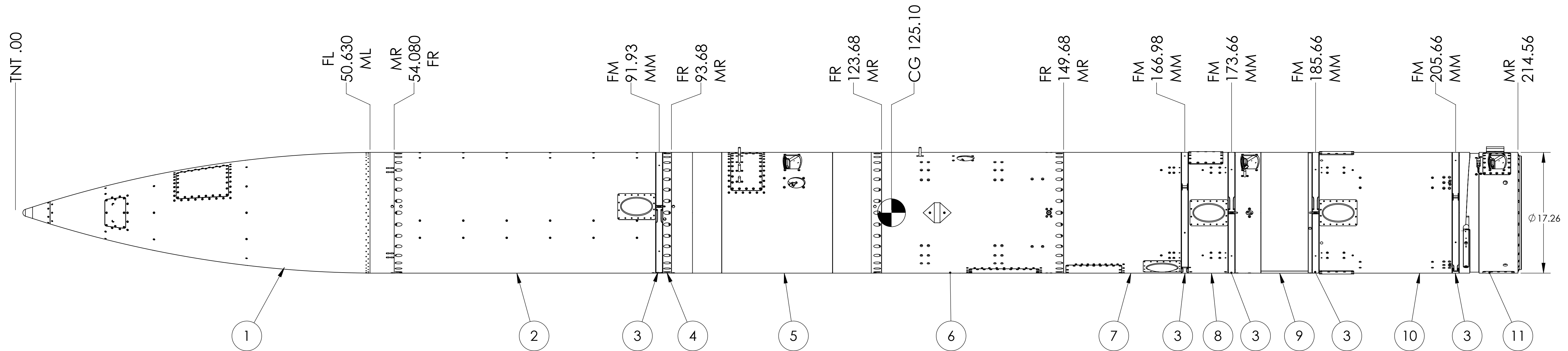
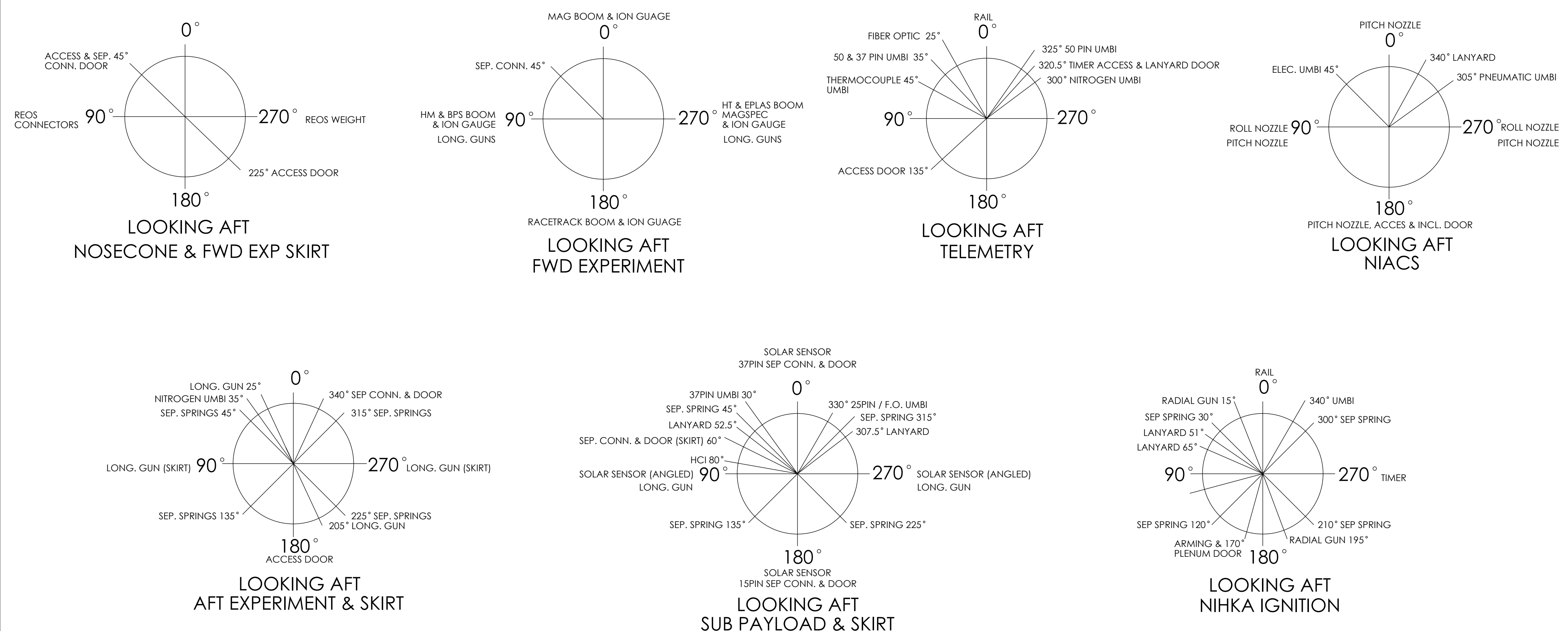


