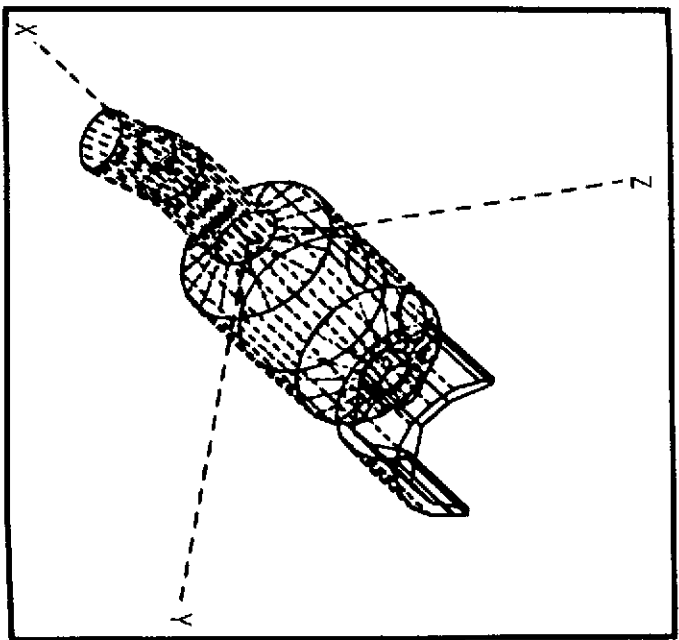


**Payload/Orbiter
Contamination Control
Requirement Study**

(NASA-CR-120572) PAYLOAD/ORBITER N75-14817
CONTAMINATION CONTROL REQUIREMENT STUDY,
VOLUME 2, EXHIBIT A (Martin Marietta
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Technical Report
Volume II

Payload/Orbiter Contamination Control Requirement Study

Final Report
Exhibit A

Contract NAS8-30755

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1. SCOPE

1.1 Purpose - The purpose of this document is to present the final computer printout of the configuration descriptions and geometric relationships used in the contamination impact analysis activity described in Volume I. The information presented is representative of the development of the contamination modeling effort to date. It can be extremely useful in understanding the geometrical relationships used in the model predictions established under this study.

1.2 Scope - This document presents the computer printout data generated during the Payload/Orbiter Contamination Control Requirement Study, NAS8-30755. Contained herein are the computer listings of the input surface data matrices, the viewfactor data matrices, and the geometric relationship data matrices for the three Orbiter/Spacelab configurations analyzed in this study. These configurations have been broken up into the geometrical surfaces and nodes necessary to define the principal critical surfaces whether they are contaminant sources, experimental surfaces, or operational surfaces. A numbering scheme was established based upon nodal numbers that relates the various Spacelab surfaces to a specific surface material or function. This numbering system was developed for the Spacelab configurations such that future extension to a surface mapping capability could be developed as required.

2. APPLICABLE DOCUMENTS

2.1 Program Documents - The following documents shown form a part of this report in the extent that they were used for Program information and/or are referenced for supporting technical material relevant to this study.

PROGRAM DOCUMENTS

MCR 74-93	"Payload/Orbiter Contamination Control Requirement Study," May 1974, Contract NAS8-30452, Martin Marietta Aerospace, Denver, Colorado.
Presentation	"European Spacelab Design and Development Effort," Parts A, C, and F, July 1974, ESRO/ESTEC.
SD72-SH-0071B	"Orbiter Definition Handbook," Rockwell International, February 4, 1974.
RFP AO/600	"Proposal for the Spacelab Design and Development Contract to ESRO/ESTEC," April 16, 1974, ERNO.

3. COMPUTER PRINTOUT DESCRIPTIONS

3.1 Discussion - The computer modeling of the induced contaminant environment of a spacecraft such as the Shuttle Orbiter and the Spacelab configurations initially involves the geometric synthesis of all major spacecraft surfaces. These surfaces were synthesized on a CDC 6500 digital computer using the Scope 3.4.1 format. For this study effort, three separate Spacelab/Shuttle Orbiter configurations were synthesized based upon configuration data contained in the reference material delineated in the Applicable Documents Section of this volume. Input surfaces included all known Spacelab windows, vents, thermal control, and basic pallet surfaces along with the baseline Shuttle Orbiter configuration updated to known current design modifications. Vent and engine sources were modeled as geometric discs representative of a surface at the engine/vent exit plane emitting with the characteristic plume distribution of the particular source. The three Spacelab/Shuttle Orbiter configurations analyzed in this study were:

- a) the long module/short pallet (SL-1);
- b) the short module/long pallet (SL-2); and
- c) the pallet only (SL-3).

For each configuration, the Spacelab surfaces were assigned nodal numbers characteristic of the function or use of the surface being modeled. This numbering scheme allows for easy identification of a surface function and is directly applicable to the materials mapping of Spacelab surfaces if required. The Shuttle Orbiter surfaces retained the nodal number assignments (between 1 and 999) used in previous modeling efforts. The Spacelab nodal numbering scheme is presented below:

<u>Node Number</u>	<u>Surface Function/Type</u>
1000-1099	Thermal Control
1100-1199	Windows - viewing and experiment
1200-1299	Vents
1300-1399	Critical Optical Surfaces
1400-1499	Contamination Monitors

Similar surfaces on the three Spacelab configurations were assigned the same surface nodal numbers to further simplify surface function identification.

The resulting computer printout of the configuration viewfactor model consists of three data matrices which will be described in following subsections. These data matrices are:

- a) the Input Data Matrix;
- b) the Viewfactor Data Matrix; and
- c) the Geometric Relationship Data Matrix.

3.2 Input Data Matrix Description - This matrix consists of all the necessary input data required to completely describe the geometrical surfaces and configurations analyzed. Figure 1 is an example of the format of the input data matrix for selected SL-1 surfaces. Following is an outline description of the major items contained in this matrix (see Figure 1):

- a) nodal surface number;
- b) geometric surface type - rectangle, disc, cylinder, etc;
- c) sides of surface activated - ability to emit or receive contamination;
- d) surface shadowing capability;
- e) surface ability to be shadowed;
- f) surface rotation about major axis system;
- g) point input data - three dimensional input with respect to program axis system;
- h) thermal property of surface emissivity; and
- i) comment - surface name and description.

```

S SURF=a1085,TYPE=bRECT,ACTIVE=cTOP,SHADE=dBOTH,BSHADE=eBOTH
  ICSN=50f
  P1=1215.2,58.5,371.
  P2=1215.2,72.8,414.
  P3=1101.2,72.8,414. }g
  PROP=0.,0.h
  COM= * +Y INSIDE TOP PANNEL,X=1101.2 TO 1215.2 *i
S SURF=1086, TYPE= RECT, ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH
  ICSN=50
  P1=1101.2,-58.5,371.
  P2=1215.2,-58.5,371.
  P3=1215.2,-34.5,344.3
  PRCP=0.,0.
  COM= * -Y INSIDE BOTTOM PANNEL, X=1101.2 TO 1215.2 *
S SURF=1087,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH
  ICSN=50
  P1=1101.2,34.5,344.3
  P2=1215.2,34.5,344.3
  P3=1215.2,58.5,371.
  PROP=0.,0.
  COM= * +Y INSIDE BOTTOM PANNEL,X 1101.2 TO 1215.2 *
S SURF=1088 , TYPE= RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH
  ICSN=50
  P1=1101.2,-34.5,344.3
  P2=1215.2,-34.5,344.3
  P3=1215.2,34.5,344.3
  PRCP= 0.,0.
  COM = * PALLET BOTTOM,X= 1101.2 TO 1215.2 *
S SURF=1100,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH
  ICSN=50
  P1=627.,0.,418.19
  P2=608.22,0.,411.35
  P3=627.,25.,418.19
  P4=627.,25.,418.19
  PROP = 0.,0.
  COM = * TUNNEL EVA HATCH X=627. SPACE LAB 1*

```

Figure 1. Computer Printout Example of Input Data Matrix

3.3 Viewfactor Data Matrix Description - Viewfactor output data is contained in this matrix for all modeled Lambertian surfaces capable of impinging upon susceptible surfaces of interest. Figure 2 is an example of the viewfactor data matrix for a selected Orbiter surface to surfaces of SL-1. The outline below describes the main items of the viewfactor data matrix (reference Figure 2):

- a) Node I - emitting Lambertian surface number;
- b) Node J - receiving surface number from Node I;
- c) computation - verification flag of viewfactor calculation;
- d) FE(I,J) W/SHAD - viewfactor fraction of mass leaving Node I capable of impinging upon Node J considering third surface shadowing;
- e) FE(J,I) W/SHAD - reciprocal viewfactor fraction of mass leaving Node J capable of impinging upon Node I considering third surface shadowing;
- f) FA(I,J) W/SHAD - viewfactor same as d) used internal to program;
- g) F(I,J) WO/SHAD - viewfactor fraction of mass leaving Node I capable of impinging upon Node J if no third surface shadowing is considered;
- h) SHAD. E Factor - percentage of Node I not shadowed from Node J;
- i) SHAD. A Factor - same as h) internal to program; and
- j) CP time - computer time required for viewfactor calculation accumulative for each Node I.

(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)
NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP. TIME (SEC)
20	1030	CAL.	.002388	.000167	.002388	.002388	1.000000	1.000000	1.554
20	1040	CAL.	.005851	.000408	.005851	.005851	1.000000	1.000000	1.822
20	1050	CAL.	.052526	.009272	.052526	.059970	.875869	.875869	2.689
20	1060	CAL.	.003103	.002427	.003103	.003103	1.000000	1.000000	2.972
20	1065	CAL.	.009669	.017427	.009669	.009669	1.000000	1.000000	3.505
20	1081	CAL.	.003709	.008625	.003709	.003709	1.000000	1.000000	4.086
20	1082	CAL.	.000747	.004052	.000747	.000747	1.000000	1.000000	5.075
20	1083	CAL.	.005846	.031716	.005846	.005846	1.000000	1.000000	6.012
20	1084	CAL.	.015514	.011144	.015514	.015514	1.000000	1.000000	6.447
20	1085	CAL.	.003710	.002565	.003710	.003710	1.000000	1.000000	6.772
20	1086	CAL.	.011959	.010843	.011959	.011959	1.000000	1.000000	7.236
20	1087	CAL.	.006441	.005840	.006441	.007381	.872652	.872652	7.666
20	1088	CAL.	.023784	.011221	.023784	.023784	1.000000	1.000000	8.036
20	1110	CAL.	.000008	.003024	.003008	.000057	.137966	.137966	8.830
20	1111	CAL.	.000032	.000096	.000032	.000032	1.000000	1.000000	9.071
20	1120	CAL.	.000083	.000150	.000083	.000219	.380890	.380890	9.424
20	1121	CAL.	.000127	.000228	.000127	.000127	1.000000	1.000000	9.657

Figure 2. Computer Printout Example of Viewfactor Data Matrix

3.4 Geometric Relationship Data Matrix Description -

This data matrix supplies the computer output information on the geometrical relationships between all Spacelab and Orbiter surfaces capable of viewing each other. This data is used in conjunction with the closed form mathematical source characteristics for sources other than Lambertian to determine contaminant fluxes at surfaces of interest. Figure 3 is an example of the geometric relationship data matrix for selected Spacelab/Orbiter surfaces. The outline below describes the major items depicted in Figure 3:

- a) NODE I - Source surface number;
- b) NODE J - Receiving surface number from Node I;
- c) F(I,J) - Viewfactor fraction of mass leaving Node I (Lambertian) capable of impinging upon Node J;
- d) AREA - Surface area of Node I in²;
- e) THETI - Angle that radius makes with Node I normal;
- f) THETJ - Angle that radius makes with Node J normal;
- g) RADIUS - Distance between Node I and Node J center points in inches;
- h) NORMAL VECTOR - Node I perpendicular vector (X,Y,Z components) normalized to amplitude of Node I surface area; and
- i) POSITION VECTOR - Vector (X,Y,Z components) from central axis origin to center point of Node I.

MODEL = CONTAM STCP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)			(i)		
20	1110	.000008	3.71E+03	13.70	89.88	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1111	.000032	3.71E+03	13.70	90.12	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1120	.000083	3.71E+03	18.67	89.83	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1121	.000127	3.71E+03	18.67	90.17	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1130	.000293	3.71E+03	24.36	23.75	2.48535E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
21	1110	.000008	3.71E+03	13.70	89.88	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1111	.000032	3.71E+03	13.70	90.12	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1120	.000083	3.71E+03	18.67	89.83	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1121	.000127	3.71E+03	18.67	90.17	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1130	.000286	3.71E+03	22.75	22.09	2.45504E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01

Figure 3. Computer Printout Example of Geometric Relationship Data Matrix

3.5 Spacelab/Orbiter Data Matrices - The following subsections contain the computer printout data matrices as previously described for the three Spacelab/Orbiter configurations. The subsections are organized such that all configuration, viewfactor and geometric relationship data is contained in one subsection for each Spacelab/Orbiter configuration (e.g. subsection 3.5.1 contains the SL-1/Orbiter data matrices, subsection 3.5.2 the SL-2/Orbiter matrices and subsection 3.5.3 the SL-3/Orbiter matrices). In addition, each configuration subsection commences with a computer drawing of the configuration indicating general locations/nodal numbers of the primary surfaces and a summary listing of all modeled Orbiter and Spacelab surfaces to facilitate the interpretation of the computer printouts.

As previously mentioned, the baseline Shuttle Orbiter model was employed with each of the three Spacelab configurations. Figure 4 illustrates the primary Orbiter nodal surface number locations used in conjunction with the three Spacelab models. These Orbiter nodal numbers were held constant for each of the Spacelab configurations. Only the primary Orbiter nodal surface number locations have been identified in Figure 4. A large number of different surfaces have been used to obtain the necessary fidelity to accurately define a particular surface shape. These surfaces are of limited use in an assessment and have not been included. Those surfaces depicted do represent the majority of surfaces necessary to understand the basic content of the presented computer printouts.

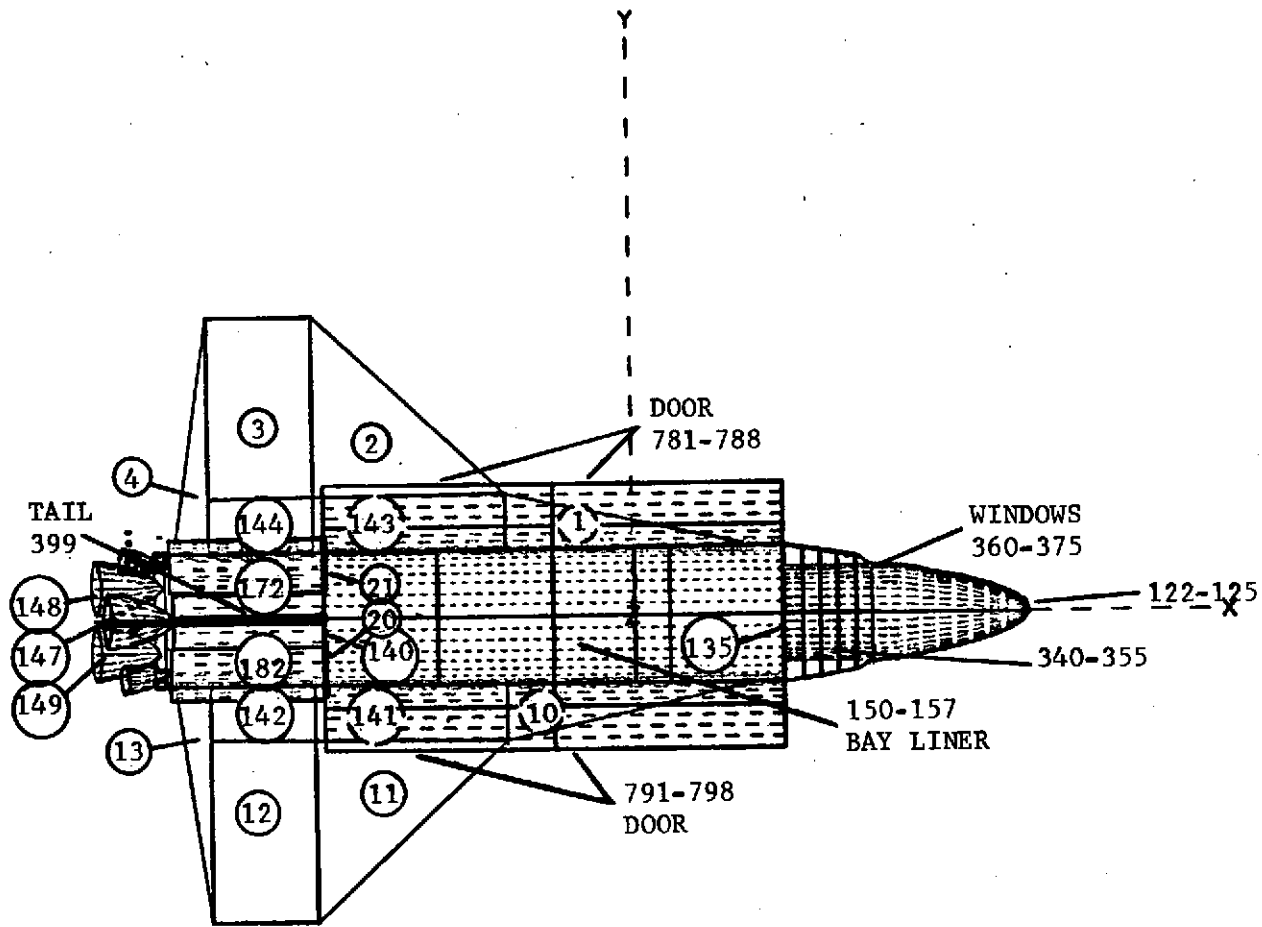


Figure 4. Primary Orbiter Nodal Surface Number Assignments

3.5.1 Spacelab-1/Orbiter Data Matrices - Figure 5 depicts the computer drawing of the modeled Spacelab-1 configuration indicating the nodal number assignments assigned to the primary Spacelab surfaces. (The Orbiter nodal assignments are depicted in Figure 4.) This is followed by a summary listing and description of the Spacelab-1/Orbiter nodal surfaces. The ensuing computer printouts contain the Input Data, Viewfactor Data, and Geometric Relationship Data matrices for the Spacelab-1/Orbiter configuration.

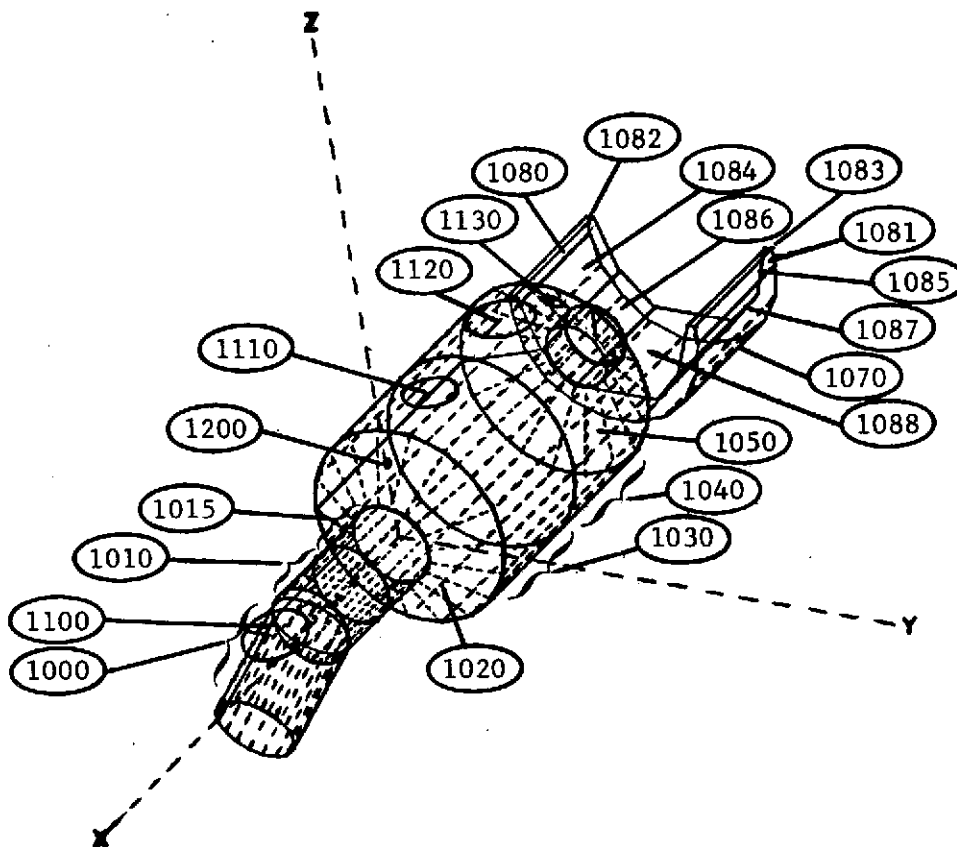


Figure 5. Primary Spacelab-1 Nodal Surface Number Assignments

NOOE	RCS	AREA	ALPH	EMTS	SURF. TYPE	ACTIVE	-----COMMENTS-----
145	BCDY	2.687E+07	0.	0.	TRAPEZOID	TOP	+Y REAR SIDE TAPER
146	BCDY	2.687E+03	0.	0.	TRAPEZOID	BOTTOM	- Y. REAR SIDE TAPER...
707	BCDY	2.827E+71	0.	0.	DISC	BOTTOM	.....JULY 8 EVAP...3 IN. RAD.
708	BCDY	2.827E+01	0.	0.	DISC	TOP	.....JULY 8 EVAP...3 IN. RAD.
147	BCDY	1.858E+04	0.	0.	PARABOLOID	CUTSID	TOP ENGINE
148	BCDY	1.858E+74	0.	0.	PARABOLOID	CUTSID	+ Y ENGINE
149	BCDY	1.858E+04	0.	0.	PARABOLOID	CUTSID	-Y ENGINE...
20	BCDY	3.711E+03	0.	0.	DISC	TOP	...-Y OWS SEALER ...
21	BCDY	3.711E+03	0.	0.	DISC	TOP	...+Y OWS SEALER ...
222	BCDY	2.573E+04	0.	0.	RECTANGLE	BOTTOM	BACK RECT 7.350EG
23	BCDY	1.634E+04	0.	0.	DISC	TOP	REAR END HALF DISK
407	BCDY	2.827E+01	0.	0.	DISC	TOP	BACK SIDE EVAPORAT, UPDATED
15	BCDY	2.827E+01	0.	0.	DISC	TOP	REAR END EVAPORATOR
10	BCDY	1.887E+74	0.	0.	TRAPEZOID	BOTTOM	....LEFT FRONT WING A ...
11	BCDY	4.045E+04	0.	0.	TRAPEZOID	TOP	.....LEFT MIDDLE WING BACK.P
141	BCDY	2.599E+04	0.	0.	RECTANGLE	TOP	ES INNER WING
12	BCDY	4.482E+04	0.	0.	RECTANGLE	TOP	..... LEFT BACK RECT. WING C
142	BCDY	1.434E+04	0.	0.	RECTANGLE	TOP	INNER WING C
13	BCDY	1.012E+04	0.	0.	TRAPEZOID	TOP	..... LEFT WING TAIL EDGE
1	BCDY	1.878E+04	0.	0.	TRAPEZOID	TOP	...FRONT WING TRIANGLE RT.A.50
2	BCDY	4.045E+04	0.	0.	TRAPEZOID	BOTTOM	.....MIDDLE WING TRAP. RT B ..
143	BCDY	2.599E+04	0.	0.	RECTANGLE	BOTTOM	B +Y RECTANGLE WING
3	BCDY	4.482E+04	0.	0.	RECTANGLE	BOTTOM	.... BACK WING RECT. RTC .129
144	BCDY	1.434E+04	0.	0.	RECTANGLE	BOTTOM	INNER WING C RECT
4	BCDY	1.012E+04	0.	0.	TRAPEZOID	BOTTOM	...WING TAIL FLAP RT 1493,1507
150	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
151	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
152	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
153	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
154	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
155	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
156	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
157	BCDY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
140	BCDY	3.269E+04	-0.	-0.	DISC	TOP	END BAY AREA DISK
135	BCDY	3.269E+04	-0.	-0.	DISC	TOP	FRONT BAY AREA DISK
122	BCDY	1.527E+04	-0.	-0.	PARABOLOID	CUTSID	VERY NOSE CONE
123	BCDY	1.527E+04	-0.	-0.	PARABOLOID	CUTSID	VERY NOSE CONE
124	BCDY	1.527E+04	-0.	-0.	PARABOLOID	CUTSID	VERY NOSE CONE
125	BCDY	1.527E+04	-0.	-0.	PARABOLOID	CUTSID	VERY NOSE CONE
320	BCDY	4.673E+03	-0.	-0.	CYLINDER	CUTSID	NOSE CYLINDER
321	BCDY	4.673E+03	-0.	-0.	CYLINDER	CUTSID	NOSE CYLINDER
322	BCDY	4.673E+03	-0.	-0.	CYLINDER	CUTSID	NOSE CYLINDER
323	BCDY	4.673E+03	-0.	-0.	CYLINDER	CUTSID	NOSE CYLINDER
324	BCDY	4.673E+03	-0.	-0.	CYLINDER	CUTSID	NOSE CYLINDER
325	BCDY	4.673E+03	-0.	-0.	CYLINDER	CUTSID	NOSE CYLINDER
326	BCDY	4.673E+03	-0.	-0.	CYLINDER	CUTSID	NOSE CYLINDER

REPRODUCIBILITY OF THE
 ORIGINAL PAGE IS POOR

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB) (RECEIVING SHUTTLE)

NODE	EOS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
327	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
328	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
329	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
330	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
331	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
332	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
333	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
334	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
335	BCDY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
340	BCDY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
341	BCDY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
342	BCDY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
343	BCDY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
344	BCDY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
345	BCDY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
346	BCDY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
347	BCDY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
348	BCDY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
349	BCDY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
350	BCDY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
351	BCDY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
352	BCDY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
353	BCDY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
354	BCDY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
355	BCDY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
360	BCDY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
361	BCDY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
362	BCDY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
363	BCDY	2.219E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
364	BCDY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
365	BCDY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
366	BCDY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
367	BCDY	2.219E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
368	BCDY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
369	BCDY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
370	BCDY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
371	BCDY	2.219E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
372	BCDY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
373	BCDY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
374	BCDY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
375	BCDY	2.219E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
401	BCDY	4.610E+04	.900	.900	RECTANGLE	BOTTOM	BOCY BOTTOM (FRNT) 4 1
402	BCDY	1.438E+05	.900	.900	RECTANGLE	BOTTOM	BOCY BOTTOM (REAR) 402
182	BCDY	3.931E+04	-0.	-0.	CYLINDER	OUTSID	CMSP0001
172	BCDY	3.933E+04	-0.	-0.	CYLINDER	OUTSID	CMSP0002
781	BCDY	2.472E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE OCOP.....

REPRODUCIBILITY OF THE
ORIGINAL PAGE IS POOR

MODEL = TAPE? STFF = 1
PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE	PCS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
782	BCDY	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
783	BCDY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
784	BCDY	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
785	BCDY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
786	BCDY	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
787	BCDY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
788	BCDY	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
791	BCDY	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
792	BCDY	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
793	BCDY	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
794	BCDY	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
795	BCDY	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
796	BCDY	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
797	BCDY	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
798	BCDY	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
301	BCDY	2.994E+04	0.	0.	TRAPEZOID	TOP	+Y SIDE FRONT TRAPEZOID
305	BCDY	4.997E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (MIDDLE-FRONT) 305
306	BCDY	5.155E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (BACK-FRONT) 306
311	BCDY	2.994E+04	0.	0.	TRAPEZOID	BOTTOM	-Y SIDE FRONT TRAPEZOID
315	BCDY	3.678E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (MIDDLE-STBD)
316	BCDY	3.795E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (BACK-STBD) 316
202	BCDY	3.695E+04	.900	.900	CYLINDER	OUTSID	BODY TOP (STBD-REAR) 202
212	BCDY	3.695E+04	.900	.900	CYLINDER	OUTSID	BODY TOP (FRONT-REAR) 212
380	BCDY	2.805E+04	.900	.900	TRAPEZOID	TOP	VERTICAL FIN (PORT) 20
385	BCDY	2.654E+04	.900	.900	TRAPEZOID	TOP	VERTICAL FIN (FRONT-AFT) 20
390	BCDY	2.805E+04	.900	.900	TRAPEZOID	BOTTOM	VERTICAL FIN (STBD) 20
395	BCDY	2.754E+04	.900	.900	TRAPEZOID	BOTTOM	VERTICAL FIN (STBD-AFT) 20
745	BCDY	2.827E+01	0.	0.	DISC	TOP	...POST FORWARD EVAPORATOR.....
700	BCDY	1.590E+03	0.	0.	DISC	BOTTOM	.....SUPER ENGINES (OMS LOCAT
701	BCDY	1.590E+03	0.	0.	DISC	TOP	.....SUPER ENGINES (OMS LOCAT
702	BCDY	1.593E+03	0.	0.	DISC	BOTTOM	.....SUPER ENGINES (OMS LOCAT
703	BCDY	1.590E+03	0.	0.	DISC	TOP	.....SUPER ENGINES (OMS LOCAT
24	BCDY	2.832E+01	0.	0.	DISC	BOTTOM	...BACK RCS ...LOCKING +/- Y.(
25	BCDY	2.832E+01	0.	0.	DISC	TOP	...BACK RCS ...LOCKING +/- Y.(
18	BCDY	2.826E+01	0.	0.	DISC	BOTTOM	...FRONT RCS...LOCKING +/-Y AT
19	BCDY	2.826E+01	0.	0.	DISC	TOP	...FRONT RCS...LOCKING +/-Y AT
26	BCDY	2.827E+01	0.	0.	DISC	BOTTOM	...BACK RCS LOCKING +/- Z...7/
27	BCDY	2.827E+01	0.	0.	DISC	TOP	...BACK RCS LOCKING +/- Z...7/
16	BCDY	2.827E+01	0.	0.	DISC	BOTTOM	...MIDDLE EVAP. LOCKING +/- Y.
17	BCDY	2.827E+01	0.	0.	DISC	TOP	...MIDDLE EVAP. LOCKING +/- Y.
160	BCDY	1.750E+02	0.	0.	RECTANGLE	BOTTOM	...THIN STRIP BETWEEN DOORS AN
161	BCDY	1.750E+02	0.	0.	RECTANGLE	TOP	...THIN STRIP BETWEEN DOORS AN
162	BCDY	1.750E+02	0.	0.	RECTANGLE	BOTTOM	...THIN STRIP BETWEEN DOORS AN
163	BCDY	1.750E+02	0.	0.	RECTANGLE	TOP	...THIN STRIP BETWEEN DOORS AN
164	BCDY	1.750E+02	0.	0.	RECTANGLE	BOTTOM	...THIN STRIP BETWEEN DOORS AN
165	BCDY	1.750E+02	0.	0.	RECTANGLE	TOP	...THIN STRIP BETWEEN DOORS AN

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE	ECS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
166	BCDY	1.750E+02	0.	0.	RECTANGLE	BOTTOM	...THIN STRIP BETWEEN DOORS AN
167	BCDY	1.750E+02	0.	0.	RECTANGLE	TOP	...THIN STRIP BETWEEN DOORS AN
349	BCDY	4.152E+03	.900	.900	RECTANGLE	TOP	VERT. FIN LOG. EDGE 2
1000	SFLAB	1.512E+04	0.	0.	CYLINDER	OUTSID	TUNNEL 1, X=582 TO 672.4, SPA
1010	SFLAB	1.168E+04	0.	0.	CYLINDER	OUTSID	TUNNEL 2, X=672.4 TO 790.4, S
1015	SFLAB	1.168E+04	0.	0.	CYLINDER	OUTSID	TUNNEL 2, X=672.4 TO 790.4, S
1020	SFLAB	1.918E+04	0.	0.	CONE	OUTSID	FWD CONE, X=790.4 TO 816.1, SP
1200	SFLAB	2.805E+01	0.	0.	DISC	BOTTOM	ECS CONDENSATE VENT 802.1, SP
1201	SFLAB	2.805E+01	0.	0.	DISC	TOP	ECS CONDENSATE VENT 802.1, SP
1030	SFLAB	5.316E+04	0.	0.	CYLINDER	OUTSID	CORE SEGMENT X=816.1 T
1040	SFLAB	5.316E+04	0.	0.	CYLINDER	OUTSID	EXPERIMENT SEGMENT X=922
1050	SFLAB	2.102E+04	0.	0.	CONE	OUTSID	AFT CONE TAPER, X=1027.9 TO
1060	SFLAB	4.745E+03	0.	0.	CYLINDER	OUTSID	AFT AIRLOCK, X=1059.3 TO 108
1065	SFLAB	2.059E+03	0.	0.	DISC	TOP	AFT AIRLOCK DISC X= 1088.8,
1070	SFLAB	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET BOTTOM CYLINDER X= 110
1080	SFLAB	1.596E+03	0.	0.	RECTANGLE	TOP	-Y PALLET OUTSIDE STRIP
1081	SFLAB	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET OUTSIDE STRIP
1082	SFLAB	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLET TOP STRIP X=1101.2 T
1083	SFLAB	6.840E+02	0.	0.	RECTANGLE	TOP	+Y PALLET TOP STRIP ,X= 1101.
1084	SFLAB	5.166E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP FANNEL,X=1101.2
1085	SFLAB	5.166E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP FANNEL,X=1101.2
1086	SFLAB	4.093E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM FANNEL, X=11
1087	SFLAB	4.093E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM FANNEL,X 110
1088	SFLAB	7.866E+03	0.	0.	RECTANGLE	TOP	PALLET BOTTOM,X= 1101.2 TO 12
1100	SFLAB	1.963E+03	0.	0.	DISC	BOTTOM	TUNNEL EVA HATCH X=627. SPACE
1101	SFLAB	1.963E+03	0.	0.	DISC	TOP	TUNNEL EVA HATCH X=627. SPACE
1110	SFLAB	1.219E+03	0.	0.	DISC	BOTTOM	CORE SEGMENT WINDOW, X=869. S
1111	SFLAB	1.219E+03	0.	0.	DISC	TOP	CORE SEGMENT WINDOW, X=869. S
1120	SFLAB	2.059E+03	0.	0.	DISC	BOTTOM	EXPERIMENT SEGMENT WINDOW,
1121	SFLAB	2.059E+03	0.	0.	DISC	TOP	EXPERIMENT SEGMENT WINDOW,
1130	SFLAB	2.427E+02	0.	0.	DISC	BOTTOM	AFT AIRLOCK WINDOW X=1043.6,
1131	SFLAB	2.427E+02	0.	0.	DISC	TOP	AFT AIRLOCK WINDOW X=1043.6,

SPACELAB-1 INPUT DATA MATRIX

The following pages contain the input data computer printouts for the Spacelab-1/Orbiter configuration.

INPUT CARD CCL. = 12345678 1 234567A 2 234567A 3 2345678 4 2345678 5 2345678 6 234567A 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

HEADER	SURFACE DATA		
I	ICSN=50	41	AA
	TX=0., TY=0., TZ=0.	42	AA
	ROTX=0., ROTY=0., ROTZ=0.	43	AA
I	ICSN = 1	44	AA
	TX=800., TY=0., TZ=0.	45	AA
	ROTX=-180., ROTY=0., ROTZ=0.	46	AA
I	ICSN = 2	47	AA
	TX = -5.0000000000E+02	48	AA
	TY = 0.	49	AA
	TZ = 0.	50	AA
	ROTX = -180.0000	51	AA
	ROTY = -0.	52	AA
	ROTZ = 0.	53	AA
I	ICSN = 3	54	AA
	TX = 8.0000000000E+02	55	AA
	TY = 0.	56	AA
	TZ = 0.	57	AA
	ROTX = -90.0000	58	AA
	ROTY = -0.	59	AA
	ROTZ = 90.0000	60	AA
I	ICSN = 4	61	AA
	TX = 4.3000000000E+02	62	AA
	TY = 6.2900000000E+01	63	AA
	TZ = 2.4000000000E+01	64	AA
	ROTX = 79.7000	65	AA
	ROTY = 41.0000	66	AA
	ROTZ = 0.	67	AA
I	ICSN = 5	68	AA
	TX = 4.3000000000E+02	69	AA
	TY = -6.2900000000E+01	70	AA
	TZ = 2.4000000000E+01	71	AA
	ROTX = 100.3000	72	AA
	ROTY = -41.0000	73	AA
	ROTZ = 0.	74	AA
I	ICSN= 6	75	AA
	TX=-195.	76	AA
	TY=0.	77	AA
	TZ=14.	78	AA
	ROTX=0., ROTY=90., ROTZ=0.	79	AA
I	ICSN=7	80	AA
	TX=-116., TY=0., TZ=14.	81	AA
	ROTX=0., ROTY=90., ROTZ=0.	82	AA
I	ICSN=8	83	AA
	TX=-116., TY=0., TZ=14.	84	AA
	ROTX=0., ROTY=90., ROTZ=0.	85	AA
I	ICSN=9	86	AA
	TX=156., TY=0., TZ=14.	87	AA
	ROTX=0., ROTY=-90., ROTZ=0.	88	AA
I	ICSN=10	89	AA
	TX=125., TY=0., TZ=14.	90	AA
		91	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	ROTX=0.,ROTY=90.,ROTZ=0.	92	AA
I	ICSN = 11	93	AA
	TX=-470.,TY=-78.14,TZ=65.56	94	AA
	ROTX=0.,ROTY=90.,ROTZ=0.	95	AA
I	ICSN=12	96	AA
	TX=-470.,TY=+78.14,TZ=65.56	97	AA
	ROTX=0.,ROTY=90.,ROTZ=0.	98	AA
I	ICSN=13	99	AA
	TX =-700.,TY=00.,TZ=50.	100	AA
	ROTX=0.0,ROTY=-80.,ROTZ=0.	101	AA
I	ICSN=14	102	AA
	TX=-717.,TY=0.0,TZ=-50.	103	AA
	ROTX=0.0,ROTY=-80.,ROTZ=0.	104	AA
I	ICSN=15	105	AA
	TX=-711.,TY=0.0,TZ=0.0	106	AA
	ROTX=0.0,ROTY=-97.35,ROTZ=0.0	107	AA
I	ICSN=16	108	AA
	TX=-705.,TY=88.,TZ=70.5	109	AA
	ROTX=0.,ROTY=-74.183,ROTZ=12.241	110	AA
I	ICSN=17	111	AA
	TX=-715.,TY=-88.,TZ=70.5	112	AA
	ROTX=0.,ROTY=-74.183,ROTZ=12.241	113	AA
I	ICSN=20	114	AA
	TX=0.,TY=102.,TZ=0.	115	AA
	ROTY=-5.,ROTX=0.,ROTZ=0.	116	AA
I	ICSN=21	117	AA
	TX=0.,TY=-102.,TZ=0.	118	AA
	ROTX=5.,ROTY=0.,ROTZ=0.	119	AA
BCS	PCCY	120	AA
S	SURF=145,TYPE=TRAP,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	121	AA
	P1=-698.,102.,0.	122	AA
	P2=-698.,102.,-125.	123	AA
	P3=-728.,102.,-125.	124	AA
	P4=-711.,102.,0.	125	AA
	PROCP=0.,0.	126	AA
	COM= * *Y REAR SIDE TAPER*	127	AA
S	SURF=146,TYPE=TRAP,ACTIVE=BOTTON,SHADE=BOTH,BSHADE=BOTH	128	AA
	P1=-698.,-102.,0.	129	AA
	P2=-698.,-102.,-125.	130	AA
	P3=-728.,-102.,-125.	131	AA
	P4=-711.,-102.,0.	132	AA
	PROCP=0.,0.	133	AA
	COM= * - Y. REAR SIDE TAPER...*	134	AA
S	SURF=707,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	135	AA
	F1=218.,104.,-47.	136	AA
	F2=218.,104.,-50.	137	AA
	F3=215.,104.,-47.	138	AA
	F4=215.,104.,-47.	139	AA
	PROCP=0.,0.	140	AA
	COM= *JULY 2 EVAP..3 IN. SAC. UF FRONT CLOSE UNDER WING*	141	AA
S	SURF=147,TYPE=PARAB,ACTIVE=OUT,SHADE=ROTH,BSHADE=ROTH	142	AA

MODEL = CONTAP
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	DIMENSIONS=4.4,0.0,100.0,360.	143	AA
	ICSN=13	144	AA
	PRCP=0.,0.	145	AA
	CCM=* TOP ENGIN *	146	AA
S	SURF=148,TYPE=PARAB,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	147	AA
	DIMENSIONS=4.4,0.0,100.0,360.	148	AA
	ICSN=14,TV=+50.	149	AA
	PROP=0.,0.	150	AA
	CCM = * + Y ENGIN *	151	AA
S	SURF=149,TYPE=PARAB,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	152	AA
	DIMENSIONS=4.4,0.0,100.0,360.	153	AA
	ICSN = 14, TV = -50.	154	AA
	PROP=0.,0.	155	AA
	CCM = * -Y ENGIN...*	156	AA
S	SURF=20,TYPE=DISC,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	157	AA
	DIMENSIONS=0.0,0.0,45.,125.,335.	158	AA
	PRCP=0.,0.	159	AA
	ICSN=11	160	AA
	CCM = * ...-Y OWS SEALER ...*	161	AA
S	SURF=21,TYPE=DISC,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	162	AA
	DIMENSIONS=0.0,0.0,45.,25.,235.	163	AA
	PRCP=0.,0.	164	AA
	ICSN=12	165	AA
	CCM = * ...Y OWS SEALER ...*	166	AA
S	SURF=222,TYPE=RECT,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	167	AA
	P1=-728.,-102.,-125.	168	AA
	P2=-728.,112.,-125.	169	AA
	P3=-711.,102.,0.0	170	AA
	PRCF=0.,0.	171	AA
	CCM=* BACK RECT 7.350DEG*	172	AA
S	SURF=23,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	173	AA
	DIMENSIONS=0.0,0.0,102.,90.,270.	174	AA
	PROP=0.,0.	175	AA
	ICSN=15	176	AA
	CCM=* REAR END HALF DISK*	177	AA
S	SURF=407,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	178	AA
	P1=-592.0,113.,-77.	179	AA
	P2=-592.0,113.,-80.	180	AA
	P3=-595.0,113.,-77.	181	AA
	P4=-595.0,113.,-77.	182	AA
	PRCF=0.,0.	183	AA
	CCM=* BACK SIDE EVAPORAT, UPDATED JULY 18, 6 IN DIA.*	184	AA
S	SURF=15,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	185	AA
	P1=-719.,126.,-95.	186	AA
	P2=-719.,126.,-98.	187	AA
	P3=-722.,126.,-95.	188	AA
	P4=-722.,126.,-95.	189	AA
	PROP=0.,0.	190	AA
	CCM=* REAR END EVAPORATOR*	191	AA
S	SURF=10,TYPE=FLY,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	192	AA
	P1=230.,0.,-102.	193	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	P2=-192.,-89.,-61.	194.	AA
	P3=-192.,0.,-61.	195	AA
	ICSN=21	196	AA
	PROF=0.,0.	197	AA
	COM=*...LEFT FRONT WING A ...*	198	AA
S	SURF=11,TYPE=PCLY,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	199	AA
	P1=-192.,-89.,-60.	200	AA
	P2=-483.,-89.,-85.	201	AA
	P3=-483.,-366.,-85.	202	AA
	ICSN=21	203	AA
	PROF=1.,0.	204	AA
	COM=*...LEFT MIDDLE WING BACK B ...*	205	AA
S	SURF=141,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	206	AA
	P1=-192.,0.,-60.	207	AA
	P2=-483.,0.,-85.	208	AA
	P3=-483.,-89.,-85.	209	AA
	ICSN=21	210	AA
	PROF=0.,0.	211	AA
	COM=* RS INNER WING *	212	AA
S	SURF=12,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	213	AA
	P1=-644.,-89.,-90.	214	AA
	P2=-644.,-366.,-90.	215	AA
	P3=-483.,-366.,-85.	216	AA
	ICSN=21	217	AA
	PROF=0.,0.	218	AA
	COM=*...LEFT BACK RECT. WING C ...*	219	AA
S	SURF=142,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	220	AA
	P1=-644.,0.,-90.	221	AA
	P2=-644.,-89.,-90.	222	AA
	P3=-483.,-89.,-85.	223	AA
	ICSN=21	224	AA
	PROF=0.,0.	225	AA
	COM=* INNER WING C*	226	AA
S	SURF=13,TYPE=PCLY,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	227	AA
	P1=-698.,0.,-102.	228	AA
	P2=-644.,-366.,-90.	229	AA
	P3=-644.,0.,-90.	230	AA
	PROF=0.,0.	231	AA
	ICSN=21	232	AA
	COM=*...LEFT WING TAIL EDGE D ...*	233	AA
S	SURF=1,TYPE=PCLY,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	234	AA
	P1=230.,0.,-70.	235	AA
	P2=-192.,89.,-60.	236	AA
	P3=-192.,0.,-60.	237	AA
	PROF=0.,0.	238	AA
	ICSN=20	239	AA
	COM=*...FRONT WING TRIANGLE RT.A.582.1024*	240	AA
S	SURF=2,TYPE=PCLY,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	241	AA
	PROF=0.,0.	242	AA
	P1=-192.,89.,-60.	243	AA
	P2=-483.,89.,-85.	244	AA

REPRODUCIBILITY OF THIS
ORIGINAL PAGE IS POOR

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	P3=-483.,366.,-85.	245	AA
	CCM=*.....MIDDLE WING TRAP, RT E ..1024,1292*	246	AA
	ICSN=20	247	AA
S	SURF=143,TYPE=RECT,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	248	AA
	P1=-192.,0.,-60.	249	AA
	P2=-483.,0.,-85.	250	AA
	P3=-483.,89.,-85.	251	AA
	PROF=0.,0.	252	AA
	ICSN=20	253	AA
	CCM=*P *Y RECTANGLE WING*	254	AA
S	SURF=3,TYPE=RECT,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	255	AA
	P1=-644.,89.,-90.	256	AA
	P2=-644.,366.,-90.	257	AA
	P3=-487.,366.,-85.	258	AA
	PROF=0.,0.	259	AA
	ICSN=20	260	AA
	CCM=*.... BACK WING RECT. RTC .1292,1453*	261	AA
S	SURF=144,TYPE=RECT,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	262	AA
	P1=-644.,0.,-90.	263	AA
	P2=-644.,89.,-90.	264	AA
	P3=-483.,89.,-85.	265	AA
	PROF=0.,0.	266	AA
	ICSN=20	267	AA
	CCM=* INNER WING C RECT*	268	AA
S	SURF=4,TYPE=RECT,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	269	AA
	P1=-698.,0.,-102.	270	AA
	P2=-644.,366.,-90.	271	AA
	P3=-644.,0.,-90.	272	AA
	PROF=0.,0.	273	AA
	ICSN=20	274	AA
	CCM=*...WING TAIL FLAP RT 1453,1507*	275	AA
S	SURF= 150,SHADE=BOTH,BSHADE=BOTH,ALPHA=-0.,EMISS=-0.	276	AA
	TRANS=-0.,TRANI=-0.,COM=*BAY AREA CYLINDER	277	AA
	TYPE=CYLINDER,ACTIVE=INSIDE,ALPH= 1.02000E+02	278	AA
	RMIN= 0.,RMAX= 7.00000E+02,CMIN= 0.	279	AA
	GMAX= 1.00000E+02,NNX= 2,NNY= 4,ICSN= -0	280	AA
	POSITION=-4.70000E+02, 0., 0.	281	AA
	ROTZ = -0., ROTY = 90.0000, ROTX = 0.	282	AA
S	SURF= 140,SHADE=BOTH,BSHADE=BOTH,ALPHA=-0.,EMISS=-0.	283	AA
	TRANS=-0.,TRANI=-0.,COM=* END BAY AREA DISK	284	AA
	TYPE=DISC,ACTIVE=TOP,ALPH= 0.	285	AA
	RMIN= 0.,RMAX= 1.02000E+02,CMIN= 0.	286	AA
	GMAX= 3.00000E+02,NNX= 1,NNY= 1,ICSN= -0	287	AA
	POSITION=-4.70000E+02, 0., 0.	288	AA
	ROTZ = -0., ROTY = 90.0000, ROTX = 0.	289	AA
S	SURF= 135,SHADE=BOTH,BSHADE=BOTH,ALPHA=-0.,EMISS=-0.	290	AA
	TRANS=-0.,TRANI=-0.,COM=* FRONT BAY AREA DISK	291	AA
	TYPE=DISC,ACTIVE=TOP,ALPH= 0.	292	AA
	RMIN= 0.,RMAX= 1.02000E+02,CMIN= 0.	293	AA
	GMAX= 3.00000E+02,NNX= 1,NNY= 1,ICSN= -0	294	AA
	POSITION= 2.30000E+02, 0., 0.	295	AA

MODEL = COATAP
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD CCL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

LINE	DESCRIPTION	EDIT NO.	OLD EDIT NO.	LABEL
S	ROTY = -0. , ROTY = -90.0000, ROTX = 0.	296		AA
	SURFA= 122, SHADE=ROTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.	297		AA
	TRANS=-0. , TRANI=-0. , COM=* VERY NOSE CONE	298		AA
	TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 6.13000E+00	299		AA
	RMIN= 0. , RMAX= 2.00000E+02, CMIN= 0.	300		AA
	CMAX= 3.60000E+02, NNX= 4, NNY= 1, ICSN= 1	301		AA
	POSITION= 2.00000E+02, 0. , -3.00000E+01	302		AA
	ROTY = -180.0000, ROTY = -90.0000, ROTX = 0.	303		AA
S	SURFA= 320, SHADE=BOTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.	304		AA
	TRANS=-0. , TRANI=-0. , COM=* NOSE CYLINDER	305		AA
	TYPE=CYLINDER , ACTIVE=OUTSIDE, ALPH= 7.00000E+01	306		AA
	RMIN= 0. , RMAX= 1.70000E+02, CMIN= 0.	307		AA
	CMAX= 3.60000E+02, NNX= 4, NNY= 4, ICSN= 1	308		AA
	POSITION= 4.00000E+02, 0. , -3.00000E+01	309		AA
	ROTY = -180.0000, ROTY = -90.0000, ROTX = 0.	310		AA
S	SURFA= 340, SHADE=ROTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.	311		AA
	TRANS=-0. , TRANI=-0. , COM=* HOOD PARTIAL RACK	312		AA
	TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 7.03000E+00	313		AA
	RMIN= 2.60000E+02, RMAX= 3.70000E+02, CMIN= 0.	314		AA
	CMAX= 3.60000E+02, NNX= 4, NNY= 4, ICSN= 1	315		AA
	POSITION= 2.00000E+02, 0. , 0.	316		AA
	ROTY = -180.0000, ROTY = -90.0000, ROTX = 0.	317		AA
S	SURFA= 360, SHADE=BOTH, BSHADE=ROTH, ALPHA=-0. , EMISS=-0.	318		AA
	TRANS=-0. , TRANI=-0. , COM=* WINDOW	319		AA
	TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 2.38000E+01	320		AA
	RMIN= 1.60000E+01, RMAX= 7.68000E+01, CMIN= 0.	321		AA
	CMAX= 3.60000E+02, NNX= 4, NNY= 4, ICSN= 1	322		AA
	POSITION= 3.80000E+02, 0. , 0.	323		AA
	ROTY = -180.0000, ROTY = -90.0000, ROTX = 0.	324		AA
S	SURFA= 401, SHADE=ROTH, BSHADE=ROTH, ALPHA= .900, EMISS= .900	325		AA
	TRANS=-0. , TRANI=-0. , COM=* BODY BOTTOM (FRONT) 4 1	326		AA
	TYPE=RECTANGLE , ACTIVE=BOTTOM , ALPH= 0.	327		AA
	RMIN=-1.02000E+02, RMAX= 1.02000E+02, CMIN= 0.	328		AA
	CMAX= 2.26000E+02, NNX= 1, NNY= 1, ICSN= 1	329		AA
	POSITION= 5.70000E+02, 0. , -1.02000E+02	330		AA
	ROTY = -0. , ROTY = 5.3870, ROTX = 0.	331		AA
S	SURFA= 402, SHADE=ROTH, BSHADE=ROTH, ALPHA= .900, EMISS= .900	332		AA
	TRANS=-0. , TRANI=-0. , COM=* BODY BOTTOM (REAR) 4 02	333		AA
	TYPE=RECTANGLE , ACTIVE=BOTTOM , ALPH=-1.25000E+02	334		AA
	RMIN=-1.02000E+02, RMAX= 1.02000E+02, CMIN= 2.25000E+02	335		AA
	CMAX= 9.70000E+02, NNX= 1, NNY= 1, ICSN= 1	336		AA
	POSITION= 5.70000E+02, 0. , 0.	337		AA
	ROTY = -0. , ROTY = -0. , ROTX = 0.	338		AA
S	SURFA= 182, SHADE=ROTH, BSHADE=ROTH, ALPHA=-0. , EMISS=-0.	339		AA
	TRANS=-0. , TRANI=-0. , COM=* CMSPCC1	340		AA
	TYPE=CYLINDER , ACTIVE=OUTSIDE, ALPH= 4.50000E+01	341		AA
	RMIN= 0. , RMAX= 2.35000E+02, CMIN= 3.50000E+01	342		AA
	CMAX= 2.48000E+02, NNX= 1, NNY= 1, ICSN= -0	343		AA
	POSITION=-4.78000E+02, -7.81400E+01, 8.55600E+01	344		AA
	ROTY = -0. , ROTY = -90.0000, ROTX = 0.	345		AA
S	SURFA= 172, SHADE=ROTH, BSHADE=ROTH, ALPHA=-0. , EMISS=-0.	346		AA

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ORIGINAL PAGE IS POOR

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MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	TRANS=-0. ,TRANI=-0. ,COM=* CHSPDC2	347	AA
	TYPE=CYLINDER ,ACTIVE=OLTSIDE,ALPH= 4.50009E+01	348	AA
	GMAX= 1.46000E+02,NNX= 1,NNY= 1,ICSN= -0	349	AA
	RMIN= 0. ,RMAX= 2.35000E+02,GMIN=-6.60000E+01	350	AA
	POSITION=-4.70000E+02, 7.81400E+01, 6.55600E+01	351	AA
	ROTZ = -0. , ROTY = -90.0000, ROTX = 0.	352	AA
S	SURFN= 781,TYPE=CYL,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	353	AA
	F1=230.,201.34,37.98	354	AA
	F2=230.,103.,19.	355	AA
	F3=230.,201.34,-64.02	356	AA
	F4=-470.,201.34,-64.02	357	AA
	FRCP=0.,0.	358	AA
	NNX=2,NNY=2	359	AA
	COM=*.....+Y SIDE DOOR.....*	360	AA
S	SURFN= 791,TYPE=CYL,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	361	AA
	F1=230.,-201.34,37.98	362	AA
	F2=230.,-201.34,-64.02	363	AA
	F3=230.,-103.,19.	364	AA
	F4=-470.,-103.,19.	365	AA
	FRCP=0.0,0.	366	AA
	NNX=2,NNY=2	367	AA
	COM=*... -Y SIDE DOOR....*	368	AA
S	SURFN= 301,TYPE=TRAP,BSHADE=BOTH,SHADE=BOTH,ACTIVE=TCP	369	AA
	F1=230.,102.,-102.	370	AA
	F2=4.,102.,-125.	371	AA
	F3=4.,102.,19.	372	AA
	F4=230.,102.,19.	373	AA
	COM=* +Y SIDE FRONT TRAPCZOID*	374	AA
	FRCP=0.,0.	375	AA
S	SURFN= 305,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	376	AA
	TRANS=-0. ,TRANI=-0. ,COM=*BCDY SIDE (MIDDLE-PORT) 305 *	377	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	378	AA
	RMIN=-1.25000E+02,RMAX= 19. ,GMIN= 2.25000E+02	379	AA
	GMAX= 5.72000E+02,NNX= 1,NNY= 1,ICSN= 1	380	AA
	POSITION= 5.70000E+02, 0. , 0.	381	AA
	ROTZ = -0. , ROTY = -0. , ROTX = 90.0000	382	AA
S	SURFN= 306,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	383	AA
	TRANS=-0. ,TRANI=-0. ,COM=*BCDY SIDE (BACK-PORT) 306 *	384	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	385	AA
	RMIN=-1.25000E+02,RMAX= 19. ,GMIN= 5.72000E+02	386	AA
	GMAX= 9.30000E+02,NNX= 1,NNY= 1,ICSN= 1	387	AA
	POSITION= 5.70000E+02, 0. , 0.	388	AA
	ROTZ = -0. , ROTY = -0. , ROTX = 90.0000	389	AA
S	SURFN= 311,TYPE=TRAP,BSHADE=BOTH,SHADE=BOTH,ACTIVE=RECTOM	390	AA
	P1=230.,102.,-102.	391	AA
	F2=4.,102.,-125.	392	AA
	F3=4.,102.,19.	393	AA
	F4=230.,102.,19.	394	AA
	COM=* -Y SIDE FRONT TRAPCZOID*	395	AA
	FRCP=0.,0.	396	AA
S	SURFN= 315,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	397	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

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	TRANS=-0. ,TRANT=-0. ,COM=*BODY SIDE (MIDDLE-STEC) 315 *	398	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	399	AA
	EMIN= 19. ,RMAX= 1.25000E+02,GMIN= 2.25000E+02	400	AA
	GMAX= 5.72000E+02,NNX= 1,NNY= 1,ICSN= 1	401	AA
	POSITION= 5.70000E+02, 0. , 0.	402	AA
	ROTZ = -0. , ROTY = -0. , ROTX = -90.0000	403	AA
S	SURFN= 316,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	404	AA
	TRANS=-0. ,TRANT=-0. ,COM=*BODY SIDE (BACK-STRO) 316 *	405	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	406	AA
	EMIN= 19. ,RMAX= 1.25000E+02,GMIN= 5.72000E+02	407	AA
	GMAX= 9.30000E+02,NNX= 1,NNY= 1,ICSN= 1	408	AA
	POSITION= 5.70000E+02, 0. , 0.	409	AA
	ROTZ = -0. , ROTY = -0. , ROTX = -90.0000	410	AA
S	SURFN= 202,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	411	AA
	TRANS=-0. ,TRANT=-0. ,COM=*BODY TOP (STRC-REAR) 202 *	412	AA
	TYPE=CYLINDER ,ACTIVE=OUTSIDE,ALPH= 1.02000E+02	413	AA
	EMIN= 7.00000E+02,GMAX= 9.30000E+02,GMIN= 2.70000E+02	414	AA
	GMAX= 3.60000E+02,NNX= 1,NNY= 1,ICSN= 1	415	AA
	POSITION= 5.70000E+02, 0. , 0.	416	AA
	ROTZ = -0. , ROTY = 90.0000, ROTX = 0.	417	AA
S	SURFN= 212,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	418	AA
	TRANS=-0. ,TRANT=-0. ,COM=*BODY TOP (PORT-REAR) 212 *	419	AA
	TYPE=CYLINDER ,ACTIVE=OUTSIDE,ALPH= 1.02000E+02	420	AA
	EMIN= 7.00000E+02,GMAX= 9.30000E+02,GMIN= 1.80000E+02	421	AA
	GMAX= 2.70000E+02,NNX= 1,NNY= 1,ICSN= 1	422	AA
	POSITION= 5.70000E+02, 0. , 0.	423	AA
	ROTZ = -0. , ROTY = 90.0000, ROTX = 0.	424	AA
S	SURFN= 382,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	425	AA
	TRANS=-0. ,TRANT=-0. ,COM=*VERTICAL FIN (FORT) 20 *	426	AA
	TYPE=TRAPEZOID ,ACTIVE=TOP ,ALPH= 0.	427	AA
	EMIN= 1.48400E+02,GMAX= 3.93400E+02,GMIN= 3.00000E+01	428	AA
	GMAX= 4.50000E+01,NNX= 1,NNY= 1,ICSN= 1	429	AA
	POSITION= 1.65840E+03, 0. , 4.95400E+02	430	AA
	ROTZ = -0. , ROTY = -180.0000, ROTX = 90.0000	431	AA
S	SURFN= 385,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	432	AA
	TRANS=-0. ,TRANT=-0. ,COM=*VERTICAL FIN (PORT-AFT) 20 *	433	AA
	TYPE=TRAPEZOID ,ACTIVE=TOP ,ALPH= 0.	434	AA
	EMIN= 1.48400E+02,GMAX= 3.93400E+02,GMIN= 1.50000E+01	435	AA
	GMAX= 3.00000E+01,NNX= 1,NNY= 1,ICSN= 1	436	AA
	POSITION= 1.65840E+03, 0. , 4.95400E+02	437	AA
	ROTZ = -0. , ROTY = -180.0000, ROTX = 90.0000	438	AA
S	SURFN= 390,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	439	AA
	TRANS=-0. ,TRANT=-0. ,COM=*VERTICAL FIN (STBC) 20 *	440	AA
	TYPE=TRAPEZOID ,ACTIVE=BOTTOM ,ALPH= 0.	441	AA
	EMIN= 1.48400E+02,GMAX= 3.93400E+02,GMIN= 3.00000E+01	442	AA
	GMAX= 4.50000E+01,NNX= 1,NNY= 1,ICSN= 1	443	AA
	POSITION= 1.65840E+03, 1.00000E+01, 4.95400E+02	444	AA
	ROTZ = -0. , ROTY = -180.0000, ROTX = 90.0000	445	AA
S	SURFN= 395,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	446	AA
	TRANS=-0. ,TRANT=-0. ,COM=*VERTICAL FIN (STBC-AFT) 20 *	447	AA
	TYPE=TRAPEZOID ,ACTIVE=BOTTOM ,ALPH= 0.	448	AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 1 2345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	BMIN= 1.48400E+02,BMAX= 3.93400E+02,GMIN= 1.50000E+01	449	AA
	GMAX= 3.00000E+01,NNX= 1,NNY= 1,ICSN= 1	450	AA
	POSITION= 1.65840E+03, 1.20000E-01, 4.95400E+02	451	AA
	ROTX = -0. , ROTY = -180.0000, ROTZ = 90.0000	452	AA
S	SURF=705,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=PTH	453	AA
	P1=327.,85.,-72.	454	AA
	P2=327.,85.,-75.	455	AA
	P3=324.,85.,-72.	456	AA
	P4=324.,85.,-72.	457	AA
	PROP=0.,0.	458	AA
	COM=*,...MOST FORWARD EVAPORATOR.....LOOKING +Y,6 IN DIA.*	459	AA
S	SURF=700,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,SHADE=PTH	460	AA
	DIMENSIONS=70.,0.,22.5,0.,360.	461	AA
	ICSN=16,PROP=0.,0.	462	AA
	COM=*,.....SUPER ENGINES (CMS LOCATION)..+Y..*	463	AA
S	SURF=702,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,SHADE=BOTH	464	AA
	DIMENSIONS=70.,0.,22.5,0.,360.	465	AA
	ICSN=17,PROP=0.,0.	466	AA
	COM=*,.....SUPER ENGINES (CMS LOCATION)..-Y..*	467	AA
S	SURF=24,TYPE=DISC,ACTIVE=BOTH,SHADE=NO,BSHADE=PTH	468	AA
	P1=-765.,134.,59.	469	AA
	P2=-765.,134.,62.	470	AA
	P3=-767.82,132.97,59.	471	AA
	P4=-767.82,132.97,59.	472	AA
	PROP=0.,0.	473	AA
	COM=*,...PACK PCS ...LOOKING +/- Y.(10 DEG CANT) .*	474	AA
S	SURF=18,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	475	AA
	P1=467.5,50.,-48.9	476	AA
	P2=470.5,51.,-48.9	477	AA
	P3=467.5,52.457,-47.18	478	AA
	P4=467.5,52.457,-47.18	479	AA
	PROP=0.,0.	480	AA
	COM=*,...FRONT PCS..LOOKING +/-Y AT 45 DEG. 7/23/74...*	481	AA
S	SURF=26,TYPE=DISC,ACTIVE=BOTH,SHADE=NO,BSHADE=BOTH	482	AA
	P1=-765.,118.,57.	483	AA
	P2=-765.,115.,57.	484	AA
	P3=-768.00,118.,57.00	485	AA
	P4=-768.00,118.,57.00	486	AA
	PROP=0.,0.	487	AA
	COM=*,...BACK PCS LOCKING +/- Z...7/23/74..*	488	AA
S	SURF=16,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=PTH	489	AA
	P1=-247.,105.,-21.	490	AA
	P2=-247.,105.,-24.	491	AA
	P3=-250.,105.,-21.	492	AA
	P4=-250.,105.,-21.	493	AA
	PROP=0.,0.	494	AA
	COM=*,...MIDDLE EVAP. LOCKING +/- Y.....*	495	AA
S	SURF=160,TYPE=RECT,ACTIVE=BOTH,SHADE=NO,BSHADE=BOTH	496	AA
	P1=230.,102.,19.	497	AA
	P2=230.,103.,19.	498	AA
	P3=55.,103.,19.	499	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

