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CLASSIFICATION CHANGE

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BI-MONTHLY WEIGHT AND BALANCE STATUS REPORT FOR CSM 011

CONTRACT NAS 9-150

(U)

1 APRIL 1965

Exhibit I, Paragraph 8.10

Prepared by

Weight Control

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(NASA-CR-117216) BIMONTHLY WEIGHT AND BALANCE STATUS REPORT FOR CSM 011 (North American Aviation, Inc.) 101 p

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DOWNGRADED AT 3 YEAR INTERVALS;
DECLASSIFIED AFTER 12 YEARS.

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INTRODUCTION

The following is a weight and balance status report for CSM 011 for SA 202 vehicle (CSM Unmanned Earth Orbital, Supercircular Re-entry). The data contained in this report are in accordance with SID 63-703 (CSM End Item Specification, Part I, Performance/Design Requirements, Spacecraft 011 Apollo), dated 11 January 1965.

The Command Module status includes 149 pounds of aft heat shield ballast to maintain the L/D of 0.34 at entry. To achieve the CM design weight consistent with the Block I control weight of 11,000 pounds, 120 pounds of additional ballast is required. The ballast added to the CM crew compartment replaces components for the Block I CM systems which were deleted for the CSM 011 mission. The crew compartment ballast simulates the weight and center of gravity of the deleted items. The ballast on the platform is required to simulate the entire platform assembly weight and center of gravity normally reacted by the crew couch attenuation struts on a manned mission. The platform weight and center of gravity simulates the 50, 70 and 90 percentile crewmen and all associated gear with the unitized couch in a 66 degree position (impact position). The Command Module also reflects the modification to the aft heat shield representing an increase of 280 pounds.

The Launch Escape System status weight is constrained to the 8200 pound control weight with a resulting LEV burnout center of gravity change from X_a 1125.0 to X_a 1122.7. The effect of this burnout LEV center of gravity change is being evaluated and will be verified by future tests. The LEV weight versus center of gravity and moments and products of inertia during main and pitch motor burning are presented in Section 4B.

The Service Module weight status is currently 360 pounds under the design weight of 10,200 pounds. The Service Module usable propellant loading of 22,300 pounds is consistent with the total burn time of 326.1 seconds as specified in NASA Letter No. FM 131-63-197 (2909MA, dated 9 March 1965) and MSC Internal Note No. 65-FM-13, Preliminary Spacecraft Reference Trajectory SA-202, dated 11 February 1965. The usable propellant includes a 0.5% loading tolerance as well as restart losses. The RCS for the CSM has a full capacity loading of propellant.

The Adapter (3480 pounds) reflects a decrease from the previously reported value. The decrease is based on actual weights of honeycomb panels.

In addition to the weight versus center of gravity and inertia curves in Section 4A, weight versus the SPS gimbal angles in the X-Y and X-Z planes and the true gimbal angle from the X axis during SPS burning are also included.

The weight distributions for the Launch Escape System, Command Module, Service Module, SM Propellant, and the Adapter are shown in Section 5. If there are no major changes in these distributions at the time of the next report, this section will be omitted.

A list of potential weight changes for each module is as follows:

COMMAND MODULE	(+198)*
Flotation system - cannister redesign.	+20
Increase the apex area due to structural modification.	+10
Add umbilical tension separation cylinder in the forward heat shield.	+5
Add vent line to each propellant and oxidizer tank (RCS) to increase service life.	+4
Replace the current HF whip antenna and utilize HF stem recovery antenna.	-2
Addition of three 40 amp. batteries and wiring to platform.	+103
Addition of an auxiliary distribution control box associated with addition of batteries but not on platform.	+48
Addition of battery control box assembly on platform.	+10

*Potential changes adopted in the configuration resulting in a change to the Command Module weight and center of gravity requirements will be compensated for by adjusting ballast in the aft heat shield, crew compartment, or the platform.

[redacted]

SERVICE MODULE	(+99)
Remove RCS plume heat shields and add cork sheet.	-5
Increase wiring provisions based on potting connectors.	+15
Increase fuel cell based on the addition of start-up potasium hydroxide wetting agent.	+8
Add dual propellant retention screens external to the existing reservoir.	+40
Modify SPS engine to use pneumatic action for the propellant valves.	+20
Increase the SPS engine based on a material change from titanium to steel for the gimbal bearing.	+13
Add heater blankets to the RCS housing.	+8

TECHNICAL REPORT INDEX/ABSTRACT

[redacted]

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Bi-Monthly Weight and Balance Status Report for CSM 011	
AUTHOR(S) D. D. Morgan	

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ABSTRACT

The Weight and Balance Status Report for CSM 011 presents summary mass property data for each module in addition to the usable SPS propellant required for the 326.1 second total burn time. The mass property data also includes the total vehicle from launch to Command Module and Service Module at SPS burnout, the LEV abort phase to CM impact and the normal CM entry mission. The CM is ballasted to meet the required lift to drag ratio of 0.34 at entry.

The report also includes detail weight statements for each module, including a breakdown for the G.F.E. Graphs representing weight versus c.g.'s and moments and products of inertia for the Command Module and Service Module during SPS propellant burning and for the LEV during main and pitch motor burning are also contained in this report. Weight distributions for each module and for the SPS propellant are also presented.

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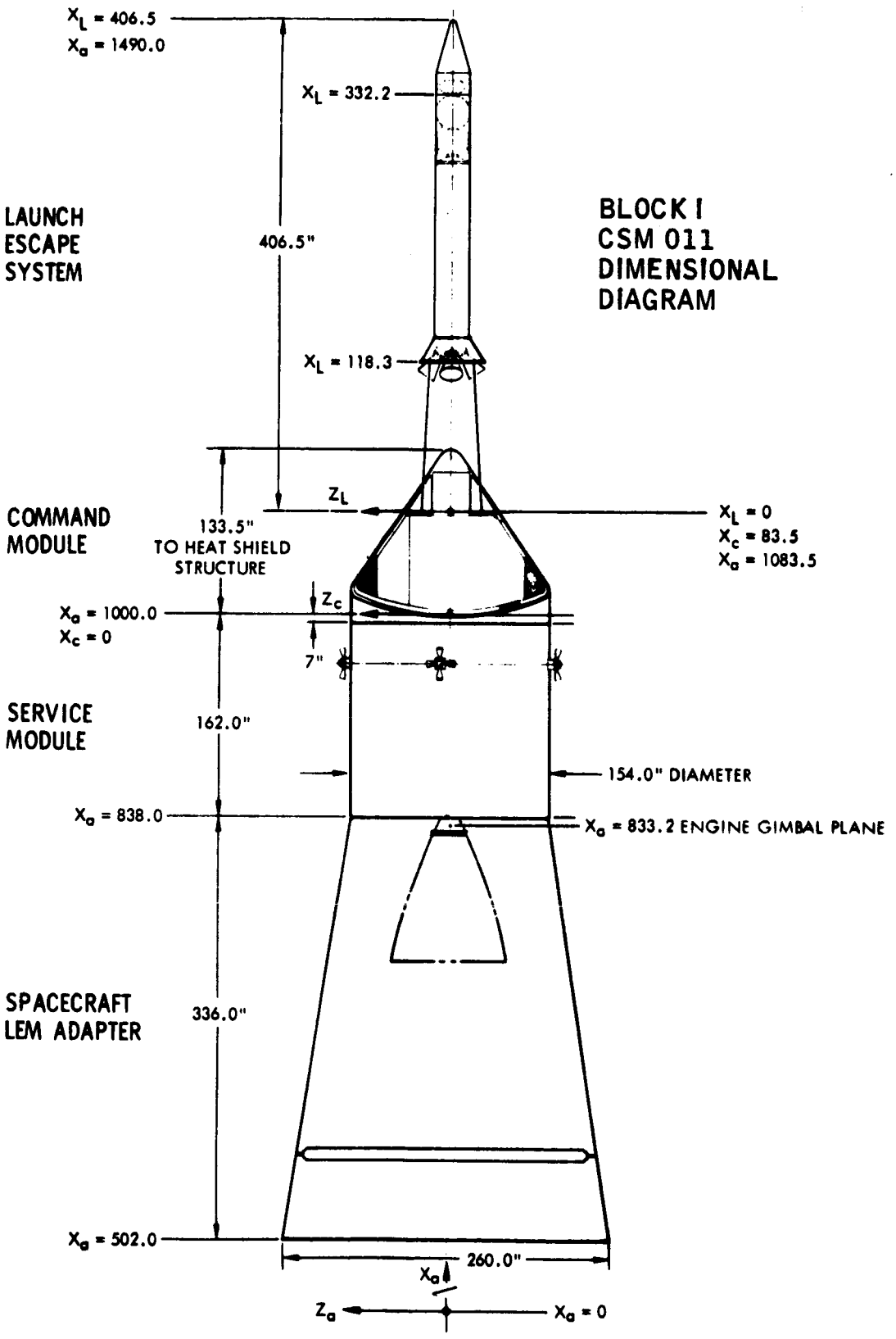
FORM 131-V REV. 6-64


X_L = 406.5
X_a = 1490.0
X_L = 332.2
LAUNCH ESCAPE SYSTEM
406.5"
BLOCK I CSM 011 DIMENSIONAL DIAGRAM
X_L = 118.3
Z_L
COMMAND MODULE
133.5" TO HEAT SHIELD STRUCTURE
X_L = 0
X_c = 83.5
X_a = 1083.5
Z_c
X_a = 1000.0
X_c = 0
7"
SERVICE MODULE
162.0"
154.0" DIAMETER
X_a = 838.0
X_a = 833.2 ENGINE GIMBAL PLANE
SPACECRAFT LEM ADAPTER
336.0"
X_a = 502.0
260.0"
X_a
Z_a
X_a = 0

[redacted]

CSM 011

MODULE MASS PROPERTIES SUMMARY

ITEM	WEIGHT	CENTER OF GRAVITY*			MOMENT OF INERTIA**			PRODUCT OF INERTIA**		
		X	Y	Z	Ixx	Iyy	Izz	Ixy	Ixz	Iyz
LAUNCH ESCAPE SYSTEM	8200	1298.4	0.0	0.0	567.7	21430.6	21431.2	16.3	64.4	-0.2
COMMAND MODULE	11000	1041.6	0.4	5.0	5406.7	4724.8	4296.0	-56.1	-279.1	24.0
SERVICE MODULE - Less Propellant***	9840	908.8	1.2	-0.8	6063.7	10209.2	10024.1	203.2	-446.6	-584.8
ADAPTER	3480	646.0	0.4	-2.0	8374.1	11694.5	11448.8	14.6	-72.3	-14.9

*Centers of gravity are in the NASA reference system except that the longitudinal axis has an origin 1000 inches below the tangency point of the Command Module substructure mold line.

**Moments and products of inertia units are slug feet squared about the center of gravity.

***Includes unusable SPS residuals but excludes the usable SPS propellant, usable SPS propellant loading tolerance and the usable SPS propellant restart losses.

[redacted]

CSM 011 MISSION

ITEM	WEIGHT	CENTER OF GRAVITY*			MOMENT OF INERTIA**			PRODUCT OF INERTIA**		
		X	Y	Z	Ixx	Iyy	Izz	Ixy	Ixz	Iyz
COMMAND MODULE	11000	1041.6	0.4	5.0	5406.7	4724.8	4296.0	-56.1	-279.1	24.0
SERVICE MODULE - Less Propellant***	9840	908.8	1.2	-0.8	6063.7	10209.2	10024.1	203.2	-446.6	-584.8
SLA ATTACHMENT RING	75	837.1	0.0	-1.8	93.3	47.6	45.7	0.0	0.0	0.0
TOTAL - Less Propellant***	20915	978.4	0.8	2.2	11602.7	35114.5	34461.5	29.8	147.1	-566.0
PROPELLANT - S/M	22300	912.5	27.3	-11.5	7424.2	11890.8	12984.1	64.5	-55.6	3671.6
TOTAL - With Propellant	43215	944.4	14.5	-4.8	21105.9	57558.5	59197.3	-4105.9	2201.4	2256.2
ADAPTER - Less Attachment Ring	3405	641.8	0.4	-2.0	8280.8	11042.8	10799.0	15.8	-72.9	-14.9
TOTAL INJECTED - Trajectory	46620	922.3	13.4	-4.6	29527.2	130983.4	132507.5	-1191.3	1541.7	2214.0
LAUNCH ESCAPE SYSTEM	8200	1298.4	0.0	0.0	567.7	21430.6	21431.2	16.3	64.4	-0.2
TOTAL - At Launch	54820	978.5	11.4	-3.9	30399.3	365368.5	367131.8	-8780.9	4232.2	2120.0

*Centers of gravity are in the NASA reference system except that the longitudinal axis has an origin 1000 inches below the tangency point of the Command Module substructure mold line.

**Moments and products of inertia units are slug feet squared about the center of gravity.

***Includes unusable SPS residuals but excludes the usable SPS propellant, usable SPS propellant loading tolerance and the usable SPS propellant restart losses.

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CSM 011

LAUNCH ESCAPE VEHICLE

ITEM	WEIGHT	CENTER OF GRAVITY*			MOMENT OF INERTIA**			PRODUCT OF INERTIA**		
		X	Y	Z	Ixx	Iyy	Izz	Ixy	Ixz	Iyz
COMMAND MODULE	11000	1041.6	0.4	5.0	5406.7	4724.8	4296.0	-56.1	-279.1	24.0
LAUNCH ESCAPE SYSTEM	8200	1298.4	0.0	0.0	567.7	21430.6	21431.2	16.3	64.4	-0.2
TOTAL - Abort Initial	19200	1151.3	0.2	2.8	6001.7	92989.1	92535.1	-159.9	-1533.8	26.2
LESS - MAIN AND PITCH MOTOR PROPELLANTS	-3198	1294.3	0.0	0.0	71.4	1336.7	1336.6	0.0	0.0	0.0
TOTAL LEV - Burnout	16002	1122.7	0.2	3.4	5922.5	74758.2	74311.0	-135.9	-1196.3	25.7

*Centers of gravity are in the NASA reference system except that the longitudinal axis has an origin 1000 inches below the tangency point of the Command Module substructure mold line.

**Moments and products of inertia units are slug feet squared about the center of gravity.

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CSM 011

C/M LOW ALTITUDE ABORT CONFIGURATION

ITEM	WEIGHT	CENTER OF GRAVITY*			MOMENT OF INERTIA**			PRODUCTS OF INERTIA**		
		X	Y	Z	Ixx	Iyy	Izz	Ixy	Ixz	Iyz
COMMAND MODULE	11000	1041.6	0.4	5.0	5406.7	4724.8	4296.0	-56.1	-279.1	24.0
LESS: RCS Oxidizer	-180	1022.6	15.6	62.4						
Forward Heat Shield	-414	1098.5	0.0	0.4						
Drogue Chutes	-56	1089.1	0.0	-21.0						
COMMAND MODULE - Prior to Main Chute Deployment	10350	1039.4	0.2	4.3	5258.5	4244.3	3945.4	-43.8	-201.7	-10.6
LESS: RCS Fuel	-90	1022.6	-46.5	44.9						
Main Chutes (3)	-409	1090.8	-1.8	6.2						
COMMAND MODULE - IMPACT	9851	1037.4	0.7	3.9	5182.6	3964.5	3655.2	-48.0	-198.9	27.0

*Centers of gravity are in the NASA reference system except that the longitudinal axis has an origin 1000 inches below the tangency point of the Command Module substructure mold line.

**Moments and products of inertia units are slug feet squared about the center of gravity.

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CSM 011

C/M ENTRY MISSION

ITEM	WEIGHT	CENTER OF GRAVITY*			MOMENT OF INERTIA**			PRODUCTS OF INERTIA**		
		X	Y	Z	Ixx	Iyy	Izz	Ixy	Ixz	Iyz
COMMAND MODULE	11000	1041.6	0.4	5.0	5406.7	4724.8	4296.0	-56.1	-279.1	24.0
LESS: Propellant	-135	1022.6	-5.1	56.6						
Ablator Burnoff***	-365	1016.2	-0.4	15.7						
Forward Heat Shield	-414	1098.5	0.0	0.4						
Drogue Chutes	-56	1089.1	0.0	-21.0						
COMMAND MODULE - Prior to Main Chute Deployment	10030	1040.2	0.5	4.3	5307.8	4244.5	3912.6	-58.1	-193.1	32.9
LESS: Main Chutes (3)	-409	1090.8	-1.8	6.2						
Propellant	-135	1022.6	-5.1	56.6						
COMMAND MODULE - IMPACT	9486	1038.2	0.7	3.4	5224.8	3920.0	3668.2	-49.9	-178.3	42.1

*Centers of gravity are in the NASA reference system except that the longitudinal axis has an origin 1000 inches below the tangency point of the Command Module substructure mold line.

**Moments and products of inertia units are slug feet squared about the center of gravity.

***Ablator Burnoff based on normal entry condition.

CSM 011

DETAIL WEIGHT STATEMENT

LAUNCH ESCAPE SYSTEM

SC 011 LAUNCH ESCAPE SYSTEM WEIGHT CG INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	BOLT INST SEP SYS TWR/CM	11.60	0	1088.4	0.	0.2	21		2.800	1.500	1.720	0.
0 0	LES BODY GROUP INSTL	46.80	0	1379.1	0.	-0.7	21		1.260	96.340	96.300	0.
0 0	TOWER ASSEMBLY LES	49.90	0	1106.1	0.	0.	21		11.760	22.070	22.900	0.
0 0	TOWER INSULATION	111.30	0	1136.8	0.	0.9	21		12.870	27.320	28.100	0.
0 0	TOWER STRUCTURE	246.00	0	1143.1	0.	0.	21		38.380	72.800	73.890	0.
0 0	SKIRT LAUNCH ESCAPE MTR	217.80	0	1209.3	0.	-0.2	21		20.850	12.300	12.170	0.
0 0	Q BALL INSTL	25.00	0	1475.4	0.	0.	21		0.070	0.070	0.070	0.
0 0	BOOST PROTECTIVE COVER	580.00	0	1070.1	-0.6	-0.7	21		312.010	265.730	265.740	0.
0 0	CANARD INSTL	8.20	0	1441.3	0.	2.2	21		0.080	0.030	0.080	0.
0 0	CANARD LE 332-387	571.70	0	1439.9	0.	-0.6	21		9.400	24.870	23.440	0.
0 0	CANARD ASSY LH	109.80	0	1447.3	-7.6	5.3	21		1.090	4.440	4.170	0.
0 0	CANARD ASSY RH	109.80	0	1447.3	7.6	5.3	21		1.080	4.440	4.160	0.
0 0	ROCKET MOTOR SET LES	5368.60	0	1298.1	0.	0.	21		137.200	4156.100	4155.400	0.
0 0	TOWER WIRING	13.70	0	1140.9	0.7	-23.3	21		1.900	4.350	6.230	0.

SC 011 LAUNCH ESCAPE SYSTEM WEIGHT CG INERTIA STATUS - 15 MARCH 1965

ØP CØDE	DESCRIPTIØN	WEIGHT	S M	CENTER ØF GRAVITY X	Y	Z	SH FA	A X	MØMENTS ØF INERTIA X	Y	Z	BEG X STA
0 0	MØTØR WIRE HARNESS RH	9.20	0	1290.6	7.5	-11.3	21		0.040	11.950	11.940	0.
0 0	MØTØR WIRE HARNESS LH	4.10	0	1291.7	-7.3	-11.1	21		0.020	3.700	3.700	0.
0 0	TØWER ELECTRICAL INSTL	10.20	0	1117.6	1.0	-22.2	21		1.240	2.970	4.200	0.
0 0	MØTØR ELECTRICAL INSTL	15.30	0	1284.7	1.0	-10.7	21		0.190	18.600	18.650	0.
0 0	CANARD ACTUATING MECH	64.70	0	1438.9	0.	-0.6	21		0.960	0.960	0.180	0.
0 0	LATCH MECH INSTL CANARDS	3.40	0	1443.8	0.	8.7	21		0.	0.	0.010	0.
0 0	ØRDNANCE INSTL TWR/CM	4.60	0	1086.4	0.	0.	21		1.230	0.570	0.660	0.
0 0	ØRD INSTL CANARD THRUSTR	2.00	0	1436.6	0.	0.8	21		0.	0.	0.	0.
2 0	BALLAST INSTL	616.30	0	1450.9	0.	0.	1	X	5.387	3.236	3.236	0.
TØTAL SC 011 LAUNCH ESCAPE SYSTEM												
	* FIRST LEVEL TØTAL	8200.00		1298.4	-0.0	-0.0			567.7 16.3	21430.6 64.4	21431.2 -0.2	
	* SECØND LEVEL TØTAL	8200.00		1298.4	-0.0	-0.0			567.7 16.3	21430.6 64.4	21431.2 -0.2	

[redacted]

[redacted]

CSM 011

DETAIL WEIGHT STATEMENT

COMMAND MODULE

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
STRUCTURE AND MECHANICAL SYSTEMS												
0 0	INNER STRUCT - FWD SECT	203.80	0	1094.0	0.	-7.0	20		67.084	33.585	33.585	1082.
0 0	INNER STRUCT - CTR SECT	701.70	0	1051.1	-0.1	-7.9	20		319.383	163.889	163.889	1014.
0 0	INNER STRUCT-CTR/DBLRS	20.00	0	1030.0	0.	40.0	2	X	6.473	1.618	5.502	1015.
0 0	INNER STRUCT - AFT SECT	200.00	0	1011.2	0.	0.	20		71.422	35.722	35.722	1000.
0 0	SEC STRUCT RH EQ BAY/CP	99.00	0	1029.5	46.2	5.4	21		4.460	5.690	1.910	1014.
0 0	SEC STRUCT LH EQ BAY	96.00	0	1030.0	-45.5	3.7	20		1.079	2.202	1.079	1014.
0 0	SEC STRUCT FWD RH EQ CMP	19.50	0	1069.4	28.2	7.5	20		0.216	0.108	0.216	1066.
0 0	SEC STRUCT MAIN DISP PNL	95.80	0	1071.5	-5.3	-18.2	20		10.231	5.115	5.115	1058.
0 0	SEC STRUCT LWR EQUIP BAY	131.80	0	1035.4	3.2	42.9	20		29.700	16.598	44.485	1013.
0 0	SEC STRUCT FWD LH EQ CMP	23.20	0	1070.7	-27.3	10.0	20		0.259	0.130	0.259	1066.
0 0	SEC STRUCT AFT EQUIP BAY	52.70	0	1012.8	5.6	4.9	20		22.858	14.958	9.519	1005.
0 0	SEC STRUCT FWD COMPT	5.50	0	1080.3	1.6	6.9	0		0.	0.	0.	1014.
0 0	SEC STRUCT AFT COMPT	44.00	0	1024.6	-7.8	14.4	1	X	40.526	20.306	20.306	1019.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	HEATSHIELD SUBSTRUCT FWD	190.00	0	1097.9	-0.2	-1.1	20		36.995	22.512	22.512	1082.
0 0	HEATSHIELD SUBSTRUCT CTR	787.00	0	1048.7	-1.0	-9.7	20		672.005	407.813	407.813	1023.
0 0	HEATSHIELD SUBSTRUCT AFT	541.00	0	1011.5	0.4	0.3	20		386.531	198.726	198.726	1000.
0 0	HEATSHIELD MOD - HNYCMB	260.00	0	1005.3	-5.0	12.2	1	X	153.654	77.096	77.096	1000.
0 0	INSULATION FWD SECTION	21.50	0	1098.0	0.	0.	4	X	3.142	2.345	2.345	1082.
0 0	INSULATION CTR SECTION	111.50	0	1048.0	0.	0.	4	X	82.409	47.702	47.702	1014.
0 0	INSULATION AFT SECTION	62.00	0	1013.0	0.	0.	1	X	74.278	40.874	40.874	1003.
0 0	SEPARATION PROV	22.00	0	1026.2	0.9	2.1	1	X	16.534	8.296	8.296	1025.
0 0	ABLATOR NOSE CONE	48.00	0	1122.4	-0.1	0.5	21		1.100	0.700	0.700	1113.
0 0	ABLATOR FWD SECTION	142.00	0	1093.6	-0.1	2.7	21		23.200	12.700	14.400	1082.
0 0	ABLATOR CTR SECTION	514.00	0	1046.5	-0.5	11.0	21		436.000	240.000	258.000	1023.
0 0	ABLATOR AFT SECTION	773.00	0	1008.4	0.	5.3	21		450.000	231.000	230.000	999.
0 0	CRUSHABLE HONEYCOMB ELS	40.00	0	1025.4	3.0	58.0	21		3.491	0.387	3.491	1010.
0 0	FLOTATION BAG SYSTEM ELS	55.00	0	1062.6	-2.4	19.1	1	X	1.336	0.890	0.890	1065.
0 0	SEA HOOK PICKUP ELS	15.00	0	1090.0	0.	-20.0	1	X	0.364	0.189	0.189	1082.
0 0	PARACHUTE ATTACH FITTNGS	29.00	0	1094.6	0.3	-11.0	1	X	3.834	1.935	1.935	1082.
2 0	ATTENUATION SYSTEM	84.10	0	1046.4	-5.4	-21.1	21		17.150	18.430	13.420	1036.
STRUCTURE AND MECHANICAL SYSTEMS TOTAL												
*	FIRST LEVEL TOTAL	5388.10		1040.0	-0.5	1.2			3201.3	2713.0	2684.7	
									-1.9	-120.6	8.0	