- NOTES (UNLESS OTHERWISE SPECIFIED):
1. INTERPRET DWG. PER ASME Y14.5M-1994.
 2. ALL DIMENSIONS IN INCHES.
 3. TOLERANCE ON DIMENSIONS:
 - X.X ± .1
 - X.XX ± .02
 - X.XXX ± .005
 - ANGULAR = 0°15'
 4. REMOVE BURRS AND BREAK SHARP EDGES .005-.010 MAX.
 5. FILLETS TO BE .010 MAX.
 6. SURFACE ROUGHNESS TO BE $\sqrt{16}$ OR BETTER.
 7. USE CAUTION WHEN MEASURING FEATURES THAT HAVE A SURFACE ROUGHNESS OF $\sqrt{32}$ OR BETTER.

DATE	REV.	DESCRIPTION	ENG/DFT
8/22/2014	-	ORIGINAL RELEASE	ST
10/12/2015	A	UPDATED FOR MRR WITH MEASURED MASS PROPERTIES	ST



LAUNCH CONFIGURATION

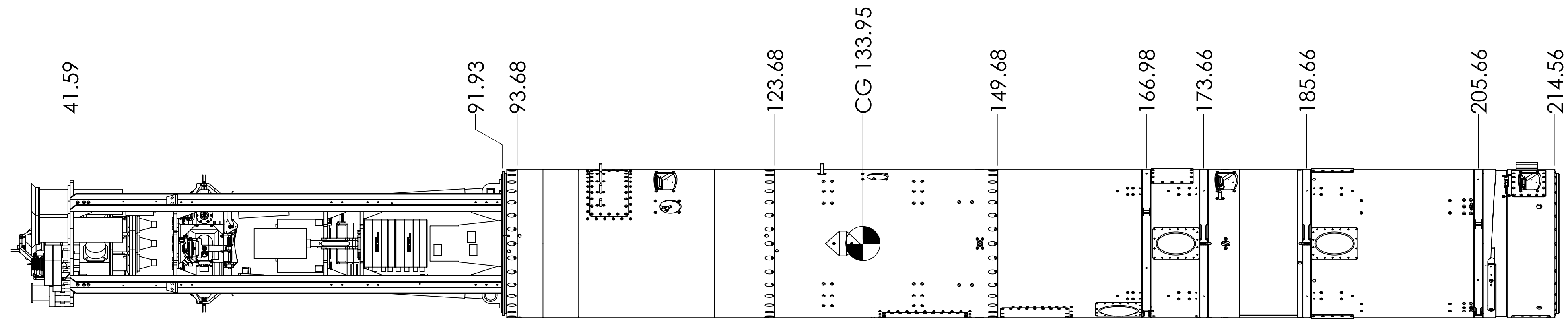


ITEM NO.	QTY.	DESCRIPTION	PartNum	Source
1	1	NOSECONE ASSEMBLY	ME104091	NSROC SHOP
2	1	SKIRT ASSEMBLY, FORWARD	ME102394	NSROC SHOP
3	5	17" V-BAND ASSEMBLY	ME47506	
4	1	EXPERIMENT ASSEMBLY, FORWARD	ME104079	NSROC SHOP
5	1	TELEMETRY ASSEMBLY	ME102395	NSROC SHOP
6	1	NIACS ASSEMBLY, 800 CU. IN. BI-LEVEL, AFT NOZZLES	ME102397	
7	1	EXPERIMENT ASSEMBLY, AFT	ME104098	NSROC SHOP
8	1	SKIRT ASSEMBLY, AFT EXPERIMENT	ME80765	NSROC SHOP
9	1	SUB-PAYLOAD ASSEMBLY, AFT - CORNELL	ME104086	
10	1	SKIRT ASSEMBLY, SUB-PAYLOAD	ME114741	NSROC SHOP
11	1	ASSEMBLY, WFF NIHKA	ME72380-3	NSROC SHOP

