IMU2 GTFILE was generated from epoch to main gear touchdown by direct integration of the equations of motion, outputting at times commensurate with the 25 Hz OI-2 file. The LAIRS atmosphere was utilized for air relative computations.

The ACIP GTFILE generated was output on NX0943. Here, 15 files (CDC System Records) were written. Table IV defines the maneuvers (type and specified times) as well as the actual start and stop times of each file necessary to accommodate the maneuvers. The ACIP data utilized (NY1030) in the short integration intervals were calibrated versus the IMU data. Again, the same OI-2 data and LAIRJ8 atmosphere were incorporated.

1) LATERAL/DIRECTIONAL

<u>START TIME</u>		<u>STOP TIME</u>		<u>MANEUVER TYPE*</u>	<u>ACIP FILE ON NX0943</u>		
GMT	(t ₁)	GMT	(t ₂)		No.	t _{START}	t _{END}
248:07:15:45	(835)	248:07:15:52	(842)	BRB	1	830	890
16:03	(853)	16:18	(868)	BRE			
16:29	(879)	16:38	(888)	OTH			
17:42	(952)	18:03	(973)	PTI @ $\bar{q} = 22$	2	950	975
20:49	(1139)	21:00	(1150)	PTI @ M = 21	3	1135	1165
21:05	(1155)	21:11	(1161)	OTH			
23:38	(1308)	23:47	(1317)	PTI @ M = 18	4	1305	1325
26:16	(1466)	26:32	(1482)	OTH	5	1460	1490
27:20	(1530)	27:24	(1534)	BRB	6	1525	1535
27:44	(1554)	27:52	(1562)	BRE	7	1550	1575
28:39	(1609)	28:54	(1624)	OTH	8	1605	1625
29:27	(1657)	29:36	(1666)	PTI @ M = 8.4	9	1655	1680
29:42	(1672)	29:46	(1676)	OTH			
30:50	(1740)	30:53	(1743)	BRB	10	1735	1770
31:06	(1756)	31:12	(1762)	BRE			
31:32	(1782)	31:41	(1791)	PTI @ M = 5.8	11	1780	1805
31:41	(1791)	31:50	(1800)	OTH			
32:34	(1844)	32:45	(1855)	PTI @ M = 4	12	1840	1860
33:23	(1893)	33:26	(1896)	BRB	13	1890	1915
33:36	(1906)	33:40	(1910)	BRE			
34:37	(1967)	34:49	(1979)	PTI @ M = 2.2	14	1965	1985
35:16	(2006)	35:31	(2021)	PTI @ M = 1.6	15	2005	2025

2) LONGITUDINAL

<u>START TIME</u>		<u>STOP TIME</u>		<u>MANEUVER TYPE *</u>	
248:07:16:14	(864)	248:07:16:29	(879)		OTH
20:58	(1148)	21:08	(1158)	PTI @ M = 21	see 3 above
23:46	(1316)	23:52	(1322)	PTI @ M = 18	see 4 above
27:48	(1558)	28:01	(1571)	BFP	see 7 above
29:36	(1666)	29:41	(1671)	PTI @ M = 8.4	see 9 above
34:49	(1979)	34:54	(1984)	PTI @ M = 2.2	see 14 above
35:30	(2020)	35:34	(2024)	PTI @ M = 1.6	see 15 above

NOTE: t₁, t₂, t_{START}, t_{END} in seconds from epoch

* KEY TO MANEUVER TYPES:

- BRB - Bank Reversal Beginning
- BRE - Bank Reversal End
- OTH - Incidental motion which may or may not be worth analysis
- PTI - Programmed Test Input, best type of maneuver for analysis

Table IV. Definition of ACIP GTFILES for STS-8.

APPENDIX A
Spacecraft and Physical Constants

++++IMU NBR 1 ATTITUDE INFORMATION++++			
...INERTIAL (EE50) TO ROTATING (ETOD)			
.20004927E-01	.99979988E+00		-.62464349E-04
-.99979463E+00	.20005024E-01		.32404828E-02
.32410839E-02	-.23740994E-05		.99999475E+00
...ROTATING (ETOD) TO N-E-D			
.38250454E-01	-.34430089E-01		.99867486E+00
-.66901498E+00	-.74324892E+00		0.
.74226401E+00	-.66812844E+00		-.51463854E-01
...NAV BASE TO S/C BODY			
.98291060E+00	.36562360E-03		-.18408340E+00
-.37935500E-03	.99999990E+00		-.39375570E-04
.18408330E+00	.10853560E-03		.98291060E+00
...NAV BASE TO OUTER ROLL			
.99999972E+00	-.41209163E-04		.74855225E-03
.41209151E-04	.10000000E+01		.30847212E-07
-.74855225E-03	0.		.99999972E+00
...PLATFORM TO OUTER ROLL			
.50912188E-02	.53491494E+00		-.84480272E+00
-.79646339E+00	-.50855789E+00		-.32678715E+00
-.60454255E+00	.67454413E+00		.42359476E+00
...INERTIAL (EE50) TO PLATFORM			
-.75639075E+00	.32071360E-01		.65333265E+00
.64588976E+00	.19455898E+00		.73822284E+00
-.10343599E+00	.98036629E+00		-.16787732E+00
...S/C BODY TO N-E-D			
.50353292E+00	-.84481462E+00		.18039834E+00
.74523528E+00	.53039443E+00		.40383799E+00
-.43700328E+00	-.68876943E-01		.89679624E+00

TABLE A-1
STS-8 IMU attitude matrices

++++IMU NBR 2 ATTITUDE INFORMATION++++			
...INERTIAL (EE50) TO ROTATING (ETDD)			
.20004927E-01	.99979988E+00		-.62464349E-04
-.99979463E+00	.20005024E-01		.32404828E-02
.32410839E-02	-.23740994E-05		.99999475E+00
...ROTATING (ETDD) TO N-E-D			
.38250454E-01	-.34430089E-01		.99867486E+00
-.66901498E+00	-.74324892E+00		0.
.74226401E+00	-.66812844E+00		-.51463854E-01
...NAV BASE TO S/C BODY			
.98291060E+00	.36562360E-03		-.18408340E+00
-.37935500E-03	.99999990E+00		-.39375570E-04
.18408330E+00	.10853560E-03		.98291060E+00
...NAV BASE TO OUTER ROLL			
.99999765E+00	-.21653551E-02		.12392294E-03
.21653520E-02	.99999766E+00		.24900017E-04
-.12397657E-03	-.24631622E-04		.99999999E+00
...PLATFORM TO OUTER ROLL			
-.11547991E+00	.65532701E+00		.74653746E+00
-.78217594E+00	-.52330219E+00		.33838161E+00
.61234995E+00	-.54483744E+00		.57290555E+00
...INERTIAL (EE50) TO PLATFORM			
.23175478E+00	.75460368E+00		.61389083E+00
-.34276372E+00	-.52725321E+00		.77750629E+00
.91038519E+00	-.39061040E+00		.13645720E+00
...S/C BODY TO N-E-D			
.50256064E+00	-.84600360E+00		.17841374E+00
.74588252E+00	.52861484E+00		.40536192E+00
-.43728663E+00	-.70635271E-01		.89658719E+00

TABLE A-1 (Continued)

++++IMU NBR 3 ATTITUDE INFORMATION++++

...INERTIAL (EE50) TO ROTATING (ETOD)

.20004927E-01	.99979988E+00	-.62464349E-04
-.99979463E+00	.20005024E-01	.32404828E-02
.32410839E-02	-.23740994E-05	.99999475E+00

...ROTATING (ETOD) TO N-E-D

.38250454E-01	-.34430089E-01	.99867486E+00
-.66901498E+00	-.74324892E+00	0.
.74226401E+00	-.66812844E+00	-.51463854E-01

...NAV BASE TO S/C BODY

.98291060E+00	.36562360E-03	-.18408340E+00
-.37935500E-03	.99999990E+00	-.39375570E-04
.18408330E+00	.10853560E-03	.98291060E+00

...NAV BASE TO OUTER ROLL

.99999429E+00	.12891322E-02	.31251399E-02
-.12891429E-02	.99999917E+00	.14160325E-05
-.31251355E-02	-.54447762E-05	.99999512E+00

...PLATFORM TO OUTER ROLL

.91913187E+00	-.38190265E+00	.96693555E-01
-.38269852E+00	-.92384330E+00	-.10912244E-01
.93493961E-01	-.26974062E-01	-.99528756E+00

...INERTIAL (EE50) TO PLATFORM

.35923463E+00	-.44550270E+00	.82004714E+00
-.46916306E+00	.67338336E+00	.57134944E+00
-.80674404E+00	-.58998471E+00	.32888920E-01

...S/C BODY TO N-E-D

.50363348E+00	-.84534088E+00	.17828737E+00
.74508021E+00	.52948684E+00	.40562587E+00
-.43728086E+00	-.71451251E-01	.89651741E+00

TABLE A-1 (Concluded)

Planet Parameters

Physical Model

Polar Radius: 20,855,591.48 ft
Equatorial Radius: 20,925,741.47 ft
Rotational Rate: .7292115147E-4 rad/sec

Gravity Model

Central mass, μ : .1407646853E17 ft³/sec²
J₂: .10827E-2
C₃₀: .256E-5
C₄₀: .158E-5
C₂₂: .157E-5
S₂₂: -.897E-6

Runway 22 Location:

Altitude: 2097. ft (above ellipsoid)
Geodetic Latitude: 34.91628 deg
Longitude: 242.137582 deg
Azimuth: 238.241167 deg

Location of IMU relative to center-of-gravity in Body coordinates

(5-point table used for entry reconstruction)

<u>TIME, sec</u>	<u>X_B, ft</u>	<u>Y_B, ft</u>	<u>Z_B, ft</u>
0	56.026	0.0083	-4.0417
1922	55.901	0.0083	-4.0833
2309	55.901	0.0083	-4.0833
2309.01	56.034	0.0083	-4.3083
2600	56.034	0.0083	-4.3083

Spacecraft aerodynamic reference parameters

Reference Area 2690 ft²
Span 78.057 ft
Chord 39.567 ft

TABLE A-2

Planet and Spacecraft Data Used for
BET8T06, STS8BET, and AEROBET Generation

Average Attitude Computations @ Epoch (25310 sec)

	<u>IMU1</u>	<u>IMU2</u>	<u>IMU3</u>	<u>μ</u>	<u>σ</u>
ψ (deg)	55.9543	56.0287	55.9435	55.9755	0.0464
θ (deg)	25.9134	25.9298	25.9296	25.9243	0.0094
ϕ (deg)	-4.3919	-4.5046	-4.5568	-4.4844	0.0843

TABLE A-2 (Concluded)

Weight and Center-of-Gravity (c.g.) Location

<u>TIME</u> (sec from epoch)	<u>EVENT</u> *	<u>WEIGHT</u> (lbs)	<u>X_{CG}</u> (inches in Orbiter Structural Reference)	<u>Y_{CG}</u>	<u>Z_{CG}</u>
0	ENTRY	205020.4	1091.5	-0.1	373.5
1922.	MACH 3	204468.4	1090.0	-0.1	373.0
2330.	LANDING	204272.4	1091.6	-0.1	370.3

Moments and Products of Inertia

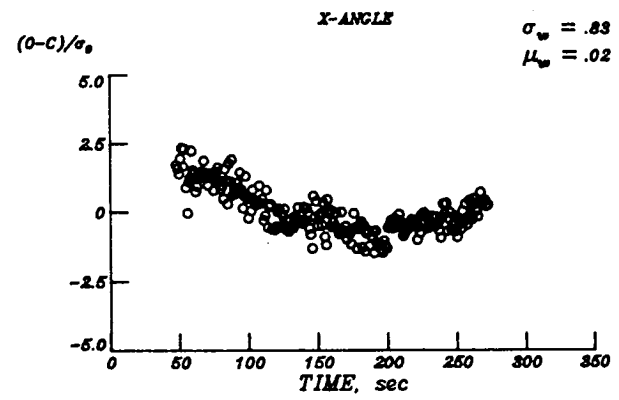
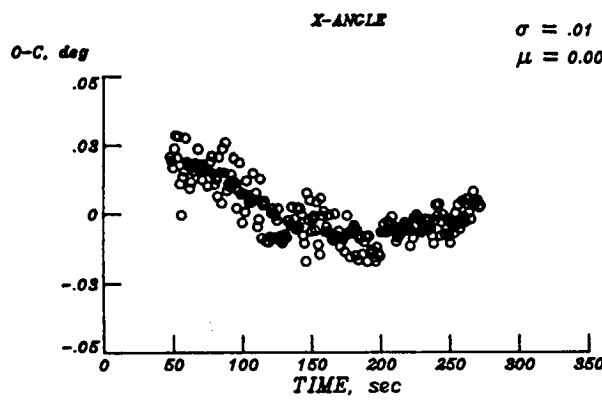
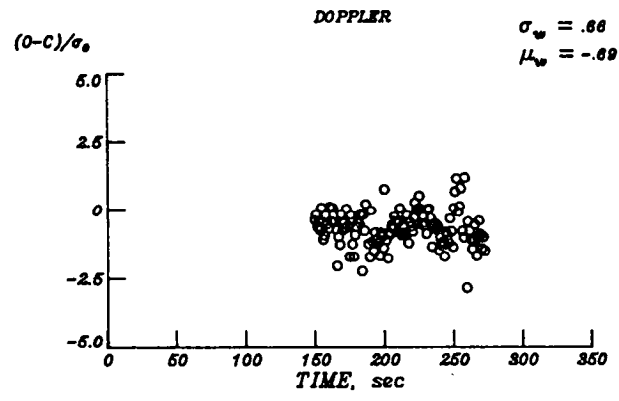
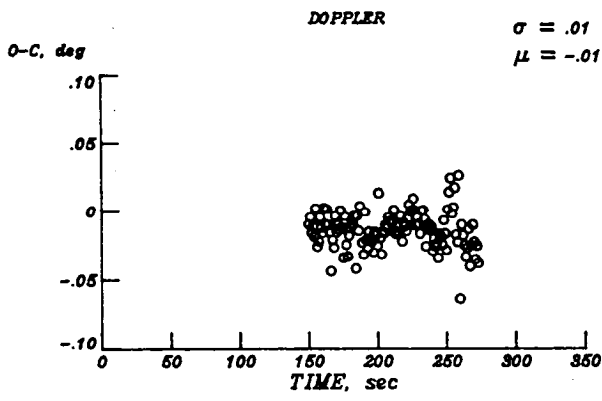
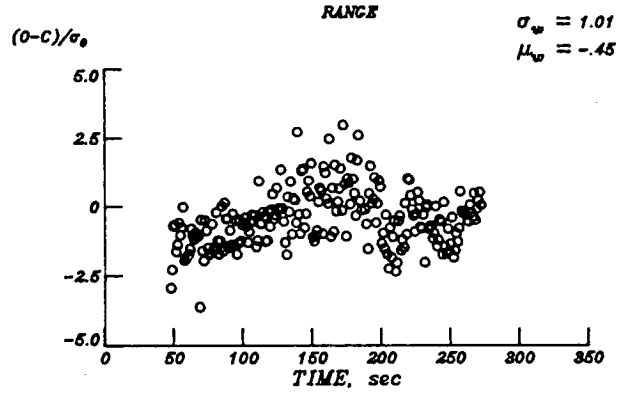
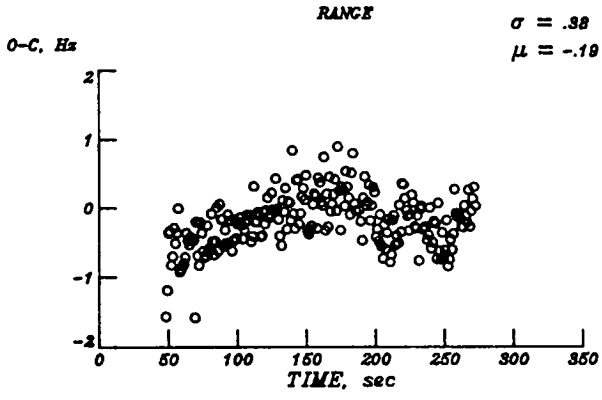
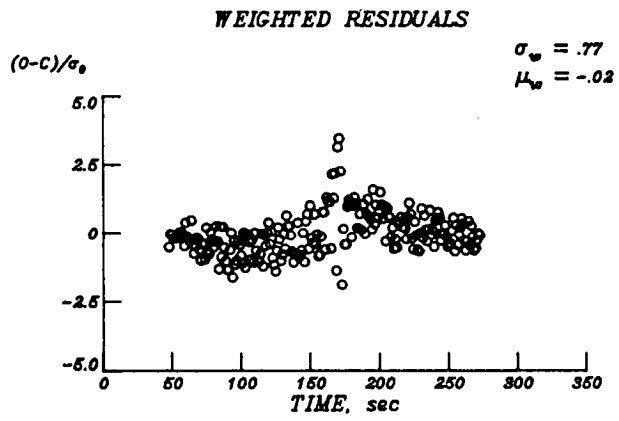
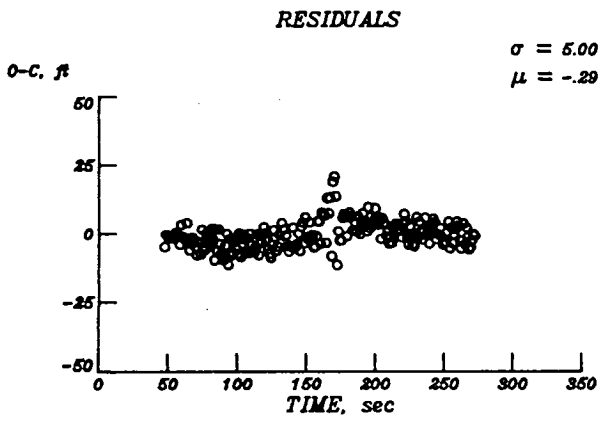
<u>TIME</u> (sec from epoch)	<u>EVENT</u> *	<u>I_{XX}</u>	<u>I_{YY}</u>	<u>I_{ZZ}</u>	<u>I_{XY}</u>	<u>I_{XZ}</u>	<u>I_{YZ}</u>
slug - ft ²							
0	ENTRY	900285.	6800431.	7095637.	3541.	140718.	-1375.
1922.	MACH 3	895848.	6761535.	7059155.	3042.	130242.	-1616.
2330.	LANDING	925221.	6780901.	7053631.	3227.	123260.	-1609.

* MACH 3 values held constant until gear deploy (t=2309),
landed values adopted thereafter.

TABLE A-3
STS-8 mass properties

APPENDIX B

Final residuals for STS-8 trajectory reconstruction



Y-ANGLE

Figure B-1. Smoothed residuals versus time for GWMS.

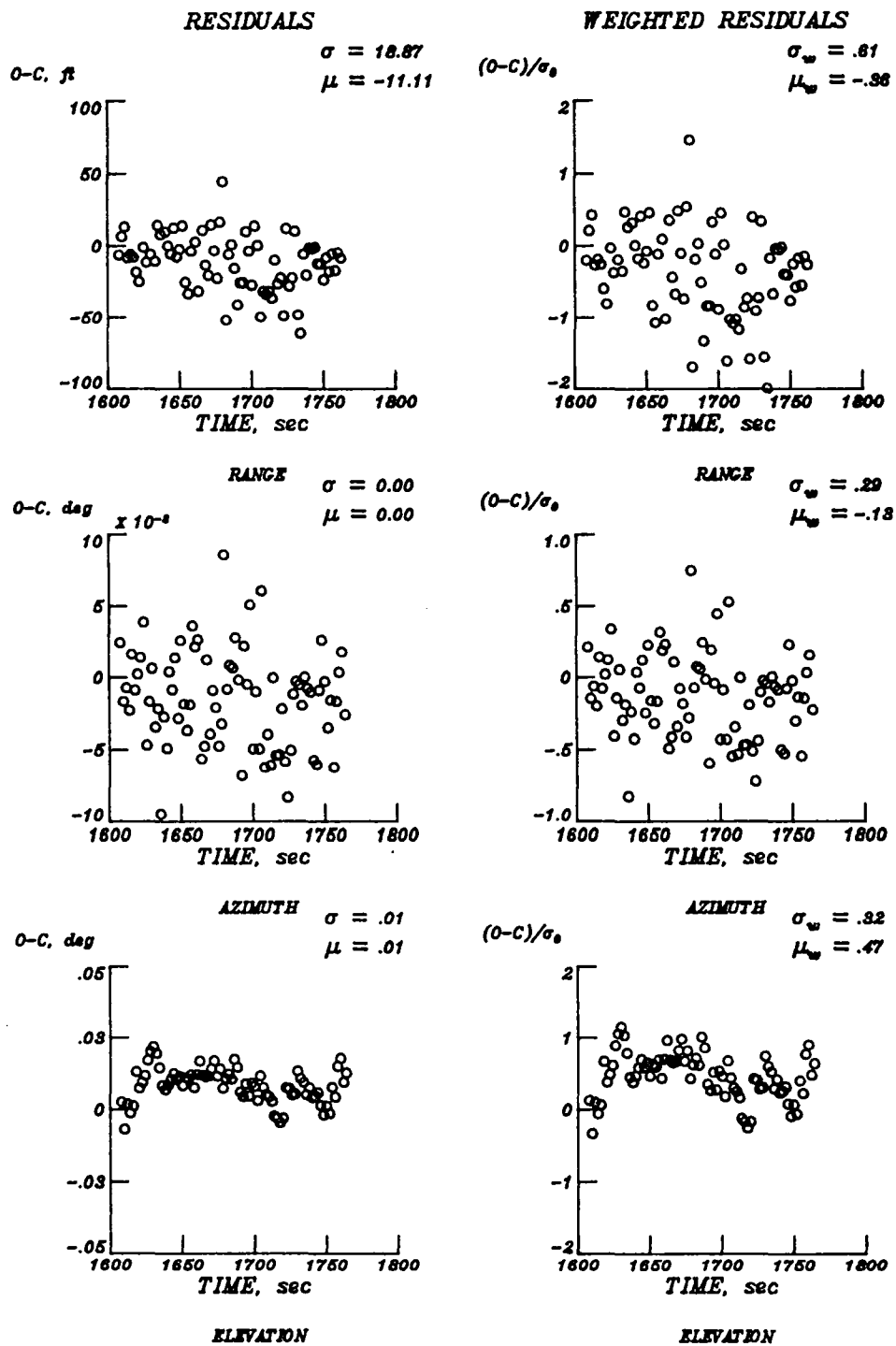


Figure B-2. Smoothed residuals versus time for PTPC.

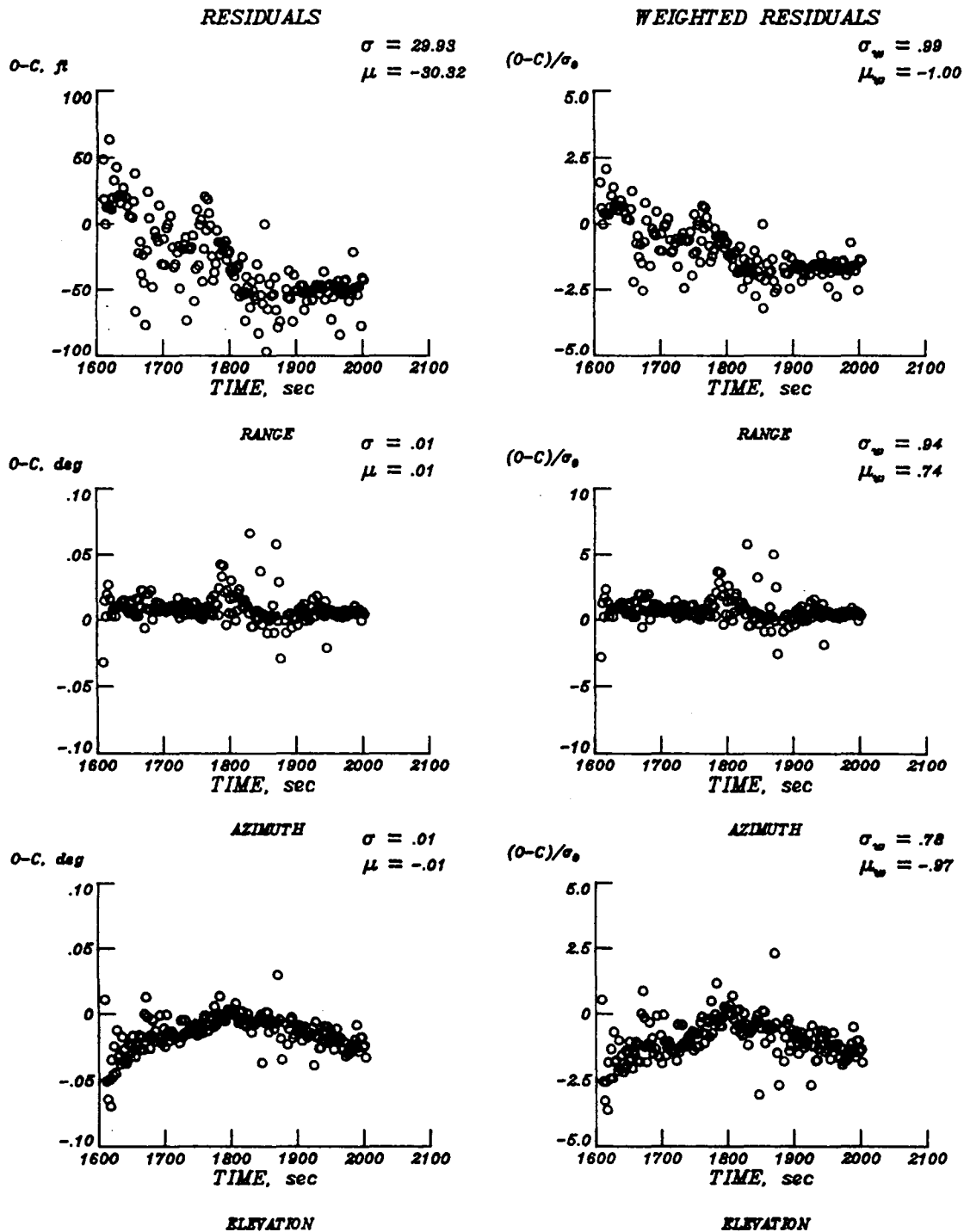


Figure B-3. Smoothed residuals versus time for VDSC.

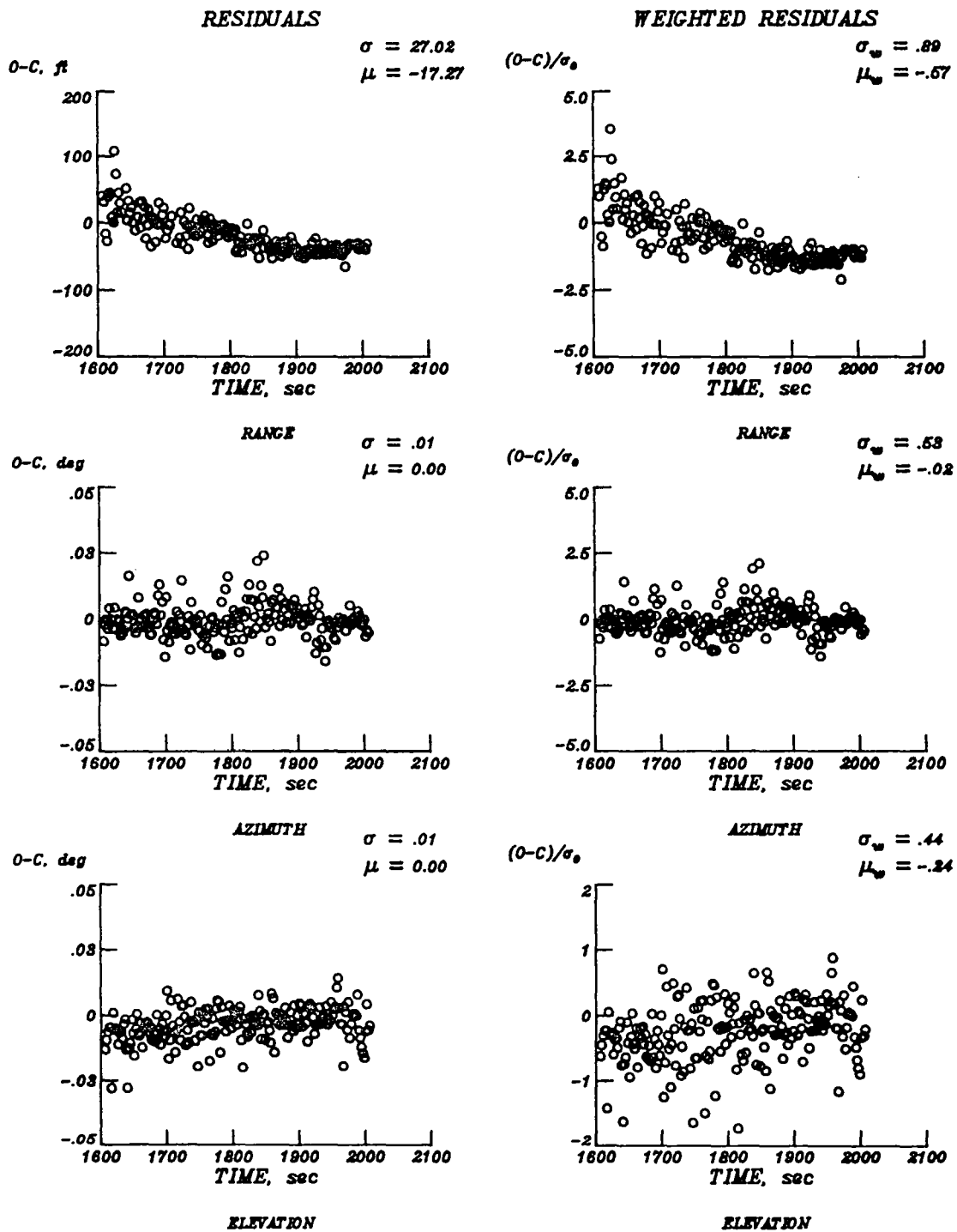


Figure B-4. Smoothed residuals versus time for VDBC.

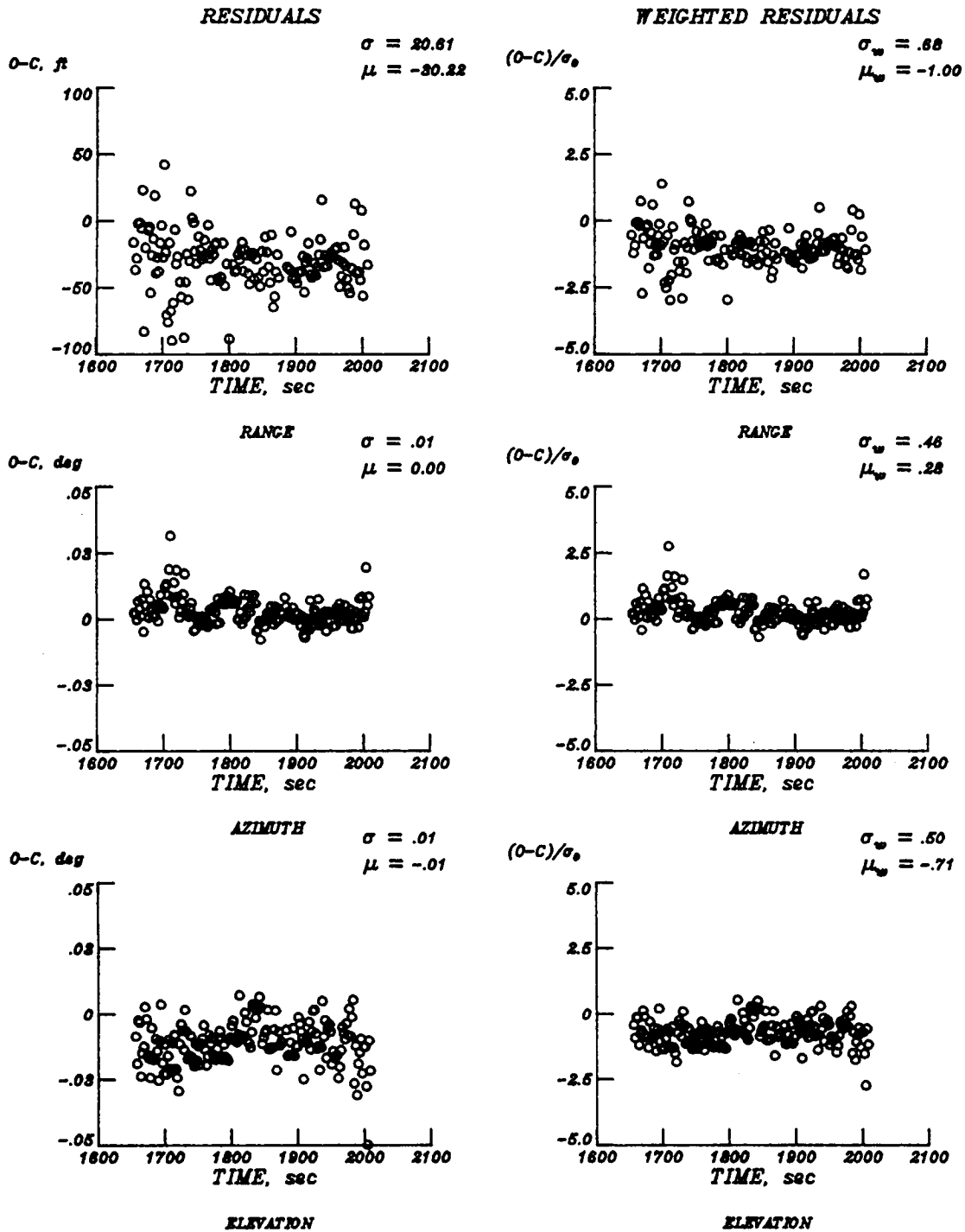


Figure B-5. Smoothed residuals versus time for SNFC.

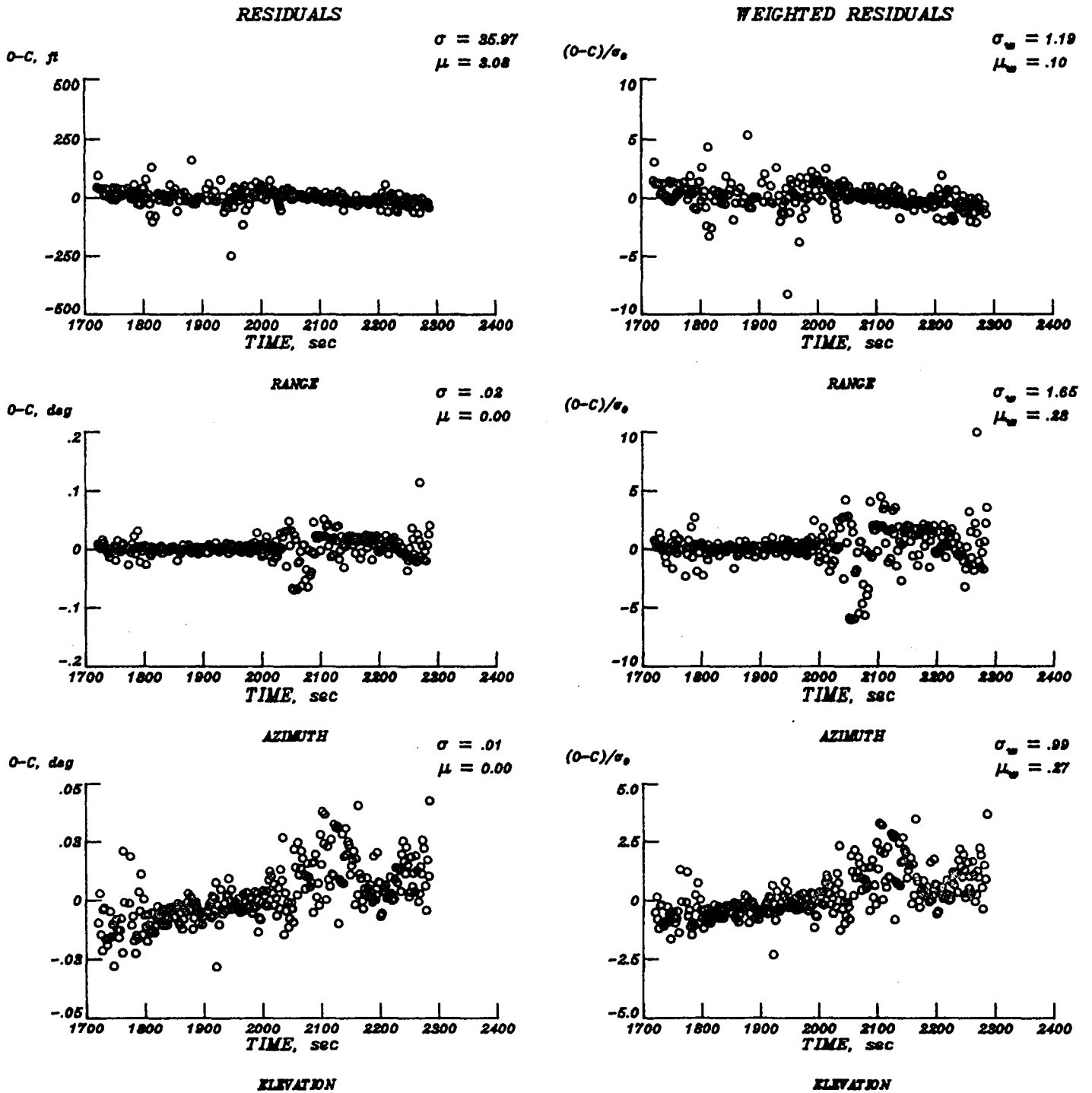


Figure B-6. Smoothed residuals versus time for EFPC.

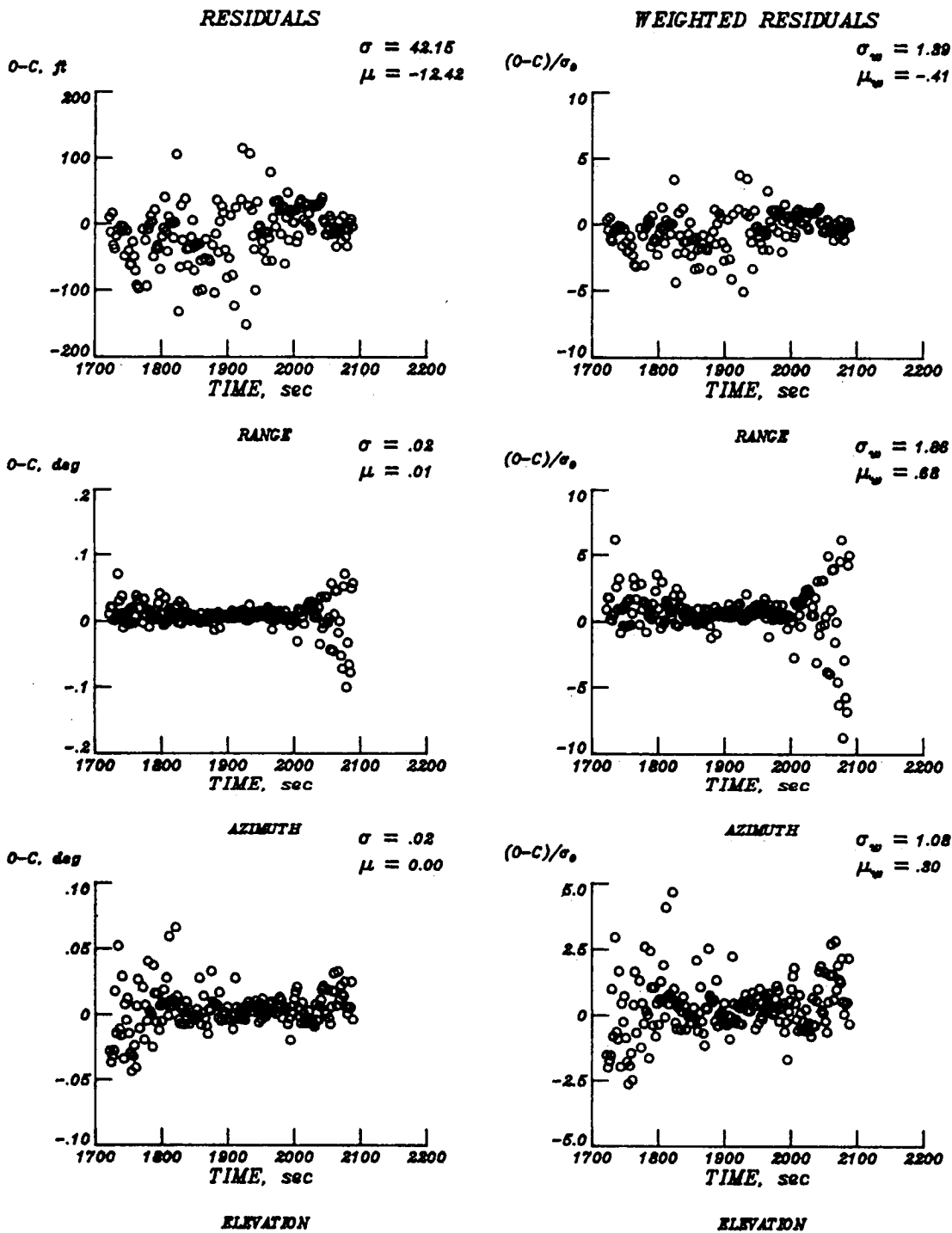


Figure B-7. Smoothed residuals versus time for FRCC.