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ORIGINAL PAGE IS POOR

INPUT CARD COL.	1	2	3	4	5	6	7	8	EDIT NO.	OLD EDIT NO.	LABEL
		PROP=0.,0.							500		AA
		COM=*...THIN STRIP BETWEEN DOORS AND BODY(7/25/74).1ST FRONT*							501		AA
S		SURFN=162,TYPE=RECT,ACTIVE=BOTH,SHADE=NO,BSHADE=ECTH							502		AA
		F1=55.,102.,19.							503		AA
		F2=55.,103.,19.							504		AA
		F3=-120.,103.,19.							505		AA
		PROP=0.,0.							506		AA
		COM=*...THIN STRIP BETWEEN DOORS AND BODY(7/25/74).2ND FRONT*							507		AA
S		SURFN=164,TYPE=RECT,ACTIVE=BOTH,SHADE=NO,BSHADE=BOTH							508		AA
		F1=-120.,102.,19.							509		AA
		F2=-120.,103.,19.							510		AA
		F3=-295.,103.,19.							511		AA
		PROP=0.,0.							512		AA
		COM=*...THIN STRIP BETWEEN DOORS AND BODY(7/25/74).3RD END..*							513		AA
S		SURFN=166,TYPE=RECT,ACTIVE=BOTH,SHADE=NO,BSHADE=BOTH							514		AA
		F1=-295.,102.,19.							515		AA
		F2=-295.,103.,19.							516		AA
		F3=-470.,103.,19.							517		AA
		PROP=0.,0.							518		AA
		COM=*...THIN STRIP BETWEEN DOORS AND BODY(7/25/74).4RD END..*							519		AA
S		SURFN= 399,SHADE=BOTH,BSHADE=RECT,ALPHA= .900,EMISS= .900							520		AA
		TRANS=-1. ,TRANI=-0. ,COM=*VERT. FIN LG. EDGE 2 *							521		AA
		TYPE=RECTANGLE ,ACTIVE=TCP. ,ALPH= 0.							522		AA
		RMIN=-6.0000E+00,RMAX= 6.0000E+00,GMIN=-5.56000E+02							523		AA
		GMAX=-2.10000E+02,NNX= 1,NNY= 1,ICSN= 1							524		AA
		POSITION= 1.65840E+03, 0. , 4.95400E+02							525		AA
		ROTZ = -0. , ROTY = -45.0000, ROTX = 0.							526		AA
BCS		SPLAP							527		AA
S		SUFF=1000,TYPE=CYL,ACTIVE=OUT,BSHADE=RECT, SHADE=BOTH							528		AA
		ICSA=50							529		AA
		P1=582.,0.,366.							530		AA
		P2=582.,31.5,366.							531		AA
		P3=582.,31.5,366.							532		AA
		P4=672.4,31.5,400.							533		AA
		PROP=0.,0.							534		AA
		COM=* TUNNEL 1, X=582 TO 672.4, SPACELAB1 *							535		AA
S		SUFF=1010,TYPE=CYL,ACTIVE=OUT,BSHADE=RECT,SHADE=BOTH							536		AA
		ICSA=50							537		AA
		P1=672.4,0.,400.							538		AA
		P2=672.4,31.5,400.							539		AA
		P3=672.4,31.5,400.							540		AA
		P4=731.4,31.5,400.							541		AA
		PROP=0.,0.							542		AA
		COM=* TUNNEL 2, X=672.4 TO 790.4, SPACELAB1 ,SEG 1 *							543		AA
S		SUFF=1015,TYPE=CYL,ACTIVE=OUT,BSHADE=RECT,SHADE=BOTH							544		AA
		ICSA=50							545		AA
		P1=731.4,0.,400.							546		AA
		P2=731.4,31.5,400.							547		AA
		P3=731.4,31.5,400.							548		AA
		P4=790.4,31.5,400.							549		AA
		PROP=0.,0.							550		AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD CCL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	CON=* TUNNEL 2, X=672.4 TO 790.4, SFACELAB1 ,SEG 2 *	551	AA
S	SURF=1020,TYPE=CCONE,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=ECTH	552	AA
	ICSN=50	553	AA
	P1=816.1,0.,400.	554	AA
	P2=816.1,79.9,400.	555	AA
	P3=816.1,79.9,400.	556	AA
	P4=773.68,0.,400.	557	AA
	P5=790.4,31.5,400.	558	AA
	PRCP=0.,0.	559	AA
	CON=* FWD CCONE, X=790.4 TO 816.1, SFACELAB 1 *	560	AA
S	SURF=1200,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	561	AA
	ICSN=50	562	AA
	P1=802.1,0.,425.44	563	AA
	P2=802.10,3.0,425.44	564	AA
	P3=804.74,0.00,426.84	565	AA
	P4=804.74,0.,426.84	566	AA
	PRCP=0.,0.	567	AA
	CON=* ECS CONDENSATE VENT 802.1, SFACELAB 1 *	568	AA
S	SURF=1030,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=ECTH	569	AA
	ICSN=50	570	AA
	P1=816.1,0.,400.	571	AA
	P2=816.1,79.9,400.	572	AA
	P3=816.1,79.9,400.	573	AA
	P4=922.,79.9,400.	574	AA
	PRCP=0.,0.	575	AA
	CON=* CORE SEGMENT X=816.1 TO 922. , SPACELAB 1*	576	AA
S	SURF=1040,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=ECTH	577	AA
	ICSN=50	578	AA
	P1=922.,0.,400.	579	AA
	P2=922.,79.9,400.	580	AA
	P3=922.,79.9,400.	581	AA
	P4=1027.9,79.9,400.	582	AA
	PRCP=0.,0.	583	AA
	CON=* EXPERIMENT SEGMENT X=922 TO 1027.9, SPACELAB1*	584	AA
S	SURF=1050,TYPE=CCONE,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=ECTH	585	AA
	ICSN=50	586	AA
	P1=1027.9,0.,400.	587	AA
	P2=1027.9,79.9,400.	588	AA
	P3=1027.9,79.9,400.	589	AA
	P4=1078.07,0.,400.	590	AA
	P5=1059.3,25.6,400.	591	AA
	PRCP=0.,0.	592	AA
	CON=* AFT CCONE TAPER, X=1027.9 TO 1059.3 SPACELAB1*	593	AA
S	SURF=1060,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	594	AA
	ICSN=50	595	AA
	P1=1059.3,0.,400.	596	AA
	P2=1059.3,25.6,400.	597	AA
	P3=1059.3,25.6,400.	598	AA
	P4=1088.8,25.6,400.0	599	AA
	PRCP=0.,0.	600	AA
	CON=* AFT AIRLOCK, X=1059.3 TO 1088.8, SPACELAB1*	601	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD CCL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

S	SURF=1065,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	602	AA
	ICSN=50	603	AA
	P1=1088.8,0.,400.	604	AA
	P2=1088.8,25.6,400.	605	AA
	P3=1088.8,00.0,425.6	606	AA
	P4=1088.8,00.0,425.6	607	AA
	PRCP=0.,0.	608	AA
	COM=* AFT AIRLOCK DISC X= 1088.8, SPACELAB1*	609	AA
S	SURF=1070,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	610	AA
	ICSN=50	611	AA
	P1=1101.2,0.,400.	612	AA
	P2=1101.2,78.8,400.	613	AA
	P3=1101.2,-78.8,400.	614	AA
	P4=1215.2,-78.8,400.	615	AA
	PRCP=0.,0.	616	AA
	COM=* PALLET BOTTOM CYLINDER X= 1101.2 TO 1215.2 *	617	AA
S	SURF=1080,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	618	AA
	ICSN=50	619	AA
	P1=1101.2,-78.8,400.	620	AA
	P2=1215.2,-78.8,400.	621	AA
	P3=1215.2,-78.8,414.	622	AA
	PRCP=0.,0.	623	AA
	COM=* -Y PALLET OUTSIDE STRIP *	624	AA
S	SURF=1081,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	625	AA
	ICSN=50	626	AA
	P1=1215.2,78.8,414.	627	AA
	P2=1215.2,78.8,400.	628	AA
	P3=1101.2,78.8,400.	629	AA
	PRCP=0.,0.	630	AA
	COM=* +Y PALLET OUTSIDE STRIP *	631	AA
S	SURF=1082,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	632	AA
	ICSN=50	633	AA
	P1=1101.2,-78.8,414.	634	AA
	P2=1215.2,-78.8,414.	635	AA
	P3=1215.2,-72.8,414.	636	AA
	PRCP=0.,0.	637	AA
	COM=* -Y PALLET TOP STRIP X=1101.2 TO 1215.2 *	638	AA
S	SURF=1083,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	639	AA
	ICSN=50	640	AA
	P1=1101.2,72.8,414.	641	AA
	P2=1215.2,72.8,414.	642	AA
	P3=1215.2,78.8,414.	643	AA
	PRCP=0.,0.	644	AA
	COM=* +Y PALLET TOP STRIP ,X= 1101.2 TO 1215.2 *	645	AA
S	SURF=1084,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	646	AA
	ICSN=50	647	AA
	P1=1101.2,-72.8,414.	648	AA
	P2=1215.2,-72.8,414.	649	AA
	P3=1215.2,-58.5,371.	650	AA
	PRCP=0.,0.	651	AA
	COM=* -Y INSIDE TOP PANNEL,X=1101.2 TO 1215.2 *	652	AA

MOCEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

S	SURF=1085,TYPE = RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	653	AA
	ICSN=50	654	AA
	P1=1215.2,58.5,371.	655	AA
	P2=1215.2,72.8,414.	656	AA
	P3=1101.2,72.8,414.	657	AA
	PRCP=0.,0.	658	AA
	COM = * +Y INSIDE TOP PANNEL,X=1101.2 TO 1215.2 *	659	AA
S	SURF=1086,TYPE= RECT, ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	660	AA
	ICSN=50	661	AA
	P1=1101.2,-58.5,371.	662	AA
	P2=1215.2,-58.5,371.	663	AA
	P3=1215.2,-34.5,344.3	664	AA
	PRCP=0.,0.	665	AA
	COM = * -Y INSIDE BOTTOM PANNEL, X=1101.2 TO 1215.2 *	666	AA
S	SURF=1087,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	667	AA
	ICSN=50	668	AA
	P1=1101.2,34.5,344.3	669	AA
	P2=1215.2,34.5,344.3	670	AA
	P3=1215.2,58.5,371.	671	AA
	PRCP=0.,0.	672	AA
	COM = * +Y INSIDE BOTTOM PANNEL, X 1101.2 TO 1215.2 *	673	AA
S	SURF=1088,TYPE= RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	674	AA
	ICSN=50	675	AA
	P1=1101.2,-34.5,344.3	676	AA
	P2=1215.2,-34.5,344.3	677	AA
	P3=1215.2,34.5,344.3	678	AA
	PRCP= 0.,0.	679	AA
	COM = * PALLET SECTION,X= 1101.2 TO 1215.2 *	680	AA
S	SURF=1100,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	681	AA
	ICSN=50	682	AA
	P1=627.,0.,418.19	683	AA
	P2=627.22,0.,411.35	684	AA
	P3=627.,25.,418.19	685	AA
	P4=627.,25.,418.19	686	AA
	PRCP = 0.,0.	687	AA
	COM = * TUNNEL EVA HATCH X=627. SPACE LAB 1*	688	AA
S	SURF=1110,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	689	AA
	ICSN=50	690	AA
	P1=869.,0.,480.9	691	AA
	P2=869.,19.7,480.9	692	AA
	P3=849.3,0.,480.9	693	AA
	P4=849.3,0.,480.9	694	AA
	PRCP=0.,0.	695	AA
	COM = * CCRF SEGMENT WINDOW, X=869. SPACELAB 1 *	696	AA
S	SURF=1120,TYPE=DISC, ACTIVE=BOTH,SHADE= BOTH, BSHADE=BOTH	697	AA
	ICSN=50	698	AA
	P1=975.,0.,480.9	699	AA
	P2=975.,25.6,480.9	700	AA
	P3=949.4,0.,480.9	701	AA
	P4=949.4,0.,480.9	702	AA
	PRCP=0.,0.	703	AA

SURFACE DATA INPUT BLOCK

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	COM=* EXPERIMENT SEGMENT WINDOW,X=975. SPACELAB 1*	693	AA
S	SURF=1131,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	694	AA
	ICSN=5J	695	AA
	P1=1043.6,0.,455.09	696	AA
	P2=1039.43,0.,461.74	697	AA
	P3=1043.6,7.85,455.09	698	AA
	P4=1043.6,7.85,455.09	699	AA
	PRCP=0.,0.	700	AA
	COM=* AFT VIEWING WINDOW X=1043.6, SPACELAB1*	701	AA

SPACELAB-1 VIEWFACTOR DATA MATRIX

The following pages contain the viewfactor data computer printouts for the Spacelab-1/Orbiter configuration.

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

145	FF SUM = 0.	RCW CP TIME =	1.389	+ TRAP	+Y REAR SIDE TAPER
146	FF SUM = 0.	RCW CP TIME =	1.382	- TRAP	- Y. REAR SIDE TAPER...
707	FF SUM = 0.	RCW CP TIME =	2.861	- DISC	.....JULY 8 EVAP..3 IN. RAD.
708	FF SUM = 0.	RCW CP TIME =	1.204	+ DISC	.....JULY 8 EVAP..3 IN. RAD.
147	FF SUM = 0.	RCW CP TIME =	5.193	+ PARAB	TOP ENGIN
148	FF SUM = 0.	RCW CP TIME =	3.005	+ PARAB	+ Y ENGIN
149	FF SUM = 0.	RCW CP TIME =	2.988	+ PARAB	-Y ENGIN...

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
20	1039	CAL.	.002388	.000167	.002388	.002388	1.000000	1.000000	1.607	
20	1040	CAL.	.005851	.000438	.005851	.005851	1.000000	1.000000	1.879	
20	1050	CAL.	.052526	.009272	.052526	.059970	.875869	.875869	2.752	
20	1060	CAL.	.003103	.002427	.003103	.003103	1.000000	1.000000	3.033	
20	1065	CAL.	.009669	.017427	.009669	.009669	1.000000	1.000000	3.572	R
20	1081	CAL.	.003709	.008625	.003709	.003709	1.000000	1.000000	4.149	R
20	1082	CAL.	.000747	.004052	.000747	.000747	1.000000	1.000000	5.138	R
20	1083	CAL.	.005846	.031716	.005846	.005846	1.000000	1.000000	6.084	R
20	1084	CAL.	.015514	.011144	.015514	.015514	1.000000	1.000000	6.518	
20	1085	CAL.	.003710	.002665	.003710	.003710	1.000000	1.000000	6.843	
20	1086	CAL.	.011959	.019843	.011959	.011959	1.000000	1.000000	7.307	
20	1087	CAL.	.006441	.005840	.006441	.007381	.872652	.872652	7.741	
20	1088	CAL.	.023784	.011221	.023784	.023784	1.000000	1.000000	8.114	
20	FF SUM =	.1452	RCW CP TIME =	8.122	+ DISC	...-Y OWS SEALER ...				

MODEL = TAPE? STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) WC/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
21	1030	CAL.	.002388	.000167	.002388	.002388	1.000000	1.000000	1.712	
21	1040	CAL.	.005851	.000408	.005851	.005851	1.000000	1.000000	2.903	
21	1050	CAL.	.052804	.009322	.052804	.059954	.880735	.880735	2.854	
21	1060	CAL.	.003103	.002427	.003103	.003103	1.000000	1.000000	3.138	
21	1065	CAL.	.009669	.017427	.009669	.009669	1.000000	1.000000	3.672	R
21	1080	CAL.	.003709	.008625	.003709	.003709	1.000000	1.000000	4.210	R
21	1082	CAL.	.005846	.031716	.005846	.005846	1.000000	1.000000	5.195	R
21	1083	CAL.	.000747	.004952	.000747	.000747	1.000000	1.000000	6.178	R
21	1084	CAL.	.003710	.002655	.003710	.003710	1.000000	1.000000	6.502	
21	1085	CAL.	.015514	.011144	.015514	.015514	1.000000	1.000000	6.939	
21	1086	CAL.	.006441	.005840	.006441	.007381	.872652	.872652	7.371	
21	1087	CAL.	.011959	.010843	.011959	.011959	1.000000	1.000000	7.826	
21	1088	CAL.	.023784	.011221	.023784	.023784	1.000000	1.000000	8.189	
21	FF SUM =	.1455	RCW CP TIME =	8.196	+ DISC	..+Y OWS SEALER ...				
222	FF SUM =	0.	RCW CP TIME =	1.013	- RECT	BACK RECT 7.35DEG				
23	FF SUM =	0.	RCW CP TIME =	1.131	+ DISC	REAR END HALF DISK				
407	FF SUM =	0.	RCW CP TIME =	1.206	+ DISC	BACK SIDE EVAPORAT, UPDATED				
15	FF SUM =	0.	RCW CP TIME =	1.210	+ DISC	REAR END EVAPORATOR				
10	FF SUM =	0.	RCW CP TIME =	17.267	- TRAP	....LEFT FRONT WING A ...				
11	1030	CAL.	.000556	.000423	.000556	.000687	.809501	.809501	.962	
11	1040	CAL.	.000114	.000087	.000114	.006199	.618409	.618409	2.709	*
11	FF SUM =	.0007	RCW CP TIME =	4.649	+ TRAP	.....LEFT MIDDLE WING BACK.B				

MODEL = TAPE? STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
141		FF SUM = 0.								+ RECT ES INNER WING
12	1030	CAL.	.000281	.000236	.000281	.000388	.725381	.725381	.910	
12	1040	CAL.	.000529	.000444	.000529	.000804	.658039	.658039	1.078	
12		FF SUM = .0008								+ RECT LEFT BACK RECT. WING C
142		FF SUM = 0.								+ RECT INNER WING C
13		FF SUM = 0.								+ TRAP LEFT WING TAIL EDGE
1		FF SUM = 0.								+ TRAP ...FRONT WING TRIANGLE PT.A.58
2	1030	CAL.	.000556	.000423	.000556	.000687	.809501	.809501	.972	
2	1040	CAL.	.000114	.000087	.000114	.000199	.018409	.018409	2.844	*
2		FF SUM = .0007								- TRAP .....MIDDLE WING TRAP, RT B ..
143		FF SUM = 0.								- RECT E +Y RECTANGLE WING
3	1030	CAL.	.000281	.000236	.000281	.000388	.725381	.725381	.916	
3	1040	CAL.	.000529	.000444	.000529	.000804	.658039	.658039	1.089	
3		FF SUM = .0008								- RECT BACK WING RECT. RTC .129
144		FF SUM = 0.								- RECT INNER WING C RECT
4		FF SUM = 0.								- TRAP ...WING TAIL FLAP RT 1453,1507
150	1030	CAL.	.000205	.000108	.000205	.000205	1.000000	1.000000	1.418	
150	1040	CAL.	.001251	.000660	.001251	.001251	1.000000	1.000000	1.632	
150	1050	CAL.	.000067	.0000774	.000067	.0003109	.520691	.520691	2.960	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WC/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
150	1070	CAL.	.430157	.427370	.430157	.430157	1.000000	1.000000	56.260	*
150	1081	CAL.	.016158	.283866	.016158	.016158	1.000000	1.000000	60.750	R
150	1084	CAL.	.005355	.029064	.005355	.036435	.146972	.146972	65.605	R
150	1086	CAL.	.002933	.020097	.002933	.026519	.110619	.110619	68.382	R
150	FF SUM =	.4941	RCW CP TIME =	68.724			- CYLN		BAY AREA CYLINDER	
151	1030	CAL.	.025332	.013360	.025332	.025332	1.000000	1.000000	4.182	*
151	1040	CAL.	.432843	.228279	.432843	.432843	1.000000	1.000000	21.711	*
151	1050	CAL.	.094272	.125740	.094272	.094272	1.000000	1.000000	34.567	*R
151	1060	CAL.	.021772	.122745	.020772	.027572	.753398	.753398	35.786	R
151	1070	CAL.	.018229	.018111	.018229	.018229	1.000000	1.000000	42.750	*
151	1091	CAL.	.010955	.016783	.010955	.010955	1.000000	1.000000	43.761	*R
151	1084	CAL.	.008868	.048132	.008868	.014627	.606279	.606279	44.634	R
151	1086	CAL.	.005864	.040176	.005864	.008788	.667322	.667322	45.158	R
151	1088	CAL.	.011770	.006309	.001770	.002970	.595805	.595805	46.649	*R
151	FF SUM =	.6089	RCW CP TIME =	46.657			- CYLN		BAY AREA CYLINDER	
152	1000	CAL.	.019461	.013877	.009461	.009938	.951915	.951915	2.594	*R
152	1010	CAL.	.018484	.044382	.018484	.019508	.947467	.947467	6.508	*R
152	1015	CAL.	.058230	.139338	.058230	.064390	.901229	.901229	7.242	R
152	1020	CAL.	.089210	.139426	.089210	.089210	1.000000	1.000000	18.413	*R
152	1030	CAL.	.418305	.227612	.418305	.418305	1.000000	1.000000	38.972	*
152	1040	CAL.	.016706	.008811	.016706	.016706	1.000000	1.000000	40.740	*
152	1070	CAL.	.000164	.000163	.000164	.000164	1.000000	1.000000	41.381	
152	1081	CAL.	.000014	.000247	.000014	.000014	1.000000	1.000000	41.731	R
152	FF SUM =	.6114	RCW CP TIME =	42.770			- CYLN		BAY AREA CYLINDER	
153	1000	CAL.	.159010	.233235	.159010	.159010	1.000000	1.000000	1.443	R
153	1010	CAL.	.080322	.192863	.080322	.080322	1.000000	1.000000	2.438	R
153	1015	CAL.	.037446	.089913	.037446	.037446	1.000000	1.000000	6.792	*R
153	1020	CAL.	.054125	.079131	.054125	.062575	.864965	.864965	7.637	R
153	1030	CAL.	.001148	.000005	.001148	.001148	1.000000	1.000000	8.204	
153	1040	CAL.	.000194	.000193	.000194	.000194	1.000000	1.000000	8.393	
153	1070	CAL.	.000027	.000027	.000027	.000027	1.000000	1.000000	9.051	
153	1081	CAL.	.000002	.000009	.000002	.000002	1.000000	1.000000	9.434	R
153	FF SUM =	.3323	RCW CP TIME =	10.441			- CYLN		BAY AREA CYLINDER	
154	1020	CAL.	.000205	.000108	.000205	.000205	1.000000	1.000000	1.580	

MODEL = TAFE? STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
154	1040	CAL.	.001251	.000669	.001251	.001251	1.000000	1.000000	1.795	
154	1050	CAL.	.035964	.047969	.035964	.073047	.492344	.492344	3.171	R
154	1070	CAL.	.430157	.427370	.430157	.430157	1.000000	1.000000	56.292	*
154	1000	CAL.	.016158	.283866	.016158	.016158	1.000000	1.000000	60.861	R
154	1085	CAL.	.015355	.029064	.015355	.036435	.146972	.146972	65.795	R
154	1007	CAL.	.012933	.020097	.012933	.026519	.110619	.110619	68.562	R
154	FF SUM =	.4920	ROW CP TIME =	68.861	- CYLN	BAY AREA CYLINDER				
155	1030	CAL.	.025332	.013360	.025332	.025332	1.000000	1.000000	4.283	*
155	1040	CAL.	.432843	.228279	.432843	.432843	1.000000	1.000000	21.793	*
155	1050	CAL.	.094272	.125740	.094272	.094272	1.000000	1.000000	34.742	*R
155	1060	CAL.	.020305	.119985	.020305	.027336	.742803	.742803	35.949	R
155	1070	CAL.	.018229	.018111	.018229	.018229	1.000000	1.000000	42.942	*
155	1080	CAL.	.000955	.016783	.000955	.000955	1.000000	1.000000	43.935	*R
155	1085	CAL.	.008869	.048132	.008869	.014627	.606279	.606279	44.999	R
155	1087	CAL.	.015864	.040176	.015864	.008788	.667322	.667322	45.397	R
155	1088	CAL.	.001770	.006309	.001770	.002970	.595805	.595805	46.852	*R
155	FF SUM =	.6084	ROW CP TIME =	45.860	- CYLN	BAY AREA CYLINDER				
156	1000	CAL.	.009461	.013877	.009461	.009938	.951915	.951915	2.518	*R
156	1010	CAL.	.018866	.045299	.018866	.019890	.948476	.948476	6.453	*R
156	1015	CAL.	.058815	.141222	.058815	.063850	.921132	.921132	7.128	R
156	1020	CAL.	.089753	.131219	.089753	.089753	1.000000	1.000000	17.966	*R
156	1030	CAL.	.418305	.220612	.418305	.418305	1.000000	1.000000	37.634	*
156	1040	CAL.	.016706	.008811	.016706	.016706	1.000000	1.000000	40.299	*
156	1070	CAL.	.000164	.000163	.000164	.000164	1.000000	1.000000	40.939	
156	1080	CAL.	.000014	.000247	.000014	.000014	1.000000	1.000000	41.256	R
156	FF SUM =	.6121	ROW CP TIME =	42.326	- CYLN	BAY AREA CYLINDER				
157	1000	CAL.	.158702	.232784	.158702	.158702	1.000000	1.000000	1.473	R
157	1010	CAL.	.080322	.192863	.080322	.080322	1.000000	1.000000	2.512	R
157	1015	CAL.	.037356	.089697	.037356	.037356	1.000000	1.000000	6.605	*R
157	1020	CAL.	.054125	.079131	.054125	.062575	.864965	.864965	7.477	R
157	1030	CAL.	.001148	.000605	.001148	.001148	1.000000	1.000000	8.946	
157	1040	CAL.	.000194	.000103	.000194	.000194	1.000000	1.000000	8.237	
157	1070	CAL.	.000027	.000027	.000027	.000027	1.000000	1.000000	8.901	
157	1080	CAL.	.000002	.000039	.000002	.000002	1.000000	1.000000	9.252	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
157	FF SUM = .3319		RCW CP TIME =		10.325					- CYLN BAY AREA CYLINDER
140	1050	CAL.	.061761	.096027	.061761	.076195	.810527	.810527	3.002	R
140	1060	CAL.	.001088	.007494	.001088	.001088	1.000000	1.000000	3.229	R
140	1065	CAL.	.013977	.223232	.013873	.015172	.914338	.914338	11.714	R
140	1082	CAL.	.001177	.056251	.001177	.001177	1.000000	1.000000	13.025	*R
140	1083	CAL.	.001174	.056120	.001174	.001174	1.000000	1.000000	14.076	*R
140	1084	CAL.	.024380	.154256	.024380	.024380	1.000000	1.000000	16.852	R
140	1085	CAL.	.023765	.150359	.023765	.023931	.993048	.993048	19.632	R
140	1086	CAL.	.018489	.147659	.018489	.019727	.937253	.937253	22.564	R
140	1087	CAL.	.018214	.145456	.018214	.018434	.988027	.988027	25.499	R
140	1088	CAL.	.035641	.148095	.035641	.035945	.991541	.991541	28.751	R
140	FF SUM = .1996		RCW CP TIME =		28.760					+ DISC END BAY AREA DISK
135	1000	CAL.	.092990	.159001	.092990	.107834	.862347	.862347	11.751	*R
135	1021	CAL.	.043976	.074778	.043876	.069566	.630721	.630721	13.117	R
135	1200	CAL.	.000018	.021444	.000018	.000056	.327645	.327645	13.562	R
135	FF SUM = .1369		RCW CP TIME =		16.027					+ DISC FRONT BAY AREA DISK
122	FF SUM = 0.		RCW CP TIME =		1.487					+ PARAB VERY NOSE CONE
123	FF SUM = 0.		RCW CP TIME =		1.484					+ PARAB VERY NOSE CONE
124	FF SUM = 0.		RCW CP TIME =		1.496					+ PARAB VERY NOSE CONE
125	FF SUM = 0.		RCW CP TIME =		1.483					+ PARAB VERY NOSE CONE
320	FF SUM = 0.		RCW CP TIME =		.917					+ CYLN NOSE CYLINDER
321	FF SUM = 0.		RCW CP TIME =		.909					+ CYLN NOSE CYLINDER

MODEL = TAPE3. STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(T,J) WC/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
322		FF SUM = 0.			RCW CP TIME = .938		+ CYLN		NOSE CYLINDER
323		FF SUM = 0.			PCW CP TIME = .907		+ CYLN		NOSE CYLINDER
324		FF SUM = 0.			RCW CP TIME = .912		+ CYLN		NOSE CYLINDER
325		FF SUM = 0.			PCW CP TIME = .912		+ CYLN		NOSE CYLINDER
326		FF SUM = 0.			RCW CP TIME = .911		+ CYLN		NOSE CYLINDER
327		FF SUM = 0.			RCW CP TIME = .913		+ CYLN		NOSE CYLINDER
328		FF SUM = 0.			RCW CP TIME = 1.117		+ CYLN		NOSE CYLINDER
329		FF SUM = 0.			PCW CP TIME = 1.089		+ CYLN		NOSE CYLINDER
330		FF SUM = 0.			RCW CP TIME = 1.082		+ CYLN		NOSE CYLINDER
331		FF SUM = 0.			RCW CP TIME = 1.086		+ CYLN		NOSE CYLINDER
332		FF SUM = 0.			RCW CP TIME = 1.079		+ CYLN		NOSE CYLINDER
333		FF SUM = 0.			RCW CP TIME = 1.082		+ CYLN		NOSE CYLINDER

MODEL = TAPE3 STEP = 1
FCRM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE FAIR HAS BEEN SUBDIVIDED)*
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)*
334		FF SUM = 0.			RCW CP TIME = 1.098		+ CYLN		NOSE CYLINDER
335		FF SUM = 0.			RCW CP TIME = 1.075		+ CYLN		NOSE CYLINDER
340		FF SUM = 0.			RCW CP TIME = 1.452		+ PARAB		HCCD PARTIAL BACK
341		FF SUM = 0.			RCW CP TIME = 1.450		+ PARAB		HCCD PARTIAL BACK
342		FF SUM = 0.			RCW CP TIME = 1.457		+ PARAB		HCCD PARTIAL BACK
343		FF SUM = 0.			RCW CP TIME = 1.456		+ PARAB		HCCD PARTIAL BACK
344		FF SUM = 0.			RCW CP TIME = 1.446		+ PARAB		HCCD PARTIAL BACK
345		FF SUM = 0.			RCW CP TIME = 1.443		+ PARAB		HCCD PARTIAL BACK
346		FF SUM = 0.			RCW CP TIME = 1.456		+ PARAB		HCCD PARTIAL BACK
347		FF SUM = 0.			RCW CP TIME = 1.455		+ PARAB		HCCD PARTIAL BACK
348		FF SUM = 0.			RCW CP TIME = 1.467		+ PARAB		HCCD PARTIAL BACK
349		FF SUM = 0.			RCW CP TIME = 1.476		+ PARAB		HCCD PARTIAL BACK

MODEL = TAFE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
350		FF SUM = 0.			RCM CP TIME = 1.506		+ PARAB		HCCD PARTIAL BACK
351		FF SUM = 0.			RCM CP TIME = 1.489		+ PARAB		HCCD PARTIAL BACK
352		FF SUM = 0.			RCM CP TIME = 1.451		+ PARAB		HCCD PARTIAL BACK
353		FF SUM = 0.			RCM CP TIME = 1.452		+ PARAB		HCCD PARTIAL BACK
354		FF SUM = 0.			RCM CP TIME = 1.476		+ PARAB		HCCD PARTIAL BACK
355		FF SUM = 0.			RCM CP TIME = 1.479		+ PARAB		HCCD PARTIAL BACK
360		FF SUM = 0.			RCM CP TIME = 1.443		+ PARAB		WINDOW
361		FF SUM = 0.			RCM CP TIME = 1.441		+ PARAB		WINDOW
362		FF SUM = 0.			RCM CP TIME = 1.449		+ PARAB		WINDOW
363		FF SUM = 0.			RCM CP TIME = 1.441		+ PARAB		WINDOW
364		FF SUM = 0.			RCM CP TIME = 1.438		+ PARAB		WINDOW
365		FF SUM = 0.			RCM CP TIME = 1.438		+ PARAB		WINDOW

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTER	SHAD. A FACTER	CP TIME (SEC)
366		FF SUM = 0.					+ PARAB	WINDOW	
	366	FF SUM = 0.					+ PARAB	WINDOW	
367		FF SUM = 0.					+ PARAB	WINDOW	
	367	FF SUM = 0.					+ PARAB	WINDOW	
368		FF SUM = 0.					+ PARAB	WINDOW	
	368	FF SUM = 0.					+ PARAB	WINDOW	
369		FF SUM = 0.					+ PARAB	WINDOW	
	369	FF SUM = 0.					+ PARAB	WINDOW	
370		FF SUM = 0.					+ PARAB	WINDOW	
	370	FF SUM = 0.					+ PARAB	WINDOW	
371		FF SUM = 0.					+ PARAB	WINDOW	
	371	FF SUM = 0.					+ PARAB	WINDOW	
372		FF SUM = 0.					+ PARAB	WINDOW	
	372	FF SUM = 0.					+ PARAB	WINDOW	
373		FF SUM = 0.					+ PARAB	WINDOW	
	373	FF SUM = 0.					+ PARAB	WINDOW	
374		FF SUM = 0.					+ PARAB	WINDOW	
	374	FF SUM = 0.					+ PARAB	WINDOW	
375		FF SUM = 0.					+ PARAB	WINDOW	
	375	FF SUM = 0.					+ PARAB	WINDOW	
401		FF SUM = 0.					- RECT	BCCY BOTTOM (FRT)	4.1
	401	FF SUM = 0.					- RECT	BCCY BOTTOM (FRT)	4.1
402		FF SUM = 0.					- RECT	BCCY BOTTOM (REAR)	4.02
	402	FF SUM = 0.					- RECT	BCCY BOTTOM (REAR)	4.02

MODEL = TAFE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
182		FF SUM = 0.			RCW CP TIME = 1.225		+ CYLN	CNSPC0C1	
172		FF SUM = 0.			RCW CP TIME = 1.187		+ CYLN	CNSPC0C2	
781		FF SUM = 0.			RCW CP TIME = 1.331		- CYLN	.....+Y SIDE DOOR.....	
782		FF SUM = 0.			RCW CP TIME = 45.235		+ CYLN	.....+Y SIDE DOOR.....	
783		FF SUM = 0.			RCW CP TIME = 1.304		- CYLN	.....+Y SIDE DOOR.....	
784		FF SUM = 0.			RCW CP TIME = 19.254		+ CYLN	.....+Y SIDE DOOR.....	
785		FF SUM = 0.			RCW CP TIME = 2.859		- CYLN	.....+Y SIDE DOOR.....	
786		FF SUM = 0.			RCW CP TIME = 7.995		+ CYLN	.....+Y SIDE DOOR.....	
787		FF SUM = 0.			RCW CP TIME = 2.476		- CYLN	.....+Y SIDE DOOR.....	
788		FF SUM = 0.			RCW CP TIME = 4.564		+ CYLN	.....+Y SIDE DOOR.....	
791		FF SUM = 0.			RCW CP TIME = 2.952		- CYLN	... -Y SIDE DOOR....	
792		FF SUM = 0.			RCW CP TIME = 6.243		+ CYLN	... -Y SIDE DOOR....	

MODEL = TAPE? STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
793		FF SUM = 0.			RCM CP TIME = 2.427		- CYLN		...	-Y SIDE DCOR....
794		FF SUM = 0.			RCM CP TIME = 4.665		+ CYLN		...	-Y SIDE DCOR....
795		FF SUM = 0.			RCM CP TIME = 1.223		- CYLN		...	-Y SIDE DCOR....
796	1030	CAL.	.002728	.001238	.002728	.015550	.175458	.175458	3.520	*
796	1040	CAL.	.057906	.026279	.057906	.140089	.413362	.413362	8.031	*
796	1050	CAL.	.024303	.027893	.024303	.055518	.437747	.437747	13.594	*R
796	1060	CAL.	.007199	.036562	.007199	.013714	.524308	.524308	14.019	R
796	1070	CAL.	.023699	.020261	.023699	.107894	.219654	.219654	22.137	*
796	1081	CAL.	.026215	.396299	.026215	.035332	.741951	.741951	48.297	*R
796	1084	CAL.	.014536	.021184	.014536	.023927	.189562	.189562	50.310	R
796	1086	CAL.	.004140	.024407	.004140	.021479	.192749	.192749	52.544	R
796		FF SUM = .1517			RCM CP TIME = 53.229		+ CYLN		...	-Y SIDE DCOR....
797		FF SUM = 0.			RCM CP TIME = 1.214		- CYLN		...	-Y SIDE DCOR....
798	1003	CAL.	.027813	.035101	.027810	.051507	.539089	.539089	1.404	*R
798	1010	CAL.	.022397	.046277	.022397	.035024	.639492	.639492	1.694	R
798	1015	CAL.	.021999	.045245	.021998	.035571	.615615	.615615	1.975	R
798	1020	CAL.	.024415	.030715	.024415	.050856	.480069	.480069	7.560	*R
798	1030	CAL.	.052424	.023792	.052424	.117164	.382203	.382203	12.114	*
798	1040	CAL.	.002248	.001020	.012248	.012639	.177841	.177841	13.989	*
798	1081	CAL.	.010013	.000190	.000013	.000022	.560191	.560191	15.280	R
798		FF SUM = .1512			RCM CP TIME = 16.476		+ CYLN		...	-Y SIDE DCOR....
301		FF SUM = 0.			RCM CP TIME = 1.227		+ TRAP			+Y SIDE FRONT TRAPEZOID
305		FF SUM = 0.			RCM CP TIME = .847		+ RECT			BDY SIDE (MIDDLE-PART) 305

MODEL = TAFF3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SECS)	
306		FF SUM = 0.				.879	+ RECT			BODY SIDE (BACK-PORT) 306
311	1015	CAL.	.010714	.027474	.010714	.045154	.237268	.237268	4.536	*R
311	1030	CAL.	.000349	.000197	.000349	.012611	.027685	.027685	8.878	*
311		FF SUM = .0111				10.310	- TRAP			-Y SIDE FRONT TRAPEZOID
315		FF SUM = 0.				.926	+ RECT			BODY SIDE (MIDDLE-STBD) 315
316		FF SUM = 0.				.940	+ RECT			BODY SIDE (BACK-STBD) 316
202		FF SUM = 0.				1.127	+ CYLN			BODY TOP (STBD-REAR) 202
212		FF SUM = 0.				1.127	+ CYLN			BODY TOP (PORT-REAR) 212
380	1030	CAL.	.000107	.000056	.000107	.000107	1.000000	1.000000	.937	
380	1040	CAL.	.010222	.000117	.000222	.000222	1.000000	1.000000	1.143	
380	1050	CAL.	.000920	.001228	.000920	.001168	.787992	.787992	1.454	R
380	1060	CAL.	.010009	.000053	.000009	.000030	.296793	.296793	1.633	R
380	1082	CAL.	.000035	.001433	.000035	.000269	.129759	.129759	2.436	R
380	1084	CAL.	.000079	.000426	.000079	.001193	.065839	.065839	2.734	R
380		FF SUM = .0114				3.229	+ TRAP			VERTICAL FIN (PORT) 20
385	1030	CAL.	.000062	.000024	.000062	.000062	1.000000	1.000000	.972	
385	1040	CAL.	.000114	.000044	.000114	.000114	1.000000	1.000000	1.180	
385	1050	CAL.	.000211	.000206	.000211	.000624	.337590	.337590	1.455	
385	1060	CAL.	.000007	.000030	.000007	.000012	.572888	.572888	1.648	R
385	1065	CAL.	.000003	.000025	.000003	.000019	.129746	.129746	1.887	R
385	1082	CAL.	.000087	.000090	.000083	.000091	.032936	.032936	2.398	R
385		FF SUM = .0004				3.199	+ TRAP			VERTICAL FIN (PORT-AFT) 20
390	1030	CAL.	.000107	.000056	.000107	.000107	1.000000	1.000000	1.031	
390	1040	CAL.	.010222	.000117	.000222	.000222	1.000000	1.000000	1.235	
390	1050	CAL.	.000918	.001225	.000918	.001168	.787990	.787990	1.537	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
390	1060	CAL.	.000000	.000052	.000009	.000030	.296727	.296727	1.715	R
390	1083	CAL.	.000075	.001431	.000035	.000269	.129735	.129735	2.546	R
390	1085	CAL.	.000078	.001426	.000078	.001191	.065837	.065837	2.829	R
390	FF SUM =	.0014	RCW CP TIME =	3.213	- TRAP	VERTICAL FIN (STBC)	20			
395	1030	CAL.	.000062	.000024	.000062	.000062	1.000000	1.000000	1.059	
395	1040	CAL.	.000114	.000044	.000114	.000114	1.000000	1.000000	1.264	
395	1050	CAL.	.000210	.000205	.000210	.000623	.337582	.337582	1.528	
395	1060	CAL.	.000007	.000030	.000007	.000012	.572771	.572771	1.721	R
395	1065	CAL.	.000003	.000025	.000003	.000019	.129745	.129745	1.920	R
395	1081	CAL.	.000003	.000009	.000003	.000090	.032933	.032933	2.483	R
395	FF SUM =	.0004	RCW CP TIME =	3.145	- TRAP	VERTICAL FIN (STBC-AFT)	20			
705	FF SUM =	0.	RCW CP TIME =	1.168	+ DISC	..MOST FORWARD EVAPORATOR.....				
700	FF SUM =	0.	RCW CP TIME =	3.974	- DISC	.....SUPER ENGINES (OMS LCCAT				
701	FF SUM =	0.	RCW CP TIME =	1.146	+ DISC	.....SUPER ENGINES (OMS LCCAT				
702	FF SUM =	0.	RCW CP TIME =	3.871	- DISC	.....SUPER ENGINES (OMS LCCAT				
703	FF SUM =	0.	RCW CP TIME =	1.157	+ DISC	.....SUPER ENGINES (OMS LCCAT				
24	FF SUM =	0.	RCW CP TIME =	1.169	- DISC	...BACK RCS ...LOOKING +/- Y.I				
25	FF SUM =	0.	RCW CP TIME =	3.815	+ DISC	...BACK RCS ...LOOKING +/- Y.I				

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
18		FF SUM = 0.			RCW CP TIME = 1.165		- DISC			...FRONT RCS..LOOKING +/-Y AT
19		FF SUM = 0.			RCW CP TIME = 2.519		+ DISC			...FRONT RCS..LOOKING +/-Y AT
26		FF SUM = 0.			RCW CP TIME = 1.335		- DISC			...BACK RCS LOOKING +/- Z...7/
27		FF SUM = 0.			RCW CP TIME = 3.807		+ DISC			...BACK RCS LOOKING +/- Z...7/
16		FF SUM = 0.			RCW CP TIME = 3.700		- DISC			...MIDDLE EVAP. LOOKING +/- Y.
17		FF SUM = 0.			RCW CP TIME = 1.164		+ DISC			...MIDDLE EVAP. LOOKING +/- Y.
160		FF SUM = 0.			RCW CP TIME = 16.333		- RECT			...THIN STRIP BETWEEN DOORS AN
161	1020	CAL.	.011248	.000103	.011248	.011248	1.000000	1.000000	1.627	
161	1030	CAL.	.000676	.000002	.000676	.000676	1.000000	1.000000	3.609	
161	1040	CAL.	.000112	.000000	.000112	.000112	1.000000	1.000000	4.278	
161		FF SUM = .0120			RCW CP TIME = 5.716		+ RECT			...THIN STRIP BETWEEN DOORS AN
162		FF SUM = 0.			RCW CP TIME = 14.199		- RECT			...THIN STRIP BETWEEN DOORS AN
163	1020	CAL.	.014060	.000128	.014060	.014060	1.000000	1.000000	.875	
163	1030	CAL.	.040770	.000134	.040770	.040770	1.000000	1.000000	4.519	*
163	1040	CAL.	.003091	.000010	.003091	.003091	1.000000	1.000000	6.610	*
163		FF SUM = .0579			RCW CP TIME = 8.050		+ RECT			...THIN STRIP BETWEEN DOORS AN

MODEL = TAPP3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):	
164	FF SUM = 0.		RCW CP TIME =		16.118		- RECT			...THIN STRIP BETWEEN DOORS AN
165	1030	CAL.	.003698	.000012	.003698	.003698	1.000000	1.000000	4.256	*
165	1040	CAL.	.041346	.000176	.041346	.041346	1.000000	1.000000	6.818	*
165	1050	CAL.	.007475	.000062	.007475	.007475	1.000000	1.000000	8.585	*
165	FF SUM = .0525		RCW CP TIME =		9.875		+ RECT			...THIN STRIP BETWEEN DOORS AN
166	FF SUM = 0.		RCW CP TIME =		18.542		- RECT			...THIN STRIP BETWEEN DOORS AN
167	1030	CAL.	.000118	.000000	.000118	.000118	1.000000	1.000000	3.370	
167	1040	CAL.	.000738	.000002	.000738	.000738	1.000000	1.000000	4.138	
167	1050	CAL.	.012331	.000103	.012331	.012331	1.000000	1.000000	5.521	
167	FF SUM = .0132		RCW CP TIME =		6.822		+ RECT			...THIN STRIP BETWEEN DOORS AN
399	1030	CAL.	.001440	.000112	.001440	.001440	1.000000	1.000000	2.521	
399	1040	CAL.	.002218	.000173	.002218	.002218	1.000000	1.000000	3.175	
399	1050	CAL.	.008325	.001644	.008325	.008325	.923118	.923118	4.280	
399	1060	CAL.	.000501	.000438	.000501	.000501	1.000000	1.000000	4.911	
399	1065	CAL.	.000865	.001744	.000865	.000865	1.000000	1.000000	5.812	R
399	1082	CAL.	.000091	.000553	.000091	.000091	1.000000	1.000000	6.957	R
399	1084	CAL.	.000202	.000163	.000202	.000202	1.000000	1.000000	8.056	
399	1086	CAL.	.000002	.000002	.000002	.000002	1.000000	1.000000	8.694	R
399	FF SUM = .0136		RCW CP TIME =		8.908		+ RECT			VERT. FIN LOG. EDGE 2
1000	1010	CAL.	.002043	.003344	.002043	.002043	1.000000	1.000000	.117	R
1000	1015	CAL.	.000569	.000931	.000569	.000569	1.000000	1.000000	.228	R
1000	1020	CAL.	.007840	.007814	.007840	.007840	1.000000	1.000000	.430	
1000	1101	CAL.	.070935	.690592	.070935	.070935	1.000000	1.000000	67.165	*R
1000	FF SUM = .7693		RCW CP TIME =		67.707		+ CYLN			TUNNEL 1, X=582 TO 672.4, SPA
1010	1020	CAL.	.018818	.011458	.018818	.018818	1.000000	1.000000	.243	
1010	FF SUM = .5438		RCW CP TIME =		2.183		+ CYLN			TUNNEL 2, X=672.4 TO 790.4, S
1015	1020	CAL.	.100074	.065804	.100074	.100074	1.000000	1.000000	6.419	*

MODEL = TAFF3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
1015	FF SUM =	.6419	RCW CP TIME =	8.354			+ CYLN		TUNNEL 2, X=672.4 TO 790.4, S	
1020	FF SUM =	.5107	RCW CP TIME =	2.062			+ CONE		FWD CCNE, X=790.4 TO 816.1, SP	
1200	FF SUM =	.0215	RCW CP TIME =	1.742			- DISC		ECS CONDENSATE VENT 802.1, SP	
1201	1131	CAL.	.000128	.000015	.000128	.000387	.330651	.330651	3.828	
1201	FF SUM =	.0001	RCW CP TIME =	3.834			+ DISC		ECS CONDENSATE VENT 802.1, SP	
1030	FF SUM =	.4967	RCW CP TIME =	1.271			+ CYLN		CORE SEGMENT X=816.1 T	
1040	1120	CAL.	.001770	.045713	.001770	.001770	1.000000	1.000000	1.508	*R
1040	FF SUM =	.5073	RCW CP TIME =	1.691			+ CYLN		EXPERIMENT SEGMENT X=922	
1050	1060	CAL.	.022611	.100172	.022611	.022611	1.000000	1.000000	7.156	*R
1050	1082	CAL.	.000558	.017163	.000558	.000558	.986787	.986787	9.623	*R
1050	1083	CAL.	.000883	.027141	.000883	.000883	1.000000	1.000000	10.083	R
1050	1084	CAL.	.013960	.056807	.013960	.013960	.883781	.883781	10.972	R
1050	1085	CAL.	.014901	.060637	.014901	.016132	.923705	.923705	11.850	R
1050	1086	CAL.	.011198	.057519	.011198	.012279	.911968	.911968	12.386	R
1050	1087	CAL.	.009515	.048875	.009515	.011842	.803556	.803556	12.967	R
1050	1088	CAL.	.016876	.045102	.016876	.019769	.853696	.853696	13.697	R
1050	1131	CAL.	.000035	.000008	.000035	.000035	1.000000	1.000000	14.809	*R
1050	FF SUM =	.5879	RCW CP TIME =	14.814			+ CONE		AFT CCNE TAPER, X=1027.9 TO	
1060	1082	CAL.	.000135	.000937	.000135	.000135	1.000000	1.000000	.466	R
1060	1083	CAL.	.000135	.000937	.000135	.000135	1.000000	1.000000	.703	R
1060	1084	CAL.	.019222	.017656	.019222	.019222	1.000000	1.000000	8.191	*
1060	1085	CAL.	.019222	.017656	.019222	.019222	1.000000	1.000000	15.794	*
1060	1086	CAL.	.015230	.017657	.015230	.015230	1.000000	1.000000	20.041	*R
1060	1087	CAL.	.015158	.017574	.015158	.015158	1.000000	1.000000	24.188	*R
1060	1088	CAL.	.025858	.015598	.025858	.025858	1.000000	1.000000	30.299	*
1060	1131	CAL.	.000062	.001217	.000062	.000062	.709988	.709988	31.255	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LTRK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
1060	FF SUM = .4874		RCW CP TIME =		31.283		+ CYLN			AFT AIRLOCK, X=1059.3 TO 108
1065	1084	CAL.	.081426	.032452	.081426	.081426	1.000000	1.000000	1.046	
1065	1085	CAL.	.081426	.032452	.081426	.081426	1.000000	1.000000	1.722	
1065	1086	CAL.	.071248	.035842	.071248	.071248	1.000000	1.000000	2.362	
1065	1087	CAL.	.071248	.035842	.071248	.071248	1.000000	1.000000	2.991	
1065	1088	CAL.	.142823	.037383	.142823	.142823	1.000000	1.000000	5.150	
1065	FF SUM = .7051		RCW CP TIME =		5.683		+ DISC			AFT AIRLOCK DISC X= 1088.8,
1070	FF SUM = .9116		RCW CP TIME =		.980		+ CYLN			PALLET BOTTOM CYLINDER X= 110
1080	FF SUM = .3096		RCW CP TIME =		.569		+ RECT			-Y PALLET OUTSIDE STRIP
1081	FF SUM = .7060		RCW CP TIME =		.550		+ RECT			+Y PALLET OUTSIDE STRIP
1082	1130	CAL.	.000293	.000226	.000293	.000429	.682741	.682741	2.172	R
1082	FF SUM = .1125		RCW CP TIME =		2.230		+ RECT			-Y PALLET TOP STRIP X=1101.2 T
1083	1130	CAL.	.000283	.000797	.000283	.000429	.659053	.659053	2.124	R
1083	FF SUM = .1218		RCW CP TIME =		2.184		+ RECT			+Y PALLET TOP STRIP ,X= 1101.
1084	1085	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	.973	
1084	1086	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.195	R
1084	1087	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	1.588	R
1084	1088	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	2.483	
1084	1130	CAL.	.000382	.008140	.000382	.000552	.692625	.692625	3.599	R
1084	FF SUM = .6044		RCW CP TIME =		3.647		+ RECT			-Y INSIDE TOP PANNEL,X=1101.2
1085	1086	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	.413	R
1085	1087	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	.634	R
1085	1088	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	1.529	
1085	1130	CAL.	.000382	.008125	.000382	.000552	.691151	.691151	2.632	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
1085	FF SUM = .5830		RCW CP TIME =		2.701		+ RECT			+Y INSIDE TOP PANNEL, X=1101.2
1086	1087	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.352	
1086	1088	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.399	
1086	1130	CAL.	.000106	.001794	.000106	.000205	.518850	.518850	2.521	R
1086	1131	CAL.	.010016	.000274	.000016	.000048	.336514	.336514	2.675	R
1086	FF SUM = .6047		RCW CP TIME =		2.681		+ RECT			-Y INSIDE BOTTOM PANNEL, X=11
1087	1088	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.074	
1087	1130	CAL.	.000075	.001260	.000075	.000205	.364571	.364571	2.199	R
1087	FF SUM = .5693		RCW CP TIME =		2.343		+ RECT			+Y INSIDE BOTTOM PANNEL, X 110
1088	FF SUM = .4949		RCW CP TIME =		1.196		+ RECT			FALLET BOTTOM, X= 1101.2 TO 12
1100	FF SUM = 0.		RCW CP TIME =		.022		- DISC			TUNNEL EVA HATCH X=627. ,SPACE
1101	FF SUM = .6906		RCW CP TIME =		.022		+ DISC			TUNNEL EVA HATCH X=627. SPACE
1110	FF SUM = 0.		RCW CP TIME =		.021		- DISC			CCRE SEGMENT WINDOW, X=869. S
1111	FF SUM = 0.		RCW CP TIME =		.022		+ DISC			CCRE SEGMENT WINDOW, X=869. S
1120	FF SUM = .0457		RCW CP TIME =		.025		- DISC			EXPERIMENT SEGIMENT WINDOW,
1121	FF SUM = 0.		RCW CP TIME =		.023		+ DISC			EXPERIMENT SEGIMENT WINDOW,

MODEL = TAPE? STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)*
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1130	FF SUP =	.0289			RCM CP TIME =	.045	- DISC		AFT AIRLOCK WINDOW X=1043.6,
1131	FF SUP =	.0045			RCM CP TIME =	.024	+ DISC		AFT AIRLOCK WINDOW X=1043.6,

TOTAL CP TIME (SEC) FOR PROBLEM = 1072.201

FORM FACTOR CALCULATION LINK.

145	FF SUM = 0.	ROW CP TIME =	.795	+ TRAP	+Y REAR SIDE TAPER
146	FF SUM = 0.	ROW CP TIME =	.803	- TRAP	- Y. REAR SIDE TAPER...
707	FF SUM = 0.	ROW CP TIME =	1.451	- DISC	.....JULY 8 EVAP..3 IN. RAD.
708	FF SUM = 0.	ROW CP TIME =	.679	+ DISC	.....JULY 8 EVAP..3 IN. RAD.
147	FF SUM = 0.	ROW CP TIME =	2.201	+ PARAB	TOP ENGIN
148	FF SUM = 0.	ROW CP TIME =	1.549	+ PARAB	+ Y ENGIN
149	FF SUM = 0.	ROW CP TIME =	1.557	+ PARAB	-Y ENGIN...

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)*
 (R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
20	1110	CAL.	.000008	.000024	.000008	.000057	.137966	.137966	1.416	R
20	1111	CAL.	.000032	.000096	.000032	.000032	1.000000	1.000000	1.652	R
20	1120	CAL.	.000083	.000150	.000083	.000219	.380890	.380890	2.002	R
20	1121	CAL.	.000127	.000228	.000127	.000127	1.000000	1.000000	2.229	R
20	1130	CAL.	.000779	.014941	.000779	.000779	1.000000	1.000000	2.709	R
20	FF SUM =	.0010	ROW CP TIME =	2.771	+ DISC	....-Y ONS SEALER ...				
21	1110	CAL.	.000008	.000024	.000008	.000057	.137966	.137966	1.397	R
21	1111	CAL.	.000032	.000096	.000032	.000032	1.000000	1.000000	1.632	R
21	1120	CAL.	.000083	.000150	.000083	.000219	.380890	.380890	1.976	R
21	1121	CAL.	.000127	.000228	.000127	.000127	1.000000	1.000000	2.199	R
21	1130	CAL.	.000779	.014941	.000779	.000779	1.000000	1.000000	2.682	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE (I,J) W/SHAD	FE (J,I) W/SHAD	FA (I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
21		FF SUM = .0010			ROW CP TIME = 2.767		+ DISC		...Y ONS SEALER ...
222		FF SUM = 0.			ROW CP TIME = .585		- RECT		BACK RECT 7.35DEG
23		FF SUM = 0.			ROW CP TIME = .653		+ DISC		REAR END HALF DISK
407		FF SUM = 0.			ROW CP TIME = .673		+ DISC		BACK SIDE EVAPORAT. UPDATED
15		FF SUM = 0.			ROW CP TIME = .671		+ DISC		REAR END EVAPORATOR
10		FF SUM = 0.			ROW CP TIME = 1.681		- TRAP		....LEFT FRONT WING A ...
11		FF SUM = 0.			ROW CP TIME = 1.535		+ TRAP		.....LEFT MIDDLE WING BACK.B
141		FF SUM = 0.			ROW CP TIME = 1.397		+ RECT		BS INNER WING
12		FF SUM = 0.			ROW CP TIME = 1.414		+ RECT		..... LEFT BACK RECT. WING C
142		FF SUM = 0.			ROW CP TIME = 1.337		+ RECT		INNER WING C
13		FF SUM = 0.			ROW CP TIME = 1.465		+ TRAP		..... LEFT WING TAIL EDGE
1		FF SUM = 0.			ROW CP TIME = 1.661		+ TRAP		...FRONT WING TRIANGLE RT.A.58

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
2		FF SUM = 0.					- TRAP			.....MIDDLE WING TRAP, RT B ..
143		FF SUM = 0.					- RECT			B +Y RECTANGLE WING
3		FF SUM = 0.					- RECT			.... BACK WING RECT. RTC .129
144		FF SUM = 0.					- RECT			INNER WING C RECT
4		FF SUM = 0.					- TRAP			...WING TAIL FLAP RT 1453,1507
150		FF SUM = 0.					- CYLN			BAY AREA CYLINDER
151		FF SUM = 0.					- CYLN			BAY AREA CYLINDER
152	1201	CAL.	.000013	.013283	.000013	.000255	.052189	.052189	3.361	R
152		FF SUM = .0000					- CYLN			BAY AREA CYLINDER
153	1200	CAL.	.000001	.000332	.000000	.000000	1.000000	1.000000	.191	R
153	1201	CAL.	.000013	.012985	.000013	.000042	.306986	.306986	.592	R
153	1101	CAL.	.003303	.047161	.003303	.024136	.136833	.136833	4.247	R
153		FF SUM = .0033					- CYLN			BAY AREA CYLINDER
154		FF SUM = 0.					- CYLN			BAY AREA CYLINDER
155		FF SUM = 0.					- CYLN			BAY AREA CYLINDER
156	1201	CAL.	.000013	.013283	.000013	.000255	.052189	.052189	3.333	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
156	FF SUM =	.0000			ROW CP TIME =	8.243				- CYLN BAY AREA CYLINDER
157	1200	CAL.	.000000	.000332	.000000	.000000	1.000000	1.000000	.197	R
157	1201	CAL.	.000013	.012985	.000013	.000042	.306986	.306986	.613	R
157	1101	CAL.	.003465	.049485	.003465	.024136	.143576	.143576	4.434	R
157	FF SUM =	.0035			ROW CP TIME =	5.790				- CYLN BAY AREA CYLINDER
14J	1130	CAL.	.000690	.116549	.000690	.000690	1.000000	1.000000	3.972	R
14J	FF SUM =	.0007			ROW CP TIME =	4.039				+ DISC END BAY AREA DISK
135	1200	CAL.	.000034	.039426	.000034	.000037	.913602	.913602	.340	R
135	1100	CAL.	.017353	.288864	.017353	.017353	1.000000	1.000000	2.004	R
135	1101	CAL.	.001137	.018930	.001137	.008102	.140363	.140363	2.800	R
135	FF SUM =	.0185			ROW CP TIME =	3.937				+ DISC FRONT BAY AREA DISK
122	FF SUM =	0.			ROW CP TIME =	.830				+ PARAB VERY NOSE CONE
123	FF SUM =	0.			ROW CP TIME =	.829				+ PARAB VERY NOSE CONE
124	FF SUM =	0.			ROW CP TIME =	.825				+ PARAB VERY NOSE CONE
125	FF SUM =	0.			ROW CP TIME =	.829				+ PARAB VERY NOSE CONE
320	FF SUM =	0.			ROW CP TIME =	.560				+ CYLN NOSE CYLINDER
321	FF SUM =	0.			ROW CP TIME =	.556				+ CYLN NOSE CYLINDER

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
322		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.568				
323		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.552				
324		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.552				
325		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.554				
326		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.552				
327		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.548				
328		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.840				
329		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.838				
330		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.836				
331		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.842				
332		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.834				
333		FF SUM = 0.					+ CYLN		NOSE CYLINDER
					.832				

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
334		FF SUM = 0.					+ CYLN		NOSE CYLINDER
	334								
335		FF SUM = 0.					+ CYLN		NOSE CYLINDER
	335								
340		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	340								
341		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	341								
342		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	342								
343		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	343								
344		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	344								
345		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	345								
346		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	346								
347		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	347								
348		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	348								
349		FF SUM = 0.					+ PARAB		HOOD PARTIAL BACK
	349								

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
350		FF SUM = 0.				.846	+ PARAB		HOOD PARTIAL BACK
351		FF SUM = 0.				.818	+ PARAB		HOOD PARTIAL BACK
352		FF SUM = 0.				.816	+ PARAB		HOOD PARTIAL BACK
353		FF SUM = 0.				.817	+ PARAB		HOOD PARTIAL BACK
354		FF SUM = 0.				.814	+ PARAB		HOOD PARTIAL BACK
355		FF SUM = 0.				.815	+ PARAB		HOOD PARTIAL BACK
360		FF SUM = 0.				.801	+ PARAB		WINDOW
361		FF SUM = 0.				.805	+ PARAB		WINDOW
362		FF SUM = 0.				.813	+ PARAB		WINDOW
363		FF SUM = 0.				.816	+ PARAB		WINDOW
364		FF SUM = 0.				.800	+ PARAB		WINDOW
365		FF SUM = 0.				.796	+ PARAB		WINDOW

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)*
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE (I,J) W/SHAD	FE (J,I) W/SHAD	FA (I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
366		FF SUM = 0.			.835		+ PARAB	WINDOW	
367		FF SUM = 0.			.818		+ PARAB	WINDOW	
368		FF SUM = 0.			.796		+ PARAB	WINDOW	
369		FF SUM = 0.			.800		+ PARAB	WINDOW	
370		FF SUM = 0.			.811		+ PARAB	WINDOW	
371		FF SUM = 0.			.811		+ PARAB	WINDOW	
372		FF SUM = 0.			.795		+ PARAB	WINDOW	
373		FF SUM = 0.			.791		+ PARAB	WINDOW	
374		FF SUM = 0.			.800		+ PARAB	WINDOW	
375		FF SUM = 0.			.812		+ PARAB	WINDOW	
401		FF SUM = 0.			.589		- RECT	BODY BOTTOM (FRT)	4 1
402		FF SUM = 0.			.536		- RECT	BODY BOTTOM (REAR)	4 2

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
182		FF SUM = 0.				.737	+ CYLN			ONSPODC1
172	1121	CAL.	.000000	.000001	.000000	.000000	1.000000	1.000000	.656	R
172		FF SUM = .0000				.779	+ CYLN			ONSPODC2
781		FF SUM = 0.				.700	- CYLN			.....+Y SIDE DOOR.....
782		FF SUM = 0.				2.422	+ CYLN			.....+Y SIDE DOOR.....
783		FF SUM = 0.				.695	- CYLN			.....+Y SIDE DOOR.....
784		FF SUM = 0.				2.206	+ CYLN			.....+Y SIDE DOOR.....
785		FF SUM = 0.				2.090	- CYLN			.....+Y SIDE DOOR.....
786		FF SUM = 0.				.847	+ CYLN			.....+Y SIDE DOOR.....
787		FF SUM = 0.				1.801	- CYLN			.....+Y SIDE DOOR.....
788		FF SUM = 0.				.813	+ CYLN			.....+Y SIDE DOOR.....
791		FF SUM = 0.				2.117	- CYLN			... -Y SIDE DOOR....
792		FF SUM = 0.				.856	+ CYLN			... -Y SIDE DOOR....