* SECØND LEVEL TØTAL	5388.10	1040.0	-0.5	1.2	3201.3	2713.0	2684.7
					-1.9	-120.6	8.0

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	STABILIZATION AND CONTROL											
0 0	RATE GYRO PACKAGE	7.70	0	1054.7	-14.7	40.3	2	Z	0.012	0.009	0.007	1051.
0 0	ATTITUDE GYRO ACCEL PKG	13.50	0	1048.0	-14.7	38.8	2	Z	0.024	0.031	0.024	1043.
0 0	ECA PITCH	31.30	0	1022.4	-15.6	43.6	2	Z	0.294	0.257	0.055	1021.
0 0	ECA ROLL	32.60	0	1027.5	-5.2	44.0	2	Z	0.385	0.347	0.057	1025.
0 0	ECA YAW	32.10	0	1034.2	-15.6	43.8	2	Z	0.301	0.264	0.056	1031.
0 0	ECA AUX	32.10	0	1027.5	-15.6	43.3	2	Z	0.278	0.240	0.056	1025.
0 0	DISPLAY ECA PKG	40.10	0	1039.3	-15.6	44.5	2	Z	0.407	0.360	0.070	1037.
2 0	SCS POWER J-BOX	0.60	0	1016.8	-37.8	37.0	0	0	0.	0.	0.	1016.
	STABILIZATION AND CONTROL TOTAL											
	* FIRST LEVEL TOTAL	190.00		1032.8	-13.8	43.3			2.5	4.6	4.0	
									-0.3	-0.3	0.0	
	* SECOND LEVEL TOTAL	5578.10		1039.8	-1.0	2.7			3281.1	2790.0	2697.8	
									1.6	-132.9	-14.1	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	GUIDANCE AND NAVIGATION											
0 0	INERTIAL MEASUREMNT UNIT	61.30	0	1056.6	0.	41.7	20		0.458	0.568	0.730	1048.
0 0	NAVIGATION BASE	25.70	0	1064.3	-0.1	41.3	20		0.248	0.306	0.395	1058.
0 0	COMPUTER	75.80	0	1037.8	1.3	46.1	20		1.150	0.922	0.410	1035.
0 0	POWER SERVO ASSEMBLY	59.80	0	1045.0	-1.1	41.5	20		0.922	0.341	0.613	1043.
0 0	COUPLING DISPLAY UNIT	14.00	0	1063.5	-14.4	35.8	20		0.016	0.031	0.028	1058.
0 0	BELLOWS ASSEMBLY	12.70	0	1064.3	-0.1	41.3	20		0.222	0.276	0.356	1060.
0 0	SIGNAL CONDITIONER	3.90	0	1063.6	-15.0	38.0	20		0.006	0.006	0.003	1059.
0 0	SEXTANT	18.70	0	1069.6	0.5	31.1	1	Z	0.086	0.115	0.070	1066.
0 0	TELESCOPE	14.30	0	1069.6	0.5	31.1	1	Z	0.055	0.074	0.028	1066.
0 0	OPTICAL BASE	17.00	0	1069.6	0.5	31.1	2	Y	0.130	0.061	0.130	1066.
0 0	OPTICAL EYEPIECES	4.20	0	1069.6	0.5	31.1	20		0.023	0.016	0.027	1066.
0 0	PHOTOMETER G-N	2.20	0	1076.0	-30.0	-2.5	1	X	0.001	0.001	0.001	1074.
0 0	OPTICAL SHROUD	3.10	0	1069.6	0.	31.1	1	X	0.021	0.006	0.026	1065.
0 0	CABLING MIT	38.00	0	1053.1	-1.1	46.8	20	X	0.986	0.850	1.330	1030.
0 0	FILM CARTRIDGES	2.50	0	1072.8	-10.9	-8.9	2	Z	0.002	0.002	0.001	1070.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	EYE RELIEF EYEPIECES	1.50	0	1076.6	-23.0	-2.6	2	Y	0.003	0.001	0.003	1066.
0 0	OPTICS COVER G/N	1.60	0	1076.6	-23.0	-2.6	2	Y	0.001	0.001	0.001	1075.
0 0	COMPUTER KEYBOARD - MDP	21.90	0	1067.8	-12.5	-20.4	20	Z	0.061	0.055	0.068	1064.
0 0	MAP Y DATA VIEWER	11.50	0	1073.5	-4.5	31.0	2	Z	0.017	0.015	0.005	1072.
0 0	NAVIGATOR DISPLAYS	18.40	0	1058.5	-4.1	34.0	20	0	0.194	0.043	0.173	1053.
2 0	COMPUTER KEYBOARD - LEB	21.90	0	1066.2	14.5	37.0	2	X	0.172	0.348	0.205	1055.
GUIDANCE AND NAVIGATION TOTAL												
	* FIRST LEVEL TOTAL	430.00		1056.0	-1.1	36.4			30.1 -1.5	38.6 -9.1	20.7 4.9	
	* SECOND LEVEL TOTAL	6008.10		1041.0	-1.0	5.1			3409.0 -0.2	2949.1 -95.0	2741.2 -9.8	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	ENVIRONMENTAL CONTROL												
0 0	SUBCONT COMPONENTS	PSC	74.40	0	1027.6	-44.5	5.8	21		5.370	3.410	5.240	1022.
0 0	CO2 SENSOR	PSC	2.00	0	1022.0	-49.0	-11.4	1	X	0.000	0.000	0.000	1021.
0 0	DUCTING/CONN/CLAMPS	PSC	16.90	0	1035.4	-38.1	-26.7	1	X	0.022	0.284	0.284	1020.
0 0	SUBCONT COMPONENTS	H2O-G	31.30	0	1035.6	-49.0	3.0	21		3.000	3.000	1.000	1034.
0 0	PLUMBING ETC	H2O-G	13.40	0	1036.8	-13.2	9.9	0	0	0.	0.	0.	1020.
0 0	WATER GLYCOL	H2O-G	12.10	0	1028.0	-49.0	-2.0	1	X	0.003	0.023	0.023	1023.
0 0	WATER GLYCOL	H2O-G	12.30	0	1040.0	-49.0	40.0	1	X	0.003	0.024	0.024	1035.
0 0	SUBCONT COMPONENTS	P/T	15.70	0	1056.7	-32.7	-6.3	20	0	0.086	0.086	0.043	1035.
0 0	BLOWER SW/OUTLET VALVE		1.60	0	1076.0	-11.0	7.0	0	0	0.	0.	0.	1075.
0 0	DUCTING ETC	P/T	0.80	0	1033.9	-33.0	-14.4	1	X	0.000	0.000	0.000	1033.
0 0	SUBCONT COMPONENTS	O2	4.30	0	1034.9	-43.4	4.0	1	Z	0.001	0.001	0.001	1033.
0 0	OXYGEN SURGE TANK	O2	8.90	0	1032.7	-48.8	-16.1	3	X	0.049	0.049	0.049	1025.
0 0	PLUMBING ETC	O2	4.50	0	1025.8	-37.7	-11.0	1	X	0.003	0.010	0.010	1020.
0 0	SUBCONT COMPONENTS	H2O	27.10	0	1031.5	-37.4	25.6	1	X	0.658	0.524	0.524	1020.
0 0	PLUMBING ETC	H2O	3.60	0	1028.7	-38.1	1.2	0	0	0.	0.	0.	1020.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	SUBCONT COMMON ITEMS ECS	42.60	0	1030.9	-40.6	15.5	1	X	1.494	1.436	1.436	1014.
0 0	WASTE MANAGEMENT SYSTEM	21.40	0	1024.8	39.3	21.4	1	X	0.289	0.298	0.298	1014.
0 0	N2 PURGE SYSTEM ECS	1.90	0	1028.9	-37.5	5.1	0	0	0.	0.	0.	1025.
0 0	SUPPORTS ECS	11.00	0	1029.0	-42.0	11.0	1	X	0.386	0.371	0.371	1014.
0 0	MISCELLANEOUS ECS	1.40	0	1030.0	-48.0	0.	2	X	0.020	0.020	0.020	1020.
0 0	CABIN VENT SYSTEM ECS	12.30	0	1080.0	15.0	15.0	2	X	0.011	0.011	0.011	1078.
0 0	COLD PLATES	61.50	0	1033.8	6.7	41.5	2	X	0.885	2.212	2.212	1014.
0 0	COOLANT PLUMBING - PLTFM	3.00	0	1080.0	0.	30.0	2	X	0.087	0.001	0.087	1079.
0 0	COOLANT PLUMBING - PLTFM	3.50	0	1065.0	12.2	11.0	2	X	0.001	0.057	0.058	1050.
0 0	COOLANT PLUMBING - PLTFM	3.50	0	1065.0	-12.2	11.0	2	X	0.001	0.057	0.058	1050.
0 0	FLEX LINE STRUCT - PLTFM	5.00	0	1063.0	12.2	11.0	2	X	0.007	0.029	0.024	1055.
2 0	FLEX LINE STRUCT - PLTFM	5.00	0	1063.0	-12.2	11.0	2	X	0.007	0.029	0.024	1055.
ENVIRONMENTAL CONTROL TOTAL												
	* FIRST LEVEL TOTAL	401.00		1035.8	-25.8	13.3			98.8	52.1	86.0	
									8.3	-0.2	21.3	
	* SECOND LEVEL TOTAL	6409.10		1040.6	-2.5	5.6			3563.4	3009.0	2879.4	
									18.6	-98.6	-5.1	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
EARTH RECOVERY													
0 0	DROGUE SYST NV	ELS	67.70	0	1090.6	0.	-21.5	21		1.860	0.400	1.730	1085.
0 0	MAIN CHUTE PACK	ELS	143.00	0	1091.8	22.5	2.5	21		1.400	1.510	2.630	1082.
0 0	MAIN CHUTE PACK	ELS	143.00	0	1091.8	-22.5	-2.5	21		1.400	1.510	2.630	1082.
0 0	MAIN CHUTE PACK	ELS	143.00	0	1091.8	-4.2	22.5	21		1.400	1.510	2.630	1082.
0 0	PACK ASSY-PILOT	ELS	9.10	0	1085.8	21.0	-13.5	21		0.010	0.010	0.010	1082.
0 0	PACK ASSY-PILOT	ELS	9.10	0	1085.8	13.6	21.2	21		0.010	0.010	0.010	1082.
0 0	PACK ASSY-PILOT	ELS	9.10	0	1085.8	-21.4	13.0	21		0.010	0.010	0.010	1082.
0 0	ATTACH PROVISIONS	ELS	7.70	0	1085.5	9.1	3.2	1	X	1.018	0.514	0.514	1082.
0 0	SEA DYE MARKER	ELS	2.00	0	1024.2	-6.4	61.5	0	0	0.	0.	0.	1020.
0 0	FWD HS REL Y EJECT	ELS	37.00	3	1101.0	0.	0.	1	X	0.009	0.100	0.100	1095.
0 0	FWD HS REL PLUMBING	ELS	7.00	0	1085.0	0.	0.	1	X	0.476	0.240	0.240	1083.
0 0	FWD HS REL BREECH	ELS	2.10	1	1103.0	0.	-11.5	1	X	0.000	0.001	0.001	1101.
0 0	FWD HS REL CARTRIDGE	ELS	0.50	1	1102.0	0.	-11.5	1	X	0.000	0.000	0.000	1101.
0 0	FWD HS REL ATTACH	ELS	3.90	0	1084.0	0.	0.	1	X	1.091	0.545	0.545	1083.
2 0	DROGUE DISCONNECT	ELS	9.60	0	1105.3	0.	-18.0	1	X	0.008	0.016	0.014	1101.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	EARTH RECOVERY TOTAL											
	* FIRST LEVEL TOTAL	593.80		1091.8	-0.7	3.2			68.1	35.3	48.6	
									-0.1	-2.3	0.2	
	* SECOND LEVEL TOTAL	7002.90		1045.0	-2.4	5.4			3632.6	3351.9	3235.4	
									29.4	-115.3	-5.4	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	INSTRUMENTATION												
0 0	SENSORS - OPS		6.30	0	1027.8	-1.0	4.0	20	0	0.432	0.432	0.432	1014.
0 0	PAM/FM/FM PKG R/D	INS	16.00	0	1034.1	15.6	43.5	2	Z	0.138	0.120	0.028	1032.
0 0	TAPE RECORDER R/D	INS	50.00	0	1030.8	-34.9	37.0	2	X	0.134	0.441	0.486	1020.
0 0	GAS CHROMATOGRPH R/D	INS	9.50	0	1024.3	-25.8	46.0	2	X	0.025	0.025	0.028	1020.
0 0	COMMUTATORS 3 R/D	INS	13.00	0	1033.7	0.	-60.0	2	X	0.015	0.027	0.035	1029.
0 0	SENSORS - FLT QUAL		131.30	0	1026.2	2.3	-13.7	20	0	1.813	1.813	1.813	1013.
0 0	SUPPORTS - FLT QUAL		35.30	0	1029.2	9.8	-22.1	2	X	0.282	0.435	0.306	1020.
0 0	MISC EQUIP		10.60	0	1032.0	0.	0.	2	X	0.002	0.004	0.004	1030.
2 0	SUPPORTS - OPS		2.70	0	1023.0	0.	0.	2	X	0.000	0.001	0.001	1021.
	INSTRUMENTATION TOTAL												
	* FIRST LEVEL TOTAL		274.70		1028.4	-4.0	-1.3			62.8 -0.5	48.5 1.3	18.9 -16.9	
	* SECOND LEVEL TOTAL		7277.60		1044.3	-2.4	5.1			3698.2 30.4	3418.6 -107.7	3270.1 -21.6	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
ELECTRICAL POWER													
0 0	BATTERY-RE ENTRY	EPS	28.00	0	1015.6	-1.5	41.8	2	Z	0.385	0.392	0.043	1012.
0 0	BATTERY-RE ENTRY	EPS	28.00	0	1015.6	-7.5	41.8	2	Z	0.385	0.392	0.043	1012.
0 0	BATTERY-POST LANDING	EPS	28.00	0	1015.6	-13.4	41.8	2	Z	0.385	0.392	0.043	1012.
0 0	BATTERY-PYROTECHNIC	EPS	5.60	0	1016.3	34.3	39.9	2	X	0.029	0.021	0.021	1008.
0 0	BATTERY VENT SYSTEM	EPS	1.50	0	1009.1	-20.0	35.1	0	0	0.	0.	0.	1015.
0 0	INVERTER/CONTROL	EPS	39.50	0	1015.4	-23.7	40.5	2	Y	0.452	0.348	0.174	1012.
0 0	INVERTER/CONTROL	EPS	39.50	0	1015.4	8.9	40.5	2	Y	0.452	0.348	0.174	1012.
0 0	INVERTER/CONTROL	EPS	39.50	0	1015.4	23.7	40.5	2	Y	0.452	0.348	0.174	1012.
0 0	DC POWER PAN ASSEM	EPS	7.60	0	1035.3	50.0	-3.0	20	0	0.002	0.002	0.002	1034.
0 0	AC POWER BOX ASSEM	EPS	10.60	0	1016.5	-7.5	50.8	20	0	0.021	0.012	0.023	1015.
0 0	MOTOR SWITCHES - LEB		5.60	0	1018.0	15.0	52.0	2	Y	0.029	0.018	0.018	1015.
0 0	BATTERY CIR BRK PAN	EPS	3.40	0	1016.1	34.9	38.9	2	X	0.012	0.010	0.005	1018.
0 0	CIR BRK PANEL EP	EPS	5.00	0	1039.2	44.0	3.1	2	Y	0.000	0.000	0.000	1038.
0 0	PHASE CORR CAPACITOR		4.00	0	1024.0	45.0	-30.9	2	X	0.004	0.012	0.012	1018.
0 0	TERM DIST BUS PANEL		10.90	0	1027.1	53.3	6.8	2	X	0.047	0.013	0.054	1024.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	INSTAL PROVISIONS	EPS	10.00	0	1016.8	5.1	44.1	2	Y	0.052	0.032	0.032	1012.
0 0	CIRCUIT INTERRUPTORS		12.00	0	1016.2	46.8	-19.2	2	X	0.043	0.043	0.043	1011.
0 0	WIRE RACEWAY		40.10	0	1019.9	1.4	-22.1	1	X	45.186	22.587	22.587	1019.
0 0	CONNECTORS		22.50	0	1035.7	22.2	-36.6	1	X	0.010	0.108	0.108	1028.
0 0	UMBILICAL HOUSING		34.00	0	1030.0	20.0	-70.0	2	X	0.245	0.401	0.333	1020.
0 0	RH CIR BREAKER PAN	EPS	18.30	0	1053.3	48.1	-10.4	2	Z	0.132	0.179	0.048	1047.
0 0	LH CIR BREAKER PAN	EPS	11.20	0	1053.0	-47.0	-11.0	2	Z	0.081	0.110	0.029	1047.
0 0	CIRCUIT UTIL PKG	EPS	6.50	0	1023.3	51.0	2.2	2	X	0.007	0.018	0.023	1017.
0 0	LIGHTING EQUIPMENT	EPS	7.40	0	1060.0	0.	0.	2	Y	1.501	0.615	0.992	1050.
0 0	HUMIDITY FIX	EPS	10.00	1	1030.0	21.0	40.0	2	Y	1.309	0.120	1.348	1021.
0 0	INSTAL PROVISIONS	EPS	25.80	3	1025.0	25.0	25.0	2	X	13.360	7.097	7.097	1010.
0 0	SEQUENCERS	EPS	61.40	0	1026.6	48.1	7.0	2	X	0.213	0.517	0.412	1018.
0 0	SEQUENCE CONTROL	ELS	11.30	0	1083.9	0.	-29.0	21		0.240	0.	0.240	1082.
0 0	INERTIA SWITCH - ELS		5.00	0	1020.0	59.3	-13.6	2	X	0.006	0.006	0.006	1017.
0 0	PYRO INIT WIRING - ELS		8.00	0	1087.3	0.	-7.1	21		0.060	0.030	0.030	1082.
0 0	SEQUENCERS-RC		26.60	0	1024.5	36.0	-45.6	2	X	0.096	0.096	0.096	1020.
0 0	FUEL DUMP BOX		7.10	0	1017.0	44.0	-39.2	2	Y	0.037	0.022	0.022	1015.
0 0	PYRO BOX ASSY		3.40	0	1027.0	48.0	-9.0	2	X	0.005	0.007	0.010	1022.

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OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	HARNESS INSTL - MDC	52.40	0	1074.8	0.	-18.0	2	Y	6.214	0.369	6.214	1068.
0 0	WIRING - C/D PANELS	77.20	0	1074.7	0.3	-18.0	2	X	9.155	0.544	9.155	1068.
0 0	CONNECTORS - C/D	19.30	0	1074.7	0.3	-18.0	2	X	2.289	0.136	2.289	1068.
0 0	WIRE - LEB	92.40	0	1030.5	10.0	38.5	2	X	6.007	0.905	6.860	1019.
0 0	WIRE	20.00	0	1011.0	42.0	-5.0	2	X	1.300	1.300	0.012	1009.
0 0	WIRE	10.00	0	1010.0	36.0	0.	2	X	0.199	0.015	0.185	1009.
0 0	WIRE	5.00	0	1011.0	36.0	23.0	2	X	0.053	0.003	0.053	1009.
0 0	WIRE	20.20	0	1010.0	13.0	-4.0	2	X	3.080	3.087	0.019	1007.
0 0	WIRE	20.00	0	1010.0	-11.0	-18.0	2	X	1.870	1.870	0.012	1008.
0 0	WIRE	5.00	0	1010.0	-24.0	22.0	2	X	0.058	0.003	0.058	1008.
0 0	WIRE	15.00	0	1011.0	-36.0	0.	2	X	1.294	1.288	0.014	1009.
0 0	WIRE	40.00	0	1028.0	-14.5	-47.0	2	X	2.625	0.611	2.337	1020.
0 0	WIRE	5.00	0	1074.8	8.0	-25.0	2	X	0.037	0.002	0.037	1073.
0 0	WIRE	5.00	0	1074.8	24.8	-13.2	2	X	0.044	0.027	0.018	1073.
0 0	WIRE	12.00	0	1045.0	50.0	18.0	2	X	0.311	0.283	0.035	1043.
0 0	WIRE	7.70	0	1049.0	52.0	-3.2	2	X	0.002	0.021	0.021	1043.
0 0	WIRE	10.00	0	1011.0	48.0	-15.0	2	X	0.222	0.223	0.004	1009.
0 0	WIRE	10.00	0	1028.0	48.0	20.0	2	X	0.003	0.143	0.143	1014.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	WIRE	10.00	0	1036.0	48.0	3.0	2	X	0.222	0.223	0.004	1034.
0 0	POTTING ETC	13.10	0	1020.0	0.	-20.0	27	X	2.004	1.685	0.320	1019.
0 0	MISC WIRE	1.30	0	1020.0	0.	-20.0	2	X	0.000	0.000	0.000	1019.
0 0	WIRE	14.70	0	1028.0	52.0	-7.0	2	X	0.005	0.210	0.210	1014.
0 0	WIRE	5.00	0	1028.0	48.0	-24.0	2	X	0.002	0.071	0.071	1014.
0 0	WIRE	15.00	0	1039.0	-48.0	-22.0	2	X	0.173	0.160	0.022	1037.
0 0	WIRE	40.30	0	1028.0	-53.0	-13.9	2	X	0.013	0.575	0.575	1014.
0 0	WIRE	11.50	0	1116.0	-13.6	8.4	2	X	0.026	0.212	0.212	1100.
0 0	WIRE	18.20	0	1085.0	4.0	-4.0	1	X	1.422	0.716	0.716	1083.
0 0	WIRE	7.60	0	1015.3	3.4	-24.3	1	X	6.726	3.362	3.362	1014.
0 0	WIRE	19.40	0	1020.0	0.	-20.0	27	X	2.967	2.495	0.474	1019.
0 0	WIRE - UMBILICAL	29.90	0	1030.0	20.0	-65.0	2	X	0.108	0.239	0.342	1020.
0 0	MDP WIRE	33.60	0	1065.0	-0.5	-17.4	2	X	3.985	0.237	3.985	1058.
0 0	WIRE - RH PANEL	3.20	0	1055.0	47.0	-12.0	2	X	0.023	0.031	0.008	1049.
0 0	WIRE - LH PANEL	3.50	0	1053.0	-47.0	-11.0	2	X	0.025	0.034	0.009	1047.
0 0	WIRE - G/N	16.90	0	1050.0	0.	35.0	2	X	2.004	0.119	2.004	1043.
0 0	LEB CABLE ASSY	17.80	0	1030.5	10.0	38.5	2	X	1.157	0.174	1.321	1019.
0 0	INST AFT COMPT	39.50	0	1020.0	0.	-20.0	27	X	6.041	5.081	0.966	1019.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	INST AFT H/S	24.80	0	1015.3	3.4	-24.3	1	X	21.947	10.971	10.971	1014.
2 0	POTTING ETC	19.00	0	1030.0	20.0	-65.0	2	X	0.068	0.152	0.218	1020.
ELECTRICAL POWER TOTAL												
	* FIRST LEVEL TOTAL	1347.80		1033.9	8.6	-2.2			635.6	521.0	424.7	
									-16.8	-50.6	-10.6	
	* SECOND LEVEL TOTAL	8625.40		1042.7	-0.7	4.0			4377.0	3979.4	3751.4	
									-14.6	-139.6	-52.1	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
REACTION CONTROL													
0 0	TANKS-FUEL SYST	RCS	6.70	0	1022.6	-54.0	37.1	3	Z	0.058	0.041	0.041	1016.
0 0	TANKS-FUEL SYST	RCS	6.70	0	1022.6	-39.0	52.6	3	Y	0.041	0.024	0.041	1016.
0 0	PLUMB + FITTGS FUEL	RCS	16.40	0	1032.8	-6.5	5.8	27	X	1.019	0.914	0.341	1015.
0 0	VALVES/REGS FUEL	RCS	9.70	0	1033.8	-46.0	47.9	2	X	0.349	0.436	0.227	1015.
0 0	SENSORS-FUEL SYST	RCS	1.00	0	1028.0	-48.0	50.0	0	0	0.	0.	0.	1028.
0 0	SUPPORTS-FUEL SYSTEM		5.90	0	1032.1	-26.2	33.9	2	X	0.021	0.021	0.021	1027.
0 0	TANKS-OXIDIZER	RCS	7.20	0	1022.6	27.7	59.4	3	Y	0.051	0.026	0.051	1016.
0 0	TANKS-OXIDIZER	RCS	7.20	0	1022.6	3.4	65.4	3	Y	0.051	0.026	0.051	1016.
0 0	PLUMB + FITTGS OXID	RCS	21.90	0	1023.7	7.1	11.1	27	X	1.361	1.221	0.455	1010.
0 0	VALVES/REGS-OXID	RCS	12.30	0	1032.6	44.1	43.7	27	X	0.764	0.686	0.255	1015.
0 0	SENSORS-OXID SYST	RCS	1.00	0	1019.0	16.0	65.0	0	0	0.	0.	0.	1019.
0 0	SUPPORTS-OXIDIZER SYSTEM		8.30	0	1028.7	23.6	41.5	2	X	0.030	0.030	0.030	1024.
0 0	TANKS-PRESS SYST	RCS	5.20	0	1022.6	54.9	33.0	3	X	0.009	0.009	0.009	1018.
0 0	TANKS-PRESS SYST	RCS	5.20	0	1023.6	-61.2	18.7	3	X	0.009	0.009	0.009	1018.
0 0	PLUMBING-PRESS SYST	RCS	8.40	0	1025.0	4.2	18.8	27	X	0.371	0.355	0.137	1018.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	VALVES/REGS-PRESS	RCS	29.80	0	1028.6	-6.5	6.5	27	X	0.977	0.858	0.227	1024.
0 0	SENSORS-PRESS SYS	RCS	2.00	0	1029.0	0.	0.	1	Y	0.000	0.000	0.000	1029.
0 0	SUPPORTS-PRESSURE SYSTEM		7.90	0	1030.4	1.9	5.4	2	X	0.028	0.028	0.028	1025.
0 0	ENGINES 1	RCS	8.10	0	1085.5	0.	-29.0	1	Z	0.017	0.017	0.005	1083.
0 0	ENGINES 1	RCS	8.10	0	1091.1	0.	-25.0	1	Z	0.017	0.017	0.005	1089.
0 0	ENGINES 2	RCS	16.20	1	1023.0	4.0	-68.0	1	Z	0.035	0.040	0.016	1020.
0 0	ENGINES 2	RCS	16.20	2	1023.0	68.0	4.0	1	Y	0.035	0.016	0.040	1020.
0 0	ENGINES 2	RCS	16.20	1	1032.3	-50.4	-40.9	1	Z	0.035	0.035	0.011	1030.
0 0	ENGINES 2	RCS	16.20	1	1032.3	-39.4	-51.9	1	Y	0.035	0.011	0.035	1030.
0 0	ENGINES 2	RCS	16.20	2	1023.0	-68.0	4.0	1	Z	0.029	0.018	0.033	1020.
0 0	ABLAT EXTENSIONS 1	RCS	3.70	0	1085.5	0.	-33.0	1	Z	0.007	0.007	0.005	1083.
0 0	ABLAT EXTENSIONS 1	RCS	3.70	0	1091.1	0.	-29.0	1	Z	0.007	0.007	0.005	1088.
0 0	ABLAT EXTENSIONS 2	RCS	4.40	1	1027.7	4.0	-72.0	1	Z	0.009	0.012	0.009	1024.
0 0	ABLAT EXTENSIONS 2	RCS	5.60	2	1027.7	72.0	4.0	1	Y	0.012	0.011	0.016	1024.
0 0	ABLAT EXTENSIONS 2	RCS	13.20	1	1032.3	-50.4	-46.9	1	Z	0.024	0.024	0.019	1029.
0 0	ABLAT EXTENSIONS 2	RCS	9.80	1	1032.3	-45.4	-51.9	1	Y	0.018	0.014	0.018	1029.
2 0	ABLAT EXTENSIONS 2	RCS	5.60	2	1027.7	-72.0	4.0	1	Z	0.013	0.011	0.017	1024.
REACTION CONTROL TOTAL													
*	FIRST LEVEL TOTAL		306.00		1032.4	-1.4	-1.8			193.7 0.4	112.9 -10.4	119.2 -1.4	