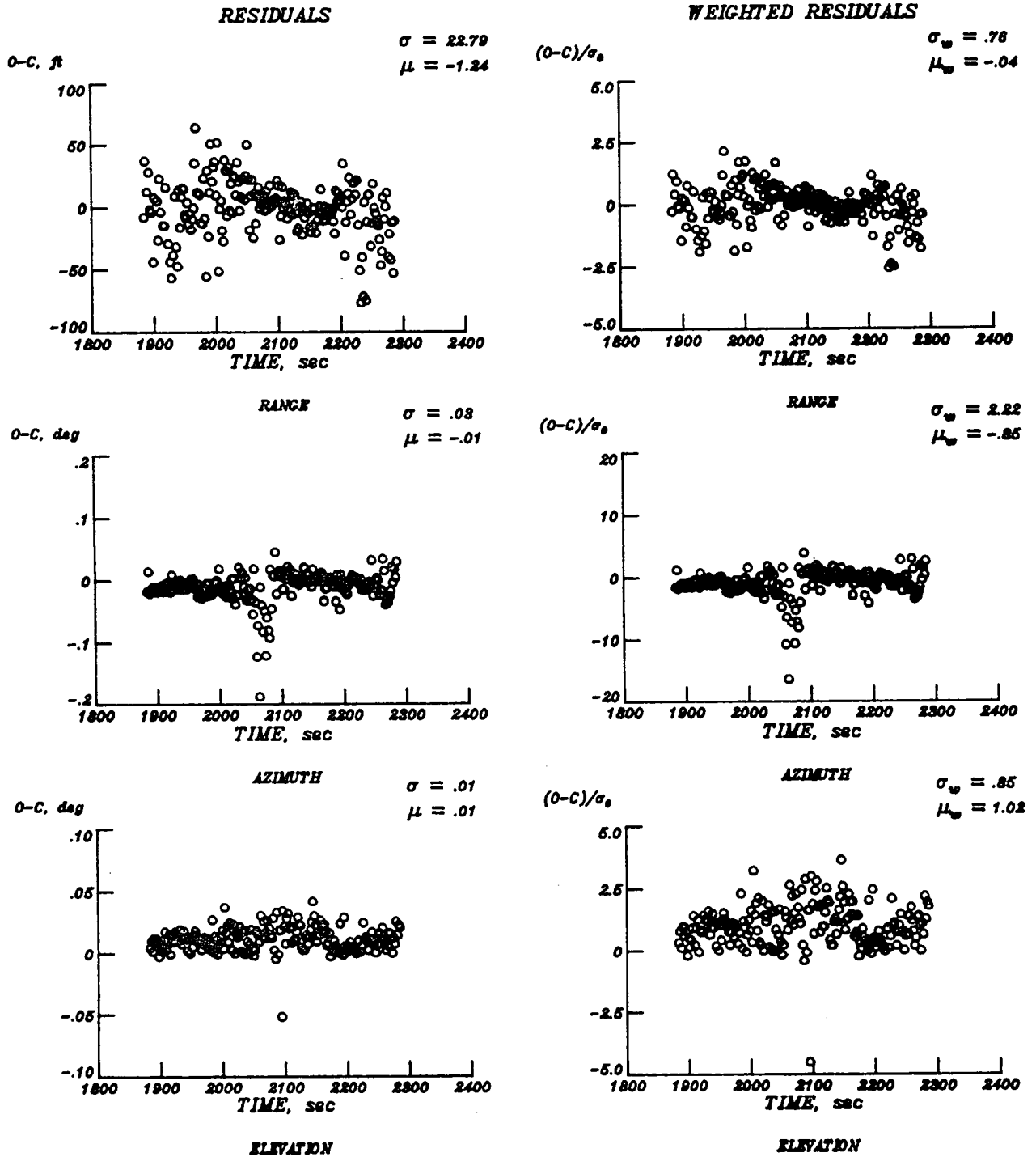


Figure B-8. Smoothed residuals versus time for EAFC,

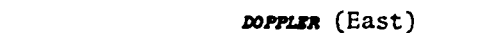
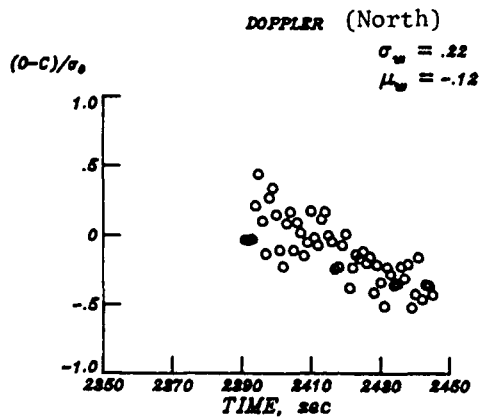
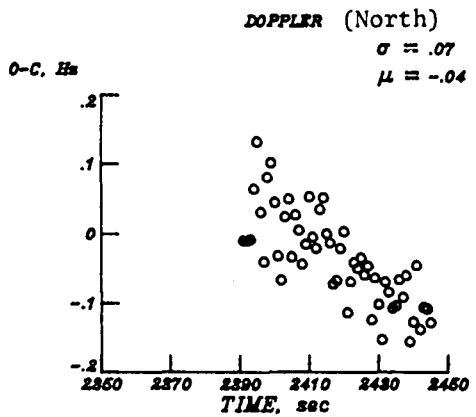
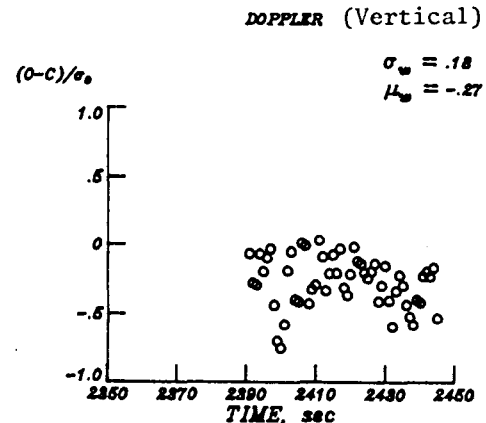
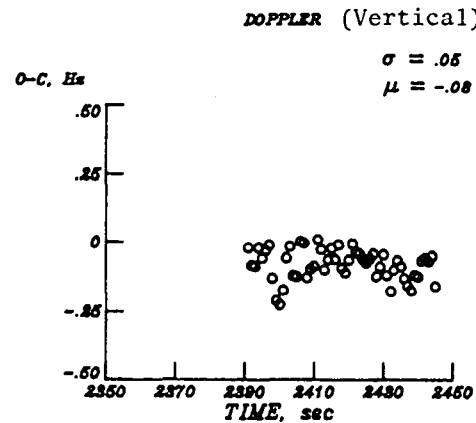
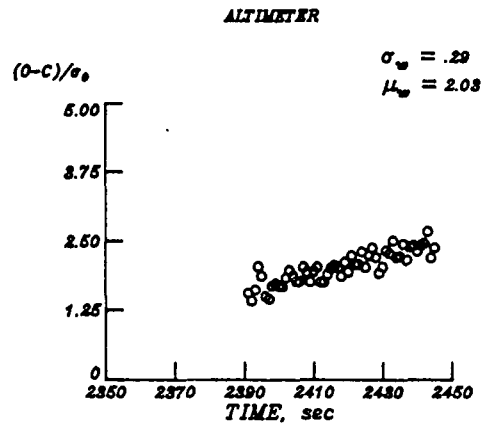
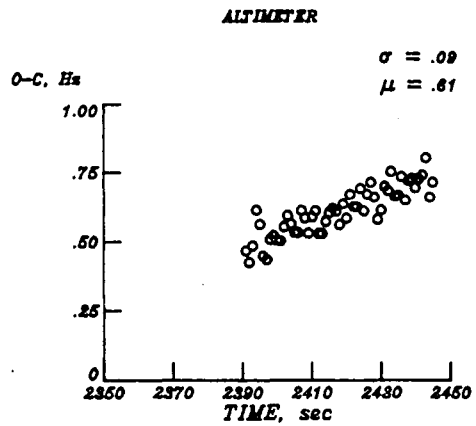
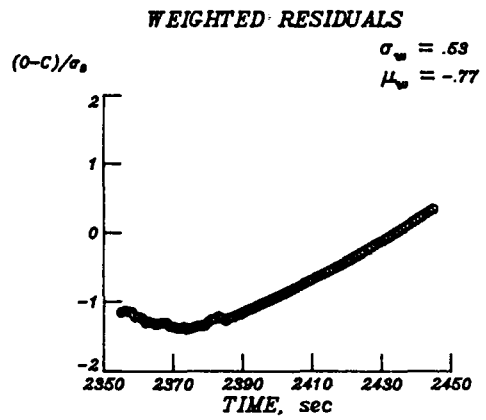
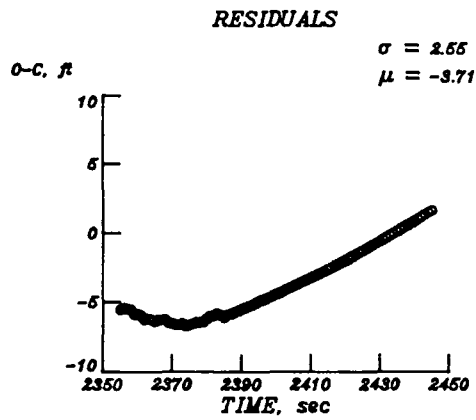


Figure B-9. Smoothed residuals for altimeter and Doppler (pseudo data). -82-

APPENDIX C

Listing of STS8BET air relative parameters

@ 1.0 sec

(t, h, V_A , γ_A , ψ_A , σ_A , β_A , α_A , M_A , q_A)

 * LARC "EXTENDED" BET HEADER RECORD *

...DESCRIPTIVE DATA (48-WORDS)

STSBBET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA.

830905 2446 STS-8 INERTIAL BET /BET8T06/ (TREF=25310)

INITIAL CONDITIONS FROM ARHQPWZ (ESOLVE) 10-06-83

IMU NBR 2 EA SEQ 1 (TAPE ND0376)

S,C-BAND, PSEUDO ALTIMETER (POST WONG), PSEUDO DOPPLER (POST STOP)

SOLUTION SET--STATE, ACCELEROMETER SCALE FACTORS

...LABELS AND UNITS FOR DATA ITEMS

(1)	TIME	SEC	(2)	VEL A	FT/SEC	(3)	GAM A	DEG
(4)	HOG A	DEG	(5)	ALTDE	FEET	(6)	LATD	DEG
(7)	LONG	DEG	(8)	SIGMAA	DEG	(9)	BETA A	DEG
(10)	ALPHA A	DEG	(11)	YAW E	DEG	(12)	PTCH E	DEG
(13)	ROLL E	DEG	(14)	U	FT/SEC	(15)	V	FT/SEC
(16)	W	FT/SEC	(17)	VEL R	FT/SEC	(18)	GAM R	DEG
(19)	HOG R	DEG	(20)	SIGMAR	DEG	(21)	BETA R	DEG
(22)	ALPHAR	DEG	(23)	U-WIND	FT/SEC	(24)	V-WIND	FT/SEC
(25)	W-WIND	FT/SEC	(26)	SIG-VA	FT/SEC	(27)	SIG-GA	DEG
(28)	SIG-HA	DEG	(29)	SIG-H	FEET	(30)	SIG-LA	DEG
(31)	SIG-LO	DEG	(32)	SIG-SA	DEG	(33)	SIG-BA	DEG
(34)	SIG-AA	DEG	(35)	SIG-YE	DEG	(36)	SIG-PE	DEG
(37)	SIG-RE	DEG	(38)	SIG-U	FT/SEC	(39)	SIG-V	FT/SEC
(40)	SIG-W	FT/SEC	(41)	MACH A	NONE	(42)	MACH R	NONE
(43)	PINF	PSF	(44)	TEMP	DEG RANKIN	(45)	RHO	SLUGS/FT3
(46)	Q A	PSF	(47)	Q R	PSF	(48)	PSTAG	PSF
(49)	P	DEG/SEC	(50)	Q	DEG/SEC	(51)	R	DEG/SEC
(52)	X ACCEL	FT/SEC/SEC	(53)	Y ACCEL	FT/SEC/SEC	(54)	Z ACCEL	FT/SEC/SEC
(55)	CXB	NONE	(56)	CYB	NONE	(57)	CZB	NONE
(58)	CL	NONE	(59)	CD	NONE	(60)	L/D	NONE
(61)	CL-ROLL	NONE	(62)	CM-PITCH	NONE	(63)	CN-YAW	NONE
(64)	PDOT	DEG/SEC2	(65)	QDOT	DEG/SEC2	(66)	RDOT	DEG/SEC2

...NUMERICAL DATA

ISERNO 1 NWDS 66 IUNITS 2

EPOCH .25310000E+05 RADE .20925741E+08 RADP .20855591E+08 OMEGA .72921151E-04

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 1 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
0.0	617298.9	24014.0	-.799	59.877	-4.120	1.866	26.913	12.825	.000
1.0	616968.0	24014.4	-.800	59.880	-4.226	1.817	27.014	12.829	.000
2.0	616636.8	24014.8	-.801	59.883	-4.323	1.776	27.118	12.832	.000
3.0	616305.0	24015.2	-.802	59.887	-4.415	1.729	27.224	12.835	.000
4.0	615972.9	24015.7	-.803	59.890	-4.476	1.706	27.332	12.839	.000
5.0	615640.3	24016.1	-.804	59.894	-4.488	1.719	27.448	12.842	.000
6.0	615307.2	24016.5	-.805	59.897	-4.475	1.743	27.567	12.845	.000
7.0	614973.8	24016.9	-.806	59.901	-4.462	1.760	27.687	12.849	.000
8.0	614639.9	24017.3	-.808	59.905	-4.459	1.769	27.815	12.852	.000
9.0	614305.6	24017.8	-.809	59.908	-4.463	1.769	27.941	12.855	.000
10.0	613970.9	24018.2	-.810	59.912	-4.464	1.763	28.066	12.859	.000
11.0	613635.7	24018.6	-.811	59.916	-4.465	1.759	28.202	12.862	.000
12.0	613300.1	24019.0	-.812	59.920	-4.482	1.753	28.337	12.866	.000
13.0	612964.0	24019.5	-.813	59.923	-4.482	1.745	28.472	12.869	.000
14.0	612627.6	24019.9	-.814	59.927	-4.495	1.742	28.609	12.873	.000
15.0	612290.7	24020.3	-.815	59.931	-4.505	1.737	28.750	12.876	.000
16.0	611953.4	24020.7	-.816	59.935	-4.504	1.731	28.892	12.880	.000
17.0	611615.7	24021.1	-.818	59.939	-4.511	1.727	29.034	12.883	.000
18.0	611277.5	24021.6	-.819	59.943	-4.525	1.723	29.176	12.887	.000
19.0	610938.9	24022.0	-.820	59.947	-4.539	1.716	29.322	12.890	.000
20.0	610599.9	24022.4	-.821	59.951	-4.544	1.709	29.483	12.894	.000
21.0	610260.5	24022.9	-.822	59.955	-4.562	1.705	29.635	12.897	.000
22.0	609920.6	24023.3	-.823	59.959	-4.575	1.697	29.782	12.901	.000
23.0	609580.4	24023.7	-.824	59.963	-4.589	1.691	29.935	12.904	.000
24.0	609239.7	24024.2	-.825	59.968	-4.609	1.686	30.094	12.908	.000
25.0	608898.5	24024.6	-.826	59.972	-4.621	1.683	30.265	12.911	.000
26.0	608557.0	24025.0	-.827	59.976	-4.641	1.675	30.422	12.915	.000
27.0	608215.0	24025.5	-.829	59.980	-4.663	1.643	30.578	12.919	.000
28.0	607872.7	24025.9	-.830	59.985	-4.697	1.609	30.718	12.922	.000
29.0	607529.9	24026.3	-.831	59.989	-4.730	1.577	30.841	12.926	.000

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
30.0	607186.7	24026.7	-.832	59.994	-4.764	1.541	30.955	12.930	.000
31.0	606843.1	24027.2	-.833	59.998	-4.778	1.516	31.064	12.933	.000
32.0	606499.1	24027.6	-.834	60.003	-4.753	1.521	31.169	12.937	.000
33.0	606154.6	24028.1	-.835	60.007	-4.734	1.522	31.266	12.941	.000
34.0	605809.8	24028.5	-.836	60.012	-4.724	1.519	31.353	12.944	.000
35.0	605464.5	24028.9	-.837	60.016	-4.708	1.523	31.442	12.948	.000
36.0	605118.8	24029.4	-.838	60.021	-4.694	1.517	31.526	12.952	.000
37.0	604772.7	24029.8	-.839	60.026	-4.681	1.516	31.627	12.956	.000
38.0	604426.2	24030.2	-.840	60.030	-4.673	1.513	31.708	12.959	.000
39.0	604079.3	24030.7	-.841	60.035	-4.663	1.511	31.780	12.963	.000
40.0	603731.9	24031.1	-.842	60.040	-4.658	1.511	31.849	12.967	.000
41.0	603384.2	24031.5	-.844	60.045	-4.646	1.504	31.926	12.971	.000
42.0	603036.0	24032.0	-.845	60.050	-4.638	1.502	32.001	12.974	.000
43.0	602687.4	24032.4	-.846	60.054	-4.625	1.502	32.088	12.978	.000
44.0	602338.5	24032.9	-.847	60.059	-4.619	1.498	32.171	12.982	.000
45.0	601989.0	24033.3	-.848	60.064	-4.616	1.497	32.258	12.986	.000
46.0	601639.2	24033.8	-.849	60.069	-4.606	1.496	32.340	12.990	.000
47.0	601289.0	24034.2	-.850	60.074	-4.613	1.495	32.425	12.994	.000
48.0	600938.4	24034.6	-.851	60.080	-4.596	1.491	32.496	12.998	.000
49.0	600587.4	24035.1	-.852	60.085	-4.596	1.488	32.565	13.002	.000
50.0	600235.9	24035.5	-.853	60.090	-4.597	1.487	32.631	13.006	.000
51.0	599884.0	24036.0	-.854	60.095	-4.600	1.482	32.701	13.009	.000
52.0	599531.8	24036.4	-.855	60.100	-4.594	1.481	32.777	13.013	.000
53.0	599179.1	24036.9	-.856	60.105	-4.595	1.478	32.859	13.017	.000
54.0	598826.0	24037.3	-.857	60.111	-4.597	1.479	32.936	13.021	.000
55.0	598472.5	24037.7	-.858	60.116	-4.595	1.475	33.011	13.025	.000
56.0	598118.6	24038.2	-.859	60.122	-4.596	1.470	33.101	13.029	.000
57.0	597764.3	24038.6	-.861	60.127	-4.606	1.470	33.184	13.033	.000
58.0	597409.6	24039.1	-.862	60.132	-4.605	1.465	33.278	13.037	.000
59.0	597054.5	24039.5	-.862	60.138	-4.609	1.462	33.334	13.041	.000

-98-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 3 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
60.0	596699.0	24040.0	-.863	60.143	-4.624	1.459	33.310	13.046	.000
61.0	596343.1	24040.4	-.865	60.149	-4.628	1.456	33.282	13.050	.000
62.0	595986.9	24040.9	-.866	60.155	-4.644	1.450	33.254	13.054	.000
63.0	595630.2	24041.4	-.867	60.160	-4.650	1.443	33.227	13.058	.000
64.0	595273.1	24041.8	-.868	60.166	-4.660	1.440	33.208	13.062	.000
65.0	594915.6	24042.3	-.869	60.171	-4.677	1.429	33.186	13.066	.000
66.0	594557.7	24042.7	-.870	60.177	-4.680	1.427	33.172	13.070	.000
67.0	594199.4	24043.1	-.871	60.183	-4.704	1.423	33.152	13.074	.000
68.0	593840.7	24043.6	-.872	60.189	-4.710	1.418	33.140	13.079	.000
69.0	593481.6	24044.1	-.873	60.195	-4.728	1.413	33.133	13.083	.000
70.0	593122.1	24044.5	-.874	60.201	-4.743	1.411	33.126	13.087	.000
71.0	592762.2	24044.9	-.875	60.206	-4.754	1.403	33.115	13.091	.000
72.0	592401.9	24045.4	-.876	60.212	-4.767	1.398	33.111	13.096	.000
73.0	592041.2	24045.9	-.877	60.218	-4.791	1.393	33.115	13.100	.000
74.0	591680.1	24046.3	-.878	60.224	-4.803	1.387	33.110	13.104	.000
75.0	591318.6	24046.8	-.879	60.230	-4.823	1.379	33.113	13.108	.000
76.0	590956.7	24047.3	-.880	60.237	-4.847	1.377	33.117	13.113	.000
77.0	590594.4	24047.7	-.881	60.243	-4.862	1.371	33.127	13.117	.000
78.0	590231.7	24048.2	-.882	60.249	-4.885	1.365	33.138	13.121	.000
79.0	589868.6	24048.6	-.883	60.255	-4.915	1.359	33.149	13.126	.000
80.0	589505.1	24049.1	-.884	60.261	-4.933	1.352	33.162	13.130	.000
81.0	589141.2	24049.5	-.885	60.268	-4.961	1.349	33.178	13.135	.000
82.0	588777.0	24050.0	-.886	60.274	-4.983	1.343	33.198	13.139	.000
83.0	588412.3	24050.4	-.887	60.280	-5.002	1.337	33.216	13.143	.000
84.0	588047.2	24050.9	-.888	60.287	-5.040	1.332	33.240	13.148	.000
85.0	587681.7	24051.4	-.889	60.293	-5.066	1.324	33.265	13.152	.000
86.0	587315.9	24051.8	-.890	60.300	-5.092	1.320	33.289	13.157	.000
87.0	586949.6	24052.3	-.891	60.306	-5.117	1.310	33.319	13.161	.000
88.0	586583.0	24052.8	-.892	60.313	-5.115	1.327	33.350	13.166	.000
89.0	586215.9	24053.2	-.894	60.319	-5.114	1.312	33.393	13.170	.000

-87-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
90.0	585848.5	24053.7	-.895	60.326	-5.118	1.289	33.438	13.175	.000
91.0	585480.6	24054.2	-.895	60.332	-5.119	1.261	33.480	13.179	.000
92.0	585112.4	24054.6	-.897	60.339	-5.112	1.236	33.527	13.184	.000
93.0	584743.8	24055.1	-.898	60.346	-5.115	1.215	33.577	13.189	.000
94.0	584374.8	24055.6	-.899	60.353	-5.116	1.184	33.626	13.193	.000
95.0	584005.4	24056.0	-.900	60.359	-5.114	1.158	33.674	13.198	.000
96.0	583635.6	24056.5	-.901	60.366	-5.124	1.134	33.725	13.202	.000
97.0	583265.4	24057.0	-.902	60.373	-5.133	1.105	33.785	13.207	.000
98.0	582894.9	24057.4	-.903	60.380	-5.133	1.081	33.844	13.212	.000
99.0	582523.9	24057.9	-.904	60.387	-5.139	1.053	33.904	13.216	.000
100.0	582152.6	24058.4	-.905	60.394	-5.138	1.031	33.971	13.221	.000
101.0	581780.8	24058.8	-.906	60.401	-5.105	1.038	34.038	13.226	.000
102.0	581408.7	24059.3	-.907	60.408	-5.060	1.052	34.113	13.231	.000
103.0	581036.2	24059.8	-.908	60.415	-5.020	1.057	34.188	13.235	.000
104.0	580663.3	24060.3	-.909	60.422	-4.974	1.074	34.259	13.240	.000
105.0	580290.0	24060.7	-.910	60.429	-4.928	1.088	34.343	13.245	.000
106.0	579916.4	24061.2	-.911	60.437	-4.890	1.098	34.421	13.250	.000
107.0	579542.4	24061.7	-.912	60.444	-4.849	1.119	34.498	13.255	.000
108.0	579167.9	24062.1	-.913	60.451	-4.807	1.123	34.589	13.259	.000
109.0	578793.1	24062.6	-.914	60.458	-4.767	1.136	34.672	13.264	.000
110.0	578417.9	24063.1	-.915	60.466	-4.724	1.156	34.767	13.269	.000
111.0	578042.4	24063.5	-.916	60.473	-4.691	1.171	34.862	13.274	.000
112.0	577666.4	24064.0	-.916	60.481	-4.661	1.178	34.952	13.279	.000
113.0	577290.1	24064.5	-.917	60.488	-4.621	1.193	35.044	13.284	.000
114.0	576913.4	24065.0	-.918	60.496	-4.587	1.207	35.142	13.289	.000
115.0	576536.3	24065.5	-.919	60.503	-4.552	1.220	35.249	13.294	.000
116.0	576158.8	24065.9	-.920	60.511	-4.518	1.237	35.348	13.299	.000
117.0	575781.0	24066.4	-.921	60.518	-4.492	1.250	35.453	13.304	.000
118.0	575402.7	24066.9	-.922	60.526	-4.456	1.265	35.559	13.309	.000
119.0	575024.1	24067.4	-.923	60.534	-4.421	1.275	35.675	13.314	.000

-88-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 5 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
120.0	574645.1	24067.8	-.924	60.541	-4.391	1.287	35.782	13.319	.000
121.0	574265.7	24068.4	-.925	60.549	-4.368	1.302	35.900	13.324	.000
122.0	573886.0	24068.8	-.926	60.557	-4.342	1.315	36.012	13.329	.000
123.0	573505.9	24069.3	-.927	60.565	-4.308	1.331	36.132	13.335	.000
124.0	573125.4	24069.8	-.928	60.573	-4.276	1.344	36.252	13.340	.000
125.0	572744.5	24070.3	-.929	60.580	-4.251	1.358	36.372	13.345	.000
126.0	572363.2	24070.7	-.930	60.588	-4.226	1.373	36.499	13.350	.000
127.0	571981.6	24071.2	-.931	60.596	-4.201	1.389	36.627	13.355	.000
128.0	571599.6	24071.7	-.932	60.604	-4.182	1.403	36.753	13.361	.000
129.0	571217.2	24072.2	-.933	60.612	-4.155	1.417	36.885	13.366	.000
130.0	570834.5	24072.7	-.934	60.620	-4.132	1.431	37.021	13.371	.000
131.0	570451.4	24073.2	-.935	60.629	-4.116	1.446	37.153	13.376	.000
132.0	570067.9	24073.7	-.936	60.637	-4.095	1.453	37.290	13.382	.000
133.0	569684.0	24074.1	-.937	60.645	-4.073	1.466	37.434	13.387	.000
134.0	569299.8	24074.6	-.938	60.653	-4.054	1.482	37.577	13.392	.000
135.0	568915.2	24075.1	-.939	60.661	-4.039	1.496	37.719	13.398	.000
136.0	568530.2	24075.6	-.940	60.670	-4.017	1.513	37.868	13.403	.000
137.0	568144.9	24076.1	-.941	60.678	-4.006	1.528	38.011	13.409	.000
138.0	567759.2	24076.6	-.942	60.686	-3.998	1.543	38.159	13.414	.000
139.0	567373.1	24077.0	-.943	60.695	-3.973	1.556	38.295	13.420	.000
140.0	566986.7	24077.5	-.943	60.703	-3.970	1.569	38.411	13.425	.000
141.0	566599.9	24078.0	-.945	60.712	-3.950	1.579	38.518	13.431	.000
142.0	566212.7	24078.5	-.945	60.720	-3.943	1.595	38.632	13.436	.000
143.0	565825.2	24079.0	-.946	60.729	-3.932	1.600	38.726	13.442	.000
144.0	565437.3	24079.5	-.947	60.737	-3.926	1.611	38.817	13.447	.000
145.0	565049.1	24080.0	-.948	60.746	-3.919	1.626	38.911	13.453	.000
146.0	564660.5	24080.5	-.949	60.755	-3.906	1.640	39.001	13.458	.000
147.0	564271.5	24081.0	-.950	60.764	-3.901	1.650	39.089	13.464	.000
148.0	563882.2	24081.4	-.951	60.772	-3.898	1.660	39.164	13.470	.000
149.0	563492.5	24081.9	-.952	60.781	-3.895	1.666	39.237	13.475	.000

-89-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
150.0	563102.5	24082.4	-.953	60.790	-3.889	1.675	39.316	13.481	.000
151.0	562712.1	24082.9	-.954	60.799	-3.885	1.686	39.397	13.487	.000
152.0	562321.3	24083.4	-.955	60.808	-3.890	1.695	39.476	13.493	.000
153.0	561930.2	24083.9	-.956	60.817	-3.890	1.706	39.567	13.498	.000
154.0	561538.7	24084.4	-.957	60.825	-3.884	1.713	39.656	13.504	.000
155.0	561146.8	24084.9	-.958	60.834	-3.887	1.723	39.734	13.510	.000
156.0	560754.6	24085.4	-.958	60.844	-3.896	1.730	39.806	13.516	.000
157.0	560362.1	24085.9	-.959	60.853	-3.894	1.735	39.873	13.522	.000
158.0	559969.2	24086.4	-.960	60.862	-3.895	1.740	39.940	13.528	.000
159.0	559575.9	24086.9	-.961	60.871	-3.904	1.751	40.018	13.534	.000
160.0	559182.3	24087.4	-.962	60.880	-3.911	1.754	40.092	13.539	.000
161.0	558788.3	24087.9	-.963	60.889	-3.912	1.765	40.164	13.545	.000
162.0	558393.9	24088.4	-.964	60.899	-3.920	1.770	40.247	13.551	.000
163.0	557999.2	24088.9	-.965	60.908	-3.929	1.772	40.330	13.557	.000
164.0	557604.2	24089.4	-.966	60.917	-3.939	1.782	40.417	13.563	.000
165.0	557208.7	24089.9	-.967	60.927	-3.949	1.788	40.505	13.570	.000
166.0	556813.0	24090.4	-.968	60.936	-3.959	1.794	40.594	13.576	.000
167.0	556416.9	24090.9	-.968	60.945	-3.973	1.799	40.675	13.582	.000
168.0	556020.4	24091.4	-.969	60.955	-3.983	1.799	40.740	13.588	.000
169.0	555623.6	24091.9	-.970	60.964	-3.995	1.805	40.816	13.594	.000
170.0	555226.4	24092.4	-.971	60.974	-4.004	1.809	40.891	13.600	.000
171.0	554828.9	24092.9	-.972	60.984	-4.026	1.811	40.960	13.606	.000
172.0	554431.0	24093.4	-.973	60.993	-4.044	1.816	41.042	13.613	.000
173.0	554032.8	24093.9	-.974	61.003	-4.058	1.821	41.120	13.619	.000
174.0	553634.2	24094.4	-.975	61.013	-4.069	1.826	41.198	13.625	.000
175.0	553235.3	24094.9	-.976	61.022	-4.088	1.827	41.282	13.631	.000
176.0	552836.0	24095.4	-.977	61.032	-4.113	1.832	41.369	13.638	.000
177.0	552436.4	24095.9	-.977	61.042	-4.141	1.789	41.449	13.644	.000
178.0	552036.4	24096.4	-.978	61.052	-4.195	1.650	41.489	13.651	.000
179.0	551636.1	24096.9	-.979	61.062	-4.254	1.490	41.502	13.657	.000

-06-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 7 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
180.0	551235.5	24097.4	-.980	61.071	-4.315	1.340	41.525	13.663	.000
181.0	550834.5	24097.9	-.981	61.081	-4.372	1.194	41.547	13.670	.000
182.0	550433.2	24098.4	-.982	61.091	-4.435	1.038	41.567	13.676	.000
183.0	550031.5	24098.9	-.983	61.102	-4.490	.884	41.594	13.683	.000
184.0	549629.5	24099.5	-.984	61.112	-4.553	.734	41.618	13.689	.000
185.0	549227.1	24100.0	-.985	61.122	-4.613	.575	41.646	13.696	.000
186.0	548824.4	24100.5	-.985	61.132	-4.672	.433	41.671	13.703	.000
187.0	548421.3	24101.0	-.986	61.142	-4.733	.281	41.707	13.709	.000
188.0	548018.0	24101.5	-.987	61.152	-4.765	.152	41.745	13.716	.000
189.0	547614.2	24102.0	-.988	61.163	-4.754	.081	41.795	13.723	.000
190.0	547210.1	24102.5	-.989	61.173	-4.718	.026	41.846	13.729	.000
191.0	546805.7	24103.0	-.990	61.183	-4.682	-.037	41.893	13.736	.000
192.0	546401.0	24103.5	-.991	61.194	-4.659	-.102	41.951	13.743	.000
193.0	545995.8	24104.1	-.992	61.204	-4.626	-.162	42.011	13.750	.000
194.0	545590.4	24104.6	-.992	61.214	-4.610	-.220	42.076	13.756	.000
195.0	545184.6	24105.1	-.993	61.225	-4.580	-.282	42.133	13.763	.000
196.0	544778.5	24105.6	-.994	61.235	-4.547	-.343	42.201	13.770	.000
197.0	544372.0	24106.1	-.995	61.246	-4.482	-.364	42.271	13.777	.000
198.0	543965.2	24106.6	-.996	61.257	-4.401	-.370	42.348	13.784	.000
199.0	543558.0	24107.1	-.997	61.267	-4.328	-.383	42.426	13.791	.000
200.0	543150.5	24107.7	-.998	61.278	-4.260	-.398	42.505	13.798	.000
201.0	542742.7	24108.2	-.998	61.289	-4.193	-.417	42.593	13.805	.000
202.0	542334.6	24108.7	-.999	61.299	-4.127	-.434	42.671	13.812	.000
203.0	541926.1	24109.2	-1.000	61.310	-4.062	-.450	42.759	13.819	.000
204.0	541517.3	24109.7	-1.001	61.321	-3.999	-.468	42.849	13.826	.000
205.0	541108.1	24110.3	-1.002	61.332	-3.934	-.481	42.939	13.833	.001
206.0	540698.6	24110.8	-1.003	61.343	-3.871	-.503	43.029	13.841	.001
207.0	540288.8	24111.3	-1.004	61.354	-3.804	-.519	43.126	13.848	.001
208.0	539878.6	24111.8	-1.005	61.365	-3.738	-.534	43.226	13.855	.001
209.0	539468.1	24112.3	-1.005	61.376	-3.680	-.549	43.324	13.862	.001

-16-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
210.0	539057.3	24112.8	-1.006	61.387	-3.618	-.568	43.425	13.870	.001
211.0	538646.1	24113.4	-1.007	61.398	-3.553	-.588	43.527	13.877	.001
212.0	538234.6	24113.9	-1.008	61.409	-3.500	-.607	43.631	13.884	.001
213.0	537822.8	24114.4	-1.009	61.420	-3.440	-.622	43.742	13.892	.001
214.0	537410.7	24114.9	-1.010	61.431	-3.388	-.639	43.852	13.899	.001
215.0	536998.2	24115.4	-1.010	61.443	-3.328	-.658	43.972	13.907	.001
216.0	536585.4	24116.0	-1.011	61.454	-3.273	-.679	44.054	13.914	.001
217.0	536172.3	24116.5	-1.012	61.465	-3.212	-.689	44.048	13.922	.001
218.0	535758.9	24117.0	-1.013	61.477	-3.023	-.481	44.049	13.929	.001
219.0	535345.3	24117.5	-1.013	61.488	-2.764	-.293	43.946	13.937	.001
220.0	534931.4	24118.0	-1.014	61.499	-2.439	-.351	43.610	13.944	.001
221.0	534517.2	24118.5	-1.015	61.511	-2.021	-.292	43.244	13.952	.001
222.0	534102.8	24119.1	-1.016	61.522	-1.583	-.219	42.881	13.960	.001
223.0	533688.0	24119.6	-1.016	61.534	-1.162	-.153	42.524	13.967	.001
224.0	533272.8	24120.1	-1.017	61.545	-.721	.003	42.172	13.975	.001
225.0	532857.4	24120.6	-1.018	61.557	-.258	.185	41.817	13.983	.001
226.0	532441.6	24121.2	-1.019	61.568	.106	.266	41.483	13.991	.001
227.0	532025.5	24121.7	-1.020	61.580	.386	.264	41.164	13.999	.001
228.0	531609.0	24122.2	-1.021	61.592	.687	.273	40.832	14.007	.001
229.0	531192.3	24122.8	-1.021	61.604	.978	.320	40.520	14.014	.001
230.0	530775.2	24123.3	-1.022	61.616	1.139	.282	40.224	14.022	.001
231.0	530357.8	24123.8	-1.023	61.627	1.266	.305	39.935	14.030	.001
232.0	529940.1	24124.4	-1.024	61.639	1.402	.367	39.646	14.039	.001
233.0	529522.0	24124.9	-1.025	61.651	1.505	.389	39.361	14.047	.001
234.0	529103.7	24125.4	-1.025	61.663	1.601	.406	39.087	14.055	.001
235.0	528685.0	24126.0	-1.026	61.675	1.698	.429	38.845	14.063	.001
236.0	528265.9	24126.5	-1.027	61.687	1.793	.446	38.670	14.071	.001
237.0	527846.6	24127.1	-1.028	61.699	1.886	.459	38.549	14.079	.001
238.0	527426.8	24127.6	-1.029	61.711	1.969	.460	38.483	14.088	.001
239.0	527006.8	24128.2	-1.030	61.723	2.059	.469	38.459	14.096	.001