SCALE: 1:12	DO NOT SCALE FROM DRAWING	NEXT ASSEMBLY:	NSROC GODDARD SPACE FLIGHT CENTER WALLOPS FLIGHT FACILITY WALLOPS ISLAND, VIRGINIA 23337	DATE: 7/29/2014
PROJECT: 52.002				ENG. S. THOMPSON
MATERIAL:			TITLE: PAYLOAD ASSEMBLY	DFT. S. THOMPSON
STOCK NUMBER:				CHK. K. FOSTER
				D ME104100 REV. A
				SHEET 1 OF 4

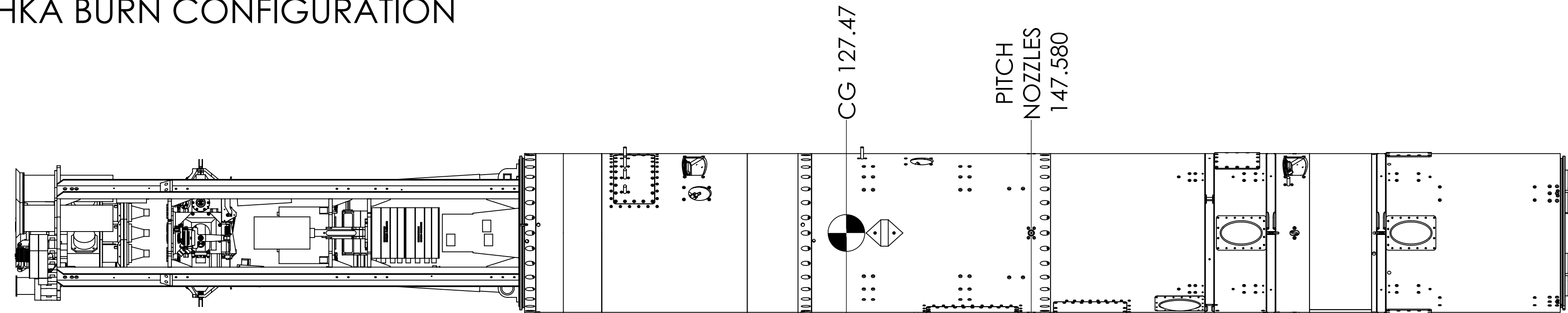
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TNT .00