* SECOND LEVEL TOTAL	8931.40	1042.4	-0.7	3.8	4572.9 -13.8	4101.3 -146.1	3877.4 -53.3

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
COMMUNICATIONS													
0 0	PCM UNIT NO 1	INS	19.50	0	1039.3	15.6	43.5	2	Z	0.183	0.160	0.034	1037.
0 0	PCM UNIT NO 2	INS	19.00	0	1039.3	26.0	41.3	2	Z	0.126	0.104	0.033	1037.
0 0	C-BAND TRANSPONDER	COM	23.60	0	1022.4	15.6	39.5	2	Z	0.106	0.078	0.041	1020.
0 0	S-BAND TRANSPONDER	COM	22.40	0	1027.5	5.2	43.9	2	Z	0.101	0.075	0.039	1025.
0 0	S-BAND PWR AMPLIF	COM	18.30	0	1027.5	15.6	39.5	2	Z	0.082	0.061	0.032	1025.
0 0	VHF FM XMTR/HF XCVR	COM	15.40	0	1022.4	26.0	39.0	2	Z	0.062	0.044	0.027	1020.
0 0	VHF AM XCVR/VHF BEAC	COM	16.00	0	1027.5	26.0	38.9	2	Z	0.065	0.046	0.028	1025.
0 0	MULTIPLEXER - VHF	COM	11.40	0	1034.2	26.0	40.5	2	Z	0.063	0.049	0.020	1032.
0 0	SIGNAL CONDITIONER	COM	38.50	0	1045.7	21.8	40.5	2	Z	0.311	0.167	0.167	1043.
0 0	RECORDER - DATA STORAGE		32.10	0	1053.1	22.2	35.4	2	Y	0.245	0.061	0.278	1048.
0 0	AUDIO CENTER	COM	7.80	0	1027.5	36.4	35.9	2	Y	0.016	0.007	0.014	1025.
0 0	PREMOD PROCESS	COM	14.70	0	1034.2	36.4	37.1	2	Y	0.038	0.021	0.026	1031.
0 0	CENTRAL TIMING EQUIP	COM	9.50	0	1022.4	36.4	36.9	2	Y	0.025	0.014	0.017	1020.
0 0	UP DATA LINK/PROV	COM	18.20	0	1022.4	5.2	43.5	2	Z	0.171	0.150	0.032	1020.
0 0	VHF-HF REC ANT/LINES	COM	25.10	0	1056.7	20.8	-1.4	20	0	0.011	0.065	0.065	1040.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION		WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	C-BAND ANT/LINES	COM	19.70	0	1022.9	-1.2	-0.8	1	X	20.540	10.266	10.266	1022.
0 0	VHF-2 KMC ANT/LINES	COM	33.20	0	1041.5	8.4	4.9	20	0	0.022	0.130	0.130	1025.
0 0	EVENT CONDITIONER		0.40	0	1056.1	21.1	42.3	2	X	0.000	0.000	0.000	1054.
0 0	SUPPORTS-COMM		0.70	0	1040.5	1.6	26.7	0	0	0.	0.	0.	1040.
2 0	RELAY ASSY - MAG LATCH		0.80	0	1031.2	53.0	-14.2	2	X	0.000	0.000	0.000	1030.
COMMUNICATIONS TOTAL													
	* FIRST LEVEL TOTAL		346.30		1036.0	18.3	31.1			49.8 1.8	41.6 -4.2	28.6 4.0	
	* SECOND LEVEL TOTAL		9277.70		1042.1	-0.0	4.8			4702.1 -20.7	4199.3 -162.8	3934.8 -12.0	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
DISPLAYS AND CONTROLS												
0 0	PANEL NO. 1	1.50	0	1077.0	-19.9	-35.1	6	X	0.003	0.001	0.002	1075.
0 0	PANEL NO. 2	1.40	0	1067.0	-23.8	-29.3	2	Y	0.006	0.001	0.005	1066.
0 0	PANEL NO. 3	2.20	0	1066.1	-33.4	-20.0	2	Y	0.004	0.003	0.003	1064.
0 0	PANEL NO. 4	11.90	0	1068.6	-25.5	-20.6	2	X	0.024	0.035	0.032	1065.
0 0	PANEL NO. 5	5.00	0	1064.5	-19.6	-18.1	2	Z	0.018	0.020	0.003	1062.
0 0	PANEL NO. 6	5.40	0	1065.5	-31.0	-14.2	2	Y	0.013	0.006	0.012	1063.
0 0	PANEL NO. 7	3.50	0	1066.8	-25.5	-14.2	2	Y	0.005	0.004	0.005	1064.
0 0	PANEL NO. 8	1.30	0	1068.8	-36.9	-9.2	2	Y	0.002	0.000	0.002	1068.
0 0	PANEL NO. 9	5.50	0	1063.4	-25.6	-9.3	2	Y	0.024	0.003	0.024	1061.
0 0	PANEL NO. 10	2.70	0	1069.1	-3.7	-34.2	2	Y	0.010	0.004	0.006	1068.
0 0	PANEL NO. 11	3.90	0	1069.3	3.9	-33.6	2	Y	0.005	0.002	0.006	1067.
0 0	PANEL NO. 12	7.70	0	1069.0	-8.6	-28.9	2	Y	0.042	0.007	0.045	1066.
0 0	PANEL NO. 13	19.40	0	1067.7	8.9	-23.6	2	Y	0.179	0.091	0.113	1065.
0 0	PANEL NO. 14	21.90	0	1067.5	-12.6	-21.3	2	Z	0.064	0.051	0.051	1064.
0 0	PANEL NO. 15	4.00	0	1065.4	-3.7	-20.9	2	Z	0.011	0.009	0.005	1063.

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OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	PANEL NO. 16	2.50	0	1062.1	-13.8	-13.6	6	X	0.008	0.004	0.004	1061.
0 0	PANEL NO. 17	1.40	0	1068.9	19.3	-32.4	6	X	0.003	0.001	0.002	1068.
0 0	PANEL NO. 18	17.90	0	1066.2	25.5	-22.1	2	Z	0.145	0.088	0.088	1063.
0 0	PANEL NO. 19	2.10	0	1062.3	13.8	-13.5	6	X	0.007	0.003	0.004	1061.
0 0	PANEL NO. 20	16.10	0	1064.1	29.3	-11.7	2	Y	0.159	0.023	0.145	1062.
0 0	PANEL NO. 21	4.50	0	1048.4	45.3	-6.4	6	Z	0.008	0.019	0.021	1040.
0 0	PANEL NO. 22	14.20	0	1053.1	48.2	-10.3	2	Z	0.102	0.139	0.037	1047.
0 0	PANEL NO. 23	4.20	0	1067.7	39.5	-21.5	2	Z	0.022	0.015	0.015	1064.
0 0	PANEL NO. 24	3.70	0	1048.4	-45.3	-6.4	6	Z	0.007	0.015	0.017	1040.
0 0	PANEL NO. 25	10.00	0	1053.0	-47.0	-11.0	2	Z	0.072	0.098	0.026	1047.
0 0	PANEL NO. 26	4.10	0	1067.7	-39.5	-21.5	2	Z	0.021	0.014	0.014	1064.
0 0	CLOCK TIMER PANEL	2.80	0	1074.5	20.1	25.4	1	Y	0.001	0.000	0.001	1073.
0 0	FLOOD LIGHT CONTROL	1.10	0	1078.3	-14.9	27.6	2	Y	0.001	0.001	0.001	1076.
0 0	CWDU	15.60	0	1075.0	9.4	-22.6	20		0.082	0.018	0.092	1070.
0 0	DATA DIST PANEL - OPS	3.80	0	1024.8	0.	-61.9	0	0	0.	0.	0.	1024.
2 0	DATA DIST PAN R/D	3.40	0	1027.0	0.	-60.0	2	Y	0.008	0.005	0.005	1025.
	DISPLAYS AND CONTROLS TOTAL											
	* FIRST LEVEL TOTAL	204.70		1063.8	1.1	-19.5			39.0 -0.6	11.3 1.5	36.6 0.9	
	* SECOND LEVEL TOTAL	9482.40		1042.6	0.0	4.3			4766.6	4256.3	3991.7	

-20.3	-184.0	-12.3

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
USEFUL LOAD-REACTION CONTROL PROP												
0 0	OXIDIZER	90.00	0	1022.6	22.7	59.4	23	0	0.	0.	0.	1016.
0 0	OXIDIZER	90.00	0	1022.6	3.4	65.4	23	0	0.	0.	0.	1016.
0 0	FUEL	44.50	0	1022.6	-54.0	37.1	23	0	0.	0.	0.	1016.
0 0	FUEL	44.50	0	1022.6	-39.0	52.6	23	0	0.	0.	0.	1016.
0 0	HELIUM	0.50	0	1022.6	54.9	33.0	23	0	0.	0.	0.	1018.
2 0	HELIUM	0.50	0	1023.6	-61.2	18.7	23	0	0.	0.	0.	1019.
USEFUL LOAD-REACTION CONTROL PROP TOTAL												
	* FIRST LEVEL TOTAL	270.00		1022.6	-6.6	56.5			56.7 -0.0	5.7 -0.0	51.0 13.5	
	* SECOND LEVEL TOTAL	9752.40		1042.0	-0.2	5.7			4980.2 -12.8	4439.0 -243.2	4067.9 -18.5	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	USEFUL LOAD-ENVIRON CONTROL											
0 0	LITHIUM HYDROXIDE 02 CTS	9.20	0	1015.4	-4.0	28.5	2	Y	0.021	0.031	0.031	1009.
0 0	OXYGEN-RE ENTRY	3.70	0	1033.7	-48.9	-17.4	3	X	0.013	0.013	0.013	1027.
2 0	CHEMICAL DISINFECTANT	3.80	0	1037.7	49.8	-6.1	2	Z	0.012	0.014	0.006	1034.
	USEFUL LOAD-ENVIRON CONTROL - TOTAL											
	* FIRST LEVEL TOTAL	16.70		1024.5	-1.7	10.5			5.5	1.9	4.4	
									0.3	-0.7	0.3	
	* SECOND LEVEL TOTAL	9769.10		1042.0	-0.2	5.7			4985.8	4442.1	4073.4	
									-12.4	-244.2	-18.2	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
ITEMS FOR AFRM 011												
0 0	LIGHT - CAMERA INSTL	5.00	0	1043.0	47.9	-36.1	2	X	0.012	0.009	0.009	1040.
0 0	LIGHT - CAMERA INSTL	5.00	0	1043.0	38.2	-46.3	2	X	0.012	0.009	0.009	1040.
0 0	LIGHT - CAMERA INSTL	5.00	0	1043.0	-13.5	-58.5	2	X	0.012	0.009	0.009	1040.
0 0	LIGHT - CAMERA INSTL	5.00	0	1043.0	-36.5	-47.6	2	X	0.012	0.009	0.009	1040.
0 0	MOTOR SWITCHES + HDWR	6.00	0	1035.6	25.0	-31.0	2	Y	0.008	0.019	0.019	1030.
0 0	CIRCUIT BREAK + DIODES	8.00	0	1039.3	25.0	-21.0	2	Y	0.033	0.030	0.007	1037.
0 0	WATER - WASTE TANK	10.00	0	1022.5	-21.1	61.8	23	0	0.	0.	0.	1016.
2 0	AMPLIFIER-VIBR + ACCEL	8.00	0	1040.5	-24.0	38.0	2	X	0.021	0.016	0.008	1039.
ITEMS FOR AFRM 011												
	* FIRST LEVEL TOTAL	52.00		1037.2	2.5	-7.2			31.6 0.8	22.8 -2.9	10.2 -7.1	
	* SECOND LEVEL TOTAL	9821.10		1042.0	-0.2	5.7			5019.3 -11.7	4467.0 -246.4	4083.9 -25.7	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
PLATFORM												
0 0	PLATFORM	225.10	0	1035.2	0.	-14.7	2	X	29.545	8.665	21.082	1034.
0 0	MISSION CONTROL PROGRMR	140.00	0	1045.0	-26.2	-5.5	2	X	1.785	1.863	1.211	1034.
0 0	MISSION CONTROL PROGRMR	140.00	0	1044.9	25.2	-16.3	2	X	1.785	1.863	1.211	1037.
0 0	A-D SENSOR	40.00	0	1041.5	-25.6	-22.3	2	X	0.092	0.092	0.092	1038.
0 0	JUNCTION BOX	2.00	0	1039.5	-32.8	-20.6	2	X	0.002	0.001	0.002	1038.
0 0	CAMERA INSTL	17.00	0	1038.0	-21.7	-33.9	2	X	0.055	0.055	0.061	1033.
0 0	CAMERA INSTL	17.00	0	1038.0	2.8	-30.9	2	X	0.055	0.055	0.061	1033.
0 0	SURVIVAL BEACON	5.20	0	1037.0	-5.0	-30.9	2	X	0.003	0.002	0.002	1037.
0 0	MICROPHONES + ACCEL	5.00	0	1037.0	0.	-23.2	2	X	0.003	0.002	0.002	1037.
0 0	BATTERY	54.00	0	1041.5	17.7	1.6	2	X	0.114	0.114	0.157	1036.
0 0	BATTERY MOUNT	9.00	0	1041.0	21.5	1.6	2	X	0.058	0.019	0.066	1036.
0 0	TRI PLUSE GENERATOR	2.50	0	1042.1	27.1	1.6	2	X	0.003	0.001	0.002	1041.
0 0	CONTROL UNIT	8.00	0	1039.9	30.0	-30.2	2	X	0.011	0.006	0.009	1038.
0 0	COLDPLATE	2.40	0	1037.5	-26.2	-5.5	2	X	0.031	0.021	0.010	1037.
0 0	COLDPLATE	2.40	0	1037.4	25.2	-16.3	2	X	0.031	0.021	0.010	1037.

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	COOLANT INSTL	1.50	0	1040.0	-12.5	0.	2	X	0.004	0.005	0.004	1036.
0 0	COOLANT INSTL	1.50	0	1040.0	12.5	0.	2	X	0.004	0.005	0.004	1036.
0 0	WIRING	10.00	0	1038.0	12.0	-18.0	2	X	0.222	0.223	0.004	1036.
0 0	WIRING	10.00	0	1038.0	16.0	-44.0	2	Z	0.042	0.043	0.004	1036.
0 0	WIRING	10.00	0	1038.0	-12.0	-18.0	2	Z	0.114	0.115	0.004	1036.
0 0	WIRING	5.00	0	1038.0	-18.0	-28.0	2	Y	0.010	0.002	0.010	1036.
0 0	WIRING	10.00	0	1039.0	-30.0	-40.0	2	Z	0.042	0.043	0.004	1037.
0 0	CONNECTORS	2.50	0	1040.0	12.0	-18.0	2	X	0.002	0.002	0.002	1038.
0 0	CONNECTORS	2.50	0	1040.0	-12.0	-18.0	2	X	0.002	0.002	0.002	1038.
0 0	MISC PARTS - WIRING	1.20	0	1038.0	0.	-40.0	0	X	0.	0.	0.	1037.
0 0	STRUCTURE FOR BALLAST	56.20	0	1043.7	-0.4	-16.3	2	X	1.541	1.237	0.959	1036.
0 0	BALLAST	50.00	0	1052.8	2.9	3.3	2	X	0.162	0.138	0.040	1051.
0 0	BALLAST	50.00	0	1052.8	8.6	3.3	2	X	0.162	0.138	0.040	1051.
0 0	BALLAST	10.00	0	1053.7	-2.9	3.3	2	X	0.032	0.026	0.007	1053.
2 0	BALLAST	20.00	0	1053.5	-8.6	3.3	2	X	0.065	0.052	0.013	1053.
TOTAL PLATFORM												
	* FIRST LEVEL TOTAL	910.00		1042.4	-0.0	-11.9			117.4 1.0	42.8 7.2	91.6 0.4	
	* SECOND LEVEL TOTAL	10731.10		1042.0	-0.2	4.2			5192.2 -10.7	4565.2 -240.5	4175.5 -25.9	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	BALLAST - AFT HEATSHIELD											
0 0	BALLAST - AFT H/S A	49.00	0	1016.4	35.0	56.0	21		1.200	0.600	0.800	1013.
4 0	BALLAST - AFT H/S B	99.90	0	1016.4	24.8	62.0	21		1.100	0.500	0.800	1013.
	TOTAL BALLAST - AFT HEATSHIELD											
	* FIRST LEVEL TOTAL	148.90		1016.4	28.2	60.0			3.3	1.4	2.3	
									0.	0.0	-0.4	
	* SECOND LEVEL TOTAL	10880.00		1041.7	0.2	4.9			5319.7	4686.2	4224.0	
									-33.7	-285.9	23.8	
	* THIRD LEVEL TOTAL	10880.00		1041.7	0.2	4.9			5319.7	4686.2	4224.0	
									-33.7	-285.9	23.8	

[redacted]

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	PREVIOUS BALLAST - DELETED											
0 0	BALLAST - AFT H/S A	-49.00	0	1016.4	35.0	56.0	21		-1.200	-0.600	-0.800	1013.
4 0	BALLAST - AFT H/S B	-99.90	0	1016.4	24.8	62.0	21		-1.100	-0.500	-0.800	1013.
	TOTAL - PREVIOUS BALLAST - DELETED											
	* FIRST LEVEL TOTAL	-148.90		1016.4	28.2	60.0			-3.3 -0.	-1.4 -0.0	-2.3 0.4	
	* SECOND LEVEL TOTAL	-148.90		1016.4	28.2	60.0			-3.3 -0.	-1.4 -0.0	-2.3 0.4	
	* THIRD LEVEL TOTAL	10731.10		1042.0	-0.2	4.2			5192.2 -10.7	4565.2 -240.5	4175.5 -25.9	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	SIMULATED SYSTEMS - BALLAST											
0 0	THERMAL GARMENTS - STOW	15.20	0	1049.1	-45.0	6.0	2	X	0.055	0.041	0.041	1046.
0 0	CONSTANT WEAR - STOW	9.00	0	1054.2	-35.0	13.0	2	X	0.063	0.055	0.024	1051.
0 0	FOOD	16.80	0	1061.0	-25.0	37.0	2	X	0.145	0.083	0.092	1058.
0 0	FOOD PACKAGING	3.10	0	1061.0	-25.0	37.0	2	X	0.027	0.015	0.017	1058.
0 0	MEDICAL EQUIP + CONT	4.90	0	1061.9	25.3	37.0	2	X	0.025	0.010	0.024	1059.
4 0	MEDICAL EQUIP + CONT	4.80	0	1050.0	36.0	40.0	2	X	0.013	0.025	0.026	1043.
	TOTAL SIMULATED SYSTEMS - BALLAST											
	* FIRST LEVEL TOTAL	53.80		1055.6	-22.3	24.5			10.7 0.4	3.0 0.7	8.5 3.1	
	* SECOND LEVEL TOTAL	53.80		1055.6	-22.3	24.5			10.7 0.4	3.0 0.7	8.5 3.1	
	* THIRD LEVEL TOTAL	10784.90		1042.1	-0.3	4.3			5213.4 -13.8	4575.1 -236.6	4191.8 -28.0	

COMMAND MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
BALLAST - AFT HEATSHIELD												
0 0	BALLAST-T AFT HS -Z AXIS	5.00	0	1016.4	9.3	-66.1	7	X	0.018	0.009	0.014	1014.
0 0	BALLAST-T AFT HS -Z AXIS	5.00	0	1016.4	-9.3	-66.1	7	X	0.018	0.009	0.014	1014.
0 0	BALLAST-T AFT HS +Y AXIS	12.00	0	1016.4	62.0	-25.6	7	X	0.044	0.021	0.034	1014.
0 0	BALLAST-T AFT HS +Y AXIS	12.00	0	1016.4	62.0	25.6	7	X	0.044	0.021	0.034	1014.
0 0	BALLAST-T AFT HS +Y AXIS	12.00	0	1016.4	65.7	-10.5	7	X	0.044	0.021	0.034	1014.
0 0	BALLAST-T AFT HS +Y AXIS	12.00	0	1016.4	65.7	10.5	7	X	0.044	0.021	0.034	1014.
0 0	BALLAST-B AFT HS +Z AXIS	99.90	0	1016.4	26.7	62.0	2	X	1.238	0.634	0.833	1013.
5 4	BALLAST-A AFT HS +Z AXIS	57.20	0	1016.4	35.0	56.0	2	X	0.709	0.363	0.477	1013.
TOTAL BALLAST - AFT HEATSHIELD												
	* FIRST LEVEL TOTAL	215.10		1016.4	36.0	40.6			73.5 0.0	59.5 0.0	14.4 -7.9	
	* SECOND LEVEL TOTAL	215.10		1016.4	36.0	40.6			73.5 0.0	59.5 0.0	14.4 -7.9	
	* THIRD LEVEL TOTAL	11000.00		1041.6	0.4	5.0			5406.7 -56.1	4724.8 -279.1	4296.0 24.0	

CSM 011

DETAIL WEIGHT STATEMENT

SERVICE MODULE

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	STRUCTURE											
0 0	RADIAL WEBS	350.00	0	929.0	-0.9	1.1	21		233.870	283.420	263.670	841.
0 0	INTERNAL PARTITIONS	20.00	0	882.2	-0.8	0.9	21		2.300	10.470	9.420	841.
0 0	OUTER PANELS + PAINT	847.00	0	918.0	1.0	-0.5	21		999.900	841.700	841.700	841.
0 0	C/M TO S/M FAIRING	161.00	0	1005.3	1.7	-5.1	21		204.520	104.050	104.050	993.
0 0	FORWARD BULKHEAD	171.00	0	993.3	0.	-0.1	21		128.380	70.420	57.950	993.
0 0	AFT BULKHEAD	354.00	0	839.4	0.	0.	21		253.030	138.920	114.340	838.
0 0	SEPARATION	28.00	0	1006.0	0.	0.	21		25.030	13.710	11.640	1000.
0 0	TANK SUPPORT SHELF	29.00	0	916.0	32.7	-42.5	21		2.820	1.410	1.410	915.
0 0	SPS ENGINE SUPPORTS	54.00	0	844.3	0.6	-0.4	21		5.640	2.960	2.960	840.
0 0	INSULATION	281.00	0	888.6	1.1	-1.6	21		209.300	333.200	331.600	820.
0 0	AFT HEAT SHIELD + N2 SYS	55.00	0	830.7	0.6	-0.8	21		26.420	13.270	13.270	826.
0 0	FITTINGS AND ATTACH PART	68.00	0	965.2	0.2	0.7	21		69.760	58.720	58.720	875.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	SPS FUEL SYS SUPTS	10.00	0	840.0	0.	0.	21		3.090	1.610	1.610	830.
0 0	SPS OXIDIZER SYS SUPTS	7.00	0	840.0	0.	0.	21		2.410	1.250	1.250	830.
0 0	SPS PRESSURE SYS SUPTS	12.00	0	890.0	-50.0	30.0	21		9.340	6.910	6.910	830.
0 0	RCS FUEL AND OX SUPTS	12.00	3	958.0	64.0	-24.0	20		0.048	0.500	0.500	928.
0 0	RCS FUEL AND OX SUPTS	12.00	3	960.0	7.0	-68.0	20		0.048	0.500	0.500	928.
0 0	RCS PRESSURE SYS SUPTS	5.50	3	951.0	75.0	-15.0	20		0.018	0.036	0.036	950.
0 0	RCS PRESSURE SYS SUPTS	5.50	2	961.0	0.	75.0	20		0.018	0.036	0.036	950.
0 0	RCS ENGINE SUPTS	12.50	3	952.0	77.0	-10.0	20		5.331	19.009	15.010	870.
0 0	RCS ENGINE SUPTS	12.50	3	952.0	10.0	77.0	20		5.331	15.010	19.009	870.
0 0	EPS OX TANK SUPT SHELF	14.00	0	971.5	23.0	-29.7	20		0.245	0.287	0.287	959.
0 0	EPS OX TANK SUPT SHELF	14.00	0	895.5	23.0	-29.7	20		0.245	0.287	0.287	883.
0 0	FUEL CELL ATTACHMENT	2.00	0	853.0	-32.7	41.3	20		0.136	0.082	0.082	842.
0 0	STABILIZING WEBS	4.00	0	858.0	-33.6	42.8	20		0.031	0.122	0.122	841.
0 0	INSTALLATION PROV - EPS	34.00	0	929.0	12.0	0.	20		7.759	8.079	8.079	850.
0 0	POWER DIST BOX SUPT	16.00	0	914.5	-22.5	41.9	20		0.116	0.276	0.171	904.
0 0	COMMON SUPPORTS - ECS	24.00	0	895.0	-41.0	-33.0	20		2.553	2.775	1.221	870.
0 0	SUPPORTS - INSTR	3.00	0	905.0	0.	0.	21		1.820	2.330	2.330	835.
0 0	CM-SM UMBILICAL PROV	7.00	0	999.9	18.5	-70.1	2	X	0.013	0.017	0.021	995.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
3 0	FLYAWAY UMBILICAL PROV	8.00	0	1001.2	54.4	-47.9	2	X	0.014	0.051	0.047	995.
	STRUCTURE TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	2633.00		915.1	0.6	-1.4			2349.5 26.8	3339.2 -32.7	3263.7 -21.3	
	* SECOND LEVEL TOTAL	2633.00		915.1	0.6	-1.4			2349.5 26.8	3339.2 -32.7	3263.7 -21.3	

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	ENVIRONMENTAL CONTROL											
0 0	PLUMBING AND HDWRE - HTS	19.30	0	972.8	6.8	-14.3	20		18.270	7.496	19.446	916.
0 0	HEAT TRANSFER FLUID	8.00	0	396.0	6.8	19.3	20		6.164	2.618	5.123	860.
0 0	SPACE RADIATOR	32.60	0	393.4	0.	0.	21		43.560	10.100	38.100	855.
0 0	VALVES	7.20	0	996.4	19.0	-39.2	20		4.701	0.412	4.310	993.
3 0	PLUMBING AND HARDWARE	3.30	0	894.0	-53.0	-45.0	20		0.764	0.430	0.658	870.
	ENVIRONMENTAL CONTROL TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	70.40		926.0	2.1	-7.8			80.6 4.3	52.0 -7.0	97.0 0.6	
	* SECOND LEVEL TOTAL	70.40		926.0	2.1	-7.8			80.6 4.3	52.0 -7.0	97.0 0.6	