-92-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 9 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
240.0	526586.4	24128.7	-1.031	61.736	2.137	.477	38.460	14.104	.001
241.0	526165.7	24129.3	-1.031	61.748	2.214	.481	38.497	14.113	.001
242.0	525744.7	24129.8	-1.032	61.760	2.159	.472	38.596	14.121	.001
243.0	525323.3	24130.3	-1.033	61.772	1.965	.370	38.747	14.129	.001
244.0	524901.6	24130.9	-1.034	61.785	1.793	.269	38.895	14.138	.001
245.0	524479.6	24131.4	-1.035	61.797	1.609	.164	39.051	14.146	.001
246.0	524057.3	24131.9	-1.036	61.809	1.424	.062	39.208	14.155	.001
247.0	523634.7	24132.5	-1.036	61.822	1.240	-.040	39.363	14.164	.001
248.0	523211.7	24133.0	-1.037	61.834	1.052	-.149	39.525	14.172	.001
249.0	522788.5	24133.6	-1.038	61.847	.864	-.256	39.683	14.181	.001
250.0	522364.9	24134.1	-1.039	61.859	.707	-.345	39.846	14.190	.001
251.0	521941.0	24134.7	-1.039	61.872	.649	-.306	40.027	14.198	.001
252.0	521516.9	24135.2	-1.040	61.885	.638	-.195	40.211	14.207	.001
253.0	521092.4	24135.7	-1.041	61.897	.626	-.099	40.405	14.216	.001
254.0	520667.6	24136.2	-1.042	61.910	.612	-.001	40.595	14.225	.001
255.0	520242.5	24136.8	-1.043	61.923	.594	.098	40.785	14.234	.001
256.0	519817.0	24137.3	-1.043	61.936	.572	.195	40.982	14.243	.001
257.0	519391.3	24137.9	-1.044	61.948	.556	.295	41.185	14.252	.001
258.0	518965.3	24138.4	-1.045	61.961	.521	.340	41.320	14.261	.001
259.0	518539.0	24138.9	-1.046	61.974	.468	.313	41.441	14.270	.001
260.0	518112.5	24139.5	-1.046	61.987	.407	.267	41.518	14.279	.001
261.0	517685.6	24140.0	-1.047	62.000	.349	.221	41.549	14.288	.001
262.0	517258.5	24140.5	-1.048	62.013	.279	.174	41.535	14.297	.001
263.0	516831.1	24141.1	-1.048	62.026	.213	.125	41.502	14.307	.001
264.0	516403.4	24141.6	-1.049	62.039	.149	.081	41.472	14.316	.001
265.0	515975.4	24142.2	-1.050	62.052	.074	.025	41.423	14.325	.001
266.0	515547.1	24142.7	-1.051	62.065	.000	-.031	41.347	14.335	.001
267.0	515118.5	24143.2	-1.051	62.078	-.073	-.084	41.272	14.344	.001
268.0	514689.6	24143.8	-1.052	62.092	-.143	-.140	41.201	14.354	.001
269.0	514260.4	24144.3	-1.053	62.105	-.224	-.191	41.134	14.363	.001

-93-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
270.0	513830.9	24144.9	-1.054	62.118	-.303	-.246	41.062	14.373	.001
271.0	513401.1	24145.4	-1.055	62.132	-.377	-.300	40.994	14.382	.001
272.0	512971.0	24145.9	-1.055	62.145	-.465	-.357	40.930	14.392	.001
273.0	512540.6	24146.5	-1.056	62.158	-.512	-.381	40.869	14.402	.001
274.0	512109.9	24147.1	-1.057	62.172	-.467	-.312	40.830	14.411	.001
275.0	511678.9	24147.6	-1.058	62.185	-.394	-.225	40.793	14.421	.001
276.0	511247.6	24148.2	-1.058	62.199	-.332	-.133	40.763	14.431	.001
277.0	510816.0	24148.7	-1.059	62.212	-.270	-.046	40.733	14.441	.001
278.0	510384.1	24149.2	-1.060	62.226	-.196	.038	40.699	14.451	.001
279.0	509952.0	24149.8	-1.061	62.240	-.125	.124	40.675	14.461	.001
280.0	509519.5	24150.3	-1.061	62.253	-.069	.211	40.648	14.471	.001
281.0	509086.7	24150.9	-1.062	62.267	.001	.305	40.624	14.481	.001
282.0	508653.7	24151.4	-1.063	62.281	.055	.352	40.604	14.491	.001
283.0	508220.3	24152.0	-1.064	62.295	.097	.369	40.588	14.501	.001
284.0	507786.7	24152.5	-1.064	62.308	.140	.385	40.564	14.512	.001
285.0	507352.8	24153.1	-1.065	62.322	.197	.414	40.551	14.522	.001
286.0	506918.5	24153.6	-1.066	62.336	.232	.433	40.537	14.532	.001
287.0	506484.0	24154.2	-1.066	62.350	.260	.391	40.517	14.543	.001
288.0	506049.2	24154.7	-1.067	62.364	.275	.278	40.508	14.553	.001
289.0	505614.1	24155.3	-1.068	62.378	.287	.168	40.497	14.564	.001
290.0	505178.7	24155.8	-1.069	62.392	.289	.054	40.491	14.574	.001
291.0	504743.1	24156.4	-1.069	62.406	.312	-.056	40.483	14.585	.001
292.0	504307.1	24156.9	-1.070	62.420	.314	-.163	40.476	14.595	.001
293.0	503870.9	24157.5	-1.071	62.435	.331	-.243	40.476	14.606	.001
294.0	503434.3	24158.1	-1.072	62.449	.364	-.266	40.474	14.617	.001
295.0	502997.5	24158.6	-1.072	62.463	.406	-.239	40.475	14.628	.001
296.0	502560.4	24159.2	-1.073	62.477	.446	-.211	40.486	14.638	.001
297.0	502123.0	24159.7	-1.074	62.492	.484	-.192	40.489	14.649	.001
298.0	501685.4	24160.3	-1.074	62.506	.521	-.170	40.495	14.660	.001
299.0	501247.4	24160.8	-1.075	62.520	.554	-.151	40.507	14.671	.001

-94-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
300.0	500809.2	24161.4	-1.076	62.535	.597	-.128	40.516	14.682	.001
301.0	500370.7	24161.9	-1.077	62.549	.631	-.103	40.534	14.694	.001
302.0	499931.9	24162.5	-1.077	62.564	.663	-.082	40.547	14.705	.001
303.0	499492.8	24163.0	-1.078	62.578	.691	-.064	40.570	14.716	.001
304.0	499053.4	24163.6	-1.079	62.593	.726	-.046	40.588	14.727	.001
305.0	498613.8	24164.1	-1.079	62.608	.761	-.018	40.613	14.739	.001
306.0	498173.9	24164.7	-1.080	62.622	.786	.001	40.641	14.750	.001
307.0	497733.7	24165.3	-1.081	62.637	.820	.020	40.662	14.762	.001
308.0	497293.2	24165.8	-1.081	62.652	.850	.041	40.694	14.773	.001
309.0	496852.4	24166.4	-1.082	62.666	.873	.061	40.725	14.785	.001
310.0	496411.4	24166.9	-1.083	62.681	.906	.081	40.759	14.796	.001
311.0	495970.1	24167.5	-1.084	62.696	.929	.099	40.792	14.808	.001
312.0	495528.5	24168.1	-1.084	62.711	.956	.112	40.836	14.820	.001
313.0	495086.6	24168.6	-1.085	62.726	.987	.133	40.877	14.832	.001
314.0	494644.5	24169.2	-1.086	62.741	1.000	.149	40.908	14.844	.001
315.0	494202.1	24169.7	-1.086	62.756	1.026	.165	40.897	14.856	.001
316.0	493759.4	24170.3	-1.087	62.771	1.044	.182	40.893	14.868	.001
317.0	493316.5	24170.9	-1.088	62.786	1.064	.192	40.885	14.880	.001
318.0	492873.2	24171.4	-1.088	62.801	1.086	.203	40.879	14.892	.001
319.0	492429.8	24172.0	-1.089	62.816	1.103	.219	40.875	14.904	.001
320.0	491986.0	24172.5	-1.090	62.831	1.117	.230	40.874	14.916	.001
321.0	491542.0	24173.1	-1.090	62.847	1.129	.242	40.878	14.929	.001
322.0	491097.7	24173.7	-1.091	62.862	1.143	.254	40.880	14.941	.001
323.0	490653.1	24174.2	-1.092	62.877	1.155	.264	40.888	14.954	.001
324.0	490208.3	24174.8	-1.092	62.893	1.170	.275	40.897	14.966	.001
325.0	489763.2	24175.3	-1.093	62.908	1.187	.287	40.903	14.979	.001
326.0	489317.8	24175.9	-1.094	62.923	1.193	.301	40.920	14.992	.001
327.0	488872.2	24176.5	-1.094	62.939	1.202	.306	40.905	15.004	.001
328.0	488426.3	24177.0	-1.095	62.954	1.207	.309	40.871	15.017	.001
329.0	487980.1	24177.6	-1.096	62.970	1.212	.322	40.834	15.030	.001

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
330.0	487533.7	24178.2	-1.096	62.986	1.212	.329	40.799	15.043	.001
331.0	487087.0	24178.7	-1.097	63.001	1.219	.332	40.768	15.056	.001
332.0	486640.1	24179.3	-1.098	63.017	1.225	.341	40.747	15.069	.001
333.0	486192.9	24179.8	-1.098	63.032	1.224	.337	40.718	15.082	.001
334.0	485745.4	24180.4	-1.099	63.048	1.225	.343	40.697	15.096	.001
335.0	485297.7	24181.0	-1.100	63.064	1.226	.350	40.676	15.109	.001
336.0	484849.7	24181.6	-1.100	63.080	1.223	.351	40.657	15.122	.001
337.0	484401.4	24182.1	-1.101	63.096	1.219	.353	40.642	15.136	.001
338.0	483952.8	24182.7	-1.102	63.112	1.217	.357	40.629	15.149	.001
339.0	483504.0	24183.2	-1.102	63.127	1.215	.361	40.618	15.163	.001
340.0	483054.9	24183.8	-1.103	63.143	1.211	.366	40.609	15.177	.001
341.0	482605.6	24184.4	-1.104	63.159	1.206	.369	40.600	15.190	.001
342.0	482156.0	24185.0	-1.104	63.175	1.198	.370	40.592	15.204	.001
343.0	481706.2	24185.5	-1.105	63.191	1.189	.370	40.587	15.218	.001
344.0	481256.1	24186.1	-1.105	63.208	1.181	.375	40.590	15.232	.001
345.0	480805.7	24186.7	-1.106	63.224	1.177	.377	40.592	15.246	.001
346.0	480355.1	24187.2	-1.107	63.240	1.168	.376	40.592	15.260	.001
347.0	479904.3	24187.8	-1.107	63.256	1.154	.379	40.593	15.275	.001
348.0	479453.2	24188.4	-1.108	63.272	1.142	.378	40.602	15.289	.001
349.0	479001.8	24189.0	-1.109	63.289	1.134	.376	40.615	15.303	.001
350.0	478550.1	24189.5	-1.109	63.305	1.121	.378	40.629	15.318	.001
351.0	478098.3	24190.1	-1.110	63.321	1.100	.378	40.643	15.332	.001
352.0	477646.1	24190.7	-1.111	63.338	1.088	.379	40.657	15.347	.001
353.0	477193.8	24191.3	-1.111	63.354	1.077	.374	40.674	15.362	.001
354.0	476741.1	24191.8	-1.112	63.371	1.054	.375	40.695	15.377	.001
355.0	476288.2	24192.4	-1.112	63.387	1.038	.372	40.718	15.392	.001
356.0	475835.1	24193.0	-1.113	63.404	1.022	.370	40.746	15.406	.001
357.0	475381.7	24193.6	-1.114	63.420	1.000	.372	40.769	15.422	.001
358.0	474928.0	24194.1	-1.114	63.437	.982	.364	40.802	15.437	.001
359.0	474474.2	24194.7	-1.115	63.454	.961	.364	40.828	15.452	.001

-96-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 13 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
360.0	474020.0	24195.3	-1.116	63.470	.939	.358	40.864	15.467	.001
361.0	473565.6	24195.9	-1.116	63.487	.921	.351	40.896	15.483	.001
362.0	473111.0	24196.4	-1.117	63.504	.887	.348	40.933	15.498	.001
363.0	472656.2	24197.0	-1.117	63.521	.870	.346	40.946	15.514	.002
364.0	472201.0	24197.6	-1.118	63.538	.835	.330	40.929	15.530	.002
365.0	471745.7	24198.1	-1.118	63.555	.816	.320	40.917	15.545	.002
366.0	471290.1	24198.7	-1.119	63.572	.788	.315	40.909	15.561	.002
367.0	470834.3	24199.3	-1.120	63.589	.751	.305	40.902	15.577	.002
368.0	470378.2	24199.9	-1.120	63.606	.719	.293	40.894	15.593	.002
369.0	469921.9	24200.5	-1.121	63.623	.684	.287	40.893	15.610	.002
370.0	469465.3	24201.0	-1.122	63.640	.655	.274	40.896	15.626	.002
371.0	469008.5	24201.6	-1.122	63.657	.623	.262	40.897	15.642	.002
372.0	468551.5	24202.2	-1.123	63.674	.587	.253	40.901	15.659	.002
373.0	468094.2	24202.8	-1.123	63.691	.549	.243	40.895	15.675	.002
374.0	467636.6	24203.4	-1.124	63.709	.515	.230	40.879	15.692	.002
375.0	467178.9	24203.9	-1.125	63.726	.475	.213	40.861	15.709	.002
376.0	466720.9	24204.5	-1.125	63.743	.426	.196	40.845	15.726	.002
377.0	466262.6	24205.1	-1.126	63.761	.394	.183	40.837	15.742	.002
378.0	465804.1	24205.7	-1.126	63.778	.347	.165	40.823	15.760	.002
379.0	465345.4	24206.3	-1.127	63.795	.305	.154	40.823	15.777	.002
380.0	464886.5	24206.8	-1.127	63.813	.267	.139	40.813	15.794	.002
381.0	464427.2	24207.4	-1.128	63.830	.218	.123	40.813	15.811	.002
382.0	463967.8	24208.0	-1.129	63.848	.178	.103	40.805	15.829	.002
383.0	463508.1	24208.6	-1.129	63.866	.128	.087	40.812	15.847	.002
384.0	463048.2	24209.2	-1.130	63.883	.075	.068	40.813	15.864	.002
385.0	462588.1	24209.7	-1.130	63.901	.032	.054	40.815	15.882	.002
386.0	462127.7	24210.3	-1.131	63.918	-.024	.038	40.826	15.900	.002
387.0	461667.1	24210.9	-1.131	63.936	-.063	.015	40.837	15.918	.002
388.0	461206.3	24211.5	-1.132	63.954	-.121	-.001	40.850	15.936	.002
389.0	460745.2	24212.1	-1.133	63.972	-.172	-.016	40.858	15.955	.002

-97-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
390.0	460283.9	24212.7	-1.133	63.990	-.225	-.036	40.871	15.973	.002
391.0	459822.4	24213.3	-1.134	64.008	-.280	-.061	40.892	15.992	.002
392.0	459360.6	24213.8	-1.134	64.026	-.333	-.082	40.916	16.010	.002
393.0	458898.7	24214.4	-1.135	64.044	-.387	-.103	40.902	16.029	.002
394.0	458436.5	24215.0	-1.135	64.062	-.448	-.122	40.863	16.048	.002
395.0	457974.1	24215.6	-1.136	64.080	-.513	-.154	40.841	16.067	.002
396.0	457511.4	24216.2	-1.136	64.098	-.578	-.184	40.817	16.086	.002
397.0	457048.6	24216.7	-1.137	64.116	-.639	-.204	40.789	16.105	.002
398.0	456585.5	24217.3	-1.138	64.134	-.699	-.226	40.770	16.125	.002
399.0	456122.1	24217.9	-1.138	64.152	-.760	-.254	40.751	16.144	.002
400.0	455658.6	24218.5	-1.139	64.171	-.836	-.284	40.729	16.164	.002
401.0	455194.8	24219.1	-1.139	64.189	-.897	-.310	40.721	16.184	.002
402.0	454730.8	24219.7	-1.140	64.207	-.966	-.346	40.712	16.203	.002
-98- 403.0	454266.5	24220.3	-1.140	64.225	-1.027	-.377	40.699	16.223	.002
404.0	453802.1	24220.9	-1.141	64.244	-1.098	-.398	40.689	16.244	.002
405.0	453337.4	24221.5	-1.141	64.262	-1.167	-.423	40.685	16.264	.002
406.0	452872.5	24222.0	-1.142	64.281	-1.240	-.454	40.683	16.284	.002
407.0	452407.4	24222.6	-1.142	64.299	-1.288	-.463	40.675	16.305	.002
408.0	451942.0	24223.2	-1.143	64.318	-1.199	-.346	40.702	16.326	.002
409.0	451476.4	24223.8	-1.144	64.336	-1.129	-.231	40.726	16.346	.002
410.0	451010.6	24224.4	-1.144	64.355	-1.044	-.114	40.748	16.367	.002
411.0	450544.6	24225.0	-1.145	64.374	-.966	-.000	40.772	16.389	.002
412.0	450078.4	24225.6	-1.145	64.392	-.889	.119	40.805	16.410	.002
413.0	449612.0	24226.2	-1.146	64.411	-.807	.237	40.832	16.431	.002
414.0	449145.3	24226.8	-1.146	64.430	-.749	.278	40.864	16.453	.002
415.0	448678.5	24227.4	-1.147	64.449	-.715	.248	40.892	16.475	.003
416.0	448211.4	24228.0	-1.147	64.468	-.671	.229	40.903	16.496	.003
417.0	447744.1	24228.5	-1.148	64.487	-.628	.208	40.917	16.518	.003
418.0	447276.6	24229.1	-1.148	64.505	-.589	.186	40.928	16.541	.003
419.0	446808.9	24229.7	-1.149	64.524	-.557	.165	40.940	16.563	.003

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 15 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
420.0	446340.9	24230.3	-1.149	64.543	-.522	.137	40.933	16.585	.003
421.0	445872.8	24230.9	-1.150	64.562	-.490	.107	40.901	16.608	.003
422.0	445404.5	24231.5	-1.150	64.582	-.458	.074	40.869	16.631	.003
423.0	444935.9	24232.1	-1.151	64.601	-.427	.054	40.840	16.654	.003
424.0	444467.2	24232.7	-1.151	64.620	-.393	.024	40.811	16.677	.003
425.0	443998.2	24233.3	-1.152	64.639	-.370	-.006	40.786	16.700	.003
426.0	443529.0	24233.9	-1.152	64.658	-.344	-.036	40.760	16.724	.003
427.0	443059.7	24234.5	-1.153	64.678	-.317	-.068	40.741	16.747	.003
428.0	442590.1	24235.1	-1.153	64.697	-.297	-.099	40.719	16.771	.003
429.0	442120.3	24235.7	-1.154	64.716	-.272	-.130	40.706	16.795	.003
430.0	441650.3	24236.3	-1.154	64.736	-.248	-.159	40.693	16.819	.003
431.0	441180.0	24236.8	-1.155	64.755	-.226	-.194	40.675	16.843	.003
432.0	440709.6	24237.4	-1.155	64.775	-.196	-.217	40.660	16.868	.003
433.0	440239.0	24238.0	-1.156	64.794	-.179	-.245	40.649	16.892	.003
434.0	439768.1	24238.7	-1.156	64.814	-.162	-.280	40.639	16.917	.003
435.0	439297.1	24239.2	-1.157	64.833	-.137	-.312	40.643	16.942	.003
436.0	438825.9	24239.8	-1.157	64.853	-.120	-.335	40.636	16.968	.003
437.0	438354.4	24240.4	-1.158	64.873	-.072	-.264	40.631	16.993	.003
438.0	437882.8	24241.0	-1.158	64.892	-.023	-.166	40.630	17.019	.003
439.0	437410.9	24241.6	-1.159	64.912	.019	-.072	40.631	17.044	.003
440.0	436938.8	24242.2	-1.159	64.932	.068	.031	40.634	17.070	.003
441.0	436466.6	24242.8	-1.160	64.952	.111	.130	40.637	17.097	.003
442.0	435994.2	24243.4	-1.160	64.971	.159	.226	40.640	17.123	.003
443.0	435521.5	24244.0	-1.161	64.991	.211	.338	40.651	17.149	.003
444.0	435048.6	24244.6	-1.161	65.011	.211	.338	40.661	17.176	.003
445.0	434575.6	24245.2	-1.162	65.031	.151	.192	40.674	17.203	.004
446.0	434102.3	24245.8	-1.162	65.051	.093	.033	40.693	17.230	.004
447.0	433628.9	24246.4	-1.163	65.071	.031	-.118	40.709	17.258	.004
448.0	433155.2	24247.0	-1.163	65.091	-.016	-.244	40.731	17.285	.004
449.0	432681.4	24247.6	-1.163	65.112	-.060	-.283	40.757	17.313	.004

166-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
450.0	432207.4	24248.2	-1.164	65.132	-.087	-.301	40.777	17.341	.004
451.0	431733.1	24248.8	-1.164	65.152	-.118	-.327	40.802	17.370	.004
452.0	431258.7	24249.4	-1.165	65.172	-.152	-.348	40.831	17.398	.004
453.0	430784.1	24250.0	-1.165	65.192	-.187	-.373	40.864	17.427	.004
454.0	430309.3	24250.6	-1.166	65.213	-.182	-.360	40.892	17.456	.004
455.0	429834.3	24251.2	-1.166	65.233	-.176	-.342	40.923	17.485	.004
456.0	429359.1	24251.8	-1.167	65.254	-.171	-.329	40.935	17.514	.004
457.0	428883.7	24252.4	-1.167	65.274	-.168	-.306	40.952	17.544	.004
458.0	428408.2	24253.0	-1.168	65.294	-.158	-.298	40.970	17.574	.004
459.0	427932.4	24253.6	-1.168	65.315	-.158	-.282	40.970	17.604	.004
460.0	427456.5	24254.2	-1.168	65.336	-.154	-.270	40.943	17.634	.004
461.0	426980.4	24254.8	-1.169	65.356	-.156	-.257	40.916	17.665	.004
462.0	426504.1	24255.4	-1.169	65.377	-.152	-.248	40.895	17.696	.004
463.0	426027.6	24256.0	-1.170	65.397	-.152	-.237	40.873	17.727	.004
464.0	425551.0	24256.6	-1.170	65.418	-.161	-.226	40.848	17.758	.004
465.0	425074.1	24257.2	-1.171	65.439	-.161	-.222	40.830	17.790	.005
466.0	424597.1	24257.8	-1.171	65.460	-.170	-.216	40.814	17.822	.005
467.0	424119.9	24258.4	-1.171	65.480	-.172	-.202	40.795	17.854	.005
468.0	423642.5	24259.0	-1.172	65.501	-.183	-.190	40.779	17.886	.005
469.0	423164.9	24259.6	-1.172	65.522	-.200	-.188	40.767	17.919	.005
470.0	422687.1	24260.2	-1.173	65.543	-.210	-.178	40.760	17.952	.005
471.0	422209.1	24260.9	-1.173	65.564	-.222	-.174	40.752	17.985	.005
472.0	421731.0	24261.5	-1.174	65.585	-.230	-.171	40.743	18.019	.005
473.0	421252.7	24262.1	-1.174	65.606	-.247	-.169	40.739	18.053	.005
474.0	420774.2	24262.7	-1.174	65.627	-.263	-.170	40.738	18.087	.005
475.0	420295.5	24263.3	-1.175	65.648	-.281	-.163	40.746	18.122	.005
476.0	419816.6	24263.9	-1.175	65.670	-.300	-.161	40.744	18.156	.005
477.0	419337.6	24264.5	-1.176	65.691	-.317	-.155	40.753	18.191	.005
478.0	418858.4	24265.1	-1.176	65.712	-.336	-.156	40.752	18.227	.005
479.0	418379.0	24265.7	-1.177	65.733	-.351	-.156	40.760	18.262	.006

-100-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 17 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHA (DEG)	MACHA (-)	QA (PSF)
480.0	417899.4	24266.3	-1.177	65.755	-.380	-.156	40.777	18.298	.006
481.0	417419.6	24266.9	-1.177	65.776	-.395	-.154	40.783	18.335	.006
482.0	416939.7	24267.5	-1.178	65.797	-.423	-.154	40.801	18.371	.006
483.0	416459.6	24268.1	-1.178	65.819	-.440	-.153	40.816	18.408	.006
484.0	415979.3	24268.7	-1.179	65.840	-.471	-.154	40.834	18.446	.006
485.0	415498.9	24269.3	-1.179	65.862	-.505	-.159	40.854	18.483	.006
486.0	415018.3	24269.9	-1.179	65.883	-.526	-.163	40.878	18.521	.006
487.0	414537.4	24270.5	-1.180	65.905	-.551	-.164	40.901	18.560	.006
488.0	414056.5	24271.1	-1.180	65.926	-.587	-.168	40.927	18.598	.006
489.0	413575.4	24271.8	-1.181	65.948	-.613	-.171	40.955	18.637	.006
490.0	413094.1	24272.3	-1.181	65.970	-.656	-.186	40.945	18.677	.006
491.0	412612.6	24273.0	-1.181	65.992	-.692	-.196	40.918	18.717	.007
492.0	412131.0	24273.6	-1.182	66.013	-.727	-.206	40.901	18.757	.007
493.0	411649.2	24274.2	-1.182	66.035	-.768	-.223	40.883	18.797	.007
494.0	411167.3	24274.8	-1.182	66.057	-.810	-.243	40.846	18.838	.007
495.0	410685.2	24275.4	-1.183	66.079	-.860	-.258	40.801	18.880	.007
496.0	410202.9	24276.0	-1.183	66.101	-.900	-.271	40.769	18.921	.007
497.0	409720.4	24276.6	-1.184	66.123	-.949	-.282	40.728	18.963	.007
498.0	409237.8	24277.2	-1.184	66.145	-1.002	-.306	40.688	19.004	.008
499.0	408755.0	24277.8	-1.184	66.167	-1.041	-.325	40.658	19.045	.008
500.0	408272.1	24278.4	-1.185	66.189	-1.092	-.337	40.632	19.087	.008
501.0	407789.0	24279.0	-1.185	66.211	-1.144	-.360	40.601	19.129	.008
502.0	407305.7	24279.6	-1.186	66.233	-1.189	-.375	40.573	19.171	.008
503.0	406822.3	24280.3	-1.186	66.255	-1.250	-.401	40.548	19.214	.008
504.0	406338.7	24280.9	-1.186	66.278	-1.303	-.417	40.524	19.257	.008
505.0	405854.9	24281.5	-1.187	66.300	-1.363	-.437	40.512	19.300	.008
506.0	405371.0	24282.1	-1.187	66.322	-1.343	-.383	40.497	19.343	.009
507.0	404887.0	24282.7	-1.187	66.345	-1.296	-.314	40.488	19.387	.009
508.0	404402.7	24283.3	-1.188	66.367	-1.248	-.244	40.481	19.430	.009
509.0	403918.3	24283.9	-1.188	66.389	-1.212	-.173	40.484	19.474	.009

-101-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
510.0	403433.8	24284.5	-1.188	66.412	-1.177	-.105	40.482	19.519	.009
511.0	402949.1	24285.1	-1.189	66.434	-1.145	-.039	40.481	19.563	.009
512.0	402464.2	24285.7	-1.189	66.457	-1.109	.031	40.488	19.608	.009
513.0	401979.2	24286.4	-1.189	66.480	-1.070	.099	40.492	19.653	.010
514.0	401494.0	24287.0	-1.190	66.502	-1.064	.090	40.497	19.699	.010
515.0	401008.7	24287.6	-1.190	66.525	-1.065	.016	40.504	19.744	.010
516.0	400523.2	24288.2	-1.191	66.547	-1.058	-.049	40.510	19.790	.010
517.0	400037.6	24288.8	-1.191	66.570	-1.061	-.118	40.519	19.836	.010
518.0	399551.8	24289.4	-1.191	66.593	-1.069	-.181	40.532	19.882	.011
519.0	399065.9	24290.0	-1.192	66.616	-1.075	-.253	40.543	19.929	.011
520.0	398579.8	24290.7	-1.192	66.639	-1.087	-.327	40.557	19.976	.011
521.0	398093.5	24291.3	-1.192	66.661	-1.017	-.334	40.586	20.023	.011
522.0	397607.1	24291.9	-1.193	66.684	-.925	-.306	40.618	20.070	.011
523.0	397120.6	24292.5	-1.193	66.707	-.835	-.287	40.649	20.117	.011
524.0	396633.9	24293.1	-1.193	66.730	-.745	-.258	40.688	20.165	.012
525.0	396147.1	24293.7	-1.194	66.753	-.648	-.231	40.716	20.213	.012
526.0	395660.1	24294.3	-1.194	66.777	-.572	-.210	40.755	20.261	.012
527.0	395172.9	24294.9	-1.194	66.800	-.480	-.183	40.798	20.310	.012
528.0	394685.6	24295.6	-1.195	66.823	-.399	-.173	40.835	20.358	.013
529.0	394198.2	24296.2	-1.195	66.846	-.304	-.143	40.881	20.407	.013
530.0	393710.7	24296.8	-1.195	66.869	-.231	-.121	40.921	20.456	.013
531.0	393223.0	24297.4	-1.196	66.892	-.150	-.107	40.908	20.505	.013
532.0	392735.1	24298.0	-1.196	66.916	-.083	-.097	40.906	20.555	.014
533.0	392247.2	24298.6	-1.196	66.939	-.007	-.079	40.899	20.604	.014
534.0	391759.1	24299.2	-1.196	66.962	.071	-.062	40.893	20.654	.014
535.0	391270.8	24299.8	-1.197	66.986	.143	-.050	40.888	20.704	.014
536.0	390782.4	24300.5	-1.197	67.009	.222	-.030	40.883	20.755	.015
537.0	390293.9	24301.1	-1.197	67.033	.297	-.012	40.885	20.805	.015
538.0	389805.2	24301.7	-1.198	67.056	.360	-.001	40.886	20.856	.015
539.0	389316.4	24302.3	-1.198	67.080	.428	.015	40.890	20.906	.015

-102-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
540.0	388827.5	24302.9	-1.198	67.104	.495	.026	40.897	20.957	.016
541.0	388338.4	24303.5	-1.199	67.127	.564	.041	40.903	21.009	.016
542.0	387849.2	24304.1	-1.199	67.151	.625	.050	40.911	21.060	.016
543.0	387359.8	24304.7	-1.199	67.175	.685	.055	40.909	21.112	.017
544.0	386870.3	24305.3	-1.199	67.198	.744	.065	40.898	21.163	.017
545.0	386380.7	24306.0	-1.200	67.222	.808	.077	40.870	21.215	.017
546.0	385891.0	24306.6	-1.200	67.246	.862	.082	40.826	21.267	.018
547.0	385401.1	24307.2	-1.200	67.270	.908	.080	40.784	21.319	.018
548.0	384911.1	24307.8	-1.201	67.294	.967	.083	40.746	21.372	.018
549.0	384421.0	24308.4	-1.201	67.318	1.020	.084	40.715	21.424	.019
550.0	383930.7	24309.0	-1.201	67.342	1.070	.109	40.679	21.477	.019
551.0	383440.3	24309.6	-1.201	67.366	1.135	.166	40.641	21.530	.020
552.0	382949.8	24310.3	-1.202	67.390	1.194	.227	40.605	21.583	.020
553.0	382459.2	24310.9	-1.202	67.414	1.257	.291	40.577	21.636	.020
554.0	381968.4	24311.5	-1.202	67.438	1.320	.355	40.548	21.689	.021
555.0	381477.5	24312.1	-1.203	67.462	1.370	.410	40.520	21.742	.021
556.0	380986.4	24312.7	-1.203	67.487	1.371	.420	40.499	21.796	.022
557.0	380495.3	24313.3	-1.203	67.511	1.320	.371	40.487	21.850	.022
558.0	380004.0	24313.9	-1.203	67.535	1.258	.324	40.475	21.903	.023
559.0	379512.5	24314.5	-1.204	67.560	1.199	.290	40.462	21.957	.023
560.0	379021.0	24315.2	-1.204	67.584	1.141	.238	40.451	22.011	.024
561.0	378529.4	24315.8	-1.204	67.608	1.080	.194	40.445	22.065	.024
562.0	378037.6	24316.4	-1.204	67.633	1.013	.143	40.437	22.119	.025
563.0	377545.7	24317.0	-1.205	67.657	.960	.097	40.430	22.174	.025
564.0	377053.6	24317.6	-1.205	67.682	.892	.051	40.427	22.228	.026
565.0	376561.5	24318.2	-1.205	67.706	.822	-.001	40.422	22.282	.026
566.0	376069.2	24318.8	-1.205	67.731	.765	-.053	40.417	22.337	.027
567.0	375576.8	24319.5	-1.206	67.756	.696	-.105	40.420	22.391	.027
568.0	375084.3	24320.1	-1.206	67.780	.629	-.162	40.416	22.446	.028
569.0	374591.7	24320.7	-1.206	67.805	.551	-.211	40.414	22.501	.029

-103-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
570.0	374099.0	24321.3	-1.206	67.830	.481	-.265	40.416	22.555	.029
571.0	373606.2	24321.9	-1.207	67.854	.401	-.320	40.414	22.610	.030
572.0	373113.2	24322.5	-1.207	67.879	.331	-.378	40.415	22.665	.031
573.0	372620.1	24323.1	-1.207	67.904	.263	-.383	40.421	22.720	.031
574.0	372126.9	24323.7	-1.207	67.929	.214	-.312	40.419	22.775	.032
575.0	371633.6	24324.4	-1.208	67.954	.173	-.230	40.424	22.829	.033
576.0	371140.2	24325.0	-1.208	67.979	.127	-.152	40.427	22.884	.033
577.0	370646.7	24325.6	-1.208	68.004	.074	-.083	40.427	22.939	.034
578.0	370153.0	24326.2	-1.208	68.029	.015	-.012	40.431	22.994	.035
579.0	369659.3	24326.8	-1.209	68.054	-.034	.060	40.441	23.049	.036
580.0	369165.4	24327.4	-1.209	68.079	-.090	.138	40.449	23.104	.037
581.0	368671.5	24328.0	-1.209	68.105	-.144	.216	40.457	23.159	.038
582.0	368177.4	24328.6	-1.209	68.130	-.219	.235	40.464	23.214	.038
583.0	367683.2	24329.3	-1.209	68.155	-.312	.177	40.470	23.269	.039
584.0	367188.9	24329.9	-1.210	68.180	-.405	.106	40.473	23.324	.040
585.0	366694.5	24330.5	-1.210	68.206	-.507	.038	40.479	23.378	.041
586.0	366200.0	24331.1	-1.210	68.231	-.607	-.037	40.486	23.433	.042
587.0	365705.4	24331.7	-1.210	68.256	-.706	-.108	40.489	23.488	.043
588.0	365210.7	24332.3	-1.210	68.282	-.808	-.184	40.495	23.542	.044
589.0	364715.9	24332.9	-1.211	68.307	-.913	-.257	40.504	23.597	.045
590.0	364221.0	24333.5	-1.211	68.333	-1.012	-.329	40.512	23.652	.046
591.0	363726.0	24334.1	-1.211	68.358	-1.125	-.408	40.522	23.706	.047
592.0	363230.9	24334.7	-1.211	68.384	-1.115	-.377	40.545	23.760	.049
593.0	362735.8	24335.3	-1.211	68.410	-1.049	-.285	40.569	23.814	.050
594.0	362240.5	24336.0	-1.212	68.435	-1.007	-.223	40.597	23.869	.051
595.0	361745.1	24336.6	-1.212	68.461	-.963	-.149	40.626	23.923	.052
596.0	361249.6	24337.2	-1.212	68.487	-.917	-.082	40.647	23.976	.053
597.0	360754.0	24337.8	-1.212	68.512	-.873	-.010	40.682	24.030	.055
598.0	360258.3	24338.4	-1.212	68.538	-.833	.063	40.711	24.084	.056
599.0	359762.6	24339.0	-1.213	68.564	-.784	.129	40.736	24.137	.058

-104-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 21 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
600.0	359266.7	24339.6	-1.213	68.590	-.751	.193	40.757	24.190	.059
601.0	358770.8	24340.2	-1.213	68.616	-.718	.258	40.785	24.244	.060
602.0	358274.7	24340.8	-1.213	68.642	-.685	.317	40.810	24.297	.062
603.0	357778.6	24341.4	-1.213	68.668	-.677	.258	40.833	24.349	.063
604.0	357282.4	24342.0	-1.213	68.694	-.682	.192	40.858	24.402	.065
605.0	356786.1	24342.6	-1.214	68.720	-.683	.118	40.881	24.454	.067
606.0	356289.7	24343.2	-1.214	68.746	-.683	.045	40.902	24.507	.068
607.0	355793.3	24343.8	-1.214	68.772	-.686	-.024	40.923	24.559	.070
608.0	355296.7	24344.4	-1.214	68.798	-.687	-.094	40.943	24.610	.072
609.0	354800.1	24345.0	-1.214	68.824	-.692	-.164	40.963	24.662	.074
610.0	354303.4	24345.6	-1.214	68.851	-.695	-.236	40.980	24.713	.076
611.0	353806.6	24346.2	-1.215	68.877	-.708	-.316	40.994	24.764	.078
612.0	353309.8	24346.8	-1.215	68.903	-.672	-.341	40.987	24.815	.080
613.0	352812.9	24347.4	-1.215	68.930	-.570	-.318	40.957	24.866	.082
614.0	352315.9	24348.0	-1.215	68.956	-.480	-.295	40.927	24.916	.084
615.0	351818.8	24348.6	-1.215	68.983	-.392	-.273	40.899	24.966	.086
616.0	351321.7	24349.2	-1.215	69.009	-.307	-.263	40.869	25.016	.088
617.0	350824.5	24349.8	-1.215	69.036	-.216	-.241	40.830	25.066	.091
618.0	350327.2	24350.4	-1.215	69.062	-.134	-.226	40.798	25.115	.093
619.0	349829.8	24351.0	-1.216	69.089	-.050	-.209	40.761	25.164	.095
620.0	349332.4	24351.6	-1.216	69.115	.044	-.193	40.723	25.212	.098
621.0	348834.9	24352.2	-1.216	69.142	.121	-.180	40.684	25.260	.101
622.0	348337.4	24352.8	-1.216	69.169	.203	-.164	40.642	25.308	.103
623.0	347839.7	24353.4	-1.216	69.196	.283	-.156	40.601	25.356	.106
624.0	347342.0	24354.0	-1.216	69.222	.364	-.148	40.556	25.403	.109
625.0	346844.2	24354.6	-1.216	69.249	.438	-.137	40.511	25.450	.112
626.0	346346.4	24355.2	-1.216	69.276	.516	-.128	40.457	25.497	.115
627.0	345848.5	24355.8	-1.216	69.303	.593	-.120	40.419	25.543	.118
628.0	345350.5	24356.3	-1.217	69.330	.676	-.071	40.351	25.589	.121
629.0	344852.5	24356.9	-1.217	69.357	.779	.067	40.299	25.634	.124