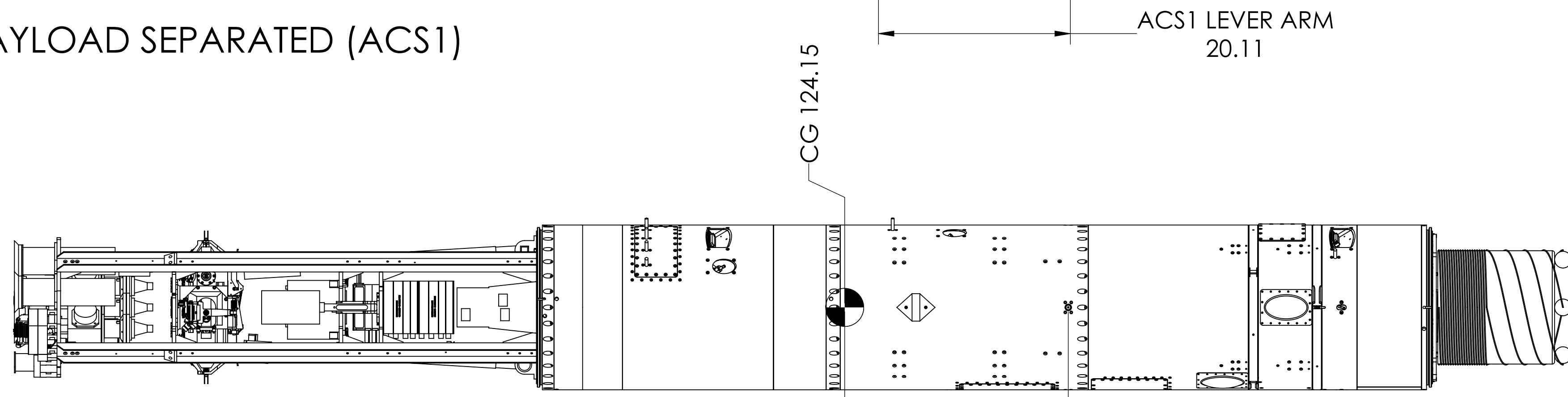
NIHKA BURN CONFIGURATION

TNT .00



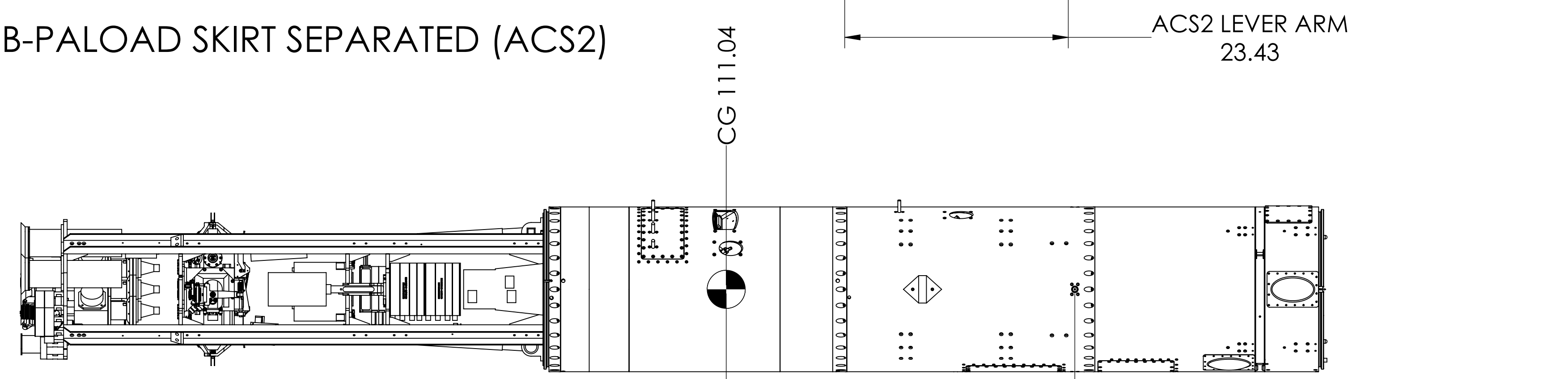
PAYLOAD SEPARATED (ACS1)

TNT .00



SUB-PALOAD SKIRT SEPARATED (ACS2)

TNT .00



SUB-PAYLOAD SEPARATED (ACS3)