SERVICE MØDULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

ØP CØDE	DESCRIPTIØN	WEIGHT	S M	CENTER ØF GRAVITY X	Y	Z	SH FA	A X	MØMENTS ØF INERTIA X	Y	Z	BEG X STA
	INSTRUMENTATIØN											
0 0	SENSØRS - ØPS	17.80	0	905.0	0.	0.	21		9.100	12.000	12.000	835.
0 0	SENSØRS - FLT QUAL	10.00	0	905.0	0.	0.	1	X	1.245	2.420	2.420	855.
0 0	SUPPØRTS - ØPS	1.80	0	905.0	0.	0.	1	X	0.224	0.436	0.436	855.
0 0	SUPPØRTS - FLT QUAL	2.10	0	905.0	0.	0.	1	X	0.262	0.508	0.508	855.
0 0	MISC EQUIP - ØPS	3.50	0	945.0	0.	0.	1	X	0.436	0.847	0.847	895.
0 0	MISC EQUIP - FLT QUAL	0.50	0	939.0	-25.0	-15.0	1	X	0.002	0.091	0.091	890.
0 0	INSTR INSTL	9.60	0	906.0	0.	0.	1	X	0.788	0.395	0.395	905.
0 0	WIRING	80.00	0	950.0	0.	0.	2	X	0.003	14.385	14.385	900.
0 0	INSTR INSTL-BM NØ 4	10.20	0	951.0	-55.0	30.0	2	X	0.005	0.054	0.058	953.
0 0	INSTR INSTL-FWD BLKHD	5.40	0	995.0	0.	0.	1	X	5.630	2.814	2.814	994.
0 0	PAM/FM/FM TM PKG	27.00	0	917.0	-45.0	37.0	2	X	0.224	0.066	0.193	914.
0 0	SUPPØRTS - TM PKG	1.80	0	915.0	-45.0	37.0	2	X	0.	0.001	0.001	913.
0 0	INSTR INSTL-INNER STRUCT	5.60	0	875.4	-14.2	9.1	2	X	0.002	0.003	0.003	873.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	INSTR INSTL-RCS PANELS	5.60	0	971.9	-10.0	-75.0	2	X	0.010	0.091	0.101	957.
0 0	INSTR INSTL-RAD PNL ST 5	0.80	0	923.0	-75.0	6.0	2	X	0.000	0.000	0.000	922.
0 0	INSTR INSTL-PNL ST 2	1.30	0	928.0	75.0	12.0	2	X	0.000	0.000	0.000	927.
0 0	INSTR INSTL-OUT SHL ST 3	1.00	0	915.0	-45.0	60.0	2	X	0.000	0.000	0.000	914.
0 0	INSTR INSTL-OUT SHL ST 6	6.30	0	908.0	-18.0	-75.0	2	X	0.001	0.002	0.002	906.
0 0	INSTR INSTL-GAGE BM 1-4	0.40	0	917.0	-65.0	35.0	2	X	0.000	0.001	0.001	910.
0 0	INSTR INSTL-GAGE BM 1-4	0.40	0	917.0	65.0	-35.0	2	X	0.000	0.001	0.001	910.
0 0	INSTR INSTL-FRNG CM-SM	0.30	0	1004.0	-40.0	-59.0	2	X	0.000	0.001	0.001	998.
0 0	INSTR INSTL-PNL ST 1	4.10	0	953.0	35.0	-66.0	2	X	0.000	0.000	0.000	952.
0 0	INSTR INSTL-FWD PNL ST 6	0.50	0	885.0	65.0	33.0	2	X	0.000	0.000	0.000	884.
0 0	INSTR INSTL-H2 SHLF ST 1	5.60	0	914.0	20.4	-26.6	2	X	0.006	0.005	0.004	912.
0 0	INSTR INSTL-TENSION TIE	3.20	0	1002.0	0.	0.	3	X	2.421	1.210	1.210	1001.
0 0	CABLE INSTL-RF SYSTEM	6.10	0	964.1	-26.9	4.1	2	X	0.000	0.395	0.395	934.
3 0	SYSTEM INSTL	3.50	0	915.0	0.	0.	2	X	0.000	0.001	0.001	913.
	INSTRUMENTATION TOTAL											
	* FIRST LEVEL TOTAL	214.40		935.0	-9.4	1.0			74.4 1.8	99.5 -4.7	91.3 -14.2	
	* SECOND LEVEL TOTAL	214.40		935.0	-9.4	1.0			74.4 1.8	99.5 -4.7	91.3 -14.2	

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	ELECTRICAL POWER											
	ELECTRICAL POWER EQUIPMENT											
0 0	LH2 TANK 1	85.80	0	934.3	42.4	-42.4	20		2.503	2.742	2.742	916.
0 0	LH2 TANK 2	85.80	0	858.8	42.4	-42.4	20		2.503	2.742	2.742	841.
0 0	PLUMBING-VALVES-SUPPORTS	1.90	0	932.6	42.4	-42.4	20		0.073	0.083	0.083	918.
0 0	PLUMBING-VALVES-SUPPORTS	1.90	0	855.1	42.4	-42.4	20		0.073	0.083	0.083	843.
0 0	LOX TANK 1	86.10	0	971.5	23.0	-29.7	20		1.713	2.089	1.905	957.
0 0	LOX TANK 2	86.20	0	895.5	23.0	-29.7	20		1.713	2.089	1.905	881.
0 0	PLUMBING-VALVES-SUPPORTS	3.00	0	971.5	23.0	-29.7	20		0.105	0.123	0.123	959.
0 0	PLUMBING-VALVES-SUPPORTS	3.10	0	895.5	23.0	-29.7	20		0.105	0.123	0.123	883.
0 0	VALVE MODULE CONTROL BOX	5.30	0	916.7	17.0	-25.2	20		0.010	0.010	0.010	914.
0 0	FUEL CELL	247.50	0	860.5	-47.4	40.8	21		3.160	10.030	10.030	841.
0 0	FUEL CELL	247.50	0	860.5	-27.6	56.1	21		3.160	10.030	10.030	841.
0 0	FUEL CELL	247.50	0	860.5	-24.2	31.3	21		3.160	10.030	10.030	841.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	FUEL CELL PLUMBING	43.40	0	880.0	-19.0	20.0	21		22.440	22.690	14.200	846.
0 0	FUEL CELL PLUMBING SUPTS	7.20	0	864.8	-16.8	21.9	20		0.330	0.540	0.330	845.
0 0	WATER GLYCOL	23.00	0	890.0	0.	0.	20		17.443	12.181	8.456	860.
0 0	EPS RADIATORS	40.50	0	920.0	4.3	-1.4	21		51.160	35.720	24.790	885.
0 0	POWER DISTRIBUTION BOX	32.50	0	912.4	-23.7	30.7	20		0.197	0.468	0.289	901.
0 0	INSTALLATION PROVISIONS	11.00	0	929.0	12.0	0.	20		8.128	8.463	8.463	850.
1 0	DISTRIBUTION PANELS	16.70	0	950.9	5.2	-3.5	2	X	0.015	0.128	0.128	941.
	ELECTRICAL POWER EQUIPMENT TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	1275.90		882.1	-11.2	16.3			723.1	808.0	688.5	
									183.5	-226.5	-280.7	

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	ELECTRICAL POWER CONTINUED											
	ELECTRICAL WIRING AND CONNECTORS											
0 0	SM-CM INTERCONNECT-WIRE	14.30	0	1007.5	38.8	-68.6	2	X	0.044	0.059	0.101	1000.
0 0	SM-CM INTERCONNECT-CONN	4.40	0	1000.0	38.8	-68.6	2	X	0.014	0.002	0.015	998.
0 0	RCS MODULE - WIRE	3.40	0	959.0	0.	0.	2	X	0.000	0.025	0.025	949.
0 0	RCS MODULE - CONN	1.40	0	959.0	0.	0.	2	X	0.000	0.010	0.010	949.
0 0	ELECT PWR SUPT - WIRE	25.90	0	921.3	-22.6	37.3	2	X	1.490	3.578	3.578	882.
0 0	ELECT PWR SUPT - CONN	6.80	0	936.9	-24.7	24.6	2	X	0.391	0.939	0.939	898.
0 0	PROPELLANT SUPT - WIRE	23.90	0	899.5	14.0	-7.7	2	X	0.344	6.779	6.779	838.
0 0	PROPELLANT SUPT - CONN	4.40	0	909.6	16.2	-9.0	2	X	0.063	1.248	1.248	848.
0 0	STAB AND CONTROL - WIRE	14.90	0	995.0	-14.4	18.9	2	X	0.214	0.214	0.214	985.
0 0	STAB AND CONTROL - CONN	3.90	0	995.0	-14.4	18.9	2	X	0.056	0.056	0.056	985.
0 0	ELECT CRYO CONT SPT-WIRE	23.30	0	917.5	6.6	-26.4	2	X	0.031	9.579	9.556	843.
0 0	ELECT CRYO CONT SPT-CONN	2.40	0	917.5	6.6	-26.4	2	X	0.003	0.987	0.984	843.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	ELECT SYSTEM - WIRE	26.10	0	965.6	5.8	-7.1	2	X	0.032	6.022	5.994	910.
0 0	ELECT SYSTEM - CONN	2.90	0	954.7	5.4	-6.1	2	X	0.004	0.669	0.666	910.
0 0	INST SPT FLGHT QL-WIRE	12.00	0	954.0	-20.3	10.8	2	X	0.004	1.315	1.315	915.
0 0	INST SPT FLGHT QL-CONN	3.00	0	954.0	-20.3	10.8	2	X	0.001	0.329	0.329	915.
1 0	POTTING	85.00	0	938.7	-4.4	5.0	2	X	0.306	2.598	2.598	919.
	ELECTRICAL WIRING AND CONNECTORS TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	258.00		943.9	-0.9	-1.2			51.4 5.6	117.0 -13.3	96.6 -20.5	

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATJS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	ELECTRICAL POWER CONTINUED											
	AUTOMATED SEQUENCE CONTROL											
0 0	SEQ CONT BATTERIES	5.60	0	991.0	-25.7	33.2	2	X	0.005	0.003	0.003	990.
0 0	SEQ CONTROLLER	6.80	0	990.7	-20.5	40.7	2	X	0.023	0.024	0.005	988.
0 0	SEQ CONTROLLER	6.80	0	990.7	-35.1	29.1	2	X	0.023	0.005	0.024	988.
3 0	PYROTECHNIC INITIATION	1.80	0	1009.7	12.0	-16.0	1	X	1.520	0.760	0.760	1008.
	AUTOMATED SEQUENCE CONTROL TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	21.00		992.4	-23.8	30.1			3.3 0.3	1.9 -0.3	1.6 -0.6	
	* SECOND LEVEL TOTAL	1554.90		893.8	-9.6	13.6			799.1 212.4	1164.0 -282.7	1014.2 -311.2	

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	SERVICE PROPULSION											
0 0	OXIDIZER TANK 2 SUMP	274.50	0	909.2	48.3	6.6	21		34.750	149.380	149.380	832.
0 0	OXIDIZER TANK 5 STORAGE	274.50	0	909.2	-48.3	-6.6	21		34.750	149.380	149.380	832.
0 0	TANK SUPT UPPER - OXID 2	13.60	0	936.7	48.3	6.6	20		1.909	1.017	1.017	977.
0 0	SKIRT LOWER - OXIDIZER 2	17.90	0	846.0	48.3	6.6	20		2.512	1.302	1.302	841.
0 0	TANK SUPT UPPER - OXID 5	13.60	0	936.7	-48.3	-6.6	20		1.909	1.017	1.017	977.
0 0	SKIRT LOWER - OXIDIZER 5	17.90	0	846.0	-48.3	-6.6	20		2.512	1.302	1.302	841.
0 0	FUEL TANK 6 SUMP	224.00	0	908.3	-14.8	-47.8	21		21.950	122.450	122.450	832.
0 0	FUEL TANK 3 STORAGE	224.00	0	908.3	14.8	47.8	21		22.440	122.450	122.450	832.
0 0	TANK SUPT UPPER - FUEL 6	6.60	0	986.0	-14.8	-47.8	20		0.721	0.378	0.378	981.
0 0	SKIRT LOWER - FUEL 6	10.90	0	846.4	-14.8	-47.8	20		1.191	0.617	0.617	841.
0 0	TANK SUPT UPPER - FUEL 3	6.60	0	986.0	14.8	47.9	20		0.721	0.378	0.378	981.
0 0	SKIRT LOWER - FUEL 3	10.90	0	846.4	14.8	47.9	20		1.191	0.617	0.617	841.
0 0	PLUMBING-FITTINGS	84.00	0	840.0	0.	0.	21		30.290	11.980	18.700	826.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	VALVES - PROPELLANT	5.00	0	328.0	35.0	33.0	20		0.019	0.014	0.011	824.
0 0	SUPPORTS-PLUMBING+EQUIP	46.40	0	880.0	0.	0.	21		18.360	9.570	9.570	870.
0 0	RETENTION RESERVOIRS	48.00	0	860.0	20.4	-17.4	21		18.610	10.000	12.610	835.
0 0	HELIUM TANK 1	392.00	0	967.5	0.	0.	21		23.350	23.350	23.350	947.
0 0	HELIUM TANK 2	392.00	0	924.5	0.	0.	21		23.350	23.350	23.350	904.
0 0	SUPPORTS HELIUM TANK 1	2.70	0	967.5	0.	0.	20		0.265	0.122	0.149	965.
0 0	SUPPORTS HELIUM TANK 2	2.70	0	924.5	0.	0.	20		0.265	0.122	0.149	922.
0 0	PLUMBING-FITTINGS	39.10	0	869.9	-18.7	13.4	21		14.860	21.500	21.500	800.
0 0	VALVES REG HEAT EXCHGRS	52.10	0	890.0	-20.0	5.0	21		40.520	29.980	29.980	830.
0 0	SUPPORTS PLUMB + EQUIP	10.90	0	890.0	-50.0	30.0	21		8.480	6.270	6.270	830.
0 0	ENGINE	569.60	0	840.3	0.4	0.1	21		18.590	56.480	57.260	818.
0 0	NOZZLE EXTENSION	160.00	0	768.7	0.	0.	20		45.759	48.133	48.133	721.
3 0	ENGINE DRAIN	8.00	0	828.0	-4.0	-39.0	20		1.804	1.104	0.728	823.
	SERVICE PROPULSION TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	2907.50		893.1	-0.3	0.1			975.9 -6.9	2717.1 4.4	2822.0 107.0	
	* SECOND LEVEL TOTAL	2907.50		893.1	-0.3	0.1			975.9 -6.9	2717.1 4.4	2822.0 107.0	

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	REACTION CONTROL											
0 0	TANKS EXPULSION 2	15.75	0	958.0	64.0	-24.0	20		0.141	1.233	1.233	928.
0 0	TANK SUPPORTS	2.00	0	958.0	64.0	-24.0	20		0.026	0.270	0.270	928.
0 0	PLUMBING FITTINGS INSUL	3.00	0	948.0	70.0	-16.0	20		0.026	0.355	0.355	928.
0 0	VALVES	7.10	0	948.0	75.0	-12.0	20		0.024	0.130	0.130	928.
0 0	QUANTITY GAGING	8.40	0	969.0	18.0	-7.0	20		0.067	0.658	0.658	939.
0 0	HELIUM TANK	5.20	0	951.0	68.0	-24.0	20		0.022	0.022	0.022	956.
0 0	PLUMBING FITTINGS INSUL	1.80	0	951.0	71.0	-15.0	20		0.019	0.035	0.035	950.
0 0	VALVES AND REGULATORS	12.80	0	951.0	75.0	-15.0	20		0.083	0.274	0.274	951.
0 0	SENSORS	1.75	0	961.0	75.0	-15.0	20		0.010	0.021	0.021	950.
0 0	PLUMBING-EQUIPMENT SUPTS	3.35	0	951.0	75.0	-15.0	20		0.013	0.027	0.027	950.
0 0	ENGINES RCS 4	20.20	0	959.0	82.0	-11.0	20		0.574	0.895	0.735	940.
0 0	ENGINE MOUNTS	3.50	0	959.0	82.0	-11.0	20		0.029	0.045	0.037	940.
0 0	ENGINE VALVE HEATERS	1.50	0	959.0	82.0	-11.0	20		0.001	0.001	0.001	958.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	TANKS EXPULSION 2	15.75	0	960.0	-7.0	68.0	20		0.141	1.233	1.233	928.
0 0	TANK SUPPORTS	2.00	0	960.0	-7.0	68.0	20		0.026	0.270	0.270	928.
0 0	PLUMBING FITTINGS INSUL	3.00	0	970.0	4.0	74.0	20		0.026	0.355	0.355	945.
0 0	VALVES	7.10	0	970.0	2.0	74.0	20		0.024	0.130	0.130	953.
0 0	QUANTITY GAGING	8.40	0	969.0	18.0	-7.0	20		0.067	0.658	0.658	939.
0 0	HELIUM TANK	5.20	0	957.0	-7.0	71.0	20		0.022	0.022	0.022	952.
0 0	PLUMBING FITTINGS INSUL	1.80	0	961.0	0.	74.0	20		0.019	0.035	0.035	950.
0 0	VALVES AND REGULATORS	12.80	0	961.0	0.	74.0	20		0.083	0.274	0.274	951.
0 0	SENSORS	1.75	0	961.0	0.	74.0	20		0.010	0.021	0.021	950.
0 0	PLUMBING-EQUIPMENT SUPTS	3.35	0	961.0	0.	75.0	20		0.013	0.027	0.027	950.
0 0	ENGINES RCS 4	20.20	0	959.0	11.0	82.0	20		0.574	0.735	0.895	940.
0 0	ENGINE MOUNTS	3.50	0	959.0	11.0	82.0	20		0.029	0.037	0.045	940.
0 0	ENGINE VALVE HEATERS	1.50	0	959.0	11.0	82.0	20		0.001	0.001	0.001	958.
0 0	TANKS EXPULSION 2	15.75	0	958.0	-64.0	24.0	20		0.141	1.233	1.233	928.
0 0	TANK SUPPORTS	2.00	0	958.0	-64.0	24.0	20		0.026	0.270	0.270	928.
0 0	PLUMBING FITTINGS INSUL	3.00	0	948.0	-70.0	16.0	20		0.026	0.355	0.355	928.
0 0	VALVES	7.10	0	948.0	-75.0	12.0	20		0.024	0.130	0.130	928.
0 0	QUANTITY GAGING	8.40	0	969.0	18.0	-7.0	20		0.067	0.658	0.658	939.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	HELIUM TANK	5.20	0	961.0	-68.0	24.0	20		0.022	0.022	0.022	956.
0 0	PLUMBING FITTINGS INSUL	1.80	0	961.0	-71.0	15.0	20		0.019	0.035	0.035	950.
0 0	VALVES AND REGULATORS	12.80	0	961.0	-75.0	15.0	20		0.083	0.274	0.274	951.
0 0	SENSORS	1.75	0	961.0	-75.0	15.0	20		0.010	0.021	0.021	950.
0 0	PLUMBING-EQUIPMENT SUPTS	3.35	0	961.0	-75.0	15.0	20		0.013	0.027	0.027	950.
0 0	ENGINES RCS 4	20.20	0	959.0	-82.0	11.0	20		0.574	0.895	0.735	940.
0 0	ENGINE MOUNTS	3.50	0	959.0	-82.0	11.0	20		0.029	0.045	0.037	940.
0 0	ENGINE VALVE HEATERS	1.50	0	959.0	-82.0	11.0	20		0.001	0.001	0.001	958.
0 0	TANKS EXPULSION 2	15.75	0	960.0	7.0	-68.0	20		0.141	1.233	1.233	928.
0 0	TANK SUPPORTS	2.00	0	960.0	7.0	-68.0	20		0.026	0.270	0.270	928.
0 0	PLUMBING FITTINGS INSUL	3.00	0	970.0	-4.0	-74.0	20		0.026	0.355	0.355	945.
0 0	VALVES	7.10	0	970.0	-2.0	-74.0	20		0.024	0.130	0.130	953.
0 0	QUANTITY GAGING	8.40	0	959.0	18.0	-7.0	20		0.067	0.658	0.658	939.
0 0	HELIUM TANK	5.20	0	957.0	7.0	-71.0	20		0.022	0.022	0.022	952.
0 0	PLUMBING FITTINGS INSUL	1.80	0	961.0	0.	-74.0	20		0.019	0.035	0.035	950.
0 0	VALVES AND REGULATORS	12.80	0	961.0	0.	-74.0	20		0.083	0.274	0.274	951.
0 0	SENSORS	1.75	0	961.0	0.	-74.0	20		0.010	0.021	0.021	950.
0 0	PLUMBING-EQUIPMENT SUPTS	3.35	0	961.0	0.	-75.0	20		0.013	0.027	0.027	950.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	ENGINES RCS 4	20.20	0	959.0	-11.0	-82.0	20		0.574	0.735	0.895	940.
0 0	ENGINE MOUNTS	3.50	0	959.0	-11.0	-82.0	20		0.029	0.037	0.045	870.
3 0	ENGINE VALVE HEATERS	1.50	0	959.0	-11.0	-82.0	20		0.001	0.001	0.001	958.
	REACTION CONTROL TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	345.40		950.4	1.8	-0.7			394.6 1.1	217.8 -0.4	207.1 -33.9	
	* SECOND LEVEL TOTAL	345.40		950.4	1.8	-0.7			394.6 1.1	217.8 -0.4	207.1 -33.9	

SERVICE MØDULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

ØP CØDE	DESCRIPTIØN	WEIGHT	S M	CENTER ØF GRAVITY X	Y	Z	SH FA	A X	MØMENTS X	ØF Y	INERTIA Z	BEG X STA
	FLUID RESIDUALS											
0 0	RCS RESIDUAL PRØPELLANT	11.25	0	958.0	64.0	-24.0	23	X	0.	0.	0.	928.
0 0	RCS RESIDUAL PRØPELLANT	11.25	0	950.0	-7.0	68.0	23	X	0.	0.	0.	928.
0 0	RCS RESIDUAL PRØPELLANT	11.25	0	958.0	-64.0	24.0	23	X	0.	0.	0.	928.
0 0	RCS RESIDUAL PRØPELLANT	11.25	0	950.0	7.0	-68.0	23	X	0.	0.	0.	928.
0 0	HELIUM RCS	0.75	0	961.0	68.0	-24.0	23	X	0.	0.	0.	956.
0 0	HELIUM RCS	0.75	0	957.0	7.0	-71.0	23	X	0.	0.	0.	952.
0 0	HELIUM RCS	0.75	0	961.0	-68.0	24.0	23	X	0.	0.	0.	956.
0 0	HELIUM RCS	0.75	0	957.0	-7.0	71.0	23	X	0.	0.	0.	952.
0 0	HYDRØGEN RESIDUALS EPS	3.95	0	933.8	42.4	-42.4	23	X	0.	0.	0.	918.
0 0	HYDRØGEN RESIDUALS EPS	3.95	0	854.5	42.4	-42.4	23	X	0.	0.	0.	841.
0 0	ØXYGEN RESIDUALS EPS-ECS	48.00	0	971.5	23.0	-29.7	23	X	0.	0.	0.	969.
0 0	ØXYGEN RESIDUALS EPS-ECS	48.00	0	895.5	23.0	-29.7	23	X	0.	0.	0.	893.
0 0	ENGINE RESIDUALS SPS	68.60	0	845.0	-5.2	-2.3	20		3.627	3.720	2.733	830.
0 0	PLUMBING RESIDUALS SPS	52.70	0	831.0	0.	0.	21		21.330	7.770	13.750	826.

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATJS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	FUEL 6 RESIDUAL SPS	97.60	0	836.6	-14.8	-47.8	24	X	0.	1.118	1.118	832.
0 0	OXIDIZER 2 RESIDUAL SPS	247.40	0	836.8	48.3	6.6	24	X	0.	3.287	3.287	832.
0 0	HELIUM SPS	49.50	0	967.5	0.	0.	23	X	0.	0.	0.	947.
4 0	HELIUM SPS	49.50	0	924.5	0.	0.	23	X	0.	0.	0.	904.
	FLUID RESIDUALS TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	717.20		874.0	17.7	-8.9			228.5 -52.1	541.6 -12.6	576.7 28.8	
	* SECOND LEVEL TOTAL	717.20		874.0	17.7	-8.9			228.5 -52.1	541.6 -12.6	576.7 28.8	
	* THIRD LEVEL TOTAL	8442.80		902.6	-0.3	1.2			5059.8 137.8	8810.1 -351.1	8761.6 -312.9	

SERVICE MODULE SC 011 WEIGHT - CG - INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	USABLE FLUIDS											
[redacted] 0 0	PROPELLANT RCS	197.50	0	958.0	64.0	-24.0	20		0.	15.450	15.450	928.
[redacted] 0 0	PROPELLANT RCS	197.50	0	960.0	-7.0	68.0	20		0.	15.450	15.450	928.
[redacted] 0 0	PROPELLANT RCS	197.50	0	958.0	-64.0	24.0	20		0.	15.450	15.450	928.
[redacted] 0 0	PROPELLANT RCS	197.50	0	960.0	7.0	-68.0	20		0.	15.450	15.450	928.
[redacted] 0 0	HYDROGEN EPS	25.30	0	933.8	42.4	-42.4	23		0.	0.	0.	918.
[redacted] 0 0	HYDROGEN EPS	25.30	0	854.5	42.4	-42.4	23		0.	0.	0.	841.
0 0	OXYGEN EPS ECS	278.30	0	971.5	23.0	-29.7	23		0.	0.	0.	958.
5 4	OXYGEN EPS ECS	278.30	0	895.5	23.0	-29.7	23		0.	0.	0.	882.
	USABLE FLUIDS TOTAL WEIGHT											
	* FIRST LEVEL TOTAL	1397.20		946.5	10.7	-13.4			917.1 -60.1	844.6 70.6	731.6 -230.1	
	* SECOND LEVEL TOTAL	1397.20		946.5	10.7	-13.4			917.1 -60.1	844.6 70.6	731.6 -230.1	
	* THIRD LEVEL TOTAL	9840.00		908.8	1.2	-0.8			6063.7 203.2	10209.2 -446.6	10024.1 -584.8	

[redacted]

SID 65-336

CSM 011

DETAIL WEIGHT STATEMENT

ADAPTER

SC 011 SLA WEIGHT CG AND INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
	SPACECRAFT LEM ADAPTER											
0 0	SLA - STR INSL MISC	107.50	0	669.6	0.	0.	21		254.270	403.530	400.760	0.
0 0	STABL DEVICE ASSY	17.50	0	584.3	0.	0.	21		25.640	7.880	17.800	0.
0 0	LEM SUPPORT	24.20	0	585.7	0.	0.	21		70.210	35.140	35.140	0.
0 0	SLA ELEC PROV	50.60	0	680.5	0.	-93.5	21		12.080	98.590	92.660	0.
0 0	SLA SEPR PROV	7.70	0	640.9	12.3	-24.5	21		18.170	27.080	27.770	0.
0 0	ADAPTER ASSY COMPLETE	70.90	0	583.7	0.	0.3	21		225.250	113.490	113.900	0.
0 0	ADAPTER ASSY - AFT SECT	58.20	0	569.2	0.	0.	21		176.820	97.780	97.780	0.
0 0	QUARTER PANEL - AFT SECT	467.50	0	538.3	0.	0.	21		1540.100	1364.200	349.000	0.
0 0	QUARTER PANEL - AFT SECT	464.30	0	538.3	0.	0.	21		1528.300	344.600	1356.400	0.
0 0	STAB DEVICE ASSY	15.10	0	585.2	0.	0.	21		38.330	14.200	24.210	0.
0 0	TRUSS ASSY	42.40	0	585.6	0.	0.	21		46.080	23.240	23.240	0.
0 0	ADAPTER ASSY - FWD SECT	88.10	0	703.9	0.2	-0.7	21		182.890	199.670	197.640	0.
0 0	QUARTER PNL NO 1 FWD	455.60	0	701.2	-0.4	-87.8	21		189.870	616.590	765.570	0.
0 0	QUARTER PNL NO 2 FWD	441.20	0	703.4	87.3	-1.0	21		190.650	746.830	592.960	0.