-105-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
630.0	344354.4	24357.5	-1.217	69.384	.882	.219	40.244	25.679	.128
631.0	343856.2	24358.2	-1.217	69.411	.929	.302	40.187	25.724	.131
632.0	343358.0	24358.7	-1.217	69.438	.908	.327	40.142	25.768	.135
633.0	342859.7	24359.3	-1.217	69.465	.900	.359	40.084	25.812	.138
634.0	342361.4	24359.9	-1.217	69.492	.886	.387	40.024	25.855	.142
635.0	341863.0	24360.5	-1.217	69.520	.858	.410	39.967	25.898	.146
636.0	341364.5	24361.1	-1.217	69.547	.840	.433	39.907	25.941	.150
637.0	340866.1	24361.6	-1.217	69.574	.807	.449	39.840	25.983	.154
638.0	340367.5	24362.2	-1.217	69.601	.781	.472	39.769	26.025	.158
639.0	339869.0	24362.8	-1.218	69.629	.672	.422	39.709	26.066	.163
640.0	339370.3	24363.4	-1.218	69.656	.524	.328	39.644	26.107	.167
641.0	338871.7	24364.0	-1.218	69.683	.386	.250	39.580	26.147	.172
642.0	338373.0	24364.5	-1.218	69.711	.234	.161	39.513	26.187	.176
643.0	337874.2	24365.1	-1.218	69.738	.084	.078	39.440	26.226	.181
644.0	337375.5	24365.7	-1.218	69.766	-.075	-.008	39.361	26.265	.186
645.0	336876.6	24366.2	-1.218	69.793	-.227	-.097	39.279	26.304	.192
646.0	336377.8	24366.8	-1.218	69.821	-.385	-.179	39.207	26.342	.197
647.0	335878.9	24367.4	-1.218	69.849	-.544	-.268	39.163	26.379	.202
648.0	335380.0	24367.9	-1.218	69.876	-.704	-.354	39.132	26.416	.208
649.0	334881.1	24368.5	-1.218	69.904	-.811	-.402	39.115	26.452	.214
650.0	334382.1	24369.1	-1.218	69.932	-.815	-.340	39.113	26.488	.220
651.0	333883.1	24369.6	-1.218	69.960	-.820	-.291	39.162	26.524	.226
652.0	333384.1	24370.2	-1.218	69.987	-.832	-.242	39.221	26.559	.232
653.0	332885.0	24370.7	-1.218	70.015	-.845	-.197	39.270	26.593	.239
654.0	332386.0	24371.3	-1.218	70.043	-.859	-.155	39.317	26.627	.246
655.0	331886.9	24371.9	-1.218	70.071	-.882	-.115	39.360	26.660	.253
656.0	331387.8	24372.4	-1.218	70.099	-.904	-.074	39.391	26.693	.260
657.0	330888.8	24372.9	-1.218	70.127	-.924	-.041	39.417	26.725	.267
658.0	330389.7	24373.5	-1.218	70.155	-.956	-.013	39.439	26.757	.275
659.0	329890.7	24374.0	-1.218	70.183	-.992	.019	39.452	26.788	.283

-106-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 23 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
660.0	329391.6	24374.5	-1.218	70.211	-1.031	.045	39.459	26.819	.291
661.0	328892.6	24375.0	-1.218	70.239	-1.069	.066	39.461	26.849	.299
662.0	328393.5	24375.6	-1.217	70.268	-1.111	.082	39.457	26.878	.308
663.0	327894.5	24376.1	-1.217	70.296	-1.165	.112	39.441	26.907	.272
664.0	327395.5	24376.7	-1.217	70.324	-1.248	.029	39.439	26.936	.280
665.0	326896.4	24377.2	-1.217	70.352	-1.339	-.103	39.451	26.964	.287
666.0	326397.4	24377.7	-1.217	70.380	-1.404	-.201	39.468	26.991	.296
667.0	325898.4	24378.2	-1.217	70.409	-1.437	-.267	39.492	27.018	.304
668.0	325399.4	24378.7	-1.217	70.437	-1.441	-.305	39.522	27.044	.313
669.0	324900.4	24379.2	-1.217	70.466	-1.421	-.318	39.556	27.070	.322
670.0	324401.4	24379.7	-1.217	70.494	-1.381	-.311	39.592	27.095	.331
671.0	323902.5	24380.2	-1.217	70.523	-1.325	-.286	39.628	27.120	.341
672.0	323403.6	24380.7	-1.216	70.551	-1.257	-.246	39.663	27.144	.351
673.0	322904.8	24381.2	-1.216	70.580	-1.180	-.197	39.695	27.167	.361
674.0	322406.1	24381.7	-1.216	70.608	-1.099	-.141	39.722	27.190	.371
675.0	321907.5	24382.1	-1.216	70.637	-1.018	-.082	39.743	27.212	.381
676.0	321408.9	24382.6	-1.216	70.666	-.940	-.023	39.755	27.234	.392
677.0	320910.4	24383.1	-1.215	70.694	-.870	.031	39.757	27.255	.404
678.0	320412.0	24383.5	-1.215	70.723	-.812	.077	39.748	27.276	.415
679.0	319913.7	24383.9	-1.215	70.752	-.760	.114	39.731	27.296	.427
680.0	319415.6	24384.4	-1.214	70.781	-.715	.142	39.710	27.315	.440
681.0	318917.5	24384.8	-1.214	70.810	-.682	.166	39.673	27.334	.453
682.0	318419.5	24385.2	-1.214	70.839	-.658	.183	39.627	27.353	.465
683.0	317921.6	24385.6	-1.214	70.868	-.647	.196	39.563	27.371	.479
684.0	317423.8	24386.1	-1.213	70.896	-.646	.198	39.513	27.388	.493
685.0	316926.2	24386.5	-1.213	70.925	-.658	.198	39.491	27.405	.507
686.0	316428.7	24386.9	-1.213	70.955	-.682	.187	39.471	27.421	.523
687.0	315931.4	24387.3	-1.212	70.984	-.714	.175	39.442	27.437	.537
688.0	315434.2	24387.7	-1.212	71.013	-.760	.151	39.406	27.453	.553
689.0	314937.1	24388.0	-1.211	71.042	-.818	.124	39.386	27.467	.569

-107-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
690.0	314440.2	24388.4	-1.211	71.071	-.895	.076	39.363	27.482	.586
691.0	313943.5	24388.8	-1.210	71.100	-.979	.027	39.350	27.495	.603
692.0	313446.9	24389.2	-1.210	71.129	-1.069	-.031	39.349	27.509	.621
693.0	312950.5	24389.5	-1.210	71.159	-1.171	-.103	39.341	27.521	.638
694.0	312454.3	24389.9	-1.209	71.188	-1.293	-.179	39.335	27.534	.657
695.0	311958.2	24390.2	-1.209	71.217	-1.421	-.260	39.334	27.546	.677
696.0	311462.3	24390.6	-1.208	71.247	-1.554	-.345	39.390	27.557	.696
697.0	310966.7	24391.0	-1.208	71.276	-1.606	-.365	39.464	27.568	.717
698.0	310471.2	24391.3	-1.207	71.306	-1.651	-.369	39.532	27.578	.737
699.0	309975.9	24391.6	-1.207	71.335	-1.702	-.378	39.604	27.588	.758
700.0	309480.8	24391.9	-1.206	71.365	-1.757	-.389	39.669	27.598	.781
701.0	308986.0	24392.2	-1.205	71.394	-1.817	-.405	39.740	27.607	.803
702.0	308491.3	24392.5	-1.205	71.424	-1.881	-.427	39.812	27.615	.827
703.0	307996.9	24392.8	-1.204	71.454	-1.951	-.451	39.888	27.623	.851
704.0	307502.8	24393.1	-1.204	71.483	-2.012	-.468	39.966	27.631	.876
705.0	307009.0	24393.3	-1.203	71.513	-2.016	-.436	40.047	27.638	.901
706.0	306515.4	24393.6	-1.202	71.543	-1.996	-.379	40.143	27.645	.927
707.0	306022.0	24393.8	-1.202	71.572	-1.987	-.327	40.240	27.652	.954
708.0	305529.0	24394.1	-1.201	71.602	-1.989	-.325	40.341	27.658	.982
709.0	305036.2	24394.3	-1.200	71.632	-1.987	-.374	40.445	27.664	1.010
710.0	304543.7	24394.5	-1.199	71.662	-1.924	-.383	40.566	27.669	1.040
711.0	304051.6	24394.7	-1.198	71.692	-1.859	-.383	40.696	27.674	1.069
712.0	303559.8	24394.9	-1.198	71.722	-1.797	-.389	40.831	27.679	1.101
713.0	303068.4	24395.0	-1.197	71.752	-1.731	-.389	40.980	27.683	1.132
714.0	302577.3	24395.2	-1.196	71.782	-1.682	-.397	41.121	27.687	1.166
715.0	302086.7	24395.3	-1.195	71.812	-1.638	-.416	41.204	27.691	1.199
716.0	301596.5	24395.4	-1.194	71.842	-1.607	-.451	41.281	27.694	1.234
717.0	301106.6	24395.5	-1.193	71.872	-1.555	-.463	41.359	27.697	1.269
718.0	300617.3	24395.5	-1.191	71.902	-1.414	-.369	41.357	27.699	1.306
719.0	300128.4	24395.6	-1.190	71.932	-1.288	-.276	41.350	27.702	1.343

-108-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
720.0	299639.9	24395.6	-1.189	71.962	-1.158	-.193	41.309	27.704	1.381
721.0	299152.0	24395.6	-1.188	71.993	-1.051	-.118	41.257	27.706	1.421
722.0	298664.5	24395.6	-1.187	72.023	-.960	-.060	41.196	27.707	1.462
723.0	298177.5	24395.6	-1.186	72.053	-.894	-.017	41.123	27.708	1.504
724.0	297691.0	24395.6	-1.184	72.084	-.839	.017	41.038	27.709	1.546
725.0	297205.1	24395.5	-1.183	72.114	-.816	.021	40.936	27.710	1.590
726.0	296719.7	24395.5	-1.182	72.144	-.819	.006	40.833	27.711	1.635
727.0	296234.8	24395.4	-1.180	72.175	-.842	-.025	40.721	27.711	1.681
728.0	295750.6	24395.3	-1.179	72.205	-.891	-.070	40.587	27.711	1.729
729.0	295266.9	24462.7	-1.174	72.555	-.974	.192	40.451	27.788	1.788
730.0	294783.9	24465.2	-1.173	72.569	-1.061	.104	40.308	27.791	1.838
731.0	294301.5	24467.4	-1.171	72.584	-1.172	.003	40.157	27.793	1.890
732.0	293819.7	24469.4	-1.169	72.599	-1.298	-.111	39.995	27.795	1.943
733.0	293338.6	24471.1	-1.168	72.614	-1.408	-.219	39.828	27.796	1.998
734.0	292858.1	24472.6	-1.166	72.630	-1.523	-.324	39.652	27.797	2.054
735.0	292378.4	24473.8	-1.164	72.645	-1.603	-.405	39.483	27.798	2.112
736.0	291899.4	24474.8	-1.162	72.661	-1.648	-.461	39.326	27.801	2.170
737.0	291421.2	24475.5	-1.160	72.677	-1.672	-.499	39.179	27.798	2.229
738.0	290943.7	24476.0	-1.159	72.693	-1.653	-.507	39.046	27.795	2.290
739.0	290466.9	24476.3	-1.157	72.709	-1.611	-.501	38.962	27.791	2.352
740.0	289990.9	24475.9	-1.155	72.725	-1.541	-.481	38.965	27.786	2.415
741.0	289515.7	24475.8	-1.153	72.742	-1.444	-.445	39.014	27.782	2.480
742.0	289041.3	24475.5	-1.151	72.759	-1.338	-.398	39.098	27.776	2.546
743.0	288567.7	24475.1	-1.149	72.776	-1.207	-.348	39.236	27.770	2.614
744.0	288095.0	24474.4	-1.147	72.793	-1.070	-.282	39.408	27.763	2.683
745.0	287623.1	24473.7	-1.145	72.811	-.934	-.227	39.639	27.756	2.754
746.0	287152.2	24472.6	-1.143	72.829	-.811	-.188	39.905	27.748	2.827
747.0	286682.3	24471.9	-1.140	72.846	-.697	-.162	40.212	27.741	2.901
748.0	286213.3	24470.5	-1.138	72.865	-.604	-.153	40.521	27.732	2.976
749.0	285745.4	24468.8	-1.136	72.884	-.530	-.153	40.803	27.722	3.054

-109-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHA (DEG)	MACHA (-)	QA (PSF)
750.0	285278.5	24466.8	-1.133	72.903	-.474	-.174	41.021	27.712	3.133
751.0	284812.8	24464.6	-1.131	72.923	-.435	-.219	41.171	27.701	3.213
752.0	284348.2	24462.1	-1.128	72.944	-.409	-.274	41.284	27.690	3.295
753.0	283884.8	24459.5	-1.125	72.965	-.380	-.335	41.350	27.678	3.379
754.0	283422.6	24456.3	-1.123	72.986	-.335	-.398	41.359	27.666	3.465
755.0	282961.5	24453.3	-1.120	73.008	-.279	-.453	41.312	27.653	3.553
756.0	282501.7	24450.0	-1.117	73.030	-.192	-.487	41.201	27.640	3.642
757.0	282043.1	24446.6	-1.114	73.052	-.071	-.504	41.016	27.626	3.733
758.0	281585.8	24443.0	-1.111	73.075	.087	-.496	40.782	27.612	3.826
759.0	281129.8	24439.2	-1.108	73.098	.277	-.476	40.506	27.597	3.920
760.0	280675.1	24435.2	-1.105	73.122	.509	-.405	40.185	27.582	4.017
761.0	280221.6	24431.2	-1.103	73.145	.712	-.339	39.861	27.566	4.115
762.0	279769.4	24427.0	-1.100	73.169	.908	-.295	39.584	27.550	4.215
763.0	279318.6	24422.6	-1.097	73.194	1.099	-.238	39.365	27.534	4.317
764.0	278869.1	24418.1	-1.094	73.220	1.196	-.198	39.200	27.517	4.422
765.0	278420.9	24413.5	-1.091	73.247	1.249	-.197	39.072	27.500	4.528
766.0	277974.1	24408.7	-1.088	73.274	1.289	-.210	38.994	27.483	4.636
767.0	277528.6	24403.8	-1.085	73.301	1.315	-.239	38.972	27.465	4.746
768.0	277084.6	24397.7	-1.082	73.331	1.334	-.166	38.995	27.446	4.857
769.0	276641.9	24392.6	-1.078	73.359	1.328	-.132	39.083	27.427	4.971
770.0	276200.7	24387.4	-1.075	73.388	1.288	-.128	39.230	27.409	5.088
771.0	275761.0	24382.2	-1.072	73.417	1.201	-.159	39.423	27.390	5.206
772.0	275322.9	24377.0	-1.068	73.446	1.116	-.212	39.671	27.371	5.326
773.0	274886.3	24371.7	-1.065	73.476	1.008	-.274	39.955	27.351	5.448
774.0	274451.3	24366.4	-1.061	73.506	.910	-.340	40.271	27.332	5.573
775.0	274018.0	24361.1	-1.057	73.536	.837	-.409	40.568	27.312	5.700
776.0	273586.4	24355.3	-1.053	73.565	.793	-.450	40.801	27.292	5.828
777.0	273156.7	24349.8	-1.049	73.596	.811	-.455	40.989	27.272	5.959
778.0	272728.9	24344.3	-1.044	73.627	.878	-.411	41.106	27.251	6.092
779.0	272303.1	24338.9	-1.040	73.658	.971	-.291	41.162	27.231	6.226

-110-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 27 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
780.0	271879.3	24333.3	-1.035	73.690	1.050	-.175	41.144	27.210	6.363
781.0	271457.6	24327.8	-1.030	73.722	1.083	-.107	41.040	27.190	6.502
782.0	271038.0	24322.3	-1.026	73.754	1.081	-.085	40.874	27.169	6.643
783.0	270620.6	24316.1	-1.021	73.788	1.033	-.111	40.646	27.147	6.786
784.0	270205.5	24310.8	-1.015	73.821	.982	-.166	40.373	27.127	6.931
785.0	269792.6	24305.6	-1.010	73.854	.941	-.214	40.076	27.106	7.079
786.0	269381.9	24300.6	-1.005	73.887	.938	-.238	39.800	27.085	7.228
787.0	268973.4	24295.7	-1.000	73.921	.975	-.240	39.596	27.065	7.379
788.0	268567.3	24291.0	-.995	73.955	1.026	-.218	39.498	27.044	7.533
789.0	268163.4	24286.3	-.989	73.989	1.103	-.177	39.485	27.024	7.689
790.0	267761.9	24281.7	-.984	74.024	1.203	-.148	39.518	27.004	7.846
791.0	267362.7	24277.6	-.978	74.060	1.289	-.087	39.632	26.984	8.006
792.0	266966.0	24273.2	-.973	74.095	1.341	-.064	39.791	26.964	8.168
793.0	266571.9	24268.7	-.967	74.130	1.385	-.047	39.993	26.943	8.332
794.0	266180.3	24264.3	-.961	74.165	1.415	-.020	40.208	26.923	8.497
795.0	265791.3	24259.9	-.955	74.200	1.415	-.028	40.430	26.903	8.665
796.0	265404.9	24255.5	-.948	74.235	1.399	-.046	40.645	26.883	8.834
797.0	265021.4	24251.1	-.942	74.270	1.354	-.018	40.817	26.862	9.005
798.0	264640.6	24246.7	-.935	74.305	1.279	-.012	40.932	26.842	9.177
799.0	264262.7	24242.3	-.929	74.340	1.190	-.045	40.978	26.822	9.352
800.0	263887.7	24237.9	-.922	74.374	1.107	-.087	40.947	26.801	9.528
801.0	263515.8	24233.5	-.914	74.409	1.045	-.128	40.845	26.781	9.705
802.0	263146.9	24229.2	-.907	74.445	1.032	-.133	40.681	26.761	9.884
803.0	262781.2	24224.9	-.900	74.480	1.060	-.133	40.469	26.741	10.064
804.0	262418.6	24220.7	-.893	74.516	1.115	-.074	40.224	26.721	10.246
805.0	262059.1	24216.6	-.885	74.552	1.162	.020	39.970	26.701	10.429
806.0	261702.9	24212.6	-.878	74.588	1.164	.073	39.727	26.682	10.614
807.0	261349.9	24208.6	-.870	74.625	1.108	.066	39.519	26.662	10.800
808.0	261000.2	24204.6	-.862	74.661	1.011	.018	39.360	26.643	10.987
809.0	260653.7	24200.2	-.854	74.699	.906	-.040	39.264	26.623	11.174

-11-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAÄ (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
810.0	260310.7	24196.4	-.847	74.736	.829	-.089	39.240	26.604	11.363
811.0	259971.0	24192.5	-.839	74.772	.828	-.093	39.283	26.585	11.553
812.0	259634.8	24188.8	-.830	74.808	.880	-.074	39.393	26.566	11.745
813.0	259302.1	24185.0	-.822	74.845	.967	-.025	39.557	26.547	11.936
814.0	258973.0	24181.3	-.813	74.881	1.064	.008	39.750	26.528	12.129
815.0	258647.7	24177.5	-.804	74.917	1.177	.071	39.974	26.510	12.322
816.0	258326.1	24173.7	-.796	74.953	1.232	.109	40.186	26.491	12.515
817.0	258008.2	24169.9	-.787	74.989	1.269	.121	40.380	26.473	12.709
818.0	257694.3	24166.2	-.777	75.025	1.288	.114	40.525	26.454	12.903
819.0	257384.2	24162.6	-.768	75.060	1.280	.090	40.628	26.436	13.098
820.0	257078.2	24158.8	-.758	75.097	1.248	.140	40.687	26.418	13.292
821.0	256776.4	24154.9	-.749	75.133	1.117	.167	40.694	26.400	13.486
822.0	256478.7	24151.0	-.739	75.169	.904	.143	40.649	26.382	13.680
823.0	256185.2	24147.1	-.728	75.205	.651	.081	40.560	26.365	13.873
824.0	255896.1	24143.2	-.718	75.241	.396	.030	40.453	26.347	14.066
825.0	255611.3	24139.3	-.708	75.277	.150	-.002	40.343	26.330	14.258
826.0	255330.9	24135.5	-.698	75.313	-.082	-.018	40.232	26.313	14.450
827.0	255054.9	24131.7	-.687	75.349	-.313	-.028	40.138	26.296	14.640
828.0	254783.3	24127.8	-.677	75.385	-.547	-.032	40.054	26.279	14.830
829.0	254516.1	24124.0	-.666	75.420	-.803	-.051	39.998	26.262	15.019
830.0	254253.5	24120.5	-.655	75.458	-1.036	-.121	39.962	26.246	15.207
831.0	253995.5	24116.5	-.644	75.494	-1.201	-.167	39.946	26.230	15.393
832.0	253742.3	24112.5	-.633	75.529	-1.342	-.172	39.950	26.213	15.578
833.0	253493.9	24108.3	-.621	75.564	-1.503	-.186	39.962	26.197	15.761
834.0	253250.4	24104.1	-.610	75.599	-1.606	-.278	39.997	26.181	15.941
835.0	253011.9	24099.7	-.598	75.635	-1.612	-.304	40.040	26.165	16.120
836.0	252778.5	24095.3	-.585	75.670	-1.538	-.238	40.094	26.149	16.296
837.0	252550.2	24090.9	-.573	75.705	-1.615	.247	40.156	26.133	16.470
838.0	252327.0	24086.3	-.561	75.741	-2.467	.827	40.222	26.118	16.642
839.0	252109.1	24081.7	-.548	75.775	-4.462	.953	40.322	26.103	16.810

-112-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 29 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
840.0	251896.5	24076.9	-.536	75.809	-7.213	.595	40.424	26.087	16.976
841.0	251689.2	24072.0	-.523	75.842	-10.170	.301	40.522	26.072	17.138
842.0	251487.4	24067.0	-.510	75.874	-13.156	.130	40.590	26.057	17.297
843.0	251291.0	24061.8	-.497	75.905	-16.108	.031	40.615	26.042	17.453
844.0	251099.9	24056.7	-.485	75.936	-19.022	-.011	40.583	26.027	17.606
845.0	250914.2	24051.6	-.472	75.965	-21.894	.009	40.480	26.013	17.755
846.0	250733.6	24046.4	-.460	75.994	-24.805	.029	40.339	25.998	17.901
847.0	250558.1	24041.1	-.448	76.021	-27.783	.029	40.192	25.984	18.044
848.0	250387.5	24035.9	-.437	76.048	-30.790	.040	40.047	25.970	18.183
849.0	250221.7	24030.5	-.425	76.075	-33.840	.046	39.896	25.957	18.319
850.0	250060.6	24025.1	-.414	76.100	-36.936	.054	39.747	25.943	18.451
851.0	249904.0	24019.8	-.404	76.125	-40.092	.055	39.632	25.930	18.581
852.0	249751.6	24014.4	-.394	76.149	-43.283	.037	39.574	25.916	18.708
853.0	249603.1	24009.0	-.385	76.172	-46.503	.053	39.568	25.903	18.831
854.0	249458.3	24003.6	-.377	76.194	-49.712	-.165	39.608	25.891	18.953
855.0	249316.7	23998.0	-.370	76.216	-52.411	-.601	39.664	25.878	19.071
856.0	249178.3	23992.2	-.362	76.236	-54.229	-.718	39.705	25.865	19.187
857.0	249043.0	23986.4	-.355	76.257	-55.518	-.523	39.730	25.852	19.301
858.0	248910.6	23980.6	-.348	76.277	-56.629	-.373	39.746	25.839	19.413
859.0	248780.9	23974.8	-.342	76.298	-57.674	-.315	39.758	25.827	19.523
860.0	248654.1	23968.7	-.335	76.317	-58.652	-.250	39.763	25.814	19.631
861.0	248530.0	23962.7	-.329	76.337	-59.622	-.243	39.786	25.801	19.736
862.0	248408.5	23956.7	-.323	76.356	-60.506	-.285	39.809	25.789	19.840
863.0	248289.4	23950.5	-.317	76.375	-61.275	-.302	39.832	25.777	19.941
864.0	248172.8	23944.1	-.311	76.394	-61.923	-.287	39.864	25.764	20.040
865.0	248058.6	23938.0	-.306	76.413	-62.520	-.287	39.995	25.752	20.138
866.0	247946.6	23931.4	-.300	76.431	-62.894	-.390	40.697	25.739	20.233
867.0	247836.9	23924.6	-.295	76.449	-62.983	-.295	40.927	25.727	20.327
868.0	247729.7	23917.7	-.289	76.467	-63.040	-.205	40.764	25.714	20.418
869.0	247624.7	23911.9	-.284	76.485	-63.176	-.192	40.491	25.703	20.509

-113-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
870.0	247521.9	23905.4	-.279	76.503	-63.348	-.212	40.274	25.691	20.597
871.0	247421.4	23898.7	-.273	76.521	-63.518	-.239	40.105	25.679	20.683
872.0	247323.0	23891.8	-.268	76.539	-63.663	-.256	39.610	25.666	20.767
873.0	247226.8	23885.6	-.263	76.558	-63.774	-.241	38.964	25.655	20.850
874.0	247132.4	23879.9	-.259	76.577	-63.877	-.236	39.061	25.644	20.932
875.0	247039.8	23873.8	-.254	76.596	-63.934	-.208	39.861	25.633	21.013
876.0	246949.4	23866.9	-.249	76.613	-63.935	-.166	40.477	25.621	21.090
877.0	246861.0	23860.0	-.244	76.631	-63.944	-.149	40.647	25.610	21.165
878.0	246774.8	23853.0	-.239	76.649	-63.988	-.157	40.687	25.598	21.238
879.0	246690.5	23846.0	-.235	76.666	-64.049	-.217	40.686	25.586	21.310
880.0	246608.4	23839.0	-.229	76.684	-64.084	-.161	40.659	25.575	21.379
881.0	246528.5	23832.0	-.224	76.702	-64.355	.243	40.624	25.563	21.447
882.0	246450.8	23825.0	-.219	76.720	-65.543	.643	40.607	25.552	21.512
883.0	246375.1	23817.8	-.214	76.738	-67.800	.566	40.643	25.541	21.575
884.0	246301.0	23810.7	-.211	76.754	-70.498	.154	40.700	25.529	21.637
885.0	246227.9	23803.4	-.210	76.771	-72.786	-.470	40.741	25.518	21.698
886.0	246155.5	23796.1	-.208	76.787	-74.130	-.655	40.752	25.507	21.758
887.0	246083.7	23788.9	-.207	76.803	-74.946	-.558	40.741	25.495	21.818
888.0	246012.4	23781.6	-.206	76.819	-75.538	-.377	40.709	25.484	21.877
889.0	245941.5	23774.3	-.205	76.835	-76.131	-.288	40.684	25.473	21.936
890.0	245870.9	23767.0	-.204	76.851	-76.709	-.304	40.664	25.462	21.995
891.0	245800.5	23759.7	-.204	76.867	-77.184	-.326	40.647	25.450	22.054
892.0	245730.3	23752.3	-.203	76.882	-77.556	-.304	40.633	25.439	22.112
893.0	245660.2	23745.0	-.203	76.898	-77.826	-.308	40.635	25.428	22.171
894.0	245590.2	23737.7	-.203	76.914	-78.059	-.324	40.636	25.416	22.230
895.0	245520.1	23730.3	-.203	76.929	-78.255	-.321	40.641	25.405	22.289
896.0	245450.1	23722.8	-.203	76.945	-78.384	-.301	40.657	25.394	22.347
897.0	245380.0	23715.2	-.204	76.960	-78.480	-.278	40.666	25.382	22.406
898.0	245309.8	23707.7	-.204	76.975	-78.556	-.279	40.660	25.370	22.465
899.0	245239.6	23700.1	-.204	76.990	-78.630	-.304	40.621	25.359	22.524

-114-

 * STS88BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 31 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
900.0	245169.3	23692.5	-.204	77.005	-78.649	-.303	40.571	25.347	22.583
901.0	245098.8	23684.9	-.205	77.020	-78.607	-.302	40.503	25.336	22.643
902.0	245028.1	23677.5	-.205	77.036	-78.528	-.284	40.420	25.324	22.703
903.0	244957.3	23670.1	-.206	77.051	-78.394	-.326	40.329	25.313	22.764
904.0	244886.2	23662.8	-.206	77.067	-78.145	-.357	40.230	25.302	22.825
905.0	244815.0	23655.5	-.207	77.082	-77.803	-.327	40.159	25.291	22.887
906.0	244743.6	23648.2	-.207	77.098	-77.475	-.264	40.128	25.279	22.948
907.0	244672.1	23641.0	-.207	77.114	-77.180	-.237	40.131	25.268	23.010
908.0	244600.5	23633.7	-.208	77.129	-76.924	-.288	40.161	25.257	23.073
909.0	244528.8	23626.4	-.208	77.145	-76.634	-.321	40.194	25.245	23.135
910.0	244457.1	23619.1	-.208	77.161	-76.288	-.256	40.219	25.234	23.198
911.0	244385.4	23611.9	-.208	77.176	-75.973	-.217	40.248	25.223	23.261
912.0	244313.7	23604.5	-.208	77.192	-75.676	-.218	40.273	25.211	23.323
913.0	244242.1	23597.1	-.208	77.207	-75.424	-.256	40.294	25.200	23.386
914.0	244170.5	23589.7	-.207	77.223	-75.156	-.277	40.308	25.189	23.449
915.0	244099.0	23582.2	-.207	77.239	-74.892	-.282	40.314	25.177	23.512
916.0	244027.6	23574.8	-.207	77.254	-74.630	-.242	40.316	25.166	23.575
917.0	243956.3	23567.4	-.207	77.270	-74.413	-.207	40.310	25.154	23.638
918.0	243885.2	23559.8	-.206	77.285	-74.248	-.201	40.295	25.143	23.701
919.0	243814.3	23552.3	-.206	77.301	-74.090	-.203	40.275	25.131	23.763
920.0	243743.5	23544.9	-.205	77.317	-73.955	-.166	40.255	25.120	23.826
921.0	243672.8	23537.4	-.205	77.332	-73.919	-.141	40.240	25.109	23.889
922.0	243602.3	23530.0	-.205	77.348	-73.915	-.175	40.238	25.097	23.951
923.0	243531.9	23522.6	-.205	77.364	-73.888	-.197	40.259	25.086	24.014
924.0	243461.6	23515.0	-.205	77.379	-73.801	-.195	40.289	25.074	24.077
925.0	243391.4	23507.4	-.204	77.394	-73.685	-.185	40.313	25.063	24.139
926.0	243321.3	23499.9	-.204	77.410	-73.562	-.180	40.323	25.051	24.202
927.0	243251.3	23492.4	-.204	77.426	-73.423	-.166	40.348	25.040	24.265
928.0	243181.3	23485.0	-.204	77.442	-73.335	-.125	40.362	25.029	24.328
929.0	243111.5	23477.5	-.204	77.457	-73.311	-.131	40.388	25.017	24.390

-115-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
930.0	243041.7	23469.9	-.203	77.473	-73.360	-.077	40.426	25.006	24.453
931.0	242972.1	23462.3	-.203	77.488	-73.522	-.099	40.471	24.994	24.516
932.0	242902.4	23454.6	-.203	77.504	-73.726	-.158	40.532	24.983	24.578
933.0	242832.7	23446.9	-.203	77.519	-73.889	-.199	40.581	24.971	24.641
934.0	242763.0	23438.9	-.203	77.533	-73.964	-.196	40.627	24.959	24.703
935.0	242693.3	23430.9	-.204	77.548	-74.007	-.173	40.638	24.947	24.766
936.0	242623.5	23422.8	-.204	77.562	-73.992	-.119	40.617	24.935	24.828
937.0	242553.8	23414.5	-.204	77.576	-73.980	-.099	40.588	24.923	24.890
938.0	242484.0	23406.2	-.204	77.590	-73.951	-.056	40.547	24.911	24.952
939.0	242414.3	23397.9	-.204	77.604	-73.930	-.049	40.496	24.898	25.014
940.0	242344.7	23389.5	-.204	77.617	-73.906	-.051	40.425	24.886	25.077
941.0	242275.0	23381.1	-.204	77.631	-73.838	-.089	40.329	24.874	25.139
942.0	242205.3	23372.8	-.204	77.645	-73.721	-.123	40.216	24.862	25.201
943.0	242135.5	23364.6	-.204	77.658	-73.557	-.142	40.101	24.849	25.264
944.0	242065.7	23356.4	-.204	77.672	-73.376	-.170	39.986	24.837	25.328
945.0	241995.9	23348.2	-.204	77.686	-73.176	-.190	39.881	24.825	25.391
946.0	241926.1	23340.1	-.204	77.700	-72.925	-.204	39.787	24.813	25.454
947.0	241856.3	23331.9	-.204	77.713	-72.662	-.224	39.710	24.801	25.518
948.0	241786.5	23323.6	-.204	77.727	-72.360	-.247	39.647	24.789	25.582
949.0	241716.8	23315.4	-.204	77.741	-71.999	-.251	39.585	24.777	25.645
950.0	241647.2	23307.2	-.203	77.754	-71.593	-.249	39.536	24.765	25.709
951.0	241577.8	23298.9	-.203	77.768	-71.151	-.242	39.494	24.752	25.772
952.0	241508.6	23290.6	-.202	77.781	-70.658	-.261	39.459	24.740	25.836
953.0	241439.9	23282.3	-.201	77.795	-70.301	-.008	39.421	24.728	25.899
954.0	241371.8	23274.1	-.200	77.809	-70.678	.359	39.386	24.716	25.961
955.0	241304.0	23265.7	-.199	77.822	-71.870	.294	39.358	24.704	26.023
956.0	241236.1	23257.3	-.200	77.835	-72.890	-.163	39.332	24.692	26.085
957.0	241168.2	23248.8	-.200	77.848	-73.333	-.320	39.273	24.679	26.146
958.0	241100.0	23240.6	-.201	77.860	-73.537	-.331	39.179	24.667	26.210
959.0	241031.4	23232.2	-.203	77.872	-73.470	-.777	39.093	24.655	26.273

-116-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 33 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	HACHA (-)	QA (PSF)
960.0	240962.0	23223.9	-.204	77.885	-71.978	-1.332	39.036	24.643	26.337
961.0	240892.8	23215.5	-.202	77.898	-69.488	-.570	39.029	24.631	26.401
962.0	240824.2	23207.2	-.201	77.911	-68.135	.039	38.955	24.618	26.465
963.0	240756.2	23198.8	-.199	77.925	-67.660	.088	38.866	24.606	26.528
964.0	240688.9	23190.5	-.198	77.939	-67.234	.174	38.786	24.594	26.590
965.0	240622.2	23182.2	-.196	77.953	-66.094	.885	38.693	24.582	26.652
966.0	240556.3	23174.0	-.194	77.967	-65.435	1.305	38.614	24.570	26.713
967.0	240491.4	23165.8	-.192	77.981	-65.753	1.051	38.591	24.558	26.773
968.0	240427.2	23157.5	-.190	77.995	-66.243	.727	38.615	24.546	26.832
969.0	240363.8	23149.2	-.188	78.009	-66.657	.470	38.657	24.535	26.891
970.0	240301.0	23140.8	-.187	78.022	-67.019	.238	38.687	24.523	26.948
971.0	240238.8	23132.4	-.185	78.036	-67.223	.065	38.716	24.511	27.005
972.0	240177.2	23123.9	-.184	78.049	-67.282	-.049	38.743	24.499	27.060
973.0	240116.1	23115.2	-.183	78.062	-67.272	-.101	38.762	24.487	27.115
974.0	240055.6	23106.6	-.181	78.075	-67.210	-.142	38.774	24.475	27.170
975.0	239995.6	23098.0	-.180	78.088	-67.120	-.178	38.766	24.463	27.224
976.0	239936.1	23089.4	-.179	78.101	-66.981	-.201	38.738	24.451	27.277
977.0	239877.1	23080.7	-.177	78.114	-66.810	-.233	38.707	24.438	27.329
978.0	239818.8	23072.1	-.176	78.127	-66.588	-.247	38.681	24.426	27.381
979.0	239760.9	23063.4	-.175	78.140	-66.327	-.285	38.667	24.415	27.433
980.0	239703.7	23054.7	-.173	78.153	-65.981	-.287	38.642	24.403	27.483
981.0	239647.1	23046.0	-.172	78.166	-65.598	-.245	38.635	24.391	27.533
982.0	239591.3	23037.2	-.170	78.179	-65.295	-.201	38.630	24.379	27.582
983.0	239536.2	23028.5	-.168	78.192	-65.020	-.198	38.622	24.367	27.630
984.0	239481.8	23019.7	-.166	78.205	-64.695	-.208	38.613	24.355	27.677
985.0	239428.2	23011.0	-.164	78.218	-64.355	-.170	38.602	24.343	27.723
986.0	239375.4	23002.3	-.162	78.232	-64.063	-.110	38.602	24.331	27.768
987.0	239323.5	22993.6	-.160	78.246	-63.910	-.047	38.609	24.320	27.813
988.0	239272.4	22985.0	-.158	78.259	-63.874	-.003	38.610	24.308	27.856
989.0	239222.0	22976.3	-.156	78.273	-63.880	.032	38.604	24.296	27.899

-117-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
990.0	239172.5	22967.7	-.154	78.287	-63.980	.069	38.593	24.285	27.940
991.0	239123.6	22959.2	-.153	78.301	-64.209	.081	38.593	24.273	27.981
992.0	239075.4	22950.6	-.151	78.314	-64.489	.048	38.617	24.262	28.022
993.0	239027.7	22942.0	-.150	78.328	-64.743	.031	38.668	24.251	28.061
994.0	238980.6	22933.3	-.149	78.342	-64.993	.028	38.735	24.239	28.099
995.0	238933.9	22924.5	-.147	78.355	-65.233	.021	38.806	24.228	28.137
996.0	238887.8	22915.6	-.146	78.368	-65.470	.010	38.878	24.216	28.174
997.0	238842.0	22906.8	-.145	78.381	-65.693	.011	38.949	24.205	28.211
998.0	238796.7	22897.9	-.145	78.394	-65.914	.004	39.002	24.193	28.247
999.0	238751.5	22889.0	-.144	78.407	-66.137	-.012	39.031	24.181	28.282
1000.0	238706.8	22879.9	-.143	78.420	-66.347	-.015	39.052	24.170	28.317
1001.0	238662.2	22870.9	-.143	78.433	-66.541	-.019	39.055	24.158	28.352
1002.0	238617.9	22861.9	-.142	78.445	-66.708	-.016	39.051	24.146	28.386
1003.0	238573.7	22852.8	-.142	78.458	-66.859	-.016	39.039	24.135	28.420
1004.0	238529.6	22843.7	-.142	78.470	-67.008	-.008	39.026	24.123	28.454
1005.0	238485.6	22834.7	-.142	78.483	-67.128	-.007	39.017	24.111	28.488
1006.0	238441.6	22825.7	-.142	78.495	-67.240	.002	39.014	24.100	28.522
1007.0	238397.6	22816.7	-.142	78.508	-67.354	-.007	39.019	24.088	28.556
1008.0	238353.5	22807.6	-.142	78.520	-67.453	-.004	39.027	24.076	28.590
1009.0	238309.3	22798.5	-.142	78.533	-67.547	-.014	39.036	24.065	28.624
1010.0	238265.1	22789.4	-.142	78.545	-67.626	-.021	39.045	24.053	28.659
1011.0	238220.7	22780.3	-.143	78.557	-67.704	-.032	39.060	24.041	28.693
1012.0	238176.2	22771.1	-.143	78.569	-67.791	-.064	39.075	24.029	28.727
1013.0	238131.4	22761.9	-.144	78.582	-67.852	-.089	39.088	24.018	28.762
1014.0	238086.5	22752.7	-.144	78.594	-67.866	-.097	39.093	24.006	28.797
1015.0	238041.3	22743.6	-.145	78.606	-67.843	-.088	39.092	23.994	28.833
1016.0	237995.8	22734.4	-.146	78.618	-67.802	-.083	39.083	23.982	28.868
1017.0	237950.0	22725.2	-.147	78.630	-67.749	-.088	39.067	23.970	28.905
1018.0	237904.0	22716.1	-.147	78.642	-67.680	-.099	39.050	23.958	28.941
1019.0	237857.6	22707.0	-.148	78.653	-67.571	-.102	39.035	23.947	28.978