ACS1 LEVER ARM 20.11

ACS2 LEVER ARM 23.43

ACS3 LEVER ARM 36.54

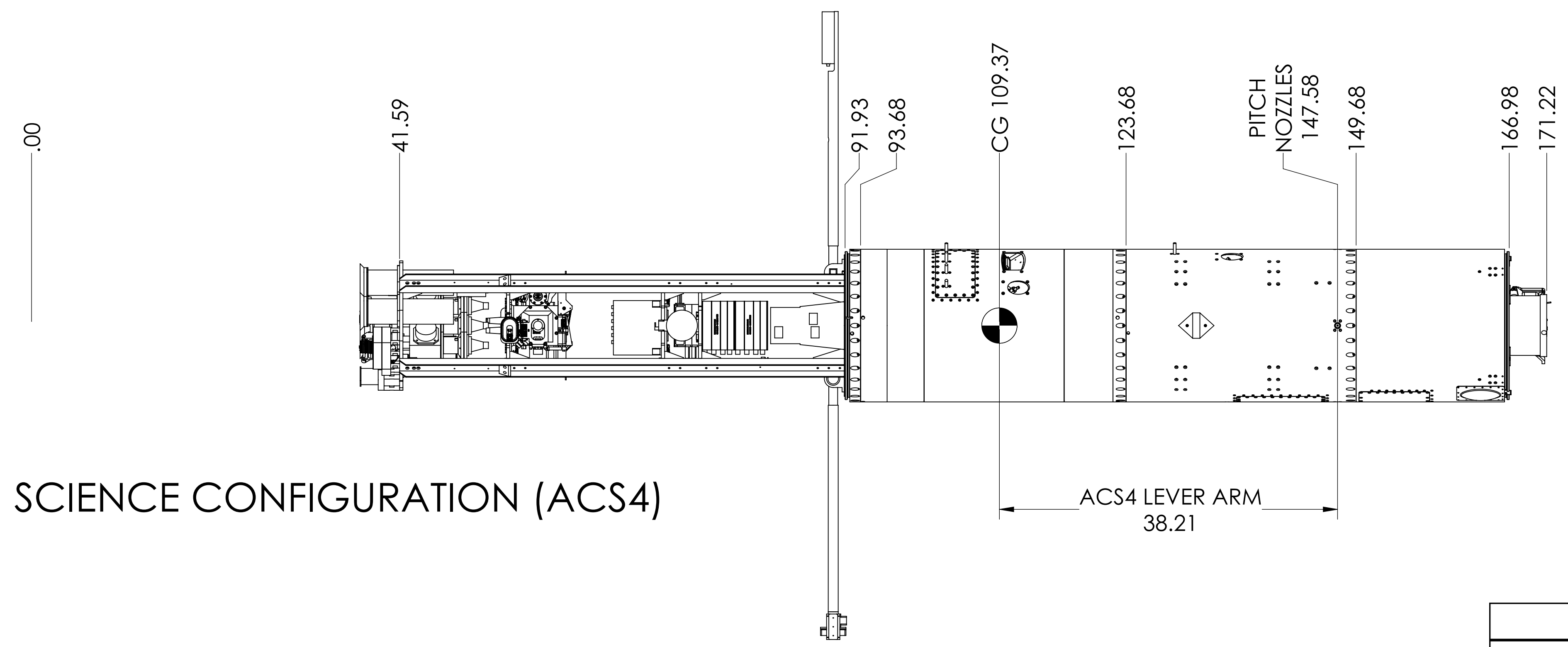
SCALE: 1:12	DO NOT SCALE FROM DRAWING	NEXT ASSEMBLY:
PROJECT: 52.002		
MATERIAL:		
STOCK NUMBER:		