SC 011 SLA WEIGHT CG AND INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	QUARTER PNL NO 3 FWD	448.70	0	699.2	0.	88.1	21		189.220	592.990	741.960	0.
0 0	QUARTER PNL NO 4 FWD	431.30	0	703.3	-87.1	-0.2	21		189.430	718.480	565.460	0.
0 0	COVER - THRUSTER ATT	6.60	0	585.9	0.	0.	21		19.770	9.920	9.910	0.
0 0	DOOR ASSY - SM ACCESS	3.00	0	826.3	-23.4	-74.5	21		0.010	0.010	0.020	0.
0 0	DOOR ASSY - SM ACCESS	3.00	0	826.3	77.7	10.5	21		0.010	0.020	0.010	0.
0 0	DOOR - LEM ENTRANCE	25.20	0	634.5	0.	0.	21		64.580	64.750	1.260	0.
0 0	SYSTEMS SUPPORT INSTL	5.40	0	611.8	23.6	-65.3	21		8.830	10.320	10.450	0.
0 0	PLATE ASSY-FLY AWAY UMBL	1.80	0	607.6	88.7	-66.9	21		0.	0.	0.	0.
0 0	BRACKET ASSY - CBL SUPT	3.20	0	693.1	0.	-97.8	21		0.150	4.940	4.860	0.
0 0	HOLDER ASSY FWD CIR JOIN	5.10	0	837.0	0.	0.	21		6.430	0.180	6.250	0.
0 0	HOLDER ASSY FWD CIR JOIN	5.10	0	837.0	0.	0.	21		6.430	6.250	0.180	0.
0 0	HOLDER ASSY AFT CIR JOIN	7.20	0	584.1	0.	0.	21		21.940	10.970	10.970	0.
0 0	HOLDER ASSY AFT CIR JOIN	7.20	0	584.1	0.	0.	21		21.940	10.970	10.970	0.
0 0	HOLDER ASSY FWD IN LONG	4.00	0	774.5	0.	0.	21		6.500	4.500	4.500	0.
0 0	HOLDER ASSY AFT IN LONG	4.80	0	649.1	0.	0.	21		11.850	7.450	7.450	0.
0 0	HOLDER ASSY FWD IN LONG	2.10	0	772.9	-61.2	61.2	21		0.020	0.690	0.690	0.
0 0	HOLDER ASSY FWD IN LONG	2.10	0	772.9	61.2	-61.2	21		0.	0.690	0.690	0.
0 0	HOLDER ASSY AFT IN LONG	2.40	0	651.7	-75.5	75.5	21		0.020	0.770	0.770	0.

SC 011 SLA WEIGHT CG AND INERTIA STATUS - 15 MARCH 1965

OP CODE	DESCRIPTION	WEIGHT	S M	CENTER OF GRAVITY X	Y	Z	SH FA	A X	MOMENTS OF INERTIA X	Y	Z	BEG X STA
0 0	HOLDER ASSY AFT IN LONG	2.40	0	651.7	75.5	-75.5	21		0.020	0.770	0.770	0.
0 0	HOLDER ASSY FWD OUT LONG	7.80	0	774.0	0.	0.	21		12.660	8.600	8.600	0.
0 0	HOLDER ASSY AFT OUT LONG	6.60	0	649.2	0.	0.	21		16.290	10.310	10.310	0.
0 0	DEFLECTOR FWD IN LONG	16.80	0	773.0	0.	0.	21		26.960	18.050	18.050	0.
0 0	DEFLECTOR AFT IN LONG	16.80	0	645.7	0.	0.	21		41.060	25.020	25.020	0.
0 0	DEFLECTOR FWD CIR JOINT	6.60	0	836.6	0.	0.	21		8.160	0.070	8.090	0.
0 0	DEFLECTOR FWD CIR JOINT	6.60	0	836.6	0.	0.	21		8.160	8.090	0.070	0.
0 0	THRUSTER ASSY PNL DEPLOY	12.00	0	587.9	0.	0.	21		34.760	17.420	17.420	0.
0 0	REEL ASSY PNL DEPLOY	32.00	0	535.0	0.	0.	21		101.110	57.670	57.670	0.
0 0	MOUNT - REEL ASSY PULLEY	5.20	0	515.3	0.	0.	21		0.	0.	0.	0.
0 0	ATTENUATOR - SLA PANEL	16.00	0	584.4	0.	0.	21		0.	0.	0.	0.
1 0	SLA SEP SYS JOINT SPLICE	72.20	0	711.0	0.	0.	21		0.	0.	0.	0.
TOTAL SC 011 LEM ADAPTER												
	* FIRST LEVEL TOTAL	3480.00		646.0	0.4	-2.0			8374.1 14.6	11694.5 -72.3	11448.8 -14.9	

[redacted]

[redacted]

CSM 011

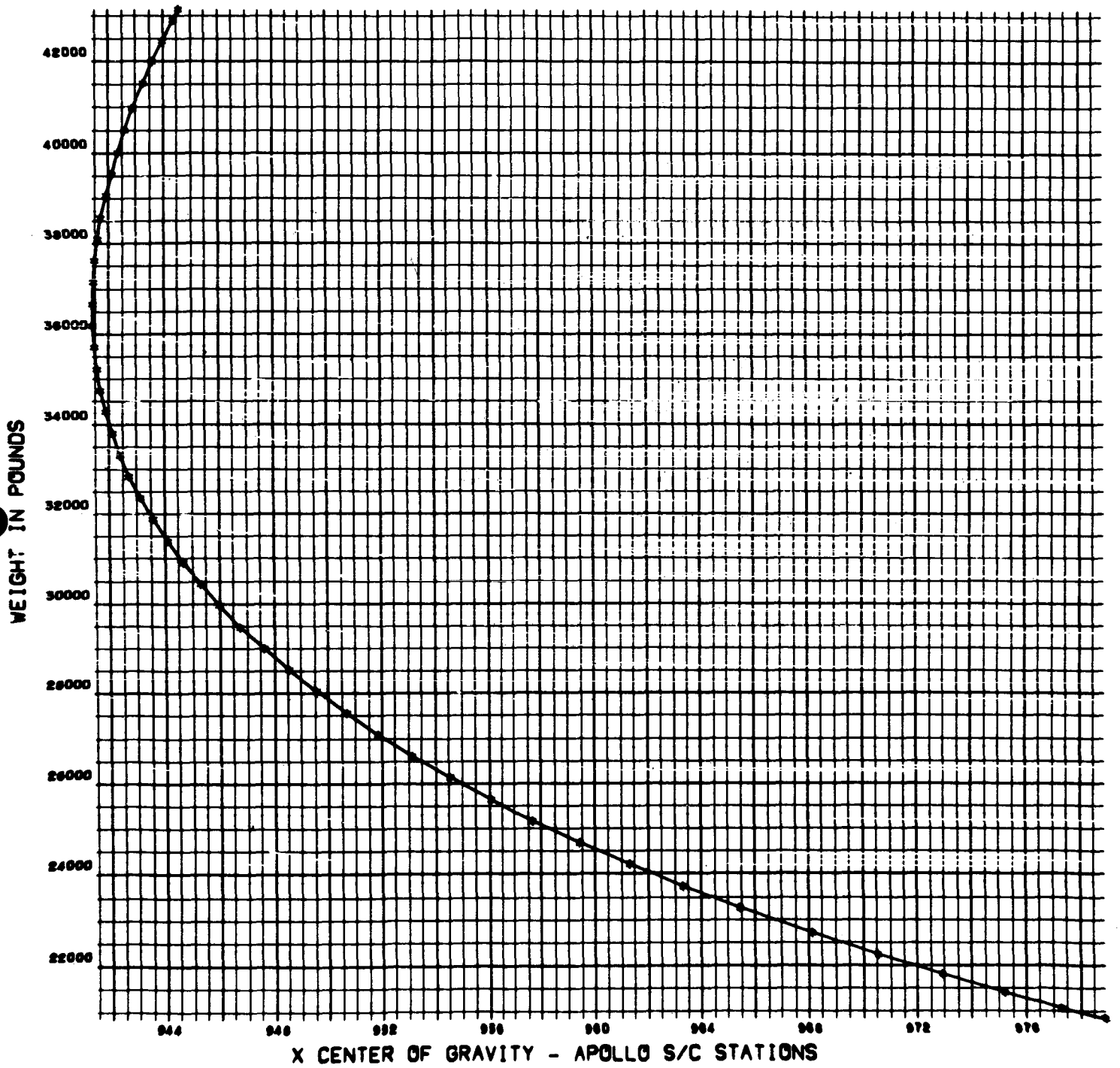
DETAIL WEIGHT STATEMENT

GOVERNMENT FURNISHED EQUIPMENT

Command Module	(576.3)
Guidance & Navigation	430.0
PAM/FM/FM Package	16.0
Commutators (3)	13.0
Survival VHF Beacon/Transceiver	5.2
Gas Chromotoraph	9.5
Cameras (2) (included film & lens)	34.0
Battery	54.0
Control Unit	8.0
Tri Pulse Generator	2.5
Calibrator (installed in flight qual. tape recorder)	2.1
Junction Box	2.0
Service Module	(178.7)
Mod. Kit	151.7
PAM/FM/FM System	27.0
Launch Escape System	(25.0)
"Q" Ball	25.0
TOTAL GOVERNMENT FURNISHED EQUIPMENT	(780.0)

SPACECRAFT 011 CSM WITH SPS PROPELLANT

0621-55
001 001



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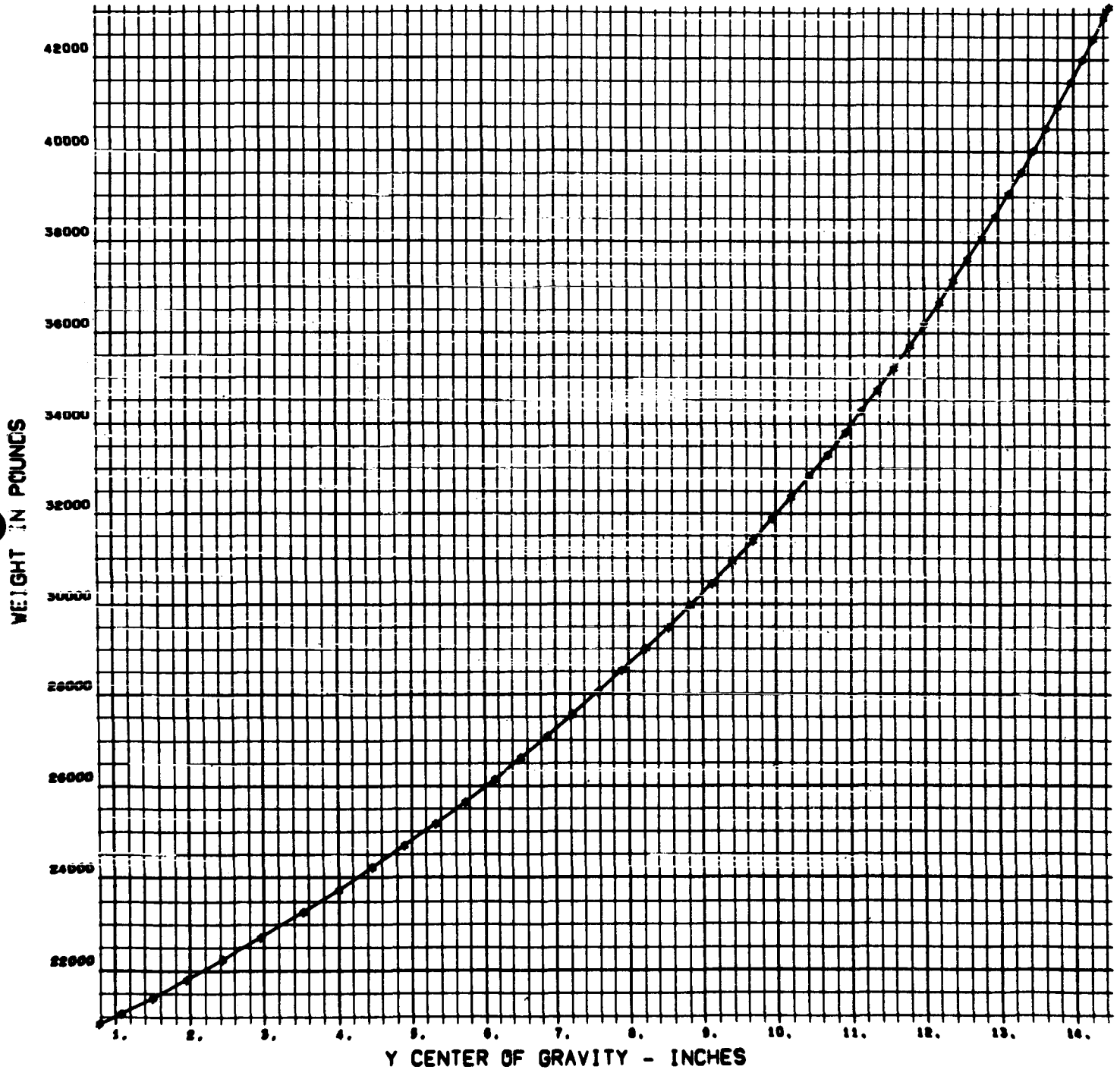
0621-55
002 00(



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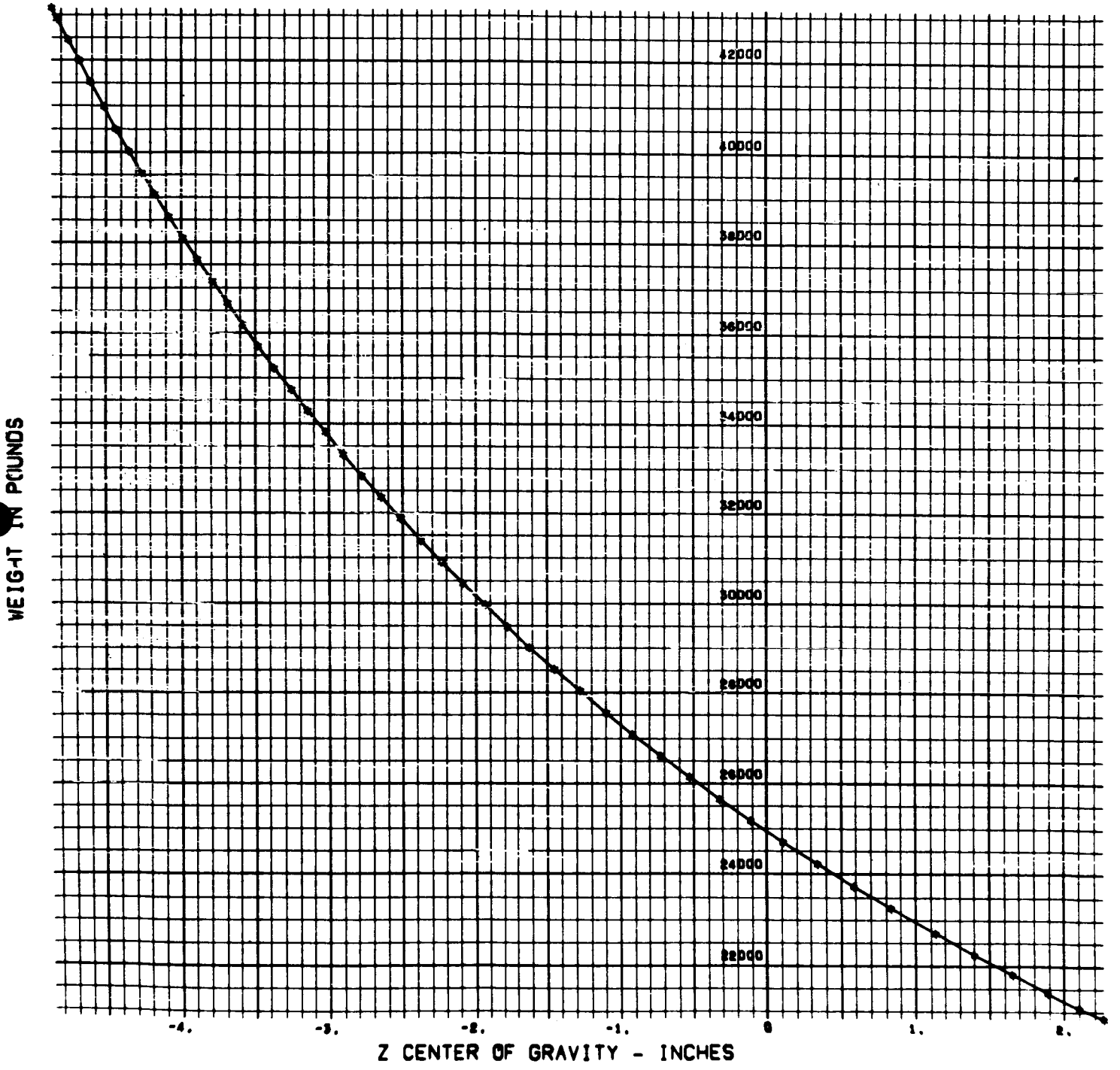
0621-55
003 00



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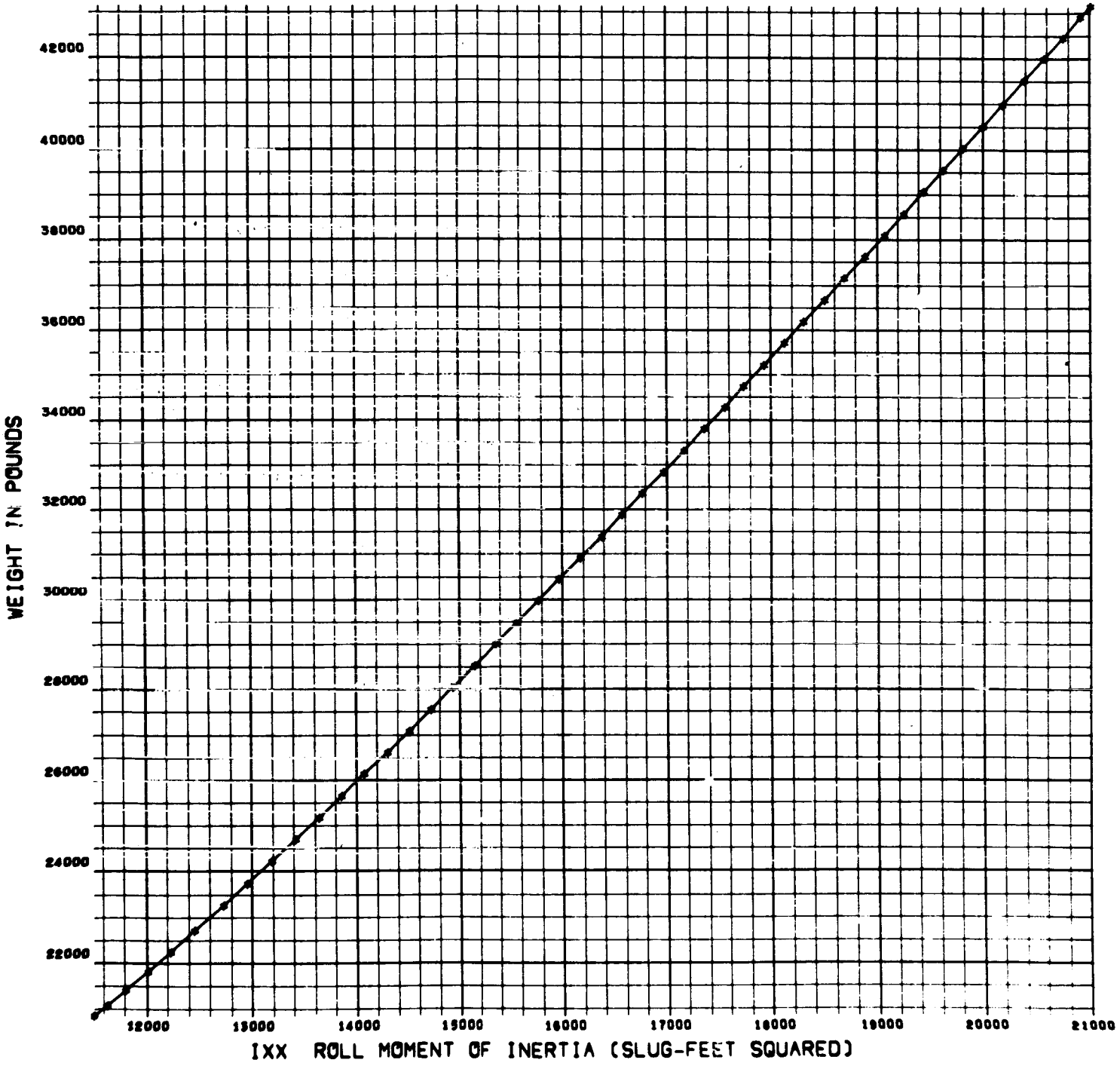

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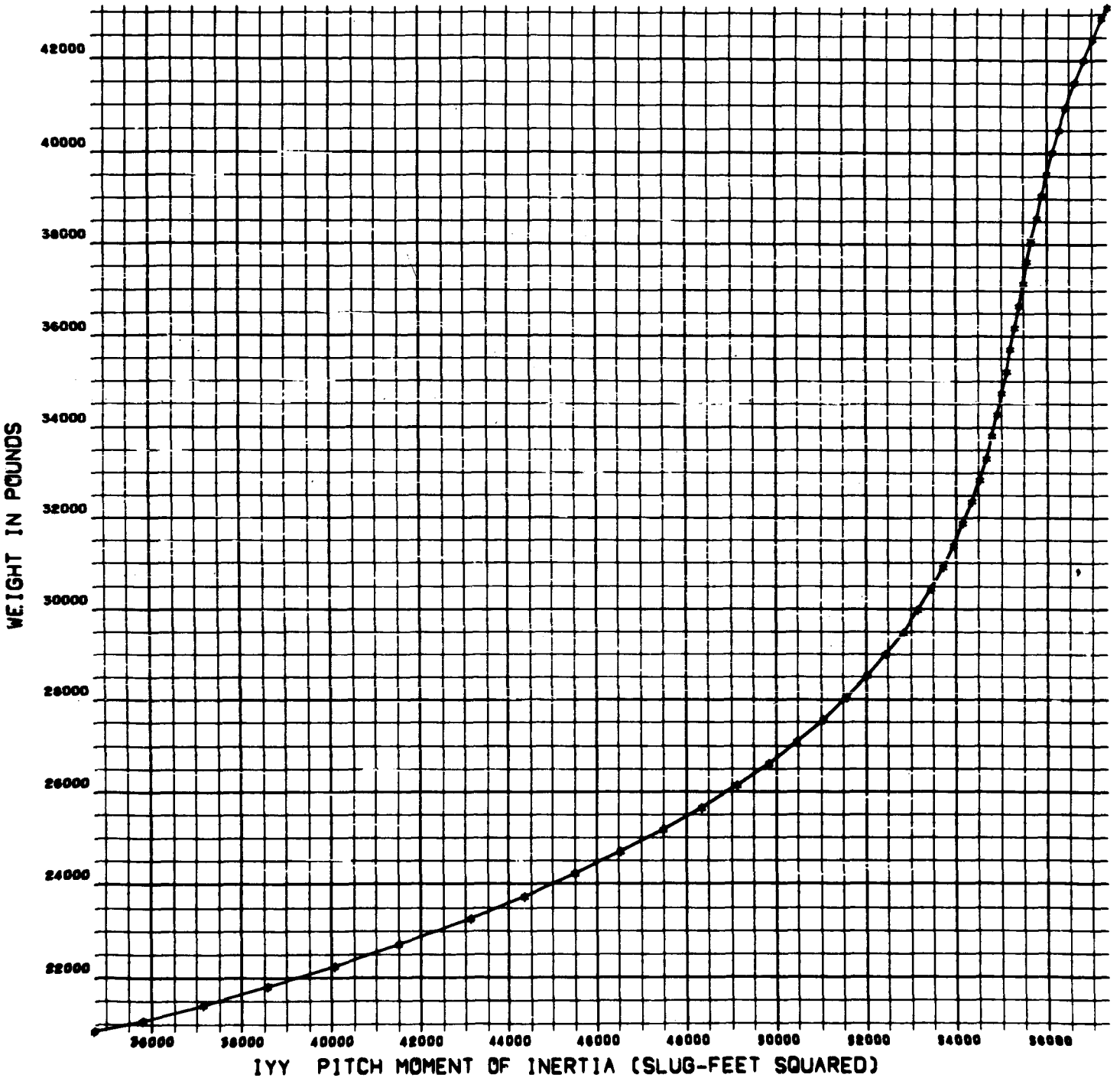