-118-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 35 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1020.0	237810.9	22697.8	-.149	78.665	-67.444	-.099	39.019	23.935	29.016
1021.0	237764.0	22688.7	-.150	78.677	-67.289	-.094	39.006	23.923	29.054
1022.0	237716.7	22679.5	-.150	78.689	-67.120	-.102	39.011	23.911	29.092
1023.0	237669.2	22670.2	-.151	78.701	-66.948	-.113	39.020	23.899	29.130
1024.0	237621.4	22661.1	-.152	78.713	-66.738	-.122	39.052	23.887	29.169
1025.0	237573.3	22651.8	-.152	78.725	-66.501	-.103	39.107	23.875	29.208
1026.0	237525.1	22642.4	-.153	78.737	-66.308	-.064	39.178	23.863	29.248
1027.0	237476.7	22632.9	-.153	78.748	-66.136	-.042	39.235	23.850	29.286
1028.0	237428.3	22623.3	-.153	78.760	-65.956	-.022	39.267	23.838	29.325
1029.0	237379.7	22613.8	-.154	78.771	-65.760	.005	39.270	23.825	29.365
1030.0	237331.1	22604.1	-.154	78.783	-65.585	.022	39.252	23.813	29.404
1031.0	237282.4	22594.5	-.154	78.794	-65.411	.031	39.237	23.801	29.443
1032.0	237233.7	22585.0	-.154	78.806	-65.268	.095	39.218	23.788	29.482
1033.0	237184.9	22575.7	-.154	78.818	-65.235	.105	39.211	23.776	29.523
1034.0	237136.0	22566.4	-.155	78.830	-65.206	.126	39.210	23.764	29.563
1035.0	237086.9	22557.0	-.155	78.842	-65.259	.182	39.239	23.752	29.604
1036.0	237037.6	22547.6	-.156	78.854	-65.436	.219	39.312	23.740	29.644
1037.0	236988.1	22538.1	-.156	78.866	-65.700	.210	39.403	23.727	29.685
1038.0	236938.3	22528.6	-.157	78.878	-66.008	.185	39.487	23.715	29.726
1039.0	236888.2	22519.1	-.158	78.890	-66.326	.168	39.559	23.702	29.768
1040.0	236837.6	22509.5	-.159	78.902	-66.661	.166	39.628	23.690	29.810
1041.0	236786.6	22499.9	-.161	78.913	-67.000	.127	39.694	23.677	29.853
1042.0	236735.0	22490.1	-.162	78.924	-67.267	.084	39.749	23.665	29.896
1043.0	236682.8	22480.3	-.164	78.935	-67.503	.087	39.798	23.652	29.939
1044.0	236630.0	22470.6	-.166	78.946	-67.739	.054	39.834	23.639	29.984
1045.0	236576.4	22460.8	-.168	78.957	-67.957	.013	39.848	23.626	30.030
1046.0	236522.1	22450.9	-.170	78.968	-68.166	-.028	39.852	23.613	30.077
1047.0	236466.9	22441.1	-.172	78.979	-68.370	-.063	39.840	23.601	30.125
1048.0	236410.9	22431.4	-.174	78.989	-68.541	-.097	39.826	23.588	30.174
1049.0	236353.9	22421.6	-.177	79.000	-68.662	-.102	39.815	23.575	30.224

-119-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1050.0	236295.9	22411.7	-.179	79.011	-68.762	-.114	39.805	23.562	30.276
1051.0	236236.9	22401.9	-.182	79.021	-68.849	-.121	39.810	23.548	30.329
1052.0	236176.8	22392.0	-.185	79.032	-68.921	-.139	39.816	23.535	30.384
1053.0	236115.7	22382.1	-.188	79.042	-68.978	-.170	39.831	23.522	30.440
1054.0	236053.5	22372.1	-.191	79.052	-68.994	-.186	39.849	23.509	30.497
1055.0	235990.2	22362.3	-.194	79.062	-68.907	-.226	39.875	23.495	30.557
1056.0	235925.7	22352.3	-.197	79.072	-68.722	-.241	39.887	23.482	30.618
1057.0	235860.0	22342.3	-.200	79.083	-68.497	-.253	39.894	23.468	30.680
1058.0	235793.3	22332.3	-.202	79.093	-68.198	-.245	39.904	23.454	30.743
1059.0	235725.6	22322.1	-.205	79.102	-67.868	-.241	39.932	23.441	30.808
1060.0	235656.9	22311.9	-.207	79.112	-67.496	-.231	39.978	23.427	30.874
1061.0	235587.4	22301.6	-.210	79.122	-67.084	-.222	40.004	23.413	30.942
1062.0	235517.0	22291.2	-.212	79.131	-66.641	-.218	40.014	23.398	31.010
1063.0	235445.9	22280.6	-.213	79.140	-66.154	-.208	40.012	23.384	31.079
1064.0	235374.3	22270.1	-.215	79.150	-65.613	-.189	39.988	23.370	31.148
1065.0	235302.1	22259.5	-.216	79.159	-65.052	-.162	39.937	23.355	31.219
1066.0	235229.5	22248.9	-.217	79.168	-64.565	-.126	39.870	23.341	31.290
1067.0	235156.6	22238.4	-.218	79.177	-64.136	-.099	39.791	23.326	31.362
1068.0	235083.3	22227.9	-.219	79.187	-63.694	-.070	39.708	23.312	31.434
1069.0	235009.8	22217.4	-.220	79.197	-63.320	-.046	39.649	23.297	31.507
1070.0	234936.0	22207.0	-.220	79.206	-63.013	-.043	39.616	23.283	31.581
1071.0	234862.1	22196.4	-.221	79.216	-62.706	-.041	39.616	23.268	31.655
1072.0	234788.0	22185.8	-.221	79.226	-62.376	-.035	39.641	23.254	31.729
1073.0	234713.9	22175.2	-.221	79.235	-62.039	-.014	39.676	23.239	31.803
1074.0	234639.7	22164.5	-.221	79.245	-61.695	.005	39.700	23.225	31.877
1075.0	234565.6	22152.4	-.221	79.250	-61.363	.019	39.708	23.208	31.947
1076.0	234491.7	22141.5	-.221	79.260	-61.028	.026	39.710	23.194	32.020
1077.0	234418.0	22130.6	-.220	79.269	-60.700	.051	39.678	23.179	32.093
1078.0	234344.5	22119.6	-.219	79.278	-60.379	.073	39.601	23.164	32.166
1079.0	234271.3	22108.7	-.219	79.287	-60.056	.094	39.499	23.149	32.238

-120-

 * STS88ET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 37 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1080.0	234198.5	22097.9	-.218	79.297	-59.753	.133	39.398	23.134	32.311
1081.0	234126.0	22087.1	-.217	79.307	-59.521	.195	39.317	23.120	32.383
1082.0	234053.9	22076.3	-.216	79.316	-59.426	.202	39.254	23.105	32.455
1083.0	233982.1	22065.6	-.215	79.326	-59.396	.198	39.204	23.090	32.526
1084.0	233910.7	22054.8	-.214	79.336	-59.370	.203	39.205	23.076	32.597
1085.0	233839.7	22044.0	-.213	79.345	-59.383	.227	39.224	23.061	32.667
1086.0	233769.0	22033.2	-.213	79.355	-59.466	.231	39.254	23.047	32.737
1087.0	233698.6	22022.4	-.212	79.364	-59.625	.209	39.281	23.032	32.807
1088.0	233628.4	22011.5	-.212	79.374	-59.832	.179	39.287	23.017	32.876
1089.0	233558.5	22000.6	-.211	79.383	-60.065	.158	39.278	23.003	32.945
1090.0	233488.7	21989.7	-.211	79.392	-60.310	.132	39.264	22.988	33.014
1091.0	233419.0	21978.8	-.211	79.401	-60.515	.095	39.256	22.974	33.083
1092.0	233349.3	21967.8	-.211	79.410	-60.699	.066	39.254	22.959	33.152
1093.0	233279.6	21956.9	-.211	79.419	-60.919	.033	39.244	22.944	33.221
1094.0	233209.8	21946.0	-.211	79.428	-61.135	.011	39.236	22.930	33.290
1095.0	233139.8	21935.0	-.212	79.436	-61.364	-.012	39.228	22.915	33.359
1096.0	233069.7	21923.9	-.212	79.445	-61.581	-.030	39.230	22.900	33.429
1097.0	232999.4	21912.9	-.213	79.453	-61.799	-.084	39.227	22.885	33.498
1098.0	232928.7	21901.8	-.214	79.461	-61.857	-.128	39.238	22.871	33.569
1099.0	232857.8	21890.6	-.215	79.469	-61.815	-.125	39.234	22.856	33.639
1100.0	232786.6	21879.5	-.216	79.477	-61.770	-.126	39.240	22.841	33.711
1101.0	232715.1	21868.3	-.217	79.485	-61.711	-.137	39.233	22.826	33.782
1102.0	232643.3	21857.1	-.218	79.493	-61.614	-.127	39.220	22.811	33.854
1103.0	232571.1	21845.9	-.218	79.501	-61.504	-.128	39.202	22.796	33.927
1104.0	232498.8	21834.7	-.219	79.509	-61.383	-.131	39.186	22.781	34.000
1105.0	232426.1	21823.4	-.220	79.516	-61.239	-.138	39.181	22.766	34.074
1106.0	232353.2	21812.1	-.221	79.524	-61.077	-.144	39.184	22.751	34.148
1107.0	232280.0	21800.9	-.221	79.532	-60.910	-.157	39.195	22.736	34.222
1108.0	232206.7	21789.5	-.222	79.540	-60.722	-.180	39.232	22.720	34.296
1109.0	232133.1	21778.1	-.223	79.547	-60.482	-.186	39.256	22.705	34.371

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHA (DEG)	MACHA (-)	QA (PSF)
1110.0	232059.4	21766.6	-.223	79.555	-60.200	-.173	39.270	22.690	34.446
1111.0	231985.6	21755.1	-.223	79.562	-59.885	-.154	39.269	22.674	34.521
1112.0	231911.8	21743.6	-.223	79.570	-59.535	-.123	39.253	22.659	34.597
1113.0	231838.0	21732.1	-.223	79.578	-59.229	-.073	39.243	22.644	34.672
1114.0	231764.3	21720.6	-.223	79.586	-59.008	-.057	39.230	22.628	34.747
1115.0	231690.6	21709.0	-.223	79.593	-58.795	-.064	39.218	22.613	34.822
1116.0	231617.1	21697.5	-.223	79.601	-58.564	-.067	39.210	22.598	34.897
1117.0	231543.7	21686.0	-.222	79.609	-58.325	-.047	39.211	22.582	34.972
1118.0	231470.5	21674.4	-.222	79.617	-58.158	-.025	39.220	22.567	35.047
1119.0	231397.4	21662.8	-.222	79.625	-58.016	.004	39.245	22.552	35.122
1120.0	231324.6	21651.2	-.221	79.633	-57.895	.010	39.253	22.536	35.196
1121.0	231251.9	21638.9	-.221	79.642	-57.797	.093	39.264	22.520	35.268
1122.0	231179.5	21627.2	-.220	79.650	-57.896	.113	39.263	22.505	35.341
1123.0	231107.3	21615.5	-.220	79.658	-58.065	.116	39.250	22.489	35.415
1124.0	231035.3	21603.8	-.219	79.665	-58.269	.093	39.245	22.474	35.487
1125.0	230963.4	21592.0	-.219	79.672	-58.506	.076	39.243	22.458	35.560
1126.0	230891.6	21580.1	-.219	79.679	-58.740	.077	39.239	22.443	35.633
1127.0	230819.7	21568.4	-.219	79.686	-58.962	.036	39.241	22.427	35.705
1128.0	230747.8	21556.6	-.220	79.693	-59.108	.030	39.242	22.412	35.778
1129.0	230675.8	21544.7	-.220	79.700	-59.222	.042	39.248	22.396	35.851
1130.0	230603.7	21532.8	-.221	79.707	-59.383	.037	39.257	22.380	35.924
1131.0	230531.4	21520.9	-.221	79.713	-59.575	-.002	39.255	22.365	35.998
1132.0	230458.9	21509.0	-.222	79.720	-59.787	-.048	39.246	22.349	36.072
1133.0	230386.2	21497.1	-.223	79.726	-59.982	-.084	39.236	22.334	36.146
1134.0	230313.0	21485.1	-.224	79.732	-60.154	-.105	39.233	22.318	36.221
1135.0	230239.5	21473.2	-.225	79.739	-60.289	-.108	39.232	22.302	36.297
1136.0	230165.6	21461.2	-.226	79.745	-60.393	-.112	39.230	22.286	36.373
1137.0	230091.2	21449.2	-.228	79.751	-60.484	-.116	39.233	22.271	36.450
1138.0	230016.3	21437.2	-.229	79.756	-60.556	-.117	39.236	22.255	36.528
1139.0	229940.9	21425.2	-.231	79.762	-60.614	-.154	39.238	22.239	36.607

-122-

 * STS8BET USING LAIRJB (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 39 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1140.0	229864.9	21413.3	-.232	79.768	-60.708	-.053	39.251	22.223	36.687
1141.0	229788.6	21401.3	-.233	79.774	-61.415	.091	39.277	22.207	36.768
1142.0	229711.4	21389.2	-.237	79.779	-62.380	-.127	39.310	22.191	36.849
1143.0	229633.1	21377.1	-.239	79.784	-62.732	-.233	39.321	22.175	36.933
1144.0	229553.9	21364.9	-.242	79.789	-62.852	-.192	39.298	22.159	37.018
1145.0	229473.5	21352.9	-.245	79.794	-61.929	.715	39.240	22.143	37.105
1146.0	229392.3	21340.8	-.248	79.799	-61.958	.842	39.208	22.127	37.194
1147.0	229310.1	21328.6	-.250	79.803	-62.443	.521	39.253	22.111	37.284
1148.0	229227.0	21316.4	-.253	79.808	-62.765	.316	39.322	22.094	37.376
1149.0	229142.8	21304.0	-.256	79.812	-62.994	.184	39.366	22.078	37.469
1150.0	229057.5	21291.3	-.259	79.815	-63.204	.115	38.954	22.061	37.562
1151.0	228971.2	21279.6	-.263	79.820	-63.465	.030	37.826	22.045	37.662
1152.0	228883.2	21268.9	-.268	79.827	-63.746	-.035	37.475	22.030	37.767
1153.0	228793.4	21257.9	-.273	79.832	-63.996	-.093	37.827	22.015	37.875
1154.0	228702.0	21246.3	-.277	79.837	-64.196	-.130	38.475	21.999	37.984
1155.0	228609.0	21234.3	-.281	79.841	-64.412	-.165	39.041	21.982	38.093
1156.0	228514.3	21221.9	-.287	79.844	-64.425	-.257	39.407	21.965	38.205
1157.0	228417.7	21209.4	-.291	79.847	-63.540	-.569	39.624	21.948	38.319
1158.0	228319.7	21196.8	-.294	79.850	-62.096	-.561	39.743	21.930	38.436
1159.0	228220.8	21184.1	-.297	79.854	-60.760	-.288	39.791	21.913	38.554
1160.0	228121.2	21171.3	-.299	79.858	-59.856	-.215	39.794	21.895	38.673
1161.0	228021.0	21158.4	-.300	79.862	-59.069	-.161	39.771	21.878	38.793
1162.0	227920.4	21144.6	-.301	79.866	-58.343	-.123	39.741	21.859	38.911
1163.0	227819.7	21131.8	-.302	79.871	-57.696	-.080	39.713	21.841	39.033
1164.0	227718.8	21118.9	-.302	79.875	-57.145	-.074	39.675	21.824	39.155
1165.0	227618.0	21106.0	-.302	79.880	-56.695	-.018	39.633	21.806	39.277
1166.0	227517.3	21093.0	-.301	79.884	-56.391	.016	39.592	21.788	39.399
1167.0	227416.8	21080.1	-.301	79.889	-56.168	-.010	39.562	21.770	39.521
1168.0	227316.6	21067.2	-.301	79.893	-55.945	-.008	39.537	21.753	39.643
1169.0	227216.5	21054.3	-.300	79.898	-55.728	-.014	39.513	21.735	39.765

-125-

TIME (SEC)	ALTDÉ (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1170.0	227116.6	21041.4	-.300	79.903	-55.523	-.005	39.475	21.717	39.887
1171.0	227017.1	21028.4	-.299	79.907	-55.347	-.014	39.432	21.699	40.009
1172.0	226917.9	21015.4	-.298	79.911	-55.181	-.015	39.418	21.682	40.129
1173.0	226819.2	21002.3	-.297	79.915	-55.024	-.006	39.408	21.664	40.250
1174.0	226720.9	20989.3	-.296	79.920	-54.889	.001	39.372	21.646	40.369
1175.0	226622.9	20976.4	-.295	79.924	-54.754	.017	39.301	21.629	40.490
1176.0	226525.3	20963.7	-.295	79.929	-54.644	.039	39.225	21.611	40.610
1177.0	226428.0	20950.8	-.294	79.934	-54.545	.075	39.186	21.594	40.729
1178.0	226331.2	20937.8	-.292	79.938	-54.650	.143	39.196	21.576	40.848
1179.0	226234.8	20924.8	-.292	79.942	-54.891	.109	39.233	21.559	40.966
1180.0	226138.7	20911.7	-.291	79.946	-55.010	.017	39.261	21.541	41.083
1181.0	226043.1	20898.4	-.290	79.949	-55.034	.041	39.282	21.523	41.198
1182.0	225947.9	20885.0	-.289	79.952	-55.085	.053	39.277	21.505	41.314
1183.0	225853.2	20871.7	-.288	79.955	-55.127	-.016	39.235	21.488	41.428
1184.0	225758.8	20858.3	-.287	79.958	-54.995	-.059	39.160	21.470	41.542
1185.0	225664.8	20845.0	-.286	79.961	-54.789	-.055	39.067	21.452	41.656
1186.0	225571.3	20831.8	-.285	79.964	-54.596	-.060	38.988	21.434	41.769
1187.0	225478.3	20818.5	-.283	79.967	-54.411	-.062	38.922	21.417	41.882
1188.0	225385.7	20805.3	-.282	79.970	-54.219	-.059	38.870	21.399	41.995
1189.0	225293.7	20792.1	-.281	79.973	-54.020	-.051	38.864	21.382	42.106
1190.0	225202.1	20778.9	-.280	79.977	-53.828	-.049	38.900	21.364	42.217
1191.0	225111.2	20765.6	-.278	79.980	-53.635	-.028	38.931	21.347	42.326
1192.0	225020.9	20752.2	-.277	79.983	-53.436	-.009	38.948	21.329	42.435
1193.0	224931.2	20738.8	-.275	79.986	-53.252	.014	38.945	21.312	42.542
1194.0	224842.3	20725.4	-.273	79.989	-53.079	.045	38.923	21.294	42.648
1195.0	224754.0	20712.1	-.271	79.992	-52.935	.055	38.908	21.277	42.753
1196.0	224666.5	20700.3	-.269	79.997	-52.840	.112	38.904	21.261	42.864
1197.0	224579.8	20686.9	-.267	80.000	-52.881	.142	38.895	21.243	42.967
1198.0	224493.8	20673.5	-.265	80.003	-52.990	.160	38.899	21.226	43.068
1199.0	224408.4	20660.0	-.264	80.006	-53.177	.165	38.887	21.208	43.168

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 41 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1200.0	224323.7	20646.5	-.262	80.008	-53.423	.159	38.877	21.191	43.267
1201.0	224239.6	20632.9	-.261	80.010	-53.722	.164	38.882	21.174	43.364
1202.0	224156.1	20619.3	-.260	80.012	-54.105	.141	38.882	21.156	43.461
1203.0	224072.8	20605.8	-.259	80.014	-54.502	.094	38.881	21.139	43.557
1204.0	223989.8	20592.2	-.259	80.016	-54.756	.079	38.877	21.121	43.654
1205.0	223907.0	20578.7	-.258	80.017	-55.065	.065	38.880	21.104	43.749
1206.0	223824.3	20565.2	-.259	80.019	-55.428	.040	38.876	21.087	43.845
1207.0	223741.5	20551.7	-.259	80.020	-55.754	.012	38.874	21.069	43.942
1208.0	223658.5	20538.1	-.260	80.021	-56.026	-.002	38.898	21.052	44.038
1209.0	223575.2	20524.6	-.261	80.022	-56.296	-.031	38.943	21.035	44.136
1210.0	223491.6	20511.1	-.262	80.022	-56.505	-.075	38.994	21.017	44.234
1211.0	223407.5	20497.5	-.264	80.023	-56.702	-.107	39.038	21.000	44.333
1212.0	223323.0	20483.9	-.265	80.023	-56.902	-.134	39.100	20.982	44.432
1213.0	223238.0	20470.0	-.267	80.023	-57.065	-.147	39.182	20.965	44.532
1214.0	223152.5	20456.1	-.268	80.023	-57.184	-.131	39.254	20.947	44.632
1215.0	223066.5	20442.1	-.270	80.022	-57.306	-.129	39.301	20.929	44.733
1216.0	222980.0	20427.9	-.271	80.021	-57.419	-.122	39.313	20.911	44.835
1217.0	222893.0	20413.8	-.273	80.020	-57.524	-.129	39.302	20.893	44.937
1218.0	222805.4	20399.6	-.275	80.019	-57.612	-.140	39.281	20.874	45.041
1219.0	222717.3	20385.3	-.277	80.017	-57.676	-.138	39.275	20.856	45.145
1220.0	222628.6	20370.9	-.278	80.015	-57.721	-.144	39.281	20.838	45.251
1221.0	222539.4	20356.5	-.280	80.013	-57.682	-.158	39.316	20.819	45.357
1222.0	222449.6	20342.1	-.282	80.011	-57.466	-.172	39.319	20.801	45.464
1223.0	222359.3	20327.6	-.283	80.009	-57.181	-.173	39.281	20.782	45.573
1224.0	222268.5	20313.0	-.285	80.007	-56.831	-.160	39.241	20.764	45.682
1225.0	222177.3	20298.5	-.286	80.004	-56.449	-.168	39.176	20.745	45.792
1226.0	222085.9	20284.1	-.287	80.003	-56.010	-.130	39.148	20.727	45.903
1227.0	221994.3	20269.5	-.287	80.001	-55.681	-.079	39.141	20.708	46.014
1228.0	221902.7	20254.9	-.288	79.999	-55.362	-.050	39.140	20.689	46.125
1229.0	221810.9	20240.3	-.288	79.997	-55.050	-.041	39.165	20.671	46.237

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1230.0	221719.3	20225.7	-.288	79.995	-54.707	-.016	39.188	20.652	46.348
1231.0	221627.7	20211.0	-.288	79.993	-54.396	.024	39.201	20.633	46.459
1232.0	221536.2	20196.3	-.287	79.991	-54.194	.038	39.194	20.615	46.570
1233.0	221445.0	20182.4	-.287	79.990	-53.983	.039	39.172	20.597	46.684
1234.0	221353.9	20167.7	-.287	79.989	-53.802	.073	39.157	20.578	46.795
1235.0	221263.2	20152.9	-.286	79.987	-53.813	.162	39.156	20.559	46.904
1236.0	221172.7	20138.1	-.285	79.985	-54.006	.199	39.179	20.540	47.013
1237.0	221082.5	20123.1	-.285	79.983	-54.289	.190	39.196	20.521	47.121
1238.0	220992.4	20108.0	-.285	79.980	-54.590	.152	39.206	20.502	47.228
1239.0	220902.6	20092.8	-.284	79.976	-54.842	.124	39.177	20.483	47.335
1240.0	220812.8	20077.7	-.284	79.973	-55.083	.113	39.120	20.464	47.441
1241.0	220723.1	20062.4	-.285	79.969	-55.285	.058	39.097	20.445	47.548
1242.0	220633.3	20047.1	-.285	79.965	-55.433	.038	39.090	20.426	47.654
1243.0	220543.6	20031.7	-.285	79.960	-55.545	.051	39.080	20.406	47.759
1244.0	220453.8	20016.3	-.286	79.955	-55.634	.009	39.049	20.387	47.865
1245.0	220363.9	20000.9	-.286	79.950	-55.562	.008	38.992	20.368	47.971
1246.0	220273.9	19985.5	-.287	79.945	-55.457	.032	38.909	20.349	48.078
1247.0	220183.8	19970.2	-.287	79.941	-55.359	.039	38.836	20.329	48.186
1248.0	220093.6	19954.9	-.288	79.936	-55.250	.055	38.809	20.310	48.293
1249.0	220003.3	19939.5	-.288	79.931	-55.133	.073	38.837	20.291	48.401
1250.0	219912.9	19924.0	-.288	79.926	-55.039	.074	38.863	20.272	48.508
1251.0	219822.6	19908.5	-.289	79.920	-54.955	.076	38.874	20.252	48.616
1252.0	219732.2	19893.0	-.289	79.915	-54.857	.086	38.874	20.233	48.723
1253.0	219641.7	19877.4	-.289	79.910	-54.752	.107	38.862	20.213	48.831
1254.0	219551.3	19861.8	-.289	79.905	-54.672	.114	38.842	20.194	48.938
1255.0	219460.9	19846.3	-.290	79.899	-54.626	.106	38.827	20.175	49.046
1256.0	219370.5	19830.7	-.290	79.894	-54.593	.102	38.821	20.155	49.154
1257.0	219280.1	19815.1	-.290	79.888	-54.553	.104	38.824	20.136	49.261
1258.0	219189.6	19799.4	-.291	79.882	-54.515	.117	38.843	20.116	49.369
1259.0	219099.1	19783.6	-.291	79.877	-54.497	.127	38.861	20.097	49.476

-126-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 43 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	OA (PSF)
1260.0	219008.7	19767.8	-.291	79.871	-54.481	.157	38.873	20.077	49.583
1261.0	218918.2	19752.0	-.291	79.864	-54.513	.168	38.864	20.057	49.691
1262.0	218827.7	19736.2	-.292	79.858	-54.596	.163	38.847	20.038	49.798
1263.0	218737.1	19720.4	-.292	79.852	-54.704	.161	38.838	20.018	49.906
1264.0	218646.3	19704.5	-.293	79.845	-54.817	.175	38.866	19.999	50.013
1265.0	218555.4	19688.5	-.294	79.839	-54.971	.180	38.924	19.979	50.121
1266.0	218464.4	19672.4	-.294	79.831	-55.177	.177	38.993	19.959	50.229
1267.0	218373.1	19656.1	-.295	79.824	-55.394	.163	39.031	19.939	50.336
1268.0	218281.7	19639.8	-.296	79.815	-55.649	.157	39.024	19.919	50.443
1269.0	218189.9	19623.5	-.298	79.807	-55.850	.120	39.001	19.899	50.551
1270.0	218097.8	19607.4	-.299	79.800	-55.982	.121	38.989	19.879	50.661
1271.0	218005.2	19591.1	-.301	79.792	-56.158	.104	38.971	19.859	50.771
1272.0	217912.0	19574.8	-.303	79.783	-56.358	.069	38.966	19.838	50.883
1273.0	217818.3	19558.4	-.305	79.774	-56.577	.034	38.994	19.818	50.995
1274.0	217723.9	19542.0	-.307	79.765	-56.784	.002	39.035	19.798	51.109
1275.0	217628.7	19525.5	-.310	79.755	-56.960	-.032	39.080	19.778	51.224
1276.0	217532.7	19508.9	-.312	79.745	-57.085	-.040	39.123	19.757	51.340
1277.0	217435.9	19492.3	-.315	79.735	-57.181	-.052	39.152	19.737	51.459
1278.0	217338.1	19475.7	-.318	79.725	-57.239	-.049	39.176	19.716	51.579
1279.0	217239.5	19458.9	-.321	79.715	-57.259	-.038	39.201	19.695	51.700
1280.0	217139.9	19442.1	-.324	79.704	-57.250	-.020	39.227	19.674	51.824
1281.0	217039.5	19425.3	-.327	79.693	-57.229	-.001	39.250	19.654	51.949
1282.0	216938.1	19408.4	-.330	79.682	-57.208	-.002	39.254	19.633	52.076
1283.0	216835.8	19391.5	-.333	79.671	-57.179	.009	39.246	19.612	52.205
1284.0	216732.5	19374.6	-.336	79.660	-57.146	.010	39.243	19.591	52.336
1285.0	216628.2	19357.7	-.340	79.649	-57.128	.003	39.263	19.570	52.470
1286.0	216523.0	19340.6	-.343	79.638	-57.089	-.006	39.306	19.548	52.605
1287.0	216416.8	19323.5	-.346	79.626	-57.045	-.011	39.360	19.527	52.742
1288.0	216309.7	19306.3	-.349	79.614	-57.004	-.020	39.415	19.506	52.881
1289.0	216201.7	19288.8	-.352	79.601	-56.950	-.032	39.443	19.484	53.021

-127-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1290.0	216092.8	19271.3	-.355	79.589	-56.893	-.044	39.460	19.462	53.162
1291.0	215983.2	19253.7	-.357	79.576	-56.826	-.041	39.464	19.440	53.304
1292.0	215872.8	19235.9	-.360	79.562	-56.742	-.035	39.444	19.418	53.448
1293.0	215761.8	19218.0	-.362	79.548	-56.648	-.024	39.428	19.396	53.592
1294.0	215650.2	19200.0	-.364	79.534	-56.598	-.036	39.401	19.374	53.738
1295.0	215538.0	19181.9	-.366	79.520	-56.542	-.053	39.367	19.351	53.884
1296.0	215425.3	19163.7	-.368	79.505	-56.392	-.098	39.336	19.329	54.031
1297.0	215312.1	19145.4	-.369	79.490	-56.172	-.115	39.294	19.306	54.179
1298.0	215198.6	19127.2	-.371	79.475	-55.914	-.149	39.257	19.283	54.328
1299.0	215084.5	19109.0	-.373	79.460	-55.516	-.189	39.198	19.261	54.479
1300.0	214970.2	19090.9	-.374	79.446	-54.985	-.139	39.129	19.238	54.631
1301.0	214855.8	19071.9	-.374	79.433	-54.627	-.098	39.088	19.215	54.778
1302.0	214741.3	19053.8	-.375	79.419	-54.367	-.090	39.075	19.192	54.932
1303.0	214626.6	19035.8	-.376	79.405	-54.104	-.071	39.090	19.170	55.085
1304.0	214512.0	19017.7	-.376	79.391	-53.914	-.019	39.112	19.148	55.239
1305.0	214397.3	18999.4	-.376	79.376	-53.889	.003	39.119	19.125	55.392
1306.0	214282.9	18980.9	-.376	79.361	-53.911	.018	39.141	19.102	55.543
1307.0	214168.7	18962.2	-.375	79.345	-53.914	.051	39.175	19.079	55.693
1308.0	214054.8	18943.4	-.375	79.329	-53.921	.059	39.184	19.056	55.842
1309.0	213941.2	18924.5	-.374	79.314	-53.989	.171	39.179	19.033	55.990
1310.0	213828.1	18905.6	-.373	79.297	-54.821	.236	39.178	19.010	56.136
1311.0	213715.0	18886.6	-.375	79.279	-55.791	.004	39.156	18.987	56.282
1312.0	213601.5	18867.6	-.376	79.260	-56.054	-.017	39.106	18.964	56.430
1313.0	213487.7	18848.5	-.377	79.242	-56.198	.033	39.020	18.940	56.577
1314.0	213373.6	18829.6	-.378	79.224	-54.462	1.620	38.894	18.917	56.727
1315.0	213259.6	18810.8	-.378	79.206	-54.837	1.472	38.885	18.894	56.877
1316.0	213145.5	18791.9	-.379	79.188	-55.642	.906	38.947	18.871	57.027
1317.0	213031.2	18808.0	-.380	79.107	-56.052	.599	38.895	18.883	57.391
1318.0	212916.7	18789.3	-.382	79.086	-56.356	.429	37.728	18.860	57.544
1319.0	212801.1	18772.3	-.386	79.068	-56.736	.246	37.313	18.839	57.711

-128-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 45 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1320.0	212684.1	18754.9	-.391	79.048	-57.050	.147	37.736	18.817	57.878
1321.0	212566.0	18736.7	-.394	79.027	-57.311	.096	38.226	18.795	58.044
1322.0	212446.7	18718.0	-.398	79.004	-57.589	.058	38.558	18.772	58.210
1323.0	212326.5	18699.0	-.402	78.981	-57.862	.009	38.775	18.749	58.375
1324.0	212205.1	18679.7	-.406	78.958	-58.083	-.054	38.945	18.725	58.543
1325.0	212082.5	18660.2	-.410	78.933	-58.128	-.071	39.057	18.701	58.712
1326.0	211958.8	18640.6	-.414	78.909	-58.024	-.075	39.127	18.677	58.883
1327.0	211834.0	18620.8	-.417	78.884	-57.845	-.099	39.175	18.653	59.056
1328.0	211708.1	18600.9	-.421	78.859	-57.600	-.112	39.220	18.629	59.231
1329.0	211581.4	18580.8	-.424	78.832	-57.264	-.099	39.259	18.604	59.407
1330.0	211454.0	18560.7	-.426	78.807	-56.901	-.112	39.267	18.579	59.585
1331.0	211325.9	18540.5	-.429	78.782	-56.467	-.123	39.251	18.555	59.764
1332.0	211197.4	18520.3	-.431	78.757	-55.961	-.097	39.221	18.530	59.945
1333.0	211068.5	18500.1	-.432	78.733	-55.534	-.055	39.212	18.505	60.126
1334.0	210939.3	18479.8	-.433	78.708	-55.240	-.029	39.227	18.481	60.309
1335.0	210810.1	18459.5	-.434	78.684	-54.991	-.029	39.231	18.456	60.491
1336.0	210680.6	18439.3	-.435	78.660	-54.672	.008	39.248	18.431	60.675
1337.0	210551.1	18419.0	-.435	78.636	-54.455	.054	39.249	18.406	60.859
1338.0	210421.7	18398.7	-.436	78.612	-54.403	.113	39.271	18.382	61.043
1339.0	210292.2	18378.3	-.436	78.588	-54.541	.146	39.300	18.357	61.226
1340.0	210162.8	18357.8	-.437	78.563	-54.779	.130	39.319	18.332	61.408
1341.0	210033.2	18337.2	-.438	78.538	-55.026	.114	39.347	18.307	61.591
1342.0	209903.5	18316.5	-.439	78.513	-55.271	.106	39.359	18.282	61.775
1343.0	209773.4	18295.9	-.441	78.488	-55.490	.099	39.384	18.257	61.959
1344.0	209642.9	18275.2	-.443	78.462	-55.681	.120	39.405	18.232	62.145
1345.0	209511.9	18254.5	-.445	78.436	-55.865	.143	39.439	18.207	62.331
1346.0	209380.3	18233.6	-.448	78.410	-56.050	.161	39.494	18.182	62.519
1347.0	209248.1	18212.7	-.450	78.383	-56.244	.187	39.541	18.156	62.708
1348.0	209115.2	18191.8	-.453	78.357	-56.486	.185	39.585	18.131	62.898
1349.0	208981.4	18170.7	-.456	78.330	-56.742	.183	39.631	18.105	63.090

-129-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1350.0	208846.8	18149.4	-.460	78.302	-57.007	.180	39.682	18.080	63.283
1351.0	208711.3	18128.1	-.464	78.274	-57.284	.180	39.723	18.054	63.479
1352.0	208574.7	18106.7	-.468	78.246	-57.589	.171	39.760	18.028	63.677
1353.0	208437.1	18085.1	-.472	78.216	-57.935	.153	39.798	18.002	63.876
1354.0	208298.2	18063.7	-.477	78.187	-58.281	.112	39.829	17.976	64.080
1355.0	208158.0	18041.7	-.481	78.157	-58.514	.069	39.853	17.950	64.285
1356.0	208016.4	18020.6	-.486	78.132	-58.678	.061	39.854	17.924	64.498
1357.0	207873.5	17998.4	-.492	78.100	-58.864	.040	39.848	17.897	64.709
1358.0	207729.1	17976.1	-.497	78.068	-59.063	.002	39.850	17.870	64.922
1359.0	207583.1	17953.7	-.503	78.036	-59.132	-.037	39.849	17.843	65.139
1360.0	207435.7	17931.2	-.508	78.003	-59.086	-.020	39.852	17.816	65.359
1361.0	207286.7	17908.5	-.514	77.970	-59.055	-.041	39.840	17.789	65.584
1362.0	207136.2	17885.9	-.519	77.936	-58.897	-.063	39.839	17.762	65.812
1363.0	206984.2	17863.2	-.525	77.903	-58.656	-.081	39.841	17.734	66.044
1364.0	206830.8	17840.4	-.530	77.870	-58.359	-.074	39.830	17.706	66.280
1365.0	206676.0	17817.5	-.535	77.836	-58.007	-.041	39.834	17.679	66.519
1366.0	206520.0	17794.6	-.539	77.803	-57.779	-.004	39.835	17.651	66.762
1367.0	206362.9	17771.5	-.543	77.769	-57.593	.005	39.836	17.623	67.006
1368.0	206204.8	17748.4	-.548	77.735	-57.407	-.006	39.845	17.595	67.254
1369.0	206045.6	17725.2	-.551	77.701	-57.219	-.012	39.864	17.567	67.504
1370.0	205885.6	17701.8	-.555	77.667	-57.072	.019	39.889	17.539	67.756
1371.0	205724.7	17678.3	-.559	77.633	-57.056	.042	39.922	17.511	68.009
1372.0	205562.9	17654.6	-.562	77.598	-57.037	.058	39.962	17.482	68.264
1373.0	205400.3	17630.7	-.565	77.563	-57.044	.088	39.988	17.453	68.521
1374.0	205236.9	17606.7	-.569	77.527	-57.130	.088	40.016	17.424	68.779
1375.0	205072.8	17582.6	-.572	77.491	-57.263	.079	40.039	17.395	69.038
1376.0	204907.7	17558.1	-.576	77.454	-57.414	.076	40.044	17.366	69.298
1377.0	204741.8	17531.8	-.580	77.416	-57.638	.041	40.043	17.335	69.546
1378.0	204574.9	17507.4	-.584	77.378	-57.870	.020	40.039	17.306	69.812
1379.0	204406.9	17482.8	-.589	77.340	-58.087	.009	40.038	17.276	70.081

-130-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 47 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1380.0	204237.7	17458.3	-.594	77.301	-58.321	.001	40.036	17.247	70.354
1381.0	204067.3	17433.7	-.599	77.262	-58.543	-.019	40.044	17.217	70.630
1382.0	203895.4	17409.0	-.605	77.222	-58.745	-.024	40.046	17.188	70.910
1383.0	203722.1	17384.2	-.611	77.182	-58.941	-.040	40.077	17.158	71.194
1384.0	203547.3	17359.1	-.616	77.140	-59.118	-.059	40.107	17.128	71.480
1385.0	203371.2	17333.7	-.622	77.098	-59.265	-.063	40.140	17.098	71.768
1386.0	203193.6	17308.2	-.628	77.054	-59.250	-.107	40.169	17.067	72.060
1387.0	203014.5	17282.7	-.634	77.011	-58.964	-.143	40.163	17.037	72.357
1388.0	202834.0	17257.1	-.639	76.968	-58.571	-.156	40.151	17.006	72.658
1389.0	202652.3	17231.5	-.644	76.925	-58.122	-.151	40.142	16.975	72.962
1390.0	202469.6	17205.9	-.648	76.881	-57.631	-.116	40.135	16.945	73.270
1391.0	202286.1	17180.2	-.651	76.839	-57.236	-.074	40.130	16.914	73.581
1392.0	202101.8	17154.6	-.655	76.796	-56.970	-.040	40.121	16.883	73.895
1393.0	201917.0	17128.8	-.657	76.752	-56.814	-.067	40.123	16.852	74.210
1394.0	201731.7	17102.3	-.660	76.709	-56.640	-.065	40.119	16.821	74.521
1395.0	201546.0	17074.7	-.662	76.664	-56.444	-.065	40.133	16.789	74.824
1396.0	201360.1	17048.3	-.664	76.618	-56.234	-.055	40.135	16.757	75.139
1397.0	201174.2	17021.7	-.664	76.572	-56.012	-.048	40.121	16.726	75.453
1398.0	200988.6	16994.9	-.664	76.526	-55.784	-.043	40.102	16.694	75.764
1399.0	200803.4	16968.1	-.664	76.479	-55.560	-.036	40.068	16.662	76.075
1400.0	200618.7	16941.3	-.663	76.431	-55.339	-.055	40.002	16.631	76.386
1401.0	200434.5	16914.7	-.663	76.384	-55.043	-.054	39.913	16.599	76.697
1402.0	200250.8	16888.2	-.662	76.338	-54.693	-.022	39.830	16.568	77.008
1403.0	200067.9	16861.7	-.660	76.291	-54.439	.028	39.787	16.537	77.318
1404.0	199885.9	16835.4	-.658	76.244	-54.343	.055	39.761	16.506	77.627
1405.0	199704.6	16809.2	-.657	76.198	-54.283	.058	39.751	16.475	77.935
1406.0	199524.1	16783.0	-.655	76.151	-54.282	.114	39.743	16.445	78.242
1407.0	199344.4	16756.6	-.653	76.103	-54.503	.133	39.748	16.414	78.546
1408.0	199165.4	16730.2	-.652	76.055	-54.909	.108	39.773	16.383	78.847
1409.0	198987.2	16703.6	-.651	76.005	-55.337	.120	39.798	16.352	79.144