NSROC
GODDARD SPACE FLIGHT CENTER
WALLOPS FLIGHT FACILITY
WALLOPS ISLAND, VIRGINIA 23337

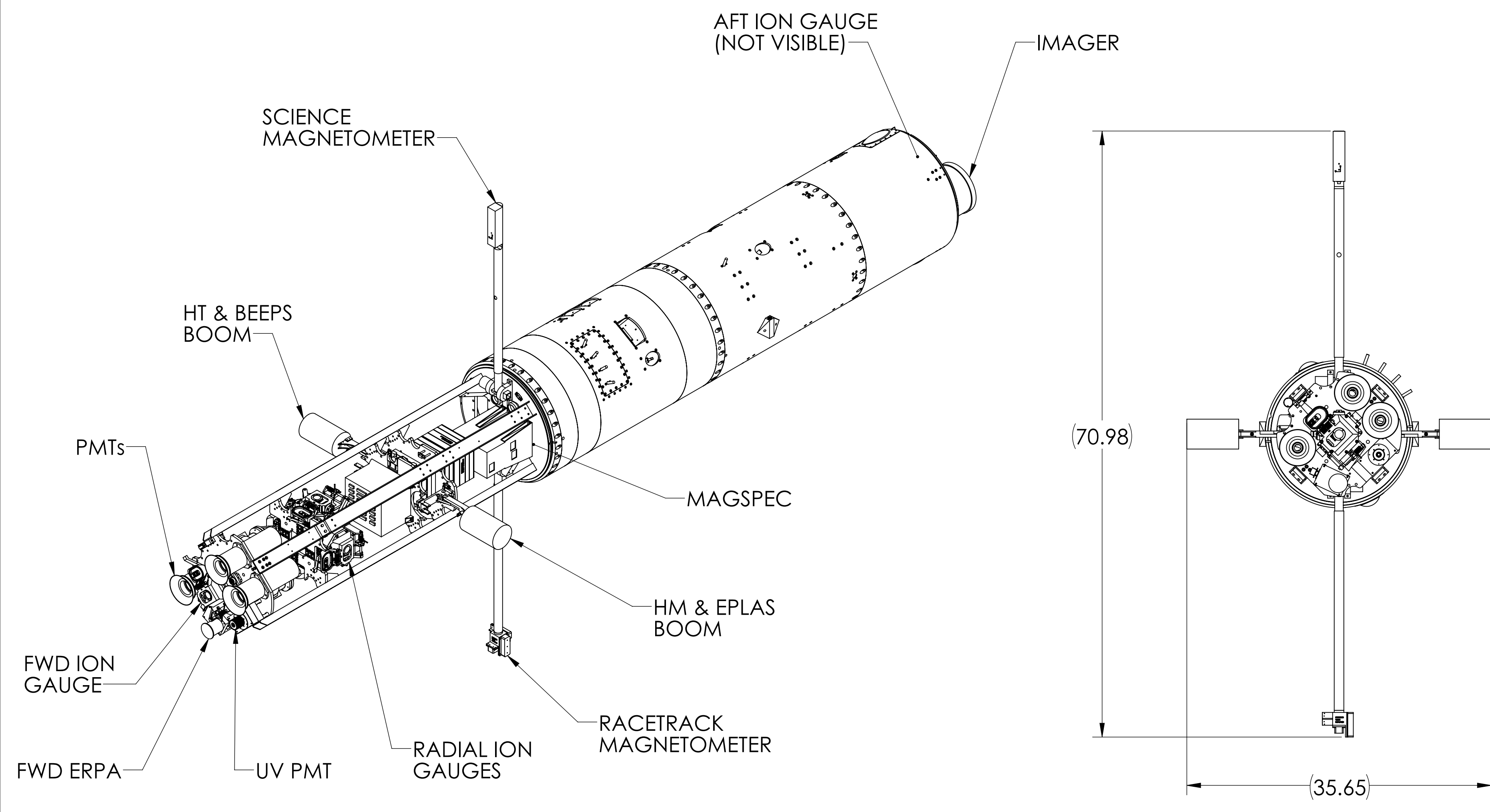
TITLE:
PAYLOAD ASSEMBLY

DATE:	7/29/2014
ENG.	S. THOMPSON
DES.	
DFT.	S. THOMPSON