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
793		FF SUM = 0.			1.813		- CYLN			... -Y SIDE DOOR....
794		FF SUM = 0.			.824		+ CYLN			... -Y SIDE DOOR....
795		FF SUM = 0.			.688		- CYLN			... -Y SIDE DOOR....
796	1130	CAL.	.000096	.011941	.000096	.000119	.802736	.802736	2.570	R
796		FF SUM = .0001			2.854		+ CYLN			... -Y SIDE DOOR....
797		FF SUM = 0.			.692		- CYLN			... -Y SIDE DCOR....
798	1200	CAL.	.000001	.001250	.000001	.000002	.885621	.885621	.197	R
798	1201	CAL.	.000018	.015160	.000018	.000050	.355953	.355953	.501	R
798	1101	CAL.	.001248	.015334	.001248	.003484	.358130	.358130	.946	R
798		FF SUM = .0013			2.293		+ CYLN			... -Y SIDE DOOR....
301		FF SUM = 0.			.681		+ TRAP			+Y SIDE FRONT TRAPOZOID
305		FF SUM = 0.			.490		+ RECT			BODY SIDE (MIDDLE-PORT) 305
306		FF SUM = 0.			.488		+ RECT			BODY SIDE (BACK-PORT) 306
311		FF SUM = 0.			1.789		- TRAP			-Y SIDE FRONT TRAPOZOID
315		FF SUM = 0.			.538		+ RECT			BODY SIDE (MIDDLE-STBD) 315

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
316		FF SUM = 0.					+ RECT	BODY SIDE (BACK-STBD)	316
	202	FF SUM = 0.					+ CYLN	BODY TOP (STBD-REAR)	202
	212	FF SUM = 0.					+ CYLN	BODY TOP (PORT-REAR)	212
	300	FF SUM = 0.					+ TRAP	VERTICAL FIN (PORT)	20
	385	FF SUM = 0.					+ TRAP	VERTICAL FIN (PORT-AFT)	20
	390	FF SUM = 0.					- TRAP	VERTICAL FIN (STBD)	20
	395	FF SUM = 0.					- TRAP	VERTICAL FIN (STBD-AFT)	20
	705	FF SUM = 0.					+ DISC	..MOST FORWARD EVAPORATOR.....	
	700	FF SUM = 0.					- DISC	.....SUPER ENGINES (OMS LOCAT	
	701	FF SUM = 0.					+ DISC	.....SUPER ENGINES (OMS LOCAT	
	702	FF SUM = 0.					- DISC	.....SUPER ENGINES (OMS LOCAT	
	703	FF SUM = 0.					+ DISC	.....SUPER ENGINES (OMS LOCAT	

FORM FACTOR CALCULATION LINK.

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) *
 (R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
24		FF SUM = 0.				.682	- DISC			...BACK RCS ...LOOKING +/- Y.(
25		FF SUM = 0.				1.486	+ DISC			...BACK RCS ...LOOKING +/- Y.(
18		FF SUM = 0.				.634	- DISC			...FRONT RCS..LOOKING +/-Y AT
19		FF SUM = 0.				1.460	+ DISC			...FRONT RCS..LOOKING +/-Y AT
26		FF SUM = 0.				1.579	- DISC			...BACK RCS LOOKING +/- Z...7/
27		FF SUM = 0.				.646	+ DISC			...BACK RCS LOOKING +/- Z...7/
16		FF SUM = 0.				1.514	- DISC			...MIDDLE EVAP. LOOKING +/- Y.
17		FF SUM = 0.				.646	+ DISC			...MIDDLE EVAP. LOOKING +/- Y.
160		FF SUM = 0.				1.781	- RECT			...THIN STRIP BETWEEN DOORS AN
161	1200	CAL.	.000008	.000049	.000008	.000008	1.000000	1.000000	1.322	R
161	1201	CAL.	.000000	.000002	.000000	.000000	1.000000	1.000000	1.599	R
161	1100	CAL.	.000006	.000001	.000006	.000006	1.000000	1.000000	1.901	
161	1101	CAL.	.000001	.000000	.000001	.000017	.080238	.080238	2.290	
161		FF SUM = .0000				6.890	+ RECT			...THIN STRIP BETWEEN DOORS AN
162		FF SUM = 0.				1.771	- RECT			...THIN STRIP BETWEEN DOORS AN
163	1201	CAL.	.000013	.000004	.000013	.000067	.199986	.199986	1.354	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NOOE PAIR HAS BEEN SUBDIVIDED):
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
163		FF SUM = .0000				6.098	+ RECT			...THIN STRIP BETWEEN DOORS AN
164		FF SUM = 0.				1.762	- RECT			...THIN STRIP BETWEEN DOORS AN
165	1130	CAL.	.000024	.000022	.000024	.000024	1.000000	1.000000	5.066	
165	1131	CAL.	.000001	.000001	.000001	.000405	.002881	.002881	6.147	
165		FF SUM = .0000				6.153	+ RECT			...THIN STRIP BETWEEN DOORS AN
166		FF SUM = 0.				1.846	- RECT			...THIN STRIP BETWEEN DOORS AN
167	1130	CAL.	.000222	.000201	.000222	.000222	1.000000	1.000000	7.725	
167		FF SUM = .0002				7.886	+ RECT			...THIN STRIP BETWEEN DOORS AN
399	1100	CAL.	.000004	.000009	.000004	.000006	.694301	.694301	1.285	R
399	1111	CAL.	.000157	.000536	.000157	.000157	1.000000	1.000000	2.644	R
399	1121	CAL.	.000461	.000930	.000461	.000461	1.000000	1.000000	3.488	R
399	1130	CAL.	.000190	.000474	.000190	.000190	1.000000	1.000000	4.254	R
399		FF SUM = .0008				4.321	+ RECT			VERT. FIN LOG. EDGE 2
100J	1101	CAL.	.070935	.690592	.070935	.070935	1.000000	1.000000	65.246	*R
1000		FF SUM = .0709				65.788	+ CYLN			TUNNEL 1, X=582 TO 672.4, SPA
1010	1200	CAL.	.000009	.003670	.000009	.000009	1.000000	1.000000	.162	R
1010		FF SUM = .0000				.909	+ CYLN			TUNNEL 2, X=672.4 TO 790.4, S
1015	1201	CAL.	.000046	.019146	.000046	.000046	1.000000	1.000000	.293	R
1015		FF SUM = .0000				.988	+ CYLN			TUNNEL 2, X=672.4 TO 790.4, S
1020	1200	CAL.	.000109	.074433	.000109	.000109	1.000000	1.000000	.708	*R
1020	1201	CAL.	.000224	.153325	.000224	.000224	1.000000	1.000000	1.828	*R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED);
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE (I,J) W/SHAD	FE (J,I) W/SHAD	FA (I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
1020		FF SUM = .0003			2.727		+ CONE			FWD CONE, X=790.4 TO 816.1, SP
1200		FF SUM = .1195			1.543		- DISC			ECS CONDENSATE VENT 802.1, SP
1201		FF SUM = .2403			3.799		+ DISC			ECS CONDENSATE VENT 802.1, SP
1030		FF SUM = 0.			.574		+ CYLN			CORE SEGMENT X=816.1 Y
1040	1120	CAL.	.001770	.045713	.001770	.001770	1.000000	1.000000	.860	*R
1040		FF SUM = .0018			1.042		+ CYLN			EXPERIMENT SEGMENT X=922
1050		FF SUM = 0.			.639		+ CONE			AFT CONE TAPER, X=1027.9 TO
1060	1130	CAL.	.000371	.009085	.000371	.000371	1.000000	1.000000	.872	R
1060		FF SUM = .0004			.991		+ CYLN			AFT AIRLOCK, X=1059.3 TO 108
1065		FF SUM = 0.			.554		+ DISC			AFT AIRLOCK DISC X= 1088.8,
1070		FF SUM = 0.			.547		+ CYLN			PALLET BOTTOM CYLINDER X= 110
1080		FF SUM = 0.			.351		+ RECT			-Y PALLET OUTSIDE STRIP
1081		FF SUM = 0.			.350		+ RECT			+Y PALLET OUTSIDE STRIP
1082	1130	CAL.	.000448	.001583	.000448	.000448	1.000000	1.000000	1.970	R

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) *
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
1082		FF SUM = .0004								ROW CP TIME = 2.052 + RECT -Y PALLET TOP STRIP X=1101.2 T
1083	1130	CAL.	.000448	.001583	.000448	.000448	1.000000	1.000000	1.963	R
1083		FF SUM = .0004								ROW CP TIME = 2.021 + RECT +Y PALLET TOP STRIP ,X= 1101.
1084	1130	CAL.	.000667	.017811	.000667	.000667	1.000000	1.000000	1.120	R
1084		FF SUM = .0007								ROW CP TIME = 1.169 + RECT -Y INSIDE TOP PANNEL,X=1101.2
1085	1130	CAL.	.000668	.017814	.000668	.000668	1.000000	1.000000	1.128	R
1085		FF SUM = .0007								ROW CP TIME = 1.176 + RECT +Y INSIDE TOP PANNEL,X=1101.2
1086	1130	CAL.	.000210	.004434	.000210	.000369	.568863	.568863	1.197	R
1086		FF SUM = .0002								ROW CP TIME = 1.250 + RECT -Y INSIDE BOTTOM PANNEL, X=11
1087	1130	CAL.	.000177	.003752	.000177	.000369	.481220	.481220	1.192	R
1087		FF SUM = .0002								ROW CP TIME = 1.245 + RECT +Y INSIDE BOTTOM PANNEL,X 110
1088		FF SUM = 0.								ROW CP TIME = 1.180 + RECT PALLET BOTTOM,X= 1101.2 TO 12
1100		FF SUM = .2889								ROW CP TIME = .470 - DISC TUNNEL EVA HATCH X=627. SPACE
1101		FF SUM = .8215								ROW CP TIME = .966 + DISC TUNNEL EVA HATCH X=627. SPACE
1110		FF SUM = .0000								ROW CP TIME = .508 - DISC CORE SEGMENT WINDOW, X=869. S
1111		FF SUM = .0007								ROW CP TIME = .270 + DISC CORE SEGMENT WINDOW, X=869. S

MODEL = TAPE3 STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)*
(R INDICATES FF CALCULATED FROM J TO I)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)*
1120		FF SUM = .0460			ROW CP TIME = .437		- DISC		EXPERIMENT SEGMENT WINDOW.
1121		FF SUM = .0014			ROW CP TIME = .152		+ DISC		EXPERIMENT SEGMENT WINDOW.
1130		FF SUM = .2187			ROW CP TIME = .085		- DISC		AFT VIEWING WINDOW X=1043.6.
1131		FF SUM = .0000			ROW CP TIME = .021		+ DISC		AFT VIEWING WINDOW X=1043.6.

TOTAL CP TIME (SEC) FOR PROBLEM = 310.057

SPACELAB-1 GEOMETRIC RELATIONSHIP DATA MATRIX

The following pages contain the geometric relationship data computer printouts for the Spacelab-1/Orbiter configuration.

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I		POSITION VECTOR I			
20	1030	.002388	3.71E+03	25.67	113.20	4.44844E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1040	.005851	3.71E+03	33.15	119.83	3.52392E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1050	.052526	3.71E+03	36.84	66.61	2.81665E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1060	.003103	3.71E+03	36.51	119.75	2.43793E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1065	.009660	3.71E+03	36.30	36.30	2.24825E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1081	.003709	3.71E+03	33.81	82.92	1.34560E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1082	.000747	3.71E+03	58.64	72.10	2.14848E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1083	.005846	3.71E+03	31.63	59.81	1.31307E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1084	.015514	3.71E+03	58.62	32.82	2.14693E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1085	.003710	3.71E+03	39.58	90.23	1.45062E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1086	.011959	3.71E+03	59.17	30.85	2.18191E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1087	.006441	3.71E+03	49.69	74.75	1.72810E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1088	.023784	3.71E+03	56.02	47.28	2.00041E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
21	1030	.002388	3.71E+03	11.49	87.83	4.09150E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1040	.005851	3.71E+03	15.44	87.10	3.06171E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1050	.052526	3.71E+03	21.85	28.59	2.42870E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1060	.003103	3.71E+03	28.45	71.75	2.22865E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1065	.009660	3.71E+03	36.30	36.30	2.24825E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1081	.003709	3.71E+03	33.81	82.92	1.34560E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1082	.000747	3.71E+03	31.63	59.81	1.31307E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1083	.005846	3.71E+03	58.64	72.10	2.14848E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1084	.003710	3.71E+03	39.58	90.23	1.45062E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1085	.015514	3.71E+03	58.62	32.82	2.14693E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1086	.006441	3.71E+03	49.69	74.75	1.72810E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1087	.011959	3.71E+03	59.17	30.85	2.18191E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1088	.023784	3.71E+03	56.02	47.28	2.00041E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
11	1030	.000556	4.05E+04	85.52	138.85	4.27961E+02	-3.46E+03	-3.51E+03	4.02E+04	-3.37E+02	-2.42E+02	-8.51E+01
11	1040	.000114	4.05E+04	83.41	150.35	3.70821E+02	-3.46E+03	-3.51E+03	4.02E+04	-3.37E+02	-2.42E+02	-8.51E+01

MODEL = TAPE3 STFF = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

12	1030	.000291	4.46E+04	85.00	128.40	6.45489E+02	-1.38E+03	-3.89E+03	4.44E+04	-5.63E+02	-3.21E+02	-1.07E+02
12	1040	.000529	4.46E+04	83.99	134.85	5.68460E+02	-1.38E+03	-3.89E+03	4.44E+04	-5.63E+02	-3.21E+02	-1.07E+02
2	1030	.000556	4.05E+04	81.63	60.02	3.25104E+02	-3.46E+03	3.51E+03	4.02E+04	-3.38E+02	2.42E+02	-8.51E+01
2	1040	.000114	4.05E+04	76.69	48.47	2.45051E+02	-3.46E+03	3.51E+03	4.02E+04	-3.38E+02	2.42E+02	-8.51E+01
3	1030	.000291	4.46E+04	82.81	64.52	5.60412E+02	-1.38E+03	3.89E+03	4.44E+04	-5.63E+02	3.21E+02	-1.07E+02
3	1040	.000529	4.46E+04	81.00	59.11	4.69630E+02	-1.38E+03	3.89E+03	4.44E+04	-5.63E+02	3.21E+02	-1.07E+02
150	1030	.000275	2.80E+04	63.54	115.30	3.95759E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1040	.001251	2.80E+04	53.62	124.68	2.67190E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1050	.038067	2.80E+04	45.66	75.49	1.99919E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1070	.430157	2.80E+04	52.72	95.01	7.64008E+01	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1091	.016158	2.80E+04	51.91	94.61	8.30409E+01	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1084	.005355	2.80E+04	21.77	44.27	1.94106E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1086	.002933	2.80E+04	32.70	56.78	1.24695E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
151	1030	.025332	2.80E+04	43.73	134.24	2.17904E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1040	.432843	2.80E+04	22.76	152.90	1.71386E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1050	.094272	2.80E+04	20.73	131.06	1.49392E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1060	.020772	2.80E+04	29.87	134.88	1.38496E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1070	.018229	2.80E+04	73.93	92.29	1.67204E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1091	.000955	2.80E+04	72.50	92.25	1.70740E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1084	.009869	2.80E+04	48.07	58.99	2.14170E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1086	.005864	2.80E+04	57.27	69.39	1.94085E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1088	.001770	2.80E+04	68.10	95.61	1.67876E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
152	1000	.009461	2.80E+04	61.66	115.99	2.36455E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1010	.018484	2.80E+04	46.83	124.78	1.81649E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1015	.058030	2.80E+04	31.11	135.56	1.45144E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1020	.089210	2.80E+04	19.14	124.97	1.49655E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1030	.418305	2.80E+04	23.00	151.99	1.72190E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1040	.016776	2.80E+04	44.03	133.60	2.20467E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1070	.000164	2.80E+04	82.03	91.15	3.32657E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1081	.000014	2.80E+04	81.21	91.14	3.35240E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
153	1000	.159010	2.80E+04	22.18	148.74	1.21223E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1010	.080322	2.80E+04	21.79	140.74	1.33834E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1015	.037446	2.80E+04	40.40	129.42	1.63192E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
153	1020	.054125	2.80E+04	46.88	70.57	2.06844E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1030	.001148	2.80E+04	54.10	124.22	2.70309E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1040	.000194	2.80E+04	63.82	115.03	3.59248E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1070	.000027	2.80E+04	84.75	90.76	5.05912E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1081	.000002	2.80E+04	84.20	90.75	5.06957E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
154	1030	.000205	2.80E+04	81.87	91.38	3.21735E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1040	.001251	2.80E+04	78.06	92.03	2.19862E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1050	.035964	2.80E+04	65.79	36.12	1.56772E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1070	.430157	2.80E+04	52.72	95.01	7.64056E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1080	.016158	2.80E+04	51.91	94.61	8.30409E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1085	.005355	2.80E+04	21.77	44.27	1.54106E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1087	.002933	2.80E+04	32.70	56.78	1.24695E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
155	1030	.025332	2.80E+04	73.08	92.85	1.56304E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1040	.432843	2.80E+04	55.09	95.61	7.95107E+01	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1050	.094272	2.80E+04	39.45	104.90	8.32445E+01	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1060	.020305	2.80E+04	39.42	84.64	1.08607E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1070	.018229	2.80E+04	73.93	92.29	1.67204E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1080	.000955	2.80E+04	72.50	92.25	1.70340E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1085	.008868	2.80E+04	48.07	58.99	2.14170E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1087	.005864	2.80E+04	57.27	69.39	1.94095E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1088	.001770	2.80E+04	61.10	95.61	1.67877E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
156	1030	.009461	2.80E+04	71.77	79.18	2.16419E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1010	.018866	2.80E+04	58.96	74.77	1.54629E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1015	.059815	2.80E+04	43.24	68.21	1.09449E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1020	.089753	2.80E+04	38.08	103.18	7.95442E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1030	.418305	2.80E+04	55.93	95.49	8.12302E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1040	.016706	2.80E+04	73.46	92.79	1.59856E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1070	.000164	2.80E+04	82.03	91.15	3.33657E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1080	.000014	2.80E+04	81.21	91.14	3.35240E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
157	1000	.158702	2.80E+04	25.29	57.14	7.48914E+01	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1010	.081322	2.80E+04	31.93	64.37	9.39348E+01	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1015	.037356	2.80E+04	52.99	72.14	1.32454E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1020	.054125	2.80E+04	67.48	33.41	1.83448E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1030	.001148	2.80E+04	78.26	91.99	2.23642E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1040	.000194	2.80E+04	81.97	91.37	3.25633E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1070	.000027	2.80E+04	84.75	90.76	5.05912E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1080	.000002	2.80E+04	84.20	90.75	5.06957E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
140	1050	.061761	3.27E+04	24.84	56.96	2.48395E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1060	.001088	3.27E+04	21.35	111.35	2.10309E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1065	.013873	3.27E+04	16.18	16.18	1.88675E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1082	.001177	3.27E+04	48.77	94.73	1.69627E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10

MODEL = TAFE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
140	1083	.001174	3.27E+04	14.29	96.97	1.15370E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1084	.024380	3.27E+04	46.28	45.66	1.61749E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1085	.023765	3.27E+04	8.37	81.72	1.13005E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1086	.018489	3.27E+04	43.56	49.19	1.54269E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1087	.018214	3.27E+04	20.85	77.96	1.19637E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1088	.035641	3.27E+04	34.04	65.62	1.34917E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
135	1000	.092990	3.27E+04	55.82	144.12	1.01819E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1020	.043876	3.27E+04	24.58	52.55	2.56498E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1200	.060018	3.27E+04	13.80	68.72	2.37639E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10

MODEL = TAPP3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

796	1030	.002728	2.41E+04	57.36	130.76	2.98792E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1040	.057906	2.41E+04	45.37	148.24	2.29423E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1050	.024307	2.41E+04	38.35	105.42	1.76376E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1060	.007190	2.41E+04	36.79	170.05	1.42919E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1070	.023699	2.41E+04	25.50	116.58	1.46099E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1081	.026215	2.41E+04	73.83	61.26	7.56205E+01	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1084	.004536	2.41E+04	37.15	27.60	1.91627E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1086	.004140	2.41E+04	28.96	37.42	1.76037E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
798	1090	.027810	2.41E+04	47.05	141.21	1.88161E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1010	.022397	2.41E+04	38.83	162.93	1.53429E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
798	1015	.021898	2.41E+04	36.19	172.01	1.48107E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1020	.024415	2.41E+04	39.16	99.12	1.09998E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1030	.052424	2.41E+04	45.89	147.40	2.31641E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1040	.002248	2.41E+04	57.72	130.26	3.01828E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1081	.000013	2.41E+04	87.09	84.98	4.15283E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
311	1015	.010714	2.99E+04	52.24	52.24	1.15131E+02	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01
311	1030	.000349	2.99E+04	83.43	83.43	1.93182E+02	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01
380	1030	.000107	2.81E+04	82.70	97.30	6.28414E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1040	.000222	2.81E+04	81.36	98.64	5.31941E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1050	.000920	2.81E+04	83.44	47.51	4.66951E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1060	.000009	2.81E+04	86.66	93.34	4.39083E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1082	.000035	2.81E+04	78.12	55.12	3.68121E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1084	.000079	2.81E+04	80.02	69.05	3.78935E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
385	1030	.000062	2.05E+04	83.61	96.39	7.17846E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1040	.000114	2.05E+04	82.58	97.42	6.18950E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1050	.000211	2.05E+04	84.46	44.11	5.52141E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1060	.000007	2.05E+04	87.20	92.80	5.23423E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1065	.000003	2.05E+04	90.00	27.42	5.15283E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1082	.000003	2.05E+04	80.26	61.97	4.47875E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
390	1030	.000107	2.81E+04	97.31	97.31	6.28427E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1040	.000222	2.81E+04	98.65	98.65	5.31956E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1050	.000918	2.81E+04	96.57	47.52	4.66963E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1060	.000009	2.81E+04	93.36	93.36	4.39089E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1083	.000035	2.81E+04	78.13	55.12	3.68101E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1085	.000078	2.81E+04	80.04	69.06	3.78917E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
395	1030	.000062	2.05E+04	96.40	96.40	7.17857E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1040	.000114	2.05E+04	97.43	97.43	6.18963E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1050	.000210	2.05E+04	95.55	44.12	5.52151E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1060	.000007	2.05E+04	92.81	92.81	5.23428E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1065	.000003	2.05E+04	90.01	27.42	5.15283E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1083	.000003	2.05E+04	80.27	61.96	4.47858E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02

MODEL = TAFE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

161	1020	.011240	1.75E+02	97.08	12.36	1.54256E+02	0.	0.	1.75E+02	1.43E+02	1.02E+02	1.90E+01
161	1030	.000676	1.75E+02	95.10	83.93	2.13600E+02	0.	0.	1.75E+02	1.43E+02	1.02E+02	1.90E+01
161	1040	.000112	1.75E+02	93.42	85.94	3.18820E+02	0.	0.	1.75E+02	1.43E+02	1.02E+02	1.90E+01
163	1020	.014060	1.75E+02	109.00	93.82	5.83677E+01	0.	0.	1.75E+02	-3.25E+01	1.02E+02	1.90E+01
163	1030	.040779	1.75E+02	113.85	61.25	4.89858E+01	0.	0.	1.75E+02	-3.25E+01	1.02E+02	1.90E+01
163	1040	.003091	1.75E+02	97.50	81.06	1.45478E+02	0.	0.	1.75E+02	-3.25E+01	1.02E+02	1.90E+01
165	1030	.003698	1.75E+02	97.71	80.81	1.41563E+02	0.	0.	1.75E+02	-2.07E+02	1.02E+02	1.90E+01
165	1040	.041346	1.75E+02	115.62	59.05	4.39461E+01	0.	0.	1.75E+02	-2.07E+02	1.02E+02	1.90E+01
165	1050	.007475	1.75E+02	107.15	94.68	6.44401E+01	0.	0.	1.75E+02	-2.07E+02	1.02E+02	1.90E+01
167	1030	.000118	1.75E+02	93.46	85.88	3.14838E+02	0.	0.	1.75E+02	-3.82E+02	1.02E+02	1.90E+01
167	1040	.000738	1.75E+02	95.20	83.81	2.09640E+02	0.	0.	1.75E+02	-3.82E+02	1.02E+02	1.90E+01
167	1050	.012331	1.75E+02	97.39	14.50	1.47649E+02	0.	0.	1.75E+02	-3.82E+02	1.02E+02	1.90E+01
399	1030	.001440	4.15E+03	68.64	98.05	5.70693E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1040	.002218	4.15E+03	73.80	99.65	4.76530E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1050	.008325	4.15E+03	78.71	50.65	4.1343E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1060	.000501	4.15E+03	80.63	93.80	3.86511E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1065	.000865	4.15E+03	83.47	38.47	3.81598E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1082	.000091	4.15E+03	87.62	48.92	3.20473E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1084	.000202	4.15E+03	90.33	65.97	3.32843E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1086	.000092	4.15E+03	94.29	53.13	3.55003E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
1000	1010	.002043	1.91E+04	90.00	90.00	7.66100E+01	-1.39E-07	1.91E+04	1.62E-07	1.73E+02	3.15E+01	-1.70E+01
1000	1015	.000569	1.91E+04	90.00	90.00	1.34778E+02	-1.39E-07	1.91E+04	1.62E-07	1.73E+02	3.15E+01	-1.70E+01
1000	1020	.007840	1.91E+04	82.21	36.15	1.78518E+02	-1.39E-07	1.91E+04	1.62E-07	1.73E+02	3.15E+01	-1.70E+01
1000	1101	.070935	1.91E+04	118.37	32.04	3.99226E+01	-1.39E-07	1.91E+04	1.62E-07	1.73E+02	3.15E+01	-1.70E+01
1010	1020	.018818	1.17E+04	76.57	41.39	1.04200E+02	9.09E-08	1.17E+04	9.09E-08	9.81E+01	3.15E+01	3.39E-10

MODEL = TAFF3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

1015	1020	.108074	1.17E+04	60.26	57.71	4.87776E+01	9.09E-08	1.17E+04	9.09E-08	3.91E+01	3.15E+01	3.39E-10
1201	1131	.000128	2.81E+01	69.19	33.73	2.44749E+02	-1.31E+01	-1.86E-10	-2.48E+01	-7.80E-01	6.25E-09	2.47E+01
1040	1120	.001770	5.32E+04	134.29	45.01	1.14429E+02	4.14E-07	5.32E+04	4.14E-07	-1.75E+02	7.99E+01	6.31E-06
1050	1060	.022611	2.10E+04	75.39	46.73	4.04733E+01	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1082	.000558	2.10E+04	22.00	96.89	1.16664E+02	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1083	.000883	2.10E+04	80.81	94.65	1.72578E+02	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1084	.013960	2.10E+04	26.19	82.95	1.14533E+02	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1085	.014901	2.10E+04	78.46	45.58	1.64696E+02	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1086	.011198	2.10E+04	40.33	78.98	1.21451E+02	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1087	.009515	2.10E+04	74.06	49.23	1.57071E+02	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1088	.016876	2.10E+04	60.34	66.07	1.37323E+02	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1050	1131	.000035	2.10E+04	111.37	61.39	7.36991E+01	-1.78E+04	1.12E+04	2.62E-08	-2.45E+02	5.33E+01	5.22E-10
1060	1082	.000135	4.75E+03	59.52	98.13	9.89811E+01	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1060	1083	.000135	4.75E+03	139.93	96.06	1.32511E+02	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1060	1084	.019222	4.75E+03	64.64	64.42	9.34959E+01	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1060	1085	.019222	4.75E+03	137.21	44.33	1.24354E+02	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1060	1086	.015230	4.75E+03	77.49	62.97	9.64964E+01	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1060	1087	.015158	4.75E+03	127.43	46.32	1.18630E+02	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1060	1088	.025858	4.75E+03	104.23	57.66	1.04111E+02	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1060	1131	.000062	4.75E+03	108.62	78.72	6.64211E+01	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1065	1084	.001426	2.06E+03	43.50	50.68	9.56785E+01	-2.06E+03	-2.91E-08	1.50E-08	-2.89E+02	8.38E-09	-1.28E+01
1065	1085	.001426	2.06E+03	43.50	50.68	9.56785E+01	-2.06E+03	-2.91E-08	1.50E-08	-2.89E+02	8.38E-09	-1.28E+01
1065	1086	.071248	2.06E+03	38.45	52.18	8.86105E+01	-2.06E+03	-2.91E-08	1.50E-08	-2.89E+02	8.38E-09	-1.28E+01
1065	1087	.071248	2.06E+03	38.45	52.18	8.86105E+01	-2.06E+03	-2.91E-08	1.50E-08	-2.89E+02	8.38E-09	-1.28E+01
1065	1088	.142823	2.06E+03	31.72	58.28	8.15890E+01	-2.06E+03	-2.91E-08	1.50E-08	-2.89E+02	8.38E-09	-1.28E+01
1082	1130	.000293	6.84E+02	73.07	64.92	1.41139E+02	0.	0.	6.84E+02	-3.58E+02	7.58E+01	1.40E+01
1083	1130	.000283	6.84E+02	73.63	65.77	1.45783E+02	0.	0.	6.84E+02	-3.58E+02	-7.58E+01	1.40E+01
1084	1085	.069758	5.17E+03	18.39	18.39	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1084	1086	.015740	5.17E+03	79.61	76.84	3.57649E+01	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1084	1087	.055797	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1084	1088	.088759	5.17E+03	54.68	53.71	8.14442E+01	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1084	1130	.000382	5.17E+03	57.32	71.50	1.44232E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1085	1086	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1085	1087	.015740	5.17E+03	79.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1085	1088	.088759	5.17E+03	54.68	53.71	8.14442E+01	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1085	1130	.000382	5.17E+03	54.42	72.01	1.48179E+02	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1086	1087	.061000	4.09E+03	41.95	41.95	9.30000E+01	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1086	1088	.093268	4.09E+03	57.97	73.98	4.83784E+01	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1086	1130	.000106	4.09E+03	51.87	81.54	1.56207E+02	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1086	1131	.000016	4.09E+03	51.87	98.46	1.56207E+02	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1087	1088	.093268	4.09E+03	57.97	73.98	4.83784E+01	-4.31E-08	3.04E+03	2.74E+03	-3.58E+02	-4.65E+01	-4.24E+01
1087	1130	.000075	4.09E+03	49.57	81.68	1.58802E+02	-4.31E-08	3.04E+03	2.74E+03	-3.58E+02	-4.65E+01	-4.24E+01

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
20	1110	.000008	3.71E+03	13.70	89.88	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1111	.000032	3.71E+03	13.70	90.12	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1120	.000083	3.71E+03	18.67	89.83	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1121	.000127	3.71E+03	18.67	90.17	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1130	.000779	3.71E+03	24.33	34.39	2.48474E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
21	1110	.000008	3.71E+03	13.70	89.88	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1111	.000032	3.71E+03	13.70	90.12	4.02611E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1120	.000083	3.71E+03	18.67	89.83	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1121	.000127	3.71E+03	18.67	90.17	2.97883E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1130	.000779	3.71E+03	22.72	33.34	2.45442E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
152	1201	.000013	2.80E+04	19.74	31.61	1.50618E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
153	1200	.000000	2.80E+04	4E.37	103.02	2.05448E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1201	.000013	2.80E+04	4E.37	76.98	2.05448E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1101	.003303	2.80E+04	13.97	41.67	1.27469E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

156	1291	.000013	2.80E+04	19.74	31.61	1.50618E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
157	1290	.000000	2.80E+04	46.37	103.02	2.05448E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1291	.000013	2.80E+04	46.37	76.98	2.05448E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1101	.063465	2.80E+04	19.45	32.13	1.12437E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
140	1130	.000690	3.27E+04	18.96	47.24	2.39392E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
135	1200	.000034	3.27E+04	18.21	76.08	2.42947E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1100	.017353	3.27E+04	49.21	91.25	8.72475E+01	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	11J1	.001137	3.27E+04	49.21	88.75	8.72475E+01	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10

172	1121	.000000	3.91E+04	103.22	88.13	4.15483E+02	9.79E-08	3.00E+04	2.52E+04	-5.87E+02	1.13E+02	9.45E+01
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796	1130	.000096	2.41E+04	62.47	87.13	1.46529E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
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798	1200	.000001	2.41E+04	64.01	103.96	1.45530E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1201	.000018	2.41E+04	64.01	76.04	1.45530E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1101	.001248	2.41E+04	57.88	69.33	1.76637E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01

161	1200	.000008	1.75E+02	78.06	79.04	1.80062E+02	0.	0.	1.75E+02	1.43E+02	1.02E+02	1.90E+01
161	1201	.000000	1.75E+02	78.06	100.96	1.80062E+02	0.	0.	1.75E+02	1.43E+02	1.02E+02	1.90E+01
161	1100	.000006	1.75E+02	90.49	94.57	9.50311E+01	0.	0.	1.75E+02	1.43E+02	1.02E+02	1.90E+01
161	1101	.000001	1.75E+02	90.49	85.43	9.50311E+01	0.	0.	1.75E+02	1.43E+02	1.02E+02	1.90E+01
163	1201	.000013	1.75E+02	70.86	65.13	1.13575E+02	0.	0.	1.75E+02	-3.25E+01	1.02E+02	1.90E+01
165	1130	.000024	1.75E+02	71.03	116.63	1.11008E+02	0.	0.	1.75E+02	-2.07E+02	1.02E+02	1.90E+01
165	1131	.000001	1.75E+02	71.03	63.37	1.11008E+02	0.	0.	1.75E+02	-2.07E+02	1.02E+02	1.90E+01
167	1130	.000222	1.75E+02	78.04	55.55	1.74106E+02	0.	0.	1.75E+02	-3.82E+02	1.02E+02	1.90E+01
399	1100	.000004	4.15E+03	60.19	90.70	7.88182E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1111	.000157	4.15E+03	60.77	74.23	5.28628E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1121	.000461	4.15E+03	64.77	70.23	4.24813E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1130	.000190	4.15E+03	71.23	5.90	3.83487E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
1000	1101	.073935	1.91E+04	118.37	32.04	3.99922E+01	-1.39E-07	1.91E+04	1.62E-07	1.73E+02	3.15E+01	-1.70E+01

MODEL = TAPE3 STEP = 1
 PROCESSING OPERATIONS DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB1 (RECEIVING SHUTTLE))

1010	1200	.000009	1.17E+04	105.48	91.63	1.18036E+02	9.09E-08	1.17E+04	9.09E-08	9.81E+01	3.15E+01	3.39E-10
1015	1201	.000046	1.17E+04	114.56	65.86	7.57997E+01	9.09E-08	1.17E+04	9.09E-08	3.91E+01	3.15E+01	3.39E-10
1020	1200	.000109	1.92E+04	107.59	129.94	7.91925E+01	1.69E+04	8.99E+03	1.36E-07	-3.25E+00	5.57E+01	-8.00E-10
1020	1201	.000224	1.92E+04	107.59	50.06	7.91925E+01	1.69E+04	8.99E+03	1.36E-07	-3.25E+00	5.57E+01	-8.00E-10
1040	1120	.001770	5.32E+04	134.29	45.01	1.14429E+02	4.14E-07	5.32E+04	4.14E-07	-1.75E+02	7.99E+01	6.31E-06
1060	1130	.000371	4.75E+03	109.00	93.00	6.65726E+01	3.69E-08	4.75E+03	3.69E-08	-2.74E+02	2.56E+01	2.42E-10
1082	1130	.000448	6.84E+02	73.10	57.84	1.41377E+02	0.	0.	6.84E+02	-3.58E+02	7.58E+01	1.40E+01
1083	1130	.000448	6.84E+02	73.60	58.86	1.45525E+02	0.	0.	6.84E+02	-3.58E+02	-7.58E+01	1.40E+01
1084	1130	.000667	5.17E+03	57.16	63.78	1.44432E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1085	1130	.000668	5.17E+03	54.57	64.45	1.47957E+02	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1086	1130	.000210	4.09E+03	51.74	73.15	1.56334E+02	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1087	1130	.000177	4.09E+03	49.69	73.41	1.58652E+02	-4.31E-08	3.04E+03	2.74E+03	-3.58E+02	-4.65E+01	-4.24E+01

3.5.2 Spacelab-2/Orbiter Data Matrices - Figure 6 depicts the computer drawing of the modeled Spacelab-2 configuration indicating the nodal numbering assignments assigned to the primary Spacelab surfaces. (The Orbiter nodal assignments are depicted in Figure 4.) This is followed by a summary listing and description of the Spacelab-2/Orbiter nodal surfaces. The ensuing computer printouts contain the Input Data, View-factor Data, and Geometric Relationship Data matrices for the Spacelab-2/Orbiter configuration.

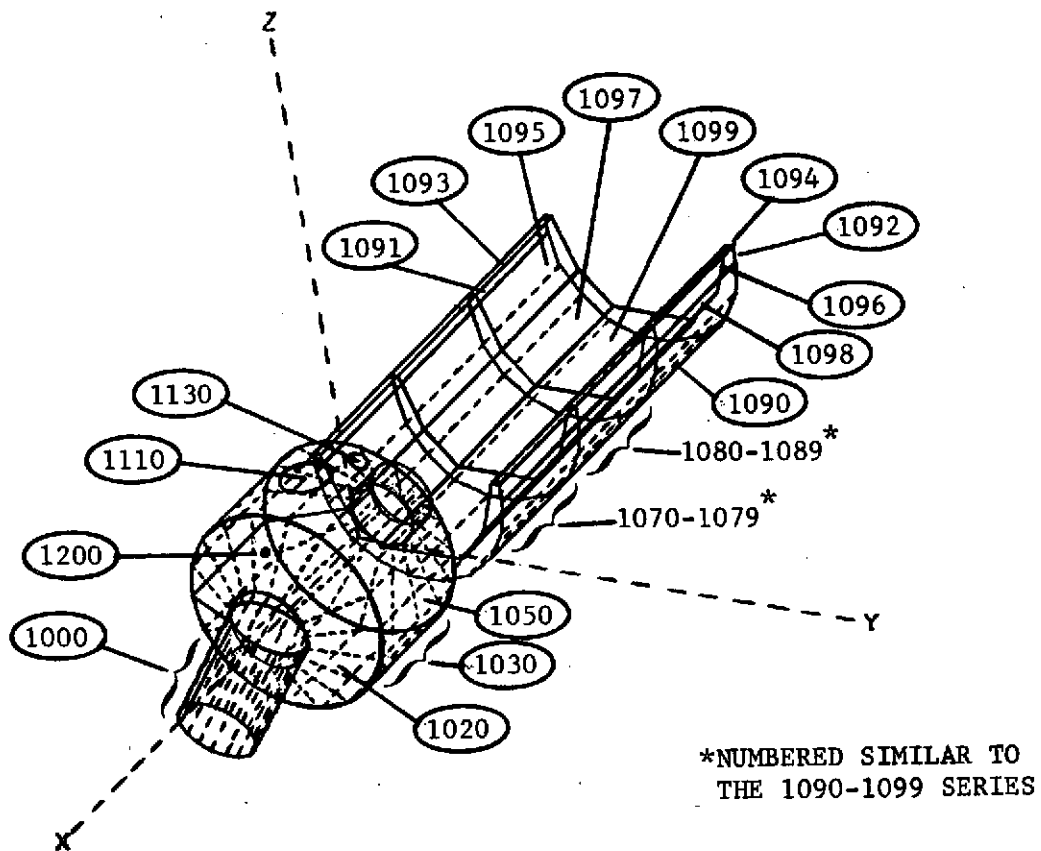


Figure 6. Primary Spacelab-2 Nodal Surface Number Assignments

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

NODE	RCS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
145	BODY	2.687E+03	0.	0.	TRAPEZOID	TOP	+Y REAR SIDE TAPED
146	BODY	2.697E+03	0.	0.	TRAPEZOID	BOTTOM	- Y. REAR SIDE TAPED...
707	BODY	2.827E+01	0.	0.	DISC	BOTTOM	.....JULY 8 EVAP..3 IN. RAD.
708	BODY	2.877E+01	0.	0.	DISC	TOP	.....JULY 8 EVAP..3 IN. RAD.
147	BODY	1.353E+04	0.	0.	PARABOLOID	OUTSIDE	TOP ENGINE
148	BODY	1.958E+04	0.	0.	PARABOLOID	OUTSIDE	+ Y ENGINE
149	BODY	1.953E+04	0.	0.	PARABOLOID	OUTSIDE	- Y ENGINE...
20	BODY	3.711E+03	0.	0.	DISC	TOP	....-Y OWS SEALER ...
21	BODY	3.711E+03	0.	0.	DISC	TOP	....-Y OWS SEALER ...
202	BODY	2.577E+04	0.	0.	RECTANGLE	BOTTOM	BACK RECT 7.350EG
23	BODY	1.670E+04	0.	0.	DISC	TOP	REAR END HALF DISK
407	BODY	2.827E+01	0.	0.	DISC	TOP	BACK SIDE EVAPORAT. UPDATED
10	BODY	2.827E+01	0.	0.	DISC	TOP	REAR END EVAPORATOR
10	BODY	1.737E+04	0.	0.	TRAPEZOID	BOTTOM	....LEFT FRONT WING A ...
11	BODY	4.045E+04	0.	0.	TRAPEZOID	TOP	.....LEFT MIDDLE WING BACK.B
141	BODY	2.589E+04	0.	0.	RECTANGLE	TOP	RS INNER WING
12	BODY	4.402E+04	0.	0.	RECTANGLE	TOP	..... LEFT BACK RECT. WING C
142	BODY	1.470E+04	0.	0.	RECTANGLE	TOP	INNER WING C
13	BODY	1.112E+04	0.	0.	TRAPEZOID	TOP	..... LEFT WING TAIL EDGE
1	BODY	1.873E+04	0.	0.	TRAPEZOID	TOP	...FRONT WING TRIANGLE RT.A.58
2	BODY	4.145E+04	0.	0.	TRAPEZOID	BOTTOM	.....MIDDLE WING TRAP, RT B ..
143	BODY	2.590E+04	0.	0.	RECTANGLE	BOTTOM	+ -Y RECTANGLE WING
1	BODY	4.462E+04	0.	0.	RECTANGLE	BOTTOM	.... BACK WING RECT. RT C .129
144	BODY	1.430E+04	0.	0.	RECTANGLE	BOTTOM	INNER WING C RECT
4	BODY	1.012E+04	0.	0.	TRAPEZOID	BOTTOM	...WING TAIL FLAP RT 1453,1507
151	BODY	2.100E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
151	BODY	2.874E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
152	BODY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
153	BODY	2.934E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
154	BODY	2.400E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
155	BODY	2.874E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
156	BODY	2.874E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
157	BODY	2.804E+04	-0.	-0.	CYLINDER	INSIDE	RAY AREA CYLINDER
140	BODY	3.260E+04	-0.	-0.	DISC	TOP	END RAY AREA DISK
175	BODY	2.260E+04	-0.	-0.	DISC	TOP	FRONT RAY AREA DISK
122	BODY	1.527E+04	-0.	-0.	PARABOLOID	OUTSIDE	VERY NOSE CONE
123	BODY	1.527E+04	-0.	-0.	PARABOLOID	OUTSIDE	VERY NOSE CONE
124	BODY	1.527E+04	-0.	-0.	PARABOLOID	OUTSIDE	VERY NOSE CONE
125	BODY	1.527E+04	-0.	-0.	PARABOLOID	OUTSIDE	VERY NOSE CONE
721	BODY	4.573E+03	-0.	-0.	CYLINDER	OUTSIDE	NOSE CYLINDER
721	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSIDE	NOSE CYLINDER
722	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSIDE	NOSE CYLINDER
723	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSIDE	NOSE CYLINDER
724	BODY	4.573E+03	-0.	-0.	CYLINDER	OUTSIDE	NOSE CYLINDER
725	BODY	4.573E+03	-0.	-0.	CYLINDER	OUTSIDE	NOSE CYLINDER
726	BODY	4.573E+03	-0.	-0.	CYLINDER	OUTSIDE	NOSE CYLINDER

MODEL = CONTIN STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

NODE	RCS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
727	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
729	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
729	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
730	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
731	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
732	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
733	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
734	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
735	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
740	BODY	3.872E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
741	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
742	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
743	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
744	BODY	7.878E+02	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
745	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
745	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
747	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
748	BODY	3.872E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
749	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
750	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
751	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
752	BODY	7.878E+02	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
753	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
754	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
755	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
760	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
761	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
762	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
763	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
764	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
765	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
766	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
767	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
768	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
769	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
770	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
771	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
772	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
773	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
774	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
775	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
401	BODY	4.610E+04	.900	.900	RECTANGLE	BOTTOM	BODY BOTTOM (FR)
402	BODY	1.474E+05	.900	.900	RECTANGLE	BOTTOM	BODY BOTTOM (REAR)
192	BODY	3.971E+04	-0.	-0.	CYLINDER	OUTSID	OMSP00C1
172	BODY	3.971E+04	-0.	-0.	CYLINDER	OUTSID	OMSP00C2
701	BODY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....Y SIDE HOOD.....

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RETRIEVING SHUTTLE))

NODE	RCS	APFA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
782	BODY	2.470E+04	0.	0.	CYLINDER	OUTSIDE	.....+Y SIDE DOOR.....
783	BODY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
784	BODY	2.470E+04	0.	0.	CYLINDER	OUTSIDE	.....+Y SIDE DOOR.....
785	BODY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
786	BODY	2.470E+04	0.	0.	CYLINDER	OUTSIDE	.....+Y SIDE DOOR.....
787	BODY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
788	BODY	2.470E+04	0.	0.	CYLINDER	OUTSIDE	.....+Y SIDE DOOR.....
791	BODY	2.417E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
792	BODY	2.417E+04	0.	0.	CYLINDER	OUTSIDE	... -Y SIDE DOOR....
793	BODY	2.417E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
794	BODY	2.417E+04	0.	0.	CYLINDER	OUTSIDE	... -Y SIDE DOOR....
795	BODY	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
796	BODY	2.413E+04	0.	0.	CYLINDER	OUTSIDE	... -Y SIDE DOOR....
797	BODY	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
799	BODY	2.413E+04	0.	0.	CYLINDER	OUTSIDE	... -Y SIDE DOOR....
799	BODY	2.394E+04	0.	0.	TRAPEZOID	TOP	+Y SIDE FRONT TRAPEZOID
305	BODY	4.987E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (MIDDLE-PORT) 305
306	BODY	5.150E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (BACK-PORT) 306
711	BODY	2.394E+04	0.	0.	TRAPEZOID	BOTTOM	-Y SIDE FRONT TRAPEZOID
715	BODY	3.678E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (MIDDLE-STRO) 315
716	BODY	3.795E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (BACK-STRO) 316
202	BODY	3.685E+04	.900	.900	CYLINDER	OUTSIDE	BODY TOP (STRO-REAR) 202
212	BODY	3.639E+04	.900	.900	CYLINDER	OUTSIDE	BODY TOP (PORT-REAR) 212
737	BODY	2.305E+04	.900	.900	TRAPEZOID	TOP	VERTICAL FIN (PORT) 20
380	BODY	2.305E+04	.900	.900	TRAPEZOID	TOP	VERTICAL FIN (PORT-AFT) 20
790	BODY	2.305E+04	.900	.900	TRAPEZOID	BOTTOM	VERTICAL FIN (STRO) 20
390	BODY	2.305E+04	.900	.900	TRAPEZOID	BOTTOM	VERTICAL FIN (STRO-AFT) 20
796	BODY	2.827E+01	0.	0.	DISC	TOP	...MOST FORWARD EVAPORATOR.....
797	BODY	1.590E+03	0.	0.	DISC	BOTTOM	.....SUPER ENGINES (OMS LOCAT
798	BODY	1.590E+03	0.	0.	DISC	TOP	.....SUPER ENGINES (OMS LOCAT
799	BODY	1.590E+03	0.	0.	DISC	BOTTOM	.....SUPER ENGINES (OMS LOCAT
799	BODY	1.590E+03	0.	0.	DISC	TOP	.....SUPER ENGINES (OMS LOCAT
24	BODY	2.832E+01	0.	0.	DISC	BOTTOM	...BACK RCS ...LOOKING +/- Y.(
25	BODY	2.832E+01	0.	0.	DISC	TOP	...BACK RCS ...LOOKING +/- Y.(
19	BODY	2.826E+01	0.	0.	DISC	BOTTOM	...FRONT RCS...LOOKING +/-Y AT
19	BODY	2.826E+01	0.	0.	DISC	TOP	...FRONT RCS...LOOKING +/-Y AT
26	BODY	2.832E+01	0.	0.	DISC	BOTTOM	...BACK RCS LOOKING +/- Z...7/
27	BODY	2.832E+01	0.	0.	DISC	TOP	...BACK RCS LOOKING +/- Z...7/
16	BODY	2.827E+01	0.	0.	DISC	BOTTOM	...MIDDLE EVAP. LOOKING +/- Y.
17	BODY	2.827E+01	0.	0.	DISC	TOP	...MIDDLE EVAP. LOOKING +/- Y.
303	BODY	4.152E+03	.900	.900	RECTANGLE	TOP	VERT. FIN LDG. EDGE 2
1000	SPLAT	1.836E+04	0.	0.	CYLINDER	OUTSIDE	TUNNEL 1, X=582 TO 668.3, SPA
1000	SPLAT	1.919E+04	0.	0.	CONF	OUTSIDE	END CONF, X=668.3 TO 694.0, SP
1210	SPLAT	2.805E+01	0.	0.	DISC	BOTTOM	RCS,CONDENSATE VENT,X=681, SPA
1201	SPLAT	2.805E+01	0.	0.	DISC	TOP	RCS,CONDENSATE VENT,X=681, SPA
1070	SPLAT	5.316E+04	0.	0.	CYLINDER	OUTSIDE	CORE SEGMENT X=694.0 T

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECOVERING SHUTTLE))

NODE	PCS	AREA	ALPH	EMISS	SUPE, TYPE	ACTIVE	-----COMMENTS-----
1050	SPLAR	2.102E+04	0.	0.	CONE	OUTSID	AFT CONE TAPER, X=799.90 TO
1060	SPLAR	6.745E+03	0.	0.	CYLINDER	OUTSID	AFT AIRLOCK, X=831.30 TO 860
1065	SPLAR	2.359E+03	0.	0.	DISC	TOP	AFT AIR LOCK DISK SL2
1070	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET1 BOTTOM CYLINDER SL2
1071	SPLAR	1.506E+03	0.	0.	RECTANGLE	TOP	-Y PALLET1 OUTSIDE STRIP SL2
1072	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET1 OUTSIDE STRIP SL2
1073	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLET3 TOP STRIP X=873.2 T
1074	SPLAR	6.841E+02	0.	0.	RECTANGLE	TOP	+Y PALLET3 TOP STRIP ,X= 873.
1075	SPLAR	5.166E+02	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL3 ,X=873.
1076	SPLAR	5.166E+02	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL3,X=873.2
1077	SPLAR	4.007E+02	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL3, X=8
1078	SPLAR	4.007E+02	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL3,X 87
1079	SPLAR	7.866E+02	0.	0.	RECTANGLE	TOP	...BOTTOM PANNEL3 ,X=873.2 TO
1080	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET4 BOTTOM CYLINDER X= 98
1081	SPLAR	1.506E+03	0.	0.	RECTANGLE	TOP	-Y PALLET4 OUTSIDE STRIP SL2
1082	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET4 OUTSIDE STRIP SL2
1083	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLET4 TOP STRIP X=987.2 T
1084	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	+Y PALLET4 TOP STRIP ,X= 987.
1085	SPLAR	5.166E+02	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL4,X=987.2
1086	SPLAR	5.166E+02	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL4,X=987.2
1087	SPLAR	4.007E+02	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL4, X=9
1088	SPLAR	4.007E+02	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL4,X 98
1089	SPLAR	7.866E+02	0.	0.	RECTANGLE	TOP	PALLET4 BOTTOM,X= 987.2 TO 11
1090	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET5 BOTTOM CYLINDER X= 11
1091	SPLAR	1.506E+03	0.	0.	RECTANGLE	TOP	-Y PALLET5 OUTSIDE STRIP
1092	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET5 OUTSIDE STRIP
1093	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLET5 TOP STRIP X=1101.2
1094	SPLAR	6.841E+02	0.	0.	RECTANGLE	TOP	+Y PALLET5 TOP STRIP ,X= 1101
1095	SPLAR	5.166E+02	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL5,X=1101.
1096	SPLAR	5.166E+02	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL5,X=1101.
1097	SPLAR	4.007E+02	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL5, Y=1
1098	SPLAR	4.007E+02	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL5,X 11
1099	SPLAR	7.866E+02	0.	0.	RECTANGLE	TOP	PALLET 5 BOTTOM,X=1011.2 TO 12
1110	SPLAR	1.219E+03	0.	0.	DISC	BOTTOM	CORE SEGMENT WINDOW, X=746.9
1111	SPLAR	1.219E+03	0.	0.	DISC	TOP	CORE SEGMENT WINDOW, X=746.9
1170	SPLAR	1.036E+02	0.	0.	DISC	BOTTOM	AFT VIEWING WINDOW X=815.6, S
1171	SPLAR	1.036E+02	0.	0.	DISC	TOP	AFT VIEWING WINDOW X=815.6, S

SPACELAB-2 INPUT DATA MATRIX

The following pages contain the input data computer printouts for the Spacelab-2/Orbiter configuration.