-131-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1410.0	198809.5	16676.9	-.650	75.954	-55.805	.129	39.798	16.321	79.440
1411.0	198632.2	16650.2	-.651	75.903	-56.236	.083	39.795	16.290	79.734
1412.0	198455.1	16623.6	-.651	75.849	-56.494	.053	39.782	16.259	80.030
1413.0	198278.1	16599.5	-.652	75.796	-56.733	.043	39.758	16.231	80.349
1414.0	198101.1	16572.7	-.653	75.742	-56.983	.034	39.753	16.200	80.643
1415.0	197923.9	16545.8	-.655	75.688	-57.218	-.013	39.746	16.169	80.937
1416.0	197746.5	16518.8	-.658	75.633	-57.356	-.026	39.722	16.138	81.231
1417.0	197568.8	16491.7	-.660	75.577	-57.473	-.021	39.707	16.107	81.526
1418.0	197390.8	16464.5	-.662	75.521	-57.584	-.020	39.682	16.075	81.821
1419.0	197212.4	16437.3	-.665	75.464	-57.704	-.024	39.680	16.044	82.117
1420.0	197033.6	16410.1	-.668	75.408	-57.830	-.032	39.673	16.013	82.415
1421.0	196854.3	16382.6	-.671	75.350	-57.938	-.035	39.687	15.981	82.713
1422.0	196674.4	16355.0	-.674	75.292	-58.043	-.040	39.699	15.950	83.011
1423.0	196494.0	16327.4	-.677	75.233	-58.160	-.046	39.711	15.918	83.311
1424.0	196313.0	16299.6	-.680	75.173	-58.276	-.052	39.733	15.886	83.612
1425.0	196131.4	16271.7	-.684	75.113	-58.373	-.059	39.736	15.854	83.914
1426.0	195949.0	16243.9	-.688	75.053	-58.450	-.059	39.743	15.822	84.220
1427.0	195765.8	16215.9	-.692	74.993	-58.516	-.061	39.761	15.790	84.526
1428.0	195581.8	16187.7	-.696	74.931	-58.540	-.043	39.780	15.758	84.834
1429.0	195397.1	16159.3	-.700	74.869	-58.554	-.024	39.796	15.726	85.142
1430.0	195211.6	16130.7	-.704	74.806	-58.564	.002	39.813	15.694	85.451
1431.0	195025.5	16102.1	-.708	74.736	-58.634	-.005	39.827	15.661	85.763
1432.0	194838.7	16073.4	-.712	74.673	-58.730	-.025	39.832	15.628	86.075
1433.0	194651.0	16044.5	-.716	74.609	-58.829	-.047	39.846	15.596	86.389
1434.0	194462.6	16015.5	-.721	74.544	-58.941	-.070	39.845	15.563	86.704
1435.0	194273.3	15986.2	-.725	74.479	-59.013	-.081	39.916	15.530	87.021
1436.0	194083.2	15956.6	-.730	74.413	-59.044	-.059	40.018	15.496	87.336
1437.0	193892.3	15926.5	-.734	74.346	-59.065	-.037	40.019	15.462	87.649
1438.0	193700.7	15896.4	-.738	74.280	-59.113	-.031	39.964	15.428	87.965
1439.0	193508.2	15866.4	-.743	74.213	-59.051	-.069	39.912	15.395	88.284

-131-

 * STS88ET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 49 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1440.0	193314.9	15836.4	-.747	74.146	-58.928	-.058	39.885	15.361	88.607
1441.0	193120.9	15806.4	-.751	74.079	-58.822	-.066	39.892	15.327	88.932
1442.0	192926.1	15776.3	-.755	74.012	-58.703	-.076	39.908	15.293	89.260
1443.0	192730.6	15746.0	-.759	73.945	-58.556	-.075	39.897	15.259	89.588
1444.0	192534.6	15715.6	-.763	73.877	-58.395	-.072	39.867	15.225	89.916
1445.0	192338.1	15684.9	-.766	73.809	-58.288	-.057	39.859	15.191	90.243
1446.0	192141.3	15654.1	-.769	73.740	-58.203	-.013	39.818	15.156	90.570
1447.0	191944.1	15623.2	-.772	73.672	-58.157	.042	39.739	15.122	90.898
1448.0	191746.6	15592.1	-.775	73.605	-58.245	.059	39.685	15.087	91.224
1449.0	191548.6	15558.9	-.778	73.544	-58.489	.040	39.671	15.050	91.529
1450.0	191350.2	15527.9	-.782	73.474	-58.734	-.006	39.672	15.016	91.860
1451.0	191151.1	15496.8	-.786	73.403	-58.885	-.025	39.659	14.981	92.193
1452.0	190951.3	15465.7	-.791	73.332	-59.033	-.039	39.636	14.947	92.528
1453.0	190750.7	15434.6	-.795	73.260	-59.148	-.067	39.685	14.912	92.866
1454.0	190549.2	15403.1	-.800	73.187	-59.173	-.069	39.787	14.877	93.202
1455.0	190347.2	15371.2	-.804	73.112	-59.143	-.082	39.846	14.842	93.536
1456.0	190144.4	15339.2	-.808	73.037	-59.010	-.118	39.848	14.806	93.872
1457.0	189941.2	15307.2	-.811	72.962	-58.820	-.096	39.859	14.771	94.209
1458.0	189737.7	15275.1	-.814	72.885	-58.615	-.114	39.822	14.736	94.546
1459.0	189533.9	15243.1	-.817	72.810	-58.264	-.062	39.795	14.700	94.885
1460.0	189329.9	15210.8	-.819	72.733	-57.983	-.031	39.757	14.665	95.222
1461.0	189126.2	15178.3	-.819	72.654	-57.754	-.035	39.718	14.629	95.555
1462.0	188923.0	15145.8	-.819	72.576	-57.530	-.035	39.705	14.593	95.886
1463.0	188720.3	15113.3	-.819	72.497	-57.338	-.042	39.673	14.558	96.216
1464.0	188518.1	15081.1	-.819	72.421	-57.050	-.045	39.611	14.522	96.547
1465.0	188316.7	15050.6	-.817	72.348	-56.718	.052	39.541	14.489	96.897
1466.0	188116.1	15018.1	-.816	72.268	-56.552	.044	39.506	14.453	97.218
1467.0	187916.6	14985.7	-.813	72.188	-56.352	.075	39.483	14.418	97.538
1468.0	187718.0	14953.2	-.812	72.107	-56.266	.072	39.484	14.382	97.851
1469.0	187520.3	14920.4	-.810	72.025	-55.775	-.184	39.493	14.347	98.157

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1470.0	187323.8	14887.3	-.806	71.941	-54.098	-.272	39.473	14.311	98.455
1471.0	187129.6	14853.9	-.796	71.861	-51.598	-.055	39.426	14.275	98.740
1472.0	186939.2	14820.6	-.781	71.784	-49.613	.048	39.337	14.239	99.011
1473.0	186753.5	14787.4	-.764	71.708	-47.827	.018	39.203	14.203	99.266
1474.0	186573.2	14754.5	-.743	71.637	-46.216	.136	39.095	14.168	99.504
1475.0	186398.9	14721.7	-.720	71.566	-45.294	.208	39.010	14.133	99.718
1476.0	186231.2	14688.7	-.696	71.496	-44.899	.193	38.934	14.098	99.907
1477.0	186070.0	14655.9	-.672	71.426	-44.823	.214	38.876	14.064	100.071
1478.0	185915.4	14623.2	-.649	71.355	-45.035	.172	38.835	14.029	100.210
1479.0	185767.0	14590.3	-.626	71.283	-45.285	.150	38.792	13.995	100.323
1480.0	185624.9	14557.6	-.603	71.210	-45.580	.126	38.740	13.960	100.413
1481.0	185488.6	14524.9	-.582	71.136	-45.871	.112	38.681	13.926	100.480
1482.0	185358.1	14492.4	-.561	71.062	-46.199	.149	38.630	13.893	100.526
1483.0	185233.2	14459.7	-.540	70.986	-46.674	.196	38.624	13.859	100.548
1484.0	185113.6	14428.4	-.521	70.902	-47.363	.158	38.609	13.827	100.567
1485.0	184998.9	14395.8	-.504	70.823	-48.102	.138	38.572	13.793	100.550
1486.0	184888.6	14363.3	-.489	70.743	-48.840	.129	38.555	13.760	100.515
1487.0	184782.4	14330.6	-.475	70.661	-49.623	.123	38.525	13.727	100.462
1488.0	184679.7	14298.0	-.462	70.577	-50.285	.053	38.497	13.694	100.395
1489.0	184580.2	14265.4	-.451	70.492	-50.853	.063	38.467	13.661	100.315
1490.0	184483.6	14233.0	-.442	70.406	-51.435	.051	38.438	13.628	100.224
1491.0	184389.4	14200.6	-.433	70.319	-51.974	.027	38.411	13.595	100.124
1492.0	184297.4	14168.2	-.427	70.231	-52.447	.020	38.389	13.562	100.016
1493.0	184207.1	14135.9	-.421	70.142	-52.876	.031	38.403	13.530	99.901
1494.0	184118.5	14103.5	-.416	70.052	-53.293	.042	38.410	13.497	99.777
1495.0	184031.1	14071.2	-.413	69.961	-53.716	.038	38.408	13.465	99.649
1496.0	183944.7	14038.8	-.410	69.869	-54.131	.019	38.422	13.432	99.517
1497.0	183859.0	14006.6	-.409	69.777	-54.513	.001	38.423	13.400	99.381
1498.0	183773.7	13974.3	-.409	69.684	-54.851	-.019	38.467	13.367	99.244
1499.0	183688.6	13942.0	-.410	69.589	-55.138	-.032	38.561	13.335	99.103

-134-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1500.0	183603.5	13909.4	-.411	69.494	-55.349	-.038	38.641	13.302	98.958
1501.0	183518.3	13876.8	-.413	69.398	-55.478	-.025	38.693	13.269	98.812
1502.0	183432.9	13844.1	-.415	69.302	-55.566	-.027	38.707	13.237	98.665
1503.0	183347.2	13811.5	-.418	69.205	-55.586	-.018	38.709	13.204	98.519
1504.0	183261.1	13778.9	-.421	69.108	-55.551	.002	38.700	13.171	98.374
1505.0	183174.6	13746.3	-.424	69.011	-55.468	.023	38.698	13.139	98.230
1506.0	183087.6	13713.8	-.427	68.914	-55.355	.036	38.692	13.106	98.087
1507.0	183000.1	13681.3	-.430	68.817	-55.242	.036	38.695	13.074	97.946
1508.0	182912.2	13648.9	-.433	68.720	-55.120	.040	38.697	13.041	97.806
1509.0	182823.7	13616.5	-.436	68.622	-54.991	.043	38.690	13.009	97.669
1510.0	182734.7	13584.2	-.440	68.526	-54.906	.092	38.706	12.976	97.533
1511.0	182645.2	13552.0	-.444	68.428	-54.939	.099	38.721	12.944	97.399
1512.0	182555.0	13519.7	-.448	68.331	-54.988	.114	38.752	12.911	97.266
1513.0	182464.1	13487.4	-.452	68.232	-55.083	.116	38.779	12.879	97.134
1514.0	182372.3	13455.1	-.457	68.134	-55.229	.104	38.806	12.847	97.005
1515.0	182279.5	13422.9	-.463	68.035	-55.354	.125	38.897	12.814	96.879
1516.0	182185.6	13390.5	-.470	67.936	-55.534	.149	39.034	12.782	96.755
1517.0	182090.4	13357.8	-.476	67.835	-55.825	.147	39.119	12.749	96.629
1518.0	181993.9	13324.3	-.484	67.731	-56.168	.089	39.172	12.716	96.496
1519.0	181895.7	13289.1	-.493	67.622	-56.391	.038	39.194	12.680	96.343
1520.0	181795.8	13256.4	-.502	67.519	-56.448	.073	39.192	12.648	96.231
1521.0	181693.9	13223.7	-.512	67.416	-56.559	.093	39.196	12.615	96.125
1522.0	181590.1	13191.1	-.522	67.312	-56.724	.091	39.204	12.582	96.026
1523.0	181484.2	13158.4	-.533	67.207	-56.916	.088	39.216	12.549	95.934
1524.0	181375.9	13125.8	-.545	67.102	-57.073	.045	39.226	12.516	95.849
1525.0	181265.3	13093.2	-.557	66.997	-57.147	.043	39.294	12.483	95.772
1526.0	181152.1	13060.5	-.570	66.891	-57.203	.030	39.383	12.450	95.700
1527.0	181036.4	13027.7	-.583	66.784	-57.147	.023	39.413	12.417	95.636
1528.0	180918.1	12994.9	-.596	66.677	-57.033	-.008	39.417	12.384	95.580
1529.0	180797.3	12962.1	-.609	66.571	-56.801	-.016	39.415	12.351	95.533

-135-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1530.0	180674.0	12929.5	-.621	66.464	-56.513	-.026	39.407	12.318	95.494
1531.0	180548.2	12896.9	-.634	66.357	-56.167	-.108	39.411	12.285	95.464
1532.0	180419.8	12864.3	-.648	66.250	-54.835	-.546	39.439	12.252	95.442
1533.0	180289.2	12831.6	-.655	66.146	-51.170	-.571	39.509	12.219	95.424
1534.0	180158.6	12798.8	-.652	66.050	-46.209	-.155	39.558	12.185	95.402
1535.0	180030.4	12766.0	-.638	65.964	-41.417	-.116	39.575	12.152	95.370
1536.0	179906.5	12733.2	-.616	65.888	-36.587	-.117	39.582	12.119	95.323
1537.0	179788.9	12700.5	-.586	65.822	-31.744	-.142	39.591	12.086	95.253
1538.0	179679.0	12667.7	-.549	65.768	-26.833	-.178	39.600	12.053	95.154
1539.0	179578.3	12635.1	-.506	65.726	-21.812	-.203	39.594	12.020	95.023
1540.0	179487.8	12602.5	-.458	65.697	-16.647	-.176	39.602	11.988	94.854
1541.0	179408.6	12570.0	-.406	65.683	-11.399	-.121	39.609	11.956	94.646
1542.0	179341.3	12537.5	-.351	65.683	-6.206	-.104	39.621	11.924	94.395
1543.0	179286.3	12505.0	-.296	65.697	-1.027	-.120	39.658	11.892	94.101
1544.0	179243.5	12472.6	-.240	65.726	4.213	-.102	39.716	11.861	93.764
1545.0	179212.8	12440.2	-.186	65.770	9.404	-.079	39.758	11.829	93.385
1546.0	179193.6	12407.8	-.134	65.828	14.573	-.081	39.807	11.798	92.966
1547.0	179185.1	12375.5	-.087	65.901	19.742	-.092	39.851	11.768	92.512
1548.0	179186.2	12343.2	-.046	65.987	24.959	-.098	39.899	11.737	92.031
1549.0	179195.4	12311.1	-.011	66.086	30.210	-.098	39.952	11.706	91.552
1550.0	179211.0	12279.1	.015	66.197	35.469	-.079	40.003	11.676	91.077
1551.0	179231.1	12247.3	.031	66.320	40.707	-.080	40.061	11.646	90.605
1552.0	179253.6	12215.4	.038	66.454	45.965	-.062	40.157	11.615	90.135
1553.0	179276.3	12183.6	.034	66.597	51.190	-.046	40.253	11.585	89.666
1554.0	179296.7	12151.9	.018	66.750	56.375	-.052	40.356	11.555	89.200
1555.0	179312.1	12120.2	-.012	66.911	61.308	.110	40.470	11.525	88.735
1556.0	179319.7	12088.6	-.054	67.077	64.871	.271	40.563	11.495	88.272
1557.0	179317.6	12057.1	-.103	67.247	66.884	.305	40.626	11.465	87.813
1558.0	179304.6	12025.6	-.155	67.417	68.000	.230	40.705	11.435	87.355
1559.0	179280.6	11994.0	-.209	67.589	68.919	.212	40.806	11.405	86.897

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 53 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1560.0	179244.8	11962.4	-.266	67.762	69.650	.187	40.969	11.375	86.439
1561.0	179197.1	11930.4	-.324	67.937	70.139	.203	41.184	11.344	85.978
1562.0	179137.0	11898.7	-.384	68.110	70.359	.214	41.355	11.313	85.676
1563.0	179064.6	11866.3	-.444	68.285	70.462	.208	41.457	11.282	85.441
1564.0	178979.7	11833.8	-.505	68.460	70.333	.231	41.554	11.250	85.245
1565.0	178882.4	11801.3	-.565	68.636	69.960	.231	41.662	11.217	85.088
1566.0	178773.0	11768.4	-.625	68.810	69.411	.218	41.771	11.185	84.963
1567.0	178651.7	11735.6	-.683	68.985	68.746	.211	41.857	11.152	84.876
1568.0	178518.9	11703.2	-.740	69.156	67.995	.212	41.916	11.119	84.830
1569.0	178375.0	11670.5	-.795	69.330	67.038	.218	41.962	11.086	84.813
1570.0	178220.4	11637.6	-.847	69.503	65.859	.216	42.035	11.053	84.828
1571.0	178055.9	11604.7	-.896	69.676	64.584	.199	42.120	11.020	84.872
1572.0	177882.0	11571.7	-.942	69.847	63.183	.185	42.163	10.986	84.944
1573.0	177699.7	11538.8	-.985	70.017	61.668	.170	42.159	10.953	85.042
1574.0	177509.6	11506.0	-1.024	70.185	60.039	.152	42.141	10.919	85.167
1575.0	177312.4	11473.3	-1.059	70.351	58.277	.100	42.142	10.886	85.314
1576.0	177109.3	11440.6	-1.089	70.514	56.804	.021	42.150	10.852	85.479
1577.0	176900.9	11407.8	-1.117	70.677	55.675	.040	42.126	10.819	85.660
1578.0	176687.7	11375.1	-1.142	70.839	54.614	.014	42.099	10.785	85.856
1579.0	176470.3	11342.4	-1.165	71.001	53.596	.007	42.080	10.752	86.066
1580.0	176249.2	11309.7	-1.186	71.161	52.615	.018	42.076	10.718	86.287
1581.0	176024.7	11277.0	-1.204	71.321	51.626	-.007	42.057	10.685	86.518
1582.0	175797.5	11244.4	-1.220	71.479	50.746	-.013	42.025	10.652	86.759
1583.0	175567.7	11211.8	-1.234	71.637	49.822	-.018	41.980	10.618	87.008
1584.0	175336.1	11180.7	-1.246	71.800	49.003	-.045	41.934	10.586	87.286
1585.0	175102.8	11148.0	-1.256	71.957	48.258	-.033	41.881	10.553	87.545
1586.0	174868.5	11115.2	-1.264	72.114	47.540	-.016	41.840	10.520	87.804
1587.0	174633.3	11082.3	-1.270	72.270	46.876	-.012	41.783	10.486	88.066
1588.0	174397.8	11049.4	-1.275	72.427	46.231	.034	41.690	10.453	88.326
1589.0	174162.1	11016.3	-1.278	72.583	45.420	.077	41.597	10.419	88.585

-137-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1590.0	173926.8	10983.3	-1.278	72.738	44.503	.093	41.505	10.386	88.842
1591.0	173692.1	10950.3	-1.276	72.891	43.562	.086	41.413	10.353	89.097
1592.0	173458.7	10917.2	-1.272	73.043	42.607	.079	41.309	10.320	89.347
1593.0	173226.8	10884.3	-1.266	73.193	41.775	.038	41.183	10.286	89.594
1594.0	172996.8	10851.6	-1.259	73.341	41.298	-.016	41.048	10.254	89.837
1595.0	172768.8	10819.0	-1.252	73.489	41.139	-.027	40.924	10.221	90.074
1596.0	172542.8	10786.4	-1.244	73.637	41.285	-.058	40.845	10.188	90.303
1597.0	172318.8	10753.8	-1.238	73.788	41.732	-.017	40.793	10.156	90.525
1598.0	172096.6	10721.7	-1.231	73.942	42.323	.021	40.736	10.124	90.749
1599.0	171875.9	10688.1	-1.227	74.097	43.002	.040	40.671	10.090	90.940
1600.0	171656.5	10655.5	-1.224	74.254	43.708	.069	40.588	10.058	91.143
1601.0	171438.1	10623.0	-1.224	74.413	44.413	.063	40.496	10.026	91.344
1602.0	171220.1	10590.6	-1.225	74.574	45.148	.079	40.423	9.994	91.544
1603.0	171002.4	10558.4	-1.228	74.737	45.875	.087	40.385	9.962	91.745
1604.0	170784.4	10526.1	-1.233	74.902	46.604	.091	40.369	9.930	91.945
1605.0	170565.8	10493.8	-1.240	75.070	47.316	.094	40.351	9.898	92.147
1606.0	170346.4	10461.5	-1.249	75.239	48.026	.100	40.317	9.866	92.351
1607.0	170125.7	10429.4	-1.261	75.410	48.716	.103	40.279	9.835	92.560
1608.0	169903.4	10397.4	-1.274	75.583	49.364	.089	40.256	9.803	92.777
1609.0	169679.0	10365.4	-1.289	75.759	50.027	.104	40.241	9.772	93.000
1610.0	169452.3	10333.4	-1.307	75.936	50.601	.199	40.227	9.740	93.232
1611.0	169222.8	10301.4	-1.327	76.116	50.361	.365	40.266	9.709	93.471
1612.0	168990.5	10269.2	-1.343	76.295	48.884	.438	40.312	9.677	93.717
1613.0	168756.5	10236.4	-1.354	76.468	46.699	.217	40.349	9.645	93.957
1614.0	168521.8	10204.0	-1.358	76.638	44.647	.129	40.357	9.613	94.206
1615.0	168287.4	10171.6	-1.359	76.805	42.604	.244	40.321	9.582	94.452
1616.0	168054.0	10139.2	-1.353	76.966	39.991	.183	40.277	9.550	94.694
1617.0	167822.8	10106.8	-1.342	77.121	37.589	.084	40.214	9.519	94.929
1618.0	167594.7	10074.7	-1.326	77.269	35.748	.040	40.136	9.487	95.155
1619.0	167370.4	10042.5	-1.307	77.414	34.435	.035	40.048	9.456	95.367

-138-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 55 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1620.0	167150.2	10010.6	-1.286	77.555	33.480	.034	39.933	9.425	95.565
1621.0	166934.4	9978.8	-1.264	77.694	32.839	-.011	39.827	9.394	95.750
1622.0	166723.1	9947.2	-1.241	77.833	32.603	-.011	39.748	9.364	95.920
1623.0	166516.3	9915.6	-1.219	77.972	32.703	.020	39.665	9.333	96.073
1624.0	166313.9	9884.0	-1.197	78.112	33.083	.045	39.582	9.303	96.209
1625.0	166115.8	9852.6	-1.176	78.254	33.631	.061	39.505	9.272	96.330
1626.0	165921.7	9821.3	-1.157	78.398	34.224	.080	39.422	9.242	96.437
1627.0	165731.3	9790.1	-1.140	78.543	34.833	.101	39.337	9.212	96.532
1628.0	165544.2	9758.0	-1.124	78.695	35.469	.137	39.247	9.182	96.595
1629.0	165360.2	9728.0	-1.109	78.848	36.071	.100	39.163	9.153	96.684
1630.0	165179.0	9697.1	-1.097	79.000	36.854	.060	39.113	9.123	96.746
1631.0	165000.3	9666.3	-1.086	79.156	37.740	.099	39.071	9.094	96.798
1632.0	164823.8	9635.5	-1.076	79.314	38.635	.121	39.015	9.064	96.839
1633.0	164649.2	9604.8	-1.070	79.475	39.436	.180	38.949	9.035	96.875
1634.0	164475.9	9574.2	-1.065	79.638	39.957	.206	38.860	9.006	96.905
1635.0	164303.8	9543.8	-1.061	79.802	40.340	.175	38.759	8.977	96.934
1636.0	164132.7	9513.5	-1.059	79.968	40.747	.165	38.665	8.948	96.961
1637.0	163962.2	9483.5	-1.059	80.134	41.135	.160	38.578	8.919	96.988
1638.0	163792.0	9453.7	-1.060	80.301	41.498	.146	38.514	8.891	97.016
1639.0	163622.0	9424.0	-1.063	80.469	41.852	.128	38.471	8.862	97.044
1640.0	163452.0	9394.4	-1.067	80.638	42.279	.105	38.435	8.834	97.073
1641.0	163281.7	9364.9	-1.072	80.809	42.842	.116	38.416	8.806	97.103
1642.0	163110.8	9335.3	-1.079	80.982	43.414	.126	38.397	8.778	97.134
1643.0	162939.1	9305.8	-1.087	81.158	44.001	.153	38.364	8.750	97.165
1644.0	162766.4	9276.3	-1.097	81.335	44.526	.194	38.333	8.722	97.200
1645.0	162592.4	9247.0	-1.109	81.514	44.840	.217	38.306	8.694	97.241
1646.0	162416.8	9217.7	-1.122	81.693	45.043	.230	38.249	8.666	97.288
1647.0	162239.5	9189.9	-1.136	81.871	45.232	.239	38.192	8.640	97.371
1648.0	162060.4	9159.6	-1.151	82.061	45.409	.265	38.137	8.611	97.407
1649.0	161879.3	9130.7	-1.167	82.243	45.535	.270	38.094	8.584	97.477

-139-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1650.0	161696.2	9101.9	-1.183	82.425	45.561	.239	38.064	8.557	97.555
1651.0	161511.0	9073.1	-1.199	82.607	45.548	.209	38.054	8.529	97.641
1652.0	161323.7	9044.3	-1.215	82.789	45.531	.193	38.030	8.502	97.734
1653.0	161134.4	9015.6	-1.232	82.972	45.522	.205	37.995	8.475	97.833
1654.0	160943.0	8987.0	-1.248	83.155	45.397	.240	37.945	8.448	97.942
1655.0	160749.6	8958.5	-1.265	83.337	45.115	.230	37.873	8.421	98.059
1656.0	160554.1	8930.1	-1.280	83.519	44.719	.278	37.813	8.394	98.185
1657.0	160356.9	8901.8	-1.295	83.699	44.184	.254	37.748	8.368	98.320
1658.0	160157.9	8873.8	-1.310	83.879	43.505	.302	37.680	8.341	98.463
1659.0	159957.3	8845.9	-1.321	84.053	42.209	.294	37.607	8.315	98.617
1660.0	159755.9	8818.2	-1.330	84.224	41.114	-.053	37.558	8.289	98.776
1661.0	159553.7	8790.5	-1.336	84.394	40.323	-.423	37.521	8.263	98.935
1662.0	159351.2	8762.8	-1.344	84.564	41.719	.818	37.445	8.237	99.096
1663.0	159147.6	8735.4	-1.357	84.740	43.190	2.172	37.329	8.211	99.266
1664.0	158942.6	8706.7	-1.369	84.917	41.413	1.107	37.365	8.184	99.413
1665.0	158736.6	8680.8	-1.376	85.077	40.199	.324	37.366	8.160	99.623
1666.0	158530.3	8653.5	-1.382	85.245	40.013	.268	37.312	8.134	99.802
1667.0	158323.7	8626.3	-1.388	85.411	39.797	.241	37.230	8.109	99.984
1668.0	158116.8	8599.2	-1.393	85.579	39.634	.230	36.605	8.083	100.170
1669.0	157909.3	8573.9	-1.404	85.741	39.463	.245	36.324	8.060	100.398
1670.0	157700.8	8548.0	-1.412	85.905	39.267	.273	36.618	8.035	100.613
1671.0	157491.8	8521.6	-1.418	86.070	39.072	.237	36.806	8.011	100.818
1672.0	157282.8	8494.8	-1.421	86.236	38.859	.217	36.896	7.986	101.014
1673.0	157074.1	8467.8	-1.422	86.400	39.307	-.070	36.907	7.961	101.203
1674.0	156865.4	8440.9	-1.429	86.572	40.637	.167	36.869	7.935	101.392
1675.0	156656.2	8414.1	-1.438	86.746	41.129	.316	36.782	7.910	101.585
1676.0	156446.1	8387.4	-1.448	86.920	41.095	.249	36.689	7.886	101.782
1677.0	156235.2	8360.7	-1.457	87.094	41.002	.201	36.619	7.861	101.981
1678.0	156023.7	8334.0	-1.465	87.269	40.832	.182	36.563	7.836	102.182
1679.0	155811.7	8308.1	-1.471	87.444	40.589	.175	36.489	7.812	102.404

-140-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 57 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1680.0	155599.4	8283.3	-1.477	87.623	40.297	.174	36.376	7.789	102.652
1681.0	155386.9	8256.6	-1.482	87.797	39.939	.187	36.272	7.764	102.855
1682.0	155174.3	8229.9	-1.487	87.970	39.497	.179	36.137	7.739	103.056
1683.0	154961.7	8203.4	-1.491	88.141	39.020	.202	35.977	7.715	103.260
1684.0	154749.2	8177.0	-1.493	88.309	38.543	.207	35.839	7.690	103.465
1685.0	154537.0	8150.7	-1.496	88.476	38.232	.167	35.711	7.666	103.671
1686.0	154325.1	8124.5	-1.498	88.642	38.190	.116	35.613	7.642	103.876
1687.0	154113.4	8098.2	-1.501	88.809	38.445	.111	35.534	7.617	104.078
1688.0	153901.8	8072.0	-1.505	88.976	38.855	.126	35.447	7.593	104.280
1689.0	153690.1	8045.8	-1.512	89.145	39.350	.128	35.360	7.569	104.482
1690.0	153478.0	8019.7	-1.520	89.316	39.866	.152	35.285	7.545	104.686
1691.0	153265.2	7993.6	-1.530	89.489	40.308	.153	35.234	7.521	104.891
1692.0	153051.6	7967.4	-1.541	89.663	40.755	.165	35.193	7.497	105.097
1693.0	152836.9	7941.2	-1.554	89.838	41.143	.156	35.145	7.473	105.306
1694.0	152620.9	7915.1	-1.568	90.015	41.453	.132	35.099	7.448	105.521
1695.0	152403.5	7888.9	-1.584	90.185	41.829	.087	35.059	7.424	105.738
1696.0	152184.4	7861.3	-1.602	90.344	42.248	.036	35.038	7.399	105.924
1697.0	151963.5	7835.2	-1.621	90.525	42.632	.002	35.009	7.375	106.157
1698.0	151740.5	7809.1	-1.641	90.708	43.008	-.027	34.996	7.351	106.397
1699.0	151515.4	7783.0	-1.663	90.893	43.390	-.039	34.978	7.327	106.643
1700.0	151288.0	7756.8	-1.685	91.081	43.766	-.059	34.961	7.303	106.899
1701.0	151058.1	7730.7	-1.709	91.271	44.059	-.049	34.942	7.279	107.164
1702.0	150825.6	7704.6	-1.734	91.463	44.217	-.062	34.919	7.255	107.439
1703.0	150590.4	7678.5	-1.760	91.655	44.294	-.104	34.881	7.231	107.726
1704.0	150352.5	7652.4	-1.786	91.849	44.318	-.146	34.835	7.207	108.025
1705.0	150111.8	7626.3	-1.812	92.045	44.332	-.159	34.776	7.184	108.333
1706.0	149868.5	7600.2	-1.838	92.242	44.372	-.157	34.712	7.160	108.654
1707.0	149622.4	7574.1	-1.864	92.440	44.360	-.169	34.661	7.136	108.985
1708.0	149373.7	7548.0	-1.890	92.641	44.308	-.169	34.596	7.112	109.326
1709.0	149122.3	7521.8	-1.915	92.846	44.133	-.120	34.529	7.088	109.675

-141-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1710.0	148868.5	7495.6	-1.940	93.055	43.804	-.068	34.456	7.065	110.035
1711.0	148612.3	7469.4	-1.963	93.258	43.326	-.017	34.371	7.041	110.406
1712.0	148354.0	7443.3	-1.985	93.460	42.661	.026	34.273	7.017	110.788
1713.0	148094.0	7417.1	-2.003	93.661	41.840	.013	34.162	6.993	111.174
1714.0	147832.7	7390.8	-2.017	93.862	41.031	.020	34.047	6.970	111.564
1715.0	147570.6	7364.6	-2.029	94.060	40.219	.038	33.945	6.946	111.958
1716.0	147307.9	7338.5	-2.039	94.257	39.378	.055	33.833	6.922	112.357
1717.0	147045.0	7312.4	-2.046	94.451	38.453	.073	33.699	6.899	112.759
1718.0	146782.2	7286.6	-2.051	94.641	37.560	.020	33.542	6.875	113.166
1719.0	146519.8	7260.8	-2.054	94.828	36.897	-.036	33.387	6.852	113.575
1720.0	146257.9	7235.2	-2.055	95.015	36.542	-.062	33.255	6.829	113.984
1721.0	145996.9	7209.6	-2.055	95.200	36.450	-.116	33.170	6.806	114.393
1722.0	145736.6	7184.8	-2.055	95.392	36.551	-.164	33.106	6.784	114.818
1723.0	145477.3	7159.0	-2.055	95.583	36.677	-.222	33.007	6.760	115.209
1724.0	145218.8	7133.2	-2.055	95.775	36.892	-.214	32.881	6.737	115.596
1725.0	144961.1	7107.4	-2.056	95.970	37.148	-.190	32.737	6.714	115.977
1726.0	144704.2	7081.5	-2.057	96.167	37.454	-.161	32.576	6.691	116.354
1727.0	144447.9	7055.8	-2.059	96.366	37.765	-.138	32.445	6.667	116.728
1728.0	144192.3	7029.9	-2.061	96.569	38.133	-.107	32.329	6.644	117.095
1729.0	143937.1	7004.0	-2.065	96.775	38.513	-.013	32.199	6.621	117.459
1730.0	143682.3	6978.2	-2.070	96.983	38.800	.048	32.070	6.598	117.821
1731.0	143427.7	6952.5	-2.076	97.192	38.851	.062	31.934	6.574	118.186
1732.0	143173.0	6927.0	-2.084	97.401	38.939	.074	31.788	6.552	118.558
1733.0	142918.2	6901.6	-2.093	97.611	39.062	.098	31.665	6.529	118.933
1734.0	142663.1	6875.9	-2.104	97.824	39.186	.093	31.546	6.506	119.296
1735.0	142407.4	6848.1	-2.117	98.040	39.353	.090	31.453	6.481	119.590
1736.0	142151.1	6823.2	-2.130	98.253	39.607	.119	31.400	6.458	119.983
1737.0	141894.1	6798.4	-2.144	98.468	39.834	.095	31.332	6.436	120.385
1738.0	141636.3	6773.7	-2.158	98.683	40.136	.045	31.277	6.414	120.796
1739.0	141377.4	6749.1	-2.174	98.901	40.519	-.017	31.243	6.392	121.212

-142-

-143-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1740.0	141117.6	6724.6	-2.191	99.122	41.053	-.002	31.217	6.370	121.635
1741.0	140856.4	6700.1	-2.212	99.350	40.994	.327	31.190	6.348	122.066
1742.0	140593.8	6675.6	-2.227	99.575	38.487	.516	31.186	6.326	122.503
1743.0	140331.3	6650.9	-2.225	99.784	34.010	.291	31.184	6.304	122.931
1744.0	140070.9	6626.1	-2.208	99.973	29.232	.147	31.127	6.282	123.345
1745.0	139814.2	6601.4	-2.176	100.139	24.400	.078	31.023	6.260	123.742
1746.0	139562.7	6576.9	-2.134	100.279	19.527	.023	30.871	6.238	124.120
1747.0	139317.4	6552.9	-2.084	100.396	14.673	-.002	30.711	6.217	124.483
1748.0	139079.0	6528.3	-2.029	100.492	9.804	.003	30.543	6.195	124.786
1749.0	138847.9	6504.6	-1.970	100.554	5.009	.027	30.397	6.173	125.083
1750.0	138624.5	6481.1	-1.909	100.590	.248	.066	30.327	6.152	125.346
1751.0	138408.8	6457.6	-1.848	100.599	-4.444	.123	30.269	6.131	125.568
1752.0	138200.6	6434.3	-1.789	100.582	-9.117	.175	30.208	6.110	125.754
1753.0	137999.4	6411.1	-1.737	100.539	-13.798	.233	30.128	6.089	125.907
1754.0	137804.4	6388.1	-1.691	100.470	-18.566	.279	30.048	6.069	126.030
1755.0	137614.8	6365.3	-1.655	100.375	-23.473	.314	29.981	6.048	126.131
1756.0	137429.3	6342.6	-1.630	100.254	-28.572	.331	29.972	6.027	126.211
1757.0	137246.5	6319.8	-1.619	100.106	-33.822	.313	29.990	6.007	126.270
1758.0	137064.8	6297.0	-1.623	99.932	-39.128	.329	29.971	5.986	126.321
1759.0	136882.3	6274.3	-1.648	99.732	-44.320	.231	29.910	5.966	126.380
1760.0	136696.5	6251.8	-1.695	99.510	-48.192	-.011	29.802	5.945	126.459
1761.0	136505.7	6229.6	-1.753	99.279	-49.947	-.041	29.620	5.925	126.576
1762.0	136309.0	6207.8	-1.816	99.046	-50.893	-.004	29.440	5.906	126.739
1763.0	136106.0	6187.0	-1.884	98.808	-51.618	.026	29.344	5.887	126.971
1764.0	135896.3	6170.0	-1.954	98.577	-52.288	.066	29.325	5.872	127.397
1765.0	135679.6	6148.7	-2.028	98.334	-52.933	.063	29.302	5.853	127.683
1766.0	135455.5	6127.4	-2.106	98.087	-53.335	.057	29.286	5.834	128.008
1767.0	135224.0	6106.0	-2.184	97.837	-53.583	.097	29.261	5.815	128.366
1768.0	134985.1	6084.5	-2.262	97.582	-53.742	.086	29.233	5.796	128.758
1769.0	134738.8	6062.7	-2.340	97.323	-53.606	.069	29.214	5.777	129.178