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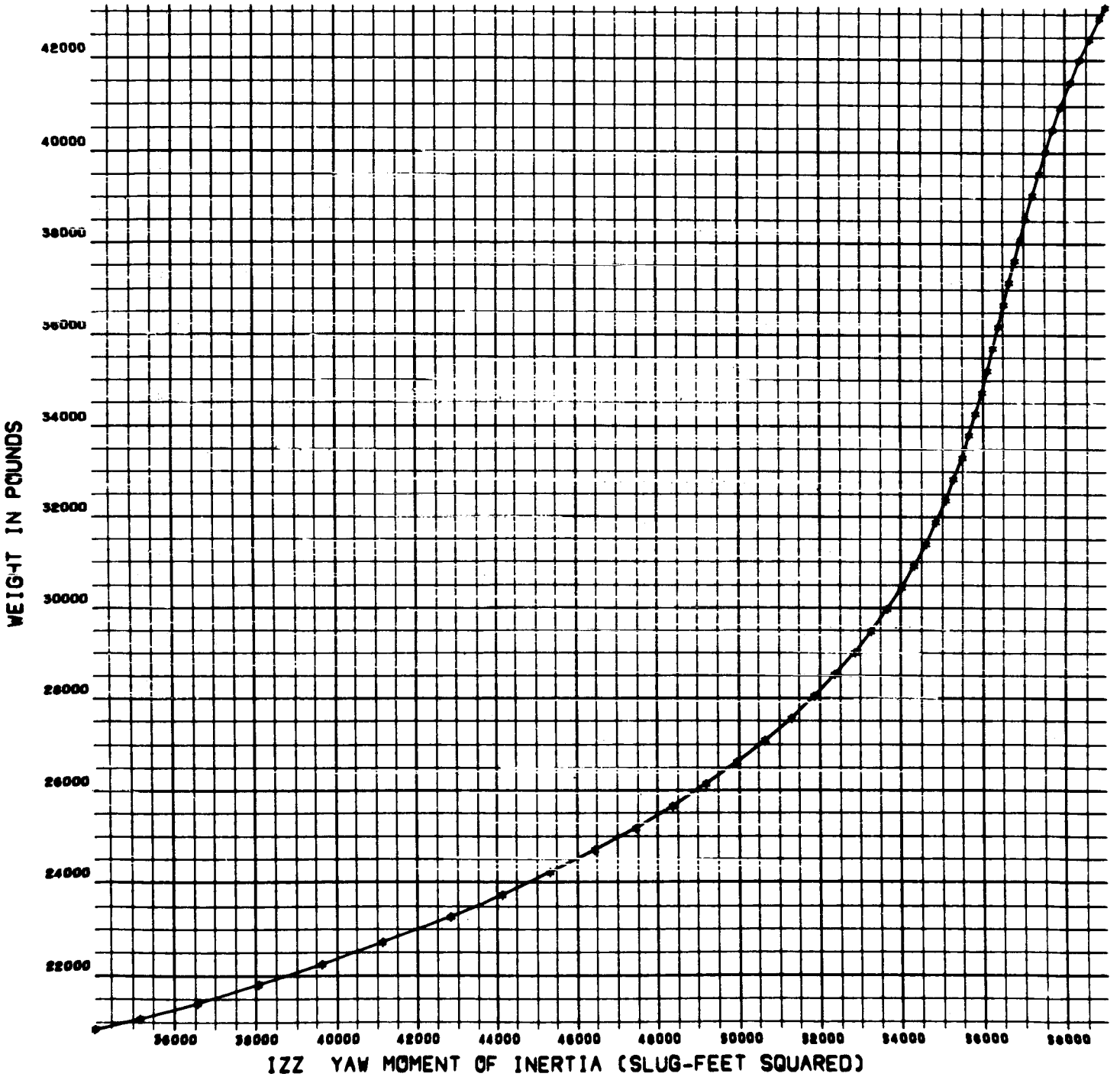

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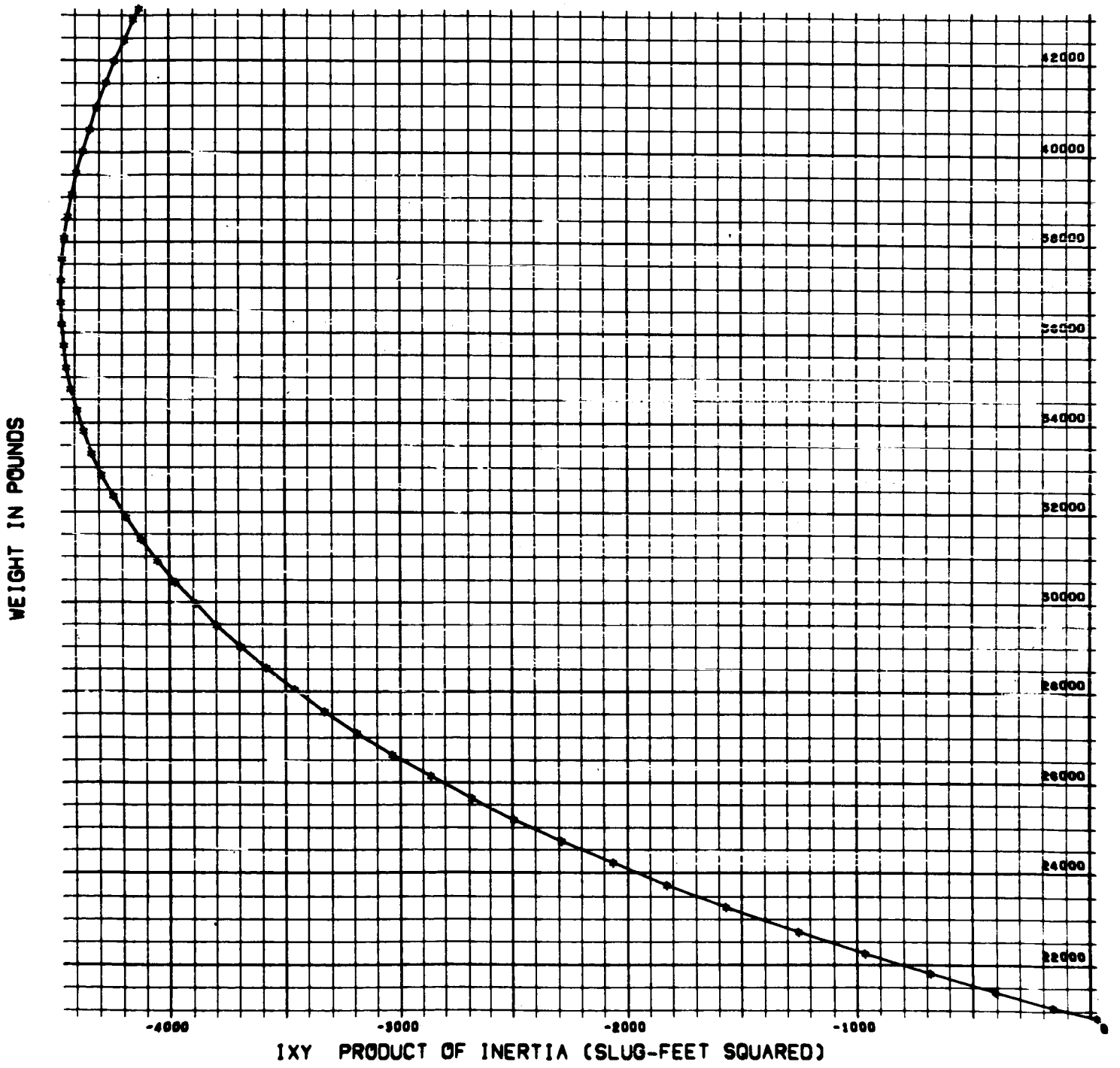

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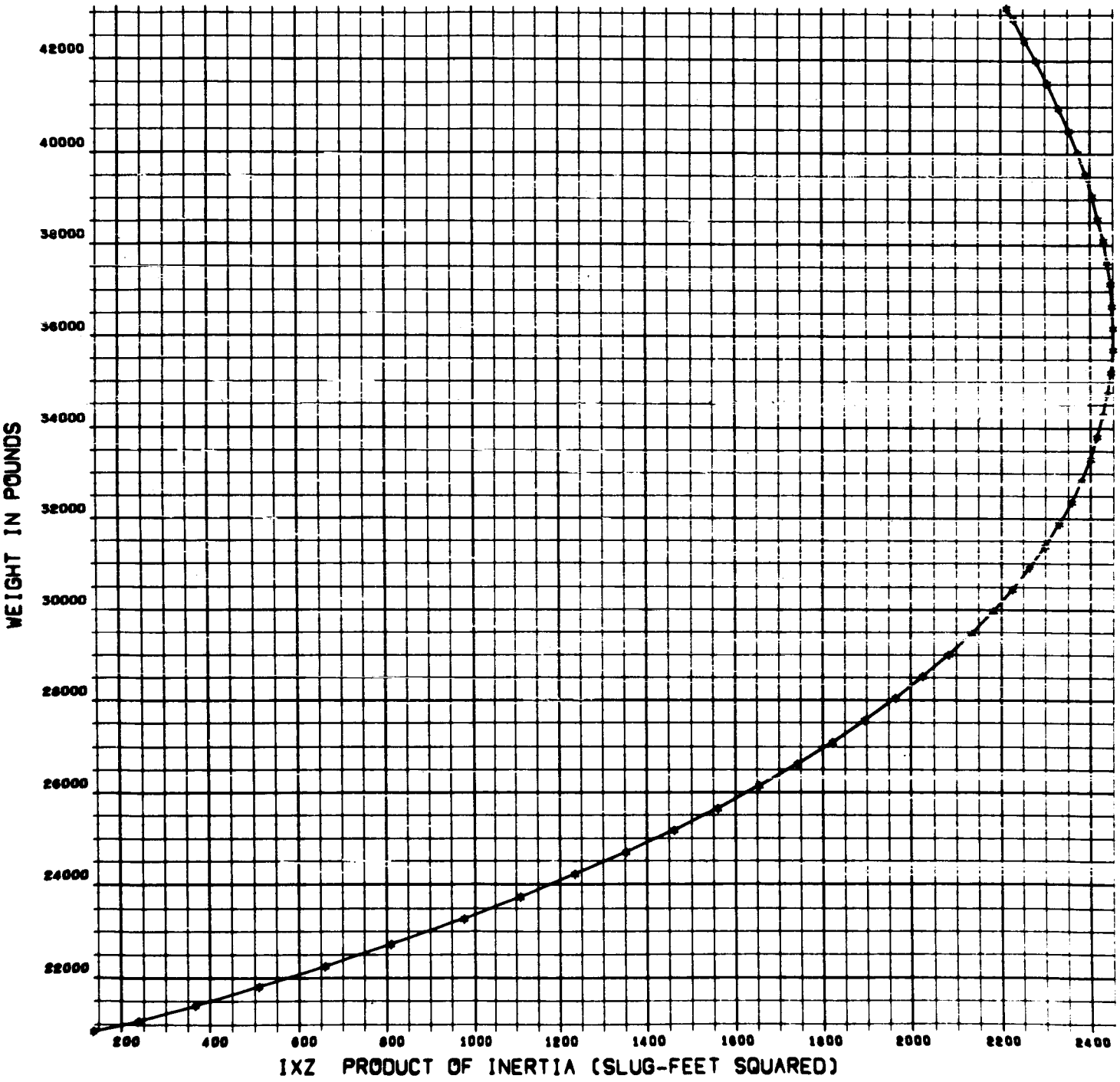

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0621-55
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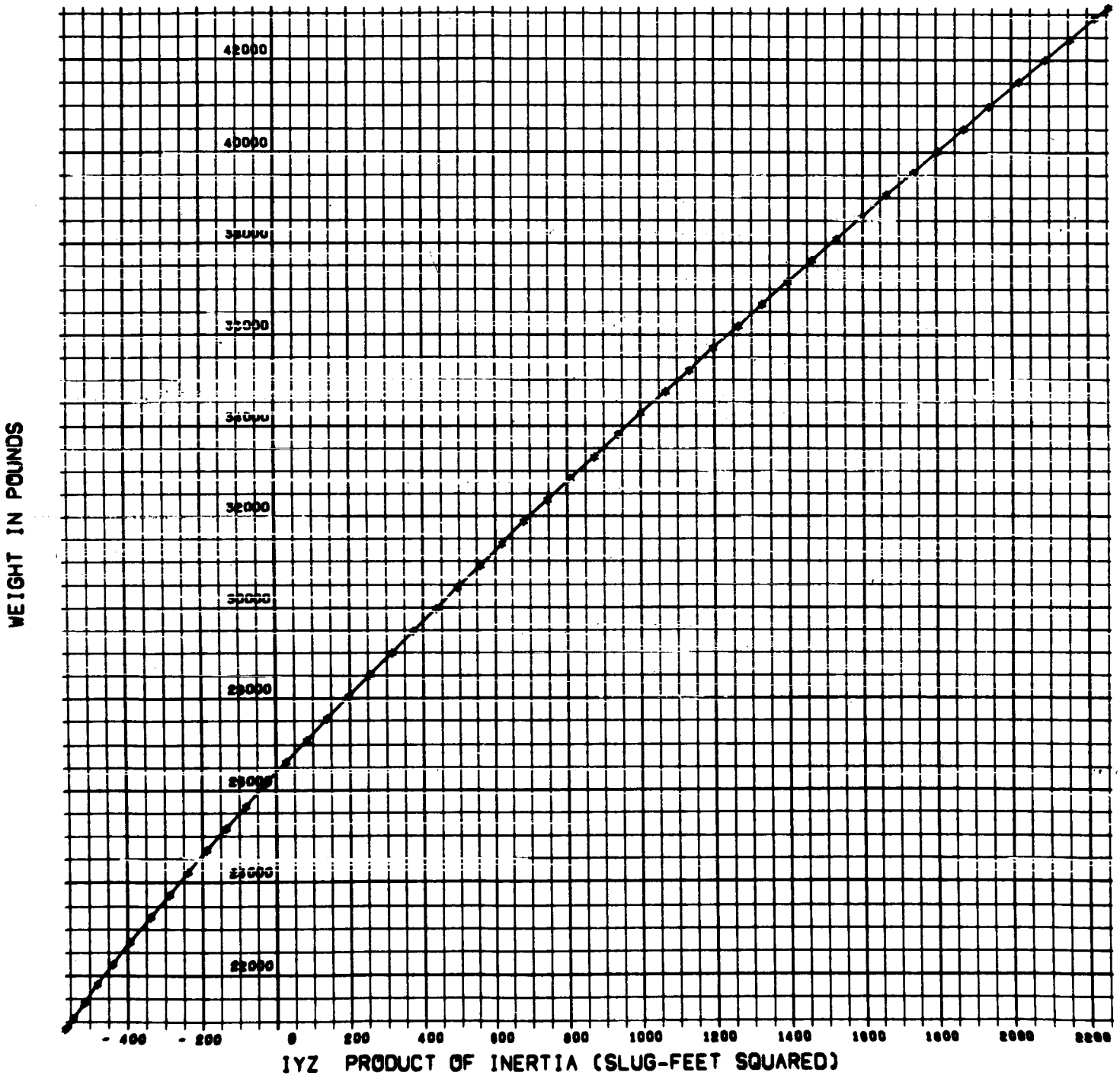

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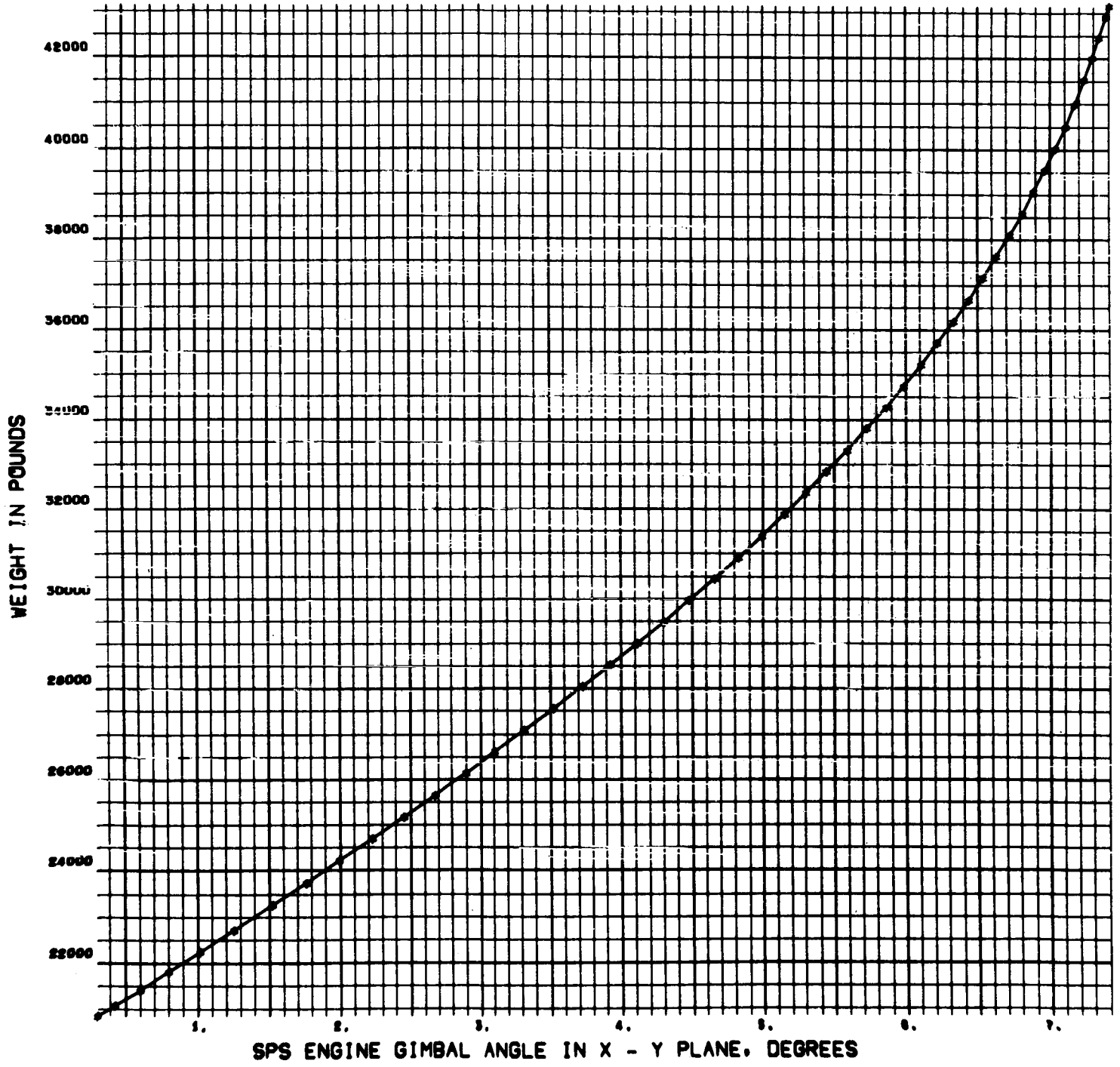

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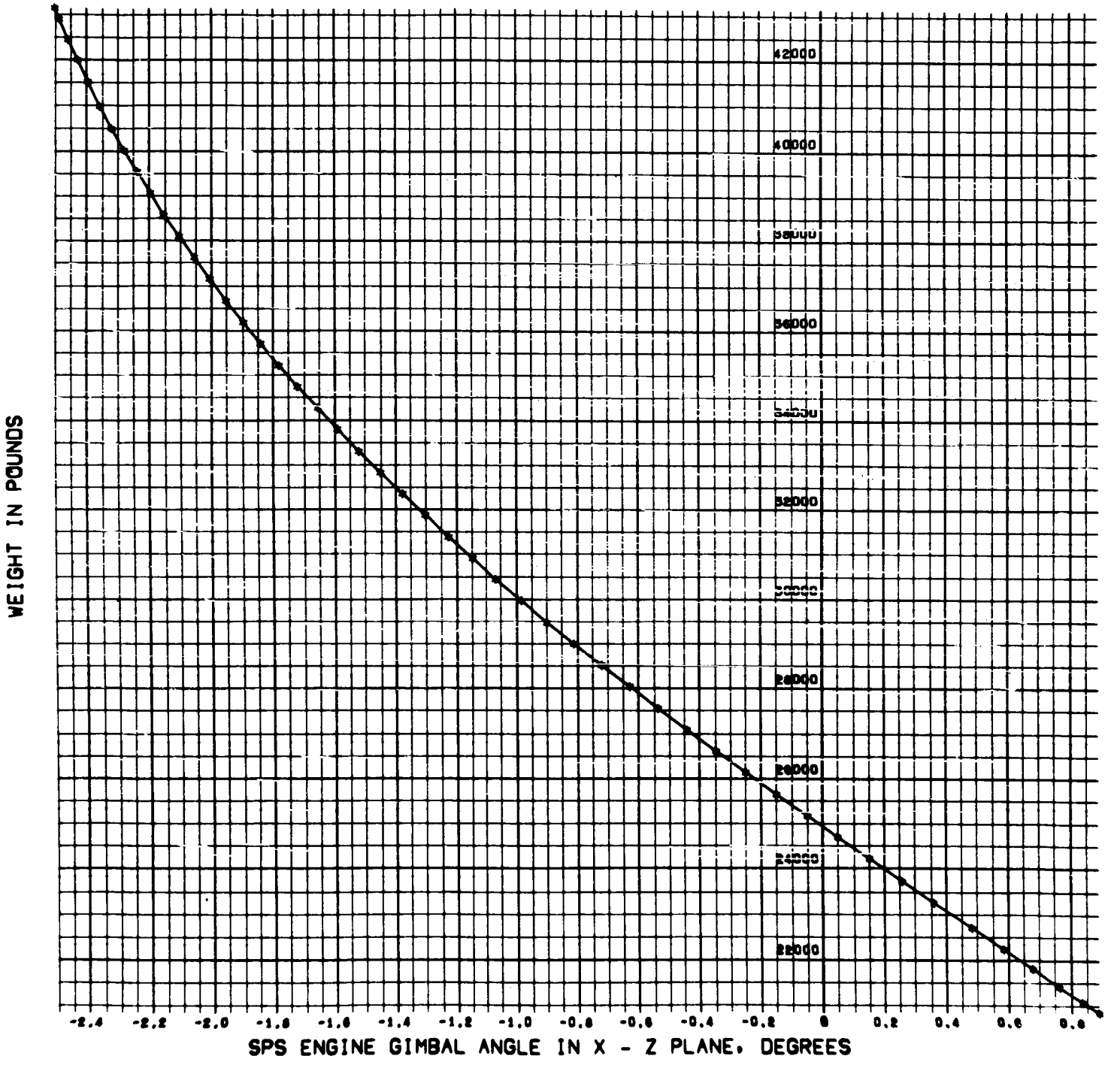

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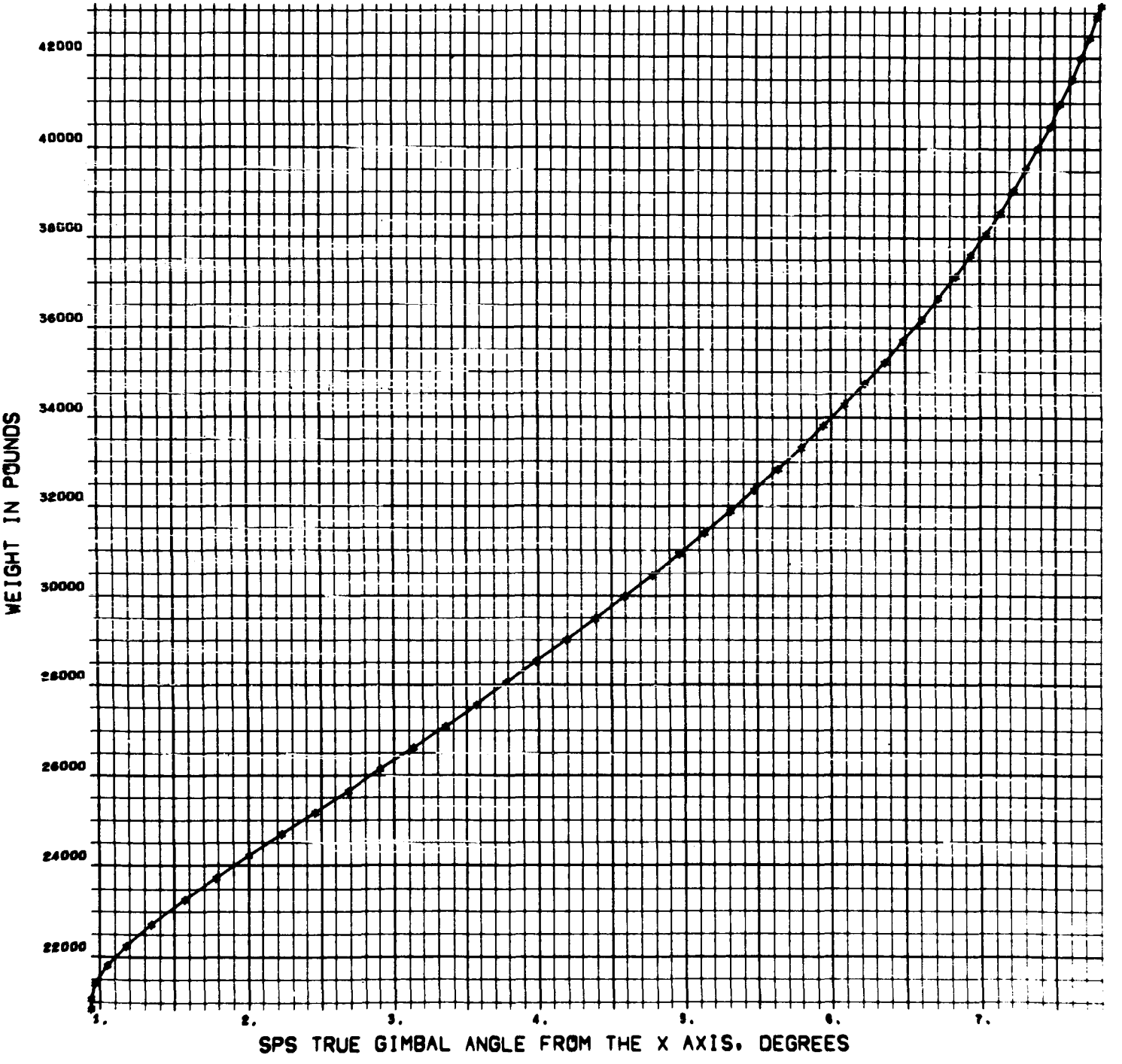
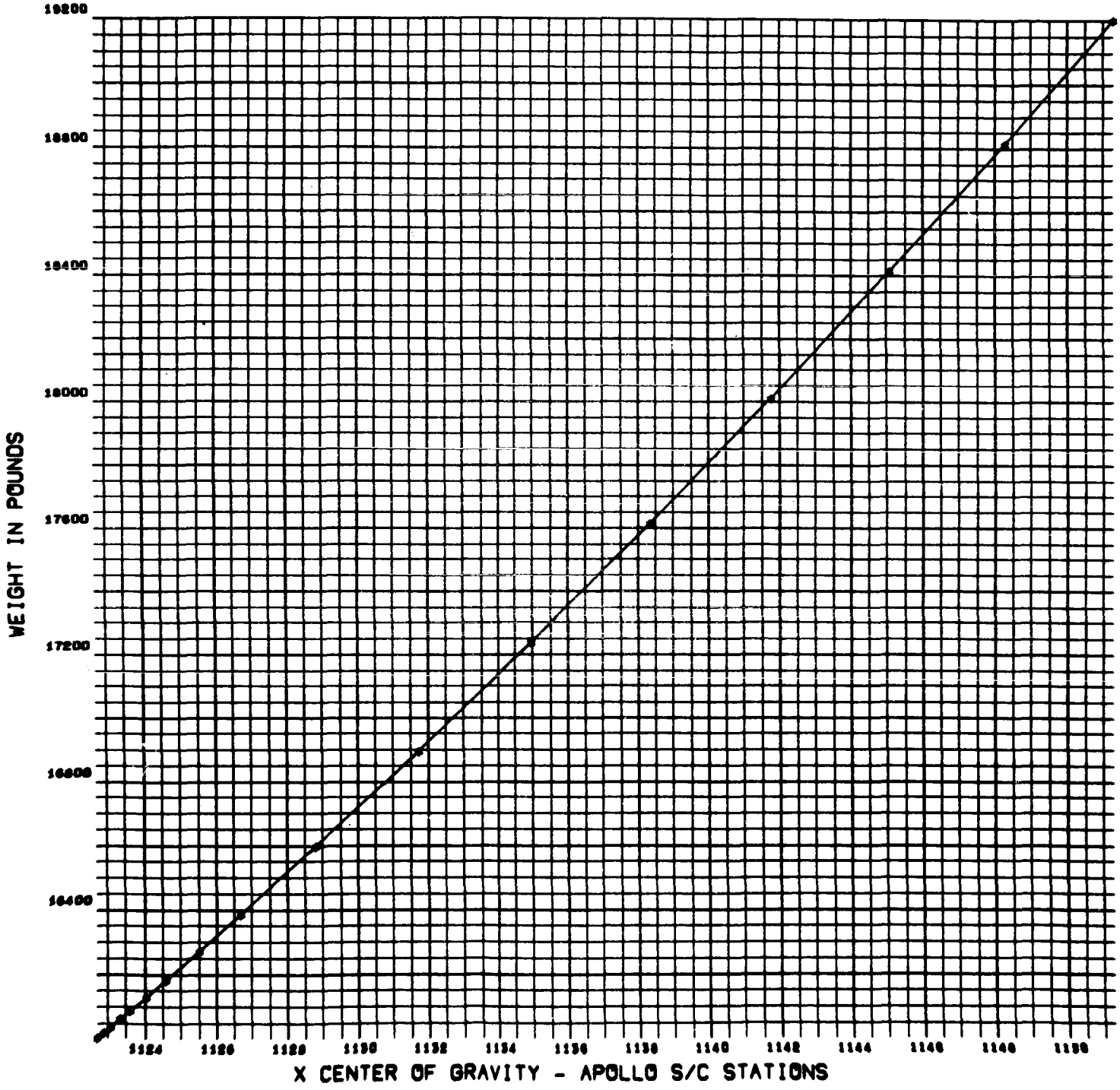