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

THICK CAPS COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

HEADPR	SURFACE DATA		
		63	AA
T	ICSN=7J	64	AA
	TX=0., TY=0., TZ=0.	65	AA
	ROTX=0., ROTY=0., ROTZ=0.	66	AA
T	ICSN = 1	67	AA
	TX=100., TY=1., TZ=0.	68	AA
	ROTZ=-140., ROTY=0., ROTX=0.	69	AA
I	ICSN = 2	70	AA
	TX = -5.0000000000E+02	71	AA
	TY = 0.	72	AA
	TZ = 0.	73	AA
	ROTZ = -100.0000	74	AA
	ROTY = -0.	75	AA
	ROTX = 0.	76	AA
I	ICSN = 3	77	AA
	TX = 4.0000000000E+02	78	AA
	TY = 0.	79	AA
	TZ = 0.	80	AA
	ROTZ = -10.0000	81	AA
	ROTY = -0.	82	AA
	ROTX = 0.0000	83	AA
I	ICSN = 4	84	AA
	TX = 4.0000000000E+02	85	AA
	TY = 6.0000000000E+01	86	AA
	TZ = 2.4000000000E+01	87	AA
	ROTZ = 70.0000	88	AA
	ROTY = 40.0000	89	AA
	ROTX = 0.	90	AA
T	ICSN = 5	91	AA
	TX = 4.0000000000E+02	92	AA
	TY = -6.0000000000E+01	93	AA
	TZ = 2.4000000000E+01	94	AA
	ROTZ = 100.0000	95	AA
	ROTY = -40.0000	96	AA
	ROTX = 0.	97	AA
I	ICSN= 6	98	AA
	TX=-125.	99	AA
	TY=0.	100	AA
	TZ=14.	101	AA
	ROTX=0., ROTY=90., ROTZ=0.	102	AA
T	ICSN=7	103	AA
	TX=-116., TY=0., TZ=14.	104	AA
	ROTX=0., ROTY=90., ROTZ=0.	105	AA
T	ICSN=8	106	AA
	TX=-110., TY=0., TZ=14.	107	AA
	ROTX=0., ROTY=90., ROTZ=0.	108	AA
I	ICSN=9	109	AA
	TX=-126., TY=0., TZ=14.	110	AA
	ROTX=0., ROTY=90., ROTZ=0.	111	AA
L	ICSN=10	112	AA
	TX=-125., TY=0., TZ=14.	113	AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

INPUT CARD NO. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	ROTX=0.,ROTY=90.,ROTZ=0.	114	AA
I	ICSN = 11	115	AA
	TX=-470.,TY=-79.14,TZ=65.56	116	AA
	ROTY=J.,ROTY=90.,ROTZ=0.	117	AA
T	ICSN=12	118	AA
	TX=-47J.,TY=+78.14,TZ=65.56	119	AA
	ROTX=0.,ROTY=90.J,ROTZ=0.	120	AA
I	ICSN=13	121	AA
	TX=-700.,TY=J0.,TZ=50.	122	AA
	ROTX=0.0,ROTY=-80.,ROTZ=0.	123	AA
T	ICSN=14	124	AA
	TX=-717.,TY=J.0,TZ=-50.	125	AA
	ROTX=0.0,ROTY=-80.,ROTZ=0.	126	AA
I	ICSN=15	127	AA
	TX=-711.,TY=0.0,TZ=0.0	128	AA
	ROTY=0.0,ROTY=-97.35,ROTZ=0.0	129	AA
I	ICSN=16	130	AA
	TX=-705.,TY=88.,TZ=70.5	131	AA
	ROTY=0.,ROTY=-74.183,ROTZ=12.241	132	AA
I	ICSN=17	133	AA
	TX=-705.,TY=-88.,TZ=70.5	134	AA
	ROTX=0.,ROTY=-74.183,ROTZ=12.241	135	AA
I	ICSN=20	136	AA
	TX=0.,TY=102.,TZ=0.	137	AA
	ROTX=-5.,ROTY=0.,ROTZ=0.	138	AA
I	ICSN=21	139	AA
	TX=J.,TY=-102.,TZ=0.	140	AA
	ROTX=5.,ROTY=0.,ROTZ=0.	141	AA
RCS	ROTY	142	AA
S	SURF=145,TYPE=TRAP,ACTIVE=TOP,SHADE=ROTH,BSHADE=BOTH	143	AA
	P1=-698.,102.,0.	144	AA
	P2=-698.,102.,-125.	145	AA
	P3=-729.,102.,-125.	146	AA
	P4=-711.,102.,0.	147	AA
	PROP=0.,0.	148	AA
	COM= * - Y REAR SIDE TAPE*	149	AA
S	SURF=146,TYPE=TRAP,ACTIVE=ROTH,SHADE=BOTH,BSHADE=BOTH	150	AA
	P1=-698.,-102.,0.	151	AA
	P2=-698.,-102.,-125.	152	AA
	P3=-729.,-102.,-125.	153	AA
	P4=-711.,-102.,0.	154	AA
	PROP=J.,0.	155	AA
	COM= * - Y REAR SIDE TAPE0,...	156	AA
S	SURF=7J7,TYPE=DISC,ACTIVE=ROTH,SHADE=BOTH,BSHADE=ROTH	157	AA
	P1=218.,104.,-47.	158	AA
	P2=218.,104.,-50.	159	AA
	P3=215.,104.,-47.	160	AA
	P4=215.,104.,-47.	161	AA
	PROP=0.,0.	162	AA
	COM= * JULY 3 EVAP..3 IN. RAD. UP FRONT CLOSE UNDER WING*	163	AA
S	SURF=147,TYPE=PARAB,ACTIVE=OUT,SHADE=ROTH,BSHADE=ROTH	164	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	DIMENSIONS=4.4,0.0,100.0,360.	165	AA
	TCSM=13	166	AA
	PROP=0.,0.	167	AA
	COM=* TOP ENGIN *	168	AA
S	SURF=148,TYPE=PARAB,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	169	AA
	DIMENSIONS=4.4,0.0,100.0,360.	170	AA
	TCSM=14,TV=50.	171	AA
	PROP=0.,0.	172	AA
	COM = * + Y ENGIN *	173	AA
S	SURF=149,TYPE=PARAB,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	174	AA
	DIMENSIONS=4.4,0.0,100.0,360.	175	AA
	TCSM = 14, TV = -50.	176	AA
	PROP=0.,0.	177	AA
	COM = * - Y ENGIN...*	178	AA
S	SURF=20,TYPE=DISC,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	179	AA
	DIMENSIONS=0.0,0.0,45.0,125.0,335.	180	AA
	PROP=0.,0.	181	AA
	TCSM=11	182	AA
	COM = * ...-Y OWS SEALER ...*	183	AA
S	SURF=21,TYPE=DISC,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	184	AA
	DIMENSIONS=0.0,0.0,45.0,25.0,235.	185	AA
	PROP=0.,0.	186	AA
	TCSM=12	187	AA
	COM = * ...+Y OWS SEALER ...*	188	AA
S	SURF=222,TYPE=RECT,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	189	AA
	P1=-723.,-102.,-125.	190	AA
	P2=-723.,102.,-125.	191	AA
	P3=-711.,102.,0.0	192	AA
	PROP=1.,0.	193	AA
	COM=* BACK RECT 7.350EG*	194	AA
S	SURF=27,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	195	AA
	DIMENSIONS=0.0,0.0,102.0,90.0,270.	196	AA
	PROP=0.,0.	197	AA
	TCSM=15	198	AA
	COM=* REAR END HALF DISK*	199	AA
S	SURF=457,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	200	AA
	P1=-592.0,113.,-77.	201	AA
	P2=-592.0,113.,-80.	202	AA
	P3=-595.0,113.,-77.	203	AA
	P4=-595.0,113.,-77.	204	AA
	PROP=0.,0.	205	AA
	COM=* BACK SIDE EVAPORAT, UPDATED JULY 18. 6 IN DIA.*	206	AA
S	SURF=15,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	207	AA
	P1=-719.,126.,-95.	208	AA
	P2=-719.,126.,-95.	209	AA
	P3=-722.,126.,-95.	210	AA
	P4=-722.,126.,-95.	211	AA
	PROP=0.,0.	212	AA
	COM=* REAR END EVAPORATOR*	213	AA
S	SURF=19,TYPE=POLY,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	214	AA
	P1=230.,..., -102.	215	AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

INPUT CASE NO.	COL. = 12345678	1	2	3	4	5	6	7	8	EDIT NO.	OLD EDIT NO.	LABEL	
												216	AA
												217	AA
												218	AA
												219	AA
												220	AA
S												221	AA
												222	AA
												223	AA
												224	AA
												225	AA
												226	AA
												227	AA
S												228	AA
												229	AA
												230	AA
												231	AA
												232	AA
												233	AA
												234	AA
S												235	AA
												236	AA
												237	AA
												238	AA
												239	AA
												240	AA
												241	AA
S												242	AA
												243	AA
												244	AA
												245	AA
												246	AA
												247	AA
												248	AA
S												249	AA
												250	AA
												251	AA
												252	AA
												253	AA
												254	AA
												255	AA
S												256	AA
												257	AA
												258	AA
												259	AA
												260	AA
												261	AA
												262	AA
S												263	AA
												264	AA
												265	AA
												266	AA

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	P3=-483.,366.,-85.	267	AA
	COM=*.....MIDDLE WING TRAP, DT B ..1024,1292*	268	AA
	TCSN=20	269	AA
S	SURF=143,TYPE=RECT,ACTIVE=BOTTOM,SHADE=ROTH,BSHADE=BOTH	270	AA
	P1=-192.,0.,-69.	271	AA
	P2=-483.,0.,-85.	272	AA
	P3=-483.,89.,-85.	273	AA
	PPOP=0.,0.	274	AA
	TCSN=20	275	AA
	COM=*R +V RECTANGLE WING*	276	AA
S	SURF=3,TYPE=RECT,ACTIVE=BOTTOM,SHADE=ROTH,BSHADE=ROTH	277	AA
	P1=-644.,89.,-90.	278	AA
	P2=-644.,366.,-90.	279	AA
	P3=-483.,366.,-85.	280	AA
	PPOP=0.,0.	281	AA
	TCSN=20	282	AA
	COM=*.....BACK WING RECT. DT C .1292,1453*	283	AA
S	SURF=144,TYPE=RECT,ACTIVE=BOTTOM,SHADE=ROTH,BSHADE=BOTH	284	AA
	P1=-644.,0.,-90.	285	AA
	P2=-644.,89.,-90.	286	AA
	P3=-483.,89.,-85.	287	AA
	PPOP=0.,0.	288	AA
	TCSN=20	289	AA
	COM=* INNER WING C RECT*	290	AA
S	SURF=4,TYPE=RECT,ACTIVE=BOTTOM,SHADE=ROTH,BSHADE=ROTH	291	AA
	P1=-644.,0.,-90.	292	AA
	P2=-644.,366.,-90.	293	AA
	P3=-644.,0.,-90.	294	AA
	PPOP=0.,0.	295	AA
	TCSN=20	296	AA
	COM=*...WING TAIL FLAP DT 1453,1507*	297	AA
S	SURF=150,SHADE=ROTH,BSHADE=BOTH,ALPHA=-0.,EMISS=-0.	298	AA
	TRANS=-0.,TRANZ=-0.,COM=*RAY AREA CYLINDER	299	AA
	TYPE=CYLINDER,ACTIVE=INSIDE,ALPHA=1.02000E+02	300	AA
	PMTN=0.,RMAX=7.00000E+02,GMIN=0.	301	AA
	CMAX=1.00000E+02,NMY=2,NNY=4,TCSN=-0	302	AA
	POSITION=-4.70000E+02,0.,0.	303	AA
	POTZ = -0.,POTY = 90.0000,POTX = 0.	304	AA
S	SURF=143,SHADE=ROTH,BSHADE=BOTH,ALPHA=-0.,EMISS=-0.	305	AA
	TRANS=-0.,TRANZ=-0.,COM=* END RAY AREA DISK	306	AA
	TYPE=DISK,ACTIVE=TOP,ALPHA=0.	307	AA
	PMTN=0.,RMAX=1.02000E+02,GMIN=0.	308	AA
	CMAX=7.00000E+02,NMY=1,NNY=1,TCSN=-0	309	AA
	POSITION=-4.70000E+02,0.,0.	310	AA
	POTZ = -0.,POTY = 90.0000,POTX = 0.	311	AA
S	SURF=135,SHADE=ROTH,BSHADE=BOTH,ALPHA=-0.,EMISS=-0.	312	AA
	TRANS=-0.,TRANZ=-0.,COM=* FRONT RAY AREA DISK	313	AA
	TYPE=DISK,ACTIVE=TOP,ALPHA=0.	314	AA
	PMTN=0.,RMAX=1.02000E+02,GMIN=0.	315	AA
	CMAX=7.00000E+02,NMY=1,NNY=1,TCSN=-0	316	AA
	POSITION=2.30000E+02,0.,0.	317	AA

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

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S	ROTZ = -0. , ROTY = -91.0000, ROTX = 0.	318	AA
	SURF# = 122, SHADE=BOTM, BSHADE=BOTM, ALPHA=-0. , EMISS=-0.	319	AA
	TRANS=-0. , TRANI=-0. , COM=* VERY NOSE CONE *	320	AA
	TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 6.13000E+00	321	AA
	RMTN= 0. , RMAX= 2.00000E+02, GMIN= 0.	322	AA
	GMAX= 3.60000E+02, NMN= 4, NMY= 1, ICSN= 1	323	AA
	POSITION= 2.00000E+02, 0. , -3.00000E+01	324	AA
S	ROTZ = -190.0000, ROTY = -90.0000, ROTX = 0.	325	AA
	SURF# = 220, SHADE=BOTM, BSHADE=BOTM, ALPHA=-0. , EMISS=-0.	326	AA
	TRANS=-J. , TRANI=-0. , COM=* NOSE CYLINDER *	327	AA
	TYPE=CYLINDER , ACTIVE=OUTSIDE, ALPH= 7.00000E+01	328	AA
	RMTN= 0. , RMAX= 1.70000E+02, GMIN= 0.	329	AA
	GMAX= 3.60000E+02, NMN= 4, NMY= 4, ICSN= 1	330	AA
	POSITION= 4.00000E+02, 0. , -3.00000E+01	331	AA
	ROTZ = -190.0000, ROTY = -91.0000, ROTX = 0.	332	AA
S	SURF# = 340, SHADE=BOTM, BSHADE=BOTM, ALPHA=-0. , EMISS=-0.	333	AA
	TRANS=-J. , TRANI=-0. , COM=* 4000 PARTIAL BACK *	334	AA
	TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 7.03000E+00	335	AA
	RMTN= 2.60000E+02, RMAX= 3.70000E+02, GMIN= 0.	336	AA
	GMAX= 3.60000E+02, NMN= 4, NMY= 4, ICSN= 1	337	AA
	POSITION= 2.00000E+02, 0. , 0.	338	AA
	ROTZ = -190.0000, ROTY = -91.0000, ROTX = 0.	339	AA
S	SURF# = 360, SHADE=BOTM, BSHADE=BOTM, ALPHA=-0. , EMISS=-0.	340	AA
	TRANS=-J. , TRANI=-0. , COM=* WINDOW *	341	AA
	TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 2.38000E+01	342	AA
	RMTN= 1.60000E+01, RMAX= 7.60000E+01, GMIN= 0.	343	AA
	GMAX= 3.60000E+02, NMN= 4, NMY= 4, ICSN= 1	344	AA
	POSITION= 3.83200E+02, 0. , 0.	345	AA
	ROTZ = -191.0000, ROTY = -91.0000, ROTX = 0.	346	AA
S	SURF# = 401, SHADE=BOTM, BSHADE=BOTM, ALPHA= .900, EMISS= .900	347	AA
	TRANS=-J. , TRANI=-0. , COM=* BODY BOTTOM (FPT) 4 1 *	348	AA
	TYPE=RECTANGLE , ACTIVE=BOTTOM , ALPH= 0.	349	AA
	RMTN=-1.02000E+02, RMAX= 1.02000E+02, GMIN= 0.	350	AA
	GMAX= 2.25000E+02, NMN= 1, NMY= 1, ICSN= 1	351	AA
	POSITION= 5.70000E+02, 0. , -1.02000E+02	352	AA
	ROTZ = -0. , ROTY = 5.3870, ROTX = 0.	353	AA
S	SURF# = 402, SHADE=BOTM, BSHADE=BOTM, ALPHA= .900, EMISS= .900	354	AA
	TRANS=-J. , TRANI=-0. , COM=* BODY BOTTOM (RFAF) 402 *	355	AA
	TYPE=RECTANGLE , ACTIVE=BOTTOM , ALPH=-1.25000E+02	356	AA
	RMTN=-1.02000E+02, RMAX= 1.02000E+02, GMIN= 2.25000E+02	357	AA
	GMAX= 9.70000E+02, NMN= 1, NMY= 1, ICSN= 1	358	AA
	POSITION= 5.70000E+02, 0. , 0.	359	AA
	ROTZ = -0. , ROTY = -0. , ROTX = 0.	360	AA
S	SURF# = 182, SHADE=BOTM, BSHADE=BOTM, ALPHA=-0. , EMISS=-0.	361	AA
	TRANS=-J. , TRANI=-0. , COM=* OMSP00C1 *	362	AA
	TYPE=CYLINDER , ACTIVE=OUTSIDE, ALPH= 4.50000E+01	363	AA
	RMTN= 1. , RMAX= 2.75000E+02, GMIN= 3.50000E+01	364	AA
	GMAX= 2.48000E+02, NMN= 1, NMY= 1, ICSN= -0	365	AA
	POSITION=-4.70000E+02, -7.81400E+01, 6.55600E+01	366	AA
	ROTZ = -0. , ROTY = -90.0000, ROTX = 0.	367	AA
S	SURF# = 170, SHADE=BOTM, BSHADE=BOTM, ALPHA=-0. , EMISS=-0.	368	AA

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	TRANS=-0. ,TRANI=-0. ,COM=* OMSPODC2	369	AA
	TYPE=CYLINDER ,ACTIVE=OUTSIDE,ALPH= 4.51000E+01	370	AA
	GMAX= 1.46000E+02,NMX= 1,NMY= 1,TCNS= -0	371	AA
	PMIN= 0. ,BMAX= 2.25000E+02,GMIN=-6.61000E+01	372	AA
	POSITION=-4.70000E+02, 7.61400E+01, 6.55600E+01	373	AA
	ROTZ = -0. , ROTY = -90.0000, ROTX = 0.	374	AA
S	SURFN= 781,TYPE=CYL,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	375	AA
	P1=230.,201.34,37.98	376	AA
	P2=230.,102.,19.	377	AA
	P3=230.,201.34,-64.02	378	AA
	P4=-470.,201.34,-64.02	379	AA
	PROP=0.,0.	380	AA
	NMX=2,NMY=2	381	AA
	COM=*.+Y SIDE DOOR.*	382	AA
S	SURFN= 791,TYPE=CYL,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	383	AA
	P1=230.,-201.34,37.98	384	AA
	P2=230.,-201.34,-64.02	385	AA
	P3=230.,-102.,19.	386	AA
	P4=-470.,-102.,19.	387	AA
	PROP=0.,0.	388	AA
	NMX=2,NMY=2	389	AA
	COM=*.-Y SIDE DOOR.*	390	AA
S	SURFN= 801,TYPE=TRAP,BSHADE=BOTH,SHADE=BOTH,ACTIVE=TOP	391	AA
	P1=230.,102.,-102.	392	AA
	P2=4.,102.,-125.	393	AA
	P3=4.,102.,19.	394	AA
	P4=230.,102.,19.	395	AA
	COM=*.+Y SIDE FRONT TRAPEZOID*	396	AA
	PROP=0.,0.	397	AA
S	SURFN= 805,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	398	AA
	TRANS=-0. ,TRANI=-0. ,COM=*BODY SIDE (MIDDLE-PORT) 305 *	399	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	400	AA
	PMIN=-1.25000E+02,GMAX= 19. ,GMTN= 2.25000E+02	401	AA
	GMAX= 5.72000E+02,NMX= 1,NMY= 1,TCNS= 1	402	AA
	POSITION= 5.72000E+02, 0. , 0.	403	AA
	ROTZ = -0. , ROTY = -0. , ROTX = 90.0000	404	AA
S	SURFN= 806,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	405	AA
	TRANS=-0. ,TRANI=-0. ,COM=*BODY SIDE (BACK-PORT) 305 *	406	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	407	AA
	PMIN=-1.25000E+02,GMAX= 19. ,GMTN= 5.72000E+02	408	AA
	GMAX= 9.33000E+02,NMX= 1,NMY= 1,TCNS= 1	409	AA
	POSITION= 5.72000E+02, 0. , 0.	410	AA
	ROTZ = -0. , ROTY = -0. , ROTX = 90.0000	411	AA
S	SURFN= 811,TYPE=TRAP,BSHADE=BOTH,SHADE=BOTH,ACTIVE=BOTTOM	412	AA
	P1=230.,102.,-102.	413	AA
	P2=4.,102.,-125.	414	AA
	P3=4.,102.,19.	415	AA
	P4=230.,102.,19.	416	AA
	COM=*.-Y SIDE FRONT TRAPEZOID*	417	AA
	PROP=0.,0.	418	AA
S	SURFN= 715,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	419	AA

INPUT CARD NO.	1	2	3	4	5	6	7	8	EDIT NO.	OLD EDIT NO.	LABEL
	TRANS=-0.	TRANT=-0.	COM=*BODY SIDE (MTDOL-STRD)	315 *					420		AA
	TYPE=RECTANGLE	ACTIVE=TOP	ALPH= 1.02000E+02						421		AA
	RMIN= 19.	RMAX= 1.25000E+02	GMIN= 2.25000E+02						422		AA
	GMAX= 5.72000E+02	NNX= 1	NNY= 1	ICSN= 1					423		AA
	POSITION= 5.70000E+02, 0.								424		AA
	POTZ = -0.	POTY = -J.	POTX = -90.0000						425		AA
S	SURFN= 316	SHADE=BOTM	PSHADE=BOTM	ALPHA= .900	EMISS= .900				426		AA
	TRANS=-0.	TRANT=-0.	COM=*BODY SIDE (BACK-STRD)	316 *					427		AA
	TYPE=RECTANGLE	ACTIVE=TOP	ALPH= 1.02000E+02						428		AA
	RMIN= 19.	RMAX= 1.25000E+02	GMIN= 5.72000E+02						429		AA
	GMAX= 9.30000E+02	NNX= 1	NNY= 1	ICSN= 1					430		AA
	POSITION= 5.70000E+02, 0.								431		AA
	POTZ = -0.	POTY = -J.	POTX = -90.0000						432		AA
S	SURFN= 202	SHADE=BOTM	PSHADE=BOTM	ALPHA= .900	EMISS= .900				433		AA
	TRANS=-0.	TRANT=-0.	COM=*BODY TOP (STRD-REAR)	202 *					434		AA
	TYPE=CYLINDER	ACTIVE=OUTSIDE	ALPH= 1.02000E+02						435		AA
	RMIN= 7.00000E+02	RMAX= 9.30000E+02	GMIN= 2.70000E+02						436		AA
	GMAX= 3.60000E+02	NNX= 1	NNY= 1	ICSN= 1					437		AA
	POSITION= 5.70000E+02, 0.								438		AA
	POTZ = -0.	POTY = 90.0000	POTX = 0.						439		AA
S	SURFN= 212	SHADE=BOTM	PSHADE=BOTM	ALPHA= .900	EMISS= .900				440		AA
	TRANS=-0.	TRANT=-0.	COM=*BODY TOP (PORT-REAR)	212 *					441		AA
	TYPE=CYLINDER	ACTIVE=OUTSIDE	ALPH= 1.02000E+02						442		AA
	RMIN= 7.00000E+02	RMAX= 9.30000E+02	GMIN= 1.30000E+02						443		AA
	GMAX= 2.70000E+02	NNX= 1	NNY= 1	ICSN= 1					444		AA
	POSITION= 5.70000E+02, 0.								445		AA
	POTZ = -0.	POTY = 90.0000	POTX = 0.						446		AA
S	SURFN= 380	SHADE=BOTM	PSHADE=BOTM	ALPHA= .900	EMISS= .900				447		AA
	TRANS=-0.	TRANT=-0.	COM=*VERTICAL FIN (PORT)	20 *					448		AA
	TYPE=TRAPEZOID	ACTIVE=TOP	ALPH= 0.						449		AA
	RMIN= 1.48400E+02	RMAX= 3.93400E+02	GMIN= 3.00000E+01						450		AA
	GMAX= 4.50000E+01	NNX= 1	NNY= 1	ICSN= 1					451		AA
	POSITION= 1.65840E+02, 0.								452		AA
	POTZ = -0.	POTY = -180.0000	POTX = 90.0000						453		AA
S	SURFN= 385	SHADE=BOTM	PSHADE=BOTM	ALPHA= .900	EMISS= .900				454		AA
	TRANS=-0.	TRANT=-0.	COM=*VERTICAL FIN (PORT-AFT)	20 *					455		AA
	TYPE=TRAPEZOID	ACTIVE=TOP	ALPH= 0.						456		AA
	RMIN= 1.48400E+02	RMAX= 3.93400E+02	GMIN= 1.50000E+01						457		AA
	GMAX= 3.00000E+01	NNX= 1	NNY= 1	ICSN= 1					458		AA
	POSITION= 1.65840E+02, 0.								459		AA
	POTZ = -0.	POTY = -180.0000	POTX = 90.0000						460		AA
S	SURFN= 390	SHADE=BOTM	PSHADE=BOTM	ALPHA= .900	EMISS= .900				461		AA
	TRANS=-0.	TRANT=-0.	COM=*VERTICAL FIN (STRD)	20 *					462		AA
	TYPE=TRAPEZOID	ACTIVE=BOTTOM	ALPH= 0.						463		AA
	RMIN= 1.48400E+02	RMAX= 3.93400E+02	GMIN= 3.00000E+01						464		AA
	GMAX= 4.50000E+01	NNX= 1	NNY= 1	ICSN= 1					465		AA
	POSITION= 1.65840E+02, 1.00000E-01								466		AA
	POTZ = -0.	POTY = -180.0000	POTX = 90.0000						467		AA
S	SURFN= 395	SHADE=BOTM	PSHADE=BOTM	ALPHA= .900	EMISS= .900				468		AA
	TRANS=-0.	TRANT=-0.	COM=*VERTICAL FIN (STRD-AFT)	20 *					469		AA
	TYPE=TRAPEZOID	ACTIVE=BOTTOM	ALPH= 0.						470		AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	GMIN= 1.46613E+02, RMAX= 3.93400E+02, GMIN= 1.50000E+01	471	AA
	RMAX= 3.00000E+01, NNX= 1, NNY= 1, ICEN= 1	472	AA
	POSITION= 1.65344E+03, 1.00000E-01, 4.95400E+02	473	AA
	POTZ = -0. , POTY = -19J.J000, POTX = . 99.0000	474	AA
S	SUPF=705, TYPE=DISC, ACTIVE=TOP, SHADE=BOTH, BSHADE=BOTH	475	AA
	P1=327., 35., -72.	476	AA
	P2=327., 65., -75.	477	AA
	P3=324., 85., -72.	478	AA
	P4=324., 35., -72.	479	AA
	PROP=0., 0.	480	AA
	COM=*...MOST FORWARD EVAPORATOR.....LOOKING +Y, 6 TH DTA.*	481	AA
S	SUPFN=710, TYPE=DISC, ACTIVE=BOTH, BSHADE=BOTH, SHADE=BOTH	482	AA
	DIMENSIONS=70., 0., 22.5, 0., 360.	483	AA
	ICEN=16, PROP=0., 0.	484	AA
	COM=*.....SUPER ENGIN (04S LOCATION)...+Y..*	485	AA
S	SUPFN=712, TYPE=DISC, ACTIVE=BOTH, BSHADE=BOTH, SHADE=BOTH	486	AA
	DIMENSIONS=70., 0., 22.5, 0., 360.	487	AA
	ICEN=17, PROP=0., 0.	488	AA
	COM=*.....SUPER ENGIN (0MS LOCATION)...-Y..*	489	AA
S	SUPFN=24, TYPE=DISC, ACTIVE=BOTH, SHADE=NO, BSHADE=BOTH	490	AA
	P1=-765., 134., 59.	491	AA
	P2=-765., 134., 62.	492	AA
	P3=-767.82, 132.97, 59.	493	AA
	P4=-767.82, 132.97, 59.	494	AA
	PROP=0., 0.	495	AA
	COM=*...BACK RCS ...LOOKING +/- Y. (10 DEG CANT) .*	496	AA
S	SUPFN=13, TYPE=DISC, ACTIVE=BOTH, SHADE=BOTH, BSHADE=BOTH	497	AA
	P1=467.5, 51., -48.9	498	AA
	P2=470.5, 51., -48.9	499	AA
	P3=467.5, 52.457, -47.18	500	AA
	P4=467.5, 52.457, -47.18	501	AA
	PROP=0., 0.	502	AA
	COM=*...FRONT RCS..LOOKING +/- Y AT 35 DEG. 7/23/74...*	503	AA
S	SUPFN=26, TYPE=DISC, ACTIVE=BOTH, SHADE=NO, BSHADE=BOTH	504	AA
	P1=-765., 118., 57.	505	AA
	P2=-765., 115., 57.	506	AA
	P3=-767.82, 118., 59.83	507	AA
	P4=-767.82, 118., 58.83	508	AA
	PROP=0., 0.	509	AA
	COM=*...BACK RCS LOOKING +/- Z...7/23/74. (10 DEGG CANT) .*	510	AA
S	SUPFN=16, TYPE=DISC, ACTIVE=BOTH, SHADE=BOTH, BSHADE=BOTH	511	AA
	P1=-247., 115., -21.	512	AA
	P2=-247., 105., -24.	513	AA
	P3=-250., 105., -21.	514	AA
	P4=-250., 115., -21.	515	AA
	PROP=0., 0.	516	AA
	COM=*...MIDDLE EVAP. LOOKING +/- Y.....*	517	AA
S	SUPFN= 749, SHADE=BOTH, BSHADE=BOTH, ALPHA= .900, ENTSS= .900	518	AA
	TRANS=0., TRANTS=0., COM=*VERT. FTN LOG. EDGE 2 *	519	AA
	TYPT=RECTANGLE, ACTIVE=TOP, ALPHA= 0.	520	AA
	RMIN=-6., 00000E+00, RMAX= 6., 00000E+00, GMIN=-6., 56000E+02	521	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	P4=867.80,25.6,400.	573	AA
	PROP=0.,0.	574	AA
	COM=* AFT ATPLOCK, X=831.30 TO 860.80, SPACELAB2*	575	AA
S	SURF=1065,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	576	AA
	TCSN=50	577	AA
	P1=867.80,0.,400.	578	AA
	P2=867.80,25.6,400.	579	AA
	P3=867.80,00.0,425.6	580	AA
	P4=867.80,00.0,425.6	581	AA
	PROP=0.,0.	582	AA
	COM=*AFT ATP LOCK DISK SL2*	583	AA
S	SURF=1070,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	584	AA
	TCSN=50	585	AA
	P1=877.2,0.,400.	586	AA
	P2=877.2,78.8,400.	587	AA
	P3=877.2,-78.8,400.	588	AA
	P4=877.2,-78.8,400.	589	AA
	PROP=0.,0.	590	AA
	COM=* PALLET1 BOTTOM CYLINDER SL2 *	591	AA
S	SURF=1071,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	592	AA
	TCSN=50	593	AA
	P1=877.2,-78.8,400.	594	AA
	P2=877.2,-78.8,400.	595	AA
	P3=877.2,-78.8,414.	596	AA
	PROP=0.,0.	597	AA
	COM=* -Y PALLET1 OUTSIDE STRIP SL2 *	598	AA
S	SURF=1072,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	599	AA
	TCSN=50	600	AA
	P1=877.2,78.8,414.	601	AA
	P2=877.2,78.8,400.	602	AA
	P3=877.2,78.8,400.	603	AA
	PROP=0.,0.	604	AA
	COM=* -Y PALLET1 OUTSIDE STRIP SL2 *	605	AA
S	SURF=1073,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	606	AA
	TCSN=50	607	AA
	P1=877.2,-78.8,414.	608	AA
	P2=877.2,-78.8,414.	609	AA
	P3=877.2,-72.8,414.	610	AA
	PROP=0.,0.	611	AA
	COM=* -Y PALLET1 TOP STRIP X=877.2 TO 987.2 SL2 *	612	AA
S	SURF=1074,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	613	AA
	TCSN=50	614	AA
	P1=877.2,72.8,414.	615	AA
	P2=877.2,72.8,414.	616	AA
	P3=877.2,78.8,414.	617	AA
	PROP=0.,0.	618	AA
	COM=* -Y PALLET1 TOP STRIP, X= 877.2 TO 987.2 SL2 *	619	AA
S	SURF=1075,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	620	AA
	TCSN=50	621	AA
	P1=877.2,-72.8,414.	622	AA
	P2=877.2,-72.8,414.	623	AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

INPUT DATA COL.	1	2	3	4	5	6	7	8	EDIT NO.	OLD EDIT NO.	LABEL
	P3=987.2,-58.5,371.								624		AA
	PROPR=0.,0.								625		AA
	COM = * -Y INSIDE TOP PANNEL3 ,X=873.2 TO 987.2SL2 *								626		AA
S	SURF=1076,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH								627		AA
	TORN=50								628		AA
	P1=987.2,58.5,371.								629		AA
	P2=987.2,72.8,414.								630		AA
	P3=973.2,72.8,414.								631		AA
	PROPR=...0.								632		AA
	COM = * -Y INSIDE TOP PANNEL3 ,X=873.2 TO 987.2 SL2 *								633		AA
S	SURF=1077,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH								634		AA
	TORN=50								635		AA
	P1=873.2,-58.5,371.								636		AA
	P2=987.2,-58.5,371.0								637		AA
	P3=987.2,-34.5,344.3								638		AA
	PROPR=1.,0.								639		AA
	COM = * -Y INSIDE BOTTOM PANNEL3 ,X=873.2 TO 987.2SL2 *								640		AA
S	SURF=1078,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH								641		AA
	TORN=50								642		AA
	P1=873.2,34.5,344.3								643		AA
	P2=987.2,34.5,344.3								644		AA
	P3=987.2,58.5,371.								645		AA
	PROPR=0.,0.								646		AA
	COM = * -Y INSIDE BOTTOM PANNEL3 ,X=873.2 TO 987.2 SL2 *								647		AA
S	SURF=1079,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH								648		AA
	TORN=50								649		AA
	P1=873.2,-34.5,344.3								650		AA
	P2=987.2,-34.5,344.3								651		AA
	P3=987.2,34.5,344.3								652		AA
	PROPR=0.,0.								653		AA
	COM = * ... BOTTOM PANNEL3 ,X=873.2 TO 987.2, SL2*								654		AA
S	SURF=1080,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH								655		AA
	TORN=50								656		AA
	P1=987.2,0.,400.								657		AA
	P2=987.2,78.8,400.								658		AA
	P3=987.2,-78.8,400.								659		AA
	P4=1101.2,-78.8,400.								660		AA
	PROPR=0.,0.								661		AA
	COM = * PALLET4 BOTTOM CYLINDER X= 987.2 TO 1101.2 SL2*								662		AA
S	SURF=1081,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH								663		AA
	TORN=50								664		AA
	P1=987.2,-78.8,400.								665		AA
	P2=1101.2,-78.8,400.								666		AA
	P3=1101.2,-78.8,414.								667		AA
	PROPR=0.,0.								668		AA
	COM = * -Y PALLET4 OUTSIDE STRIP SL2 *								669		AA
S	SURF=1082,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH								670		AA
	TORN=50								671		AA
	P1=1101.2,78.8,414.								672		AA
	P2=1101.2,78.8,400.								673		AA
	P3=987.2,78.8,400.								674		AA

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	PROP=0.,0.	675	AA
	COM=* +Y PALLET4 OUTSIDE STRIP SL2 *	676	AA
S	SURF=1003,TYPE=RECT,ACTIVE=TOP,SHADE=ROTH,BSHADE=ROTH	677	AA
	TOSN=50	678	AA
	P1=987.2,-72.8,414.	679	AA
	P2=1101.2,-72.8,414.	680	AA
	P3=1101.2,-72.8,414.	681	AA
	PROP=0.,0.	682	AA
	COM=* -Y PALLET4 TOP STRIP X=987.2 TO 1101.2 SL2 *	683	AA
S	SURF=1004,TYPE=RECT,ACTIVE=TOP,SHADE=ROTH,BSHADE=ROTH	684	AA
	TOSN=50	685	AA
	P1=987.2,72.8,414.	686	AA
	P2=1101.2,72.8,414.	687	AA
	P3=1101.2,72.8,414.	688	AA
	PROP=0.,0.	689	AA
	COM=* +Y PALLET4 TOP STRIP ,X= 987.2 TO 1101.2SL2 *	690	AA
S	SURF=1005,TYPE=RECT,ACTIVE=TOP,SHADE=ROTH,BSHADE=ROTH	691	AA
	TOSN=50	692	AA
	P1=987.2,-72.8,414.	693	AA
	P2=1101.2,-72.8,414.	694	AA
	P3=1101.2,-58.5,371.	695	AA
	PROP=0.,0.	696	AA
	COM=* -Y INSIDE TOP PANNEL4,X=987.2 TO 1101.2 *	697	AA
S	SURF=1006,TYPE=RECT,ACTIVE=TOP,SHADE=ROTH,BSHADE=ROTH	698	AA
	TOSN=50	699	AA
	P1=1101.2,58.5,371.	700	AA
	P2=1101.2,72.8,414.	701	AA
	P3=987.2,72.8,414.	702	AA
	PROP=0.,0.	703	AA
	COM=* +Y INSIDE TOP PANNEL4,X=987.2 TO 1101.2 SL2 *	704	AA
S	SURF=1107,TYPE=RECT,ACTIVE=TOP,SHADE=ROTH,BSHADE=ROTH	705	AA
	TOSN=50	706	AA
	P1=987.2,-58.5,371.	707	AA
	P2=1101.2,-58.5,371.0	708	AA
	P3=1101.2,-34.5,344.3	709	AA
	PROP=0.,0.	710	AA
	COM=* -Y INSIDE BOTTOM PANNEL4, X=987.2 TO 1101.2 SL2 *	711	AA
S	SURF=1008,TYPE=RECT,ACTIVE=TOP,SHADE=ROTH,BSHADE=ROTH	712	AA
	TOSN=50	713	AA
	P1=987.2,34.5,344.3	714	AA
	P2=1101.2,34.5,344.3	715	AA
	P3=1101.2,58.5,371.	716	AA
	PROP=0.,0.	717	AA
	COM=* +Y INSIDE BOTTOM PANNEL4,X 987.2 TO 1101.2 SL2*	718	AA
S	SURF=1009,TYPE=RECT,ACTIVE=TOP,SHADE=ROTH,BSHADE=ROTH	719	AA
	TOSN=50	720	AA
	P1=987.2,-34.5,344.3	721	AA
	P2=1101.2,-34.5,344.3	722	AA
	P3=1101.2,34.5,344.3	723	AA
	PROP=0.,0.	724	AA
	COM=* PALLET4 BOTTOM,Y= 987.2 TO 1101.2 SL2 *	725	AA

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

S	SURF=1100,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH TOSN=50	726	AA
	P1=1101.2,0.,400.	727	AA
	P2=1101.2,78.8,400.	728	AA
	P3=1101.2,-78.8,400.	729	AA
	P4=1215.2,-73.8,400.	730	AA
	P5=1215.2,72.8,400.	731	AA
	P6=1215.2,72.8,414.	732	AA
	CON = * PALLET5 BOTTOM CYLINDER X= 1101.2 TO 1215.2 *	733	AA
S	SURF=1091,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH TOSN=50	734	AA
	P1=1101.2,-73.8,400.	735	AA
	P2=1215.2,-73.8,400.	736	AA
	P3=1215.2,-73.8,414.	737	AA
	P4=1101.2,72.8,400.	738	AA
	P5=1101.2,72.8,414.	739	AA
	CON = * -Y PALLET5 OUTSIDE STRIP *	740	AA
S	SURF=1102,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH TOSN=50	741	AA
	P1=1215.2,72.8,414.	742	AA
	P2=1215.2,72.8,400.	743	AA
	P3=1101.2,72.8,400.	744	AA
	P4=1101.2,72.8,414.	745	AA
	CON = * +Y PALLET5 OUTSIDE STRIP *	746	AA
S	SURF=1103,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH TOSN=50	747	AA
	P1=1101.2,-72.8,414.	748	AA
	P2=1215.2,-72.8,414.	749	AA
	P3=1215.2,-72.8,414.	750	AA
	P4=1101.2,72.8,414.	751	AA
	P5=1101.2,72.8,400.	752	AA
	CON = * -Y PALLET5 TOP STRIP X=1101.2 TO 1215.2 *	753	AA
S	SURF=1094,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH TOSN=50	754	AA
	P1=1101.2,72.8,414.	755	AA
	P2=1215.2,72.8,414.	756	AA
	P3=1215.2,72.8,414.	757	AA
	P4=1101.2,72.8,414.	758	AA
	P5=1101.2,72.8,400.	759	AA
	CON = * +Y PALLET5 TOP STRIP ,X= 1101.2 TO 1215.2 *	760	AA
S	SURF=1105,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH TOSN=50	761	AA
	P1=1101.2,-72.8,414.	762	AA
	P2=1215.2,-72.8,414.	763	AA
	P3=1215.2,-53.5,371.	764	AA
	P4=1101.2,72.8,414.	765	AA
	P5=1101.2,72.8,400.	766	AA
	CON = * -Y INSIDE TOP PANEL5,X=1101.2 TO 1215.2 *	767	AA
S	SURF=1096,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH TOSN=50	768	AA
	P1=1215.2,58.5,371.	769	AA
	P2=1215.2,72.8,414.	770	AA
	P3=1101.2,72.8,414.	771	AA
	P4=1101.2,72.8,400.	772	AA
	CON = * +Y INSIDE TOP PANEL5,Y=1101.2 TO 1215.2 *	773	AA
S	SURF=1097,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH TOSN=50	774	AA
	P1=1215.2,58.5,371.	775	AA
	P2=1215.2,72.8,414.	776	AA
	P3=1101.2,72.8,414.		

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

INPUT TARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	TCSN=50	777	AA
	P1=1101.2,-54.5,371.	778	AA
	P2=1215.2,-58.5,371.3	779	AA
	P3=1215.2,-34.5,344.3	780	AA
	PROP=1.,0.	781	AA
	COM=* -Y INSIDE BOTTOM PANNELS, X=1101.2 TO 1215.2 *	782	AA
S	SURF=1198,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	783	AA
	TCSN=50	784	AA
	P1=1101.2,74.5,344.3	785	AA
	P2=1215.2,74.5,344.3	786	AA
	P3=1215.2,58.5,371.	787	AA
	PROP=0.,0.	788	AA
	COM=* +Y INSIDE BOTTOM PANNELS,X 1101.2 TO 1215.2 *	789	AA
S	SURF=1199,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	790	AA
	TCSN=50	791	AA
	P1=1101.2,-74.5,344.3	792	AA
	P2=1215.2,-74.5,344.3	793	AA
	P3=1215.2,74.5,344.3	794	AA
	PROP=0.,0.	795	AA
	COM=* PARALLEL 5 BOTTOM,X=1011.2 TO 1215.2 SL2*	796	AA
S	SURF=1110,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	797	AA
	TCSN=50	798	AA
	P1=746.9,0.,480.9	799	AA
	P2=746.9,19.7,480.9	800	AA
	P3=727.2,0.,480.9	801	AA
	P4=727.2,0.,480.9	802	AA
	PROP=0.,0.	803	AA
	COM=* TOP SEGMENT WINDOW, X=746.9 SPACELAB 2 *	804	AA
S	SURF=1170,TYPE=DISC,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	805	AA
	TCSN=50	806	AA
	P1=815.6,0.,454.49	807	AA
	P2=811.43,0.,462.23	808	AA
	P3=815.6,7.85,454.49	809	AA
	P4=815.6,7.85,454.49	810	AA
	PROP=0.,0.	811	AA
	COM=* ACT VIEWING WINDOW X=815.6, SPACELAB2*	812	AA

SPACELAB-2 VIEWFACTOR MATRIX

The following pages contain the viewfactor data printouts for the Spacelab-2/Orbiter configuration.

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

145	FF SUM = 0.	ROW CP TIME =	2.542	+ TRAP	+Y REAR SIDE TAPER
146	FF SUM = 0.	ROW CP TIME =	2.524	- TRAP	- Y. REAR SIDE TAPER...
707	FF SUM = 0.	ROW CP TIME =	5.583	- DISC	.....JULY 8 EVAP..3 IN. RAD.
708	FF SUM = 0.	ROW CP TIME =	2.201	+ DISC	.....JULY 8 EVAP..3 IN. RAD.
147	FF SUM = 0.	ROW CP TIME =	11.396	+ PARAB	TOP ENGIN
148	FF SUM = 0.	ROW CP TIME =	5.813	+ PARAB	+ Y ENGIN
149	FF SUM = 0.	ROW CP TIME =	5.813	+ PARAB	-Y ENGIN...

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. F FACTOR	SHAD. A FACTOR	CP TIME (SEC)
20	1070	CAL.	.001088	.000376	.001088	.001088	1.000000	1.000000	1.194
20	1050	CAL.	.020541	.007626	.020541	.022050	.931593	.931593	2.132
20	1060	CAL.	.000429	.000735	.000428	.000428	1.000000	1.000000	2.464
21	1065	CAL.	.007312	.005969	.007312	.007312	1.000000	1.000000	3.132
20	1072	CAL.	.000197	.000435	.000187	.000187	1.000000	1.000000	3.860
20	1073	CAL.	.000217	.001177	.000217	.000217	1.000000	1.000000	5.354
20	1074	CAL.	.000720	.001786	.000729	.000729	1.000000	1.000000	6.607
20	1075	CAL.	.004577	.007248	.004577	.004577	1.000000	1.000000	7.260
20	1076	CAL.	.000769	.000265	.000769	.000769	1.000000	1.000000	7.670
20	1077	CAL.	.003669	.003744	.003688	.003688	1.000000	1.000000	8.337
20	1078	CAL.	.001086	.000085	.011086	.001106	.007878	.007878	8.917
20	1079	CAL.	.005682	.002681	.005682	.005692	1.000000	1.000000	9.449
20	1082	CAL.	.000611	.001421	.000611	.000611	1.000000	1.000000	10.173
20	1083	CAL.	.000457	.002479	.000457	.000457	1.000000	1.000000	11.426
20	1084	CAL.	.001059	.000742	.001059	.001059	1.000000	1.000000	12.568
20	1085	CAL.	.000572	.000676	.000572	.000572	1.000000	1.000000	13.154
20	1086	CAL.	.001060	.000702	.001060	.001060	1.000000	1.000000	13.532

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
20	1087	CAL.	.007595	.006887	.007595	.007595	1.000000	1.000000	14.146
20	1088	CAL.	.002719	.002466	.002719	.003125	.898935	.898935	14.732
20	1089	CAL.	.012723	.006002	.012723	.012723	1.000000	1.000000	15.201
20	1092	CAL.	.003709	.004625	.003709	.003709	1.000000	1.000000	15.820
20	1093	CAL.	.000747	.004357	.000747	.000747	1.000000	1.000000	16.912
20	1094	CAL.	.005846	.0031715	.005846	.005846	1.000000	1.000000	17.909
20	1095	CAL.	.015514	.011144	.015514	.015514	1.000000	1.000000	18.395
20	1096	CAL.	.003710	.002665	.003710	.003710	1.000000	1.000000	19.738
20	1097	CAL.	.011959	.010347	.011959	.011959	1.000000	1.000000	19.249
20	1098	CAL.	.006441	.005840	.006441	.007331	.872652	.872652	19.725
20	1099	CAL.	.023784	.011221	.023784	.023784	1.000000	1.000000	20.122
20	1110	CAL.	.000004	.000013	.000004	.000127	.155613	.155613	20.504
20	1111	CAL.	.000015	.000045	.000015	.000115	1.000000	1.000000	20.771
20	1130	CAL.	.000091	.001739	.000091	.000272	.333685	.333685	21.281
20	FE SUM =	.1491	ROW OF TIME =	21.353	+ DISC	...-7 DWS SEALER ...			
21	1030	CAL.	.001089	.000376	.001089	.001089	1.000000	1.000000	1.275
21	1050	CAL.	.000541	.000526	.000541	.002150	.931593	.931593	2.213
21	1060	CAL.	.000428	.000335	.000428	.000428	1.000000	1.000000	2.540
21	1065	CAL.	.003312	.005969	.003312	.003312	1.000000	1.000000	3.200
21	1071	CAL.	.000187	.000435	.000187	.000187	1.000000	1.000000	3.898
21	1073	CAL.	.000329	.000785	.000329	.000329	1.000000	1.000000	5.218
21	1074	CAL.	.000217	.000177	.000217	.000217	1.000000	1.000000	6.708
21	1075	CAL.	.000369	.000265	.000369	.000369	1.000000	1.000000	7.114
21	1076	CAL.	.004577	.000288	.004577	.004577	1.000000	1.000000	7.773
21	1077	CAL.	.001086	.000095	.001086	.001106	.907878	.907878	8.359
21	1078	CAL.	.003688	.003344	.003688	.003688	1.000000	1.000000	9.030
21	1079	CAL.	.005682	.000691	.005682	.005682	1.000000	1.000000	9.559
21	1081	CAL.	.000611	.000421	.000611	.000611	1.000000	1.000000	10.208
21	1083	CAL.	.001159	.0005742	.001159	.001159	1.000000	1.000000	11.416
21	1084	CAL.	.000457	.0002479	.000457	.000457	1.000000	1.000000	12.692
21	1085	CAL.	.001160	.000762	.001160	.001160	1.000000	1.000000	13.079
21	1086	CAL.	.009572	.006676	.009572	.009572	1.000000	1.000000	13.659
21	1087	CAL.	.002719	.002466	.002719	.003125	.898935	.898935	14.235
21	1088	CAL.	.007595	.006887	.007595	.007595	1.000000	1.000000	14.844
21	1089	CAL.	.012723	.006002	.012723	.012723	1.000000	1.000000	15.310
21	1091	CAL.	.003709	.004625	.003709	.003709	1.000000	1.000000	15.891
21	1093	CAL.	.005846	.0031715	.005846	.005846	1.000000	1.000000	16.934
21	1094	CAL.	.000747	.004357	.000747	.000747	1.000000	1.000000	18.026
21	1095	CAL.	.003710	.002665	.003710	.003710	1.000000	1.000000	18.769
21	1096	CAL.	.015514	.011144	.015514	.015514	1.000000	1.000000	18.852
21	1097	CAL.	.006441	.005840	.006441	.007331	.872652	.872652	19.333
21	1098	CAL.	.011959	.010343	.011959	.011959	1.000000	1.000000	19.837
21	1099	CAL.	.023784	.011221	.023784	.023784	1.000000	1.000000	20.229

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATED NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
21	1110	CAL.	.000004	.000013	.000004	.000027	.155613	.155613	20.610
21	1111	CAL.	.000315	.000045	.000015	.000315	1.000000	1.000000	20.895
21	1130	CAL.	.000090	.001778	.000090	.000272	.331520	.331520	21.405
21	FF SUM =	.1491	ROW CP TIME =	21.476	+ DISC	...Y OWS SEALER ...			
222	FF SUM =	0.	ROW CP TIME =	1.703	- RECT	BACK RECT 7.35DEG			
23	FF SUM =	0.	ROW CP TIME =	1.950	+ DISC	REAR END HALF DISK			
407	FF SUM =	0.	ROW CP TIME =	2.210	+ DISC	BACK SIDE EVAPORAT, UPDATED			
15	FF SUM =	0.	ROW CP TIME =	2.202	+ DISC	REAR END EVAPORATOR			
10	FF SUM =	0.	ROW CP TIME =	32.034	- TPAP	....LEFT FRONT WING A ...			
11	1030	CAL.	.000204	.000155	.000204	.000239	.853585	.853585	.824
11	FF SUM =	.0002	ROW CP TIME =	6.578	+ TPAP	.....LEFT MIDDLE WING BACK.B			
141	FF SUM =	0.	ROW CP TIME =	12.727	+ RECT	BS INNER WING			
12	1030	CAL.	.000144	.000121	.000144	.000180	.801353	.801353	.715
12	FF SUM =	.0001	ROW CP TIME =	4.653	+ RECT	..... LEFT BACK RECT. WING C			
142	FF SUM =	0.	ROW CP TIME =	4.514	+ RECT	INNER WING C			

(* INDICATES NODE PATH HAS BEEN SURVIVED):

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
13		FF SUM = 0.				3.695	+ TRAP			..... LEFT WING TAIL EDGE
1		FF SUM = 0.				34.857	+ TRAP			...FRONT WING TRIANGLE RT.A.58
2	1070	CAL.	.000704	.000155	.000204	.000239	.853585	.853585	.771	
2		FF SUM = .0002				6.543	- TRAP			.....MIDDLE WING TRAP, RT B ..
143		FF SUM = 0.				12.977	- RECT	0		+Y RECTANGLE WING
3	1070	CAL.	.000144	.000121	.000144	.000180	.801353	.801353	.734	
3		FF SUM = .0001				4.706	- RECT			.... BACK WING RECT. RTC .129
144		FF SUM = 0.				4.623	- RECT			INNER WING C RECT
4		FF SUM = 0.				3.739	- TRAP			...WING TAIL FLAP RT 1453,1507
150	1030	CAL.	.000051	.000027	.000051	.000051	1.000000	1.000000	1.049	
150	1070	CAL.	.000493	.000495	.000493	.000498	1.000000	1.000000	2.904	
150	1072	CAL.	.000046	.000000	.000046	.000046	1.000000	1.000000	3.748	
150	1080	CAL.	.044195	.047893	.044195	.044185	1.000000	1.000000	14.774	*
150	1082	CAL.	.001310	.001973	.001810	.001319	1.000000	1.000000	16.590	*
150	1090	CAL.	.430157	.407370	.430157	.430157	1.000000	1.000000	69.539	*
150	1092	CAL.	.016152	.023865	.016158	.016158	1.000000	1.000000	74.160	
150	1095	CAL.	.005355	.020064	.005355	.035435	.146972	.146972	70.530	
150	1097	CAL.	.002933	.020097	.002933	.025510	.110619	.110619	82.815	
150		FF SUM = .5012				83.967	- CYLN			RAY AREA CYLINDER
151	1030	CAL.	.000456	.000249	.000456	.000456	1.000000	1.000000	.932	
151	1070	CAL.	.264467	.262757	.264467	.264467	1.000000	1.000000	29.868	*
151	1072	CAL.	.010037	.000000	.010037	.010037	1.000000	1.000000	35.201	*
151	1080	CAL.	.406454	.407821	.406454	.406454	1.000000	1.000000	93.734	*
151	1082	CAL.	.010037	.020064	.010037	.010037	1.000000	1.000000	98.315	*
151	1090	CAL.	.010037	.020064	.010037	.010037	1.000000	1.000000	111.555	*

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	FA(J,I) W/SHAD	SHAD. F FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
151	1132	CAL.	.000055	.016783	.000055	.000055	1.000000	1.000000	112.959	*
151	FF SUM =	.7157	FORM OF TIME =		117.043	- CYLN		BAY AREA CYLINDER		
152	1130	CAL.	.233778	.125070	.233778	.233778	1.000000	1.000000	16.691	*
152	1050	CAL.	.120607	.160864	.120607	.130769	.922737	.922287	30.337	*
152	1060	CAL.	.024404	.144275	.024404	.075618	.685251	.685251	31.991	
152	1065	CAL.	.004269	.058119	.004268	.004799	.849778	.829739	32.354	
152	1070	CAL.	.185460	.184665	.135060	.153359	1.000000	1.000000	51.530	*
152	1072	CAL.	.007101	.124743	.007101	.007101	1.000000	1.000000	55.722	*
152	1075	CAL.	.007703	.040099	.007703	.025051	.294324	.294924	57.549	
152	1077	CAL.	.004955	.031203	.004955	.016930	.259372	.259032	59.396	
152	1079	CAL.	.003376	.007127	.003376	.007197	.121750	.121750	59.610	
152	1080	CAL.	.001095	.001094	.001095	.001095	1.000000	1.000000	59.911	
152	1082	CAL.	.000107	.001347	.000107	.000107	1.000000	1.000000	60.394	
152	1085	CAL.	.001132	.005440	.001132	.005376	.171896	.171896	60.731	
152	1087	CAL.	.000578	.007027	.000578	.003379	.150796	.150396	61.231	
152	1090	CAL.	.000104	.000163	.000104	.000104	1.000000	1.000000	61.768	
152	1092	CAL.	.000014	.0000247	.000014	.000014	1.000000	1.000000	62.192	
152	1095	CAL.	.000167	.000005	.000167	.001305	.092425	.092429	62.677	
152	1130	CAL.	.000050	.000051	.000050	.000050	.201118	.201118	63.544	
152	FF SUM =	.5972	FORM OF TIME =		65.828	- CYLN		BAY AREA CYLINDER		
153	1100	CAL.	.142973	.218363	.142973	.152338	.912526	.938526	1.594	
153	1120	CAL.	.118350	.177087	.118390	.110765	.988526	.988526	16.720	*
153	1201	CAL.	.000017	.0017359	.000017	.0000221	.078642	.078642	19.714	
153	1175	CAL.	.224078	.118157	.224078	.224078	1.000000	1.000000	31.533	*
153	1170	CAL.	.000354	.000350	.000354	.000354	1.000000	1.000000	32.163	
153	1172	CAL.	.000032	.000055	.000032	.000032	1.000000	1.000000	32.532	
153	1180	CAL.	.000073	.000079	.000079	.000079	1.000000	1.000000	33.774	
153	1182	CAL.	.000007	.0000116	.000007	.000007	1.000000	1.000000	34.202	
153	1190	CAL.	.000027	.000027	.000027	.000027	1.000000	1.000000	35.539	
153	1192	CAL.	.000002	.000019	.000002	.000002	1.000000	1.000000	35.984	
153	FF SUM =	.4350	FORM OF TIME =		40.133	- CYLN		BAY AREA CYLINDER		
154	1030	CAL.	.000051	.000027	.000051	.000051	1.000000	1.000000	1.166	
154	1075	CAL.	.000498	.101490	.000498	.000498	1.000000	1.000000	2.993	
154	1071	CAL.	.000046	.000000	.000046	.000046	1.000000	1.000000	3.793	
154	1080	CAL.	.146185	.047539	.144185	.044185	1.000000	1.000000	14.994	*
154	1085	CAL.	.000010	.000000	.000010	.000010	1.000000	1.000000	16.791	*
154	1090	CAL.	.420007	.420007	.430007	.430007	1.000000	1.000000	69.402	*

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
154	1091	CAL.	.016158	.283866	.116158	.016158	1.000000	1.000000	74.184
154	1096	CAL.	.005355	.022064	.005355	.026435	.146972	.146972	79.597
154	1098	CAL.	.002933	.020097	.002933	.026519	.110619	.110619	82.639
154	FF SUM =	.5012	ROW CP TIME =		93.946	- CYLN		BAY AREA CYLINDER	
155	1030	CAL.	.000456	.000240	.000456	.000456	1.000000	1.000000	.979
155	1070	CAL.	.264467	.262753	.264467	.264467	1.000000	1.000000	30.053 *
155	1071	CAL.	.010037	.176348	.010037	.010037	1.000000	1.000000	35.963 *
155	1090	CAL.	.406454	.403871	.406454	.406454	1.000000	1.000000	94.743 *
155	1091	CAL.	.015083	.264986	.015083	.015083	1.000000	1.000000	99.345 *
155	1093	CAL.	.018229	.018111	.018229	.018229	1.000000	1.000000	112.894 *
155	1094	CAL.	.000955	.016783	.000955	.000955	1.000000	1.000000	113.961 *
155	FF SUM =	.7157	ROW CP TIME =		118.097	- CYLN		BAY AREA CYLINDER	
156	1030	CAL.	.238779	.125970	.238779	.238779	1.000000	1.000000	16.590 *
156	1050	CAL.	.125536	.167439	.125536	.125536	.926424	.926424	30.407 *
156	1060	CAL.	.024279	.143466	.024279	.024279	.685706	.685706	31.879 *
156	1065	CAL.	.004268	.059119	.004268	.004268	.889338	.889338	32.247 *
156	1070	CAL.	.185869	.194865	.185869	.185869	1.000000	1.000000	50.894 *
156	1071	CAL.	.007101	.124743	.007101	.007101	1.000000	1.000000	59.495 *
156	1076	CAL.	.007333	.047069	.007333	.025051	.294924	.294924	57.449 *
156	1078	CAL.	.004557	.031207	.004557	.016330	.269072	.269072	59.264 *
156	1079	CAL.	.006976	.003123	.006976	.007197	.121750	.121750	59.428 *
156	1080	CAL.	.001095	.001098	.001095	.001095	1.000000	1.000000	59.728 *
156	1081	CAL.	.000107	.001997	.000107	.000107	1.000000	1.000000	60.087 *
156	1086	CAL.	.001132	.005410	.001132	.000376	.171896	.171896	60.688 *
156	1088	CAL.	.000573	.003687	.000573	.003979	.150386	.150386	61.094 *
156	1091	CAL.	.000164	.000163	.000164	.000164	1.000000	1.000000	61.578 *
156	1091	CAL.	.000014	.000047	.000014	.000014	1.000000	1.000000	61.957 *
156	1096	CAL.	.000167	.000905	.000167	.001905	.092429	.092429	62.569 *
156	1130	CAL.	.000067	.000064	.000067	.000065	.193644	.193644	65.353 *
156	FF SUM =	.6020	ROW CP TIME =		65.632	- CYLN		BAY AREA CYLINDER	
157	1050	CAL.	.142621	.217826	.142621	.152157	.937948	.937948	1.592 *
157	1090	CAL.	.123011	.179942	.123011	.124335	.988953	.988953	14.383 *
157	1091	CAL.	.000017	.001753	.000017	.000021	.078632	.078632	17.487 *
157	1093	CAL.	.224074	.110157	.224074	.224074	1.000000	1.000000	29.292 *
157	1094	CAL.	.000354	.000352	.000354	.000354	1.000000	1.000000	29.913 *
157	1091	CAL.	.000032	.000057	.000032	.000032	1.000000	1.000000	30.245 *
157	1090	CAL.	.000079	.000079	.000079	.000079	1.000000	1.000000	31.529 *

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAQ. F FACTOR	SHAQ. A FACTOR	CP TIME (SEC)
157	1031	CAL.	.000007	.000116	.000007	.000107	1.000000	1.000000	31.914
157	1093	CAL.	.000027	.000027	.000027	.000127	1.000000	1.000000	33.313
157	1091	CAL.	.000002	.000039	.000002	.000102	1.000000	1.000000	33.720
157	FF SUM =	.4902	ROW CP TIME =	38.000	- CYLN	RAY AREA CYLINDER			
140	1050	CAL.	.024299	.037781	.024299	.024299	1.000000	1.000000	1.599
140	1051	CAL.	.000112	.000768	.000112	.000112	1.000000	1.000000	1.891
140	1065	CAL.	.003783	.060054	.003783	.003783	1.000000	1.000000	2.831
140	1077	CAL.	.000055	.002647	.000055	.000055	1.000000	1.000000	3.420
140	1074	CAL.	.000048	.002311	.000048	.000048	1.000000	1.000000	3.806
140	1075	CAL.	.002416	.015289	.002416	.002416	1.000000	1.000000	4.225
140	1076	CAL.	.002408	.015278	.002408	.002408	1.000000	1.000000	4.643
140	1077	CAL.	.001369	.014927	.001369	.001369	1.000000	1.000000	5.077
140	1078	CAL.	.001873	.014950	.001873	.001873	1.000000	1.000000	5.511
140	1079	CAL.	.003207	.013327	.003207	.003207	1.000000	1.000000	5.861
140	1083	CAL.	.000185	.003852	.000185	.000185	1.000000	1.000000	6.423
140	1084	CAL.	.000137	.006527	.000137	.000137	1.000000	1.000000	6.781
140	1085	CAL.	.007173	.045384	.007173	.007173	1.000000	1.000000	7.184
140	1086	CAL.	.007065	.044699	.007065	.007065	1.000000	1.000000	7.587
140	1087	CAL.	.005550	.044321	.005550	.005550	1.000000	1.000000	8.084
140	1088	CAL.	.005610	.044801	.005610	.005610	1.000000	1.000000	8.574
140	1089	CAL.	.009626	.039999	.009626	.009626	1.000000	1.000000	9.266
140	1093	CAL.	.001177	.056251	.001177	.001177	1.000000	1.000000	10.653
140	1094	CAL.	.001174	.056120	.001174	.001174	1.000000	1.000000	11.748
140	1095	CAL.	.024380	.154256	.024380	.024380	1.000000	1.000000	14.466
140	1096	CAL.	.023765	.150759	.023765	.023765	.993348	.993348	17.169
140	1097	CAL.	.018489	.147659	.018489	.019727	.937253	.937253	20.212
140	1098	CAL.	.018214	.145456	.018214	.018474	.988027	.988027	23.242
140	1099	CAL.	.035641	.148095	.035641	.075945	.991541	.991541	25.704
140	1130	CAL.	.000090	.015271	.000090	.000274	.330461	.330461	27.612
140	FF SUM =	.1987	ROW CP TIME =	27.891	+ DISC	END	RAY AREA DISK		
135	1090	CAL.	.105390	.188734	.105390	.105390	1.000000	1.000000	13.448
135	1092	CAL.	.128749	.019425	.128749	.168549	.763417	.763417	19.796
135	1200	CAL.	.000064	.074450	.000064	.000064	.710215	.710215	20.308
135	1131	CAL.	.000067	.011283	.000067	.000067	.079708	.079708	28.579
135	FF SUM =	.2349	ROW CP TIME =	24.585	+ DISC	FRONT	RAY AREA DISK		

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
122	FF SUM = 0.	ROW CP TIME =			2.750		+ PARAB		VERY NOSE CONE
123	FF SUM = 0.	ROW CP TIME =			2.724		+ PARAB		VERY NOSE CONE
124	FF SUM = 0.	ROW CP TIME =			2.725		+ PARAB		VERY NOSE CONE
125	FF SUM = 0.	ROW CP TIME =			2.699		+ PARAB		VERY NOSE CONE
320	FF SUM = 0.	ROW CP TIME =			1.642		+ CYLN		NOSE CYLINDER
321	FF SUM = 0.	ROW CP TIME =			1.646		+ CYLN		NOSE CYLINDER
322	FF SUM = 0.	ROW CP TIME =			1.638		+ CYLN		NOSE CYLINDER
323	FF SUM = 0.	ROW CP TIME =			1.631		+ CYLN		NOSE CYLINDER
324	FF SUM = 0.	ROW CP TIME =			1.642		+ CYLN		NOSE CYLINDER
325	FF SUM = 0.	ROW CP TIME =			1.638		+ CYLN		NOSE CYLINDER
326	FF SUM = 0.	ROW CP TIME =			1.641		+ CYLN		NOSE CYLINDER
327	FF SUM = 0.	ROW CP TIME =			1.639		+ CYLN		NOSE CYLINDER