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1770.0	134485.4	6040.9	-2.416	97.063	-53.184	.035	29.182	5.757	129.635
1771.0	134225.0	6019.0	-2.490	96.804	-52.335	.008	29.102	5.738	130.128
1772.0	133958.2	5997.2	-2.559	96.547	-51.277	-.005	29.002	5.719	130.657
1773.0	133685.5	5975.3	-2.623	96.292	-50.002	.002	28.917	5.699	131.219
1774.0	133407.5	5953.3	-2.681	96.040	-48.624	.030	28.839	5.680	131.805
1775.0	133124.9	5931.3	-2.733	95.791	-47.401	.061	28.773	5.661	132.416
1776.0	132838.3	5908.8	-2.781	95.545	-46.206	.079	28.698	5.641	133.031
1777.0	132548.2	5885.6	-2.824	95.281	-45.034	.084	28.597	5.621	133.633
1778.0	132255.2	5863.4	-2.861	95.040	-44.022	.131	28.525	5.601	134.296
1779.0	131959.9	5841.0	-2.892	94.800	-43.297	.133	28.455	5.582	134.967
1780.0	131662.9	5818.5	-2.920	94.560	-42.688	.135	28.381	5.562	135.641
1781.0	131364.4	5795.9	-2.945	94.322	-41.979	.145	28.295	5.542	136.326
1782.0	131064.8	5773.5	-2.967	94.088	-41.145	.155	28.179	5.523	137.021
1783.0	130764.3	5751.1	-2.985	93.859	-40.469	.199	28.060	5.503	137.726
1784.0	130463.3	5728.6	-3.002	93.628	-40.191	.246	27.939	5.483	138.431
1785.0	130162.0	5706.1	-3.017	93.397	-39.988	.318	27.784	5.464	139.138
1786.0	129860.5	5683.6	-3.032	93.165	-40.406	.176	27.659	5.444	139.851
1787.0	129558.7	5661.2	-3.049	92.933	-38.991	1.055	27.519	5.424	140.567
1788.0	129256.7	5636.8	-3.062	92.694	-38.805	1.415	27.408	5.403	141.186
1789.0	128954.6	5614.5	-3.079	92.457	-40.470	.818	27.376	5.384	141.914
1790.0	128651.9	5592.3	-3.099	92.216	-41.065	.654	27.300	5.364	142.649
1791.0	128348.5	5570.3	-3.120	91.975	-41.695	.600	27.147	5.345	143.400
1792.0	128044.1	5548.6	-3.147	91.729	-43.398	.481	26.994	5.326	144.178
1793.0	127737.7	5527.1	-3.186	91.472	-44.975	.336	26.907	5.307	144.979
1794.0	127428.7	5505.7	-3.228	91.210	-45.619	.305	26.798	5.289	145.802
1795.0	127116.9	5484.3	-3.270	90.943	-45.952	.288	26.663	5.270	146.646
1796.0	126802.5	5462.9	-3.311	90.673	-46.235	.295	26.534	5.252	147.514
1797.0	126485.2	5441.8	-3.357	90.399	-46.563	.109	26.426	5.234	148.411
1798.0	126165.0	5420.7	-3.399	90.121	-45.112	-.139	26.364	5.215	149.335
1799.0	125842.8	5400.8	-3.423	89.862	-41.799	-.022	26.198	5.198	150.343

L144

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1800.0	125520.5	5379.6	-3.432	89.617	-39.255	.072	26.018	5.180	151.286
1801.0	125199.0	5358.7	-3.435	89.384	-37.271	.049	25.807	5.162	152.238
1802.0	124878.9	5337.8	-3.430	89.162	-35.533	.095	25.657	5.144	153.193
1803.0	124560.9	5317.0	-3.419	88.948	-34.637	.120	25.555	5.126	154.136
1804.0	124245.4	5296.0	-3.404	88.733	-34.359	.180	25.471	5.108	155.057
1805.0	123932.7	5274.8	-3.386	88.516	-34.468	.168	25.378	5.089	155.950
1806.0	123623.0	5253.6	-3.369	88.297	-34.594	.149	25.270	5.071	156.822
1807.0	123316.1	5232.4	-3.352	88.078	-34.535	.145	25.124	5.053	157.679
1808.0	123012.2	5211.4	-3.334	87.861	-34.434	.161	24.931	5.034	158.525
1809.0	122711.0	5190.1	-3.319	87.648	-34.495	.158	24.763	5.016	159.344
1810.0	122412.4	5169.3	-3.303	87.431	-34.531	.158	24.629	4.998	160.167
1811.0	122116.6	5148.4	-3.288	87.213	-34.690	.207	24.511	4.979	160.972
1812.0	121823.3	5127.6	-3.274	86.990	-35.271	.170	24.427	4.961	161.763
1813.0	121532.4	5106.8	-3.262	86.763	-35.893	.096	24.325	4.943	162.534
1814.0	121243.7	5086.0	-3.253	86.533	-36.383	.091	24.199	4.925	163.296
1815.0	120956.9	5065.3	-3.248	86.298	-36.784	.061	24.079	4.907	164.050
1816.0	120671.8	5044.7	-3.243	86.062	-37.135	.047	23.948	4.889	164.796
1817.0	120388.2	5024.1	-3.240	85.823	-37.487	.065	23.844	4.871	165.531
1818.0	120106.1	5003.5	-3.238	85.581	-38.103	.052	23.746	4.852	166.257
1819.0	119825.1	4983.0	-3.241	85.335	-38.320	.025	23.665	4.834	166.979
1820.0	119545.2	4962.7	-3.243	85.098	-38.465	.121	23.593	4.817	167.704
1821.0	119266.1	4942.4	-3.248	84.851	-38.751	.160	23.476	4.799	168.421
1822.0	118987.7	4922.1	-3.255	84.601	-39.041	.165	23.397	4.781	169.134
1823.0	118710.0	4901.7	-3.262	84.347	-39.265	.171	23.347	4.763	169.838
1824.0	118432.9	4881.2	-3.269	84.088	-39.539	.159	23.298	4.745	170.526
1825.0	118156.5	4860.6	-3.276	83.826	-39.833	.158	23.238	4.727	171.204
1826.0	117880.6	4840.1	-3.284	83.561	-40.124	.177	23.160	4.709	171.878
1827.0	117605.2	4819.5	-3.294	83.292	-40.487	.181	23.075	4.690	172.549
1828.0	117330.2	4799.0	-3.306	83.018	-40.932	.146	22.983	4.672	173.212
1829.0	117055.3	4778.3	-3.318	82.738	-41.109	.094	22.885	4.654	173.863

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1830.0	116780.8	4757.6	-3.329	82.455	-41.236	.066	22.790	4.636	174.507
1831.0	116506.7	4736.9	-3.341	82.170	-41.477	.052	22.698	4.617	175.145
1832.0	116232.7	4715.5	-3.356	81.895	-41.745	.027	22.595	4.598	175.729
1833.0	115958.7	4695.1	-3.375	81.608	-41.845	.035	22.488	4.580	176.389
1834.0	115684.2	4674.9	-3.395	81.321	-41.723	.065	22.392	4.562	177.060
1835.0	115409.3	4654.9	-3.417	81.036	-41.352	.157	22.300	4.544	177.748
1836.0	115134.0	4635.0	-3.437	80.751	-41.275	.197	22.227	4.527	178.447
1837.0	114858.3	4615.1	-3.457	80.461	-41.404	.176	22.157	4.509	179.148
1838.0	114582.3	4595.2	-3.476	80.167	-41.468	.176	22.084	4.492	179.846
1839.0	114306.1	4575.2	-3.495	79.870	-41.682	.131	22.013	4.474	180.543
1840.0	114029.6	4555.3	-3.514	79.566	-41.977	.080	21.937	4.456	181.243
1841.0	113752.8	4535.4	-3.535	79.258	-42.300	.039	21.874	4.439	181.947
1842.0	113475.6	4515.6	-3.558	78.947	-42.537	.010	21.829	4.421	182.659
1843.0	113197.8	4495.9	-3.582	78.633	-42.654	-.004	21.787	4.404	183.378
1844.0	112919.3	4476.1	-3.607	78.327	-42.557	.019	21.738	4.386	184.097
1845.0	112640.3	4456.6	-3.631	78.012	-42.223	.048	21.672	4.369	184.838
1846.0	112360.8	4437.1	-3.654	77.696	-42.115	-.003	21.590	4.351	185.590
1847.0	112080.7	4417.8	-3.677	77.378	-41.715	.030	21.527	4.334	186.355
1848.0	111800.4	4398.5	-3.696	77.061	-40.966	.282	21.453	4.317	187.124
1849.0	111520.1	4379.2	-3.709	76.744	-39.476	1.004	21.373	4.300	187.889
1850.0	111240.0	4360.0	-3.726	76.420	-41.364	.350	21.364	4.283	188.653
1851.0	110959.8	4340.7	-3.746	76.088	-41.456	.249	21.306	4.266	189.420
1852.0	110679.6	4321.6	-3.761	75.758	-41.542	.221	21.232	4.249	190.189
1853.0	110399.4	4302.5	-3.782	75.420	-43.185	.088	21.145	4.232	190.967
1854.0	110118.5	4283.6	-3.817	75.064	-44.594	-.016	21.046	4.215	191.758
1855.0	109835.9	4264.8	-3.857	74.700	-45.117	-.051	20.925	4.198	192.577
1856.0	109551.6	4248.0	-3.899	74.325	-45.568	-.088	20.797	4.184	193.590
1857.0	109265.3	4229.3	-3.946	73.953	-45.724	-.103	20.724	4.167	194.455
1858.0	108976.8	4210.7	-3.994	73.579	-45.209	-.106	20.679	4.150	195.336
1859.0	108686.4	4192.0	-4.033	73.211	-44.017	.006	20.602	4.134	196.231

-146-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 63 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1860.0	108394.8	4173.3	-4.068	72.847	-42.983	.128	20.519	4.117	197.136
1861.0	108102.2	4154.6	-4.097	72.485	-42.377	.139	20.449	4.101	198.044
1862.0	107809.0	4135.7	-4.122	72.121	-41.862	.120	20.373	4.084	198.945
1863.0	107515.6	4116.8	-4.143	71.758	-41.141	.126	20.300	4.067	199.842
1864.0	107222.3	4097.9	-4.160	71.401	-40.374	.186	20.230	4.050	200.736
1865.0	106929.3	4079.1	-4.174	71.048	-39.801	.269	20.137	4.033	201.630
1866.0	106636.8	4060.2	-4.187	70.692	-39.447	.257	20.019	4.016	202.512
1867.0	106344.8	4041.1	-4.198	70.302	-39.042	.208	19.884	3.999	203.370
1868.0	106053.7	4022.1	-4.205	69.944	-38.733	.167	19.764	3.982	204.228
1869.0	105763.6	4003.1	-4.209	69.584	-38.692	.111	19.651	3.965	205.061
1870.0	105474.7	3983.9	-4.213	69.218	-39.074	-.058	19.543	3.948	205.875
1871.0	105186.9	3964.8	-4.217	68.851	-38.986	-.108	19.424	3.931	206.670
1872.0	104900.3	3945.7	-4.223	68.485	-38.991	-.160	19.302	3.914	207.453
1873.0	104614.7	3926.6	-4.230	68.125	-38.634	-.146	19.184	3.897	208.234
1874.0	104330.0	3907.8	-4.237	67.773	-37.933	-.004	19.081	3.880	209.018
1875.0	104046.3	3889.0	-4.246	67.426	-37.533	.086	18.970	3.863	209.798
1876.0	103763.5	3870.2	-4.251	67.081	-37.381	.067	18.878	3.846	210.559
1877.0	103481.7	3851.3	-4.257	66.733	-37.641	.027	18.814	3.829	211.299
1878.0	103201.0	3832.3	-4.264	66.377	-37.824	-.004	18.757	3.811	212.008
1879.0	102921.4	3813.0	-4.268	66.003	-37.869	-.051	18.676	3.794	212.668
1880.0	102643.0	3793.8	-4.271	65.639	-38.239	-.136	18.565	3.776	213.322
1881.0	102365.7	3774.6	-4.278	65.271	-38.533	-.236	18.434	3.759	213.955
1882.0	102089.5	3755.5	-4.286	64.906	-38.357	-.279	18.308	3.741	214.577
1883.0	101814.2	3736.3	-4.294	64.545	-37.804	-.216	18.190	3.724	215.188
1884.0	101539.8	3717.3	-4.302	64.193	-37.375	-.174	18.077	3.707	215.792
1885.0	101266.3	3698.5	-4.313	63.850	-37.056	-.124	17.969	3.689	216.407
1886.0	100993.4	3679.8	-4.328	63.513	-36.603	.002	17.877	3.672	217.021
1887.0	100721.0	3661.2	-4.342	63.180	-36.386	.067	17.793	3.655	217.626
1888.0	100449.2	3642.4	-4.354	62.843	-36.412	.045	17.724	3.638	218.206
1889.0	100178.2	3623.5	-4.365	62.503	-36.624	.003	17.672	3.621	218.754

-147-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1890.0	99907.9	3604.5	-4.375	62.158	-36.866	-.019	17.629	3.603	219.267
1891.0	99638.6	3584.5	-4.386	61.827	-37.000	.007	17.583	3.585	219.645
1892.0	99370.0	3565.4	-4.398	61.481	-36.955	.020	17.523	3.567	220.116
1893.0	99102.2	3546.4	-4.411	61.137	-36.673	.034	17.444	3.550	220.585
1894.0	98834.9	3527.6	-4.427	60.793	-36.308	.015	17.325	3.532	221.049
1895.0	98568.3	3505.0	-4.442	60.544	-34.239	-.196	17.296	3.511	221.032
1896.0	98303.2	3486.3	-4.425	60.240	-29.776	-.043	17.296	3.494	221.472
1897.0	98041.6	3467.5	-4.381	59.972	-25.510	-.106	17.244	3.476	221.852
1898.0	97784.7	3448.7	-4.315	59.753	-20.292	-.017	17.185	3.459	222.172
1899.0	97533.7	3430.0	-4.230	59.586	-15.061	.030	17.103	3.441	222.431
1900.0	97289.7	3411.6	-4.132	59.481	-9.936	.053	17.016	3.424	222.646
1901.0	97053.0	3393.0	-4.027	59.422	-4.745	.072	16.917	3.407	222.742
1902.0	96823.9	3374.3	-3.919	59.416	.340	.063	16.826	3.389	222.742
1903.0	96602.4	3355.7	-3.813	59.460	5.104	-.010	16.754	3.372	222.650
1904.0	96388.0	3336.2	-3.717	59.573	9.579	-.104	16.703	3.353	222.354
1905.0	96180.2	3317.2	-3.629	59.699	14.153	-.201	16.676	3.335	222.044
1906.0	95978.2	3298.7	-3.554	59.887	18.999	-.257	16.644	3.318	221.717
1907.0	95781.1	3280.2	-3.499	60.129	24.067	-.280	16.596	3.300	221.338
1908.0	95587.4	3262.0	-3.471	60.421	29.289	-.297	16.535	3.283	220.935
1909.0	95395.5	3243.9	-3.477	60.767	34.289	-.150	16.464	3.265	220.534
1910.0	95203.2	3226.4	-3.513	61.146	37.505	-.064	16.366	3.249	220.186
1911.0	95009.4	3208.8	-3.567	61.545	39.153	-.167	16.313	3.232	219.842
1912.0	94813.3	3191.2	-3.633	61.964	40.709	-.201	16.303	3.215	219.517
1913.0	94614.2	3173.7	-3.709	62.403	42.299	-.048	16.287	3.199	219.215
1914.0	94411.7	3156.3	-3.791	62.856	43.072	.005	16.283	3.182	218.944
1915.0	94205.7	3139.0	-3.876	63.318	43.538	.026	16.288	3.166	218.725
1916.0	93996.0	3121.6	-3.965	63.788	43.875	.080	16.278	3.149	218.520
1917.0	93782.6	3104.3	-4.053	64.268	44.054	.132	16.259	3.133	218.343
1918.0	93565.6	3086.9	-4.142	64.753	44.089	.167	16.249	3.116	218.193
1919.0	93344.9	3069.6	-4.230	65.236	43.773	.137	16.258	3.100	218.083

-148-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 65 *

-149-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	HACHA (-)	QA (PSF)
1920.0	93120.8	3053.9	-4.313	65.718	43.268	-.031	16.269	3.085	218.209
1921.0	92893.4	3036.1	-4.395	66.212	43.653	-.003	16.313	3.068	218.081
1922.0	92663.1	3018.1	-4.477	66.722	44.210	.082	16.312	3.051	217.929
1923.0	92429.5	3000.0	-4.564	67.239	44.390	.136	16.266	3.034	217.773
1924.0	92192.8	2981.1	-4.653	67.762	44.157	.129	16.222	3.016	217.527
1925.0	91952.9	2962.8	-4.741	68.273	43.576	-.010	16.203	2.998	217.397
1926.0	91710.0	2944.6	-4.824	68.785	43.362	-.061	16.190	2.981	217.286
1927.0	91464.3	2926.3	-4.906	69.305	43.551	.002	16.147	2.963	217.184
1928.0	91215.9	2907.9	-4.990	69.828	43.603	.031	16.088	2.946	217.074
1929.0	90964.7	2889.9	-5.075	70.354	43.478	.053	16.022	2.929	217.040
1930.0	90710.8	2872.1	-5.157	70.879	43.232	.061	15.928	2.912	217.053
1931.0	90454.2	2854.5	-5.239	71.409	43.100	.090	15.849	2.895	217.102
1932.0	90195.2	2837.1	-5.320	71.942	43.097	.135	15.789	2.878	217.197
1933.0	89933.7	2819.4	-5.403	72.454	43.124	.179	15.746	2.862	217.259
1934.0	89669.6	2802.5	-5.486	72.983	42.841	.173	15.689	2.846	217.458
1935.0	89403.0	2785.8	-5.566	73.509	42.395	.149	15.642	2.830	217.706
1936.0	89134.1	2769.6	-5.644	74.026	41.870	.092	15.607	2.814	218.032
1937.0	88863.1	2753.3	-5.718	74.544	41.443	.032	15.579	2.799	218.352
1938.0	88590.2	2737.0	-5.789	75.061	41.231	-.011	15.556	2.784	218.697
1939.0	88315.4	2721.3	-5.858	75.581	41.089	-.062	15.530	2.769	219.123
1940.0	88038.9	2705.1	-5.927	76.103	41.152	-.075	15.482	2.753	219.489
1941.0	87760.8	2688.7	-5.997	76.636	41.515	-.034	15.431	2.738	219.830
1942.0	87481.0	2672.2	-6.068	77.178	41.833	.134	15.354	2.722	220.150
1943.0	87199.5	2655.6	-6.138	77.714	41.559	.141	15.282	2.706	220.451
1944.0	86916.6	2638.9	-6.206	78.260	41.308	.178	15.184	2.690	220.745
1945.0	86632.3	2622.0	-6.275	78.817	41.225	.242	15.071	2.674	220.995
1946.0	86346.5	2605.3	-6.348	79.358	40.895	.248	14.987	2.658	221.294
1947.0	86059.2	2588.6	-6.420	79.886	40.213	.167	14.937	2.642	221.590
1948.0	85770.5	2572.1	-6.490	80.424	39.722	.125	14.907	2.626	221.905
1949.0	85480.5	2555.4	-6.555	80.969	39.449	.095	14.885	2.611	222.205

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1950.0	85189.6	2538.0	-6.619	81.540	39.499	.097	14.847	2.594	222.362
1951.0	84897.7	2521.7	-6.681	82.113	39.716	.186	14.809	2.578	222.697
1952.0	84605.1	2505.7	-6.735	82.690	39.523	.337	14.778	2.563	223.101
1953.0	84312.1	2490.9	-6.780	83.265	38.198	.388	14.768	2.549	223.690
1954.0	84019.2	2475.6	-6.805	83.805	35.936	.197	14.806	2.534	224.186
1955.0	83727.2	2460.4	-6.816	84.328	33.355	.253	14.812	2.520	224.654
1956.0	83437.4	2445.3	-6.787	84.795	28.903	.177	14.803	2.505	225.127
1957.0	83151.3	2429.9	-6.720	85.209	24.120	.046	14.704	2.490	225.473
1958.0	82870.3	2414.1	-6.630	85.568	20.303	.291	14.524	2.475	225.687
1959.0	82595.2	2398.4	-6.526	85.861	15.654	.425	14.417	2.460	225.827
1960.0	82326.5	2382.5	-6.403	86.075	10.246	.376	14.432	2.444	225.831
1961.0	82065.1	2366.1	-6.259	86.215	5.154	.334	14.476	2.428	225.656
1962.0	81811.7	2349.5	-6.102	86.278	.715	.395	14.526	2.412	225.320
1963.0	81566.6	2332.7	-5.940	86.263	-3.898	.306	14.538	2.396	224.826
1964.0	81329.8	2315.6	-5.783	86.183	-7.049	.130	14.493	2.379	224.181
1965.0	81100.8	2298.3	-5.631	86.071	-8.113	.285	14.445	2.362	223.376
1966.0	80879.7	2281.0	-5.481	85.932	-9.468	.307	14.397	2.345	222.459
1967.0	80666.1	2263.6	-5.335	85.770	-10.748	.127	14.346	2.328	221.426
1968.0	80459.7	2246.3	-5.198	85.594	-11.109	.090	14.279	2.310	220.297
1969.0	80260.1	2228.9	-5.066	85.402	-11.853	-.326	14.284	2.293	219.071
1970.0	80067.2	2211.9	-4.929	85.232	-10.687	-.235	14.310	2.276	217.837
1971.0	79881.1	2194.4	-4.791	85.073	-9.859	.079	14.303	2.259	216.398
1972.0	79701.7	2176.9	-4.659	84.915	-10.163	.070	14.221	2.241	214.872
1973.0	79528.5	2159.5	-4.539	84.766	-9.130	.361	14.034	2.224	213.297
1974.0	79360.9	2142.5	-4.436	84.619	-9.319	.181	13.835	2.207	211.704
1975.0	79198.2	2125.2	-4.348	84.477	-10.374	-.308	13.674	2.189	210.010
1976.0	79039.9	2108.4	-4.264	84.320	-10.599	-.275	13.524	2.173	208.348
1977.0	78885.8	2091.8	-4.194	84.132	-12.427	-.481	13.346	2.156	206.653
1978.0	78735.1	2075.3	-4.142	83.931	-13.534	-.733	13.216	2.139	204.953
1979.0	78587.3	2059.0	-4.099	83.729	-13.169	-.656	13.175	2.123	203.237

-150-

 * STSBET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 67 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
1980.0	78442.1	2042.8	-4.058	83.533	-12.803	-.589	13.268	2.106	201.502
1981.0	78299.9	2026.8	-4.014	83.350	-12.359	-.523	12.657	2.090	199.771
1982.0	78158.5	2011.7	-4.063	83.189	-11.782	-.436	12.195	2.075	198.217
1983.0	78016.5	1996.8	-4.109	83.034	-11.132	-.323	12.297	2.060	196.674
1984.0	77874.1	1981.8	-4.146	82.885	-10.630	-.215	12.379	2.045	195.115
1985.0	77731.5	1966.8	-4.185	82.742	-9.811	-.193	12.361	2.030	193.562
1986.0	77588.5	1952.0	-4.230	82.622	-8.437	-.010	12.234	2.015	192.024
1987.0	77444.9	1937.5	-4.290	82.513	-7.528	.105	12.015	2.000	190.540
1988.0	77300.1	1923.2	-4.371	82.403	-7.318	.083	11.778	1.986	189.098
1989.0	77153.2	1909.2	-4.472	82.290	-7.506	-.079	11.551	1.972	187.748
1990.0	77003.8	1895.7	-4.592	82.178	-7.531	-.297	11.365	1.958	186.478
1991.0	76851.2	1882.4	-4.724	82.073	-6.983	-.442	11.202	1.945	185.281
1992.0	76695.3	1869.4	-4.868	81.977	-5.961	-.523	11.076	1.932	184.161
1993.0	76535.5	1856.6	-5.023	81.908	-4.434	-.411	10.960	1.919	183.121
1994.0	76371.7	1844.1	-5.190	81.850	-3.522	-.305	10.816	1.906	182.153
1995.0	76203.4	1832.1	-5.367	81.797	-3.297	-.312	10.656	1.894	181.299
1996.0	76030.5	1820.0	-5.559	81.748	-3.024	-.324	10.500	1.882	180.472
1997.0	75852.4	1808.0	-5.761	81.701	-2.441	-.263	10.396	1.870	179.709
1998.0	75669.1	1796.2	-5.969	81.659	-1.878	-.186	10.312	1.858	179.011
1999.0	75480.4	1784.6	-6.184	81.626	-1.363	-.087	10.240	1.847	178.373
2000.0	75286.3	1773.4	-6.401	81.581	-.797	.049	10.182	1.836	177.870
2001.0	75086.6	1761.9	-6.624	81.554	-.574	.175	10.115	1.824	177.346
2002.0	74881.4	1750.5	-6.852	81.526	-.649	.272	10.049	1.813	176.866
2003.0	74670.5	1739.1	-7.086	81.493	-.954	.325	10.025	1.801	176.419
2004.0	74454.0	1727.6	-7.320	81.452	-1.374	.336	10.008	1.790	176.006
2005.0	74231.8	1715.8	-7.559	81.382	-1.810	.296	9.963	1.778	175.561
2006.0	74004.1	1704.4	-7.800	81.324	-2.418	.217	9.905	1.767	175.230
2007.0	73770.8	1693.1	-8.044	81.260	-3.145	.103	9.852	1.755	174.943
2008.0	73531.9	1681.8	-8.290	81.188	-4.055	-.183	9.796	1.744	174.708
2009.0	73287.4	1669.8	-8.540	81.126	-4.448	-.405	9.794	1.732	174.352

-151-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2010.0	73037.6	1658.8	-8.778	81.080	-3.863	-.315	9.817	1.721	174.242
2011.0	72782.7	1648.2	-9.007	81.045	-3.476	-.143	9.822	1.711	174.244
2012.0	72523.1	1638.1	-9.230	81.014	-3.872	-.142	9.804	1.701	174.361
2013.0	72258.9	1629.5	-9.438	81.014	-4.774	-.249	9.765	1.692	174.858
2014.0	71990.3	1618.6	-9.656	80.781	-4.395	-.436	9.718	1.681	174.856
2015.0	71717.5	1609.0	-9.864	80.776	-3.753	-.395	9.683	1.672	175.194
2016.0	71440.6	1599.1	-10.071	80.784	-3.840	-.490	9.665	1.662	175.473
2017.0	71159.9	1588.6	-10.274	80.790	-2.783	-.245	9.709	1.652	175.629
2018.0	70875.6	1577.6	-10.469	80.810	-.101	.218	9.734	1.641	175.708
2019.0	70588.2	1566.2	-10.661	80.827	-.674	.025	9.705	1.629	175.689
2020.0	70297.6	1553.3	-10.873	80.816	-.659	-.173	9.720	1.616	175.358
2021.0	70003.9	1541.3	-11.065	80.845	.069	-.046	9.970	1.604	175.225
2022.0	69707.9	1529.1	-11.217	80.886	.555	.111	10.227	1.592	175.056
2023.0	69410.8	1516.9	-11.332	80.934	.480	.148	10.225	1.580	174.868
2024.0	69113.1	1504.7	-11.461	80.965	-.119	.081	10.006	1.567	174.677
2025.0	68814.2	1493.6	-11.602	80.985	-1.909	-.240	9.832	1.556	174.701
2026.0	68513.8	1482.9	-11.747	80.983	-4.001	-.727	9.731	1.545	174.835
2027.0	68211.9	1472.6	-11.887	81.021	-4.145	-.949	9.708	1.535	175.066
2028.0	67908.7	1462.7	-12.017	81.047	-2.164	-.710	9.731	1.525	175.364
2029.0	67604.4	1453.1	-12.138	81.093	-.468	-.381	9.683	1.516	175.744
2030.0	67299.1	1444.5	-12.253	81.149	.724	-.119	9.570	1.507	176.364
2031.0	66992.7	1435.7	-12.373	81.221	1.759	.225	9.470	1.498	176.949
2032.0	66685.2	1427.1	-12.492	81.283	1.506	.380	9.354	1.490	177.565
2033.0	66376.6	1418.6	-12.615	81.321	.851	.384	9.246	1.481	178.197
2034.0	66066.9	1410.2	-12.741	81.328	.461	.353	9.139	1.473	178.863
2035.0	65756.0	1401.7	-12.870	81.359	.627	.418	9.050	1.464	179.502
2036.0	65443.9	1393.2	-12.996	81.397	.774	.509	8.939	1.456	180.144
2037.0	65130.7	1384.8	-13.125	81.465	.839	.617	8.832	1.447	180.801
2038.0	64816.3	1376.2	-13.255	81.487	.727	.659	8.736	1.439	181.407
2039.0	64500.9	1367.4	-13.391	81.479	-.043	.556	8.632	1.430	181.964

-152-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 69 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2040.0	64184.3	1358.5	-13.526	81.447	-.412	.442	8.573	1.421	182.478
2041.0	63866.7	1349.3	-13.668	81.396	-.420	.353	8.469	1.411	182.918
2042.0	63547.9	1339.9	-13.812	81.336	-.143	.301	8.408	1.402	183.296
2043.0	63228.2	1330.0	-13.954	81.199	.347	.255	8.381	1.392	183.520
2044.0	62907.8	1320.4	-14.087	81.135	-.071	.149	8.351	1.382	183.824
2045.0	62586.8	1310.9	-14.215	81.098	-.844	-.069	8.306	1.372	184.132
2046.0	62265.3	1301.4	-14.340	81.169	-.310	.071	8.280	1.363	184.437
2047.0	61943.4	1292.2	-14.454	81.209	.570	.334	8.235	1.353	184.801
2048.0	61621.4	1283.2	-14.567	81.218	-.494	.260	8.159	1.344	185.200
2049.0	61299.1	1273.7	-14.689	81.246	-2.143	-.014	8.149	1.334	185.440
2050.0	60976.8	1264.9	-14.789	81.166	-2.124	-.249	8.151	1.325	185.887
2051.0	60654.6	1256.7	-14.876	81.064	-.334	-.172	8.105	1.317	186.470
2052.0	60332.8	1249.1	-14.950	80.943	1.354	-.055	8.011	1.309	187.222
2053.0	60011.4	1243.4	-14.997	80.706	2.863	-.006	7.852	1.303	188.517
2054.0	59690.4	1235.0	-15.081	80.686	3.547	.216	7.717	1.295	189.015
2055.0	59369.8	1225.9	-15.176	80.709	3.478	.407	7.658	1.285	189.233
2056.0	59049.8	1215.9	-15.273	80.784	2.128	.423	7.625	1.275	189.166
2057.0	58730.4	1205.2	-15.375	80.796	1.349	.379	7.614	1.264	188.858
2058.0	58411.8	1193.7	-15.481	80.791	.714	.316	7.574	1.252	188.266
2059.0	58094.1	1180.6	-15.620	80.749	-.282	.089	7.574	1.239	187.102
2060.0	57777.2	1169.0	-15.734	80.746	-.242	.017	7.591	1.227	186.364
2061.0	57461.2	1157.6	-15.839	80.746	-.762	-.092	7.562	1.215	185.670
2062.0	57146.2	1146.4	-15.947	80.807	-1.151	-.232	7.526	1.203	184.965
2063.0	56832.4	1135.9	-16.029	80.871	.545	-.028	7.555	1.192	184.455
2064.0	56520.0	1125.8	-16.108	80.965	1.524	.231	7.453	1.182	184.042
2065.0	56208.7	1117.6	-16.159	81.086	1.296	.365	7.375	1.173	184.216
2066.0	55898.9	1107.8	-16.234	81.147	1.022	.410	7.340	1.163	183.804
2067.0	55590.3	1097.4	-16.321	81.164	.604	.395	7.353	1.152	183.183
2068.0	55283.1	1086.4	-16.408	81.038	-.106	.175	7.375	1.141	182.281
2069.0	54977.5	1075.2	-16.491	80.944	-1.366	-.175	7.343	1.129	181.294

-153-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2070.0	54673.6	1061.9	-16.616	80.958	-1.455	-.342	7.360	1.115	179.510
2071.0	54371.1	1052.6	-16.683	80.605	.308	-.595	7.367	1.105	179.070
2072.0	54070.2	1036.4	-16.858	80.691	1.402	-.315	7.513	1.088	176.185
2073.0	53771.0	1026.3	-16.920	80.891	.735	-.104	7.567	1.078	175.382
2074.0	53473.8	1022.3	-16.874	80.968	-.015	-.130	7.448	1.074	176.592
2075.0	53178.3	1017.8	-16.858	80.839	.161	-.314	7.248	1.069	177.622
2076.0	52884.1	1012.6	-16.887	81.068	.537	-.098	7.115	1.064	178.400
2077.0	52590.8	1008.0	-16.920	80.955	.579	-.230	6.986	1.059	179.361
2078.0	52298.1	1003.6	-16.978	81.226	-.039	-.066	6.808	1.054	180.383
2079.0	52005.4	996.6	-17.109	81.236	-.230	-.085	6.710	1.047	180.461
2080.0	51712.6	986.6	-17.301	81.493	-1.041	.062	6.746	1.036	179.437
2081.0	51419.6	979.3	-17.435	81.004	-.021	-.349	6.754	1.029	179.392
2082.0	51126.6	978.0	-17.455	81.065	.750	-.104	6.647	1.027	181.497
2083.0	50833.7	973.8	-17.534	81.302	-.221	.160	6.549	1.023	182.579
2084.0	50540.6	964.9	-17.704	81.185	-.607	.082	6.643	1.013	181.863
2085.0	50247.7	954.2	-17.892	81.288	-.884	.209	6.743	1.002	180.432
2086.0	49955.1	947.0	-18.015	81.152	-1.245	.017	6.764	.994	180.263
2087.0	49662.9	937.1	-18.185	81.196	-1.017	.056	6.834	.984	179.092
2088.0	49371.0	932.2	-18.253	80.840	-1.044	-.298	6.792	.979	179.777
2089.0	49079.6	918.5	-18.527	80.947	-.724	-.130	6.850	.964	177.054
2090.0	48787.8	915.1	-18.640	80.856	-1.233	-.202	6.671	.961	178.270
2091.0	48495.0	904.3	-18.972	80.658	-1.354	-.473	6.704	.949	176.586
2092.0	48200.7	899.3	-19.170	80.976	-.677	-.096	6.827	.944	177.170
2093.0	47905.3	900.6	-19.215	80.946	-.908	-.080	6.792	.945	180.272
2094.0	47608.7	903.6	-19.219	80.800	-1.390	-.174	6.707	.948	184.100
2095.0	47311.3	903.0	-19.267	80.906	-1.932	.028	6.892	.948	186.544
2096.0	47014.2	896.1	-19.354	81.064	-2.773	.359	7.114	.940	186.406
2097.0	46717.8	891.9	-19.425	80.930	-3.952	.297	7.055	.936	187.340
2098.0	46422.0	890.4	-19.400	81.034	-3.496	.354	7.153	.934	189.386
2099.0	46127.4	887.4	-19.349	80.887	-1.186	.272	7.406	.931	190.828

-154-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2100.0	45835.4	887.2	-19.125	80.598	.684	.049	7.558	.931	193.465
2101.0	45547.1	886.0	-18.831	80.760	1.165	.155	7.471	.931	196.553
2102.0	45262.8	884.0	-18.668	80.614	.984	-.060	7.223	.927	197.483
2103.0	44981.5	879.2	-18.607	80.496	.994	-.154	7.127	.922	198.030
2104.0	44702.6	878.3	-18.443	80.830	.647	.238	7.021	.921	200.275
2105.0	44426.5	875.5	-18.324	80.956	-.146	.348	6.848	.918	201.656
2106.0	44152.7	878.1	-18.140	80.826	.141	.203	6.351	.920	205.552
2107.0	43880.0	880.5	-18.085	80.689	.043	.059	5.732	.923	209.433
2108.0	43606.2	878.0	-18.241	80.652	-1.476	-.122	5.709	.920	210.996
2109.0	43331.4	874.3	-18.371	80.821	-2.097	-.094	5.803	.916	211.980
2110.0	43056.0	872.6	-18.427	80.807	-1.722	-.234	5.817	.914	213.996
2111.0	42780.6	871.8	-18.427	80.899	-1.043	-.181	5.842	.913	216.446
2112.0	42505.8	870.4	-18.406	81.074	-.615	-.002	5.798	.911	218.570
2113.0	42231.7	868.0	-18.416	81.070	-.439	-.009	5.702	.909	220.236
2114.0	41958.1	871.4	-18.308	80.950	-.853	-.159	5.549	.912	224.900
2115.0	41685.0	872.5	-18.253	80.484	-.836	-.575	5.420	.913	228.431
2116.0	41412.3	872.2	-18.230	80.599	-.439	-.262	5.306	.912	231.218
2117.0	41140.0	868.9	-18.292	80.480	-.917	-.064	5.203	.909	232.494
2118.0	40867.4	864.4	-18.428	80.460	-1.884	.121	5.195	.904	233.085
2119.0	40594.2	860.3	-18.553	80.346	-2.097	.024	5.226	.899	233.870
2120.0	40320.8	854.5	-18.692	80.282	-1.493	-.073	5.291	.893	233.764
2121.0	40047.3	848.8	-18.818	80.213	-1.343	-.131	5.350	.887	233.614
2122.0	39774.1	841.5	-18.959	80.339	-1.348	.028	5.378	.879	232.627
2123.0	39501.2	839.3	-18.997	80.330	-1.238	.053	5.243	.877	234.429
2124.0	39228.4	837.6	-19.037	80.375	-1.344	.044	5.119	.874	235.960
2125.0	38955.4	836.2	-19.098	80.261	-1.358	-.154	4.902	.870	237.140
2126.0	38681.6	834.8	-19.210	80.109	-1.442	-.318	4.840	.867	238.353
2127.0	38407.1	840.9	-19.100	79.969	-1.613	-.381	4.696	.871	243.922
2128.0	38132.2	847.6	-18.950	79.796	-1.512	-.467	4.573	.876	249.970
2129.0	37857.5	848.3	-18.909	79.754	-1.163	-.328	4.664	.874	252.548

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2130.0	37583.4	844.9	-18.905	80.043	-1.591	.201	4.798	.869	252.648
2131.0	37310.9	842.0	-18.867	80.309	-2.126	.679	4.801	.864	253.049
2132.0	37039.5	836.5	-18.913	80.283	-2.518	.673	4.908	.857	251.926
2133.0	36769.4	835.6	-18.827	80.312	-2.626	.632	4.897	.854	253.496
2134.0	36501.0	833.2	-18.755	80.209	-2.631	.451	4.856	.850	254.173
2135.0	36234.3	829.2	-18.736	79.925	-2.233	.143	4.818	.844	253.806
2136.0	35969.0	823.7	-18.761	79.765	-1.855	.005	4.814	.837	252.585
2137.0	35705.2	820.6	-18.743	79.501	-1.744	-.136	4.711	.832	252.761
2138.0	35442.3	814.4	-18.835	79.526	-1.778	-.034	4.783	.824	251.002
2139.0	35180.2	810.5	-18.851	79.446	-1.253	.037	4.788	.818	250.644
2140.0	34919.0	806.0	-18.929	79.374	-1.070	.060	4.732	.812	249.930
2141.0	34657.9	803.1	-18.988	79.408	-.924	.140	4.775	.808	250.145
2142.0	34397.4	799.4	-19.023	79.423	-2.925	.254	4.846	.803	249.860
2143.0	34137.6	797.7	-19.008	79.456	-7.843	.474	4.836	.800	250.840
2144.0	33878.3	793.4	-19.109	79.098	-13.500	.411	4.851	.794	250.202
2145.0	33618.6	790.0	-19.245	78.525	-18.277	.317	5.020	.789	250.059
2146.0	33358.6	784.7	-19.383	77.756	-22.110	.222	5.311	.782	248.771
2147.0	33098.7	780.1	-19.488	76.880	-25.778	.279	5.476	.777	247.900
2148.0	32838.8	775.8	-19.629	75.897	-28.210	.428	5.697	.771	247.188
2149.0	32578.7	770.7	-19.745	74.420	-29.820	.200	5.894	.765	245.926
2150.0	32319.5	766.2	-19.792	72.963	-31.261	.077	5.943	.759	245.063
2151.0	32060.8	763.4	-19.850	71.616	-32.469	.137	6.067	.755	245.238
2152.0	31802.6	758.9	-19.880	70.289	-33.313	.150	6.534	.749	244.368
2153.0	31546.7	754.0	-19.803	68.788	-33.288	.049	6.580	.743	243.128
2154.0	31293.0	748.8	-19.781	67.432	-33.160	.140	6.666	.737	241.713
2155.0	31041.5	744.0	-19.756	66.046	-33.028	.236	6.686	.731	240.549
2156.0	30791.5	740.6	-19.776	64.640	-32.982	.321	6.575	.727	240.220
2157.0	30542.0	737.8	-19.809	63.058	-32.864	.235	6.615	.723	240.307
2158.0	30293.5	735.1	-19.814	61.481	-34.250	.171	6.485	.719	240.415
2159.0	30045.2	732.5	-19.957	59.847	-37.064	.183	6.544	.716	240.626