SPACECRAFT 011 LAUNCH ESCAPE VEHICLE ABORT PHASE

0621-70
001 00(



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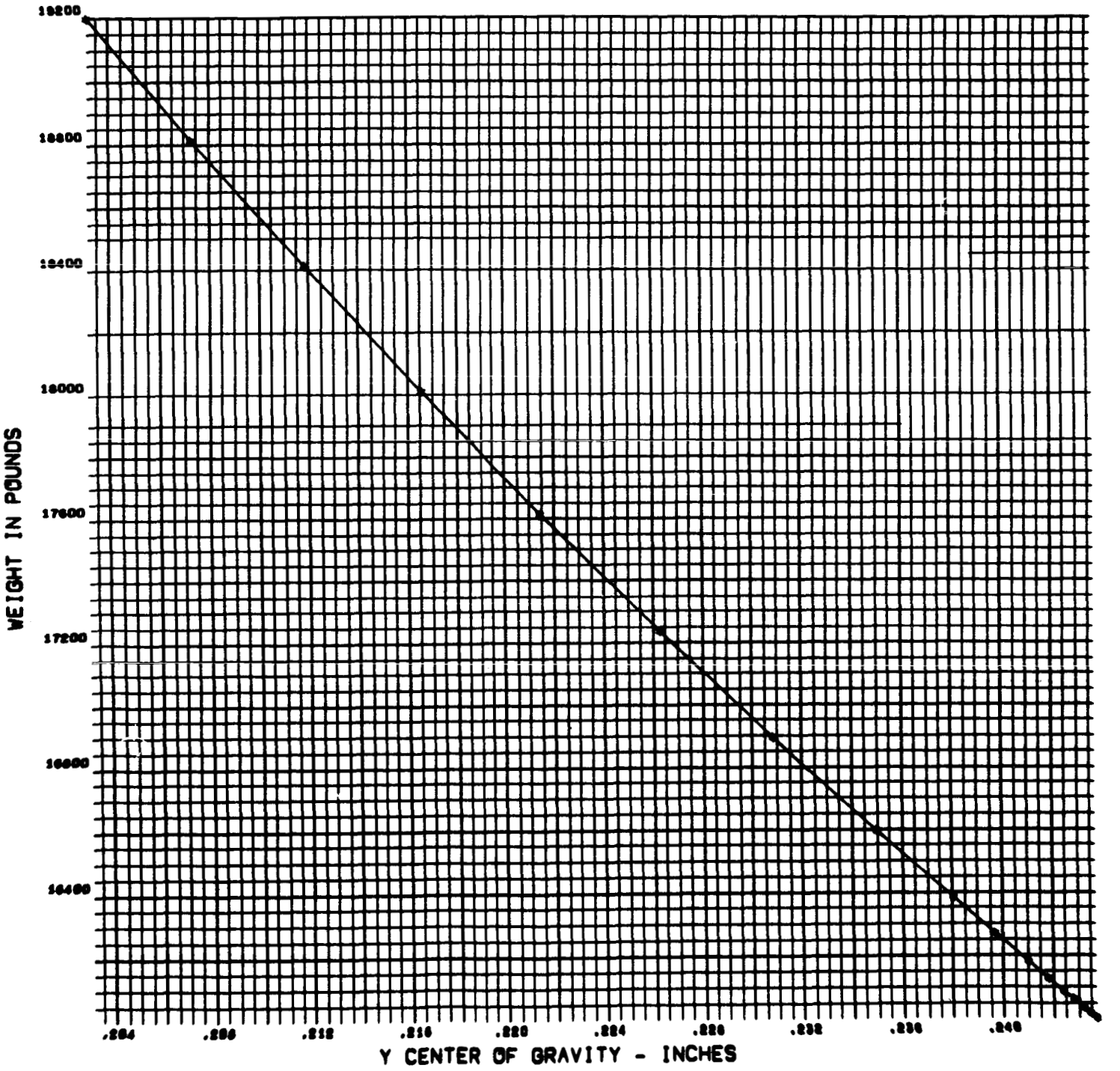

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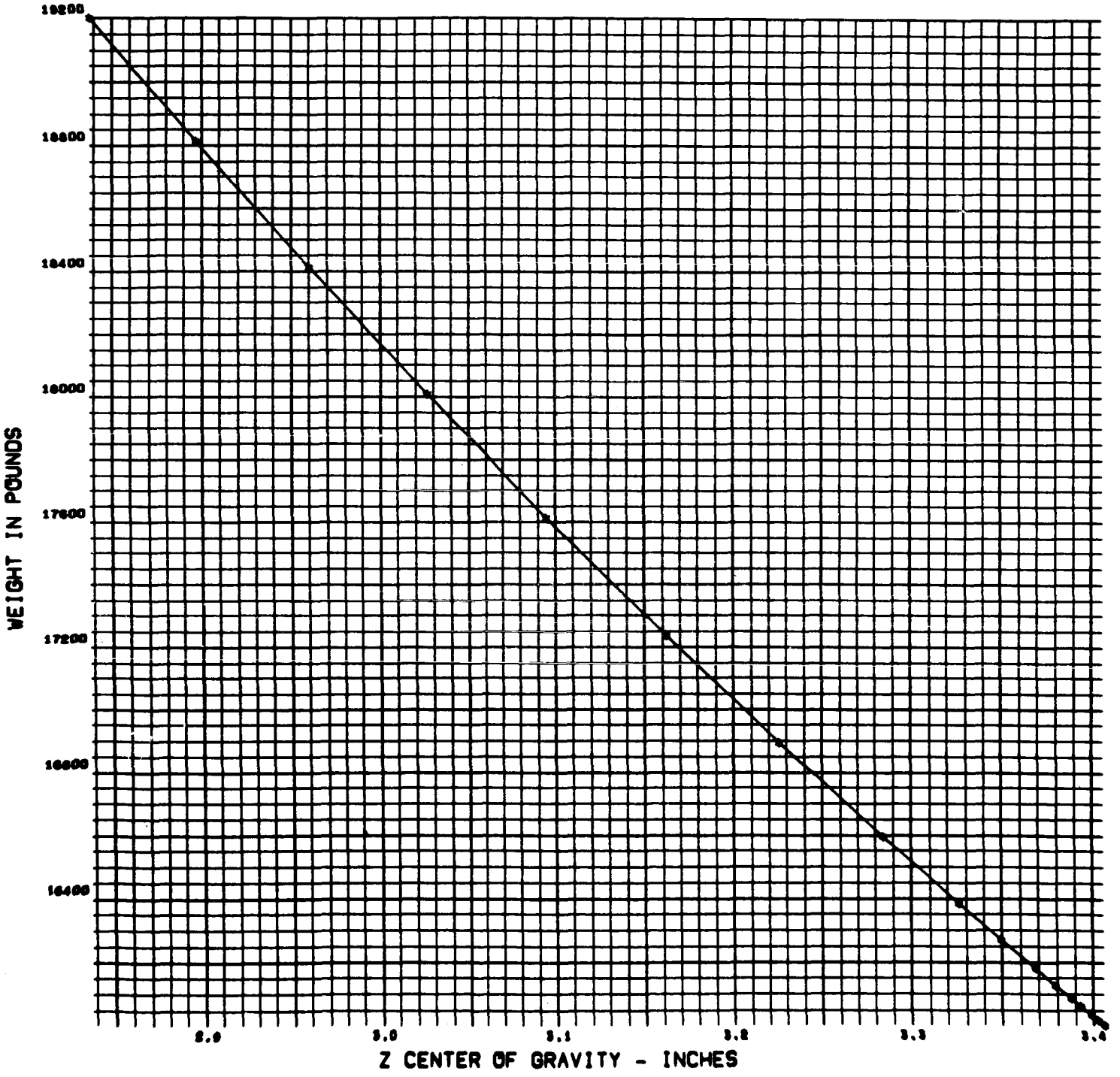
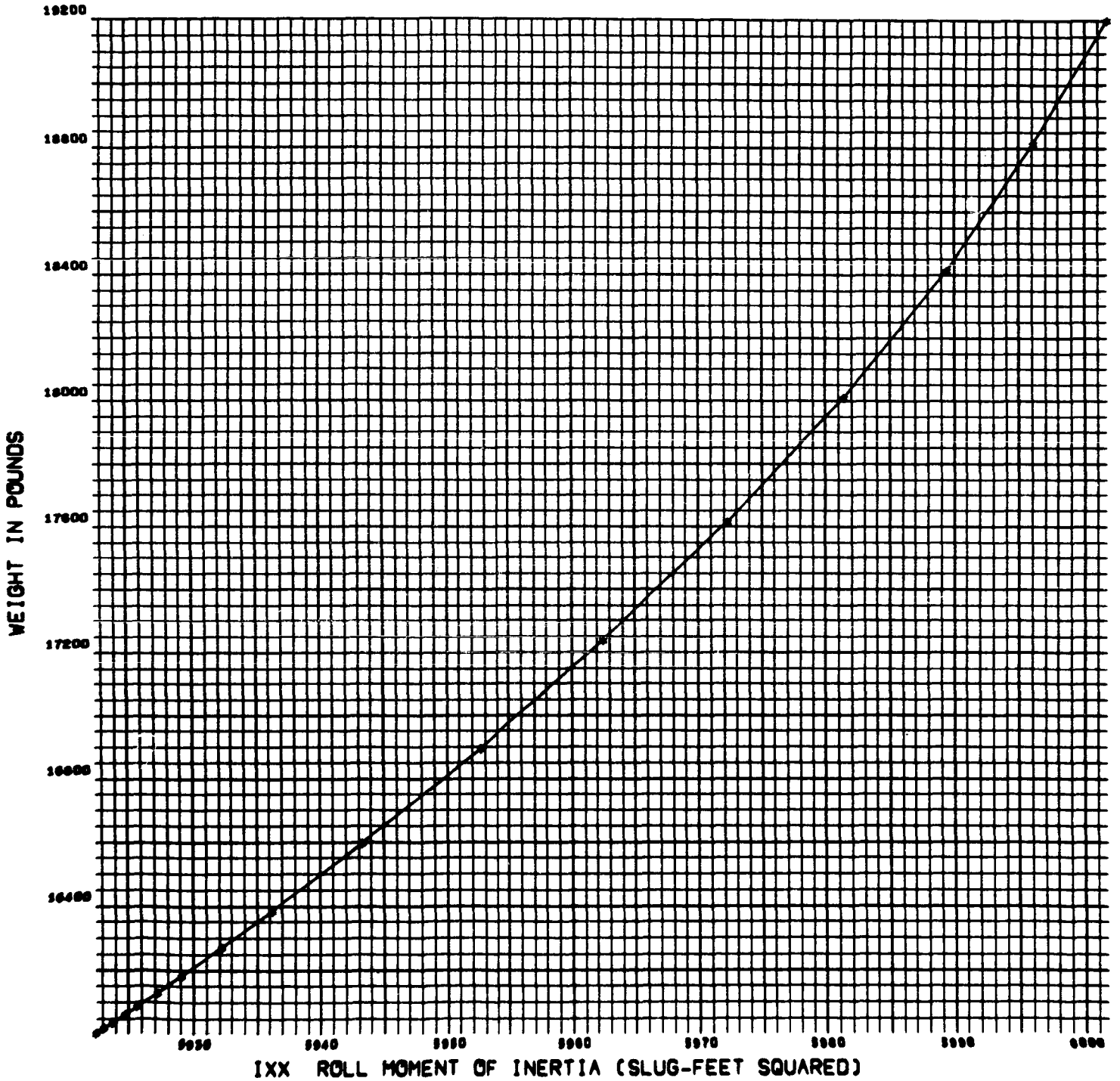
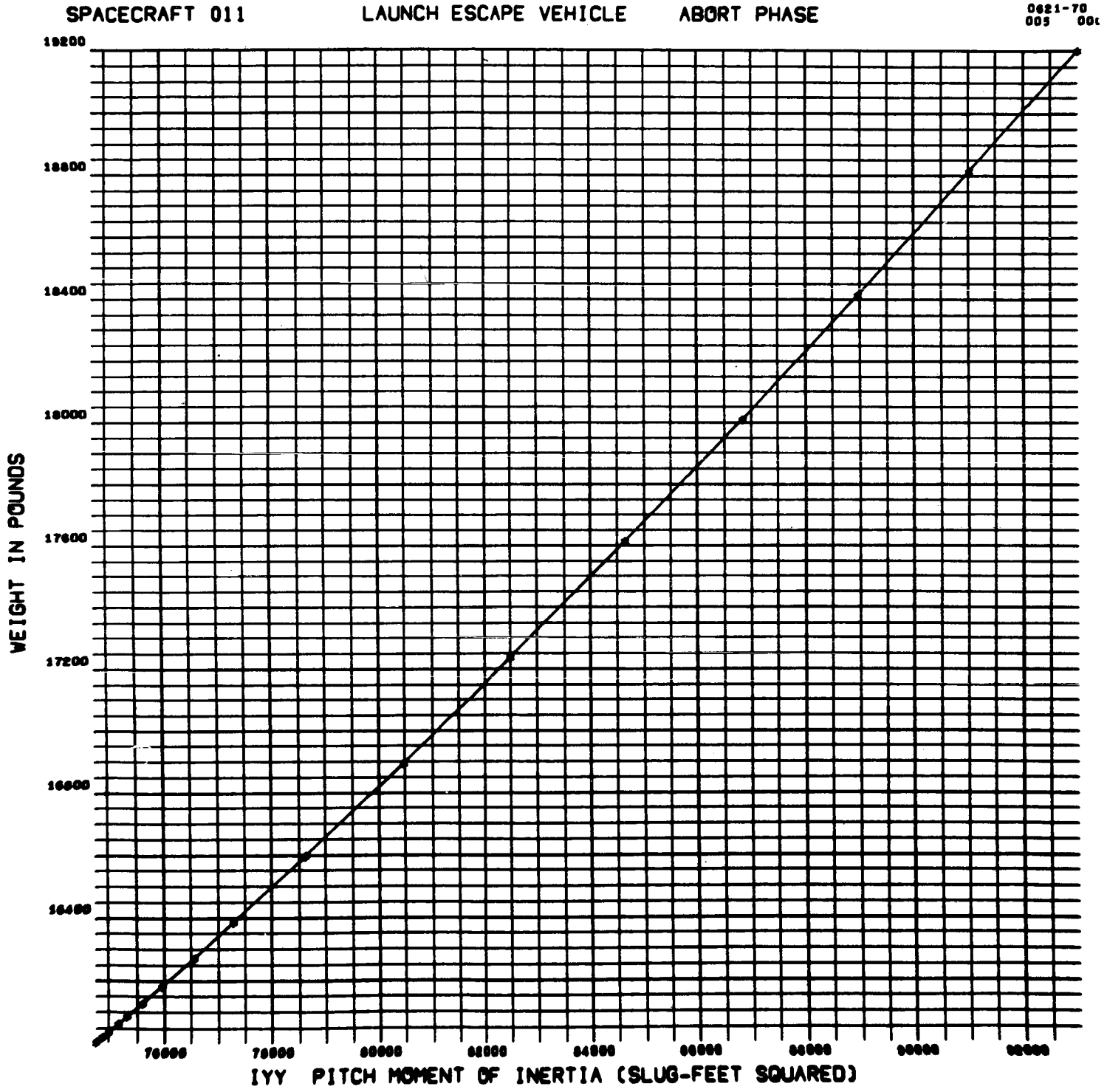


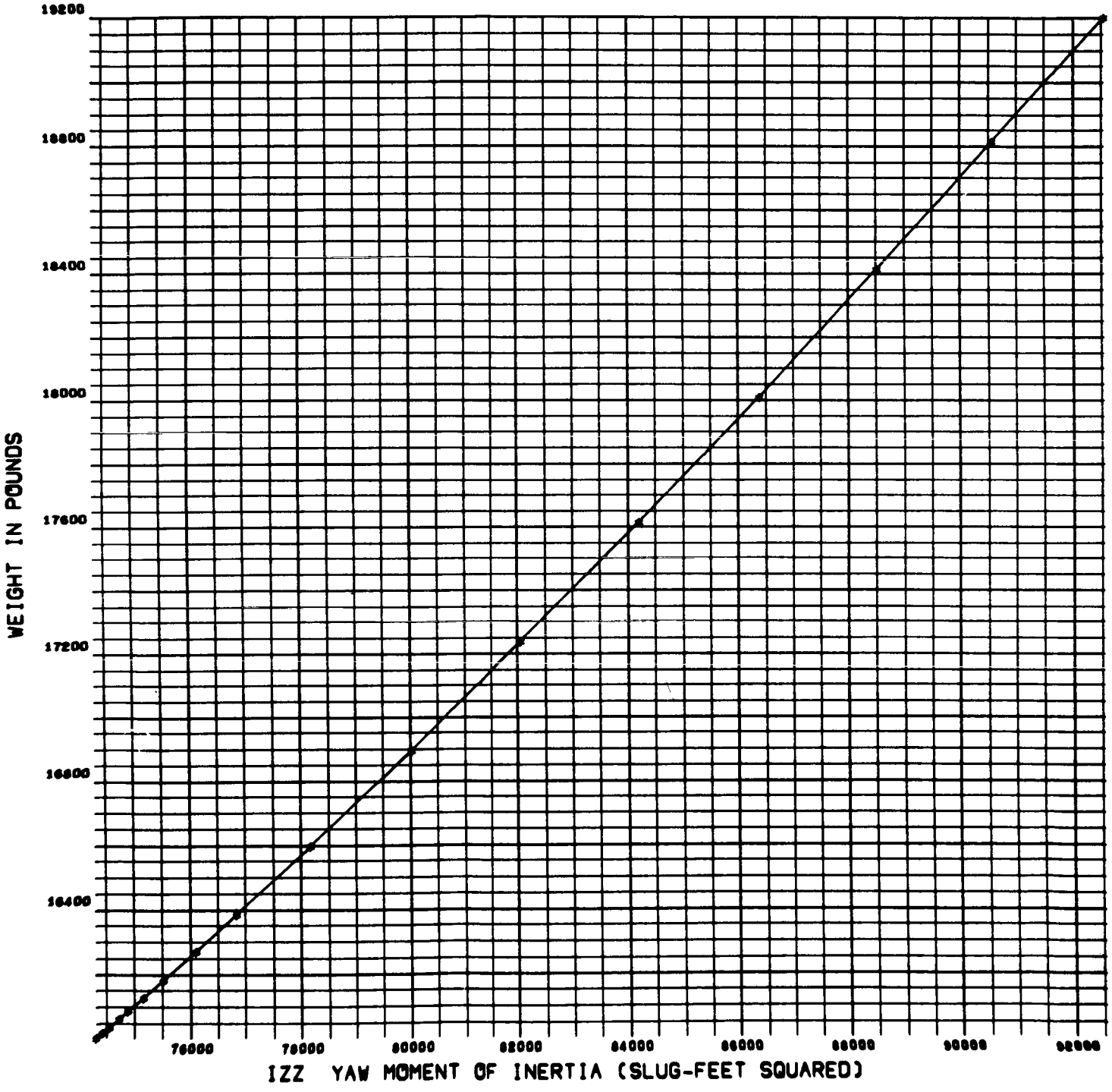
SPACECRAFT 011 LAUNCH ESCAPE VEHICLE ABORT PHASE

0621-70
004 00




SPACECRAFT 011
LAUNCH ESCAPE VEHICLE
ABORT PHASE
0621-70
WEIGHT IN POUNDS
19200
18800
18400
18000
17600
17200
16800
16400
IYY PITCH MOMENT OF INERTIA (SLUG-FEET SQUARED)

SPACECRAFT 011 LAUNCH ESCAPE VEHICLE ABORT PHASE 0621-70 006 00(



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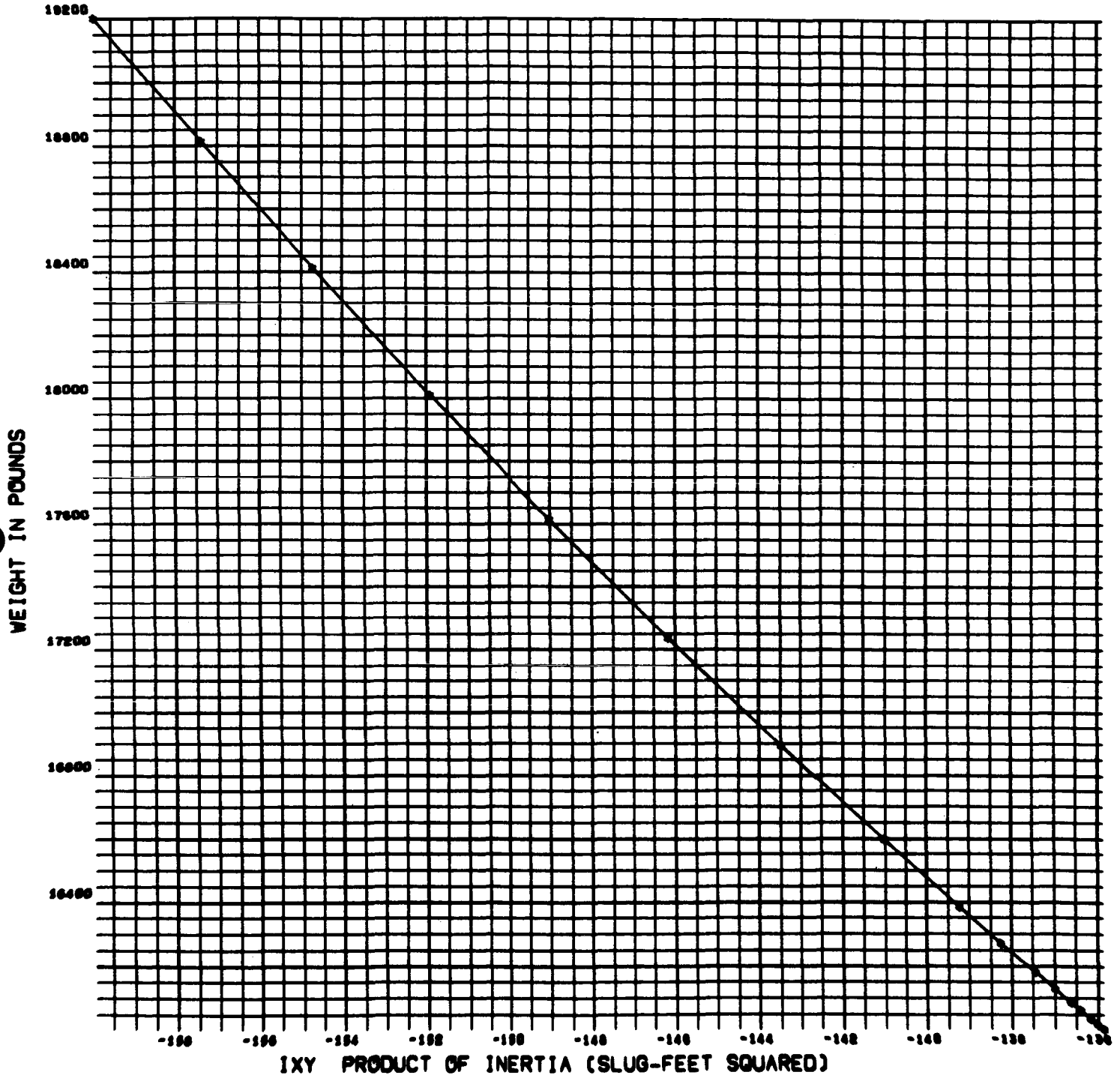