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
328		FF SUM = 0.			2.276		+ CYLN		NOSE CYLINDER
329		FF SUM = 0.			2.257		+ CYLN		NOSE CYLINDER
330		FF SUM = 0.			2.259		+ CYLN		NOSE CYLINDER
331		FF SUM = 0.			2.253		+ CYLN		NOSE CYLINDER
332		FF SUM = 0.			2.253		+ CYLN		NOSE CYLINDER
333		FF SUM = 0.			2.244		+ CYLN		NOSE CYLINDER
334		FF SUM = 0.			2.239		+ CYLN		NOSE CYLINDER
335		FF SUM = 0.			2.239		+ CYLN		NOSE CYLINDER
340		FF SUM = 0.			2.716		+ PARAB		HOOD PARTIAL BACK
341		FF SUM = 0.			2.722		+ PARAB		HOOD PARTIAL BACK
342		FF SUM = 0.			2.729		+ PARAB		HOOD PARTIAL BACK
343		FF SUM = 0.			2.713		+ PARAB		HOOD PARTIAL BACK

MODEL = CONTAM STCP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
344		FF SUM = 0.			2.744		+ PARAB		HOOD PARTIAL BACK
345		FF SUM = 0.			2.714		+ PARAB		HOOD PARTIAL BACK
346		FF SUM = 0.			2.727		+ PARAB		HOOD PARTIAL BACK
347		FF SUM = 0.			2.721		+ PARAB		HOOD PARTIAL BACK
348		FF SUM = 0.			2.724		+ PARAB		HOOD PARTIAL BACK
349		FF SUM = 0.			2.718		+ PARAB		HOOD PARTIAL BACK
350		FF SUM = 0.			2.719		+ PARAB		HOOD PARTIAL BACK
351		FF SUM = 0.			2.723		+ PARAB		HOOD PARTIAL BACK
352		FF SUM = 0.			2.690		+ PARAB		HOOD PARTIAL BACK
353		FF SUM = 0.			2.693		+ PARAB		HOOD PARTIAL BACK
354		FF SUM = 0.			2.705		+ PARAB		HOOD PARTIAL BACK
355		FF SUM = 0.			2.700		+ PARAB		HOOD PARTIAL BACK

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) NO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
360		FF SUM = 0.					+ PARAB	WINDOW	
					2.729				
361		FF SUM = 0.					+ PARAB	WINDOW	
					2.710				
362		FF SUM = 0.					+ PARAB	WINDOW	
					2.713				
363		FF SUM = 0.					+ PARAB	WINDOW	
					2.707				
364		FF SUM = 0.					+ PARAB	WINDOW	
					2.719				
365		FF SUM = 0.					+ PARAB	WINDOW	
					2.713				
366		FF SUM = 0.					+ PARAB	WINDOW	
					2.703				
367		FF SUM = 0.					+ PARAB	WINDOW	
					2.729				
368		FF SUM = 0.					+ PARAB	WINDOW	
					2.723				
369		FF SUM = 0.					+ PARAB	WINDOW	
					2.722				
370		FF SUM = 0.					+ PARAB	WINDOW	
					2.721				
371		FF SUM = 0.					+ PARAB	WINDOW	
					2.724				

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
372		FF SUM = 0.			2.720		+ PARAB	WINDOW	
									ROW CP TIME =
373		FF SUM = 0.			2.711		+ PARAB	WINDOW	
									ROW CP TIME =
374		FF SUM = 0.			2.706		+ PARAB	WINDOW	
									ROW CP TIME =
375		FF SUM = 0.			2.706		+ PARAB	WINDOW	
									ROW CP TIME =
401		FF SUM = 0.			1.767		- RECT	BODY BOTTOM (FRT)	4 1
									ROW CP TIME =
402		FF SUM = 0.			1.509		- RECT	BODY BOTTOM (REAR)	402
									ROW CP TIME =
192		FF SUM = 0.			1.995		+ CYLN	OMSP00C1	
									ROW CP TIME =
172		FF SUM = 0.			1.981		+ CYLN	OMSP00C2	
									ROW CP TIME =
781		FF SUM = 0.			2.242		- CYLN	.....+Y SIDE DOOR.....	
									ROW CP TIME =
782		FF SUM = 0.			63.077		+ CYLN	.....+Y SIDE DOOR.....	
									ROW CP TIME =
783		FF SUM = 0.			2.241		- CYLN	.....+Y SIDE DOOR.....	
									ROW CP TIME =
784		FF SUM = 0.			33.689		+ CYLN	.....+Y SIDE DOOR.....	
									ROW CP TIME =

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDTOTED) :

NODE I	NODE J	COMPUTATION	FF (I,J) W/SHAD	FF (J,I) W/SHAD	FA (I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
785		FF SUM = 0.			ROW CP TIME = 5.874		- CYLN			.....+Y SIDE DOOR.....
786		FF SUM = 0.			ROW CP TIME = 14.923		+ CYLN			.....+Y SIDE DOOR.....
787		FF SUM = 0.			ROW CP TIME = 4.974		- CYLN			.....+Y SIDE DOOR.....
788		FF SUM = 0.			ROW CP TIME = 8.557		+ CYLN			.....+Y SIDE DOOR.....
791		FF SUM = 0.			ROW CP TIME = 6.05F		- CYLN			... -Y SIDE DOOR....
792		FF SUM = 0.			ROW CP TIME = 12.005		+ CYLN			... -Y SIDE DOOR....
793		FF SUM = 0.			ROW CP TIME = 4.879		- CYLN			... -Y SIDE DOOR....
794		FF SUM = 0.			ROW CP TIME = 9.620		+ CYLN			... -Y SIDE DOOR....
795		FF SUM = 0.			ROW CP TIME = 2.174		- CYLN			... -Y SIDE DOOR....
796	1552	CAL.	.002900	.073432	.002900	.019128	.156310	.156310	1.741	
796	1073	CAL.	.003443	.007218	.003443	.064113	.131639	.131639	8.908	*
796	1072	CAL.	.016698	.252432	.016698	.020747	.804828	.804828	24.103	*
796	1390	CAL.	.027129	.323193	.027129	.109396	.246637	.246637	34.816	*
796	1092	CAL.	.031458	.475562	.031458	.075071	.896978	.896978	51.513	*
796	1093	CAL.	.023699	.020261	.023699	.107894	.219654	.219654	64.708	*
796	1092	CAL.	.022511	.401400	.022511	.176129	.900358	.900358	81.288	*
796	1095	CAL.	.002426	.011333	.002426	.023327	.131409	.131409	83.441	
796	1097	CAL.	.001680	.000903	.001680	.021479	.378210	.378210	85.900	
796	1130	CAL.	.000137	.004641	.000137	.000160	.232745	.232745	87.678	

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
796		FF SUM = .1471			ROW CP TIME = 37.777		+ CYLN		...	-Y SIDE DOOR....
797		FF SUM = 0.			ROW CP TIME = 2.171		- CYLN		...	-Y SIDE DOOR....
798	1000	CAL.	.025169	.033078	.025169	.049366	.509842	.509842	1.475	*
799	1020	CAL.	.021169	.026572	.021169	.040120	.527646	.527646	5.046	*
798	1201	CAL.	.000034	.003567	.000034	.000162	.067295	.067295	5.683	
798	1030	CAL.	.055255	.025076	.055255	.149726	.369037	.369037	9.401	*
798	1050	CAL.	.020193	.023176	.020193	.043709	.461974	.461974	12.420	*
798	1060	CAL.	.007245	.035941	.007245	.012519	.578808	.578808	12.759	
798	1070	CAL.	.011161	.039542	.011161	.046469	.240189	.240189	17.553	*
798	1072	CAL.	.012452	.185039	.012452	.014685	.847898	.847898	28.897	*
798	1075	CAL.	.001599	.007424	.001599	.014351	.113122	.113122	29.856	
798	1077	CAL.	.002077	.012242	.002077	.012220	.169938	.169938	30.507	
798	1082	CAL.	.000096	.001455	.000096	.000162	.594390	.594390	31.616	
798	1085	CAL.	.000567	.003115	.000567	.004317	.138430	.138430	72.374	
798	1087	CAL.	.000487	.002373	.000487	.003756	.129758	.129758	32.862	
798	1092	CAL.	.000013	.000190	.000013	.000122	.560191	.560191	34.159	
798	1095	CAL.	.000166	.000773	.000166	.001337	.107670	.107670	34.711	
798	1130	CAL.	.000032	.004000	.000032	.000122	.262133	.262133	36.236	
798		FF SUM = .1578			ROW CP TIME = 36.529		+ CYLN		...	-Y SIDE DOOR....
301		FF SUM = 0.			ROW CP TIME = 2.190		+ TRAP			+Y SIDE FRONT TRAPEZOID
305		FF SUM = 0.			ROW CP TIME = 1.447		+ RECT			BODY SIDE (MIDDLE-PORT) 305
306		FF SUM = 0.			ROW CP TIME = 1.438		+ RECT			BODY SIDE (BACK-PORT) 306
311	1020	CAL.	.006360	.009930	.006360	.067994	.093536	.093536	7.652	*
311	1030	CAL.	.029529	.016632	.029529	.249933	.118148	.118148	19.217	*
311		FF SUM = .0359			ROW CP TIME = 24.174		- TRAP			-Y SIDE FRONT TRAPEZOID

MODEL = CONTAM STP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
315	FF SUM = 0.				1.631		+ RECT	BODY SIDE (MIDDLE-STBD)	315
716	FF SUM = 0.				1.608		+ RECT	BODY SIDE (BACK-STBD)	316
202	FF SUM = 0.				1.909		+ CYLN	BODY TOP (STBD-REAR)	202
212	FF SUM = 0.				1.902		+ CYLN	BODY TOP (PORT-REAR)	212
700	1030	CAL.	.000035	.000018	.000035	.000053	.662201	.662201	.755
740	1050	CAL.	.000246	.000328	.000246	.000361	.682059	.682059	1.082
740	1073	CAL.	.000036	.001460	.000036	.000036	1.000000	1.000000	2.589
780	1075	CAL.	.000162	.000892	.000162	.000162	1.000000	1.000000	3.078
790	1077	CAL.	.000055	.000376	.000055	.000126	.435784	.435784	3.501
390	1087	CAL.	.000056	.000200	.000056	.000138	.638174	.638174	4.681
380	1085	CAL.	.000140	.000763	.000140	.000398	.753125	.753125	5.091
390	1087	CAL.	.000077	.000529	.000077	.000292	.264340	.264340	5.456
390	1093	CAL.	.000030	.001473	.000030	.000269	.129759	.129759	6.302
360	1095	CAL.	.000079	.000426	.000079	.000193	.065939	.065939	6.591
790	FF SUM = .0009				7.641		+ TRAP	VERTICAL FIN (PORT)	20
745	1070	CAL.	.000033	.000013	.000033	.000033	1.000000	1.000000	.798
745	1050	CAL.	.000181	.000177	.000181	.000233	.778079	.778079	1.164
345	1073	CAL.	.000011	.000323	.000011	.000011	.596608	.596608	2.471
785	1075	CAL.	.000041	.000162	.000041	.000089	.509510	.509510	2.900
395	1077	CAL.	.000026	.000128	.000026	.000064	.396536	.396536	3.714
745	1093	CAL.	.000019	.000565	.000019	.000038	.501948	.501948	4.421
795	1085	CAL.	.000057	.000229	.000057	.000167	.343543	.343543	4.810
785	1087	CAL.	.000014	.000068	.000014	.000030	.104605	.104605	5.141
745	1093	CAL.	.000003	.000009	.000003	.000009	.072936	.072936	5.922
340	FF SUM = .0004				7.292		+ TRAP	VERTICAL FIN (PORT-AFT)	20
790	1030	CAL.	.000035	.000018	.000035	.000053	.662482	.662482	.720
790	1050	CAL.	.000245	.000328	.000245	.000369	.682066	.682066	1.041
390	1074	CAL.	.000036	.001458	.000036	.000036	1.000000	1.000000	2.516
390	1076	CAL.	.000162	.000890	.000162	.000162	1.000000	1.000000	2.992
790	1075	CAL.	.000055	.000375	.000055	.000126	.435813	.435813	3.414

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF (I, J) W/SHAD	FF (J, I) W/SHAD	FA (I, J) W/SHAD	F (I, J) W/SHAD	SHAD. F FACTOR	SHAD. A FACTOR	CF TIME (SEC)
794	1236	CAL.	.000143	.000751	.000140	.000397	.353151	.357151	4.852
795	1238	CAL.	.000177	.000529	.000177	.000291	.264755	.264355	5.249
795	1236	CAL.	.000175	.000431	.000135	.000259	.129735	.129735	5.995
795	1235	CAL.	.000173	.000425	.000178	.001131	.065437	.065537	6.276
795	FF SUM =	.00019	ROW OF TIME =	7.189	- TRAP	VERTICAL FIN (ST90)	20		
795	1230	CAL.	.000133	.000117	.000073	.000137	1.000000	1.000000	.771
795	1253	CAL.	.000121	.000117	.000121	.000232	.770076	.770076	1.129
795	1274	CAL.	.000111	.000122	.000011	.000113	.596603	.596603	2.431
795	1276	CAL.	.000041	.000162	.000041	.000120	.509557	.509557	2.850
795	1278	CAL.	.000125	.000123	.000025	.000164	.396564	.396564	3.259
795	1244	CAL.	.000019	.000565	.000019	.000137	.501939	.501939	4.228
795	1235	CAL.	.000057	.000227	.000057	.000156	.747577	.747577	4.635
795	1283	CAL.	.000014	.000058	.000014	.000130	.104615	.104615	4.932
795	1294	CAL.	.000003	.000049	.000003	.000130	.032933	.032933	5.628
795	FF SUM =	.0004	ROW OF TIME =	6.636	- TRAP	VERTICAL FIN (ST90-AFT)	20		
795	FF SUM =	0.	ROW OF TIME =	2.171	+ DISC	..MOST FORWARD EVAPORATOR.....			
700	FF SUM =	0.	ROW OF TIME =	8.502	- DISC	.....SUPER ENGINES (OMS LOCAT			
701	FF SUM =	0.	ROW OF TIME =	2.109	+ DISC	.....SUPER ENGINES (OMS LOCAT			
702	FF SUM =	0.	ROW OF TIME =	8.265	- DISC	.....SUPER ENGINES (OMS LOCAT			
707	FF SUM =	0.	ROW OF TIME =	2.115	+ DISC	.....SUPER ENGINES (OMS LOCAT			
26	FF SUM =	0.	ROW OF TIME =	2.194	- DISC	...BACK RCS ...LOCKING +/- Y.(

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
25		FF SUM = 0.				7.822	+ DISC	...	PACK RCS ...LOOKING +/- Y.
18		FF SUM = 0.				2.130	- DISC	...	FRONT RCS...LOOKING +/-Y AT
19		FF SUM = 0.				4.992	+ DISC	...	FRONT RCS...LOOKING +/-Y AT
26		FF SUM = 0.				7.978	- DISC	...	PACK RCS LOOKING +/- Z...7/
27		FF SUM = 0.				2.145	+ DISC	...	PACK RCS LOOKING +/- Z...7/
16		FF SUM = 0.				7.504	- DISC	...	MIDDLE EVAP. LOOKING +/- Y.
17		FF SUM = 0.				2.171	+ DISC	...	MIDDLE EVAP. LOOKING +/- Y.
390	1030	CAL.	.000916	.000922	.000916	.000916	1.000000	1.000000	2.012
790	1050	CAL.	.006192	.004227	.006192	.006192	1.000000	1.000000	3.596
390	1060	CAL.	.000217	.000141	.000207	.000207	1.000000	1.000000	4.372
330	1065	CAL.	.000310	.001634	.000610	.000910	1.000000	1.000000	5.499
790	1077	CAL.	.000127	.000773	.000127	.000127	1.000000	1.000000	7.895
390	1074	CAL.	.000027	.000160	.000027	.000127	.210764	.210764	9.056
790	1075	CAL.	.000612	.000492	.000612	.000612	1.000000	1.000000	10.447
720	1075	CAL.	.000177	.000142	.000177	.000612	.289577	.289577	11.137
720	1077	CAL.	.000549	.000656	.000544	.000548	1.000000	1.000000	12.197
720	1078	CAL.	.000701	.000356	.000351	.000345	.640349	.640349	13.797
720	1079	CAL.	.001212	.000640	.001212	.001212	1.000000	1.000000	13.877
790	1087	CAL.	.000135	.000135	.000135	.000135	1.000000	1.000000	16.065
330	1085	CAL.	.000313	.000653	.000313	.000313	1.000000	1.000000	18.220
720	1087	CAL.	.000526	.000577	.000526	.000526	1.000000	1.000000	17.729
720	1089	CAL.	.000990	.000525	.000990	.000990	1.000000	1.000000	21.090
720	1097	CAL.	.000191	.000553	.000191	.000191	1.000000	1.000000	22.211
720	1097	CAL.	.000222	.000143	.000222	.000222	1.000000	1.000000	22.770
720	1097	CAL.	.000102	.000102	.000102	.000102	1.000000	1.000000	22.733
720	1111	CAL.	.000027	.000315	.000027	.000027	1.000000	1.000000	25.352
500	1120	CAL.	.000021	.000667	.000021	.000021	.717293	.277000	25.913

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTER	SHAD. A FACTOR	CP TIME (SEC)	
399		FF SUM =	.0141		ROW CP TIME =	26.016	+ RECT		VERT. FIN LOG. EDGE	2
1000	1020	CAL.	.067777	.064879	.067777	.067777	1.000000	1.000000	10.754	*
1000	1201	CAL.	.000003	.000046	.000003	.000003	1.000000	1.000000	10.967	
1000		FF SUM =	.7258		ROW CP TIME =	14.622	+ CYLN		TUNNEL 1, X=582 TO 668.3, SPA	
1020	1200	CAL.	.000057	.039106	.000057	.000057	1.000000	1.000000	.664	*
1020	1201	CAL.	.000048	.032559	.000048	.000048	1.000000	1.000000	1.359	*
1020		FF SUM =	.6730		ROW CP TIME =	3.739	+ CONF		FWD CONF, X=668.3 TO 694.0, SP	
1200		FF SUM =	.1136		ROW CP TIME =	1.968	+ DISC		ECS,CONDENSATE VENT,X=681, SPA	
1201		FF SUM =	.0759		ROW CP TIME =	7.582	+ DISC		ECS,CONDENSATE VENT,X=681, SPA	
1030		FF SUM =	.5313		ROW CP TIME =	1.752	+ CYLN		CORE SEGMENT X=694.0 T	
1050	1060	CAL.	.022611	.000172	.022611	.022611	1.000000	1.000000	6.896	*
1050	1073	CAL.	.000558	.017163	.000558	.000566	.986787	.986787	9.323	*
1050	1074	CAL.	.001883	.027141	.000883	.000333	1.000000	1.000000	9.747	
1050	1075	CAL.	.013960	.056807	.013960	.015796	.883781	.883781	10.529	
1050	1076	CAL.	.014001	.067637	.014901	.016132	.923705	.923705	11.332	
1050	1077	CAL.	.011198	.057519	.011198	.012270	.911968	.911968	11.846	
1050	1078	CAL.	.009515	.048375	.009515	.011842	.803556	.803556	12.338	
1050	1079	CAL.	.016876	.045102	.016876	.019769	.853696	.853696	17.095	
1050	1083	CAL.	.000143	.004401	.000143	.000143	1.000000	1.000000	13.836	
1050	1084	CAL.	.000147	.004401	.000143	.000143	1.000000	1.000000	14.377	
1050	1085	CAL.	.004563	.018570	.004563	.004563	1.000000	1.000000	14.838	
1050	1086	CAL.	.004563	.018570	.004563	.004563	1.000000	1.000000	15.292	
1050	1087	CAL.	.003534	.018107	.003534	.003534	1.000000	1.000000	15.771	
1050	1088	CAL.	.003534	.018107	.003534	.003534	1.000000	1.000000	16.249	
1050	1089	CAL.	.006101	.016304	.006101	.006101	1.000000	1.000000	16.634	
1050	1090	CAL.	.000047	.001450	.000047	.000047	1.000000	1.000000	17.407	
1050	1094	CAL.	.000047	.001450	.000047	.000047	1.000000	1.000000	17.407	
1050	1095	CAL.	.001705	.006939	.001705	.001705	1.000000	1.000000	18.487	
1050	1096	CAL.	.001705	.006939	.001705	.001705	1.000000	1.000000	18.994	
1050	1097	CAL.	.001321	.006783	.001321	.001321	1.000000	1.000000	19.504	
1050	1098	CAL.	.001321	.006783	.001321	.001321	1.000000	1.000000	20.014	

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LTMK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RELIEVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1050	1090	CAL.	.002262	.005045	.002262	.002262	1.000000	1.000000	20.421
1050	1110	CAL.	.000005	.000492	.000005	.000005	1.000000	1.000000	21.075 *
1050	1131	CAL.	.008917	.968236	.008917	.008917	1.000000	1.000000	21.849 *
1050	FF SUM = .5326		ROW CP TIME =		21.854	+ CONE		AFT CONE TAPER, X=799.90 TO	
1060	1073	CAL.	.000135	.000037	.000135	.000135	1.000000	1.000000	.471
1060	1074	CAL.	.000135	.000037	.000135	.000135	1.000000	1.000000	.703
1060	1075	CAL.	.019222	.017656	.019222	.019222	1.000000	1.000000	8.080 *
1060	1076	CAL.	.019222	.017656	.019222	.019222	1.000000	1.000000	15.522 *
1060	1077	CAL.	.015230	.017457	.015230	.015230	1.000000	1.000000	19.531 *
1060	1078	CAL.	.015158	.017574	.015158	.015158	1.000000	1.000000	23.551 *
1060	1079	CAL.	.025858	.015538	.025858	.025858	1.000000	1.000000	29.696 *
1060	1083	CAL.	.000005	.000041	.000005	.000005	1.000000	1.000000	33.129
1060	1084	CAL.	.000006	.000041	.000006	.000006	1.000000	1.000000	33.396
1060	1085	CAL.	.000556	.000511	.000556	.000556	1.000000	1.000000	30.624
1060	1086	CAL.	.000556	.000511	.000556	.000556	1.000000	1.000000	30.851
1060	1087	CAL.	.000344	.000399	.000344	.000344	1.000000	1.000000	31.043
1060	1088	CAL.	.000344	.000399	.000344	.000344	1.000000	1.000000	31.229
1060	1089	CAL.	.000453	.000279	.000453	.000453	1.000000	1.000000	31.453
1060	1090	CAL.	.000001	.000036	.000001	.000001	1.000000	1.000000	31.914
1060	1094	CAL.	.000001	.000006	.000001	.000001	1.000000	1.000000	32.212
1060	1095	CAL.	.000026	.000079	.000026	.000026	1.000000	1.000000	32.463
1060	1096	CAL.	.000086	.000079	.000086	.000086	1.000000	1.000000	32.719
1060	1097	CAL.	.000361	.000059	.000361	.000361	1.000000	1.000000	32.915
1060	1098	CAL.	.000051	.000059	.000051	.000051	1.000000	1.000000	33.114
1060	1099	CAL.	.000071	.000043	.000071	.000071	1.000000	1.000000	33.343
1060	1131	CAL.	.001093	.025802	.001093	.002452	.445995	.445995	33.918
1060	FF SUM = .5250		ROW CP TIME =		33.991	+ CYLN		AFT AIRLOCK, X=831.30 TO 860	
1065	1075	CAL.	.081426	.032452	.081426	.081426	1.000000	1.000000	1.056
1065	1076	CAL.	.081426	.032452	.081426	.081426	1.000000	1.000000	1.714
1065	1077	CAL.	.071248	.035942	.071248	.071248	1.000000	1.000000	2.368
1065	1078	CAL.	.071248	.035942	.071248	.071248	1.000000	1.000000	3.023
1065	1079	CAL.	.142923	.037387	.142923	.142923	1.000000	1.000000	5.260
1065	1085	CAL.	.014935	.005952	.014935	.014935	1.000000	1.000000	5.091
1065	1086	CAL.	.014935	.005952	.014935	.014935	1.000000	1.000000	6.314
1065	1087	CAL.	.011807	.005940	.011807	.011807	1.000000	1.000000	6.668
1065	1088	CAL.	.011807	.005940	.011807	.011807	1.000000	1.000000	7.017
1065	1089	CAL.	.020748	.005431	.020748	.020748	1.000000	1.000000	7.340
1065	1090	CAL.	.003357	.001537	.003357	.003357	1.000000	1.000000	8.097
1065	1096	CAL.	.003357	.001537	.003357	.003357	1.000000	1.000000	9.445
1065	1097	CAL.	.003001	.001510	.003001	.003001	1.000000	1.000000	8.819

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1065	1098	CAL.	.003001	.001510	.003001	.003001	1.000000	1.000000	9.190
1065	1099	CAL.	.005161	.001351	.005161	.005161	1.000000	1.000000	9.541
1065	FF SUM = .7311		ROW CP TIME =		9.783		+ DISC	AFT AIR LOCK DISK SL2	
1070	FF SUM = .9135		ROW CP TIME =		1.626		+ CYLN	PALLET1 BOTTOM CYLINDER SL2	
1071	FF SUM = .3029		ROW CP TIME =		.969		+ RECT	-Y PALLET1 OUTSIDE STRIP SL2	
1072	FF SUM = .7435		ROW CP TIME =		.941		+ RECT	+Y PALLET1 OUTSIDE STRIP SL2	
1073	1130	CAL.	.000221	.000790	.000221	.000662	.333418	.333418	1.815
1073	FF SUM = .0265		ROW CP TIME =		1.887		+ RECT	-Y PALLET3 TOP STRIP X=873.2 T	
1074	1130	CAL.	.000236	.000835	.000236	.000662	.357347	.357347	1.769
1074	FF SUM = .0755		ROW CP TIME =		1.835		+ RECT	+Y PALLET3 TOP STRIP ,X= 873.	
1075	1076	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	1.176
1075	1077	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.407
1075	1078	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	1.834
1075	1079	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	2.858
1075	1086	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	3.329
1075	1087	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	3.610
1075	1088	CAL.	.022966	.023088	.022966	.022966	1.000000	1.000000	3.896
1075	1089	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	4.145
1075	1096	CAL.	.006480	.006480	.006480	.006480	1.000000	1.000000	4.657
1075	1097	CAL.	.010047	.000054	.000043	.000043	1.000000	1.000000	4.953
1075	1098	CAL.	.003332	.004837	.003832	.003832	1.000000	1.000000	5.270
1075	1099	CAL.	.002172	.001426	.002172	.002172	1.000000	1.000000	5.534
1075	1130	CAL.	.000373	.000994	.000373	.001176	.316867	.316867	6.037
1075	FF SUM = .4087		ROW CP TIME =		6.093		+ RECT	-Y INSIDE TOP PANNEL3 ,X=873.	
1076	1077	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	.442

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LTMK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I, J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1076	1078	CAL.	.015740	.017867	.015740	.015740	1.000000	1.000000	.674
1076	1079	CAL.	.088759	.058292	.038759	.088759	1.000000	1.000000	1.731
1076	1085	CAL.	.072622	.072622	.072622	.072622	1.000000	1.000000	2.181
1076	1087	CAL.	.022966	.023388	.022966	.022966	1.000000	1.000000	2.505
1076	1088	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	2.786
1076	1089	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	3.037
1076	1095	CAL.	.006490	.006490	.006490	.006490	1.000000	1.000000	3.528
1076	1097	CAL.	.003332	.003332	.003332	.003332	1.000000	1.000000	3.884
1076	1098	CAL.	.000043	.000043	.000043	.000043	1.000000	1.000000	4.176
1076	1099	CAL.	.002172	.001426	.002172	.002172	1.000000	1.000000	4.446
1076	1130	CAL.	.000377	.000377	.000377	.001176	.320096	.320096	4.953
1076	FF SUM =	.4947	ROW CP TIME =	5.009	+ RECT	+Y INSIDE TOP PANNEL3, X=873.2			
1077	1078	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.393
1077	1079	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.674
1077	1085	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.153
1077	1086	CAL.	.028988	.023966	.028988	.028988	1.000000	1.000000	2.437
1077	1088	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.770
1077	1089	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.403
1077	1095	CAL.	.000054	.000054	.000054	.000054	1.000000	1.000000	9.983
1077	1096	CAL.	.004337	.004337	.004337	.004337	1.000000	1.000000	10.229
1077	1098	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	10.591
1077	1099	CAL.	.000405	.000405	.000405	.000405	1.000000	1.000000	10.659
1077	1130	CAL.	.000074	.001559	.000074	.000350	.077596	.077596	11.395
1077	FF SUM =	.4876	ROW CP TIME =	11.456	+ RECT	-Y INSIDE BOTTOM PANNEL3, X=8			
1078	1079	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.290
1078	1135	CAL.	.023988	.023966	.023988	.023988	1.000000	1.000000	1.787
1078	1085	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.063
1078	1087	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.773
1078	1089	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	3.038
1078	1095	CAL.	.004337	.004337	.004337	.004337	1.000000	1.000000	9.577
1078	1096	CAL.	.000054	.000054	.000054	.000054	1.000000	1.000000	9.869
1078	1097	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	10.199
1078	1099	CAL.	.000405	.000405	.000405	.000405	1.000000	1.000000	10.509
1078	1130	CAL.	.000177	.000740	.000177	.000350	.186210	.186210	11.051
1078	FF SUM =	.4666	ROW CP TIME =	11.111	+ RECT	+Y INSIDE BOTTOM PANNEL3, X 87			
1079	1085	CAL.	.015649	.023328	.015649	.015649	1.000000	1.000000	.476
1079	1086	CAL.	.015649	.023928	.015649	.015649	1.000000	1.000000	.725

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBSTITUED):

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. F FACTOR	SHAD. A FACTOR	CP TIME (SEC):	
1070	1097	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	7.364	*
1070	1098	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	13.932	*
1070	1095	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	14.455	
1070	1096	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	14.719	
1070	1097	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	15.003	
1070	1098	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	15.270	
1070	FF SUM =	.3924	ROW CP TIME =	15.362	+ RECT	...BOTTOM PANNEL3 ,X=873.2 TO				
1090	FF SUM =	.9210	ROW CP TIME =	1.159	+ CYLN	PALLET4 BOTTOM CYLINDER X= 98				
1081	FF SUM =	.3004	ROW CP TIME =	.677	+ RECT	-Y PALLET4 OUTSIDE STRIP SL2				
1092	FF SUM =	.7774	ROW CP TIME =	.657	+ RECT	+Y PALLET4 OUTSIDE STRIP SL2				
1097	1130	CAL.	.000058	.000205	.000058	.000166	.350280	.350280	1.533	
1087	FF SUM =	.0256	ROW CP TIME =	1.600	+ RECT	-Y PALLET4 TOP STRIP X=987.2 T				
1094	1133	CAL.	.000059	.000210	.000059	.000166	.358266	.358266	1.457	
1094	FF SUM =	.0221	ROW CP TIME =	1.523	+ RECT	+Y PALLET4 TOP STRIP ,X= 987.				
1095	1096	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	1.407	
1095	1097	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.671	
1095	1083	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	2.159	
1085	1099	CAL.	.088759	.098292	.088759	.088759	1.000000	1.000000	3.377	
1095	1096	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	7.872	
1087	1097	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	4.162	
1095	1098	CAL.	.022966	.021938	.022966	.022966	1.000000	1.000000	4.452	
1085	1099	CAL.	.023820	.015649	.023820	.023820	1.000000	1.000000	4.693	
1085	1090	CAL.	.000106	.000028	.000106	.000317	.333898	.333898	5.238	
1085	FF SUM =	.4813	ROW CP TIME =	5.293	+ RECT	-Y INSIDE TOP PANNEL4,X=987.2				
1096	1047	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	.809	

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. F FACTOR	SHAD. A FACTOR	OP TIME (SEC)
1086	1098	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	.770
1086	1089	CAL.	.008759	.059292	.008759	.008759	1.000000	1.000000	1.979
1086	1095	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	2.446
1086	1097	CAL.	.022966	.028938	.022966	.022966	1.000000	1.000000	2.769
1086	1098	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	3.052
1086	1099	CAL.	.023328	.015649	.023328	.023328	1.000000	1.000000	3.295
1086	1130	CAL.	.000103	.002755	.000103	.000317	.325312	.325312	3.829
1086	FF SUM =	.4760	ROW OP TIME =	3.883	+ RECT	+Y INSIDE TOP PANNEL4, X=987.2			
1087	1088	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.421
1087	1089	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.857
1087	1095	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.346
1087	1096	CAL.	.028938	.022966	.028938	.028938	1.000000	1.000000	2.661
1087	1098	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	3.095
1087	1099	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.609 *
1087	1130	CAL.	.000110	.002775	.000110	.000331	.333312	.333312	10.295
1087	FF SUM =	.4519	ROW OP TIME =	10.267	+ RECT	-Y INSIDE BOTTOM PANNEL4, X=9			
1088	1089	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.422
1088	1095	CAL.	.028938	.022966	.028938	.028938	1.000000	1.000000	1.938
1088	1096	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.214
1088	1097	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.526
1088	1099	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.198 *
1088	1130	CAL.	.000109	.002297	.000109	.000331	.327913	.327913	9.786
1088	FF SUM =	.4490	ROW OP TIME =	0.849	+ RECT	+Y INSIDE BOTTOM PANNEL4, X 98			
1089	1095	CAL.	.015649	.023328	.015649	.015649	1.000000	1.000000	.453
1089	1096	CAL.	.015649	.023328	.015649	.015649	1.000000	1.000000	.790
1089	1097	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	7.426 *
1089	1098	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	14.142 *
1089	1130	CAL.	.000117	.004771	.000117	.000353	.332435	.332435	14.731
1089	FF SUM =	.3720	ROW OP TIME =	14.702	+ RECT	PALLET4 BOTTOM, X= 987.2 TO 11			
1090	FF SUM =	.9116	ROW OP TIME =	.675	+ CYLN	PALLETS BOTTOM CYLINDER X= 11			

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE (I, J) W/SHAD	FE (J, I) W/SHAD	FA (T, J) W/SHAD	F (T, J) W/SHAD	SHAD. F FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1091		FF SUM = .7096				.416	+ RECT		-Y PALLETS OUTSIDE STRIP
1092		FF SUM = .8012				.381	+ RECT		+Y PALLETS OUTSIDE STRIP
1093	1130	CAL.	.000020	.000070	.000020	.000055	.355331	.355331	1.217
1093		FF SUM = .0950				1.213	+ RECT		-Y PALLETS TOP STRIP X=1101.2
1094	1130	CAL.	.000020	.000070	.000020	.000055	.358968	.358968	1.172
1094		FF SUM = .0949				1.237	+ RECT		+Y PALLETS TOP STRIP ,X= 1101
1095	1096	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	1.169
1095	1097	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.419
1095	1098	CAL.	.055797	.071429	.055797	.055797	1.000000	1.000000	1.862
1095	1099	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	2.892
1095	1130	CAL.	.000037	.000086	.000037	.000109	.339242	.339242	3.455
1095		FF SUM = .5420				3.510	+ RECT		-Y INSIDE TOP PANNEL5,X=1101.
1096	1097	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	.459
1096	1098	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	.712
1096	1099	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	1.739
1096	1130	CAL.	.000036	.000091	.000036	.000109	.327164	.327164	2.309
1096		FF SUM = .5267				2.363	+ RECT		+Y INSIDE TOP PANNEL5,X=1101.
1097	1098	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.393
1097	1099	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.639
1097	1130	CAL.	.000042	.000079	.000042	.000123	.339059	.339059	2.251
1097		FF SUM = .5155				2.313	+ RECT		-Y INSIDE BOTTOM PANNEL5, X=1
1098	1099	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.257
1098	1130	CAL.	.000041	.000089	.000041	.000123	.331418	.331418	1.673
1098		FF SUM = .5034				1.937	+ RECT		+Y INSIDE BOTTOM PANNEL5,X 11

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FF(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1099		FF SUM = .4368			.673		+ RECT		PALLET 5 BOTTOM, X=1311.2 TO 12
1110		FF SUM = .0000			.396		- DISC		CORE SEGMENT WINDOW, X=746.9
1111		FF SUM = .0004			.135		+ DISC		CORE SEGMENT WINDOW, X=746.9
1130		FF SUM = .1201			.682		- DISC		AFT VIEWING WINDOW X=815.6, S
1131		FF SUM = .9796			.624		+ DISC		AFT VIEWING WINDOW X=815.6, S

TOTAL CP TIME (SEC) FOR PROBLEM = 1690.135

SPACELAB-2 GEOMETRIC RELATIONSHIP DATA MATRIX

The following pages contain the geometric relationship data computer printouts for the Spacelab-2/Orbiter configuration.

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

NOCT	MODE J	F(I, J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I		POSITION VECTOR I			
20	1030	.001030	3.71E+03	20.22	108.77	5.57+11E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1050	.020541	3.71E+03	20.43	50.94	4.83351E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1050	.0010428	3.71E+03	18.89	105.66	4.48176E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1055	.003312	3.71E+03	18.02	18.02	4.30299E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1072	.00107	3.71E+03	12.43	87.27	3.47367E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1073	.001217	3.71E+03	28.37	80.16	3.86166E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1074	.000320	3.71E+03	11.46	79.02	3.46708E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1075	.004577	3.71E+03	28.34	62.14	3.86175E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1076	.000769	3.71E+03	15.22	90.10	3.52148E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1077	.003688	3.71E+03	29.87	61.13	3.84131E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1078	.001036	3.71E+03	21.20	82.84	3.64456E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1079	.005882	3.71E+03	26.02	68.97	3.78129E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1082	.000611	3.71E+03	18.75	86.00	2.37392E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1083	.000457	3.71E+03	39.09	76.38	2.90340E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1084	.001358	3.71E+03	16.96	73.76	2.76167E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1085	.000572	3.71E+03	39.07	51.66	2.90318E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1086	.001060	3.71E+03	22.26	90.14	2.43297E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1087	.007595	3.71E+03	39.63	50.73	2.93410E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1088	.002710	3.71E+03	37.27	79.99	2.61458E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1089	.002723	3.71E+03	36.30	61.03	2.80184E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1092	.003700	3.71E+03	37.81	82.02	1.74560E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1097	.000767	3.71E+03	53.64	72.10	2.14348E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1098	.005846	3.71E+03	31.67	59.81	1.31307E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1098	.0015514	3.71E+03	58.62	32.02	2.14583E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1096	.003717	3.71E+03	39.53	90.23	1.45162E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1097	.001054	3.71E+03	59.17	37.35	2.18191E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1098	.006441	3.71E+03	49.69	74.75	1.72310E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1099	.0023784	3.71E+03	56.02	47.28	2.00141E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1117	.000004	3.71E+03	10.53	89.90	5.22137E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1111	.000015	3.71E+03	10.53	90.10	5.22137E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1170	.0010691	3.71E+03	12.72	13.84	4.65924E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
21	1030	.001068	3.71E+03	8.86	88.32	5.29352E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1050	.020541	3.71E+03	11.27	28.49	4.62145E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1067	.000428	3.71E+03	14.06	80.81	4.37142E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1065	.003712	3.71E+03	18.02	18.02	4.30299E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

MODE I	MODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
21	1071	.000197	3.71E+03	12.43	87.27	3.47353E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1072	.000329	3.71E+03	11.46	79.02	3.46708E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1074	.000217	3.71E+03	29.37	80.16	3.86166E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1075	.000369	3.71E+03	15.22	90.10	3.52148E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1076	.004577	3.71E+03	29.34	62.14	3.86775E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1077	.001086	3.71E+03	21.20	82.94	3.64456E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1078	.003696	3.71E+03	29.87	61.17	3.89031E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1079	.005682	3.71E+03	26.02	68.97	3.79129E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1081	.000611	3.71E+03	18.35	86.00	2.37192E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1083	.001368	3.71E+03	19.96	73.76	2.36067E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1084	.0010457	3.71E+03	39.09	76.88	2.90940E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1085	.001068	3.71E+03	22.26	90.14	2.43137E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1086	.009772	3.71E+03	39.27	51.66	2.90818E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1087	.002719	3.71E+03	30.27	79.99	2.61435E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1088	.007525	3.71E+03	39.68	50.33	2.97410E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1089	.012723	3.71E+03	36.30	61.03	2.80184E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1091	.003709	3.71E+03	33.81	82.92	1.34560E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1092	.005846	3.71E+03	31.63	59.81	1.31307E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1094	.001747	3.71E+03	58.84	72.17	2.14348E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1095	.003710	3.71E+03	39.53	90.27	1.45069E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1096	.015514	3.71E+03	58.62	32.82	2.14637E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1097	.006441	3.71E+03	40.69	74.75	1.72310E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1098	.011059	3.71E+03	59.17	30.85	2.18191E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1099	.023784	3.71E+03	56.02	47.23	2.05041E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1110	.001074	3.71E+03	10.53	89.90	5.22037E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1111	.000015	3.71E+03	10.53	93.10	5.22177E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01
21	1170	.000000	3.71E+03	11.90	13.01	4.64214E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.30E+01

11	1030	.000204	4.05E+04	87.43	128.88	5.13434E+02	-3.46E+03	-3.51E+03	4.02E+04	-3.37E+02	-2.42E+02	-8.51E+01
12	1030	.000144	4.46E+04	85.95	122.65	7.43175E+02	-1.38E+03	-3.89E+03	4.44E+04	-5.63E+02	-3.21E+02	-1.07E+02
2	1030	.000204	4.15E+04	85.10	67.38	4.31459E+02	-3.46E+03	3.51E+03	4.02E+04	-3.38E+02	2.42E+02	-8.51E+01
3	1030	.000144	4.46E+04	84.32	68.93	6.70598E+02	-1.38E+03	3.89E+03	4.44E+04	-5.63E+02	3.21E+02	-1.07E+02

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

150	1030	.000051	2.80E+04	70.16	109.00	4.66923E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1070	.000498	2.80E+04	79.85	91.46	2.62492E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1072	.000046	2.80E+04	78.83	91.45	2.64501E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1080	.00418F	2.80E+04	72.76	92.45	1.56120E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1082	.001819	2.80E+04	71.26	92.40	1.59475E+02	-7.72E-08	1.98E+04	1.93E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1090	.016159	2.80E+04	51.91	95.01	7.64106E+01	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1095	.005755	2.80E+04	21.77	44.27	1.54106E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1097	.002033	2.80E+04	37.70	56.78	1.24695E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
151	1070	.000656	2.80E+04	59.27	119.35	3.10151E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1070	.064467	2.80E+04	64.10	93.61	1.05933E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1072	.010077	2.80E+04	62.47	93.45	1.10318E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1090	.006654	2.80E+04	55.25	94.72	8.12000E+01	-7.72E-08	1.98E+04	1.93E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1092	.015022	2.80E+04	54.15	94.78	8.74768E+01	-7.72E-08	1.98E+04	1.93E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1095	.018220	2.80E+04	73.93	92.29	1.67204E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1097	.000355	2.80E+04	77.50	92.25	1.70340E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
152	1030	.039778	2.80E+04	32.93	147.65	1.38765E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1050	.020697	2.80E+04	16.73	111.45	1.45591E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1060	.024402	2.80E+04	17.86	143.10	1.22212E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1065	.004368	2.80E+04	17.73	106.86	9.75324E+01	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1070	.035069	2.80E+04	67.63	93.15	1.21622E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1072	.007101	2.80E+04	65.99	93.04	1.25309E+02	-7.72E-08	1.98E+04	1.93E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1075	.007398	2.80E+04	37.69	52.43	1.80341E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1077	.004555	2.80E+04	47.91	64.12	1.56537E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1079	.000376	2.80E+04	59.27	97.70	1.22544E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1095	.001095	2.80E+04	78.06	91.71	2.27749E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1092	.000107	2.80E+04	76.90	91.69	2.26102E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1095	.001162	2.80E+04	56.71	64.96	2.60721E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1097	.000533	2.80E+04	64.59	73.77	2.44490E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1090	.001164	2.80E+04	92.03	91.15	3.33657E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1092	.000014	2.80E+04	81.21	91.14	3.35340E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1095	.000167	2.80E+04	66.54	72.13	3.59493E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1130	.000059	2.80E+04	15.43	91.72	1.48662E+02	-7.72E-08	1.98E+04	1.93E+04	-3.25E+01	-7.21E+01	-7.21E+01
153	1060	.042973	2.80E+04	22.78	148.33	1.21751E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1070	.018390	2.80E+04	13.00	105.73	1.48662E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1090	.000017	2.80E+04	17.31	46.22	1.48001E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1070	.024078	2.80E+04	33.72	142.92	1.90565E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1070	.000354	2.80E+04	80.56	91.35	2.82156E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1072	.000032	2.80E+04	79.61	91.35	2.84125E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1090	.000079	2.80E+04	83.24	93.97	3.93425E+02	-7.72E-08	1.98E+04	1.93E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1092	.000007	2.80E+04	82.54	90.97	3.94769E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

NODE I	NODE J	F(T, J)	AFPA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
153	1090	.000027	2.80E+04	84.75	90.76	5.05312E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1092	.000062	2.80E+04	84.20	90.75	5.06957E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
154	1073	.000051	2.80E+04	94.09	91.01	4.41550E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1073	.000408	2.80E+04	79.85	91.46	2.62492E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1071	.000185	2.80E+04	78.83	91.45	2.64501E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1080	.044185	2.80E+04	72.76	92.45	1.56120E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1081	.001819	2.80E+04	71.26	92.49	1.59475E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1093	.430157	2.80E+04	52.72	95.61	2.64035E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1091	.016158	2.80E+04	51.91	94.61	3.30489E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1096	.065755	2.80E+04	21.77	44.27	1.54186E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1096	.062933	2.80E+04	32.70	56.73	1.24695E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
155	1070	.000455	2.80E+04	80.31	91.65	2.70460E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1070	.026467	2.80E+04	64.10	93.61	1.05933E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1071	.030177	2.80E+04	62.47	93.45	1.10318E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1080	.408454	2.80E+04	55.25	94.72	8.12000E+01	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1081	.015083	2.80E+04	54.15	94.38	8.74768E+01	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1090	.018229	2.80E+04	77.93	92.29	1.67204E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1091	.000955	2.80E+04	72.59	92.25	1.70340E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
156	1070	.023778	2.80E+04	66.07	93.37	1.12166E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1080	.105576	2.80E+04	32.49	72.36	7.62130E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1080	.024279	2.80E+04	15.58	57.63	8.69917E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1085	.004268	2.80E+04	17.73	106.86	9.75324E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1070	.015369	2.80E+04	67.63	93.15	1.21522E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1071	.037131	2.80E+04	65.09	93.04	1.25399E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1076	.007338	2.80E+04	37.08	52.40	1.80941E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1078	.014555	2.80E+04	47.91	64.12	1.56537E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1079	.003976	2.80E+04	59.27	97.70	1.22544E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1080	.011095	2.80E+04	78.56	91.71	2.23749E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1081	.001107	2.80E+04	76.92	91.69	2.26102E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1085	.001182	2.80E+04	66.71	64.95	2.60721E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1088	.009538	2.80E+04	64.58	73.77	2.44902E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1090	.001104	2.80E+04	82.03	91.15	2.33557E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1091	.000914	2.80E+04	81.21	91.14	2.35247E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1096	.000167	2.80E+04	66.54	72.13	3.59493E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1170	.000057	2.80E+04	17.95	91.76	1.44304E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
157	1090	.142621	2.80E+04	26.62	57.36	7.57341E+01	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1090	.123011	2.80E+04	36.27	68.40	7.76608E+01	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1071	.000717	2.80E+04	17.41	46.22	1.43941E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1079	.024078	2.80E+04	66.73	93.87	1.15188E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1079	.000354	2.80E+04	80.56	91.36	2.82156E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1071	.000032	2.80E+04	79.61	91.35	2.84326E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1080	.000079	2.80E+04	83.24	90.97	3.93425E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

MODE I	MODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR J			POSITION VECTOR I		
157	1091	.000007	2.80E+04	82.54	90.97	3.94769E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1092	.000027	2.80E+04	84.75	90.76	5.05912E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1091	.000007	2.80E+04	84.20	90.75	5.06957E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
140	1053	.024299	3.27E+04	12.96	45.08	4.65272E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1050	.005112	3.27E+04	10.24	100.24	4.70310E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1065	.003783	3.27E+04	7.32	7.32	4.12965E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1077	.000055	3.27E+04	20.58	92.21	3.62358E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1074	.000048	3.27E+04	4.79	92.35	7.40901E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1075	.002416	3.27E+04	18.98	71.66	3.59343E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1075	.002416	3.27E+04	2.77	87.26	3.40198E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1077	.001869	3.27E+04	17.37	73.55	3.56139E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1079	.001171	3.27E+04	7.14	85.87	3.42458E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1079	.002207	3.27E+04	12.57	81.79	3.48101E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1093	.000185	3.27E+04	20.47	93.09	2.59345E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1094	.000177	3.27E+04	7.13	97.53	2.27589E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1095	.007173	3.27E+04	27.37	67.60	2.54262E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1096	.007065	3.27E+04	0.17	85.88	2.26399E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1097	.005550	3.27E+04	25.21	66.17	2.49570E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1098	.005610	3.27E+04	10.68	83.76	2.29781E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1099	.009526	3.27E+04	18.49	76.47	2.38195E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1093	.001177	3.27E+04	48.77	94.73	1.69527E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1094	.001174	3.27E+04	14.29	96.97	1.15370E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1095	.024380	3.27E+04	46.29	45.66	1.61749E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1096	.023765	3.27E+04	8.37	81.72	1.13105E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1097	.018489	3.27E+04	47.56	49.19	1.54269E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1099	.018214	3.27E+04	20.85	77.96	1.19577E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1099	.035644	3.27E+04	34.04	65.62	1.34117E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1170	.000000	3.27E+04	9.66	17.77	4.61340E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
135	1090	.005990	3.27E+04	56.79	145.03	1.00582E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1090	.028748	3.27E+04	43.03	71.79	1.54176E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1200	.001064	3.27E+04	34.63	89.27	1.37393E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1131	.000067	3.27E+04	17.49	12.65	2.57438E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

796	1079	.022900	2.41E+04	64.87	63.33	3.25707E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1070	.009407	2.41E+04	51.13	108.10	2.11528E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1072	.016604	2.41E+04	62.88	77.64	1.69354E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1180	.027129	2.41E+04	21.98	117.57	1.42076E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1182	.031458	2.41E+04	71.28	56.34	6.56276E+01	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1090	.023699	2.41E+04	25.50	115.58	1.46499E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1092	.032511	2.41E+04	73.83	61.26	7.56245E+01	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1095	.062626	2.41E+04	37.15	27.60	1.01627E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1097	.031643	2.41E+04	28.96	37.42	1.76137E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1130	.089837	2.41E+04	77.77	71.38	3.11146E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
799	1011	.025160	2.41E+04	47.42	140.73	1.89451E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1020	.021160	2.41E+04	39.87	138.29	1.82976E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1211	.000004	2.41E+04	64.74	52.09	1.40746E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1030	.055255	2.41E+04	74.48	176.17	1.95517E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1070	.020193	2.41E+04	41.10	144.93	1.83547E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1060	.007245	2.41E+04	48.80	144.10	1.73776E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1070	.011161	2.41E+04	54.40	106.77	2.27781E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1072	.012452	2.41E+04	83.67	73.95	1.89331E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1075	.001709	2.41E+04	57.85	49.01	2.58394E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1077	.002077	2.41E+04	51.53	55.62	2.47576E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1082	.000006	2.41E+04	96.00	87.08	3.02070E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1085	.000667	2.41E+04	54.10	60.94	3.40639E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1097	.000497	2.41E+04	63.18	65.82	3.41347E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1092	.000013	2.41E+04	87.09	84.98	4.15733E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1095	.000166	2.41E+04	70.21	67.88	4.51067E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
799	1170	.000032	2.41E+04	67.70	121.67	1.54051E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
711	1020	.006360	2.90E+04	45.50	72.30	6.60579E+01	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01
711	1070	.029520	2.90E+04	74.45	74.45	8.24296E+01	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

380	1070	.000075	2.81E+04	83.87	96.17	7.42440E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1050	.000246	2.81E+04	85.47	41.08	6.74642E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1073	.000036	2.81E+04	82.31	68.18	5.66392E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1075	.000162	2.81E+04	87.43	76.33	5.73479E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1077	.000055	2.81E+04	85.45	68.71	5.86516E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1083	.000056	2.81E+04	80.59	63.01	4.63854E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1085	.000140	2.81E+04	82.01	77.37	4.72432E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1087	.000077	2.81E+04	84.54	64.14	4.88340E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1093	.000075	2.81E+04	79.12	55.17	3.68121E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1095	.000077	2.81E+04	80.02	69.05	3.78935E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
385	1030	.000077	2.05E+04	84.50	95.50	8.74017E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1050	.000181	2.05E+04	86.00	39.61	7.65271E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1073	.000011	2.05E+04	83.36	71.25	6.55352E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1075	.000041	2.05E+04	84.33	78.18	6.61496E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1077	.000026	2.05E+04	86.04	71.55	6.72315E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1083	.000019	2.05E+04	82.07	67.43	5.49590E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1085	.000057	2.05E+04	83.23	75.92	5.56431E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1087	.000014	2.05E+04	85.32	68.09	5.70407E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1093	.000003	2.05E+04	81.26	61.97	6.47875E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
390	1030	.000035	2.81E+04	96.18	96.18	7.42350E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1050	.000245	2.81E+04	94.54	41.09	6.74651E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1074	.000035	2.81E+04	87.32	68.18	5.66379E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1076	.000162	2.81E+04	87.44	76.34	5.73468E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1077	.000055	2.81E+04	85.46	68.72	5.86516E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1084	.000056	2.81E+04	81.61	63.01	4.63378E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1086	.000140	2.81E+04	87.03	73.35	4.72468E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1088	.000077	2.81E+04	84.55	64.15	4.88371E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1094	.000035	2.81E+04	79.13	55.17	3.68101E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1096	.000078	2.81E+04	80.04	69.06	3.78917E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
395	1030	.000033	2.05E+04	95.50	95.50	8.74017E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1050	.000181	2.05E+04	94.00	39.62	7.65238E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1074	.000011	2.05E+04	83.37	71.26	6.55352E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1076	.000041	2.05E+04	84.31	78.19	6.61456E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1078	.000025	2.05E+04	86.05	71.56	6.72408E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1084	.000019	2.05E+04	82.08	67.48	5.49576E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1086	.000057	2.05E+04	83.24	75.93	5.56379E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1088	.000014	2.05E+04	85.33	68.08	5.70499E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1094	.000003	2.05E+04	81.27	61.95	6.47358E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

799	1039	.000016	4.15E+03	64.51	96.71	6.87578E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1057	.006192	4.15E+03	66.56	42.74	5.15491E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1069	.000207	4.15E+03	67.55	92.53	5.96408E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1065	.000417	4.15E+03	69.26	24.25	5.77732E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1073	.000427	4.15E+03	69.96	65.57	5.09139E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1074	.000027	4.15E+03	69.96	65.57	5.09199E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1075	.000012	4.15E+03	72.06	74.33	5.17173E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1076	.000177	4.15E+03	72.06	74.41	5.17173E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1077	.000548	4.15E+03	75.33	66.79	5.31608E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1078	.000351	4.15E+03	75.33	66.38	5.31608E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1079	.000212	4.15E+03	76.53	58.90	5.76424E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1083	.000195	4.15E+03	76.74	59.09	4.09375E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1065	.000417	4.15E+03	79.19	71.16	4.19617E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1087	.000526	4.15E+03	82.00	60.85	4.37437E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1049	.000030	4.15E+03	84.22	50.78	4.43243E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1093	.000001	4.15E+03	87.62	48.92	3.22473E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1095	.000202	4.15E+03	91.73	65.97	3.32443E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1097	.000002	4.15E+03	94.29	53.13	3.55103E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1111	.000393	4.15E+03	67.83	77.17	6.46323E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
799	1120	.000001	4.15E+03	61.56	6.97	5.96746E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
1000	1020	.067777	1.84E+04	67.54	53.02	6.73330E+01	-1.31E-07	1.84E+04	1.56E-07	1.75E+02	3.15E+01	-1.70E+01
1000	1021	.000000	1.84E+04	169.03	66.08	9.65912E+01	-1.31E-07	1.84E+04	1.56E-07	1.75E+02	3.15E+01	-1.70E+01
1020	1200	.000007	1.92E+04	108.27	129.52	7.91675E+01	1.69E+04	8.99E+03	1.36E-07	1.19E+02	5.57E+01	-8.00E-10
1020	1201	.000048	1.92E+04	108.27	50.44	7.91676E+01	1.69E+04	8.99E+03	1.36E-07	1.19E+02	5.57E+01	-8.00E-10
1050	1060	.022611	2.10E+04	75.39	46.73	4.04733E+01	-1.78E+04	1.12E+04	2.62E-08	-1.56E+01	5.33E+01	5.22E-10
1050	1077	.000556	2.10E+04	22.30	96.89	1.16664E+02	-1.79E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

NOFF I	NOFF J	F(I, J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1050	1074	.003837	2.10E+04	80.81	94.65	1.7578E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1075	.013960	2.10E+04	26.19	87.95	1.14533E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1076	.014901	2.10E+04	78.46	45.58	1.64596E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1077	.011198	2.10E+04	40.33	78.98	1.21481E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1078	.003515	2.10E+04	74.86	49.23	1.57171E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1079	.016976	2.10E+04	60.38	66.07	1.37323E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1080	.000143	2.10E+04	26.79	93.50	2.29156E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1084	.000143	2.10E+04	61.74	93.06	2.62178E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1085	.004563	2.10E+04	29.09	86.47	2.28178E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1086	.014563	2.10E+04	60.74	63.34	2.86356E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1087	.003534	2.10E+04	35.26	84.25	2.31529E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1088	.003534	2.10E+04	55.36	66.00	2.82138E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1089	.000101	2.10E+04	45.84	76.60	2.40332E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1090	.000147	2.10E+04	28.45	92.34	3.42546E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1094	.000147	2.10E+04	52.86	92.20	3.65484E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1095	.001705	2.10E+04	30.09	87.65	3.41326E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1096	.001705	2.10E+04	51.34	71.42	3.81329E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1097	.001705	2.10E+04	73.03	86.13	3.44355E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1098	.001705	2.10E+04	43.77	73.37	3.59423E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1099	.002202	2.10E+04	41.83	60.55	3.50219E+02	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1101	.000005	2.10E+04	111.62	96.34	7.35556E+01	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1050	1101	.000017	2.10E+04	111.62	83.66	7.35556E+01	-1.78E+04	1.12E+04	2.62E-08	-1.66E+01	5.33E+01	5.22E-10
1060	1073	.000135	4.75E+03	59.57	94.13	9.89411E+01	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1074	.000176	4.75E+03	139.93	96.06	1.32311E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1075	.019222	4.75E+03	64.64	64.42	9.34359E+01	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1076	.019222	4.75E+03	137.21	44.33	1.24354E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1077	.015230	4.75E+03	77.49	62.97	9.64264E+01	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1078	.015158	4.75E+03	127.43	46.32	1.18530E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1079	.025858	4.75E+03	104.23	57.66	1.04111E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1083	.000000	4.75E+03	75.82	93.92	2.04389E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1084	.000005	4.75E+03	117.04	93.60	2.23288E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1085	.000556	4.75E+03	74.58	78.49	2.02296E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1086	.000556	4.75E+03	114.71	65.95	2.19210E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1087	.000344	4.75E+03	84.11	77.57	2.03730E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1088	.000344	4.75E+03	109.59	67.61	2.15171E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1089	.000467	4.75E+03	97.09	74.42	2.07416E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1090	.000001	4.75E+03	80.47	92.54	3.16471E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1094	.000001	4.75E+03	107.98	92.44	3.28535E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1095	.000006	4.75E+03	92.69	82.63	3.14793E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1096	.000006	4.75E+03	106.29	74.13	3.25331E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1097	.000051	4.75E+03	86.20	82.32	3.15702E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1098	.000051	4.75E+03	102.39	75.31	3.23156E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1099	.000071	4.75E+03	94.62	79.92	3.18112E+02	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10
1060	1130	.000003	4.75E+03	100.15	71.53	6.60779E+01	3.69E-08	4.75E+03	3.69E-08	-4.60E+01	2.56E+01	2.42E-10

MODEL = CONTAM STP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1065	1075	.081426	2.06E+07	43.50	50.68	9.56785E+01	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1076	.081426	2.06E+07	43.50	50.68	9.56785E+01	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1077	.071248	2.06E+07	78.45	52.18	8.86105E+01	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1078	.071248	2.06E+07	39.45	52.18	8.86105E+01	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1079	.142823	2.06E+03	31.72	59.28	8.15390E+01	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1080	.014975	2.06E+07	19.75	71.87	1.94368E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1081	.014975	2.06E+07	19.75	71.87	1.94368E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1082	.011807	2.06E+03	16.72	73.52	1.91497E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1083	.011807	2.06E+03	16.72	73.52	1.91497E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1084	.011807	2.06E+03	16.72	73.52	1.91497E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1085	.014975	2.06E+03	12.49	78.52	3.04306E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1086	.014975	2.06E+03	12.49	78.52	3.04306E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1087	.013071	2.06E+07	10.50	79.65	3.02460E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1088	.013071	2.06E+03	10.50	79.65	3.02460E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1065	1089	.005161	2.06E+03	8.21	81.79	3.00478E+02	-2.06E+03	-2.91E-08	1.50E-08	-6.08E+01	6.60E-09	-1.28E+01
1073	1170	.000221	6.84E+02	73.34	41.20	1.41704E+02	0.	0.	6.84E+02	-1.30E+02	7.58E+01	1.40E+01
1074	1130	.000236	6.84E+02	73.83	43.04	1.45357E+02	0.	0.	6.84E+02	-1.30E+02	-7.58E+01	1.40E+01
1075	1076	.0369758	5.17E+03	18.39	18.39	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1077	.015740	5.17E+03	79.61	76.84	3.97649E+01	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1078	.055797	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1079	.038750	5.17E+03	54.68	53.71	8.14442E+01	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1080	.032622	5.17E+03	44.23	44.23	1.73384E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1081	.001545	5.17E+03	36.59	85.70	1.20736E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1082	.022066	5.17E+03	54.74	49.31	1.67671E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1083	.027328	5.17E+03	70.36	69.88	1.40104E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1084	.016480	5.17E+03	61.74	61.74	2.63104E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1087	.007047	5.17E+03	83.22	87.76	2.31442E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1088	.007332	5.17E+03	68.16	65.41	2.56469E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1089	.002172	5.17E+03	78.79	78.52	2.42110E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1130	.000373	5.17E+03	57.18	44.60	1.44173E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1076	1077	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1078	.015740	5.17E+03	79.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1079	.038759	5.17E+03	54.68	53.71	8.14442E+01	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1080	.032622	5.17E+03	44.23	44.23	1.73384E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1081	.022066	5.17E+03	54.74	49.31	1.67671E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1083	.001545	5.17E+03	36.59	85.70	1.20736E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1084	.027328	5.17E+03	70.36	69.88	1.40104E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1089	.006480	5.17E+03	61.74	61.74	2.63104E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1087	.007332	5.17E+03	68.16	65.41	2.56469E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

MODE I	MODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1076	1008	.000043	5.17E+03	88.22	87.76	2.31442E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1090	.000172	5.17E+03	78.79	78.52	2.42110E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1130	.000377	5.17E+03	54.59	45.97	1.47704E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1077	1078	.061000	4.00E+03	41.95	41.95	9.70000E+01	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1079	.093268	4.00E+03	57.97	73.08	4.83784E+01	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1080	.001050	4.00E+03	85.70	86.59	1.20736E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1086	.022988	4.00E+03	49.31	54.34	1.63471E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1089	.019507	4.00E+03	61.96	61.96	1.47122E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1090	.010432	4.00E+03	79.84	83.81	1.23341E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1095	.000054	4.00E+03	87.76	88.22	2.31442E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1096	.004037	4.00E+03	65.41	68.16	2.56469E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1099	.002231	4.00E+03	73.69	73.69	2.46238E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1099	.000465	4.00E+03	33.68	86.72	2.33176E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1131	.000074	4.00E+03	51.92	51.62	1.55361E+02	4.71E-08	-7.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1078	1070	.037268	4.00E+03	57.97	73.98	4.83784E+01	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1085	.028058	4.00E+03	49.31	54.34	1.63471E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1086	.001050	4.00E+03	85.70	86.59	1.20736E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1087	.019507	4.00E+03	61.96	61.96	1.47122E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1089	.010432	4.00E+03	79.84	83.81	1.23341E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1095	.004037	4.00E+03	65.41	68.16	2.56469E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1096	.000054	4.00E+03	87.76	88.22	2.31442E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1097	.002231	4.00E+03	73.69	73.69	2.46238E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1099	.000465	4.00E+03	33.68	86.72	2.33176E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1130	.000177	4.00E+03	49.77	52.28	1.56234E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1079	1035	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1086	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1087	.000272	7.87E+03	83.81	78.04	1.23341E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1088	.000272	7.87E+03	83.81	78.04	1.23341E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1085	.001424	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1086	.001424	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1087	.000211	7.87E+03	83.68	83.68	2.33176E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1088	.000211	7.87E+03	83.68	83.68	2.33176E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1083	1130	.000058	6.84E+02	80.41	25.89	2.43170E+02	0.	0.	6.84E+02	-2.44E+02	7.58E+01	1.40E+01
1084	1130	.000059	6.84E+02	80.51	27.04	2.45466E+02	0.	0.	6.84E+02	-2.44E+02	-7.58E+01	1.40E+01
1085	1086	.063758	5.17E+03	18.39	18.79	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1087	.015740	5.17E+03	79.51	76.84	7.97649E+01	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1088	.055707	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAP2 (RECEIVING SHUTTLE))

MODE I	MODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR Y			POSITION VECTOR I		
1085	1099	.088759	5.17E+03	54.68	53.71	9.14442E+01	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1096	.032522	5.17E+03	44.23	44.23	1.73384E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1097	.001545	5.17E+03	86.59	85.79	1.20736E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1098	.022956	5.17E+03	54.34	49.31	1.63671E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1099	.027828	5.17E+03	79.76	69.88	1.40104E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1137	.001126	5.17E+03	71.39	29.52	2.44767E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1086	1087	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1088	.015740	5.17E+03	79.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1089	.008700	5.17E+03	54.63	53.71	8.14442E+01	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1090	.072622	5.17E+03	44.23	44.23	1.73384E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1097	.022956	5.17E+03	54.34	49.31	1.63671E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1098	.001545	5.17E+03	86.59	85.79	1.20736E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1099	.027828	5.17E+03	79.76	69.88	1.40104E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1137	.000157	5.17E+03	69.72	29.41	2.44863E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1087	1088	.061700	4.09E+03	41.95	41.95	9.30710E+01	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1089	.087268	4.09E+03	57.97	73.98	4.83794E+01	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1095	.001950	4.09E+03	85.79	86.59	1.20736E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1096	.023988	4.09E+03	49.31	54.34	1.63671E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1098	.019607	4.09E+03	61.96	61.76	1.47122E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1099	.010172	4.09E+03	79.04	83.81	1.27341E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1137	.000110	4.09E+03	67.50	33.83	2.51390E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1088	1089	.093268	4.09E+03	57.97	73.98	4.83794E+01	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1095	.073938	4.09E+03	49.31	54.34	1.63671E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1096	.001950	4.09E+03	85.79	86.59	1.20736E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1097	.012617	4.09E+03	61.96	61.96	1.47122E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1099	.011137	4.09E+03	73.84	83.81	1.27341E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1137	.000109	4.09E+03	66.20	34.72	2.53335E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1089	1095	.015640	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1089	1096	.015649	7.87E+03	69.88	79.76	1.40104E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1089	1097	.005272	7.87E+03	83.81	78.04	1.27341E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1089	1098	.005272	7.87E+03	83.81	78.04	1.27341E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1089	1170	.000117	7.87E+03	64.27	35.35	2.53402E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1093	1130	.000020	6.84E+02	83.43	29.05	3.52392E+02	0.	0.	6.84E+02	-3.58E+02	7.58E+01	1.40E+01
1094	1170	.000020	6.84E+02	83.43	29.78	3.54077E+02	0.	0.	6.84E+02	-3.58E+02	-7.58E+01	1.40E+01
1095	1096	.059758	5.17E+03	18.79	18.79	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1095	1097	.015740	5.17E+03	79.61	76.84	3.97649E+01	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB2 (RECEIVING SHUTTLE))

MODE I	MODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1095	1093	.055797	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1095	1199	.088759	5.17E+03	54.68	53.71	3.14442E+01	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1095	1130	.100037	5.17E+03	77.23	22.17	3.53592E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1095	1097	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1096	1098	.010740	5.17E+03	72.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1096	1099	.083759	5.17E+03	54.68	53.71	3.14442E+01	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1096	1130	.000036	5.17E+03	76.05	22.74	3.55047E+02	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1097	1093	.061000	4.09E+03	41.95	41.95	9.30110E+01	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1097	1099	.093268	4.09E+03	57.97	73.98	4.83784E+01	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1097	1130	.000042	4.09E+03	74.40	26.27	3.58560E+02	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1098	1099	.093268	4.09E+03	57.97	73.98	4.83784E+01	-4.31E-08	3.04E+03	2.74E+03	-3.58E+02	-4.65E+01	-4.24E+01
1098	1130	.000041	4.09E+03	73.48	26.55	3.59577E+02	-4.31E-08	3.04E+03	2.74E+03	-3.58E+02	-4.65E+01	-4.24E+01
1099	1130	.000045	7.87E+03	72.17	27.44	3.59306E+02	0.	0.	7.87E+03	-3.58E+02	1.03E+08	-5.57E+01

3.5.3 Spacelab-3/Orbiter Data Matrices - Figure 7 depicts the computer drawing of the modeled Spacelab-3 configuration indicating the nodal numbering assignments assigned to the primary Spacelab surfaces. (The Orbiter nodal assignments are depicted in Figure 4.) This is followed by a summary listing and description of the Spacelab-3/Orbiter nodal surfaces. The ensuing computer printouts contain the Input Data, Viewfactor Data, and Geometric Relationship Data matrices for the Spacelab-3/Orbiter configuration.