-156-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	HACHA (-)	QA (PSF)
2160.0	29795.7	730.7	-20.056	57.977	-38.324	.171	6.939	.713	241.306
2161.0	29546.7	727.3	-20.106	56.014	-38.694	.184	7.024	.709	240.950
2162.0	29297.9	720.5	-20.286	53.850	-38.743	-.034	7.096	.701	238.356
2163.0	29049.9	716.2	-20.306	51.724	-38.698	-.028	7.311	.696	237.370
2164.0	28803.2	713.9	-20.301	49.479	-38.272	-.049	7.188	.693	237.652
2165.0	28557.0	710.7	-20.376	47.173	-38.970	-.171	7.253	.689	237.351
2166.0	28311.3	707.6	-20.398	44.934	-39.517	-.158	7.328	.685	237.138
2167.0	28066.8	705.0	-20.400	42.578	-40.105	-.123	7.115	.682	237.233
2168.0	27822.0	704.5	-20.524	40.231	-41.196	-.072	6.999	.680	238.698
2169.0	27576.0	704.9	-20.598	38.097	-41.026	.166	7.203	.680	240.855
2170.0	27329.5	704.2	-20.614	35.834	-40.343	.300	7.409	.678	242.279
2171.0	27083.8	703.2	-20.529	33.554	-39.703	.424	7.461	.676	243.439
2172.0	26839.4	701.2	-20.497	31.311	-39.056	.446	7.318	.674	243.956
2173.0	26596.0	702.3	-20.390	28.794	-38.361	.186	6.949	.674	246.574
2174.0	26353.4	701.2	-20.357	26.592	-37.932	-.036	6.910	.672	247.682
2175.0	26111.9	700.5	-20.236	24.577	-38.806	.027	7.358	.671	249.106
2176.0	25872.9	697.3	-20.077	22.539	-38.877	.367	7.534	.667	248.670
2177.0	25636.3	694.0	-20.005	20.599	-38.982	.632	7.628	.663	248.204
2178.0	25401.7	690.2	-19.941	18.510	-38.941	.639	7.779	.658	247.281
2179.0	25169.5	688.0	-19.752	16.318	-38.535	.521	7.769	.656	247.491
2180.0	24940.5	685.2	-19.538	14.114	-39.432	.399	7.830	.652	247.304
2181.0	24714.9	680.8	-19.369	11.578	-39.940	.231	7.703	.647	245.901
2182.0	24492.2	675.9	-19.303	9.236	-40.047	.182	7.474	.642	244.062
2183.0	24271.4	667.9	-19.408	6.887	-39.971	-.028	7.550	.634	239.950
2184.0	24052.2	659.9	-19.479	4.647	-39.605	-.116	7.731	.626	235.895
2185.0	23835.0	652.7	-19.522	2.342	-39.113	-.207	7.797	.618	232.298
2186.0	23619.6	646.2	-19.587	-.015	-38.309	-.238	7.974	.612	229.268
2187.0	23406.0	642.4	-19.445	-2.650	-36.310	-.317	8.060	.607	228.090
2188.0	23195.5	638.6	-19.318	-4.971	-35.333	-.328	7.920	.603	226.893
2189.0	22987.0	633.5	-19.304	-7.275	-33.804	-.418	7.877	.598	224.749

-157-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2190.0	22780.4	631.3	-19.195	-9.433	-32.607	-.401	7.724	.595	224.658
2191.0	22575.1	631.4	-19.116	-11.435	-31.315	-.339	7.518	.595	226.174
2192.0	22370.5	630.7	-19.087	-13.388	-30.253	-.375	7.397	.594	227.107
2193.0	22166.3	631.1	-19.040	-15.197	-30.002	-.391	7.253	.594	228.894
2194.0	21962.1	631.6	-19.045	-16.953	-30.930	-.481	7.234	.594	230.757
2195.0	21757.7	633.3	-19.011	-18.937	-33.369	-.636	7.207	.595	233.469
2196.0	21552.9	634.3	-19.017	-20.794	-34.583	-.411	7.407	.595	235.665
2197.0	21348.1	636.6	-18.929	-23.113	-35.439	-.439	7.330	.597	238.944
2198.0	21143.3	638.1	-18.911	-25.381	-36.206	-.396	7.147	.598	241.605
2199.0	20937.7	640.8	-18.858	-27.563	-36.072	-.288	7.521	.600	245.225
2200.0	20733.5	642.5	-18.569	-29.843	-35.766	-.189	7.697	.601	248.123
2201.0	20531.9	645.2	-18.222	-32.143	-37.759	-.146	7.807	.603	251.752
2202.0	20333.3	646.9	-17.875	-34.610	-39.285	-.054	8.023	.604	254.686
2203.0	20138.5	647.6	-17.365	-37.141	-39.631	.108	8.537	.604	256.747
2204.0	19950.3	647.3	-16.771	-39.804	-39.801	.195	8.261	.603	258.017
2205.0	19767.5	644.6	-16.330	-42.454	-40.052	.115	8.585	.600	257.390
2206.0	19591.5	641.3	-15.674	-45.296	-39.351	.159	8.686	.597	256.157
2207.0	19423.5	637.4	-15.056	-48.012	-38.535	.224	8.553	.593	254.324
2208.0	19262.3	632.7	-14.553	-50.561	-38.206	.226	8.677	.588	251.913
2209.0	19108.6	628.0	-13.843	-53.158	-34.976	.587	8.754	.583	249.366
2210.0	18963.3	623.4	-13.304	-55.432	-32.201	.512	7.853	.579	246.790
2211.0	18822.6	620.1	-13.061	-57.242	-28.957	.493	7.426	.575	245.257
2212.0	18685.0	613.9	-12.875	-58.912	-25.577	.451	7.338	.569	241.424
2213.0	18550.3	610.5	-12.741	-60.148	-21.245	.588	6.926	.566	239.762
2214.0	18416.7	607.6	-12.779	-61.346	-18.067	.389	6.621	.563	238.498
2215.0	18283.0	605.6	-12.836	-62.614	-16.069	-.008	6.493	.561	237.876
2216.0	18149.2	602.8	-12.940	-63.717	-12.793	-.298	6.311	.558	236.673
2217.0	18014.2	600.1	-13.139	-64.597	-8.085	-.553	6.371	.555	235.534
2218.0	17878.2	597.7	-13.219	-65.155	-10.532	-.855	6.710	.553	234.658
2219.0	17742.7	595.2	-13.200	-66.037	-18.469	-1.131	6.881	.550	233.644

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2220.0	17607.7	595.7	-13.163	-67.145	-23.171	-.863	6.799	.550	235.017
2221.0	17472.0	595.5	-13.325	-68.538	-28.018	-.712	6.633	.550	235.887
2222.0	17333.8	596.3	-13.657	-70.176	-32.823	-.583	6.478	.550	237.519
2223.0	17191.1	595.0	-14.167	-72.057	-36.121	-.466	6.524	.549	237.531
2224.0	17043.4	597.3	-14.693	-74.098	-38.106	-.450	6.131	.551	240.415
2225.0	16888.5	597.3	-15.408	-76.290	-43.479	-.761	6.634	.550	241.628
2226.0	16727.5	599.3	-15.899	-78.916	-45.927	-.773	6.956	.552	244.410
2227.0	16560.9	602.6	-16.320	-81.643	-47.550	-.652	7.383	.554	248.394
2228.0	16389.8	606.4	-16.599	-84.457	-48.802	-.394	7.844	.558	252.844
2229.0	16215.1	608.1	-16.858	-87.638	-49.774	-.332	7.914	.559	255.634
2230.0	16037.2	608.5	-17.155	-90.720	-50.101	-.264	7.897	.559	257.367
2231.0	15856.0	609.5	-17.448	-94.221	-49.974	-.420	7.463	.559	259.653
2232.0	15671.1	609.3	-17.862	-97.323	-49.545	-.467	7.100	.559	260.940
2233.0	15481.5	610.2	-18.313	-100.212	-48.925	-.377	7.099	.559	263.261
2234.0	15287.4	611.0	-18.664	-102.969	-48.569	-.195	7.359	.560	265.541
2235.0	15090.0	611.5	-18.925	-106.037	-48.788	-.201	7.381	.560	267.580
2236.0	14889.8	613.9	-19.119	-109.016	-48.037	-.147	7.042	.562	271.373
2237.0	14686.3	612.5	-19.514	-111.996	-45.871	-.339	6.521	.560	271.792
2238.0	14479.2	613.4	-19.822	-114.565	-41.136	-.189	6.291	.560	274.337
2239.0	14269.4	611.2	-20.052	-117.060	-33.625	-.152	6.268	.558	274.065
2240.0	14059.4	611.8	-19.909	-119.170	-27.701	-.235	6.225	.558	276.347
2241.0	13851.5	611.8	-19.633	-121.052	-24.218	-.259	6.151	.558	278.134
2242.0	13646.7	611.2	-19.310	-122.491	-18.392	-.016	6.038	.557	279.339
2243.0	13445.5	612.0	-18.918	-123.369	-10.148	.186	5.722	.557	281.791
2244.0	13247.7	611.6	-18.612	-123.723	-4.959	.217	5.487	.556	283.079
2245.0	13052.8	611.4	-18.388	-123.949	-4.346	.061	5.327	.556	284.537
2246.0	12859.8	610.8	-18.203	-124.291	-1.961	-.074	5.435	.555	285.682
2247.0	12669.8	610.7	-17.846	-124.189	-.115	.138	5.619	.554	287.188
2248.0	12484.1	606.4	-17.416	-124.039	1.646	.275	6.069	.550	284.788
2249.0	12305.3	600.9	-16.879	-124.010	4.628	.246	5.765	.545	281.114

-159-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2250.0	12131.8	596.7	-16.655	-123.588	4.391	.288	5.348	.540	278.643
2251.0	11960.8	592.6	-16.588	-123.061	3.681	.548	5.033	.536	276.250
2252.0	11791.0	589.4	-16.641	-122.909	3.212	.467	4.814	.533	274.657
2253.0	11621.0	585.8	-16.796	-122.804	.013	.374	5.082	.530	272.666
2254.0	11451.7	583.6	-16.517	-122.846	-.676	.275	5.797	.527	272.077
2255.0	11287.5	582.0	-16.146	-123.201	-2.951	-.169	5.228	.526	271.909
2256.0	11125.0	579.9	-16.090	-123.616	-2.770	-.358	5.366	.523	271.233
2257.0	10964.8	578.6	-15.829	-124.017	-1.739	-.324	5.402	.522	271.291
2258.0	10807.3	578.4	-15.584	-124.073	-1.031	-.106	5.272	.522	272.354
2259.0	10651.3	575.6	-15.631	-124.297	-.842	-.077	5.234	.519	271.002
2260.0	10495.0	572.4	-15.742	-124.571	-.731	-.188	5.633	.516	269.231
2261.0	10338.9	570.2	-15.786	-124.398	-1.740	.014	5.975	.513	268.445
2262.0	10183.0	569.3	-15.719	-124.541	-4.450	-.027	6.312	.512	268.838
2263.0	10029.1	570.4	-15.452	-124.906	-6.641	-.082	6.021	.513	271.088
2264.0	9875.6	570.7	-15.629	-125.305	-6.022	-.116	5.322	.513	272.619
2265.0	9718.7	572.0	-16.059	-125.797	-6.750	-.396	5.121	.514	275.118
2266.0	9557.4	573.2	-16.459	-126.090	-6.535	-.392	5.019	.515	277.634
2267.0	9391.8	575.9	-16.821	-126.312	-1.978	-.182	4.956	.517	281.590
2268.0	9222.4	578.9	-17.090	-126.313	2.822	-.042	4.782	.519	285.942
2269.0	9048.9	579.8	-17.579	-126.053	7.444	.040	4.458	.520	288.285
2270.0	8869.9	580.3	-18.147	-125.708	9.960	-.054	4.605	.520	290.344
2271.0	8686.4	581.9	-18.402	-125.328	8.924	-.235	4.745	.521	293.482
2272.0	8501.0	583.1	-18.521	-124.911	7.327	-.229	4.453	.522	296.322
2273.0	8313.8	582.3	-18.745	-124.740	5.804	-.302	4.572	.521	297.067
2274.0	8125.2	580.0	-18.943	-124.639	5.337	-.387	4.658	.518	296.340
2275.0	7935.0	577.6	-19.217	-124.447	2.626	-.460	4.698	.516	295.576
2276.0	7743.4	577.6	-19.316	-124.241	-2.284	-.347	4.730	.515	297.192
2277.0	7551.6	576.6	-19.258	-124.526	-4.473	-.302	4.894	.514	297.796
2278.0	7361.6	574.1	-19.102	-124.763	-3.902	-.225	4.862	.512	296.890
2279.0	7173.8	572.8	-18.939	-124.765	-.850	-.034	4.586	.510	297.101

-160-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2280.0	6987.5	570.2	-18.918	-124.790	.254	-.047	4.359	.507	295.966
2281.0	6801.8	567.7	-19.006	-124.730	-.393	-.145	4.189	.505	294.974
2282.0	6616.0	564.5	-19.084	-124.738	-1.330	-.121	4.271	.502	293.242
2283.0	6431.4	562.1	-18.976	-124.832	.894	-.039	4.215	.499	292.253
2284.0	6248.1	556.1	-19.106	-124.915	2.501	-.023	4.127	.494	287.604
2285.0	6065.5	551.5	-19.205	-124.824	2.054	.037	4.249	.489	284.303
2286.0	5883.3	549.0	-19.288	-124.761	1.028	.006	4.452	.487	283.167
2287.0	5701.1	546.5	-19.335	-124.657	.998	-.066	4.851	.484	282.064
2288.0	5520.4	545.5	-19.119	-124.622	-2.229	-.326	5.140	.483	282.550
2289.0	5341.6	545.3	-18.972	-124.589	-7.124	-.189	5.162	.483	283.759
2290.0	5163.6	547.9	-18.852	-124.452	-4.658	.642	5.170	.484	287.844
2291.0	4985.6	549.7	-18.794	-124.317	-.611	1.035	5.151	.486	291.253
2292.0	4807.6	552.5	-18.680	-124.104	2.326	.909	5.067	.488	295.702
2293.0	4629.8	555.2	-18.568	-123.678	4.150	.730	4.999	.490	300.063
2294.0	4452.2	558.7	-18.452	-123.494	4.599	.296	4.899	.493	305.339
2295.0	4274.2	561.8	-18.383	-123.237	4.856	.138	5.005	.495	310.381
2296.0	4096.2	564.0	-18.317	-123.062	4.981	-.119	4.972	.497	314.319
2297.0	3917.9	568.0	-18.144	-122.585	3.994	.119	5.293	.500	320.359
2298.0	3741.8	569.3	-17.718	-122.314	2.613	.144	5.543	.501	323.477
2299.0	3570.2	570.7	-17.041	-122.303	2.243	-.063	6.133	.502	326.528
2300.0	3407.1	571.3	-15.950	-122.279	-1.775	-.256	6.365	.502	328.774
2301.0	3254.7	569.7	-14.802	-122.440	-2.098	-.183	6.472	.500	328.285
2302.0	3113.9	566.6	-13.782	-122.274	-1.819	.103	6.181	.497	325.979
2303.0	2982.3	559.7	-13.023	-122.400	2.143	.133	6.402	.491	319.268
2304.0	2860.6	553.0	-12.009	-122.487	2.103	-.264	6.639	.485	312.664
2305.0	2749.5	548.2	-11.162	-122.620	-2.701	-.384	6.394	.481	308.247
2306.0	2646.6	542.2	-10.310	-123.142	-2.251	-.362	7.027	.475	302.413
2307.0	2554.8	536.8	-9.072	-123.612	.408	-.269	7.255	.470	297.098
2308.0	2475.2	532.0	-7.874	-123.611	1.582	-.329	6.958	.466	292.463
2309.0	2406.6	526.5	-6.881	-123.480	1.624	-.155	6.744	.461	286.995

-161-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 78 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2310.0	2346.6	519.5	-6.072	-123.359	1.765	.202	6.982	.455	279.895
2311.0	2295.8	511.1	-4.988	-123.271	2.334	.495	7.571	.447	271.250
2312.0	2257.0	501.4	-3.609	-123.093	4.730	.674	7.763	.439	261.302
2313.0	2229.9	491.7	-2.458	-122.612	5.953	.776	7.685	.430	251.486
2314.0	2213.0	481.8	-1.431	-122.217	5.759	.650	7.244	.422	241.584
2315.0	2202.0	472.5	-1.114	-121.767	4.948	.700	6.798	.413	232.448
2316.0	2192.5	463.6	-1.036	-121.540	3.063	.639	6.816	.406	223.780
2317.0	2183.4	454.9	-1.066	-121.373	1.488	.584	6.936	.398	215.553
2318.0	2173.9	446.6	-1.182	-121.342	-1.806	.508	7.146	.391	207.814
2319.0	2163.5	438.7	-1.341	-121.547	-4.400	.455	7.603	.384	200.587
2320.0	2152.4	430.8	-1.325	-121.883	-3.656	.622	8.249	.377	193.490
2321.0	2142.8	422.8	-1.074	-122.138	-2.050	.697	8.464	.370	186.373
2322.0	2134.9	415.1	-.964	-122.307	-2.533	.580	8.490	.363	179.713
2323.0	2127.5	407.5	-.820	-122.539	-2.484	.600	9.050	.357	173.233
2324.0	2123.0	399.5	-.241	-122.733	-.451	.679	9.157	.349	166.509
2325.0	2122.2	391.7	.123	-122.785	.130	.561	8.721	.343	160.042
2326.0	2122.2	384.5	.008	-122.759	.724	.494	8.555	.336	154.235
2327.0	2120.9	377.5	-.186	-122.770	-.263	.362	8.821	.330	148.704
2328.0	2118.8	370.7	-.264	-122.747	1.361	.488	8.994	.324	143.358
2329.0	2116.6	363.9	-.216	-122.689	-.480	.158	9.098	.318	138.143
2330.0	2115.0	357.3	-.132	-122.685	-.068	.332	9.023	.313	133.219
2331.0	2114.0	350.5	.027	-122.706	.172	.323	8.608	.307	128.230
2332.0	2113.9	344.1	.095	-122.812	-.206	.166	7.595	.301	123.587
2333.0	2113.8	338.8	.069	-122.935	.450	-.050	6.964	.296	119.802
2334.0	2113.7	333.8	.117	-122.976	.513	-.277	6.242	.292	116.308
2335.0	2114.1	329.2	.163	-123.010	-.040	-.477	5.361	.288	113.061
2336.0	2114.4	324.5	.152	-122.998	-.003	-.562	4.320	.284	109.861
2337.0	2114.7	319.8	.100	-122.962	-.029	-.681	2.801	.280	106.696
2338.0	2114.3	314.8	-.056	-122.860	-.088	-.801	1.036	.275	103.397
2339.0	2114.3	308.2	.408	-122.752	-.167	-.853	-2.502	.270	99.094

-162-

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2340.0	2116.0	300.8	.169	-122.673	-.052	-.944	-3.662	.263	94.438
2341.0	2115.9	295.0	.127	-122.515	-.060	-1.025	-3.740	.258	90.839
2342.0	2116.5	289.2	.217	-122.328	-.100	-1.051	-4.039	.253	87.303
2343.0	2116.7	283.6	.029	-122.186	-.025	-1.059	-3.739	.248	83.928
2344.0	2116.2	277.9	.075	-122.033	-.030	-.961	-3.811	.243	80.581
2345.0	2116.8	272.2	.253	-121.944	-.260	-.877	-4.011	.238	77.337
2346.0	2117.2	266.4	.125	-121.944	-.083	-.841	-3.901	.233	74.050
2347.0	2117.3	260.7	.094	-121.950	.008	-.824	-3.798	.228	70.921
2348.0	2117.4	255.5	.151	-121.906	.050	-.919	-3.796	.224	68.127
2349.0	2117.7	250.1	.083	-121.855	.078	-.945	-3.775	.219	65.279
2350.0	2117.4	243.8	.073	-121.948	.268	-.720	-3.818	.213	62.031
2351.0	2117.8	235.5	.210	-122.279	.675	-.563	-4.042	.206	57.900
2352.0	2118.1	226.8	.132	-122.518	.537	-.833	-3.910	.198	53.674
2353.0	2118.3	219.3	.157	-122.683	.580	-.916	-3.892	.192	50.168
2354.0	2118.5	212.7	.134	-122.807	.556	-1.052	-3.875	.186	47.212
2355.0	2118.5	206.0	.063	-122.913	.534	-1.089	-3.851	.180	44.265
2356.0	2118.4	198.3	.084	-123.078	.553	-1.126	-3.887	.173	41.041
2357.0	2118.5	190.5	.101	-123.182	.465	-1.250	-3.880	.167	37.853
2358.0	2118.5	183.2	.149	-123.266	.445	-1.323	-3.936	.160	35.022
2359.0	2118.9	176.2	.174	-123.405	.472	-1.321	-3.994	.154	32.401
2360.0	2118.9	169.1	.054	-123.524	.434	-1.399	-3.840	.148	29.847
2361.0	2119.0	162.0	.210	-123.555	.404	-1.571	-4.012	.142	27.400
2362.0	2119.3	155.3	.120	-123.583	.462	-1.594	-3.919	.136	25.176
2363.0	2119.2	148.7	.072	-123.724	.566	-1.654	-3.831	.130	23.086
2364.0	2119.3	141.9	.147	-123.775	.527	-1.665	-3.931	.124	21.007
2365.0	2119.4	134.9	.092	-123.860	.634	-1.773	-3.835	.118	18.983
2366.0	2119.3	127.9	.045	-123.920	.557	-1.970	-3.805	.112	17.065
2367.0	2119.3	120.9	.089	-123.959	.406	-2.120	-3.899	.106	15.245
2368.0	2119.3	113.8	.138	-124.004	.562	-2.173	-3.937	.100	13.504
2369.0	2119.5	106.4	.188	-124.084	.584	-2.359	-3.994	.093	11.814

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2370.0	2119.5	99.1	.084	-124.214	.449	-2.620	-3.893	.087	10.249
2371.0	2119.6	92.0	.149	-124.476	.530	-2.715	-3.943	.080	8.825
2372.0	2119.6	84.7	.027	-124.888	.620	-2.749	-3.808	.074	7.488
2373.0	2119.5	77.3	.123	-125.405	.456	-3.145	-3.924	.068	6.239
2374.0	2119.7	69.9	.176	-125.853	.483	-3.609	-3.968	.061	5.104
2375.0	2119.6	62.7	-.051	-126.342	.555	-4.051	-3.720	.055	4.102
2376.0	2119.6	55.2	.030	-126.950	.528	-4.546	-3.791	.048	3.183
2377.0	2119.5	47.7	-.027	-127.770	.644	-5.233	-3.731	.042	2.376
2378.0	2119.5	40.4	.119	-128.760	.586	-6.232	-3.858	.035	1.702
2379.0	2119.4	33.5	-.144	-130.147	.613	-7.755	-3.574	.029	1.173
2380.0	2119.2	27.0	-.501	-131.649	.628	-9.469	-3.239	.024	.761
2381.0	2119.0	21.1	-.187	-134.320	.567	-12.318	-3.520	.018	.465
2382.0	2119.0	15.1	-.136	-139.443	.568	-17.544	-3.543	.013	.237
2383.0	2118.8	10.6	-.968	-147.552	.994	-25.676	-2.462	.009	.116
2384.0	2119.0	9.9	2.197	-149.525	-.612	-27.663	-5.926	.009	.101
2385.0	2119.1	10.2	-.798	-148.394	.947	-26.520	-2.626	.009	.109
2386.0	2118.9	10.1	-.646	-148.846	.868	-26.979	-2.729	.009	.106
2387.0	2118.9	10.0	-.431	-148.914	.767	-27.044	-2.983	.009	.104
2388.0	2118.8	10.0	-.661	-148.987	.888	-27.116	-2.718	.009	.105
2389.0	2118.6	10.1	-.625	-148.915	.864	-27.051	-2.765	.009	.105
2390.0	2118.5	10.0	-.659	-148.941	.885	-27.067	-2.728	.009	.105
2391.0	2118.4	10.1	-.600	-148.906	.854	-27.042	-2.788	.009	.105
2392.0	2118.3	10.1	-.483	-148.850	.799	-26.985	-2.922	.009	.106
2393.0	2118.2	10.1	-.617	-148.910	.867	-27.039	-2.771	.009	.106
2394.0	2118.1	10.0	-.767	-148.931	.940	-27.057	-2.600	.009	.105
2395.0	2118.0	10.0	-.685	-149.038	.901	-27.165	-2.689	.009	.105
2396.0	2117.9	10.0	-.541	-148.906	.828	-27.039	-2.854	.009	.105
2397.0	2117.8	10.0	-.540	-148.793	.824	-26.919	-2.857	.009	.105
2398.0	2117.7	10.1	-.622	-149.019	.867	-27.140	-2.762	.009	.106
2399.0	2117.6	10.1	-.639	-149.102	.876	-27.223	-2.742	.009	.106

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2400.0	2117.5	10.1	-.623	-149.055	.867	-27.179	-2.759	.009	.106
2401.0	2117.3	10.1	-.630	-148.934	.869	-27.060	-2.751	.009	.106
2402.0	2117.2	10.1	-.670	-148.829	.891	-26.955	-2.704	.009	.106
2403.0	2117.1	10.0	-.711	-148.898	.914	-27.026	-2.660	.009	.105
2404.0	2117.0	10.1	-.684	-148.988	.897	-27.117	-2.694	.009	.106
2405.0	2116.9	10.1	-.652	-148.899	.872	-27.028	-2.734	.009	.106
2406.0	2116.8	10.0	-.655	-148.870	.877	-26.997	-2.730	.009	.105
2407.0	2116.6	10.0	-.765	-148.864	.942	-26.988	-2.600	.009	.105
2408.0	2116.5	10.1	-.697	-148.902	.909	-27.028	-2.675	.009	.106
2409.0	2116.4	10.1	-.662	-148.899	.892	-27.028	-2.715	.009	.106
2410.0	2116.3	10.1	-.728	-148.956	.919	-27.082	-2.641	.009	.105
2411.0	2116.1	10.0	-.762	-148.847	.929	-26.970	-2.604	.009	.105
2412.0	2116.0	10.1	-.633	-148.875	.878	-27.005	-2.743	.009	.105
2413.0	2115.9	10.1	-.662	-148.937	.888	-27.065	-2.712	.009	.105
2414.0	2115.8	10.0	-.711	-148.955	.908	-27.082	-2.657	.009	.105
2415.0	2115.6	10.0	-.739	-148.844	.921	-26.966	-2.625	.009	.105
2416.0	2115.5	10.1	-.742	-148.902	.924	-27.023	-2.623	.009	.106
2417.0	2115.4	10.1	-.745	-148.809	.924	-26.938	-2.622	.009	.105
2418.0	2115.3	10.1	-.684	-148.824	.897	-26.951	-2.688	.009	.106
2419.0	2115.1	10.1	-.771	-148.917	.947	-27.043	-2.590	.009	.106
2420.0	2115.0	10.1	-.715	-148.883	.908	-27.010	-2.655	.009	.105
2421.0	2114.9	10.1	-.818	-148.749	.960	-26.870	-2.546	.009	.106
2422.0	2114.7	10.1	-.764	-148.813	.935	-26.940	-2.601	.009	.106
2423.0	2114.6	10.1	-.782	-148.835	.943	-26.958	-2.585	.009	.105
2424.0	2114.4	10.1	-.862	-148.866	.986	-26.992	-2.484	.009	.106
2425.0	2114.3	10.1	-.736	-148.848	.923	-26.977	-2.629	.009	.106
2426.0	2114.2	10.1	-.833	-148.825	.970	-26.948	-2.520	.009	.106
2427.0	2114.0	10.1	-.888	-148.840	1.001	-26.962	-2.455	.009	.106
2428.0	2113.9	10.1	-.817	-148.803	.966	-26.927	-2.532	.009	.106
2429.0	2113.7	10.1	-.704	-148.823	.905	-26.948	-2.660	.009	.106

-165-

 * STS8BET USING LAIRJ8 (10/12/83), INERTIAL-BET8T06, NX0482 DYN. DATA. PAGE 82 *

TIME (SEC)	ALTDE (FT)	VELA (FPS)	GAMA (DEG)	HDGA (DEG)	SIGMAA (DEG)	BETAA (DEG)	ALPHAA (DEG)	MACHA (-)	QA (PSF)
2430.0	2113.6	10.1	-.731	-148.741	.914	-26.866	-2.635	.009	.106
2431.0	2113.5	10.1	-.872	-148.717	.988	-26.843	-2.477	.009	.106
2432.0	2113.3	10.1	-.805	-148.834	.957	-26.959	-2.550	.009	.106
2433.0	2113.2	10.1	-.946	-148.818	1.027	-26.939	-2.394	.009	.106
2434.0	2113.0	10.1	-.794	-148.638	.948	-26.769	-2.565	.009	.105
2435.0	2112.9	10.1	-.822	-148.629	.961	-26.756	-2.536	.009	.106
2436.0	2112.7	10.1	-.910	-148.688	1.009	-26.810	-2.433	.009	.106
2437.0	2112.6	10.1	-.776	-148.662	.939	-26.788	-2.585	.009	.106
2438.0	2112.4	10.1	-.896	-148.734	1.000	-26.858	-2.450	.009	.106
2439.0	2112.3	10.1	-.897	-148.563	1.001	-26.688	-2.447	.009	.106
2440.0	2112.1	10.1	-.837	-148.562	.963	-26.688	-2.519	.009	.106
2441.0	2112.0	10.0	-.902	-148.606	.995	-26.731	-2.445	.009	.105
2442.0	2111.8	10.0	-.887	-148.491	.990	-26.614	-2.465	.009	.105
2443.0	2111.6	10.0	-1.009	-148.537	1.053	-26.662	-2.325	.009	.105
2444.0	2111.5	10.0	-.802	-148.499	.952	-26.625	-2.554	.009	.105
2445.0	2111.3	10.1	-.859	-148.560	.979	-26.685	-2.493	.009	.106

-166-

APPENDIX D

STS-8 Source and Output Products for Archival

D. 1 STS-8 Output Products

(a) FILES

<u>NAME</u>	<u>USER CATALOG</u>	<u>DESCRIPTION</u>
BET8T06	169750N	Final reconstructed trajectory (40 word format per AMA 81-1)
STS8BET	274885C	Final Extended BET (66 word format per AMA 81-11)
NAVBET8	389102C	STS-8 onboard nav BET (66 word format)
LAIRJ8	476250C	Final LAIRS file (STS8MET/UN=712662N with jimsphere winds)
TRWSTS8	274885C	Reformatted JSC/TRW BET (66 word format)

(b) TAPES

<u>REEL NO.</u>	<u>DESCRIPTION</u>
NX0483	STS-8 AEROBET (201 words per AMA 82-9)
NX0484	Duplicate of above
NX0844	25 Hz IMU2 GTFILE (62 words per AMA 81-20)
NX0943	25 Hz ACIP GTFILES (15 CDC System Records, 62 word format)
NX0478	Final STS-8 residuals for BET8T06
NX0477	Edited tracking tape
NX0479	1 Hz OI-2 for AEROBET
NX0482	20 Hz IMU2 file in body axes for STS8BET, AEROBET and GTFILE (calibrated per BET8T06 solution)
NY1030	25 Hz "calibrated" ACIP file (epoch: 25310 ^S 0 GMT)
ND0376	Dynamic data (input for trajectory reconstruction) - 20 Hz IMU2 data in platform coordinates (second CDC record)
NX0603	Master ACIP cal input tape
NX0622	25 Hz IMU1 @ ACIP
NX0625	25 Hz IMU2 @ ACIP
NY1006	25 Hz IMU3 @ ACIP
	} body axes
NX0635	25 Hz edited, "thinned", ACIP data
NX0664	25 Hz ACIP interpolated temperatures

D. 2 Source Tapes Recieved via NASA LaRC

(a) T/M tapes

<u>REEL NO.</u>	<u>DESCRIPTION</u>
NL1253	OI-1
NM0543	OI-2
NN1148	OI-4
NK1107	OI-1 from CBET01

(b) ACIP Tapes

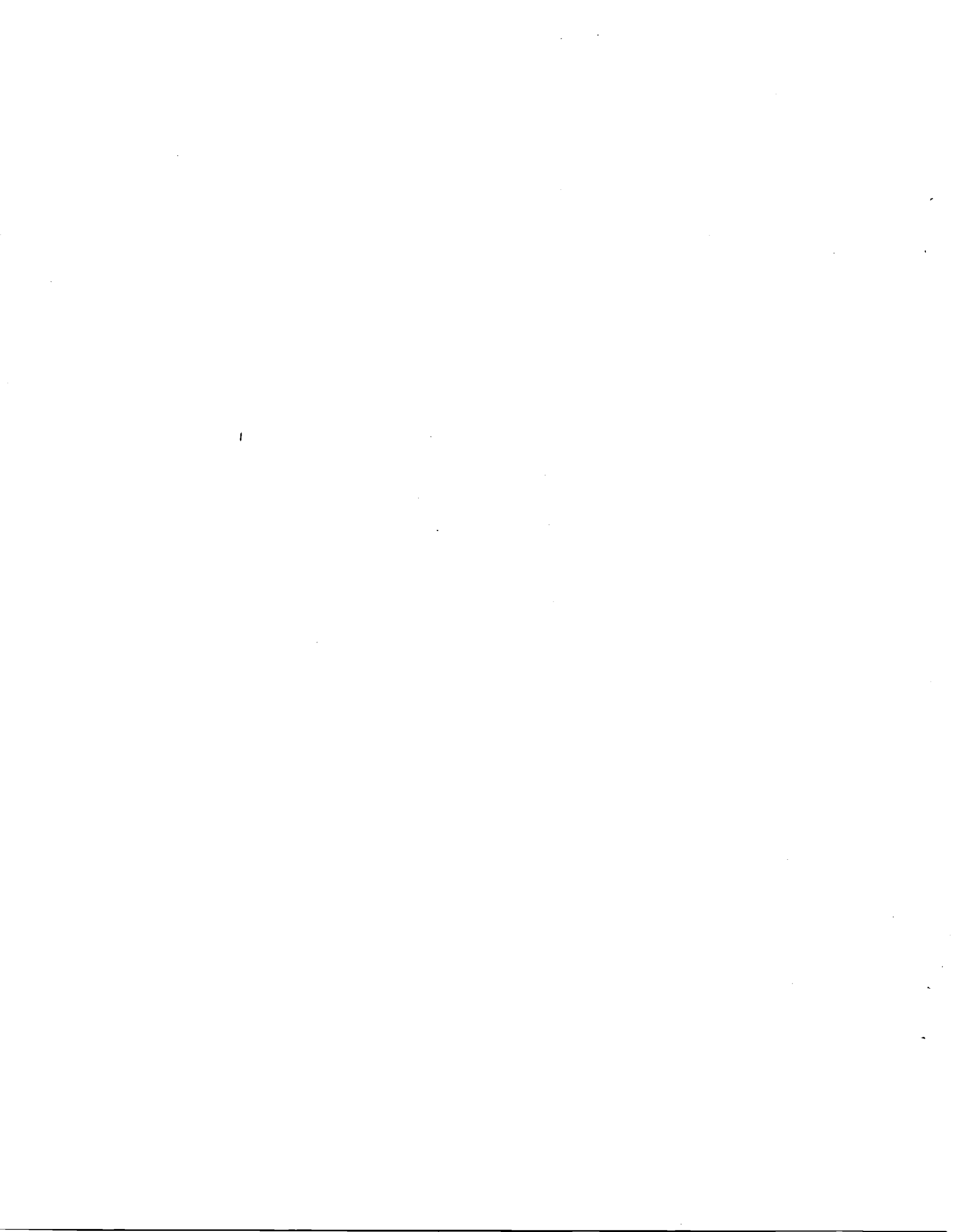
<u>REEL NO.</u>	<u>DESCRIPTION</u>
NV0480/NW0444/ NV0306	ACIP housekeeping
NV0818/NV0925/ NV0749	150 Hz linear cal ACIP

(c) Tracking Tapes

<u>REEL NO.</u>	<u>DESCRIPTION</u>
NW1018	JSC/TRW tracking data
NW0916	Goddard Space Flight Center data

(d) Other

<u>REEL NO.</u>	<u>DESCRIPTION</u>
NM0878	JSC/TRW Descent BET
ST5246	Jimsphere data (balloon 1; landing - 3½ hours)
ST5247	Jimsphere data (balloon 2; landing - 1½ hours)
ST5248	Jimsphere data (balloon 3; landing + 15 minutes)





1. Report No. NASA CR-172257		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle STS-8 BET RESULTS				5. Report Date November 1983	
				6. Performing Organization Code	
7. Author(s) John T. Findlay, G. Mel Kelly, Michael L. Heck, and Judy G. McConnell				8. Performing Organization Report No. AMA Report No. 83-21	
9. Performing Organization Name and Address Analytical Mechanics Associates, Inc. 17 Research Road Hampton, VA 23666				10. Work Unit No.	
				11. Contract or Grant No. NAS1-16087	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Washington, DC 20546				13. Type of Report and Period Covered Contractor Report	
				14. Sponsoring Agency Code	
15. Supplementary Notes Langley Technical Monitor: Harold R. Compton					
16. Abstract <p>This report documents the final Best Estimate Trajectory (BET) products, i.e., the reconstructed trajectory, the Extended BET, AEROBET and MMLE input files, generated for the eighth NASA Space Shuttle flight. Section I discusses the reconstructed trajectory (inertial BET) for this "Challenger" flight, the first night landing. State (position, velocity, and attitude) plus three accelerometer scale factors were determined from fitting the Guam S-band data, seven C-band passes, and pseudo Doppler and altimeter during rollout on Runway 22. The anchor epoch utilized for the batch weighted-least-squares determination was Sept. 5, 1983 7^h1^m50^s.0 (25310 GMT seconds). The spacecraft altitude at epoch is ~617 kft. IMU2 data were selected for the reconstruction.</p>					
17. Key Words (Suggested by Author(s)) Space Shuttle Best Estimate Trajectory (BET) Results Trajectories Spacecraft Dynamics			18. Distribution Statement Unclassified - Unlimited Subject Category 16		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 172	22. Price A08