CHK.	K. FOSTER
D	ME104100
	SHEET 2 OF 4
REV.	A

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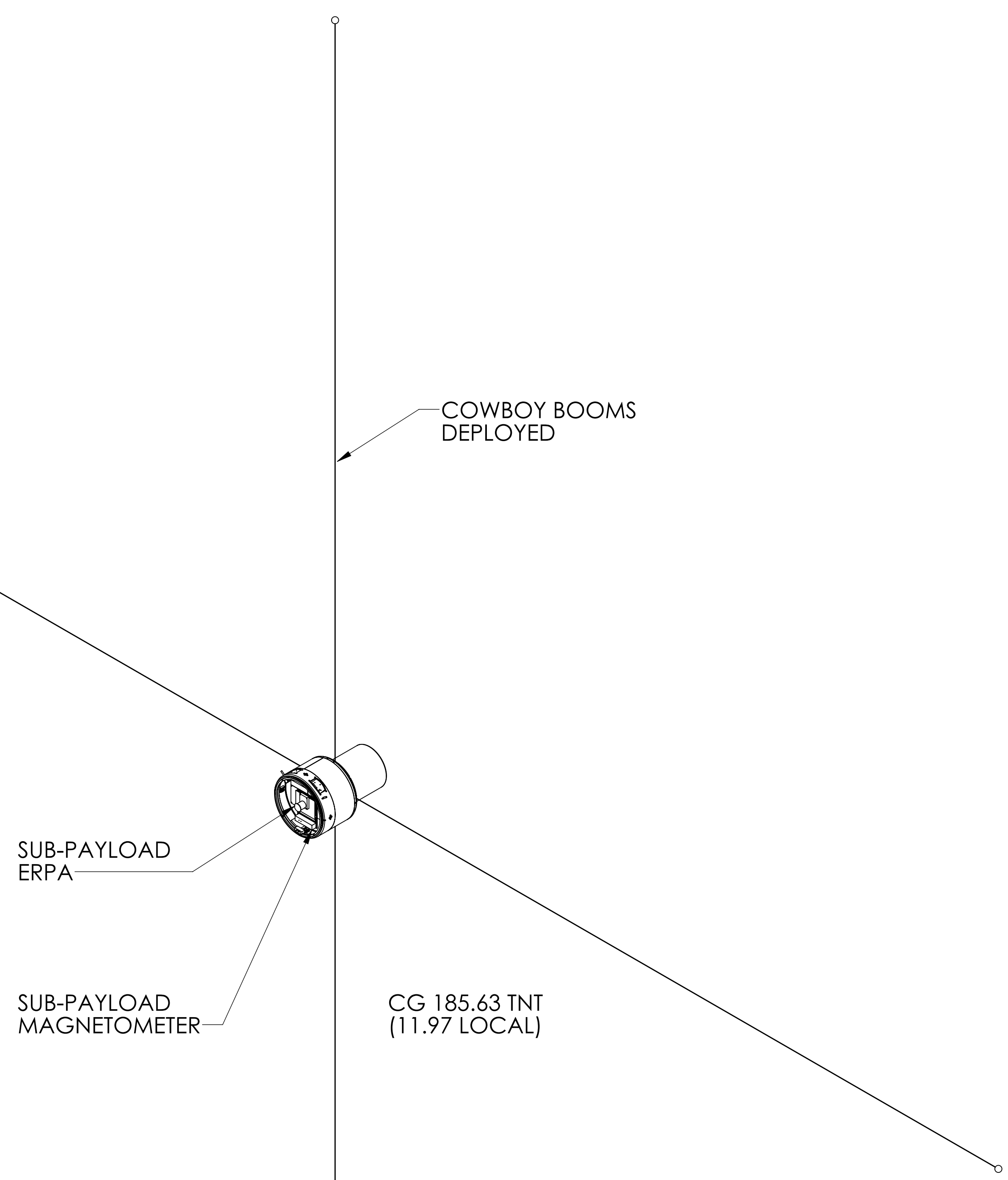
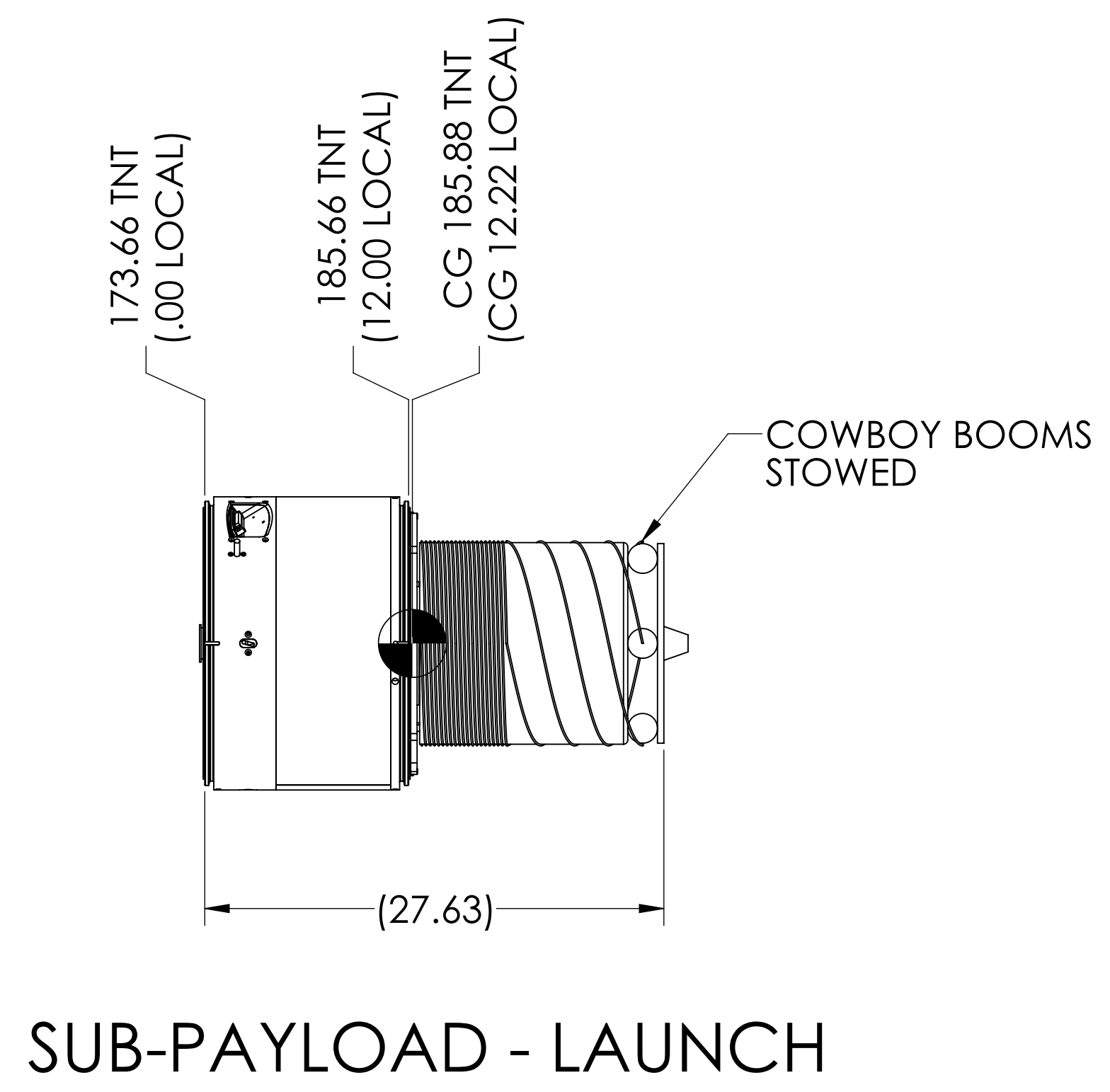
SCIENCE CONFIGURATION (ACS4)