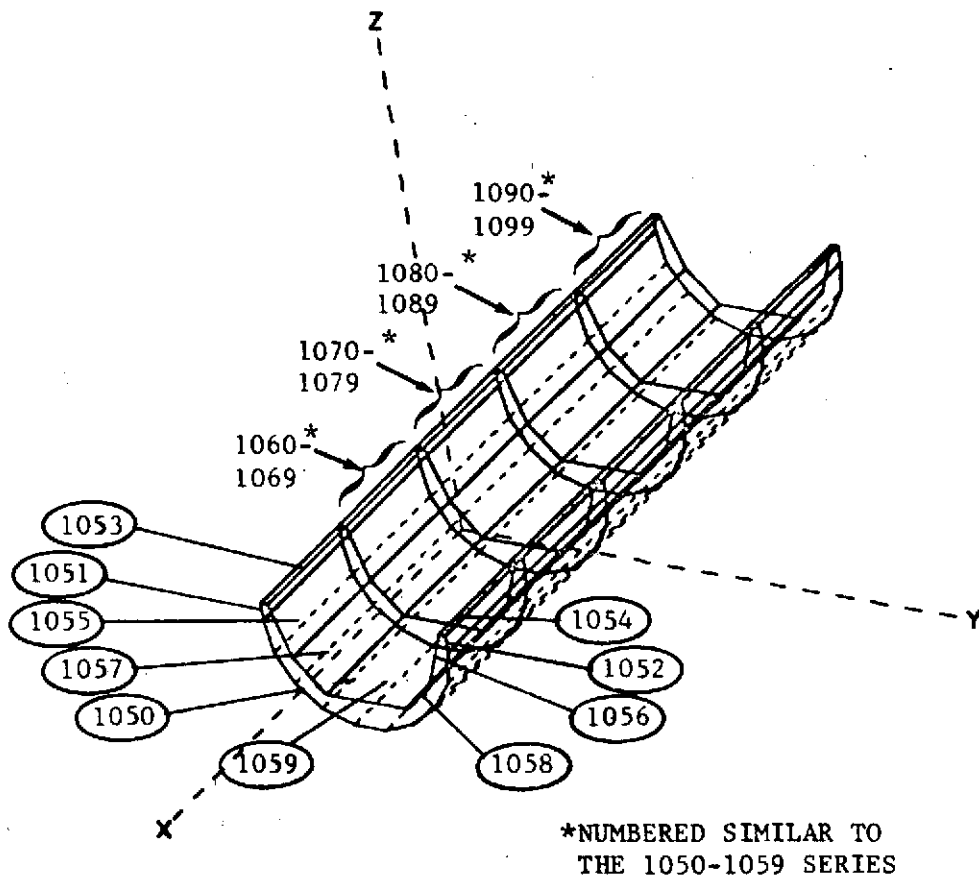


Figure 7. Primary Spacelab-3 Nodal Surface Number Assignments

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE	RCS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
145	R00Y	2.687E+03	0.	0.	TRAPEZOID	TOP	+Y REAR SIDE TAPER
146	R00Y	2.687E+03	0.	0.	TRAPEZOID	BOTTOM	- Y. REAR SIDE TAPER...
707	B00Y	2.827E+01	J.	0.	DISC	BOTTOM	.....JULY 8 EVAP..3 IN. RAD.
708	B00Y	2.827E+01	U.	0.	DISC	TOP	.....JULY 8 EVAP..3 IN. RAD.
147	R00Y	1.858E+04	U.	0.	PARABOLOID	OUTSID	TOP ENGIN
148	R00Y	1.858E+04	0.	0.	PARABOLOID	OUTSID	+ Y ENGIN
149	R00Y	1.858E+04	U.	0.	PARABOLOID	OUTSID	-Y ENGIN...
21	R00Y	3.711E+03	0.	0.	DISC	TOP	...-Y OWS SEALER ...
21	B00Y	3.711E+03	0.	0.	DISC	TOP	...+Y OWS SEALER ...
222	B00Y	2.573E+04	0.	J.	RECTANGLE	BOTTOM	BACK RECT 7.350FG
23	B00Y	1.674E+04	0.	0.	DISC	TOP	REAR END HALF DISK
407	R00Y	2.827E+01	U.	0.	DISC	TOP	BACK SIDE EVAPORAT, UPDATED
15	R00Y	2.827E+01	0.	0.	DISC	TOP	REAR END EVAPORATOP
13	R00Y	1.887E+04	0.	0.	TRAPEZOID	BOTTOM	....LEFT FRONT WING A ...
11	R00Y	4.045E+04	0.	0.	TRAPEZOID	TOP	.....LEFT MIDDLE WING BACK.B
141	B00Y	2.599E+04	0.	0.	RECTANGLE	TOP	RS INNER WING
12	B00Y	4.462E+04	0.	0.	RECTANGLE	TOP	..... LEFT BACK RECT. WING C
142	R00Y	1.474E+04	0.	0.	RECTANGLE	TOP	INNER WING C
13	R00Y	1.012E+04	0.	0.	TRAPEZOID	TOP	..... LEFT WING TAIL EDGE
1	R00Y	1.878E+04	U.	0.	TRAPEZOID	TOP	...FRONT WING TRIANGLE RT.A.58
2	B00Y	4.045E+04	0.	0.	TRAPEZOID	BOTTOM	.....MIDDLE WING TRAP, RT B ..
143	B00Y	2.599E+04	0.	0.	RECTANGLE	BOTTOM	B +Y RECTANGLE WING
3	B00Y	4.462E+04	0.	0.	RECTANGLE	BOTTOM	.... BACK WING RECT. RTC .129
144	R00Y	1.474E+04	U.	0.	RECTANGLE	BOTTOM	INNER WING C RECT
4	R00Y	1.012E+04	0.	0.	TRAPEZOID	BOTTOM	...WING TAIL FLAP RT 1453,1507
150	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
151	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
152	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
153	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
154	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
155	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
156	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
157	R00Y	2.804E+04	-0.	-0.	CYLINDER	INSIDE	BAY AREA CYLINDER
140	R00Y	3.269E+04	-0.	-0.	DISC	TOP	END BAY AREA DISK
135	R00Y	3.269E+04	-0.	-0.	DISC	TOP	FRONT BAY AREA DISK
122	R00Y	1.527E+04	-0.	-0.	PARABOLOID	OUTSID	VERY NOSE CONE
123	B00Y	1.527E+04	-0.	-0.	PARABOLOID	OUTSID	VERY NOSE CONE
124	B00Y	1.527E+04	-0.	-0.	PARABOLOID	OUTSID	VERY NOSE CONE
125	R00Y	1.527E+04	-0.	-0.	PARABOLOID	OUTSID	VERY NOSE CONE
220	R00Y	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
221	R00Y	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
222	R00Y	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
223	R00Y	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
224	R00Y	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
225	R00Y	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
226	R00Y	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

MODE	BCS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
327	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
328	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
329	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
330	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
331	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
332	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
333	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
334	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
335	BODY	4.673E+03	-0.	-0.	CYLINDER	OUTSID	NOSE CYLINDER
340	BODY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
341	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
342	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
343	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
344	BODY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
345	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
346	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
347	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
348	BODY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
349	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
350	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
351	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
352	BODY	3.838E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
353	BODY	4.022E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
354	BODY	4.197E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
355	BODY	4.366E+03	-0.	-0.	PARABOLOID	OUTSID	HOOD PARTIAL BACK
360	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
361	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
362	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
363	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
364	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
365	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
366	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
367	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
368	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
369	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
370	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
371	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
372	BODY	1.593E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
373	BODY	1.825E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
374	BODY	2.031E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
375	BODY	2.218E+03	-0.	-0.	PARABOLOID	OUTSID	WINDOW
401	BODY	4.611E+04	.900	.900	RECTANGLE	BOTTOM	BODY BOTTOM (FRT) 4 1
402	BODY	1.434E+05	.900	.900	RECTANGLE	BOTTOM	BODY BOTTOM (REAR) 402
182	BODY	3.971E+04	-0.	-0.	CYLINDER	OUTSID	OMSPDC1
172	BODY	3.913E+04	-0.	-0.	CYLINDER	OUTSID	OMSPDC2
781	BODY	2.470E+04	0.	0.	CYLINDER	INSIDE	.....Y SIDE DOOR.....

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE	RCS	AREA	ALPH	EMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
782	R00Y	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
783	R00Y	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
784	B00Y	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
785	R00Y	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
786	R00Y	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
787	B00Y	2.470E+04	0.	0.	CYLINDER	INSIDE	.....+Y SIDE DOOR.....
788	R00Y	2.470E+04	0.	0.	CYLINDER	OUTSID	.....+Y SIDE DOOR.....
791	R00Y	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
792	B00Y	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
793	R00Y	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
794	R00Y	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
795	B00Y	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
796	B00Y	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
797	R00Y	2.413E+04	0.	0.	CYLINDER	INSIDE	... -Y SIDE DOOR....
798	R00Y	2.413E+04	0.	0.	CYLINDER	OUTSID	... -Y SIDE DOOR....
301	B00Y	2.994E+04	0.	0.	TRAPEZOID	TOP	+Y SIDE FRONT TRAPEZOID
305	R00Y	4.997E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (MIDDLE-PORT) 305
306	B00Y	5.155E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (BACK-PORT) 306
311	R00Y	2.994E+04	0.	0.	TRAPEZOID	BOTTOM	-Y SIDE FRONT TRAPEZOID
315	B00Y	3.678E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (MIDDLE-STBD) 315
316	R00Y	3.795E+04	.900	.900	RECTANGLE	TOP	BODY SIDE (BACK-STBD) 316
202	R00Y	3.685E+04	.900	.900	CYLINDER	OUTSID	BODY TOP (STBD-REAR) 202
212	B00Y	3.685E+04	.900	.900	CYLINDER	OUTSID	BODY TOP (PORT-REAR) 212
380	B00Y	2.805E+04	.900	.900	TRAPEZOID	TOP	VERTICAL FIN (PORT) 20
385	B00Y	2.054E+04	.900	.900	TRAPEZOID	TOP	VERTICAL FIN (PORT-AFT) 20
390	B00Y	2.305E+04	.900	.900	TRAPEZOID	BOTTOM	VERTICAL FIN (STBD) 20
395	R00Y	2.054E+04	.900	.900	TRAPEZOID	BOTTOM	VERTICAL FIN (STBD-AFT) 20
705	R00Y	2.827E+01	0.	0.	DISC	TOP	...MOST FORWARD EVAPORATOR.....
700	R00Y	1.590E+03	0.	0.	DISC	BOTTOM	.....SUPER ENGIN (OMS LOCAT
701	B00Y	1.590E+03	0.	0.	DISC	TOP	.....SUPER ENGIN (OMS LOCAT
702	B00Y	1.590E+03	0.	0.	DISC	BOTTOM	.....SUPER ENGIN (OMS LOCAT
703	R00Y	1.590E+03	0.	0.	DISC	TOP	.....SUPER ENGIN (OMS LOCAT
24	R00Y	2.832E+01	0.	0.	DISC	BOTTOM	...BACK RCS ...LOOKING +/- Y.(
25	R00Y	2.832E+01	0.	0.	DISC	TOP	...BACK RCS ...LOOKING +/- Y.(
18	B00Y	2.826E+01	0.	0.	DISC	BOTTOM	...FRONT RCS..LOOKING +/-Y AT
19	R00Y	2.826E+01	0.	0.	DISC	TOP	...FRONT RCS..LOOKING +/-Y AT
26	B00Y	2.832E+01	0.	0.	DISC	BOTTOM	...BACK RCS LOOKING +/- Z...7/
27	R00Y	2.832E+01	0.	0.	DISC	TOP	...BACK RCS LOOKING +/- Z...7/
16	R00Y	2.827E+01	0.	0.	DISC	BOTTOM	...MIDDLE EVAP..LOOKING +/- Y.
17	R00Y	2.827E+01	0.	0.	DISC	TOP	...MIDDLE EVAP..LOOKING +/- Y.
399	R00Y	4.152E+03	.900	.900	RECTANGLE	TOP	VEPT. FIN LDG. EDGE 2
1050	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET1 BOTTOM CYLINDER X= 64
1051	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	-Y PALLET1 OUTSIDE STRIP SL3
1052	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET1 OUTSIDE STRIP SL3
1053	SPLAR	6.940E+02	0.	0.	RECTANGLE	TOP	-Y PALLET1 TOP STRIP X=645.2 Y
1054	SPLAR	6.940E+02	0.	0.	RECTANGLE	TOP	+Y PALLET1 TOP STRIP ,X= 645.

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NOSE	BCS	AREA	ALPH	FMISS	SURF. TYPE	ACTIVE	-----COMMENTS-----
1055	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL1 ,X=645.
1056	SPLAR	5.155E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL1,X=645.2
1057	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL1, X=6
1058	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL1,X 64
1059	SPLAR	7.866E+03	0.	0.	RECTANGLE	TOP	BOTTOM PANNEL 1 X=645.2 TO759
1060	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET2 BOTTOM CYLINDER X= 75
1061	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	-Y PALLET2 OUTSIDE STRIP SL3
1062	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET2 OUTSIDE STRIP SL3
1063	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLET2 TOP STRIP X=759.2 T
1064	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	+Y PALLET2 TOP STRIP ,X= 759.
1065	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL2,X=759.2
1066	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL2,Y=759.2
1067	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL2, X=7
1068	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL2,X 75
1069	SPLAR	7.866E+03	0.	0.	RECTANGLE	TOP	PALLET2 BOTTOM,X= 759.2 TO 87
1070	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET3 BOTTOM CYLINDER X= 87
1071	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	-Y PALLET1 OUTSIDE STRIP SL2
1072	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET1 OUTSIDE STRIP SL2
1073	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLET3 TOP STRIP X=873.2 T
1074	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	+Y PALLET3 TOP STRIP ,X= 873.
1075	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL3 ,X=873.
1076	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL3,X=873.2
1077	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL3, X=8
1078	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL3,X 87
1079	SPLAR	7.866E+03	0.	0.	RECTANGLE	TOP	...BOTTOM PANNEL3 ,X=873.2 TO
1080	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLET4 BOTTOM CYLINDER X= 98
1081	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	-Y PALLET4 OUTSIDE STRIP SL3
1082	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLET4 OUTSIDE STRIP SL3
1083	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLET4 TOP STRIP X=987.2 T
1084	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	+Y PALLET4 TOP STRIP ,X= 987.
1085	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL4,X=987.2
1086	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL4,X=987.2
1087	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL4, X=9
1088	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL4,X 98
1089	SPLAR	7.866E+03	0.	0.	RECTANGLE	TOP	PALLET4 BOTTOM,X= 987.2 TO 11
1090	SPLAR	2.822E+04	0.	0.	CYLINDER	OUTSID	PALLETS BOTTOM CYLINDER X= 11
1091	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	-Y PALLETS OUTSIDE STRIP
1092	SPLAR	1.596E+03	0.	0.	RECTANGLE	TOP	+Y PALLETS OUTSIDE STRIP
1093	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	-Y PALLETS TOP STRIP X=1101.2
1094	SPLAR	6.840E+02	0.	0.	RECTANGLE	TOP	+Y PALLETS TOP STRIP ,X= 1101
1095	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE TOP PANNEL5,X=1101.
1096	SPLAR	5.166E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE TOP PANNEL5,X=1101.
1097	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	-Y INSIDE BOTTOM PANNEL5, X=1
1098	SPLAR	4.093E+03	0.	0.	RECTANGLE	TOP	+Y INSIDE BOTTOM PANNEL5,X 11
1099	SPLAR	7.866E+03	0.	0.	RECTANGLE	TOP	PALLET 5 BOTTOM,X=1011.2 TO 12

SPACELAB-3 INPUT DATA MATRIX

The following pages contain the input data computer printouts for the Spacelab-3/Orbiter configuration.

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

HEADER	SURFACE DATA		
I	ICSN=50	72	AA
	TX=0., TY=0., TZ=0.	73	AA
	ROTX=0., ROTY=0., ROTZ=0.	74	AA
I	ICSN = 1	75	AA
	TX=810., TY=0., TZ=0.	76	AA
	ROTZ=-140., ROTY=0., ROTX=0.	77	AA
I	ICSN = 2	78	AA
	TX = -5.0000000000E+02	79	AA
	TY = 0.	80	AA
	TZ = 0.	81	AA
	ROTZ = -180.0000	82	AA
	ROTY = -0.	83	AA
	ROTX = 0.	84	AA
I	ICSN = 3	85	AA
	TX = 8.0000000000E+02	86	AA
	TY = 0.	87	AA
	TZ = 0.	88	AA
	ROTZ = -90.0000	89	AA
	ROTY = -0.	90	AA
	ROTX = 90.0000	91	AA
I	ICSN = 4	92	AA
	TX = 4.3000000000E+02	93	AA
	TY = 6.2900000000E+01	94	AA
	TZ = 2.4000000000E+01	95	AA
	ROTZ = 79.7000	96	AA
	ROTY = 41.0000	97	AA
	ROTX = 0.	98	AA
I	ICSN = 5	99	AA
	TX = 4.3000000000E+02	100	AA
	TY = -6.2900000000E+01	101	AA
	TZ = 2.4000000000E+01	102	AA
	ROTZ = 130.3000	103	AA
	ROTY = -41.0000	104	AA
	ROTX = 0.	105	AA
I	ICSN= 6	106	AA
	TX=-195.	107	AA
	TY=0.	108	AA
	TZ=14.	109	AA
	ROTX=0., ROTY=90., ROTZ=0.	110	AA
I	ICSN=7	111	AA
	TX=-116., TY=0., TZ=14.	112	AA
	ROTX=0., ROTY=90., ROTZ=0.	113	AA
I	ICSN=8	114	AA
	TX=-116., TY=0., TZ=14.	115	AA
	ROTX=0., ROTY=90., ROTZ=0.	116	AA
I	ICSN=9	117	AA
	TX=156., TY=0., TZ=14.	118	AA
	ROTX=0., ROTY=-90., ROTZ=0.	119	AA
I	ICSN=10	120	AA
	TX=130., TY=0., TZ=14.	121	AA
		122	AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	ROTX=0.,ROTY=90.,ROTZ=0.	123	AA
I	ICSN = 11	124	AA
	TX=-470.,TY=-78.14,TZ=65.56	125	AA
	ROTX=0.,ROTY=90.,ROTZ=0.	126	AA
I	ICSN=12	127	AA
	TX=-470.,TY=+78.14,TZ=65.56	128	AA
	ROTX=0.,ROTY=90.,ROTZ=0.	129	AA
I	ICSN=13	130	AA
	TX=-700.,TY=00.,TZ=50.	131	AA
	ROTX=0.,ROTY=-90.,ROTZ=0.	132	AA
I	ICSN=14	133	AA
	TX=-717.,TY=0.,TZ=-50.	134	AA
	ROTX=0.,ROTY=-90.,ROTZ=0.	135	AA
I	ICSN=15	136	AA
	TX=-711.,TY=0.,TZ=0.	137	AA
	ROTX=0.,ROTY=-97.35,ROTZ=0.0	138	AA
I	ICSN=16	139	AA
	TX=-705.,TY=88.,TZ=70.5	140	AA
	ROTX=0.,ROTY=-74.183,ROTZ=12.241	141	AA
I	ICSN=17	142	AA
	TX=-705.,TY=-88.,TZ=70.5	143	AA
	ROTX=0.,ROTY=-74.183,ROTZ=12.241	144	AA
I	ICSN=20	145	AA
	TX=0.,TY=102.,TZ=0.	146	AA
	ROTX=-5.,ROTY=0.,ROTZ=0.	147	AA
I	ICSN=21	148	AA
	TX=0.,TY=-102.,TZ=0.	149	AA
	ROTX=5.,ROTY=0.,ROTZ=0.	150	AA
BNS	BODY	151	AA
S	SURF=145,TYPE=TRAP,ACTIVE=TOP,SHADE=90TH,BSHADE=BOTH	152	AA
	P1=-638.,102.,0.	153	AA
	P2=-638.,102.,-125.	154	AA
	P3=-728.,102.,-125.	155	AA
	P4=-711.,102.,0.	156	AA
	PROP=1.,0.	157	AA
	COM=* +Y REAR SIDE TAPER*	158	AA
S	SURF=146,TYPE=TRAP,ACTIVE=BOTTOM,SHADE=80TH,BSHADE=BOTH	159	AA
	P1=-698.,-102.,0.	160	AA
	P2=-698.,-102.,-125.	161	AA
	P3=-728.,-102.,-125.	162	AA
	P4=-711.,-102.,0.	163	AA
	PROP=0.,0.	164	AA
	COM=* -Y. REAR SIDE TAPER...*	165	AA
S	SURF=737,TYPE=DISC,ACTIVE=BOTH,SHADE=90TH,BSHADE=BOTH	166	AA
	P1=218.,104.,-47.	167	AA
	P2=218.,104.,-50.	168	AA
	P3=215.,104.,-47.	169	AA
	P4=215.,104.,-47.	170	AA
	PROP=0.,0.	171	AA
	COM=*.....JULY 8 EVAP..3 IN. RAD. UP FRONT CLOSE UNDER WING*	172	AA
S	SURF=147,TYPE=PARAB,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	173	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	DIMENSTONS=4.4,0.0,100.,0.,360.	174	AA
	TCSN=13	175	AA
	PROP=J.,0.	176	AA
	COM=* TOP ENGIN *	177	AA
S	SURF=146,TYPE=PARAB,ACTIVE= OUT,SHADE=BOTH,BSHADE=BOTH	178	AA
	DIMENSIONS=4.4,0.0,100.,0.,360.	179	AA
	ICSN=14,TY=+50.	180	AA
	PROP=0.,0.	181	AA
	COM = * + Y ENGIN *	182	AA
S	SURF=149,TYPE=PARAB,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	183	AA
	DIMENSTONS=4.4,0.0,100.,0.,360.	184	AA
	TCSN = 14, TY =-50.	185	AA
	PROP=0.,0.	186	AA
	COM = * -Y ENGIN...*	187	AA
S	SURF=20,TYPE=DISC,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	188	AA
	DIMENSTONS=0.0,0.0,45.,125.,335.	189	AA
	PROP=0.,0.	190	AA
	ICSN=11	191	AA
	COM = * ...-Y OWS SEALER ...*	192	AA
S	SURF=21,TYPE=DISC,ACTIVE=OUT,SHADE=BOTH,BSHADE=BOTH	193	AA
	DIMENSTONS=0.0,0.0,45.,25.,235.	194	AA
	PROP=0.,J.	195	AA
	ICSN=12	196	AA
	COM= * ...+Y OWS SEALER ...*	197	AA
S	SURF=22,TYPE=RECT,ACTIVE=BOTTON,SHADE=BOTH,BSHADE=BOTH	198	AA
	P1=-723.,-102.,-125.	199	AA
	P2=-723.,102.,-125.	200	AA
	P3=-711.,102.,0.J	201	AA
	PROP=0.,0.	202	AA
	COM=* BACK RECT 7.35DEG*	203	AA
S	SURF=23,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	204	AA
	DIMENSTONS=0.0,0.0,102.,90.,270.	205	AA
	PROP=0.,0.	206	AA
	ICSN=15	207	AA
	COM=* REAR END HALF DISK*	208	AA
S	SURF=407,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE= BOTH	209	AA
	P1=-592.0,113.,-77.	210	AA
	P2=-592.0,113.,-80.	211	AA
	P3=-595.0,113.,-77.	212	AA
	P4=-595.0,113.,-77.	213	AA
	PROP=0.,0.	214	AA
	COM=* BACK SIDE EVAPORAT, UPDATED JULY 18, 6 IN DIA.*	215	AA
S	SURF=15,TYPE=DISC,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	216	AA
	P1=-719.,126.,-95.	217	AA
	P2=-719.,126.,-98.	218	AA
	P3=-722.,126.,-95.	219	AA
	P4=-722.,126.,-95.	220	AA
	PROP=0.,0.	221	AA
	COM=* REAR END EVAPORATOR*	222	AA
S	SURF=10,TYPE=POLY,ACTIVE=BOTTOM,SHADE=BOTH,BSHADE=BOTH	223	AA
	P1=230.,0.,-102.	224	AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL.	1	2	3	4	5	6	7	8	EDIT NO.	OLD EDIT NO.	LABEL
									225		AA
									226		AA
									227		AA
									228		AA
									229		AA
S									230		AA
									231		AA
									232		AA
									233		AA
									234		AA
									235		AA
									236		AA
S									237		AA
									238		AA
									239		AA
									240		AA
									241		AA
									242		AA
									243		AA
S									244		AA
									245		AA
									246		AA
									247		AA
									248		AA
									249		AA
									250		AA
S									251		AA
									252		AA
									253		AA
									254		AA
									255		AA
									256		AA
									257		AA
S									258		AA
									259		AA
									260		AA
									261		AA
									262		AA
									263		AA
									264		AA
S									265		AA
									266		AA
									267		AA
									268		AA
									269		AA
									270		AA
									271		AA
S									272		AA
									273		AA
									274		AA
									275		AA

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MODFL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL.	1	2	3	4	5	6	7	8	EDIT NO.	OLD EDIT NO.	LABEL
									276		AA
									277		AA
									278		AA
S									279		AA
									280		AA
									281		AA
									282		AA
									283		AA
									284		AA
									285		AA
S									286		AA
									287		AA
									288		AA
									289		AA
									290		AA
									291		AA
									292		AA
S									293		AA
									294		AA
									295		AA
									296		AA
									297		AA
									298		AA
									299		AA
S									300		AA
									301		AA
									302		AA
									303		AA
									304		AA
									305		AA
									306		AA
S									307		AA
									308		AA
									309		AA
									310		AA
									311		AA
									312		AA
									313		AA
S									314		AA
									315		AA
									316		AA
									317		AA
									318		AA
									319		AA
									320		AA
S									321		AA
									322		AA
									323		AA
									324		AA
									325		AA
									326		AA

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MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

LINE	CHAR	DESCRIPTION	EDIT NO.	OLD EDIT NO.	LABEL
327		ROTZ = -0. , ROTY = -90.0000, ROTX = 0.			AA
328	S	SURFN= 122, SHADE=BOTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.			AA
329		TRANS=-0. , TRANI=-0. , COM=* VERY NOSE CONE *			AA
330		TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 6.13000E+00			AA
331		RMTN= 0. , BMAX= 2.00000E+02, GMIN= 0.			AA
332		GMAX= 3.60000E+02, NNX= 4, NNY= 1, ICSN= 1			AA
333		POSITION= 2.00000E+02, 0. , -3.00000E+01			AA
334		POTZ = -180.0000, ROTY = -90.0000, ROTX = 0.			AA
335	S	SURFN= 320, SHADE=BOTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.			AA
336		TRANS=-J. , TRANI=-0. , COM=* NOSE CYLINDER *			AA
337		TYPE=CYLINDER , ACTIVE=OUTSIDE, ALPH= 7.00000E+01			AA
338		RMTN= 0. , BMAX= 1.70000E+02, GMIN= 0.			AA
339		GMAX= 3.60000E+02, NNX= 4, NNY= 4, ICSN= 1			AA
340		POSITION= 4.00000E+02, 0. , -3.00000E+01			AA
341		POTZ = -180.0000, ROTY = -90.0000, ROTX = 0.			AA
342	S	SURFN= 340, SHADE=BOTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.			AA
343		TRANS=-J. , TRANI=-0. , COM=* HOOD PARTIAL BACK *			AA
344		TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 7.03000E+00			AA
345		RMTN= 2.60000E+02, BMAX= 3.70000E+02, GMIN= 0.			AA
346		GMAX= 3.60000E+02, NNX= 4, NNY= 4, ICSN= 1			AA
347		POSITION= 2.00000E+02, 0. , 0.			AA
348		POTZ = -180.0000, ROTY = -90.0000, ROTX = 0.			AA
349	S	SURFN= 360, SHADE=BOTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.			AA
350		TRANS=-J. , TRANI=-0. , COM=* WINDOW *			AA
351		TYPE=PARABOLOID, ACTIVE=OUTSIDE, ALPH= 2.38000E+01			AA
352		RMTN= 1.60000E+01, BMAX= 7.68000E+01, GMIN= 0.			AA
353		GMAX= 3.60000E+02, NNX= 4, NNY= 4, ICSN= 1			AA
354		POSITION= 3.83200E+02, 0. , 0.			AA
355		POTZ = -180.0000, ROTY = -90.0000, ROTX = 0.			AA
356	S	SURFN= 401, SHADE=BOTH, BSHADE=BOTH, ALPHA= .900, EMISS= .900			AA
357		TRANS=-J. , TRANI=-0. , COM=* BODY BOTTOM (FPT) 4 1 *			AA
358		TYPE=RECTANGLE , ACTIVE=BOTTOM , ALPH= 0.			AA
359		RMTN=-1.02000E+02, BMAX= 1.02000E+02, GMIN= 0.			AA
360		GMAX= 2.26000E+02, NNX= 1, NNY= 1, ICSN= 1			AA
361		POSITION= 5.70000E+02, 0. , -1.02000E+02			AA
362		POTZ = -0. , ROTY = 5.3870, ROTX = 0.			AA
363	S	SURFN= 402, SHADE=BOTH, BSHADE=BOTH, ALPHA= .900, EMISS= .900			AA
364		TRANS=-J. , TRANI=-0. , COM=* BODY BOTTOM (REAR) 402 *			AA
365		TYPE=RECTANGLE , ACTIVE=BOTTOM , ALPH=-1.25000E+02			AA
366		RMTN=-1.02000E+02, BMAX= 1.02000E+02, GMIN= 2.25000E+02			AA
367		GMAX= 9.30000E+02, NNX= 1, NNY= 1, ICSN= 1			AA
368		POSITION= 5.70000E+02, 0. , 0.			AA
369		POTZ = -0. , ROTY = -0. , ROTX = 0.			AA
370	S	SURFN= 182, SHADE=BOTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.			AA
371		TRANS=-0. , TRANI=-0. , COM=* OMSPODC1 *			AA
372		TYPE=CYLINDER , ACTIVE=OUTSIDE, ALPH= 4.50000E+01			AA
373		RMTN= 0. , BMAX= 2.35000E+02, GMIN= 3.50000E+01			AA
374		GMAX= 2.40000E+02, NNX= 1, NNY= 1, ICSN= -0			AA
375		POSITION=-4.70000E+02, -7.81400E+01, 6.55600E+01			AA
376		POTZ = -0. , ROTY = -90.0000, ROTX = 0.			AA
377	S	SURFN= 172, SHADE=BOTH, BSHADE=BOTH, ALPHA=-0. , EMISS=-0.			AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD NO. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	TRANS=-0. ,TRANI=-0. ,COM=* OMSPODC2	378	AA
	TYPE=CYLINDER ,ACTIVE=OUTSIDE,ALPH= 4.50000E+01	379	AA
	GMAX= 1.46100E+02,NNX= 1,NNY= 1,ICSN= -0	380	AA
	BMTN= 0. ,BMAX= 2.35000E+02,GMIN=-6.60000E+01	381	AA
	POSITION=-4.70000E+02, 7.81400E+01, 6.55600E+01	382	AA
	POTZ = -J. , ROTY = -90.0000, ROTX = 0.	383	AA
S	SURFN= 781,TYPE=CYL,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	384	AA
	P1=230.,201.34,37.98	385	AA
	P2=230.,103.,19.	386	AA
	P3=230.,201.34,-64.02	387	AA
	P4=-470.,201.34,-64.02	388	AA
	PRNP=0.,0.	389	AA
	NNX=2,NNY=2	390	AA
	COM=*,.....+Y SIDE DOOR.....*	391	AA
S	SURFN= 791,TYPE=CYL,ACTIVE=BOTH,SHADE=BOTH,BSHADE=BOTH	392	AA
	P1=230.,-201.34,37.98	393	AA
	P2=230.,-201.34,-64.02	394	AA
	P3=230.,-103.,19.	395	AA
	P4=-470.,-103.,19.	396	AA
	PRNP=0.,0.,0.	397	AA
	NNX=2,NNY=2	398	AA
	COM=*,... -Y SIDE DOOR.....*	399	AA
S	SURFN= 301,TYPE=TRAP,BSHADE=BOTH,SHADE=BOTH,ACTIVE=TOP	400	AA
	P1=230.,102.,-102.	401	AA
	P2=4.,102.,-125.	402	AA
	P3=4.,102.,19.	403	AA
	P4=230.,102.,19.	404	AA
	COM=* +Y SIDE FRONT TRAPEZOID*	405	AA
	PRNP=0.,0.	406	AA
S	SURFN= 305,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	407	AA
	TRANS=-0. ,TRANI=-0. ,COM=*BODY SIDE (MIDDLE-PORT) 305 *	408	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	409	AA
	BMTN=-1.25000E+02,BMAX= 19. ,GMIN= 2.25000E+02	410	AA
	GMAX= 5.72000E+02,NNX= 1,NNY= 1,ICSN= 1	411	AA
	POSITION= 5.70000E+02, 0. , 0.	412	AA
	POTZ = -0. , POTY = -0. , ROTX = 90.0000	413	AA
S	SURFN= 306,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	414	AA
	TRANS=-0. ,TRANI=-0. ,COM=*BODY SIDE (BACK-PORT) 306 *	415	AA
	TYPE=RECTANGLE ,ACTIVE=TOP ,ALPH= 1.02000E+02	416	AA
	BMTN=-1.25000E+02,BMAX= 19. ,GMIN= 5.72000E+02	417	AA
	GMAX= 9.31000E+02,NNX= 1,NNY= 1,ICSN= 1	418	AA
	POSITION= 5.79000E+02, 0. , 0.	419	AA
	POTZ = -0. , ROTY = -0. , ROTX = 90.0000	420	AA
S	SURFN= 311,TYPE=TRAP,BSHADE=BOTH,SHADE=BOTH,ACTIVE=BOTTOM	421	AA
	P1=230.,102.,-102.	422	AA
	P2=4.,102.,-125.	423	AA
	P3=4.,102.,19.	424	AA
	P4=230.,102.,19.	425	AA
	COM=* -Y SIDE FRONT TRAPEZOID*	426	AA
	PRNP=0.,0.	427	AA
S	SURFN= 315,SHADE=BOTH,BSHADE=BOTH,ALPHA= .900,EMISS= .900	428	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

INPUT CARD COL.	1	2	3	4	5	6	7	8	EDIT NO.	OLD EDIT NO.	LABEL
	TRANS=-0.	,TRANI=-0.	,COM=*BODY SIDE (MIDDLE-STBD)	315	*				429		AA
	TYPE=RECTANGLE	,ACTIVE=TOP	,ALPH= 1.02000E+02						430		AA
	BMIN= 19.	,BMAX= 1.25000E+02	,GMIN= 2.25000E+02						431		AA
	GMAX= 5.72000E+02	,NNY= 1	,ICSN= 1						432		AA
	POSITION= 5.70000E+02	, 0.	, 0.						433		AA
	ROTZ = -0.	, ROTY = -0.	, ROTX = -90.0000						434		AA
S	SURFN= 316	,SHADE=BOTH	,BSHADE=BOTH	,ALPHA= .900	,EMISS= .900				435		AA
	TRANS=-0.	,TRANI=-0.	,COM=*BODY SIDE (BACK-STBD)	316	*				436		AA
	TYPE=RECTANGLE	,ACTIVE=TOP	,ALPH= 1.02000E+02						437		AA
	BMIN= 19.	,BMAX= 1.25000E+02	,GMIN= 5.72000E+02						438		AA
	GMAX= 9.30000E+02	,NNY= 1	,ICSN= 1						439		AA
	POSITION= 5.70000E+02	, 0.	, 0.						440		AA
	ROTZ = -0.	, ROTY = -0.	, ROTX = -90.0000						441		AA
S	SURFN= 202	,SHADE=BOTH	,BSHADE=BOTH	,ALPHA= .900	,EMISS= .900				442		AA
	TRANS=-0.	,TRANI=-0.	,COM=*BODY TOP (STRD-REAR)	202	*				443		AA
	TYPE=CYLINDER	,ACTIVE=OUTSIDE	,ALPH= 1.02000E+02						444		AA
	BMIN= 7.00000E+02	,BMAX= 9.30000E+02	,GMIN= 2.70000E+02						445		AA
	GMAX= 3.60000E+02	,NNX= 1	,NNY= 1	,ICSN= 1					446		AA
	POSITION= 5.70000E+02	, 0.	, 0.						447		AA
	ROTZ = -0.	, ROTY = 90.0000	, ROTX = 0.						448		AA
S	SURFN= 212	,SHADE=BOTH	,BSHADE=BOTH	,ALPHA= .900	,EMISS= .900				449		AA
	TRANS=-0.	,TRANI=-0.	,COM=*BODY TOP (PORT-REAR)	212	*				450		AA
	TYPE=CYLINDER	,ACTIVE=OUTSIDE	,ALPH= 1.02000E+02						451		AA
	BMIN= 7.00000E+02	,BMAX= 9.30000E+02	,GMIN= 1.80000E+02						452		AA
	GMAX= 2.70000E+02	,NNX= 1	,NNY= 1	,ICSN= 1					453		AA
	POSITION= 5.70000E+02	, 0.	, 0.						454		AA
	ROTZ = -0.	, ROTY = 90.0000	, ROTX = 0.						455		AA
S	SURFN= 380	,SHADE=BOTH	,BSHADE=BOTH	,ALPHA= .900	,EMISS= .900				456		AA
	TRANS=-0.	,TRANI=-0.	,COM=*VERTICAL FIN (PORT)	20	*				457		AA
	TYPE=TRAPEZOID	,ACTIVE=TOP	,ALPH= 0.						458		AA
	BMIN= 1.48400E+02	,BMAX= 3.93400E+02	,GMIN= 3.00000E+01						459		AA
	GMAX= 4.50000E+01	,NNX= 1	,NNY= 1	,ICSN= 1					460		AA
	POSITION= 1.65840E+03	, 0.	, 4.95400E+02						461		AA
	ROTZ = -0.	, ROTY = -180.0000	, ROTX = 90.0000						462		AA
S	SURFN= 385	,SHADE=BOTH	,BSHADE=BOTH	,ALPHA= .900	,EMISS= .900				463		AA
	TRANS=-0.	,TRANI=-0.	,COM=*VERTICAL FIN (PORT-AFT)	20	*				464		AA
	TYPE=TRAPEZOID	,ACTIVE=TOP	,ALPH= 0.						465		AA
	BMIN= 1.48400E+02	,BMAX= 3.93400E+02	,GMIN= 1.50000E+01						466		AA
	GMAX= 3.00000E+01	,NNX= 1	,NNY= 1	,ICSN= 1					467		AA
	POSITION= 1.65840E+03	, 0.	, 4.95400E+02						468		AA
	ROTZ = -0.	, ROTY = -180.0000	, ROTX = 90.0000						469		AA
S	SURFN= 390	,SHADE=BOTH	,BSHADE=BOTH	,ALPHA= .900	,EMISS= .900				470		AA
	TRANS=-0.	,TRANI=-0.	,COM=*VERTICAL FIN (STBD)	20	*				471		AA
	TYPE=TRAPEZOID	,ACTIVE=BOTTOM	,ALPH= 0.						472		AA
	BMIN= 1.48400E+02	,BMAX= 3.93400E+02	,GMIN= 3.00000E+01						473		AA
	GMAX= 4.50000E+01	,NNX= 1	,NNY= 1	,ICSN= 1					474		AA
	POSITION= 1.65840E+03	, 1.00000E-01	, 4.95400E+02						475		AA
	ROTZ = -0.	, ROTY = -180.0000	, ROTX = 90.0000						476		AA
S	SURFN= 395	,SHADE=BOTH	,BSHADE=BOTH	,ALPHA= .900	,EMISS= .900				477		AA
	TRANS=-0.	,TRANI=-0.	,COM=*VERTICAL FIN (STBD-AFT)	20	*				478		AA
	TYPE=TRAPEZOID	,ACTIVE=BOTTOM	,ALPH= 0.						479		AA

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MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	RMIN= 1.48400E+02, RMAX= 3.93400E+02, GMIN= 1.50000E+01	480	AA
	RMAX= 3.00000E+01, NNY= 1, ICSN= 1	481	AA
	POSITION= 1.65940E+03, 1.00000E-01, 4.95400E+02	482	AA
	ROTZ = -0. , ROTY = -180.0000, ROTX = 90.0000	483	AA
S	SURF=705, TYPE=DISC, ACTIVE=TOP, SHADE=BOTH, BSHADE=BOTH	484	AA
	P1=327., 85., -72.	485	AA
	P2=327., 85., -75.	486	AA
	P3=324., 85., -72.	487	AA
	P4=324., 85., -72.	488	AA
	PROP=0., 0.	489	AA
	COM=*...MOST FORWARD EVAPORATOR.....LOOKING +Y, 6 IN DIA.*	490	AA
S	SURFN=700, TYPE=DISC, ACTIVE=BOTH, BSHADE=BOTH, SHADE=BOTH	491	AA
	DIMENSIONS=70., 0., 22.5, 0., 360.	492	AA
	ICSN=16, PROP=0., 0.	493	AA
	COM=*.....SUPER ENGINES (OMS LOCATION)..+Y..*	494	AA
S	SURFN=702, TYPE=DISC, ACTIVE=BOTH, BSHADE=BOTH, SHADE=BOTH	495	AA
	DIMENSIONS=70., 0., 22.5, 0., 360.	496	AA
	ICSN=17, PROP=0., 0.	497	AA
	COM=*.....SUPER ENGINES (OMS LOCATION)..-Y..*	498	AA
S	SURFN=24, TYPE=DISC, ACTIVE=BOTH, SHADE=NO, BSHADE=BOTH	499	AA
	P1=-765., 134., 59.	500	AA
	P2=-765., 134., 62.	501	AA
	P3=-767.82, 132.97, 59.	502	AA
	P4=-767.82, 132.97, 59.	503	AA
	PROP=0., 0.	504	AA
	COM=*...BACK RCS ...LOOKING +/- Y. (10 DEG CANT) .*	505	AA
S	SURFN=18, TYPE=DISC, ACTIVE=BOTH, SHADE=BOTH, BSHADE=BOTH	506	AA
	P1=467.5, 50., -48.9	507	AA
	P2=470.5, 53., -48.9	508	AA
	P3=467.5, 52.457, -47.18	509	AA
	P4=467.5, 52.457, -47.18	510	AA
	PROP=0., 0.	511	AA
	COM=*...FRONT RCS...LOOKING +/- Y AT 35 DEG. 7/23/74...*	512	AA
S	SURFN=26, TYPE=DISC, ACTIVE=BOTH, SHADE=NO, BSHADE=BOTH	513	AA
	P1=-765., 118., 57.	514	AA
	P2=-765., 115., 57.	515	AA
	P3=-767.82, 118., 58.03	516	AA
	P4=-767.82, 118., 58.03	517	AA
	PROP=0., 0.	518	AA
	COM=*...BACK RCS LOOKING +/- Z...7/23/74. (10 DEGG CANT)..*	519	AA
S	SURFN=16, TYPE=DISC, ACTIVE=BOTH, SHADE=BOTH, BSHADE=BOTH	520	AA
	P1=-247., 105., -21.	521	AA
	P2=-247., 105., -24.	522	AA
	P3=-250., 105., -21.	523	AA
	P4=-250., 105., -21.	524	AA
	PROP=0., 0.	525	AA
	COM=*...MIDDLE EVAP. LOOKING +/- Y.....*	526	AA
S	SURFN= 399, SHADE=BOTH, BSHADE=BOTH, ALPHA= .900, ENTSS= .900	527	AA
	TRANS=-1. , TRANT=-0. , COM=*VERT. FIN LOG. EDGE 2 *	528	AA
	TYPE=RECTANGLE , ACTIVE=TOP , ALPHA= 0.	529	AA
	RMIN=-6.00000E+10, RMAX= 6.00000E+03, GMIN=-5.56000E+02	530	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	RMAX=-2.10000E+02,NNX= 1,NNY= 1,ICSN= 1	531	AA
	POSITION= 1.65840E+03, 0.	532	AA
	POTZ = -0. , POTY = -45.0000, ROTX = 0.	533	AA
BDS	SPLAB	534	AA
S	SURF=1050,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	535	AA
	TCSN=50	536	AA
	P1=645.2,0.,400.	537	AA
	P2=645.2,78.8,400.	538	AA
	P3=645.2,-78.8,400.	539	AA
	P4=759.2,-78.8,400.	540	AA
	PROP=1.,0.	541	AA
	COM = * PALLET1 BOTTOM CYLINDER X= 645.2 TO 759.2 SL3 *	542	AA
S	SURF=1051,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	543	AA
	TCSN=50	544	AA
	P1=645.2,-78.8,400.	545	AA
	P2=759.2,-78.8,400.	546	AA
	P3=759.2,-78.8,414.	547	AA
	PROP=.,0.	548	AA
	COM= * -Y PALLET1 OUTSIDE STRIP SL3 *	549	AA
S	SURF=1052,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	550	AA
	ICSN=50	551	AA
	P1=645.2,78.8,414.	552	AA
	P2=759.2,78.8,414.	553	AA
	P3=759.2,78.8,400.	554	AA
	PROP= 0.,0.	555	AA
	COM=* +Y PALLET1 OUTSIDE STRIP SL3 *	556	AA
S	SURF=1053,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	557	AA
	TCSN=50	558	AA
	P1=645.2,-78.8,414.	559	AA
	P2=759.2,-78.8,414.	560	AA
	P3=759.2,-72.8,414.	561	AA
	PROP=0.,0.	562	AA
	COM=*-Y PALLET1 TOP STRIP X=645.2 TO 759.2 SL3 *	563	AA
S	SURF=1054,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	564	AA
	ICSN=50	565	AA
	P1=645.2,72.8,414.	566	AA
	P2=759.2,72.8,414.	567	AA
	P3=759.2,78.8,414.	568	AA
	PROP=0.,0.	569	AA
	COM= * +Y PALLET1 TOP STRIP ,X= 645.2 TO 759.2 SL3 *	570	AA
S	SURF=1055,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	571	AA
	TCSN=50	572	AA
	P1=645.2,-72.8,414.	573	AA
	P2=759.2,-72.8,414.	574	AA
	P3=759.2,-58.5,371.	575	AA
	PROP=0.,0.	576	AA
	COM = * -Y INSIDE TOP PANNEL1 ,X=645.2 TO 759.2SL3 *	577	AA
S	SURF=1056,TYPE = RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	578	AA
	ICSN=50	579	AA
	P1=759.2,58.5,371.	580	AA
	P2=759.2,72.5,414.	581	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	P3=645.2,72.8,414.	582	AA
	PROP=0.,0.	583	AA
	COM= * +Y INSIDE TOP PANNEL1,X=645.2 TO 759.2 SL3 *	584	AA
S	SURF=1057, TYPE= RECT, ACTIVE=TOP, SHADE=BOTH, BSHADE=BOTH	585	AA
	TCSN=50	586	AA
	P1=645.2,-58.5,371.	587	AA
	P2=759.2,-58.5,371.0	588	AA
	P3=759.2,-34.5,344.3	589	AA
	PROP=0.,0.	590	AA
	COM=* -Y INSIDE BOTTOM PANNEL1, X=645.2 TO 759.2SL3 *	591	AA
S	SURF=1058,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	592	AA
	TCSN=50	593	AA
	P1=645.2,34.5,344.3	594	AA
	P2=759.2,34.5,344.3	595	AA
	P3=759.2,58.5,371.	596	AA
	PROP=0.,0.	597	AA
	COM=* +Y INSIDE BOTTOM PANNEL1,X 645.2 TO 759.2 SL3 *	598	AA
S	SURF=1059, TYPE= RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	599	AA
	TCSN=50	600	AA
	P1=645.2,-34.5,344.3	601	AA
	P2=759.2,-34.5,344.3	602	AA
	P3=759.2,34.5,344.3	603	AA
	PROP= 0.,0.	604	AA
	COM=* BOTTOM PANNEL 1 X=645.2 TO759.2, SL3*	605	AA
S	SURF=1060,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	606	AA
	TCSN=50	607	AA
	P1=759.2,0.,400.	608	AA
	P2=759.2,78.8,400.	609	AA
	P3=759.2,-78.8,400.	610	AA
	P4=873.2,-78.8,400.	611	AA
	PROP=J.,0.	612	AA
	COM = * PALLET2 BOTTOM CYLINDER X= 759.2 TO 873.2 SL2*	613	AA
S	SURF=1061,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	614	AA
	TCSN=50	615	AA
	P1=759.2,-78.8,400.	616	AA
	P2=873.2,-78.8,400.	617	AA
	P3=873.2,-78.8,414.	618	AA
	PROP= 0.,0.	619	AA
	COM= * -Y PALLET2 OUTSIDE STRIP SL3 *	620	AA
S	SURF=1062,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	621	AA
	TCSN=50	622	AA
	P1=873.2,78.8,414.	623	AA
	P2=873.2,78.8,430.	624	AA
	P3=759.2,78.8,400.	625	AA
	PROP= J.,J.	626	AA
	COM=* +Y PALLET2 OUTSIDE STRIP SL3 *	627	AA
S	SURF=1063,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	628	AA
	TCSN=50	629	AA
	P1=759.2,-78.8,414.	630	AA
	P2=873.2,-78.8,414.	631	AA
	P3=873.2,-72.8,414.	632	AA

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MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	PROP=0.,0.	633	AA
	COM=*-Y PALLET2 TOP STRIP X=759.2 TO 873.2 SL3 *	634	AA
S	SURF=1064,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	635	AA
	TCSN=5J	636	AA
	P1=759.2,72.8,414.	637	AA
	P2=873.2,72.8,414.	638	AA
	P3=873.2,78.3,414.	639	AA
	PROP=0.,0.	640	AA
	COM= * +Y PALLET2 TOP STRIP ,X= 759.2 TO 873.2SL3 *	641	AA
S	SURF=1065,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	642	AA
	TCSN=5J	643	AA
	P1=759.2,-72.8,414.	644	AA
	P2=873.2,-72.8,414.	645	AA
	P3=873.2,-58.5,371.	646	AA
	PROP=0.,J.	647	AA
	COM = * -Y INSIDE TOP PANNEL2,X=759.2 TO 873.2 *	648	AA
S	SURF=1066,TYPE = RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	649	AA
	TCSN=5J	650	AA
	P1=873.2,58.5,371.	651	AA
	P2=873.2,72.8,414.	652	AA
	P3=759.2,72.8,414.	653	AA
	PROP=0.,0.	654	AA
	COM= * +Y INSIDE TOP PANNEL2,X=759.2 TO 873.2 SL3 *	655	AA
S	SURF=1067, TYPE= RECT, ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	656	AA
	TCSN=5J	657	AA
	P1=759.2,-58.5,371.	658	AA
	P2=873.2,-58.5,371.0	659	AA
	P3=873.2,-34.5,344.3	660	AA
	PROP=0.,0.	661	AA
	COM=* -Y INSIDE BOTTOM PANNEL2, X=759.2 TO 873.2 SL3 *	662	AA
S	SURF=1068,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	663	AA
	TCSN=5J	664	AA
	P1=759.2,34.5,344.3	665	AA
	P2=873.2,34.5,344.3	666	AA
	P3=873.2,58.5,371.	667	AA
	PROP=0.,0.	668	AA
	COM=* +Y INSIDE BOTTOM PANNEL2,X 759.2 TO 873.2 SL3*	669	AA
S	SURF=1069 , TYPE= RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	670	AA
	TCSN=5J	671	AA
	P1=759.2,-34.5,344.3	672	AA
	P2=873.2,-34.5,344.3	673	AA
	P3=873.2,34.5,344.3	674	AA
	PROP= 0.,0.	675	AA
	COM = * PALLET2 BOTTOM,X= 759.2 TO 873.2 SL3 *	676	AA
S	SURF=1070,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	677	AA
	TCSN=5J	678	AA
	P1=873.2,0.,400.	679	AA
	P2=873.2,78.3,400.	680	AA
	P3=873.2,-78.8,400.	681	AA
	P4=987.2,-78.8,400.	682	AA
	PROP=0.,0.	683	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL.	= 12345678	1	2345678	2	2345678	3	2345678	4	2345678	5	2345678	6	2345678	7	2345678	8	EDIT NO.	OLD EDIT NO.	LABEL	
S	COM = * PALLET3 BOTTOM CYLINDER X= 873.2 TO 987.2 SL3 *																		684	AA
	SURF=1071,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH																		685	AA
	TCSN=50																		686	AA
	P1=873.2,-78.8,400.																		687	AA
	P2=987.2,-78.8,400.																		688	AA
	P3=987.2,-78.8,414.																		689	AA
	PROP=0.,0.																		690	AA
	COM= * -Y PALLET1 OUTSIDE STRIP SL2 *																		691	AA
S	SURF=1072,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH																		692	AA
	TCSN=50																		693	AA
	P1=987.2,78.8,414.																		694	AA
	P2=987.2,78.8,400.																		695	AA
	P3=873.2,78.8,400.																		696	AA
	PROP=0.,0.																		697	AA
	COM= * +Y PALLET1 OUTSIDE STRIP SL2 *																		698	AA
S	SURF=1073,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH																		699	AA
	TCSN=50																		700	AA
	P1=873.2,-78.8,414.																		701	AA
	P2=987.2,-78.8,414.																		702	AA
	P3=987.2,-72.8,414.																		703	AA
	PROP=0.,0.																		704	AA
	COM= * -Y PALLET3 TOP STRIP X=873.2 TO 987.2 SL2 *																		705	AA
S	SURF=1074,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH																		706	AA
	TCSN=50																		707	AA
	P1=873.2,72.8,414.																		708	AA
	P2=987.2,72.8,414.																		709	AA
	P3=987.2,78.8,414.																		710	AA
	PROP=0.,0.																		711	AA
	COM= * +Y PALLET3 TOP STRIP ,X= 873.2 TO 987.2 SL3 *																		712	AA
S	SURF=1075,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH																		713	AA
	TCSN=50																		714	AA
	P1=873.2,-72.8,414.																		715	AA
	P2=987.2,-72.8,414.																		716	AA
	P3=987.2,-58.5,371.																		717	AA
	PROP=0.,0.																		718	AA
	COM = * -Y INSIDE TOP PANNEL3 ,X=873.2 TO 987.2SL3 *																		719	AA
S	SURF=1076,TYPE = RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH																		720	AA
	TCSN=50																		721	AA
	P1=987.2,58.5,371.																		722	AA
	P2=987.2,72.8,414.																		723	AA
	P3=873.2,72.8,414.																		724	AA
	PROP=0.,0.																		725	AA
	COM= * +Y INSIDE TOP PANNEL3,X=873.2 TO 987.2 SL3 *																		726	AA
S	SURF=1077, TYPE= RECT, ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH																		727	AA
	TCSN=50																		728	AA
	P1=873.2,-58.5,371.																		729	AA
	P2=987.2,-58.5,371.0																		730	AA
	P3=987.2,-34.5,344.3																		731	AA
	PROP=0.,0.																		732	AA
	COM= * -Y INSIDE BOTTOM PANNEL3, X=873.2 TO 987.2SL3 *																		733	AA
S	SURF=1078,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH																		734	AA

MODEL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	TCSN=50	735	AA
	P1=873.2,34.5,344.3	736	AA
	P2=937.2,34.5,344.3	737	AA
	P3=987.2,58.5,371.	738	AA
	POOP=0.,0.	739	AA
	COM=* +Y INSIDE BOTTOM PANNEL3,X 873.2 TO 987.2 SL3 *	740	AA
S	SURF=1079 , TYPE= RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	741	AA
	TCSN=50	742	AA
	P1=873.2,-34.5,344.3	743	AA
	P2=987.2,-34.5,344.3	744	AA
	P3=987.2,34.5,344.3	745	AA
	POOP= J.,0.	746	AA
	COM=*...BOTTOM PANNEL3 ,X=873.2 TO 937.2, SL3*	747	AA
S	SURF=1080,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	748	AA
	TCSN=50	749	AA
	P1=987.2,0.,400.	750	AA
	P2=987.2,78.8,400.	751	AA
	P3=987.2,-78.8,400.	752	AA
	P4=1101.2,-78.8,400.	753	AA
	POOP=0.,0.	754	AA
	COM = * PALLET4 BOTTOM CYLINDER X= 987.2 TO 1101.2 SL3*	755	AA
S	SURF=1081,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	756	AA
	TCSN=50	757	AA
	P1=987.2,-78.8,400.	758	AA
	P2=1101.2,-78.8,400.	759	AA
	P3=1101.2,-78.8,414.	760	AA
	POOP= 0.,J.	761	AA
	COM= * -Y PALLET4 OUTSIDE STRIP SL3 *	762	AA
S	SURF=1082,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	763	AA
	TCSN=50	764	AA
	P1=1101.2,78.8,414.	765	AA
	P2=1101.2,78.8,400.	766	AA
	P3=987.2,78.8,400.	767	AA
	POOP= 0.,0.	768	AA
	COM=* +Y PALLET4 OUTSIDE STRIP SL3 *	769	AA
S	SURF=1083,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	770	AA
	TCSN=50	771	AA
	P1=987.2,-78.8,414.	772	AA
	P2=1101.2,-78.8,414.	773	AA
	P3=1101.2,-72.8,414.	774	AA
	POOP=0.,0.	775	AA
	COM=*-Y PALLET4 TOP STRIP X=987.2 TO 1101.2 *	776	AA
S	SURF=1084,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	777	AA
	TCSN=50	778	AA
	P1=987.2,72.8,414.	779	AA
	P2=1101.2,72.8, 414.	780	AA
	P3=1101.2,78.8,414.	781	AA
	POOP=J.,J.	782	AA
	COM= * +Y PALLET4 TOP STRIP ,X= 987.2 TO 1101.2SL3 *	783	AA
S	SURF=1085,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	784	AA
	TCSN=50	785	AA

MODEL = CONTAM
 SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	P1=987.2,-72.8,414.	786	AA
	P2=1101.2,-72.8,414.	787	AA
	P3=1101.2,-58.5,371.	788	AA
	PROP=0.,0.	789	AA
	COM = * -Y INSIDE TOP PANNEL4,X=987.2 TO 1101.2 *	790	AA
S	SURF=1086,TYPE = RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	791	AA
	TCSN=50	792	AA
	P1=1101.2,58.5,371.	793	AA
	P2=1101.2,72.8,414.	794	AA
	P3=987.2,72.8,414.	795	AA
	PROP=0.,0.	796	AA
	COM= * +Y INSIDE TOP PANNEL4,X=987.2 TO 1101.2 SL2 *	797	AA
S	SURF=1087,TYPE= RECT, ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	798	AA
	TCSN=50	799	AA
	P1=987.2,-58.5,371.	800	AA
	P2=1101.2,-58.5,371.0	801	AA
	P3=1101.2,-34.5,344.3	802	AA
	PROP=0.,0.	803	AA
	COM=* -Y INSIDE BOTTOM PANNEL4, X=987.2 TO 1101.2 SL3 *	804	AA
S	SURF=1088,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	805	AA
	TCSN=50	806	AA
	P1=987.2,34.5,344.3	807	AA
	P2=1101.2,34.5,344.3	808	AA
	P3=1101.2,58.5,371.	809	AA
	PROP=0.,0.	810	AA
	COM=* +Y INSIDE BOTTOM PANNEL4,X 987.2 TO 1101.2 SL3*	811	AA
S	SURF=1089,TYPE= RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	812	AA
	TCSN=50	813	AA
	P1=987.2,-34.5,344.3	814	AA
	P2=1101.2,-34.5,344.3	815	AA
	P3=1101.2,34.5,344.3	816	AA
	PROP= 0.,0.	817	AA
	COM = * PALLET4 BOTTOM,X= 987.2 TO 1101.2 SL3 *	818	AA
S	SURF=1090,TYPE=CYL,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	819	AA
	TCSN=50	820	AA
	P1=1101.2,0.,400.	821	AA
	P2=1101.2,78.8,400.	822	AA
	P3=1101.2,-78.8,400.	823	AA
	P4=1215.2,-78.8,400.	824	AA
	PROP=0.,0.	825	AA
	COM = * PALLET5 BOTTOM CYLINDER X= 1101.2 TO 1215.2 *	826	AA
S	SURF=1091,TYPE=RECT,ACTIVE=OUTSIDE,SHADE=BOTH,BSHADE=BOTH	827	AA
	TCSN=50	828	AA
	P1=1101.2,-78.8,400.	829	AA
	P2=1215.2,-78.8,400.	830	AA
	P3=1215.2,-78.8,414.	831	AA
	PROP= 0.,0.	832	AA
	COM= * -Y PALLET5 OUTSIDE STRIP *	833	AA
S	SURF=1092,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	834	AA
	TCSN=50	835	AA
	P1=1215.2,78.8,414.	836	AA

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

	P2=1215.2,78.8,400.	837	AA
	P3=1101.2,78.8,400.	838	AA
	PROP=0.,0.	839	AA
	COM=* +Y PALLETS OUTSIDE STRIP *	840	AA
S	SURF=1093,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	841	AA
	TCSN=50	842	AA
	P1=1101.2,-78.8,414.	843	AA
	P2=1215.2,-78.8,414.	844	AA
	P3=1215.2,-72.8,414.	845	AA
	PROP=0.,0.	846	AA
	COM=* -Y PALLETS TOP STRIP X=1101.2 TO 1215.2 *	847	AA
S	SURF=1094,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	848	AA
	TCSN=50	849	AA
	P1=1101.2,72.8,414.	850	AA
	P2=1215.2,72.8,414.	851	AA
	P3=1215.2,78.8,414.	852	AA
	PROP=0.,0.	853	AA
	COM=* +Y PALLETS TOP STRIP ,X= 1101.2 TO 1215.2 *	854	AA
S	SURF=1095,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	855	AA
	TCSN=50	856	AA
	P1=1101.2,-72.8,414.	857	AA
	P2=1215.2,-72.8,414.	858	AA
	P3=1215.2,-53.5,371.	859	AA
	PROP=0.,0.	860	AA
	COM=* -Y INSIDE TOP PANNEL5,X=1101.2 TO 1215.2 *	861	AA
S	SURF=1096,TYPE = RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	862	AA
	TCSN=50	863	AA
	P1=1215.2,58.5,371.	864	AA
	P2=1215.2,72.8,414.	865	AA
	P3=1101.2,72.8,414.	866	AA
	PROP=0.,0.	867	AA
	COM=* +Y INSIDE TOP PANNEL5,X=1101.2 TO 1215.2 *	868	AA
S	SURF=1097,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	869	AA
	TCSN=50	870	AA
	P1=1101.2,-53.5,371.	871	AA
	P2=1215.2,-53.5,371.0	872	AA
	P3=1215.2,-74.5,344.3	873	AA
	PROP=0.,0.	874	AA
	COM=* -Y INSIDE BOTTOM PANNEL5, X=1101.2 TO 1215.2 *	875	AA
S	SURF=1098,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	876	AA
	TCSN=50	877	AA
	P1=1101.2,34.5,344.3	878	AA
	P2=1215.2,34.5,344.3	879	AA
	P3=1215.2,58.5,371.	880	AA
	PROP=0.,0.	881	AA
	COM=* +Y INSIDE BOTTOM PANNEL5,X 1101.2 TO 1215.2 *	882	AA
S	SURF=1099,TYPE=RECT,ACTIVE=TOP,SHADE=BOTH,BSHADE=BOTH	883	AA
	TCSN=50	884	AA
	P1=1101.2,-34.5,344.3	885	AA
	P2=1215.2,-34.5,344.3	886	AA
	P3=1215.2,74.5,344.3	887	AA

MOFL = CONTAM
SURFACE DATA INPUT BLOCK

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

INPUT CARD COL. = 12345678 1 2345678 2 2345678 3 2345678 4 2345678 5 2345678 6 2345678 7 2345678 8 EDIT NO. OLD EDIT NO. LABEL

PROP= 0.,0.