SID 65-336

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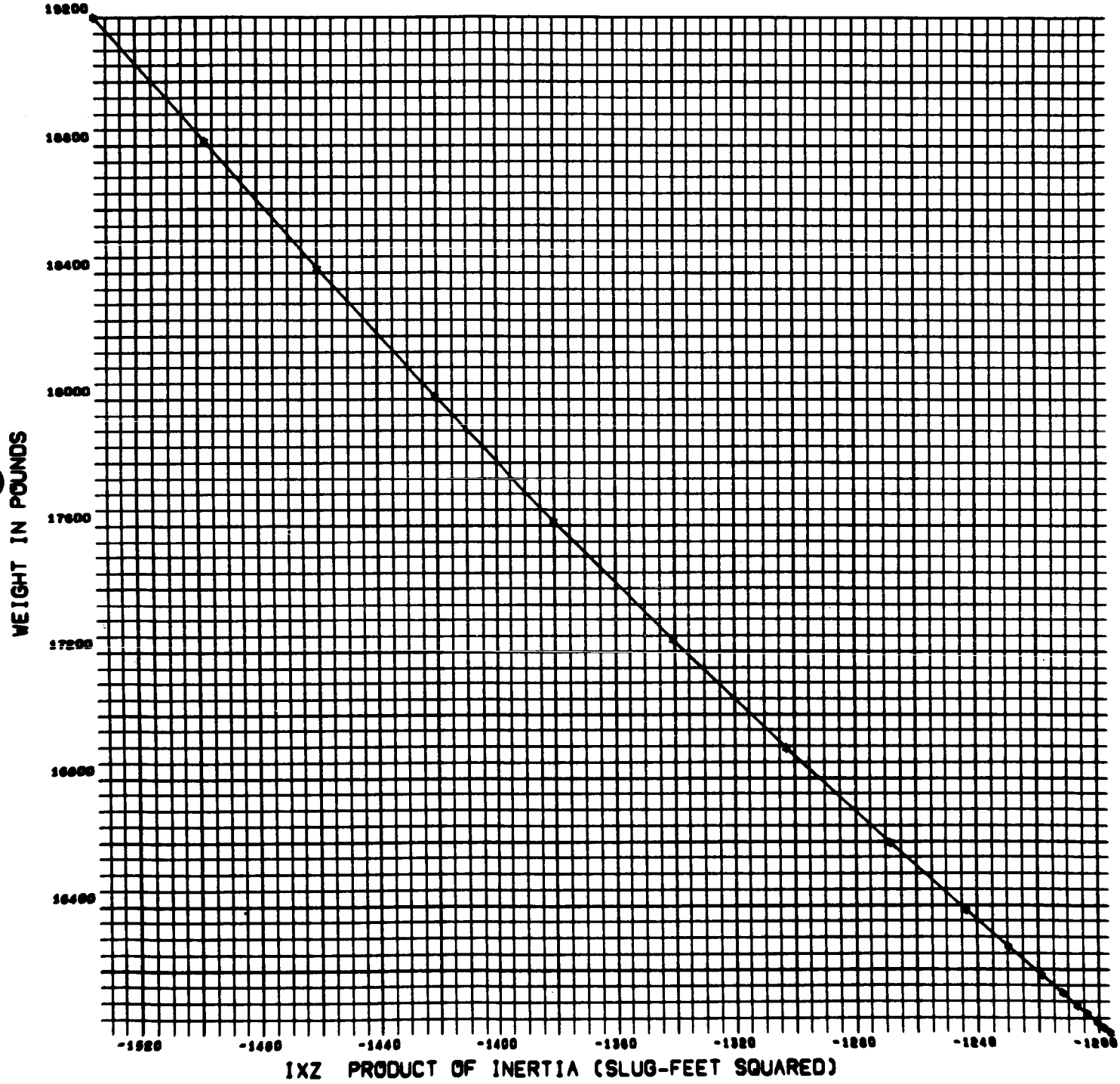
SPACECRAFT 011 LAUNCH ESCAPE VEHICLE ABORT PHASE 0621-70 008 000



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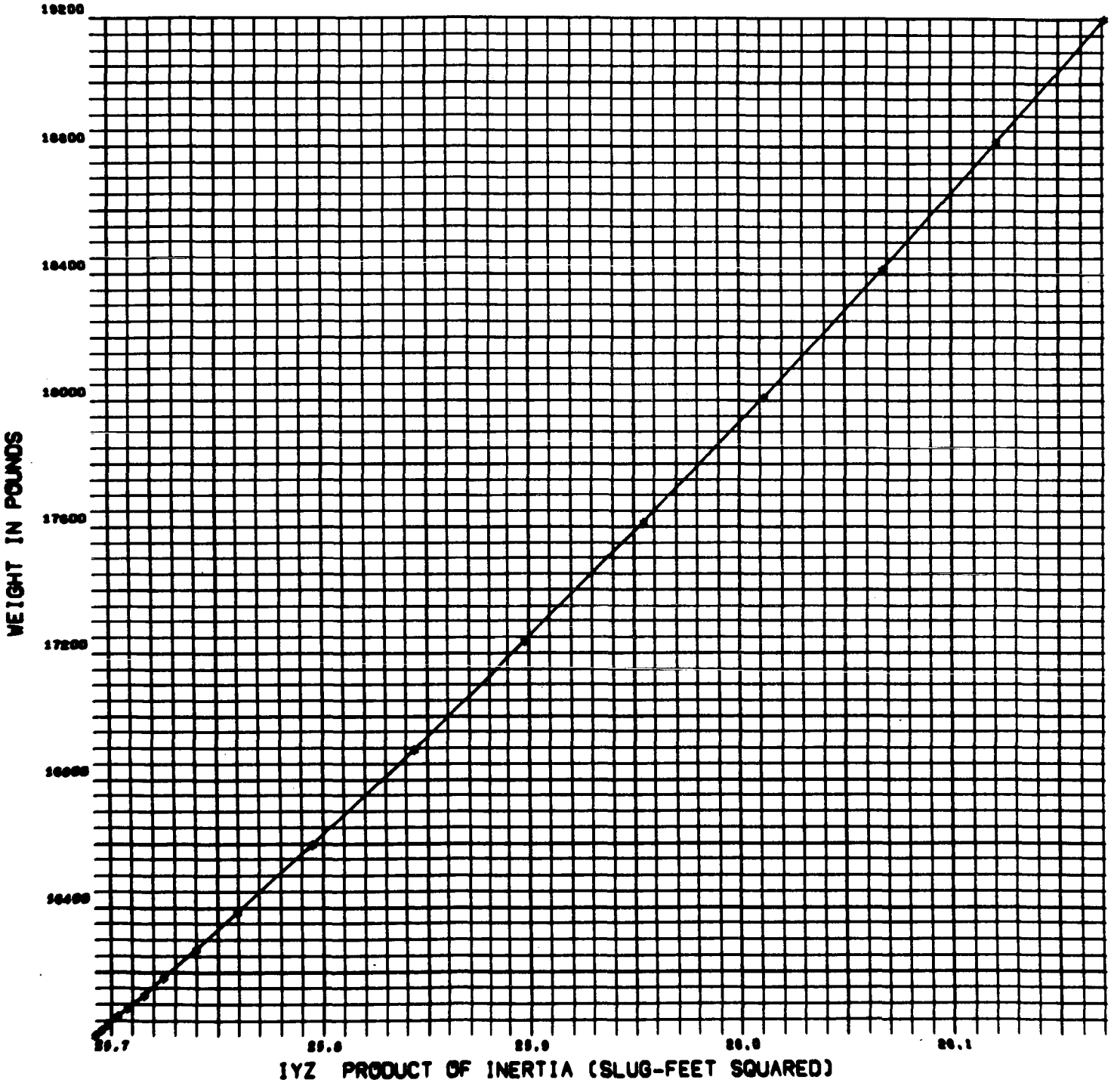
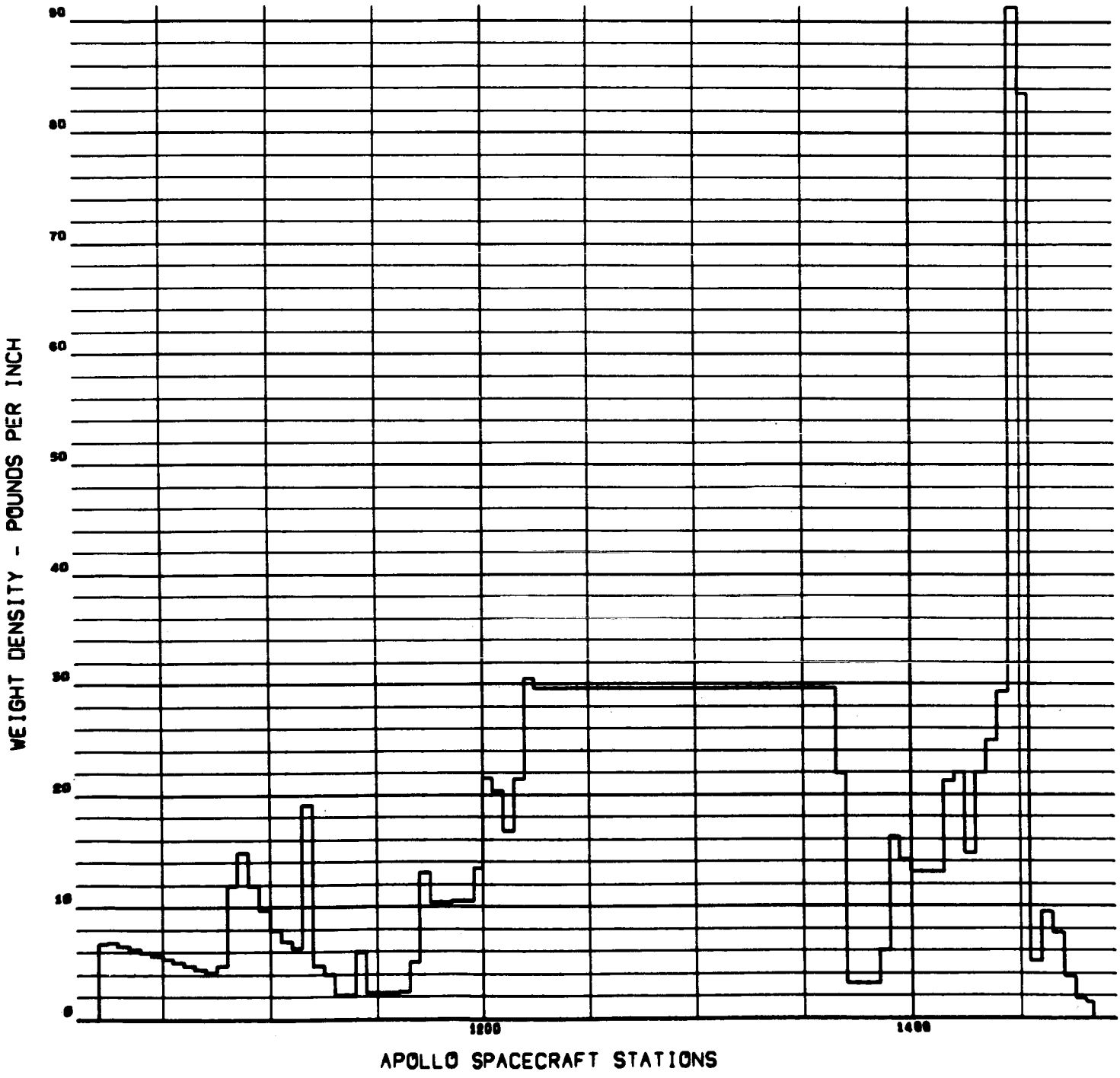
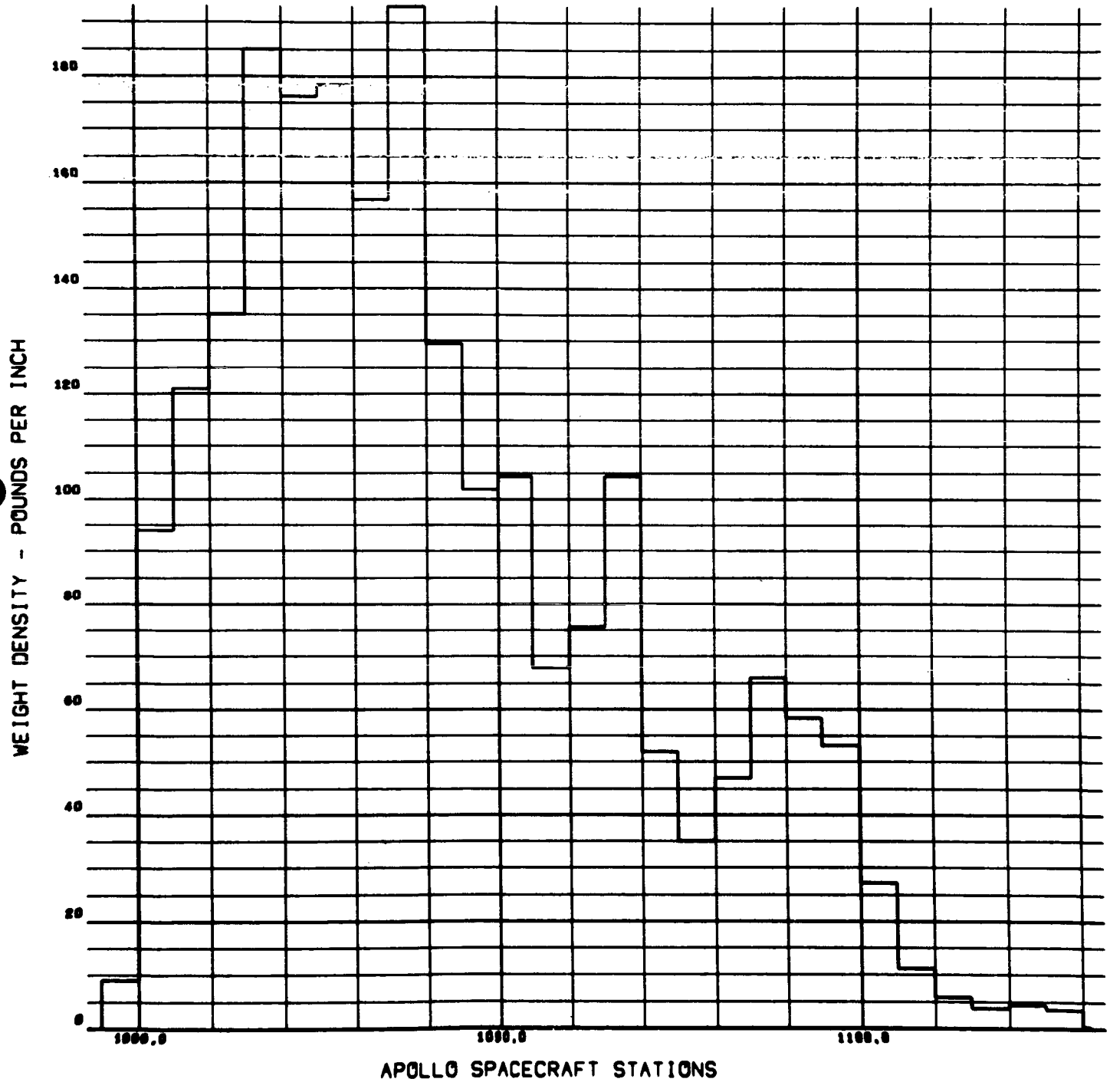


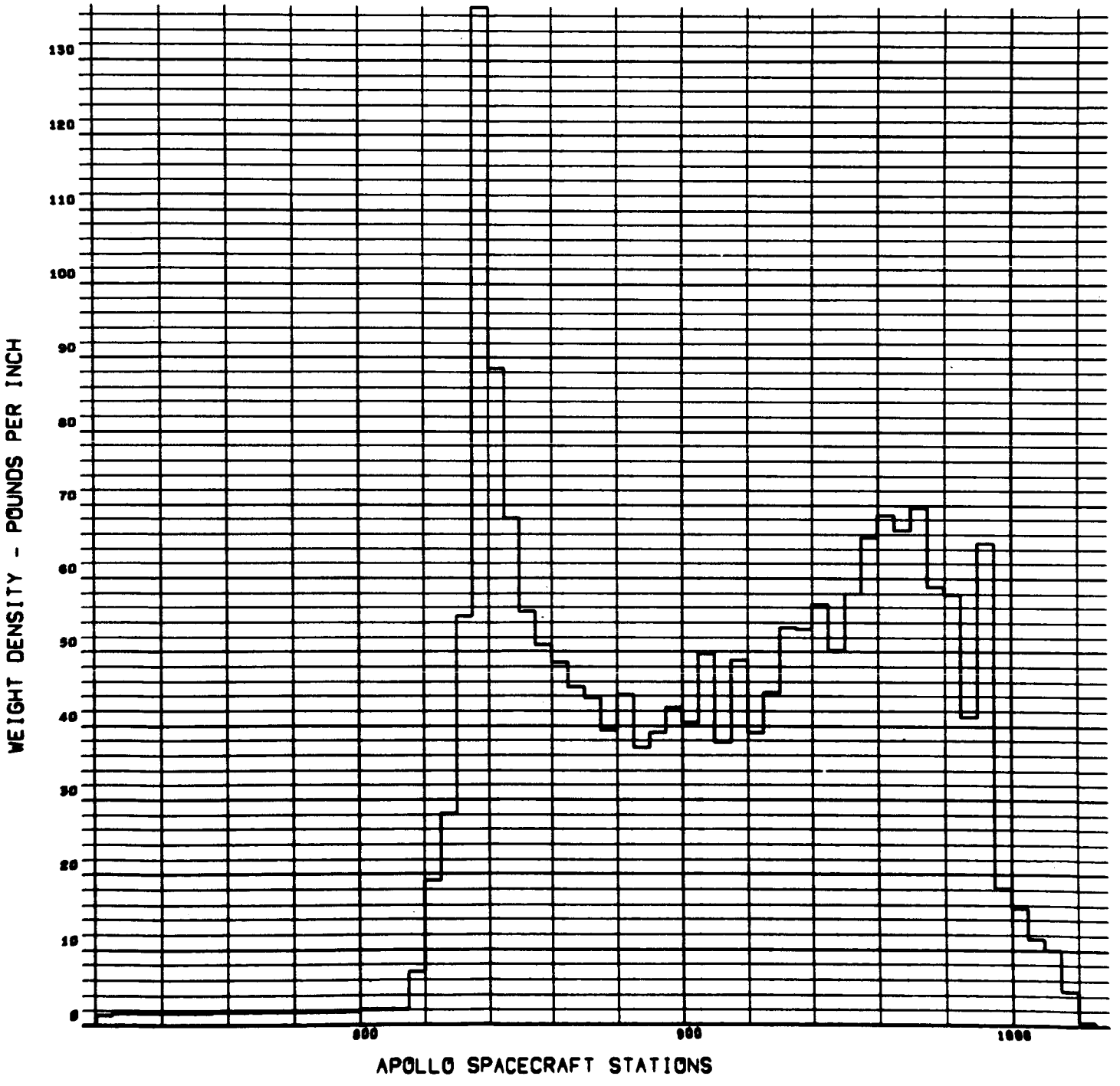
LAUNCH ESCAPE SYSTEM GROSS WEIGHT V15 3 1 19 MAR 65 0621-68 001 000



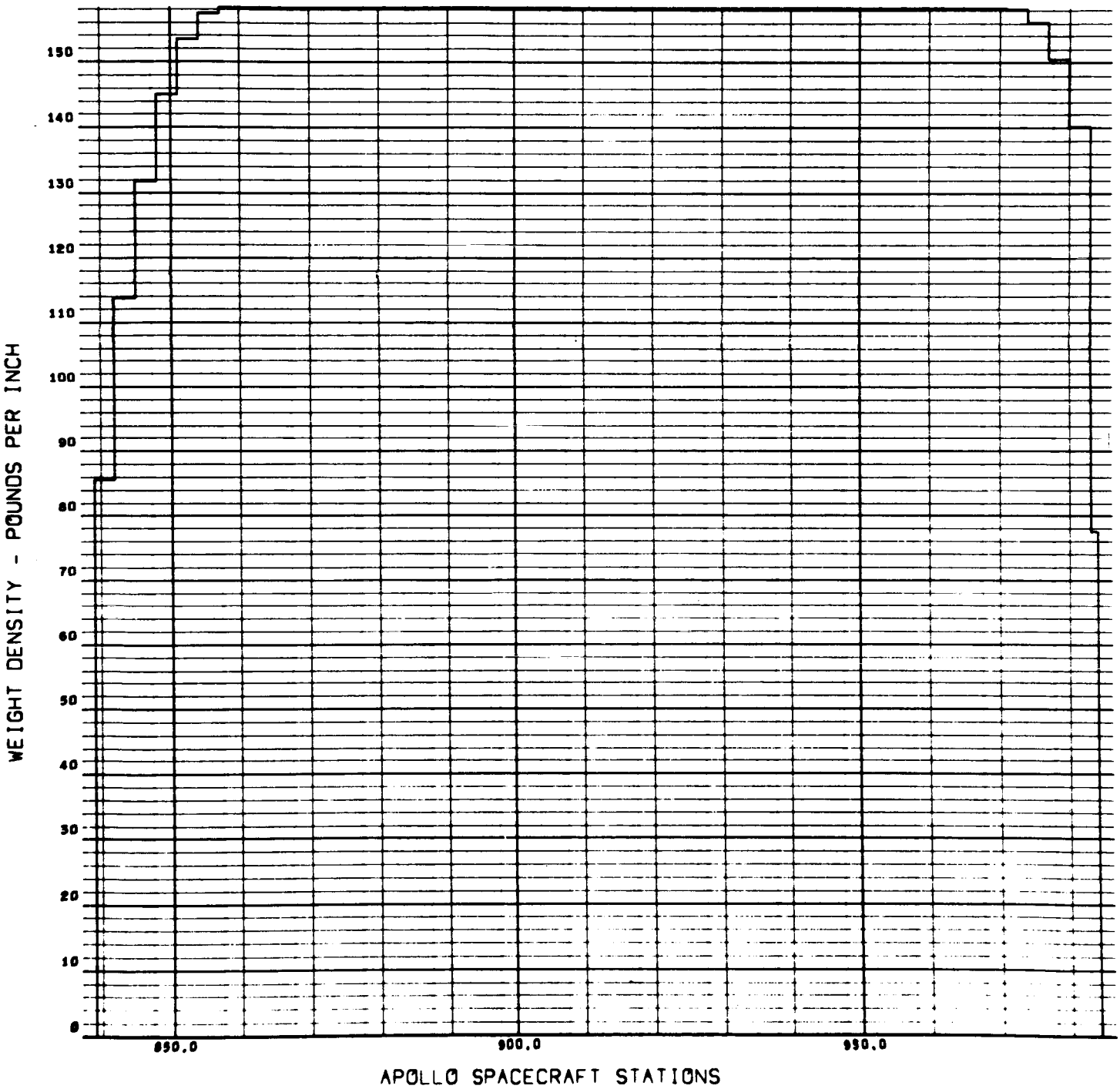
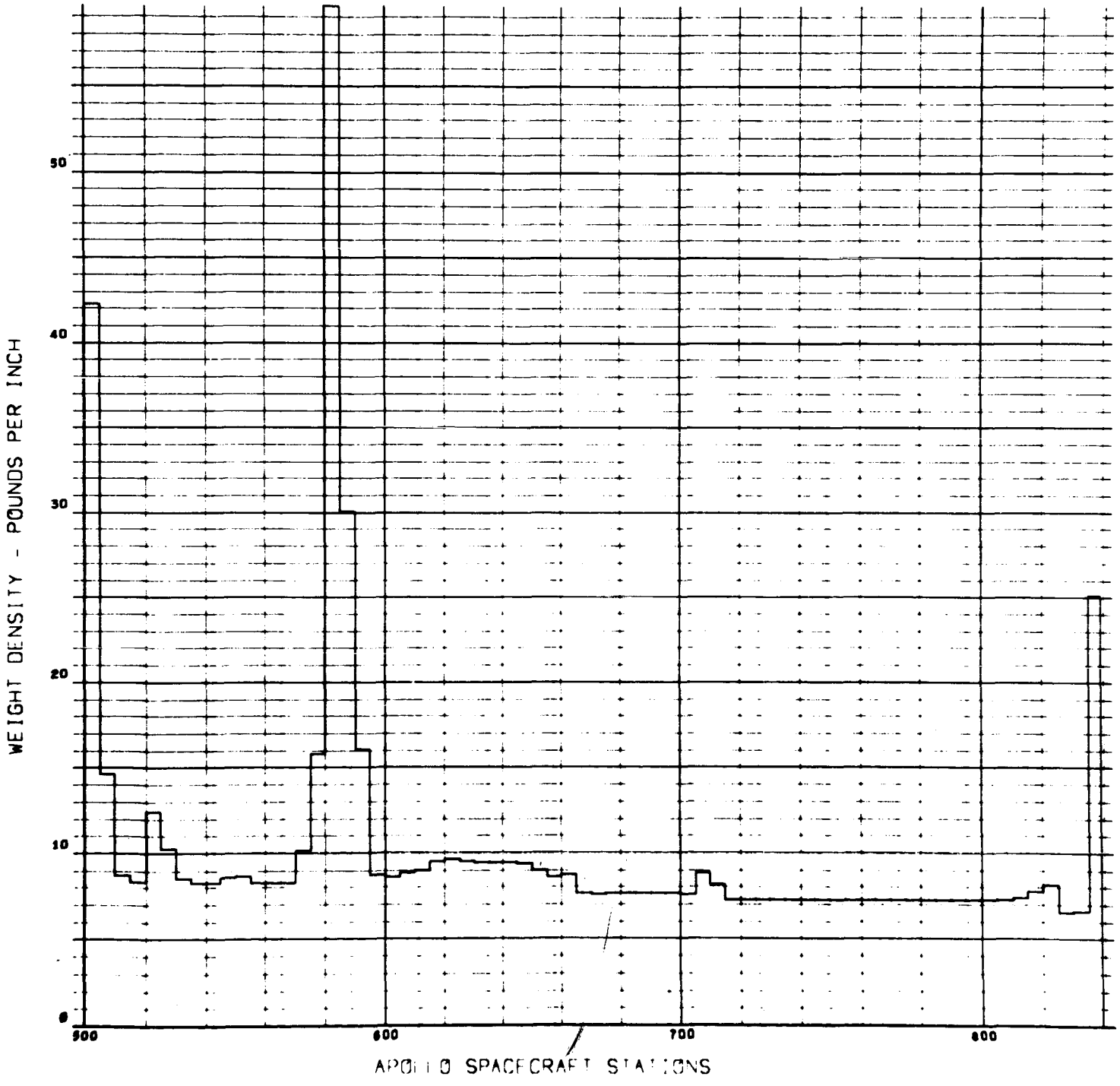
SC 011 COMMAND MODULE 15 MARCH 1965 WEIGHT DISTRIBUTION RUN 13 MAR 1965 0621-23 001 000



SC 011 SERVICE MODULE 15 MARCH 1965 WEIGHT DISTRIBUTION RUN 17 MAR 1965 0621-46 001 000



SERVICE MODULE PROPELLANT 22300 LBS WEIGHT DISTRIBUTION RUN 17 MAR 1965 0621-52 001 00



ADAPTER GROSS WEIGHT V24 3 9 30 JAN 65 0623-01 001 000