52.002 / Lessard - Payload Properties Rev A						
Payload Section	Length (in)	Weight (lbs)	Global CG (in TNT)	RMOI (slug-ft ²)	PMOI (slug-ft ²)	Delta Separation Velocity (ft/s)
Nose Cone & Fwd Skirt	91.93	78.00	47.89	0.87	12.00	
V-Band	0.00	1.64	91.93	0.03	0.01	12.34
Upper Balance Weight, Main Payload	0.00	4.92	95.98	0.06	0.06	
NIACS Gas, 800 cu-in	0.00	16.00	140.56	0.07	0.07	
Lower Balance Weight, Main Payload	0.00	3.36	155.98	0.04	0.04	
Main Payload - Booms Deployed	75.05	457.20	108.08	3.88	119.27	
Main Payload - Booms Stowed	75.05	457.20	107.88	3.25	120.26	
V-Band	0.00	1.64	166.98	0.03	0.01	1.64
Skirt, Aft Experiment	6.68	13.50	170.37	0.20	0.12	
V-Band	0.00	1.64	173.66	0.03	0.01	3.37
Sub-Payload - Deployed	12.00	102.75	185.63	6.23	4.08	
Sub-Payload - Launch	12.00	104.15	185.88	0.65	1.36	
V-Band	0.00	1.64	185.66	0.03	0.01	7.38
Upper Balance Weight, Sub-PL Skirt	0.00	0.27	187.86	0.00	0.00	
Lower Balance Weight, Sub-PL Skirt	0.00	0.49	203.46	0.01	0.01	
Skirt, Sub-Payload	20.00	27.25	195.49	0.40	0.50	
V-Band	0.00	1.64	205.66	0.03	0.01	13.58
Igniter Housing, Nihka	8.90	53.00	209.07	0.53	0.34	
Configuration	Length (in)	Weight (lbs)	Global CG (in TNT)	RMOI (slug-ft ²)	PMOI (slug-ft ²)	ACS Lever Arm (in)
Launch	214.56	766.33	125.10	6.21	471.99	
Nihka Burn	122.63	686.69	133.95	5.31	347.61	
Payload Separated (ACS1)	113.73	632.05	127.47	4.76	275.15	20.11
Sub-Payload Skirt Separated (ACS2)	93.73	602.41	124.15	4.33	243.97	23.43
Sub-Payload Separated (ACS3)	81.73	496.62	111.04	3.65	137.63	36.54
Science Configuration (ACS4)	75.05	481.48	109.37	4.05	124.74	38.21
Sub-Payload Launch	12.00	104.15	185.88	0.65	1.36	
Sub-Payload Science	12.00	102.75	185.63	6.23	4.08	

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PROJECT: 52.002		TITLE: PAYLOAD ASSEMBLY		ENG. S. THOMPSON
MATERIAL:				DFI. S. THOMPSON
STOCK NUMBER:				CHK. K. FOSTER
			D ME104100	REV. A
			SHEET 3 OF 4	



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STOCK NUMBER:				CHK. K. FOSTER
			D ME104100	REV. A
			SHEET 4 OF 4	