COM=*PALLET 5 BOTTOM,X=1011.2 TO 1215.2 SL2*

888
889

AA
AA

SPACELAB-3 VIEWFACTOR DATA MATRIX

The following pages contain the viewfactor data computer printouts for the Spacelab-3/Orbiter configuration.

MODEL = MONTAY STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

145	FF SUM = 0.	ROW CP TIME =	2.809	+ TRAP	+Y REAR SIDE TAPER
146	FF SUM = 0.	ROW CP TIME =	2.790	- TRAP	- Y. REAR SIDE TAPER...
707	FF SUM = 0.	ROW CP TIME =	6.081	- DISC	.....JULY 8 EVAP..3 IN. RAD.
708	FF SUM = 0.	ROW CP TIME =	2.405	+ DISC	.....JULY 8 EVAP..3 IN. RAD.
147	FF SUM = 0.	ROW CP TIME =	14.369	+ PARAB	TOP ENGIN
148	FF SUM = 0.	ROW CP TIME =	6.310	+ PARAB	+ Y ENGIN
149	FF SUM = 0.	ROW CP TIME =	6.286	+ PARAB	-Y ENGIN...

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC) :
20	1052	CAL.	.000041	.000095	.000041	.000041	1.000000	1.000000	.898
20	1053	CAL.	.000062	.000335	.000062	.000062	1.000000	1.000000	2.643
20	1054	CAL.	.000072	.000393	.000072	.000072	1.000000	1.000000	4.127
20	1055	CAL.	.001312	.000942	.001312	.001312	1.000000	1.000000	4.897
20	1056	CAL.	.000078	.000054	.000078	.000078	1.000000	1.000000	5.280
20	1057	CAL.	.001069	.000969	.001069	.001069	1.000000	1.000000	6.067
20	1059	CAL.	.000275	.000249	.000275	.000301	.913009	.913009	6.748
20	1059	CAL.	.001554	.000733	.001554	.001554	1.000000	1.000000	7.336
20	1062	CAL.	.000080	.000195	.000080	.000080	1.000000	1.000000	8.162
20	1063	CAL.	.000110	.000599	.000110	.000110	1.000000	1.000000	9.850
20	1064	CAL.	.000141	.000764	.000141	.000141	1.000000	1.000000	11.313
20	1065	CAL.	.002336	.001678	.002336	.002336	1.000000	1.000000	12.074
20	1066	CAL.	.000164	.000118	.000164	.000164	1.000000	1.000000	12.549
20	1067	CAL.	.001397	.001720	.001397	.001397	1.000000	1.000000	13.320
20	1068	CAL.	.000511	.000463	.000511	.000560	.911353	.911353	14.013
20	1069	CAL.	.002312	.001326	.002312	.002312	1.000000	1.000000	14.603
20	1072	CAL.	.000187	.000435	.000187	.000187	1.000000	1.000000	15.355

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
20	1073	CAL.	.000217	.001177	.000217	.000217	1.000000	1.000000	16.856
20	1074	CAL.	.000329	.001786	.000329	.000329	1.000000	1.000000	18.179
20	1075	CAL.	.004577	.003288	.004577	.004577	1.000000	1.000000	18.848
20	1076	CAL.	.000369	.000265	.000369	.000369	1.000000	1.000000	19.279
20	1077	CAL.	.003688	.003344	.003688	.003688	1.000000	1.000000	19.962
20	1078	CAL.	.001086	.000985	.001086	.001196	.907878	.907878	20.579
20	1079	CAL.	.005682	.002681	.005682	.005682	1.000000	1.000000	21.120
20	1082	CAL.	.000511	.001421	.000611	.000611	1.000000	1.000000	21.009
20	1033	CAL.	.000457	.002479	.000457	.000457	1.000000	1.000000	23.112
20	1084	CAL.	.001058	.003742	.001058	.001058	1.000000	1.000000	24.267
20	1085	CAL.	.009572	.005876	.009572	.009572	1.000000	1.000000	24.862
20	1085	CAL.	.001160	.000762	.001160	.001160	1.000000	1.000000	25.248
20	1097	CAL.	.007595	.006987	.007595	.007595	1.000000	1.000000	25.867
20	1039	CAL.	.002719	.002466	.002719	.003025	.898935	.898935	26.438
20	1089	CAL.	.012723	.005002	.012723	.012723	1.000000	1.000000	26.909
20	1092	CAL.	.003709	.003625	.003709	.003709	1.000000	1.000000	27.536
20	1093	CAL.	.000747	.004052	.000747	.000747	1.000000	1.000000	28.635
20	1094	CAL.	.005846	.031716	.005846	.005846	1.000000	1.000000	29.639
20	1095	CAL.	.015514	.011144	.015514	.015514	1.000000	1.000000	30.128
20	1095	CAL.	.003710	.002665	.003710	.003710	1.000000	1.000000	30.476
20	1097	CAL.	.011959	.010843	.011959	.011959	1.000000	1.000000	30.993
20	1098	CAL.	.006441	.005940	.006441	.007381	.872652	.872652	31.474
20	1099	CAL.	.023784	.011221	.023784	.023784	1.000000	1.000000	31.874
20	FF SUM =	.1362	ROW CP TIME =	31.880	+ DISC	...	-Y OWS SEALER ...		

21	1051	CAL.	.000041	.000095	.000041	.000041	1.000000	1.000000	.846
21	1053	CAL.	.000072	.000393	.000072	.000072	1.000000	1.000000	2.380
21	1054	CAL.	.000062	.000335	.000062	.000062	1.000000	1.000000	4.128
21	1055	CAL.	.000086	.000062	.000086	.000086	1.000000	1.000000	4.597
21	1055	CAL.	.001297	.000933	.001297	.001297	1.000000	1.000000	5.369
21	1057	CAL.	.000275	.000249	.000275	.000301	.913009	.913009	6.053
21	1058	CAL.	.001069	.000969	.001069	.001069	1.000000	1.000000	6.847
21	1059	CAL.	.001554	.000733	.001554	.001554	1.000000	1.000000	7.438
21	1061	CAL.	.000080	.000185	.000080	.000080	1.000000	1.000000	8.225
21	1063	CAL.	.000141	.000764	.000141	.000141	1.000000	1.000000	9.732
21	1064	CAL.	.000110	.000599	.000110	.000110	1.000000	1.000000	11.419
21	1065	CAL.	.000164	.000118	.000164	.000164	1.000000	1.000000	11.892
21	1066	CAL.	.002336	.001678	.002336	.002336	1.000000	1.000000	12.656
21	1067	CAL.	.000511	.000463	.000511	.000560	.911353	.911353	13.352
21	1068	CAL.	.001397	.001720	.001397	.001397	1.000000	1.000000	14.129
21	1069	CAL.	.002812	.001326	.002812	.002312	1.000000	1.000000	14.720
21	1071	CAL.	.000187	.000475	.000187	.000187	1.000000	1.000000	15.441
21	1073	CAL.	.000329	.001746	.000329	.000329	1.000000	1.000000	16.804
21	1074	CAL.	.000217	.001177	.000217	.000217	1.000000	1.000000	18.302

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAO	FE(J,I) W/SHAO	FA(I,J) W/SHAO	F (I,J) W/SHAO	SHAQ. E FACTOR	SHAQ. A FACTOR	CP TIME (SEC)
21	1075	CAL.	.000369	.000265	.000369	.000369	1.000000	1.000000	18.726
21	1075	CAL.	.004577	.003289	.004577	.004577	1.000000	1.000000	19.419
21	1077	CAL.	.001086	.000985	.001086	.001196	.907878	.907878	20.041
21	1078	CAL.	.003698	.003344	.003688	.003588	1.000000	1.000000	20.726
21	1079	CAL.	.005682	.002691	.005632	.005642	1.000000	1.000000	21.264
21	1081	CAL.	.000611	.001421	.000611	.000611	1.000000	1.000000	21.924
21	1093	CAL.	.001058	.003742	.001058	.001058	1.000000	1.000000	23.141
21	1034	CAL.	.000457	.002479	.000457	.000457	1.000000	1.000000	24.424
21	1085	CAL.	.001060	.000762	.001060	.001060	1.000000	1.000000	24.812
21	1086	CAL.	.009572	.006876	.009572	.009572	1.000000	1.000000	25.396
21	1097	CAL.	.002719	.002466	.002719	.003025	.898935	.898935	25.975
21	1089	CAL.	.007595	.005887	.007595	.007595	1.000000	1.000000	26.587
21	1089	CAL.	.012723	.005002	.012723	.012723	1.000000	1.000000	27.057
21	1091	CAL.	.003709	.008625	.003709	.003709	1.000000	1.000000	27.636
21	1093	CAL.	.005346	.031715	.005846	.005846	1.000000	1.000000	28.693
21	1094	CAL.	.000747	.004952	.000747	.000747	1.000000	1.000000	29.779
21	1095	CAL.	.003710	.002665	.003710	.003710	1.000000	1.000000	30.124
21	1096	CAL.	.015514	.011144	.015514	.015514	1.000000	1.000000	30.613
21	1097	CAL.	.006441	.005840	.006441	.007381	.872652	.872652	31.093
21	1098	CAL.	.011959	.010843	.011959	.011959	1.000000	1.000000	31.600
21	1099	CAL.	.023784	.011221	.023784	.023784	1.000000	1.000000	31.997
21	FF SUM =	.1361	ROW CP TIME =	32.004	+ DISC	...	Y OMS SEALER ...		
222	FF SUM =	0.	ROW CP TIME =	1.837	- RECT		BACK RECT 7.35DEG		
23	FF SUM =	0.	ROW CP TIME =	2.124	+ DISC		REAR END HALF DISK		
407	FF SUM =	0.	ROW CP TIME =	2.421	+ DISC		BACK SIDE EVAPORAT, UPDATED		
15	FF SUM =	0.	ROW CP TIME =	2.408	+ DISC		REAR END EVAPORATOR		
10	FF SUM =	0.	ROW CP TIME =	19.572	- TRAP		....LEFT FRONT WING A ...		

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
11		FF SUM = 0.					+ TRAP		.....LEFT MIDDLE WING BACK.B
141		FF SUM = 0.					+ RECT		BS INNER WING
12		FF SUM = 0.					+ RECT		..... LEFT BACK RECT. WING C
142		FF SUM = 0.					+ RECT		INNER WING C
13		FF SUM = 0.					+ TRAP		..... LEFT WING TAIL EDGE
1		FF SUM = 0.					+ TRAP		...FRONT WING TRIANGLE RT.A.58
2		FF SUM = 0.					- TRAP		.....MIDDLE WING TRAP, RT B ..
143		FF SUM = 0.					- RECT		B +Y RECTANGLE WING
3		FF SUM = 0.					- RECT		.... BACK WING RECT. RTC .129
144		FF SUM = 0.					- RECT		INNER WING C RECT
4		FF SUM = 0.					- TRAP		...HING TAIL FLAP RT 1453,1507

150	1750	CAL.	.000032	.000032	.000032	.000032	1.000000	1.000000	.412
150	1752	CAL.	.000003	.000046	.000003	.000003	1.000000	1.000000	.936
150	1760	CAL.	.000100	.001099	.000100	.000100	1.000000	1.000000	2.789
150	1762	CAL.	.000004	.000147	.000004	.000004	1.000000	1.000000	3.311
150	1770	CAL.	.000000	.000095	.000000	.000000	1.000000	1.000000	5.161

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)	
150	1072	CAL.	.000046	.000000	.000046	.000046	1.000000	1.000000	5.636	
150	1080	CAL.	.044185	.043898	.044185	.044185	1.000000	1.000000	17.204	*
150	1082	CAL.	.001319	.031953	.001319	.001319	1.000000	1.000000	19.038	*
150	1090	CAL.	.430157	.427370	.430157	.430157	1.000000	1.000000	72.227	*
150	1092	CAL.	.016158	.283856	.016158	.016158	1.000000	1.000000	76.858	
150	1095	CAL.	.005355	.029064	.005355	.036435	.146972	.146972	82.231	
150	1097	CAL.	.002933	.020097	.002933	.028519	.110619	.110619	85.321	
150	FF SUM =	.5013	ROW CP TIME =	65.693	- CYLN	BAY AREA CYLINDER				
151	1050	CAL.	.000217	.000215	.000217	.000217	1.000000	1.000000	.369	
151	1052	CAL.	.000019	.000330	.000019	.000019	1.000000	1.000000	.815	
151	1060	CAL.	.001746	.001735	.001746	.001746	1.000000	1.000000	2.283	
151	1062	CAL.	.000180	.003158	.000180	.000180	1.000000	1.000000	2.729	
151	1070	CAL.	.264467	.262753	.264467	.264467	1.000000	1.000000	30.372	*
151	1072	CAL.	.010037	.176340	.010037	.010037	1.000000	1.000000	36.433	*
151	1080	CAL.	.406454	.403821	.406454	.406454	1.000000	1.000000	94.987	*
151	1082	CAL.	.015063	.264986	.015083	.015083	1.000000	1.000000	99.747	
151	1090	CAL.	.018229	.018111	.018229	.018229	1.000000	1.000000	113.386	*
151	1092	CAL.	.000955	.016783	.000955	.000955	1.000000	1.000000	114.501	*
151	FF SUM =	.7174	ROW CP TIME =	117.554	- CYLN	BAY AREA CYLINDER				
152	1050	CAL.	.070508	.070051	.070508	.070508	1.000000	1.000000	13.483	*
152	1052	CAL.	.002707	.047565	.002707	.002707	1.000000	1.000000	16.081	*
152	1060	CAL.	.439739	.436890	.439739	.439739	1.000000	1.000000	63.244	*
152	1062	CAL.	.016381	.287782	.016381	.016381	1.000000	1.000000	67.284	
152	1070	CAL.	.185869	.184665	.185869	.185869	1.000000	1.000000	94.214	*
152	1072	CAL.	.007101	.124743	.007101	.007101	1.000000	1.000000	99.296	*
152	1080	CAL.	.001095	.001088	.001095	.001095	1.000000	1.000000	103.144	
152	1082	CAL.	.000107	.001887	.000107	.000107	1.000000	1.000000	103.594	
152	1090	CAL.	.000164	.000163	.000164	.000164	1.000000	1.000000	105.074	
152	1092	CAL.	.000314	.000247	.000014	.000014	1.000000	1.000000	105.552	
152	FF SUM =	.7237	ROW CP TIME =	106.784	- CYLN	BAY AREA CYLINDER				
153	1050	CAL.	.390456	.387926	.390456	.390456	1.000000	1.000000	19.302	*
153	1052	CAL.	.014222	.249860	.014222	.014222	1.000000	1.000000	25.749	*
153	1055	CAL.	.007301	.039625	.007301	.034370	.212659	.212659	28.647	
153	1057	CAL.	.003183	.021809	.003183	.024728	.128738	.128738	30.121	
153	1059	CAL.	.000722	.002574	.000722	.013087	.055186	.055186	30.396	
153	1060	CAL.	.011641	.011566	.011641	.011641	1.000000	1.000000	36.528	*
153	1062	CAL.	.000663	.011647	.000663	.000663	1.000000	1.000000	37.562	*

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECIEVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) NO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
153	1070	CAL.	.000354	.000352	.000354	.000354	1.000000	1.000000	39.958
153	1072	CAL.	.000032	.000555	.000032	.000032	1.000000	1.000000	40.362
153	1080	CAL.	.000079	.000079	.000079	.000079	1.000000	1.000000	41.642
153	1082	CAL.	.000007	.000116	.000007	.000007	1.000000	1.000000	42.104
153	1090	CAL.	.000027	.000027	.000027	.000027	1.000000	1.000000	43.479
153	1092	CAL.	.000002	.000039	.000002	.000002	1.000000	1.000000	43.971
153	FF SUM =	.4287	ROW CP TIME =		45.078	- CYLN		BAY AREA CYLINDER	
154	1050	CAL.	.000032	.000032	.000032	.000032	1.000000	1.000000	.417
154	1051	CAL.	.000003	.000046	.000003	.000003	1.000000	1.000000	.905
154	1060	CAL.	.000100	.000099	.000100	.000100	1.000000	1.000000	2.816
154	1061	CAL.	.000008	.000147	.000008	.000008	1.000000	1.000000	3.309
154	1070	CAL.	.000498	.000495	.000498	.000498	1.000000	1.000000	5.211
154	1071	CAL.	.000046	.000030	.000046	.000046	1.000000	1.000000	5.646
154	1080	CAL.	.044185	.047898	.044185	.044185	1.000000	1.000000	17.337 *
154	1081	CAL.	.001819	.031953	.001819	.001819	1.000000	1.000000	19.148 *
154	1090	CAL.	.430157	.427370	.430157	.430157	1.000000	1.000000	71.981 *
154	1091	CAL.	.016158	.287866	.016158	.016158	1.000000	1.000000	76.673
154	1096	CAL.	.005355	.029064	.005355	.036435	.146972	.146972	82.113
154	1098	CAL.	.002933	.020097	.002933	.026519	.110619	.110619	85.179
154	FF SUM =	.5013	ROW CP TIME =		85.500	- CYLN		BAY AREA CYLINDER	
155	1050	CAL.	.000217	.000215	.000217	.000217	1.000000	1.000000	.373
155	1051	CAL.	.000019	.000030	.000019	.000019	1.000000	1.000000	.794
155	1060	CAL.	.001746	.001735	.001746	.001746	1.000000	1.000000	2.314
155	1061	CAL.	.000180	.003163	.000180	.000180	1.000000	1.000000	2.724
155	1070	CAL.	.264467	.262753	.264467	.264467	1.000000	1.000000	30.433 *
155	1071	CAL.	.010037	.176340	.010037	.010037	1.000000	1.000000	36.483 *
155	1080	CAL.	.406454	.403821	.406454	.406454	1.000000	1.000000	95.828 *
155	1081	CAL.	.015083	.264986	.015083	.015083	1.000000	1.000000	100.619
155	1090	CAL.	.018229	.018111	.018229	.018229	1.000000	1.000000	114.260 *
155	1091	CAL.	.000955	.015783	.000955	.000955	1.000000	1.000000	115.326 *
155	FF SUM =	.7174	ROW CP TIME =		118.426	- CYLN		BAY AREA CYLINDER	
156	1050	CAL.	.070508	.070051	.070508	.070508	1.000000	1.000000	13.492 *
156	1051	CAL.	.002707	.047565	.002707	.002707	1.000000	1.000000	16.032 *
156	1060	CAL.	.439739	.436890	.439739	.439739	1.000000	1.000000	63.143 *
156	1061	CAL.	.016381	.287782	.016381	.016381	1.000000	1.000000	67.069 *
156	1070	CAL.	.185069	.184665	.185069	.185069	1.000000	1.000000	93.831 *
156	1071	CAL.	.007101	.124743	.007101	.007101	1.000000	1.000000	98.749 *

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC) :
156	1080	CAL.	.001095	.001088	.001095	.001095	1.000000	1.000000	102.629
156	1081	CAL.	.000107	.001887	.000107	.000107	1.000000	1.000000	103.055
156	1090	CAL.	.000164	.000163	.000164	.000164	1.000000	1.000000	104.564
156	1091	CAL.	.000014	.000247	.000014	.000014	1.000000	1.000000	104.998
156	FF SUM =	.7237	ROW CP TIME =	106.281	- CYLN	BAY AREA CYLINDER			
157	1050	CAL.	.390456	.387926	.390456	.390456	1.000000	1.000000	19.571 *
157	1051	CAL.	.014222	.249860	.014222	.014222	1.000000	1.000000	25.926 *
157	1056	CAL.	.007335	.039892	.007335	.034492	.212643	.212643	29.088
157	1058	CAL.	.003183	.021309	.003183	.024728	.128738	.128738	30.572
157	1059	CAL.	.000722	.002574	.000722	.013087	.055186	.055186	30.795
157	1060	CAL.	.011641	.011566	.011641	.011641	1.000000	1.000000	36.932 *
157	1061	CAL.	.000663	.011647	.000663	.000663	1.000000	1.000000	37.917 *
157	1070	CAL.	.000354	.000357	.000354	.000354	1.000000	1.000000	40.368
157	1071	CAL.	.000032	.000555	.000032	.000032	1.000000	1.000000	40.732
157	1080	CAL.	.000079	.000079	.000079	.000079	1.000000	1.000000	42.041
157	1081	CAL.	.000007	.000116	.000007	.000007	1.000000	1.000000	42.461
157	1090	CAL.	.000027	.000027	.000027	.000027	1.000000	1.000000	43.873
157	1091	CAL.	.000002	.000039	.000002	.000002	1.000000	1.000000	44.321
157	FF SUM =	.4287	ROW CP TIME =	45.471	- CYLN	BAY AREA CYLINDER			
140	1053	CAL.	.000012	.0000570	.000012	.000012	1.000000	1.000000	.702
140	1054	CAL.	.000011	.000544	.000011	.000011	1.000000	1.000000	1.157
140	1055	CAL.	.000557	.003526	.000557	.000557	1.000000	1.000000	1.647
140	1056	CAL.	.000544	.003450	.000544	.000544	1.000000	1.000000	2.142
140	1057	CAL.	.000430	.003437	.000430	.000430	1.000000	1.000000	2.654
140	1058	CAL.	.000430	.003438	.000430	.000430	1.000000	1.000000	3.168
140	1059	CAL.	.000734	.003052	.000734	.000734	1.000000	1.000000	3.568
140	1063	CAL.	.000023	.001116	.000023	.000023	1.000000	1.000000	4.224
140	1064	CAL.	.000022	.001034	.000022	.000022	1.000000	1.000000	4.670
140	1065	CAL.	.001067	.006748	.001067	.001067	1.000000	1.000000	5.157
140	1066	CAL.	.001065	.006741	.001065	.001065	1.000000	1.000000	5.654
140	1067	CAL.	.000824	.006583	.000824	.000824	1.000000	1.000000	6.162
140	1068	CAL.	.000825	.006587	.000825	.000825	1.000000	1.000000	6.671
140	1069	CAL.	.001409	.005355	.001409	.001409	1.000000	1.000000	7.072
140	1073	CAL.	.000055	.002647	.000055	.000055	1.000000	1.000000	7.683
140	1074	CAL.	.000048	.002311	.000048	.000048	1.000000	1.000000	8.088
140	1075	CAL.	.002416	.015289	.002416	.002416	1.000000	1.000000	8.529
140	1076	CAL.	.002408	.015238	.002408	.002408	1.000000	1.000000	8.973
140	1077	CAL.	.001369	.014927	.001369	.001369	1.000000	1.000000	9.437
140	1078	CAL.	.001873	.014960	.001873	.001873	1.000000	1.000000	9.898
140	1079	CAL.	.003207	.013327	.003207	.003207	1.000000	1.000000	10.271

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC) :
140	1083	CAL.	.000185	.000852	.000185	.000185	1.000000	1.000000	10.840
140	1084	CAL.	.000137	.000527	.000137	.000137	1.000000	1.000000	11.230
140	1085	CAL.	.007173	.045384	.007173	.007173	1.000000	1.000000	11.639
140	1086	CAL.	.007065	.044699	.007065	.007065	1.000000	1.000000	12.047
140	1087	CAL.	.005550	.044321	.005550	.005550	1.000000	1.000000	12.546
140	1088	CAL.	.005610	.044801	.005610	.005610	1.000000	1.000000	13.045
140	1089	CAL.	.009626	.039939	.009626	.009626	1.000000	1.000000	13.740
140	1097	CAL.	.001177	.056251	.001177	.001177	1.000000	1.000000	15.139 *
140	1094	CAL.	.001174	.056120	.001174	.001174	1.000000	1.000000	16.243 *
140	1095	CAL.	.024380	.154256	.024380	.024380	1.000000	1.000000	18.980
140	1096	CAL.	.023765	.150359	.023765	.023765	.993048	.993048	21.704
140	1097	CAL.	.018409	.147659	.018409	.019727	.937253	.937253	24.773
140	1093	CAL.	.018214	.145456	.018214	.018434	.988027	.988027	27.623
140	1099	CAL.	.035641	.148095	.035641	.035945	.991541	.991541	31.308

140 FF SUM = .1780 ROW CP TIME = 31.313 + DISC END BAY AREA DISK

135	1053	CAL.	.000809	.038656	.000809	.000809	1.000000	1.000000	.495
135	1054	CAL.	.000366	.017499	.000366	.000366	1.000000	1.000000	.751
135	1055	CAL.	.018767	.119714	.018763	.018763	1.000000	1.000000	1.905
135	1056	CAL.	.018825	.119350	.018825	.018825	1.000000	1.000000	3.235
135	1057	CAL.	.015342	.122521	.015342	.015342	1.000000	1.000000	4.629
135	1058	CAL.	.015342	.122521	.015342	.015342	1.000000	1.000000	5.993
135	1059	CAL.	.024868	.103334	.024868	.024327	.997646	.997646	7.554
135	1063	CAL.	.000144	.005972	.000144	.000144	1.000000	1.000000	8.033
135	1064	CAL.	.000111	.005314	.000111	.000111	1.000000	1.000000	8.319
135	1065	CAL.	.005750	.036378	.005750	.005750	1.000000	1.000000	8.635
135	1066	CAL.	.005686	.035973	.005686	.005686	1.000000	1.000000	8.953
135	1067	CAL.	.004479	.035449	.004439	.004439	1.000000	1.000000	9.292
135	1068	CAL.	.004473	.035723	.004473	.004473	1.000000	1.000000	9.633
135	1069	CAL.	.007683	.031926	.007683	.007683	1.000000	1.000000	9.918
135	1073	CAL.	.000047	.002224	.000047	.000047	1.000000	1.000000	10.443
135	1074	CAL.	.000041	.001972	.000041	.000041	1.000000	1.000000	10.771
135	1075	CAL.	.002054	.012997	.002054	.002054	1.000000	1.000000	11.137
135	1076	CAL.	.002049	.012962	.002049	.002049	1.000000	1.000000	11.504
135	1077	CAL.	.001589	.012587	.001589	.001589	1.000000	1.000000	11.896
135	1078	CAL.	.001591	.012710	.001591	.001591	1.000000	1.000000	12.284
135	1079	CAL.	.002723	.011317	.002723	.002723	1.000000	1.000000	12.613
135	1083	CAL.	.000020	.000978	.000020	.000020	1.000000	1.000000	13.198
135	1084	CAL.	.000019	.000913	.000019	.000019	1.000000	1.000000	13.578
135	1085	CAL.	.000940	.005946	.000940	.000940	1.000000	1.000000	14.001
135	1086	CAL.	.000939	.005941	.000939	.000939	1.000000	1.000000	14.427
135	1087	CAL.	.000726	.005799	.000726	.000726	1.000000	1.000000	14.867
135	1088	CAL.	.000727	.005803	.000727	.000727	1.000000	1.000000	15.310
135	1089	CAL.	.001241	.005156	.001241	.001241	1.000000	1.000000	15.669

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
135	1093	CAL.	.000011	.000513	.000011	.000011	1.000000	1.000000	16.276
135	1094	CAL.	.000010	.000491	.000010	.000010	1.000000	1.000000	16.697
135	1095	CAL.	.000503	.003181	.000503	.000503	1.000000	1.000000	17.156
135	1096	CAL.	.000503	.003180	.000503	.000503	1.000000	1.000000	17.615
135	1097	CAL.	.000388	.003100	.000388	.000388	1.000000	1.000000	18.089
135	1098	CAL.	.000388	.003101	.000388	.000388	1.000000	1.000000	18.553
135	1099	CAL.	.000662	.002752	.000662	.000662	1.000000	1.000000	18.932
135	FF SUM =	.1398	ROW CP TIME =	18.938	+ DISC	FRONT BAY AREA DISK			
122	FF SUM =	0.	ROW CP TIME =	3.065	+ PARAB	VERY NOSE CONE			
123	FF SUM =	0.	ROW CP TIME =	3.070	+ PARAB	VERY NOSE CONE			
124	FF SUM =	0.	ROW CP TIME =	3.050	+ PARAB	VERY NOSE CONE			
125	FF SUM =	0.	ROW CP TIME =	3.037	+ PARAB	VERY NOSE CONE			
320	FF SUM =	0.	ROW CP TIME =	1.773	+ CYLN	NOSE CYLINDER			
321	FF SUM =	0.	ROW CP TIME =	1.767	+ CYLN	NOSE CYLINDER			
322	FF SUM =	0.	ROW CP TIME =	1.777	+ CYLN	NOSE CYLINDER			
323	FF SUM =	0.	ROW CP TIME =	1.772	+ CYLN	NOSE CYLINDER			

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
324		FF SUM = 0.				1.799	+ CYLN		NOSE CYLINDER
325		FF SUM = 0.				1.775	+ CYLN		NOSE CYLINDER
326		FF SUM = 0.				1.772	+ CYLN		NOSE CYLINDER
327		FF SUM = 0.				1.762	+ CYLN		NOSE CYLINDER
328		FF SUM = 0.				2.355	+ CYLN		NOSE CYLINDER
329		FF SUM = 0.				2.343	+ CYLN		NOSE CYLINDER
330		FF SUM = 0.				2.344	+ CYLN		NOSE CYLINDER
331		FF SUM = 0.				2.341	+ CYLN		NOSE CYLINDER
332		FF SUM = 0.				2.339	+ CYLN		NOSE CYLINDER
333		FF SUM = 0.				2.331	+ CYLN		NOSE CYLINDER
334		FF SUM = 0.				2.315	+ CYLN		NOSE CYLINDER
335		FF SUM = 0.				2.317	+ CYLN		NOSE CYLINDER

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)!

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)!
340		FF SUM = 0.			3.052		+ PARAB		HOOD PARTIAL BACK
341		FF SUM = 0.			3.023		+ PARAB		HOOD PARTIAL BACK
342		FF SUM = 0.			3.033		+ PARAB		HOOD PARTIAL BACK
343		FF SUM = 0.			3.035		+ PARAB		HOOD PARTIAL BACK
344		FF SUM = 0.			3.030		+ PARAB		HOOD PARTIAL BACK
345		FF SUM = 0.			3.029		+ PARAB		HOOD PARTIAL BACK
346		FF SUM = 0.			3.024		+ PARAB		HOOD PARTIAL BACK
347		FF SUM = 0.			3.020		+ PARAB		HOOD PARTIAL BACK
348		FF SUM = 0.			3.032		+ PARAB		HOOD PARTIAL BACK
349		FF SUM = 0.			3.031		+ PARAB		HOOD PARTIAL BACK
350		FF SUM = 0.			3.021		+ PARAB		HOOD PARTIAL BACK
351		FF SUM = 0.			3.023		+ PARAB		HOOD PARTIAL BACK

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
352		FF SUM = 0.			3.023		+ PARAB		HOOD PARTIAL BACK
353		FF SUM = 0.			3.009		+ PARAB		HOOD PARTIAL BACK
354		FF SUM = 0.			3.026		+ PARAB		HOOD PARTIAL BACK
355		FF SUM = 0.			3.029		+ PARAB		HOOD PARTIAL BACK
360		FF SUM = 0.			3.045		+ PARAB		WINDOW
361		FF SUM = 0.			3.032		+ PARAB		WINDOW
362		FF SUM = 0.			3.032		+ PARAB		WINDOW
363		FF SUM = 0.			3.029		+ PARAB		WINDOW
364		FF SUM = 0.			3.032		+ PARAB		WINDOW
365		FF SUM = 0.			3.038		+ PARAB		WINDOW
366		FF SUM = 0.			3.029		+ PARAB		WINDOW
367		FF SUM = 0.			3.034		+ PARAB		WINDOW

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
368		FF SUM = 0.			3.039		+ PARAB	WINDOW	
369		FF SUM = 0.			3.036		+ PARAB	WINDOW	
370		FF SUM = 0.			3.032		+ PARAB	WINDOW	
371		FF SUM = 0.			3.035		+ PARAB	WINDOW	
372		FF SUM = 0.			3.010		+ PARAB	WINDOW	
373		FF SUM = 0.			3.019		+ PARAB	WINDOW	
374		FF SUM = 0.			3.004		+ PARAB	WINDOW	
375		FF SUM = 0.			3.014		+ PARAB	WINDOW	
401		FF SUM = 0.			1.912		- RECT	BODY BOTTOM (FRT)	4 1
402		FF SUM = 0.			1.629		- RECT	BODY BOTTOM (REAR)	402
182		FF SUM = 0.			2.074		+ CYLN	OMSP00C1	
172		FF SUM = 0.			2.039		+ CYLN	OMSP00C2	

MODEL = CONTAM STCP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC) :
781	FF SUM = 0.	ROW CP TIME =			2.438		- CYLN		.....+Y SIDE DOOR.....
782	FF SUM = 0.	ROW CP TIME =			64.045		+ CYLN		.....+Y SIDE DOOR.....
783	FF SUM = 0.	ROW CP TIME =			2.420		- CYLN		.....+Y SIDE DOOR.....
784	FF SUM = 0.	ROW CP TIME =			51.647		+ CYLN		.....+Y SIDE DOOR.....
785	FF SUM = 0.	ROW CP TIME =			5.690		- CYLN		.....+Y SIDE DOOR.....
786	FF SUM = 0.	ROW CP TIME =			14.995		+ CYLN		.....+Y SIDE DOOR.....
787	FF SUM = 0.	ROW CP TIME =			5.030		- CYLN		.....+Y SIDE DOOR.....
788	FF SUM = 0.	ROW CP TIME =			13.741		+ CYLN		.....+Y SIDE DOOR.....
791	FF SUM = 0.	ROW CP TIME =			5.871		- CYLN		... -Y SIDE DOOR...
792	FF SUM = 0.	ROW CP TIME =			13.043		+ CYLN		... -Y SIDE DOOR....
793	FF SUM = 0.	ROW CP TIME =			4.988		- CYLN		... -Y SIDE DOOR....
794	FF SUM = 0.	ROW CP TIME =			13.679		+ CYLN		... -Y SIDE DOOR....

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECIEVING SHUTTLE))

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LYNK.

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)				
306	FF SUM = 0.									ROW CP TIME = 1.546	+ RECT	BODY SIDE (BACK-PORT)	306
311	1050	CAL.	.003488	.003701	.003488	.230564	.015129	.015129	6.421	*			
311	1051	CAL.	.004828	.005589	.004828	.037826	.127643	.127643	17.159	*			
311	1060	CAL.	.007401	.007953	.007401	.085035	.087034	.087034	32.171	*			
311	1061	CAL.	.000411	.007712	.000411	.012934	.031778	.031778	49.411	*			
311	FF SUM = .0161									ROW CP TIME = 54.520	- TRAP	-Y SIDE FRONT TRAPEZOID	
315	FF SUM = 0.									ROW CP TIME = 1.735	+ RECT	BODY SIDE (MIDDLE-STBD)	315
316	FF SUM = 0.									ROW CP TIME = 1.721	+ RECT	BODY SIDE (BACK-STBD)	316
202	FF SUM = 0.									ROW CP TIME = 2.076	+ CYLN	BODY TOP (STBD-REAR)	202
212	FF SUM = 0.									ROW CP TIME = 2.086	+ CYLN	BODY TOP (PORT-REAR)	212
380	1053	CAL.	.000009	.000364	.000009	.000009	.977657	.977657	1.268				
380	1055	CAL.	.000037	.000209	.000037	.000041	.894928	.894928	1.806				
380	1057	CAL.	.000024	.000167	.000024	.000034	.725053	.725053	2.306				
380	1063	CAL.	.000017	.000696	.000017	.000017	1.000000	1.000000	3.826				
380	1065	CAL.	.000077	.000420	.000077	.000077	1.000000	1.000000	4.388				
380	1067	CAL.	.000056	.000381	.000056	.000062	.899137	.899137	4.913				
380	1073	CAL.	.000036	.001460	.000036	.000036	1.000000	1.000000	6.314				
380	1075	CAL.	.000162	.000882	.000162	.000162	1.000000	1.000000	6.828				
380	1077	CAL.	.000055	.000376	.000055	.000055	.435784	.435784	7.264				
380	1083	CAL.	.000056	.002290	.000056	.000088	.638174	.638174	8.449				
380	1085	CAL.	.000140	.000767	.000140	.000098	.353125	.353125	8.850				
380	1097	CAL.	.000077	.000529	.000077	.000092	.264340	.264340	9.229				
380	1093	CAL.	.000035	.001433	.000035	.000035	.129759	.129759	10.085				
380	1095	CAL.	.000079	.000426	.000079	.001193	.065839	.065839	10.386				
380	FF SUM = .0009									ROW CP TIME = 10.872	+ TRAP	VERTICAL FIN (PORT)	20
38E	1053	CAL.	.000006	.000168	.000006	.000006	1.000000	1.000000	1.261				
38E	1055	CAL.	.000014	.000054	.000014	.000015	.858708	.858708	1.792				
38E	1057	CAL.	.000009	.000034	.000009	.000011	.725053	.725053	2.306				

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
385	1063	CAL.	.000007	.000213	.000007	.000010	.735406	.735406	3.585
385	1065	CAL.	.000023	.000091	.000023	.000043	.533652	.533652	4.081
385	1067	CAL.	.000019	.000098	.000019	.000035	.555614	.555614	4.568
385	1073	CAL.	.000011	.000323	.000011	.000018	.596608	.596608	5.774
385	1075	CAL.	.000041	.000162	.000041	.000080	.509510	.509510	6.224
385	1077	CAL.	.000026	.000128	.000026	.000064	.396536	.396536	6.651
385	1083	CAL.	.000019	.000365	.000019	.000038	.501948	.501948	7.746
385	1085	CAL.	.000057	.000228	.000057	.000167	.343543	.343543	8.140
385	1087	CAL.	.000014	.000068	.000014	.000130	.104605	.104605	8.474
385	1093	CAL.	.000003	.000090	.000003	.000091	.032936	.032936	9.261
385	FF SUM =	.0003	ROW CP TIME =	10.055	+ TRAP	VERTICAL FIN (PORT-AFT) 20			
390	1054	CAL.	.000009	.000363	.000009	.000009	.977658	.977658	1.303
390	1056	CAL.	.000036	.000195	.000036	.000040	.894869	.894869	1.828
390	1058	CAL.	.000024	.000167	.000024	.000034	.725030	.725030	2.328
390	1064	CAL.	.000017	.000696	.000017	.000017	1.000000	1.000000	3.705
390	1066	CAL.	.000077	.000419	.000077	.000077	1.000000	1.000000	4.255
390	1068	CAL.	.000056	.000380	.000056	.000062	.899127	.899127	4.780
390	1074	CAL.	.000036	.001458	.000036	.000036	1.000000	1.000000	6.039
390	1076	CAL.	.000162	.000880	.000162	.000162	1.000000	1.000000	6.539
390	1078	CAL.	.000055	.000375	.000055	.000126	.435813	.435813	6.973
390	1084	CAL.	.000056	.002288	.000056	.000087	.638150	.638150	8.031
390	1086	CAL.	.000140	.000761	.000140	.000097	.353151	.353151	8.425
390	1088	CAL.	.000077	.000528	.000077	.000091	.264355	.264355	8.816
390	1094	CAL.	.000035	.001431	.000035	.0000269	.129735	.129735	9.573
390	1096	CAL.	.000078	.000426	.000078	.001191	.065837	.065837	9.859
390	FF SUM =	.0009	ROW CP TIME =	10.239	- TRAP	VERTICAL FIN (STBD) 20			
395	1054	CAL.	.000006	.000167	.000006	.000006	1.000000	1.000000	1.325
395	1056	CAL.	.000013	.000053	.000013	.000024	.550966	.550966	1.813
395	1058	CAL.	.000012	.000059	.000012	.000021	.573383	.573383	2.316
395	1064	CAL.	.000007	.000212	.000007	.000010	.735403	.735403	3.537
395	1066	CAL.	.000023	.000091	.000023	.000043	.533701	.533701	4.007
395	1068	CAL.	.000019	.000098	.000019	.000035	.555649	.555649	4.497
395	1074	CAL.	.000011	.000322	.000011	.000018	.596603	.596603	5.587
395	1076	CAL.	.000041	.000162	.000041	.000080	.509557	.509557	6.021
395	1078	CAL.	.000025	.000128	.000025	.000064	.396564	.396564	6.447
395	1084	CAL.	.000019	.000365	.000019	.000037	.501939	.501939	7.453
395	1086	CAL.	.000057	.000227	.000057	.000166	.343577	.343577	7.832
395	1088	CAL.	.000014	.000068	.000014	.000130	.104615	.104615	8.166
395	1094	CAL.	.000003	.000090	.000003	.000090	.032933	.032933	8.856

MODEL = PONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FF(I,J) W/SHAD	FE(J,T) W/SHAD	FA(T,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
395		FF SUM = .0002					- TRAP		VERTICAL FIN (STBD-AFT) 20
705		FF SUM = 0.					+ DISC		..MOST FORWARD EVAPORATOR.....
700		FF SUM = 0.					- DISC		.....SUPER ENGINES (OMS LOCAT
701		FF SUM = 0.					+ DISC		.....SUPER ENGINES (OMS LOCAT
702		FF SUM = 0.					- DISC		.....SUPER ENGINES (OMS LOCAT
703		FF SUM = 0.					+ DISC		.....SUPER ENGINES (OMS LOCAT
24		FF SUM = 0.					- DISC		...BACK RCS ...LOOKING +/- Y.(
25		FF SUM = .3000					+ DISC		...BACK RCS ...LOOKING +/- Y.(
18		FF SUM = 0.					- DISC		...FRONT RCS..LOOKING +/-Y AT
19		FF SUM = 0.					+ DISC		...FRONT RCS..LOOKING +/-Y AT
26		FF SUM = 0.					- DISC		...BACK RCS LOOKING +/- Z...7/
27		FF SUM = 0.					+ DISC		...BACK RCS LOOKING +/- Z...7/

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC) :
16	FF SUM = 0.		ROW CP TIME =		0.125	- DISC	...MIDDLE EVAP. LOOKING +/- Y.		
17	FF SUM = 0.		ROW CP TIME =		2.370	+ DISC	...MIDDLE EVAP. LOOKING +/- Y.		
399	1053	CAL.	.000056	.000337	.000056	.000056	1.000000	1.000000	2.938
399	1054	CAL.	.000056	.000337	.000056	.000056	1.000000	1.000000	5.831
399	1055	CAL.	.000274	.000220	.000274	.000274	1.000000	1.000000	7.064
399	1056	CAL.	.000268	.000215	.000268	.000268	1.000000	1.000000	8.371
399	1057	CAL.	.000289	.000294	.000289	.000289	1.000000	1.000000	9.650
399	1059	CAL.	.000289	.000294	.000289	.000289	1.000000	1.000000	11.019
399	1059	CAL.	.000684	.000361	.000684	.000684	1.000000	1.000000	11.978
399	1063	CAL.	.000083	.000503	.000083	.000083	1.000000	1.000000	14.787
399	1064	CAL.	.000083	.000503	.000083	.000083	1.000000	1.000000	17.564
399	1065	CAL.	.000406	.000327	.000406	.000406	1.000000	1.000000	18.759
399	1066	CAL.	.000406	.000327	.000406	.000406	1.000000	1.000000	20.062
399	1067	CAL.	.000406	.000411	.000406	.000406	1.000000	1.000000	21.276
399	1068	CAL.	.000406	.000411	.000406	.000406	1.000000	1.000000	22.551
399	1069	CAL.	.000938	.000495	.000938	.000938	1.000000	1.000000	23.464
399	1073	CAL.	.000127	.000773	.000127	.000127	1.000000	1.000000	25.947
399	1074	CAL.	.000327	.000163	.000327	.000327	.210764	.210764	27.531
399	1075	CAL.	.000612	.000492	.000612	.000612	1.000000	1.000000	28.580
399	1076	CAL.	.000177	.000142	.000177	.000612	.289577	.289577	29.339
399	1077	CAL.	.000548	.000556	.000548	.000548	1.000000	1.000000	30.361
399	1078	CAL.	.000351	.000356	.000351	.000548	.640349	.640349	31.309
399	1079	CAL.	.0001212	.000640	.0001212	.0001212	1.000000	1.000000	32.108
399	1083	CAL.	.000185	.000122	.000185	.000185	1.000000	1.000000	34.315
399	1085	CAL.	.000813	.000653	.000813	.000813	1.000000	1.000000	36.505
399	1087	CAL.	.000526	.000573	.000526	.000526	1.000000	1.000000	38.026
399	1089	CAL.	.000999	.000528	.000999	.000999	1.000000	1.000000	39.313
399	1093	CAL.	.000091	.000553	.000091	.000091	1.000000	1.000000	40.529
399	1095	CAL.	.000202	.000163	.000202	.000202	1.000000	1.000000	41.652
399	1097	CAL.	.000102	.000092	.000102	.000102	1.000000	1.000000	42.233
399	FF SUM = .0105		ROW CP TIME =		42.534	+ RECT	VERT. FIN LDG. EDGE 2		
1050	FF SUM = .9430		ROW CP TIME =		2.340	+ CYLN	PALLET1 BOTTOM CYLINDER X= 64		
1051	FF SUM = .3885		ROW CP TIME =		1.380	+ RECT	-Y PALLET1 OUTSIDE STRIP SL3		

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1052	FF SUM =	.7780				1.352	+ RECT		+Y PALLET1 OUTSIDE STRIP SL3
1053	FF SUM =	.0408				1.695	+ RECT		-Y PALLET1 TOP STRIP X=645.2 T
1054	FF SUM =	.0196				1.649	+ RECT		+Y PALLET1 TOP STRIP ,X= 645.
1055	1056	CAL.	.069755	.069900	.069755	.069755	1.000000	1.000000	.967
1055	1057	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.190
1055	1058	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	1.573
1055	1059	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	2.394
1055	1065	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	2.856
1055	1067	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	3.111
1055	106A	CAL.	.022966	.028988	.022966	.022966	1.000000	1.000000	3.385
1055	1069	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	3.605
1055	1076	CAL.	.006480	.006480	.006480	.006480	1.000000	1.000000	4.105
1055	1077	CAL.	.000043	.000054	.000043	.000043	1.000000	1.000000	4.410
1055	1078	CAL.	.003932	.004837	.003932	.003932	1.000000	1.000000	4.713
1055	1079	CAL.	.002172	.001426	.002172	.002172	1.000000	1.000000	4.973
1055	1085	CAL.	.001604	.001604	.001604	.001604	1.000000	1.000000	5.513
1055	1087	CAL.	.000007	.000009	.000007	.000007	1.000000	1.000000	5.854
1055	1088	CAL.	.000385	.001118	.000385	.000385	1.000000	1.000000	6.234
1055	1089	CAL.	.000427	.000281	.000427	.000427	1.000000	1.000000	6.491
1055	1095	CAL.	.000545	.000545	.000545	.000545	1.000000	1.000000	7.067
1055	1097	CAL.	.000002	.000003	.000002	.000002	1.000000	1.000000	7.423
1055	1098	CAL.	.000293	.000370	.000293	.000293	1.000000	1.000000	7.801
1055	1099	CAL.	.000134	.000088	.000134	.000134	1.000000	1.000000	8.099
1055	FF SUM =	.5017				8.104	+ RECT		-Y INSIDE TOP PANNEL1 ,X=645.
1056	1057	CAL.	.055800	.079286	.055800	.055800	1.000000	1.000000	.624
1056	1058	CAL.	.016279	.029505	.016279	.016279	1.000000	1.000000	.848
1056	1059	CAL.	.089597	.058721	.089597	.089597	1.000000	1.000000	1.675
1056	1065	CAL.	.032639	.032571	.032639	.032639	1.000000	1.000000	2.110
1056	1067	CAL.	.023023	.029900	.023023	.023023	1.000000	1.000000	2.407
1056	106A	CAL.	.001564	.001969	.001564	.001564	1.000000	1.000000	2.662
1056	1069	CAL.	.023944	.019692	.023944	.023944	1.000000	1.000000	2.884
1056	1075	CAL.	.066465	.006452	.066465	.066465	1.000000	1.000000	3.358
1056	1077	CAL.	.003827	.004821	.003827	.003827	1.000000	1.000000	3.690
1056	1078	CAL.	.000042	.000052	.000042	.000042	1.000000	1.000000	3.985
1056	1079	CAL.	.002166	.001420	.002166	.002166	1.000000	1.000000	4.248
1056	1085	CAL.	.001597	.001597	.001597	.001597	1.000000	1.000000	4.771

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FE (I, J) W/SHAD	FE (J, I) W/SHAD	FA (I, J) W/SHAD	F (I, J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
1056	1088	CAL.	.000007	.000008	.000007	.000007	1.000000	1.000000	5.494
1056	1089	CAL.	.000423	.000277	.000423	.000423	1.000000	1.000000	5.803
1056	1095	CAL.	.000541	.000540	.000541	.000541	1.000000	1.000000	6.357
1056	1097	CAL.	.000291	.000366	.000291	.000291	1.000000	1.000000	6.774
1056	1098	CAL.	.000002	.000002	.000002	.000002	1.000000	1.000000	7.126
1056	1099	CAL.	.000132	.000086	.000132	.000132	1.000000	1.000000	7.429
1056	FF SUM =	.4933	ROW CP TIME =	7.435	+ RECT	+ Y INSIDE TOP PANNEL1, X=645.2			
1057	1058	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.338
1057	1059	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.308
1057	1065	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	1.770
1057	1066	CAL.	.028988	.022966	.028988	.028988	1.000000	1.000000	2.039
1057	1068	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.356
1057	1069	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	8.545
1057	1075	CAL.	.000054	.000043	.000054	.000054	1.000000	1.000000	9.048
1057	1076	CAL.	.004837	.003832	.004837	.004837	1.000000	1.000000	9.350
1057	1078	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	9.688
1057	1079	CAL.	.000405	.000211	.000405	.000405	1.000000	1.000000	9.965
1057	1085	CAL.	.000009	.000007	.000009	.000009	1.000000	1.000000	10.500
1057	1086	CAL.	.001118	.000885	.001118	.001118	1.000000	1.000000	10.852
1057	1088	CAL.	.000457	.000457	.000457	.000457	1.000000	1.000000	11.251
1057	1089	CAL.	.000070	.000036	.000070	.000070	1.000000	1.000000	11.565
1057	1095	CAL.	.000003	.000002	.000003	.000003	1.000000	1.000000	12.124
1057	1096	CAL.	.000370	.000293	.000370	.000370	1.000000	1.000000	12.506
1057	1098	CAL.	.000145	.000145	.000145	.000145	1.000000	1.000000	12.931
1057	1099	CAL.	.000021	.000011	.000021	.000021	1.000000	1.000000	13.255
1057	FF SUM =	.4759	ROW CP TIME =	13.261	+ RECT	- Y INSIDE BOTTOM PANNEL1, X=6			
1058	1059	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	.991
1058	1065	CAL.	.028988	.022966	.028988	.028988	1.000000	1.000000	1.469
1058	1066	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	1.721
1058	1067	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.006
1058	1069	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	8.280
1058	1075	CAL.	.004837	.003832	.004837	.004837	1.000000	1.000000	8.790
1058	1076	CAL.	.000054	.000043	.000054	.000054	1.000000	1.000000	9.084
1058	1077	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	9.393
1058	1079	CAL.	.000405	.000211	.000405	.000405	1.000000	1.000000	9.709
1058	1085	CAL.	.001118	.000885	.001118	.001118	1.000000	1.000000	10.271
1058	1086	CAL.	.000009	.000007	.000009	.000009	1.000000	1.000000	10.603
1058	1087	CAL.	.000457	.000457	.000457	.000457	1.000000	1.000000	10.974
1058	1089	CAL.	.000070	.000036	.000070	.000070	1.000000	1.000000	11.334
1058	1095	CAL.	.000370	.000293	.000370	.000370	1.000000	1.000000	11.929

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1058	1096	CAL.	.000007	.000002	.000003	.000103	1.000000	1.000000	12.282
1058	1097	CAL.	.000145	.000145	.000145	.000145	1.000000	1.000000	12.703
1058	1099	CAL.	.000021	.000011	.000021	.000021	1.000000	1.000000	13.067
1058	FF SUM =	.4651	ROW CP TIME =	13.072	+ RECT	+Y INSIDE BOTTOM PANNEL1, X 64			
1059	1065	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.449
1059	1066	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.673
1059	1067	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	6.798
1059	1068	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	12.919
1059	1075	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	13.407
1059	1073	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	13.656
1059	1077	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	13.911
1059	1076	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	14.167
1059	1085	CAL.	.000281	.000427	.000281	.000281	1.000000	1.000000	14.636
1059	1086	CAL.	.000281	.000427	.000281	.000281	1.000000	1.000000	14.664
1059	1087	CAL.	.000336	.000370	.000336	.000336	1.000000	1.000000	15.262
1059	1088	CAL.	.000336	.000370	.000336	.000336	1.000000	1.000000	15.559
1059	1095	CAL.	.000398	.000134	.000398	.000398	1.000000	1.000000	16.098
1059	1095	CAL.	.000398	.000134	.000398	.000398	1.000000	1.000000	16.392
1059	1097	CAL.	.000111	.000021	.000011	.000011	1.000000	1.000000	16.706
1059	1099	CAL.	.000111	.000021	.000011	.000011	1.000000	1.000000	17.019
1059	FF SUM =	.7734	ROW CP TIME =	17.058	+ RECT	BOTTOM PANNEL 1 X=645.2 10759			
1060	FF SUM =	.9294	ROW CP TIME =	1.876	+ CYLN	PALLET2 BOTTOM CYLINDER X= 75			
1061	FF SUM =	.3106	ROW CP TIME =	1.150	+ RECT	-Y PALLET2 OUTSIDE STRIP SL3			
1062	FF SUM =	.7957	ROW CP TIME =	1.083	+ RECT	+Y PALLET2 OUTSIDE STRIP SL3			
1063	FF SUM =	.0108	ROW CP TIME =	1.340	+ RECT	-Y PALLET2 TOP STRIP X=759.2 T			

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBOPTIMIZED)

NODE I	NODE J	COMPUTATION	FF (I,J) W/SHAD	FE (J,I) W/SHAD	FA (I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1064		FF SUM =	.0091						
		POW CP TIME =			1.317		+ RECT		+Y PALLET2 TOP STRIP ,X= 759.
1065	1065	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	1.317
1065	1067	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.575
1065	1068	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	2.038
1065	1069	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	3.115
1065	1076	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	3.600
1065	1077	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	3.900
1065	1078	CAL.	.022966	.028988	.022966	.022966	1.000000	1.000000	4.193
1065	1079	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	4.435
1065	1086	CAL.	.006480	.006480	.006480	.006480	1.000000	1.000000	4.953
1065	1087	CAL.	.000043	.000054	.000043	.000043	1.000000	1.000000	5.280
1065	1088	CAL.	.003832	.004837	.003832	.003832	1.000000	1.000000	5.620
1065	1089	CAL.	.002172	.001426	.002172	.002172	1.000000	1.000000	5.903
1065	1096	CAL.	.001604	.001604	.001604	.001604	1.000000	1.000000	6.453
1065	1097	CAL.	.000007	.000009	.000007	.000007	1.000000	1.000000	6.803
1065	1098	CAL.	.000385	.001118	.000385	.000385	1.000000	1.000000	7.159
1065	1099	CAL.	.000427	.000281	.000427	.000427	1.000000	1.000000	7.454
1065		FF SUM =	.4545						
		POW CP TIME =			7.459		+ RECT		-Y INSIDE TOP PANNEL2,X=759.2
1066	1067	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	.481
1066	1068	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	.741
1066	1069	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	1.840
1066	1076	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	2.305
1066	1077	CAL.	.022966	.028988	.022966	.022966	1.000000	1.000000	2.631
1066	1078	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	2.918
1066	1079	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	3.162
1066	1086	CAL.	.006480	.006480	.006480	.006480	1.000000	1.000000	3.665
1066	1087	CAL.	.003832	.004837	.003832	.003832	1.000000	1.000000	4.037
1066	1088	CAL.	.000043	.000054	.000043	.000043	1.000000	1.000000	4.360
1066	1089	CAL.	.002172	.001426	.002172	.002172	1.000000	1.000000	4.645
1066	1096	CAL.	.001604	.001604	.001604	.001604	1.000000	1.000000	5.177
1066	1097	CAL.	.000007	.000009	.000007	.000007	1.000000	1.000000	5.574
1066	1098	CAL.	.000385	.001118	.000385	.000385	1.000000	1.000000	5.920
1066	1099	CAL.	.000427	.000281	.000427	.000427	1.000000	1.000000	6.221
1066		FF SUM =	.4528						
		POW CP TIME =			6.227		+ RECT		+Y INSIDE TOP PANNEL2,X=759.2
1067	1068	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.401
1067	1069	CAL.	.093268	.043528	.093268	.093268	1.000000	1.000000	1.689
1067	1076	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	2.193
1067	1077	CAL.	.022966	.022966	.022966	.022966	1.000000	1.000000	2.490
1067	1078	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	2.832

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1067	1085	CAL.	.000054	.000043	.000054	.000054	1.000000	1.000000	10.005
1067	1086	CAL.	.004837	.003432	.004837	.004837	1.000000	1.000000	10.361
1067	1088	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	10.740
1067	1089	CAL.	.000405	.000211	.000405	.000405	1.000000	1.000000	11.042
1067	1095	CAL.	.000009	.000007	.000009	.000009	1.000000	1.000000	11.605
1067	1096	CAL.	.001118	.000885	.001118	.001118	1.000000	1.000000	11.979
1067	1098	CAL.	.000457	.000457	.000457	.000457	1.000000	1.000000	12.387
1067	1099	CAL.	.000070	.000076	.000070	.000070	1.000000	1.000000	12.698
1067	FF SUM =	.4206	ROW CP TIME =	12.704	+ RECT	-Y INSIDE BOTTOM PANNEL2, X=7			
1068	1069	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.304
1068	1075	CAL.	.028988	.022966	.028988	.028988	1.000000	1.000000	1.812
1068	1076	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.102
1068	1077	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.414
1068	1079	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.090
1068	1083	CAL.	.004837	.003832	.004837	.004837	1.000000	1.000000	9.634
1068	1086	CAL.	.000054	.000043	.000054	.000054	1.000000	1.000000	9.960
1068	1087	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	10.310
1068	1089	CAL.	.000405	.000211	.000405	.000405	1.000000	1.000000	10.654
1068	1095	CAL.	.001118	.000885	.001118	.001118	1.000000	1.000000	11.242
1068	1096	CAL.	.000009	.000007	.000009	.000009	1.000000	1.000000	11.595
1068	1097	CAL.	.000457	.000457	.000457	.000457	1.000000	1.000000	11.977
1068	1099	CAL.	.000070	.000076	.000070	.000070	1.000000	1.000000	12.328
1068	FF SUM =	.4265	ROW CP TIME =	12.334	+ RECT	+Y INSIDE BOTTOM PANNEL2, X 75			
1069	1075	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.467
1069	1076	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.709
1069	1077	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	7.216
1069	1078	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	13.699
1069	1085	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	14.220
1069	1086	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	14.497
1069	1087	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	14.796
1069	1088	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	15.104
1069	1095	CAL.	.000281	.000427	.000281	.000281	1.000000	1.000000	15.643
1069	1096	CAL.	.000281	.000427	.000281	.000281	1.000000	1.000000	15.934
1069	1097	CAL.	.000036	.000070	.000036	.000036	1.000000	1.000000	16.256
1069	1098	CAL.	.000036	.000070	.000036	.000036	1.000000	1.000000	16.573
1069	FF SUM =	.3422	ROW CP TIME =	16.611	+ RECT	PALLET2 BOTTOM, X= 759.2 TO 87			

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED)

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC)
1070		FF SUM = .9133			ROW CP TIME = 1.410		+ CYLN		PALLET3 BOTTOM CYLINDER X= 87
1071		FF SUM = .3029			ROW CP TIME = .809		+ RECT		-Y PALLET1 OUTSIDE STRIP SL2.
1072		FF SUM = .7435			ROW CP TIME = .787		+ RECT		+Y PALLET1 OUTSIDE STRIP SL2
1073		FF SUM = .0104			ROW CP TIME = .976		+ RECT		-Y PALLET3 TOP STRIP X=873.2 T
1074		FF SUM = .0092			ROW CP TIME = .931		+ RECT		+Y PALLET3 TOP STRIP ,X= 873.
1075	1076	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	1.345
1075	1077	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.598
1075	1078	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	2.066
1075	1079	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	3.188
1075	1085	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	3.690
1075	1087	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	3.988
1075	1088	CAL.	.022966	.028988	.022966	.022966	1.000000	1.000000	4.293
1075	1089	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	4.548
1075	1095	CAL.	.006480	.006480	.006480	.006480	1.000000	1.000000	5.069
1075	1097	CAL.	.000043	.000054	.000043	.000043	1.000000	1.000000	5.383
1075	1098	CAL.	.003832	.004837	.003832	.003832	1.000000	1.000000	5.713
1075	1099	CAL.	.002172	.001426	.002172	.002172	1.000000	1.000000	5.987
1075		FF SUM = .4504			ROW CP TIME = 5.992		+ RECT		-Y INSIDE TOP PANNEL3 ,X=873.
1076	1077	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	.488
1076	1078	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	.744
1076	1079	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	1.877
1076	1085	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	2.348
1076	1087	CAL.	.022966	.028988	.022966	.022966	1.000000	1.000000	2.690
1076	1088	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	2.983
1076	1089	CAL.	.023328	.015649	.023328	.023328	1.000000	1.000000	3.239
1076	1095	CAL.	.006480	.006480	.006480	.006480	1.000000	1.000000	3.736
1076	1097	CAL.	.003832	.004837	.003832	.003832	1.000000	1.000000	4.096
1076	1098	CAL.	.000043	.000054	.000043	.000043	1.000000	1.000000	4.402
1076	1099	CAL.	.002172	.001426	.002172	.002172	1.000000	1.000000	4.676

MODEL = CONTAM STEP = 1
 FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC) :
1076	FF SUM = .4500		ROW CP TIME =		4.701	+ RECT	+Y INSIDE TOP PANNEL3,X=873.2		
1077	1078	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.425
1077	1079	CAL.	.093268	.043528	.093268	.093268	1.000000	1.000000	1.855
1077	1085	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.351
1077	1086	CAL.	.028988	.022966	.028988	.028988	1.000000	1.000000	2.656
1077	1088	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	3.009
1077	1089	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.806 *
1077	1095	CAL.	.000054	.000043	.000054	.000054	1.000000	1.000000	10.327
1077	1096	CAL.	.004837	.003832	.004837	.004837	1.000000	1.000000	10.656
1077	1099	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	11.020
1077	1099	CAL.	.000405	.000211	.000405	.000405	1.000000	1.000000	11.298
1077	FF SUM = .4140		ROW CP TIME =		11.305	+ RECT	-Y INSIDE BOTTOM PANNEL3, X=8		
1078	1079	CAL.	.093268	.043528	.093268	.093268	1.000000	1.000000	1.431
1078	1085	CAL.	.028988	.022966	.028988	.028988	1.000000	1.000000	1.950
1078	1086	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.239
1078	1087	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.570
1078	1099	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.365 *
1078	1095	CAL.	.004837	.003832	.004837	.004837	1.000000	1.000000	9.931
1079	1096	CAL.	.000054	.000043	.000054	.000054	1.000000	1.000000	10.238
1078	1097	CAL.	.002231	.002231	.002231	.002231	1.000000	1.000000	10.572
1078	1099	CAL.	.000405	.000211	.000405	.000405	1.000000	1.000000	10.889
1078	FF SUM = .4138		ROW CP TIME =		10.895	+ RECT	+Y INSIDE BOTTOM PANNEL3,X 87		
1079	1085	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.475
1079	1086	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.726
1079	1037	CAL.	.005272	.011132	.005272	.005272	1.000000	1.000000	7.561 *
1079	1088	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	14.271 *
1079	1095	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	14.791
1079	1096	CAL.	.001426	.002172	.001426	.001426	1.000000	1.000000	15.064
1079	1097	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	15.354
1079	1099	CAL.	.000211	.000405	.000211	.000211	1.000000	1.000000	15.638
1079	FF SUM = .7345		ROW CP TIME =		15.678	+ RECT	...BOTTOM PANNEL3 ,X=873.2 TO		
1080	FF SUM = .9210		ROW CP TIME =		.916	+ CYLN	PALLET4 BOTTOM CYLINDER X= 98		

MODEL = CONTAM STP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F (I,J) WO/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
1081		FF SUM = .3004				.548	+ RECT		-Y PALLET4 OUTSIDE STRIP SL3
1082		FF SUM = .7774				.502	+ RECT		+Y PALLET4 OUTSIDE STRIP SL3
1083		FF SUM = .0220				.606	+ RECT		-Y PALLET4 TOP STRIP X=987.2 T
1084		FF SUM = .0165				.563	+ RECT		+Y PALLET4 TOP STRIP ,X= 987.
1085	1085	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	1.415
1085	1087	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.683
1085	1088	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	2.178
1085	1089	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	3.395
1085	1095	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	3.896
1085	1097	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	4.190
1085	1098	CAL.	.022966	.028988	.022966	.022966	1.000000	1.000000	4.484
1085	1099	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	4.727
1085		FF SUM = .4680				4.731	+ RECT		-Y INSIDE TOP PANNEL4,X=987.2
1086	1087	CAL.	.055797	.070429	.055797	.055797	1.000000	1.000000	.512
1086	1088	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	.777
1086	1089	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	1.976
1086	1095	CAL.	.032622	.032622	.032622	.032622	1.000000	1.000000	2.449
1086	1097	CAL.	.022966	.028988	.022966	.022966	1.000000	1.000000	2.772
1086	1098	CAL.	.001545	.001950	.001545	.001545	1.000000	1.000000	3.059
1086	1099	CAL.	.023828	.015649	.023828	.023828	1.000000	1.000000	3.299
1086		FF SUM = .4667				3.306	+ RECT		+Y INSIDE TOP PANNEL4,X=987.2
1087	1088	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.426
1087	1089	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.876
1087	1095	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.363
1087	1096	CAL.	.028988	.022966	.028988	.028988	1.000000	1.000000	2.688
1087	1099	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	3.638
1087	1099	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.694
						700	+ RECT		-Y INSIDE BOTTOM PANNEL4, X=9

MODEL = CONTAM STEP = 1
FORM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED) :

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC) :
1088	1089	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.432
1088	1095	CAL.	.028938	.022966	.028988	.028988	1.000000	1.000000	1.976
1088	1096	CAL.	.001950	.001545	.001950	.001950	1.000000	1.000000	2.254
1088	1097	CAL.	.019607	.019607	.019607	.019607	1.000000	1.000000	2.568
1088	1098	CAL.	.010132	.005272	.010132	.010132	1.000000	1.000000	9.303 *
1088	FF SUM =	.4357	ROW CP TIME =	9.309	+ RECT	+Y INSIDE BOTTOM PANNEL4,X 98			
1089	1095	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.464
1089	1096	CAL.	.015649	.023828	.015649	.015649	1.000000	1.000000	.701
1089	1097	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	7.490 *
1089	1098	CAL.	.005272	.010132	.005272	.005272	1.000000	1.000000	14.259 *
1089	FF SUM =	.3589	ROW CP TIME =	14.299	+ RECT	PALLET4 BOTTOM,X= 987.2 TO 11			
1090	FF SUM =	.9116	ROW CP TIME =	.437	+ CYLN	PALLETS5 BOTTOM CYLINDER X= 11			
1091	FF SUM =	.3096	ROW CP TIME =	.244	+ RECT	-Y PALLETS5 OUTSIDE STRIP			
1092	FF SUM =	.8012	ROW CP TIME =	.227	+ RECT	+Y PALLETS5 OUTSIDE STRIP			
1093	FF SUM =	.0946	ROW CP TIME =	.236	+ RECT	-Y PALLETS5 TOP STRIP X=1101.2			
1094	FF SUM =	.0939	ROW CP TIME =	.199	+ RECT	+Y PALLETS5 TOP STRIP ,X= 1101			
1095	1096	CAL.	.069758	.069758	.069758	.069758	1.000000	1.000000	1.177
1095	1097	CAL.	.015740	.019867	.015740	.015740	1.000000	1.000000	1.433
1095	1098	CAL.	.055797	.073429	.055797	.055797	1.000000	1.000000	1.884
1095	1099	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	2.923
1095	FF SUM =	.5397	ROW CP TIME =	2.929	+ RECT	-Y INSIDE TOP PANNEL5,X=1101.			
1096	1097	CAL.	.055797	.073429	.055797	.055797	1.000000	1.000000	.467

MODEL = CONTAM STEP = 1
 FOPM FACTOR CALCULATION LINK.

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

(* INDICATES NODE PAIR HAS BEEN SUBDIVIDED):

NODE I	NODE J	COMPUTATION	FE(I,J) W/SHAD	FE(J,I) W/SHAD	FA(I,J) W/SHAD	F(I,J) W/SHAD	SHAD. E FACTOR	SHAD. A FACTOR	CP TIME (SEC):
1096	1098	CAL.	.015740	.013867	.015740	.015740	1.000000	1.000000	.721
1096	1099	CAL.	.088759	.058292	.088759	.088759	1.000000	1.000000	1.778
1096	FF SUM =	.5243	ROW CP TIME =	1.785	+ RECT	+Y INSIDE TOP PANNEL5, X=1101.			
1097	1098	CAL.	.061000	.061000	.061000	.061000	1.000000	1.000000	.397
1097	1099	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.656
1097	FF SUM =	.6124	ROW CP TIME =	1.670	+ RECT	-Y INSIDE BOTTOM PANNEL5, X=1			
1098	1099	CAL.	.093268	.048528	.093268	.093268	1.000000	1.000000	1.266
1098	FF SUM =	.5003	ROW CP TIME =	1.272	+ RECT	+Y INSIDE BOTTOM PANNEL5, X 11			
1099	FF SUM =	.4329	ROW CP TIME =	.021	+ RECT	PALLET 5 BOTTOM, X=1101.2 TO 12			

TOTAL CP TIME (SEC) FOR PROBLEM = 1964.574

SPACELAB-3 GEOMETRIC RELATIONSHIP DATA MATRIX

The following pages contain the geometric relationship data computer printouts for the Spacelab-3/Orbiter configuration.

MODEL = CONTAM STFO = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECIEIVING SHUTTLE))

NODE I	NODE J	F(I, J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I		POSITION VECTOR I			
20	1052	.000041	3.71E+03	7.51	88.34	5.72716E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1053	.000062	3.71E+03	17.91	83.65	5.96705E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1054	.000072	3.71E+03	6.92	83.37	5.71961E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1055	.001312	3.71E+03	17.89	72.40	5.96646E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1056	.000079	3.71E+03	9.25	90.26	5.75297E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1057	.001059	3.71E+03	18.26	71.74	5.97314E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1058	.000275	3.71E+03	13.07	85.53	5.82390E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1059	.001554	3.71E+03	15.29	76.74	5.91535E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1062	.000090	3.71E+03	3.37	87.93	4.59936E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1063	.000110	3.71E+03	22.01	82.25	4.89484E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1064	.000141	3.71E+03	8.63	81.73	4.58395E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1065	.002736	3.71E+03	21.99	68.37	4.89412E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1066	.000164	3.71E+03	11.51	90.07	4.67118E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1067	.001897	3.71E+03	22.43	67.57	4.90957E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1068	.000511	3.71E+03	15.19	84.48	4.72545E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1069	.002812	3.71E+03	20.08	73.69	4.83168E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1072	.000187	3.71E+03	12.43	87.27	3.47353E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1073	.000217	3.71E+03	28.37	80.16	3.86166E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1074	.000329	3.71E+03	11.45	79.02	3.46703E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1075	.004577	3.71E+03	28.74	62.14	3.86075E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1076	.001369	3.71E+03	15.22	90.10	3.52148E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1077	.003668	3.71E+03	23.87	61.13	3.88131E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1078	.001086	3.71E+03	21.20	82.84	3.64456E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1079	.005682	3.71E+03	26.02	68.97	3.78129E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1082	.000611	3.71E+03	18.35	86.00	2.37492E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1083	.000457	3.71E+03	39.09	76.88	2.90340E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1084	.001058	3.71E+03	16.96	73.76	2.36067E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1085	.009572	3.71E+03	39.07	51.66	2.90318E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1086	.001060	3.71E+03	22.26	90.14	2.43987E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1087	.000795	3.71E+03	39.58	50.33	2.93410E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1088	.002719	3.71E+03	30.27	79.99	2.61433E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1039	.012723	3.71E+03	36.70	61.03	2.80184E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1037	.003709	3.71E+03	33.81	82.92	1.34560E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1093	.009747	3.71E+03	58.64	72.10	2.14343E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1094	.005346	3.71E+03	31.63	59.81	1.31307E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1095	.015514	3.71E+03	58.62	32.82	2.14683E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE T	NODE J	F(I,J)	APEA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
20	1096	.003710	3.71E+03	79.58	90.23	1.45052E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1097	.011959	3.71E+03	59.17	30.85	2.18191E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1098	.006441	3.71E+03	49.69	74.75	1.72310E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
20	1099	.023784	3.71E+03	56.02	47.28	2.00041E+02	3.71E+03	0.	1.44E-08	-4.70E+02	-9.54E+01	8.00E+01
21	1051	.000041	3.71E+03	7.51	88.34	5.72716E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1052	.000072	3.71E+03	6.92	83.37	5.71961E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1054	.000062	3.71E+03	17.91	83.65	5.96705E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1055	.000086	3.71E+03	9.25	90.06	5.75274E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1056	.000127	3.71E+03	17.89	72.56	5.96564E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1057	.000275	3.71E+03	13.07	85.53	5.82390E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1058	.001069	3.71E+03	18.26	71.74	5.97914E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1059	.001554	3.71E+03	16.29	70.74	5.91535E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1061	.000080	3.71E+03	9.37	87.93	4.59336E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1063	.000141	3.71E+03	8.63	81.73	4.56995E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1064	.000110	3.71E+03	22.01	82.25	4.89494E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1065	.000164	3.71E+03	11.51	90.07	4.63118E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1066	.002336	3.71E+03	21.99	68.37	4.89412E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1067	.000511	3.71E+03	15.19	84.48	4.72545E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1068	.001997	3.71E+03	22.43	67.57	4.90957E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1069	.002312	3.71E+03	20.08	73.69	4.83168E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1071	.000187	3.71E+03	12.43	87.27	3.79532E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1073	.000329	3.71E+03	11.46	79.02	3.46708E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1074	.000217	3.71E+03	28.37	80.16	3.86166E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1075	.000359	3.71E+03	15.22	90.10	3.52148E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1076	.004577	3.71E+03	23.34	62.14	3.86175E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1077	.001086	3.71E+03	21.20	82.84	3.64456E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1078	.003688	3.71E+03	28.37	61.13	3.88031E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1079	.005682	3.71E+03	26.02	68.97	3.78129E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1081	.000611	3.71E+03	18.35	86.00	2.37892E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1082	.001058	3.71E+03	16.96	73.76	2.36067E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1084	.000457	3.71E+03	39.09	76.88	2.90940E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1085	.001760	3.71E+03	22.26	90.14	2.43947E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1086	.000972	3.71E+03	79.37	51.66	2.86818E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1087	.002719	3.71E+03	30.27	79.99	2.61438E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1088	.007595	3.71E+03	39.68	50.33	2.93410E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1089	.012723	3.71E+03	36.30	61.03	2.80184E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1091	.003709	3.71E+03	33.81	82.92	1.34560E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1092	.005846	3.71E+03	31.63	59.81	1.31307E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1094	.000747	3.71E+03	58.64	72.10	2.14848E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1095	.003710	3.71E+03	33.58	90.23	1.45162E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1096	.015514	3.71E+03	58.62	32.82	2.14693E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1097	.006441	3.71E+03	49.69	74.75	1.72310E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1098	.011959	3.71E+03	59.17	30.85	2.18191E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01
21	1099	.023784	3.71E+03	56.02	47.28	2.00041E+02	3.71E+03	0.	1.44E-08	-4.70E+02	9.54E+01	8.00E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

150	1053	.000032	2.80E+04	84.53	90.79	4.85731E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1052	.000003	2.80E+04	83.96	90.79	4.86820E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1060	.000100	2.80E+04	82.88	91.02	3.73393E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1062	.000008	2.80E+04	82.14	91.02	3.74398E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1073	.000498	2.80E+04	79.85	91.46	2.62492E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1072	.000046	2.80E+04	78.83	91.45	2.64531E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1099	.044185	2.80E+04	72.76	92.45	1.56120E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1082	.001819	2.80E+04	71.26	92.40	1.59475E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1090	.439157	2.80E+04	52.72	95.01	7.64906E+01	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1092	.016158	2.80E+04	51.91	94.61	8.30409E+01	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1095	.075355	2.80E+04	21.77	44.27	1.54136E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
150	1097	.002933	2.80E+04	32.70	56.78	1.24695E+02	-7.72E-08	1.98E+04	1.98E+04	-3.82E+02	-7.21E+01	-7.21E+01
151	1050	.000217	2.80E+04	81.52	91.22	3.13775E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1052	.000019	2.80E+04	80.65	91.21	3.15457E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1059	.001746	2.80E+04	76.92	91.87	2.04554E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1052	.000130	2.80E+04	75.68	91.85	2.07126E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1070	.264457	2.80E+04	64.10	93.61	1.05933E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1072	.010037	2.80E+04	62.47	93.45	1.10918E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1080	.406454	2.80E+04	55.25	94.72	8.12900E+01	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1082	.015083	2.80E+04	54.15	94.38	8.74768E+01	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1090	.018229	2.80E+04	73.93	92.29	1.67294E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
151	1092	.009955	2.80E+04	72.50	92.25	1.70340E+02	-7.72E-08	1.98E+04	1.98E+04	-2.07E+02	-7.21E+01	-7.21E+01
152	1050	.079598	2.80E+04	71.91	92.57	1.49979E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1052	.002707	2.80E+04	70.38	92.51	1.52599E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1060	.439739	2.80E+04	51.44	95.16	7.42445E+01	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1062	.015331	2.80E+04	50.80	94.72	8.10617E+01	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1070	.185869	2.80E+04	67.63	93.15	1.21622E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1072	.007101	2.80E+04	65.99	93.04	1.25899E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
152	1080	.001095	2.80E+04	79.06	91.71	2.23749E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1082	.000107	2.80E+04	76.93	91.69	2.26102E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1090	.000164	2.80E+04	82.03	91.15	3.33657E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
152	1092	.000014	2.80E+04	81.21	91.14	3.35240E+02	-7.72E-08	1.98E+04	1.98E+04	-3.25E+01	-7.21E+01	-7.21E+01
153	1051	.390456	2.80E+04	57.06	94.50	8.51155E+01	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1052	.014222	2.80E+04	55.79	94.20	9.11230E+01	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1055	.007301	2.80E+04	25.53	45.92	1.58608E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1057	.003193	2.80E+04	35.31	58.36	1.30217E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1059	.000722	2.80E+04	43.58	100.96	8.64284E+01	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1060	.011641	2.80E+04	74.62	92.19	1.74448E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1062	.000653	2.80E+04	73.22	92.16	1.77457E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1070	.000354	2.80E+04	80.56	91.36	2.82156E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1072	.000032	2.80E+04	79.61	91.35	2.84126E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1081	.000079	2.80E+04	83.24	90.97	3.93425E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1082	.000007	2.80E+04	82.54	91.97	3.94769E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1090	.000027	2.80E+04	84.75	90.76	5.05912E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
153	1092	.000002	2.80E+04	84.20	90.75	5.06957E+02	-7.72E-08	1.98E+04	1.98E+04	1.43E+02	-7.21E+01	-7.21E+01
154	1050	.000032	2.80E+04	84.53	90.79	4.85731E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1051	.000003	2.80E+04	83.96	90.79	4.86820E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1050	.000100	2.80E+04	82.89	91.02	3.73393E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1051	.000008	2.80E+04	82.14	91.02	3.74308E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1070	.000498	2.80E+04	79.85	91.46	2.62492E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1071	.000046	2.80E+04	78.83	91.45	2.64501E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1070	.044185	2.80E+04	72.76	92.45	1.56120E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1081	.001319	2.80E+04	71.26	92.40	1.59475E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1090	.430157	2.80E+04	52.72	95.01	7.64106E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1091	.016158	2.80E+04	51.91	94.61	8.30409E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1096	.005355	2.80E+04	21.77	44.27	1.54106E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
154	1098	.002973	2.80E+04	32.70	56.78	1.24595E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.82E+02	7.21E+01	-7.21E+01
155	1050	.000217	2.80E+04	81.52	91.22	3.13775E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1051	.000019	2.80E+04	80.65	91.21	3.15457E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1050	.001745	2.80E+04	76.92	91.87	2.04554E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1051	.000180	2.80E+04	75.58	91.85	2.07126E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1070	.264467	2.80E+04	64.10	93.61	1.05933E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1071	.010037	2.80E+04	62.47	93.45	1.10318E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1090	.406454	2.80E+04	55.25	94.72	8.12000E+01	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1081	.315083	2.80E+04	54.15	94.39	8.74768E+01	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1090	.018229	2.80E+04	73.93	92.29	1.67204E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
155	1091	.000955	2.80E+04	72.50	92.25	1.70340E+02	-7.72E-08	-1.98E+04	1.98E+04	-2.07E+02	7.21E+01	-7.21E+01
156	1050	.070508	2.80E+04	71.91	92.57	1.49079E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1051	.002707	2.80E+04	70.38	92.51	1.52589E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1060	.439739	2.80E+04	51.44	95.16	7.42445E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I, J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
156	1061	.016381	2.80E+04	50.80	94.72	8.10617E+01	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1070	.185469	2.80E+04	67.63	93.15	1.21622E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1071	.007101	2.80E+04	65.99	93.04	1.25499E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1080	.001095	2.80E+04	79.06	91.71	2.23749E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1081	.000107	2.80E+04	75.90	91.69	2.26132E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1090	.000164	2.80E+04	82.03	91.15	3.37657E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
156	1091	.000014	2.80E+04	81.21	91.14	3.35240E+02	-7.72E-08	-1.98E+04	1.98E+04	-3.25E+01	7.21E+01	-7.21E+01
157	1050	.390456	2.80E+04	57.06	94.50	8.51155E+01	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1051	.014222	2.80E+04	55.79	94.20	9.11230E+01	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1056	.007375	2.80E+04	25.53	45.53	1.58022E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1058	.003173	2.80E+04	36.31	58.36	1.30217E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1059	.000722	2.80E+04	43.58	100.96	9.64284E+01	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1060	.011641	2.80E+04	74.62	92.19	1.74448E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1061	.009663	2.80E+04	73.22	92.16	1.77457E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1070	.000354	2.80E+04	80.56	91.76	2.82156E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1071	.000032	2.80E+04	79.61	91.35	2.84026E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1080	.000079	2.80E+04	83.24	90.97	3.93425E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1081	.000007	2.80E+04	82.54	90.97	3.94769E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1090	.000027	2.80E+04	84.75	90.76	5.05312E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
157	1091	.000002	2.80E+04	84.20	90.75	5.06357E+02	-7.72E-08	-1.98E+04	1.98E+04	1.43E+02	7.21E+01	-7.21E+01
140	1053	.000012	3.27E+04	12.66	91.38	5.81355E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1054	.000011	3.27E+04	2.87	91.41	5.68514E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1055	.000557	3.27E+04	11.63	78.75	5.79707E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1056	.000544	3.27E+04	1.66	88.50	5.68457E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1057	.000430	3.27E+04	10.60	79.95	5.77565E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1058	.000430	3.27E+04	4.29	87.49	5.69395E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1059	.000734	3.27E+04	7.58	84.42	5.72800E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1063	.000023	3.27E+04	15.70	91.70	4.71390E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1064	.000022	3.27E+04	3.59	91.76	4.54693E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1065	.001067	3.27E+04	14.44	76.04	4.68613E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1066	.001065	3.27E+04	2.08	87.95	4.54098E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1067	.000824	3.27E+04	13.18	77.51	4.66384E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1068	.000825	3.27E+04	5.36	86.86	4.55794E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1069	.001409	3.27E+04	9.45	83.05	4.60341E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1073	.000055	3.27E+04	20.58	92.21	3.62958E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1074	.000048	3.27E+04	4.79	92.35	3.40391E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1075	.002416	3.27E+04	18.98	71.66	3.59343E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1076	.002408	3.27E+04	2.77	87.26	3.40198E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1077	.001969	3.27E+04	17.77	73.55	3.56339E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1078	.001873	3.27E+04	7.14	85.82	3.42458E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1079	.003207	3.27E+04	12.53	80.79	3.48391E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1083	.000185	3.27E+04	29.47	93.09	2.59345E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1084	.000137	3.27E+04	7.19	93.53	2.27889E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1085	.007173	3.27E+04	27.37	63.60	2.54262E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I, J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
140	1086	.007065	3.27E+04	4.17	85.88	2.26399E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1087	.005550	3.27E+04	25.21	66.17	2.49570E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1088	.005610	3.27E+04	10.68	83.76	2.29781E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1089	.009626	3.27E+04	18.49	76.47	2.38195E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1093	.001177	3.27E+04	48.77	94.73	1.69627E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1094	.001174	3.27E+04	14.29	96.97	1.15373E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1095	.024380	3.27E+04	46.28	45.66	1.61749E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1096	.023765	3.27E+04	8.37	81.72	1.13105E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1097	.013489	3.27E+04	43.56	49.19	1.54269E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1098	.018214	3.27E+04	20.65	77.96	1.19637E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
140	1099	.035641	3.27E+04	34.04	65.62	1.34917E+02	3.27E+04	0.	1.27E-07	-4.70E+02	-5.10E+01	-3.99E-10
135	1053	.000809	3.27E+04	43.93	94.37	1.83715E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1054	.000366	3.27E+04	12.16	95.94	1.35233E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1055	.019767	3.27E+04	41.48	50.16	1.76466E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1056	.018825	3.27E+04	7.10	82.85	1.33202E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1057	.015742	3.27E+04	38.80	53.53	1.69637E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1058	.015342	3.27E+04	17.86	79.65	1.38391E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1059	.024868	3.27E+04	29.74	68.54	1.52251E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1060	.000144	3.27E+04	27.39	92.89	2.77288E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1064	.000111	3.27E+04	6.60	93.24	2.47842E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1065	.005750	3.27E+04	25.40	65.49	2.72540E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1066	.005686	3.27E+04	3.82	86.22	2.46749E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1067	.004439	3.27E+04	23.35	67.92	2.68168E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1068	.004473	3.27E+04	9.81	84.27	2.49856E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1069	.007683	3.27E+04	17.05	77.51	2.57523E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1073	.000147	3.27E+04	19.50	92.10	3.82123E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1074	.000041	3.27E+04	4.52	92.22	3.61324E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1075	.002054	3.27E+04	17.98	72.63	3.78692E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1076	.002049	3.27E+04	2.62	87.41	3.60376E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1077	.001569	3.27E+04	16.44	74.43	3.75558E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1078	.001591	3.27E+04	6.74	86.05	3.62709E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1079	.002727	3.27E+04	11.84	81.30	3.68932E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1083	.000020	3.27E+04	15.06	91.63	4.91060E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1084	.000019	3.27E+04	3.44	91.69	4.76154E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1085	.000940	3.27E+04	13.85	76.62	4.88394E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1086	.000939	3.27E+04	1.99	88.04	4.74486E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1087	.000726	3.27E+04	12.63	78.03	4.85969E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1088	.000727	3.27E+04	5.13	86.99	4.76109E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1089	.001241	3.27E+04	9.05	83.34	4.80176E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1093	.000011	3.27E+04	12.24	91.33	6.01375E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1094	.000010	3.27E+04	2.77	91.36	5.88889E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1095	.000593	3.27E+04	11.24	79.13	5.99702E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1096	.000593	3.27E+04	1.60	88.42	5.88430E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1097	.000304	3.27E+04	18.24	80.29	5.97728E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
135	1098	.000388	3.27E+04	4.14	87.57	5.89740E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10

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MODEL * CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
135	1099	.000662	2.27E+04	7.32	84.61	5.93028E+02	-3.27E+04	0.	1.27E-07	2.30E+02	-5.10E+01	3.99E-10
796	1052	.000017	2.41E+04	86.94	84.72	3.94990E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1052	.000168	2.41E+04	85.71	82.59	2.81877E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1070	.008443	2.41E+04	51.18	108.10	2.11528E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1072	.016698	2.41E+04	82.88	77.64	1.69954E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1050	.027129	2.41E+04	29.98	117.57	1.42006E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1092	.031458	2.41E+04	71.28	56.34	6.56206E+01	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1090	.023699	2.41E+04	25.50	116.58	1.46399E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1092	.032511	2.41E+04	73.83	61.26	7.56285E+01	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1075	.002426	2.41E+04	37.15	27.60	1.91627E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
796	1097	.001680	2.41E+04	28.96	37.42	1.76037E+02	-3.40E-07	2.08E+04	-1.23E+04	-2.95E+02	-1.15E+02	-1.31E+01
798	1050	.026692	2.41E+04	17.91	110.15	1.39344E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1052	.031744	2.41E+04	69.32	52.43	5.96428E+01	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1055	.002335	2.41E+04	34.75	24.00	1.85900E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1057	.001954	2.41E+04	24.88	34.57	1.69784E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1060	.024538	2.41E+04	28.25	115.90	1.50514E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1062	.032429	2.41E+04	75.19	63.82	8.24310E+01	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1065	.000294	2.41E+04	38.22	29.13	1.94413E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1067	.001068	2.41E+04	30.67	38.67	1.79065E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1070	.011161	2.41E+04	54.40	106.77	2.27781E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	MODE J	F(I, J)	APEA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
798	1072	.012452	2.41E+04	83.63	78.95	1.89801E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1082	.000096	2.41E+04	86.00	83.08	3.02170E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
798	1092	.000013	2.41E+04	87.09	84.98	4.15287E+02	-3.40E-07	2.08E+04	-1.23E+04	5.50E+01	-1.15E+02	-1.31E+01
711	1050	.003488	2.99E+04	19.98	106.99	1.09530E+02	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01
311	1051	.004828	2.99E+04	67.99	67.99	6.18988E+01	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01
311	1060	.007401	2.99E+04	53.32	100.71	1.70741E+02	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01
311	1061	.000411	2.99E+04	80.83	80.83	1.45620E+02	6.57E-07	-2.99E+04	-7.98E-18	1.17E+02	1.02E+02	-4.71E+01
380	1053	.001009	2.81E+04	84.43	74.37	7.81160E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1055	.001037	2.81E+04	85.21	80.78	7.86215E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1057	.000024	2.81E+04	86.65	74.48	7.95846E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1053	.000017	2.81E+04	93.53	71.76	6.72511E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1065	.000077	2.81E+04	84.45	78.48	6.78609E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1067	.000056	2.81E+04	86.13	72.01	6.89744E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1077	.000036	2.81E+04	87.31	68.18	5.66392E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1075	.000162	2.81E+04	83.43	76.33	5.73479E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1077	.000055	2.81E+04	85.45	68.71	5.86514E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1083	.000056	2.81E+04	89.59	63.01	4.63354E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1085	.000140	2.81E+04	82.01	73.33	4.72482E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1087	.000077	2.81E+04	84.54	64.14	4.88340E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1093	.000035	2.81E+04	78.12	55.12	3.68121E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
380	1095	.000079	2.81E+04	80.82	69.05	3.78935E+02	-2.18E-07	2.81E+04	-1.09E-07	-6.51E+02	-1.23E-08	2.25E+02
385	1053	.000006	2.05E+04	85.82	76.05	8.73140E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1055	.000014	2.05E+04	85.71	81.12	8.77754E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1057	.000012	2.05E+04	86.99	76.10	8.86391E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1063	.000007	2.05E+04	84.30	74.00	7.63505E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1065	.000023	2.05E+04	85.10	79.85	7.68777E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1067	.000019	2.05E+04	86.58	74.13	7.78624E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1073	.000011	2.05E+04	83.36	71.26	6.55362E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1075	.000041	2.05E+04	84.31	78.18	6.61496E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1077	.000026	2.05E+04	86.04	71.55	6.72315E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1083	.000019	2.05E+04	82.07	67.48	5.49590E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1085	.000057	2.05E+04	83.23	75.92	5.56391E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1087	.000014	2.05E+04	85.32	68.08	5.70407E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
385	1093	.000003	2.05E+04	80.26	61.97	4.47375E+02	-1.60E-07	2.05E+04	-7.99E-08	-7.46E+02	-1.31E-08	2.25E+02
390	1054	.000009	2.81E+04	84.44	74.36	7.81135E+02	-2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
397	1056	.000076	2.81E+04	85.22	80.31	7.86224E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1058	.000024	2.81E+04	86.66	74.49	7.95440E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
397	1064	.000017	2.81E+04	83.54	71.76	6.72619E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1066	.000077	2.81E+04	84.46	78.49	6.78599E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1068	.000056	2.81E+04	86.14	72.02	6.89738E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
397	1074	.000036	2.81E+04	82.32	68.18	5.66379E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1076	.000162	2.81E+04	83.44	76.34	5.73468E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1078	.000055	2.81E+04	85.46	68.72	5.86676E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1084	.000056	2.81E+04	80.61	63.01	4.63338E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
397	1086	.000140	2.81E+04	82.03	73.75	4.72468E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
397	1088	.000077	2.81E+04	84.55	64.15	4.88331E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1094	.000035	2.81E+04	78.13	55.12	3.68101E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
390	1096	.000078	2.81E+04	80.04	69.06	3.78917E+02	2.18E-07	-2.81E+04	1.09E-07	-6.51E+02	-1.00E-01	2.25E+02
395	1054	.000006	2.05E+04	85.03	76.05	8.73132E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1056	.000013	2.05E+04	85.72	81.35	8.77754E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1058	.000012	2.05E+04	87.00	76.10	8.86336E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1064	.000067	2.05E+04	84.31	74.00	7.63436E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1066	.000023	2.05E+04	85.11	79.85	7.68769E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1068	.000019	2.05E+04	86.58	74.13	7.78518E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1074	.000011	2.05E+04	83.37	71.26	6.55350E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1076	.000041	2.05E+04	84.31	78.19	6.61486E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1078	.000025	2.05E+04	86.05	71.56	6.72908E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1084	.000019	2.05E+04	82.08	67.48	5.49576E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1086	.000057	2.05E+04	83.24	75.93	5.56379E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1094	.000014	2.05E+04	85.33	68.08	5.70399E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
395	1096	.000003	2.05E+04	80.27	61.96	4.47358E+02	1.60E-07	-2.05E+04	7.99E-08	-7.46E+02	-1.00E-01	2.25E+02
399	1053	.000056	4.15E+03	62.25	73.02	7.20994E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1054	.000056	4.15E+03	62.25	73.02	7.20994E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1055	.000274	4.15E+03	63.82	79.25	7.26576E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1056	.000258	4.15E+03	63.82	79.49	7.26594E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1057	.000289	4.15E+03	66.33	73.20	7.36491E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02

MODFL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NOOF J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
399	1058	.000289	4.15E+03	66.33	73.20	7.36991E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1059	.000684	4.15E+03	67.24	67.76	7.40472E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1063	.000083	4.15E+03	65.43	69.93	6.13646E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1064	.000043	4.15E+03	65.43	69.93	6.13646E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1065	.000406	4.15E+03	67.24	77.38	6.20196E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1066	.000406	4.15E+03	67.24	77.38	6.20196E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1067	.000406	4.15E+03	70.10	70.31	6.32365E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1068	.000406	4.15E+03	70.10	70.31	6.32365E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1069	.000938	4.15E+03	71.13	63.87	6.36419E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1073	.000127	4.15E+03	69.96	65.57	5.09199E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1074	.000027	4.15E+03	69.96	65.57	5.09199E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1075	.000612	4.15E+03	72.06	74.80	5.17173E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1076	.000177	4.15E+03	72.06	74.80	5.17173E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1077	.000548	4.15E+03	75.33	66.38	5.31608E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1078	.000351	4.15E+03	75.33	66.38	5.31608E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1079	.001712	4.15E+03	76.50	58.50	5.36424E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1083	.000185	4.15E+03	75.76	59.09	4.09375E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1085	.000813	4.15E+03	79.19	71.16	4.19617E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1087	.000526	4.15E+03	82.90	60.85	4.37403E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1089	.000999	4.15E+03	84.22	50.78	4.43243E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1093	.000091	4.15E+03	87.62	48.92	3.20473E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1095	.000202	4.15E+03	90.33	65.97	3.32343E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
399	1097	.000002	4.15E+03	94.29	53.13	3.55003E+02	2.94E+03	2.29E-08	2.94E+03	-5.88E+02	-1.08E-08	2.25E+02
1055	1056	.0069755	5.17E+03	18.39	18.03	1.31390E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1057	.015740	5.17E+03	79.61	76.84	3.97649E+01	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1058	.055797	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1059	.088759	5.17E+03	54.68	53.71	8.14442E+01	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1066	.032622	5.17E+03	44.23	44.23	1.73384E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1067	.001545	5.17E+03	86.59	85.70	1.20736E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1068	.022966	5.17E+03	54.34	49.31	1.63671E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1069	.023828	5.17E+03	79.36	69.88	1.40114E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1076	.006480	5.17E+03	61.74	61.74	2.63104E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1077	.000043	5.17E+03	88.22	87.76	2.31442E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1078	.003832	5.17E+03	68.16	65.41	2.56469E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1079	.002172	5.17E+03	78.79	78.52	2.42110E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1086	.001604	5.17E+03	70.12	70.12	3.66338E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1087	.000007	5.17E+03	88.81	88.49	3.44304E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1088	.000895	5.17E+03	74.79	72.84	3.61602E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1089	.000427	5.17E+03	82.30	82.12	3.51504E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1096	.000545	5.17E+03	74.78	74.78	4.74527E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00

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MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1055	1097	.000002	5.17E+03	89.10	88.87	4.57731E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1099	.000293	5.17E+03	78.31	76.90	4.70880E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1055	1099	.000134	5.17E+03	84.17	84.03	4.63216E+02	6.93E-08	-4.90E+03	1.63E+03	9.78E+01	6.57E+01	-7.50E+00
1056	1057	.055900	5.16E+03	35.30	24.69	1.17440E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1058	.016279	5.16E+03	79.25	76.84	3.97649E+01	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1059	.087597	5.16E+03	54.32	53.71	8.14443E+01	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1065	.032530	5.16E+03	44.25	44.24	1.73396E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1067	.027023	5.16E+03	54.78	49.32	1.63484E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1068	.001564	5.16E+03	86.61	85.70	1.20754E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1069	.027944	5.16E+03	70.31	69.88	1.44119E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1075	.006465	5.16E+03	61.81	61.74	2.63120E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1077	.003827	5.16E+03	68.19	65.42	2.56435E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1070	.000042	5.16E+03	88.39	87.76	2.31460E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1079	.002166	5.16E+03	78.82	78.52	2.47127E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1085	.001597	5.16E+03	70.22	70.12	3.66355E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1087	.000881	5.16E+03	74.77	72.84	3.61520E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1088	.001007	5.16E+03	83.91	88.49	3.44322E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1089	.000473	5.16E+03	82.38	82.12	3.51532E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1095	.000044	5.16E+03	74.89	74.78	4.74545E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1097	.001291	5.16E+03	78.48	76.90	4.70996E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1098	.000002	5.16E+03	89.21	88.87	4.57749E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1056	1099	.000132	5.16E+03	84.26	84.03	4.63234E+02	1.29E+01	4.90E+03	1.60E+03	9.78E+01	-6.57E+01	-7.50E+00
1057	1059	.061003	4.09E+03	41.95	41.95	9.30300E+01	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1059	.093268	4.09E+03	57.97	73.98	4.83794E+01	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1065	.001950	4.09E+03	85.70	86.59	1.20736E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1066	.028989	4.09E+03	49.31	54.34	1.63571E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1069	.015607	4.09E+03	61.96	61.96	1.47122E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1069	.015132	4.09E+03	78.04	83.81	1.23041E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1075	.000054	4.09E+03	87.76	88.22	2.31462E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1075	.004837	4.09E+03	65.41	68.26	2.56469E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1079	.002231	4.09E+03	73.69	73.89	2.46238E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1079	.000405	4.09E+03	83.68	86.72	2.33076E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1085	.000009	4.09E+03	89.49	88.81	3.46394E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1086	.001110	4.09E+03	72.84	74.78	3.61502E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1089	.003457	4.09E+03	78.75	78.75	3.54419E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1089	.000970	4.09E+03	85.74	87.78	3.45495E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1095	.000003	4.09E+03	88.87	89.10	4.57731E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1096	.000370	4.09E+03	76.90	78.31	4.70880E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1099	.001845	4.09E+03	81.45	81.46	4.65387E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1057	1099	.000021	4.09E+03	86.79	88.33	4.58559E+02	4.31E-08	-3.04E+03	2.74E+03	9.78E+01	4.65E+01	-4.24E+01
1059	1059	.093268	4.09E+03	57.97	73.98	4.83794E+01	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1059	1065	.028989	4.09E+03	49.31	54.34	1.63571E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1059	1066	.001950	4.09E+03	85.70	86.59	1.20736E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1058	1057	.019607	4.09E+03	61.96	61.96	1.47122E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1069	.010132	4.09E+03	78.04	83.81	1.23841E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1075	.004837	4.09E+03	65.41	68.16	2.56469E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1076	.000054	4.09E+03	87.76	88.22	2.31442E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1077	.002231	4.09E+03	73.69	73.69	2.46238E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1079	.000405	4.09E+03	83.68	86.72	2.73376E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1085	.001118	4.09E+03	72.84	74.70	3.61602E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1086	.000009	4.09E+03	88.49	88.81	3.44704E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1087	.000457	4.09E+03	78.75	78.75	3.54419E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1089	.000070	4.09E+03	85.74	87.78	3.45405E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1095	.000370	4.09E+03	76.90	78.31	4.70880E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1076	.000003	4.09E+03	88.87	89.10	4.57731E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1097	.000145	4.09E+03	81.45	81.45	4.65787E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1058	1099	.000021	4.09E+03	86.79	86.33	4.58559E+02	-4.31E-08	3.04E+03	2.74E+03	9.78E+01	-4.65E+01	-4.24E+01
1059	1065	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1066	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1057	.005272	7.87E+03	83.81	78.04	1.23414E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1068	.005272	7.87E+03	83.81	78.04	1.23414E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1075	.001425	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1076	.001425	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1077	.000211	7.87E+03	86.72	83.68	2.33076E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1078	.000211	7.87E+03	86.72	83.68	2.33076E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1085	.000281	7.87E+03	82.12	82.30	3.51564E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1086	.000281	7.87E+03	82.12	82.30	3.51564E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1087	.000036	7.87E+03	87.78	85.74	3.45405E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1088	.000036	7.87E+03	87.78	85.74	3.45405E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1095	.000088	7.87E+03	84.03	84.17	4.63216E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1096	.000088	7.87E+03	84.03	84.17	4.63216E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1097	.000011	7.87E+03	88.33	86.79	4.58559E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1059	1098	.000011	7.87E+03	88.33	86.79	4.58559E+02	0.	0.	7.87E+03	9.78E+01	6.72E-09	-5.57E+01
1065	1066	.069758	5.17E+03	18.39	18.39	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1067	.015740	5.17E+03	79.61	76.84	3.97649E+01	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1068	.055797	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1069	.088759	5.17E+03	54.68	53.71	8.14442E+01	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1076	.037622	5.17E+03	44.23	44.23	1.73384E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1077	.001545	5.17E+03	86.59	85.79	1.20736E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1078	.022966	5.17E+03	54.34	49.31	1.63671E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1079	.023828	5.17E+03	70.36	69.88	1.40104E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1086	.006480	5.17E+03	61.74	61.74	2.63104E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1065	1067	.000043	5.17E+03	88.22	87.76	2.31442E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1088	.003832	5.17E+03	68.16	65.41	2.56469E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1089	.002172	5.17E+03	78.79	78.52	2.42110E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1096	.001604	5.17E+03	70.12	70.12	3.66338E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1097	.000007	5.17E+03	88.81	88.49	3.44304E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1098	.000885	5.17E+03	74.70	72.84	3.61602E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1065	1099	.000427	5.17E+03	82.30	82.12	3.51564E+02	6.93E-08	-4.90E+03	1.63E+03	-1.62E+01	6.57E+01	-7.50E+00
1066	1067	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1068	.015740	5.17E+03	79.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1069	.088759	5.17E+03	54.68	53.71	8.144+2E+01	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1075	.072672	5.17E+03	44.23	44.23	1.73884E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1077	.022966	5.17E+03	54.34	49.31	1.63671E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1078	.001545	5.17E+03	86.59	85.70	1.20736E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1079	.023828	5.17E+03	70.36	69.88	1.40104E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1085	.006490	5.17E+03	61.74	61.74	2.63104E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1087	.003832	5.17E+03	68.16	65.41	2.56469E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1088	.000043	5.17E+03	88.22	87.76	2.31442E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1089	.002172	5.17E+03	78.79	78.52	2.42110E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1095	.001604	5.17E+03	70.12	70.12	3.66338E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1097	.000007	5.17E+03	74.70	72.84	3.61602E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1098	.000885	5.17E+03	88.81	88.49	3.44304E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1066	1099	.000427	5.17E+03	82.30	82.12	3.51564E+02	-3.35E-08	4.90E+03	1.63E+03	-1.62E+01	-6.56E+01	-7.50E+00
1067	1068	.061000	4.09E+03	41.95	41.95	9.30000E+01	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1069	.093268	4.09E+03	57.97	73.98	4.83784E+01	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1075	.001950	4.09E+03	85.70	86.59	1.20736E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1076	.029988	4.09E+03	49.31	54.34	1.63671E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1078	.019607	4.09E+03	61.96	61.96	1.47122E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1079	.010132	4.09E+03	78.04	83.81	1.23341E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1085	.000354	4.09E+03	87.76	88.22	2.31442E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1086	.004377	4.09E+03	65.41	68.16	2.56469E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1087	.002271	4.09E+03	73.69	73.69	2.46238E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1089	.009405	4.09E+03	83.68	86.72	2.33176E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1095	.000009	4.09E+03	88.49	88.81	3.44304E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1096	.001118	4.09E+03	72.84	74.70	3.61602E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1098	.000457	4.09E+03	78.75	78.75	3.54419E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1067	1099	.000070	4.09E+03	85.74	87.78	3.45485E+02	4.31E-08	-3.04E+03	2.74E+03	-1.62E+01	4.65E+01	-4.24E+01
1068	1069	.093268	4.09E+03	57.97	73.98	4.83784E+01	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1075	.028988	4.09E+03	49.31	54.34	1.63671E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1076	.001950	4.09E+03	85.70	86.59	1.20736E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1077	.019607	4.09E+03	61.96	61.96	1.47122E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1079	.010172	4.09E+03	78.04	83.81	1.23341E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1085	.004837	4.09E+03	65.41	68.16	2.56469E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1086	.000054	4.09E+03	87.76	88.22	2.31442E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01

MODEL = CONTAM STEP = 1
 PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

NODE I	NODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1068	1097	.002231	4.09E+03	73.69	73.69	2.46238E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1089	.000405	4.09E+03	83.68	86.72	2.33074E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1069	1095	.001118	4.09E+03	72.84	74.70	3.61602E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1096	.000009	4.09E+03	88.49	89.81	3.44304E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1097	.000457	4.09E+03	78.75	78.75	3.54419E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1068	1099	.000070	4.09E+03	85.74	87.78	3.45405E+02	-4.31E-08	3.04E+03	2.74E+03	-1.62E+01	-4.65E+01	-4.24E+01
1069	1075	.015649	7.87E+03	69.38	70.36	1.40104E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1076	.015649	7.87E+03	69.89	70.36	1.40104E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1077	.005272	7.87E+03	83.81	78.04	1.23341E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1078	.005272	7.87E+03	83.81	78.04	1.23341E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1079	.001426	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1085	.001426	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1087	.000211	7.87E+03	86.72	83.68	2.33076E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1088	.000211	7.87E+03	86.72	83.68	2.33076E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1095	.000281	7.87E+03	82.12	82.30	3.51564E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1096	.000281	7.87E+03	82.12	82.30	3.51564E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1097	.000036	7.87E+03	87.78	85.74	3.45405E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1069	1098	.000036	7.87E+03	87.78	85.74	3.45405E+02	0.	0.	7.87E+03	-1.62E+01	7.60E-09	-5.57E+01
1075	1076	.069758	5.17E+03	18.39	18.39	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1077	.015740	5.17E+03	79.61	76.84	3.97649E+01	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1078	.055797	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1079	.088759	5.17E+03	54.68	53.71	8.14442E+01	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1086	.072622	5.17E+03	44.23	44.23	1.73334E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1087	.001545	5.17E+03	86.59	85.70	1.20736E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1088	.022966	5.17E+03	54.34	49.31	1.63671E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1089	.023828	5.17E+03	70.36	69.88	1.40104E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1095	.066480	5.17E+03	61.74	61.74	2.63104E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1097	.000043	5.17E+03	88.22	87.76	2.31442E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1098	.003832	5.17E+03	68.16	65.41	2.55469E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1075	1099	.002172	5.17E+03	78.79	78.52	2.42110E+02	6.93E-08	-4.90E+03	1.63E+03	-1.30E+02	6.57E+01	-7.50E+00
1076	1077	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1078	.015740	5.17E+03	79.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1079	.088759	5.17E+03	54.68	53.71	8.14442E+01	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1085	.032622	5.17E+03	44.23	44.23	1.73334E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1087	.022966	5.17E+03	54.34	49.31	1.63671E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1088	.001545	5.17E+03	86.59	85.70	1.20736E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1089	.023828	5.17E+03	70.36	69.88	1.40104E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1095	.066480	5.17E+03	61.74	61.74	2.63104E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

MODE I	MODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1076	1097	.003832	5.17E+03	68.16	65.41	2.56469E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1098	.000043	5.17E+03	88.22	87.76	2.31442E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1076	1099	.002172	5.17E+03	78.79	78.52	2.42110E+02	-3.35E-08	4.90E+03	1.63E+03	-1.30E+02	-6.56E+01	-7.50E+00
1077	1078	.061000	4.09E+03	41.95	41.95	9.30300E+01	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1079	.093268	4.09E+03	57.97	73.98	4.83784E+01	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1095	.001950	4.09E+03	85.70	86.59	1.20736E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1096	.028908	4.09E+03	49.31	54.34	1.63671E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1088	.019607	4.09E+03	61.96	61.96	1.47122E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1099	.010132	4.09E+03	78.04	83.81	1.23341E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1095	.000054	4.09E+03	87.76	88.22	2.31442E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1096	.004837	4.09E+03	65.41	68.16	2.56469E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1098	.002271	4.09E+03	73.69	73.69	2.46238E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1077	1099	.000405	4.09E+03	83.68	86.72	2.33176E+02	4.31E-08	-3.04E+03	2.74E+03	-1.30E+02	4.65E+01	-4.24E+01
1078	1079	.093268	4.09E+03	57.97	73.98	4.83784E+01	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1085	.028908	4.09E+03	49.31	54.34	1.63671E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1086	.001950	4.09E+03	85.70	86.59	1.20736E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1097	.019607	4.09E+03	61.96	61.96	1.47122E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1099	.010132	4.09E+03	78.04	83.81	1.23341E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1095	.004837	4.09E+03	65.41	68.16	2.56469E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1096	.000054	4.09E+03	87.76	88.22	2.31442E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1097	.002271	4.09E+03	73.69	73.69	2.46238E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1078	1099	.000405	4.09E+03	83.68	86.72	2.33176E+02	-4.31E-08	3.04E+03	2.74E+03	-1.30E+02	-4.65E+01	-4.24E+01
1079	1095	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1096	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1087	.005272	7.87E+03	83.81	78.04	1.23341E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1098	.005272	7.87E+03	83.81	78.04	1.23341E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1095	.001426	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1096	.001426	7.87E+03	78.52	78.79	2.42110E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1097	.000211	7.87E+03	86.72	83.68	2.33176E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1079	1098	.000211	7.87E+03	86.72	83.68	2.33176E+02	0.	0.	7.87E+03	-1.30E+02	8.49E-09	-5.57E+01
1085	1086	.089758	5.17E+03	18.59	18.39	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1087	.015740	5.17E+03	79.61	76.84	3.97649E+01	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1088	.085797	5.17E+03	39.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1089	.009759	5.17E+03	54.68	53.71	8.14662E+01	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1096	.002622	5.17E+03	44.23	44.23	1.73384E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1085	1097	.001545	5.17E+03	86.59	85.70	1.20736E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00

MODEL = CONTAM STEP = 1
PROCESSING OPERATION DATA

SHUTTLE CONTAMINATION STUDY (SPACE LAB3 (RECEIVING SHUTTLE))

MODE I	MODE J	F(I,J)	AREA	THETI	THETJ	RADIUS	NORMAL VECTOR I			POSITION VECTOR I		
1085	1099	.023828	5.17E+03	70.36	69.88	1.40104E+02	6.93E-08	-4.90E+03	1.63E+03	-2.44E+02	6.57E+01	-7.50E+00
1086	1097	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1098	.015740	5.17E+03	79.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1099	.088759	5.17E+03	54.68	53.71	8.14442E+01	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1095	.032622	5.17E+03	44.23	44.23	1.73384E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1097	.022966	5.17E+03	54.34	49.31	1.63671E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1098	.001545	5.17E+03	86.59	86.70	1.20736E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1086	1099	.023828	5.17E+03	70.36	69.88	1.40104E+02	-3.35E-08	4.90E+03	1.63E+03	-2.44E+02	-6.56E+01	-7.50E+00
1087	1088	.061000	4.09E+03	41.95	41.95	9.30300E+01	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1099	.093268	4.09E+03	57.97	73.98	4.83784E+01	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1095	.001950	4.09E+03	85.70	86.59	1.20736E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1096	.020988	4.09E+03	49.31	54.34	1.63671E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1098	.019607	4.09E+03	61.96	61.96	1.47122E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1087	1099	.010132	4.09E+03	78.04	83.81	1.23941E+02	4.31E-08	-3.04E+03	2.74E+03	-2.44E+02	4.65E+01	-4.24E+01
1088	1089	.093268	4.09E+03	57.97	73.98	4.83784E+01	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1095	.024938	4.09E+03	49.31	54.34	1.63671E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1096	.001950	4.09E+03	85.70	86.59	1.20736E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1097	.019607	4.09E+03	61.96	61.96	1.47122E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1088	1099	.010132	4.09E+03	78.04	83.81	1.23941E+02	-4.31E-08	3.04E+03	2.74E+03	-2.44E+02	-4.65E+01	-4.24E+01
1089	1095	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1089	1096	.015649	7.87E+03	69.88	70.36	1.40104E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1089	1097	.005272	7.87E+03	83.81	78.04	1.23941E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1089	1098	.005272	7.87E+03	83.81	78.04	1.23941E+02	0.	0.	7.87E+03	-2.44E+02	9.38E-09	-5.57E+01
1095	1096	.069758	5.17E+03	18.39	18.39	1.31300E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1095	1097	.015740	5.17E+03	79.61	76.84	3.97649E+01	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1095	1098	.055797	5.17E+03	35.66	24.69	1.17440E+02	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1095	1099	.088759	5.17E+03	54.68	53.71	8.14442E+01	6.93E-08	-4.90E+03	1.63E+03	-3.58E+02	6.57E+01	-7.50E+00
1096	1097	.055797	5.17E+03	35.66	24.69	1.17440E+02	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1096	1098	.015740	5.17E+03	79.61	76.84	3.97649E+01	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1096	1099	.088759	5.17E+03	54.68	53.71	8.14442E+01	-3.35E-08	4.90E+03	1.63E+03	-3.58E+02	-6.56E+01	-7.50E+00
1097	1098	.061000	4.09E+03	41.95	41.95	9.30300E+01	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1097	1099	.093268	4.09E+03	57.97	73.98	4.83784E+01	4.31E-08	-3.04E+03	2.74E+03	-3.58E+02	4.65E+01	-4.24E+01
1098	1099	.093268	4.09E+03	57.97	73.98	4.83784E+01	-4.31E-08	3.04E+03	2.74E+03	-3.58E+02	-4.65E+01	-4.24E+01