Apollo 16 LM 11 Erasable load

24 Mar 72

O'Donnell 267-0401 home

Julie Feldman is MIT contact

just finished Trio SF test +1499 -Y
+747 +Y

Control Rm 4 5016/5017 LM 11

Control Rm 2 6284/6289 CM 113

1 PM

presently in IMU, ASA, align

4 pm they're in at

2nd perf test start ≈ 4 or 5 pm EST

Roy Parker 333-2253 (4701)

Dick Carl 488-3562 (2308)

Jack Garman 488-1411

Chuck Finch

Julie Feldman 617-244-4839

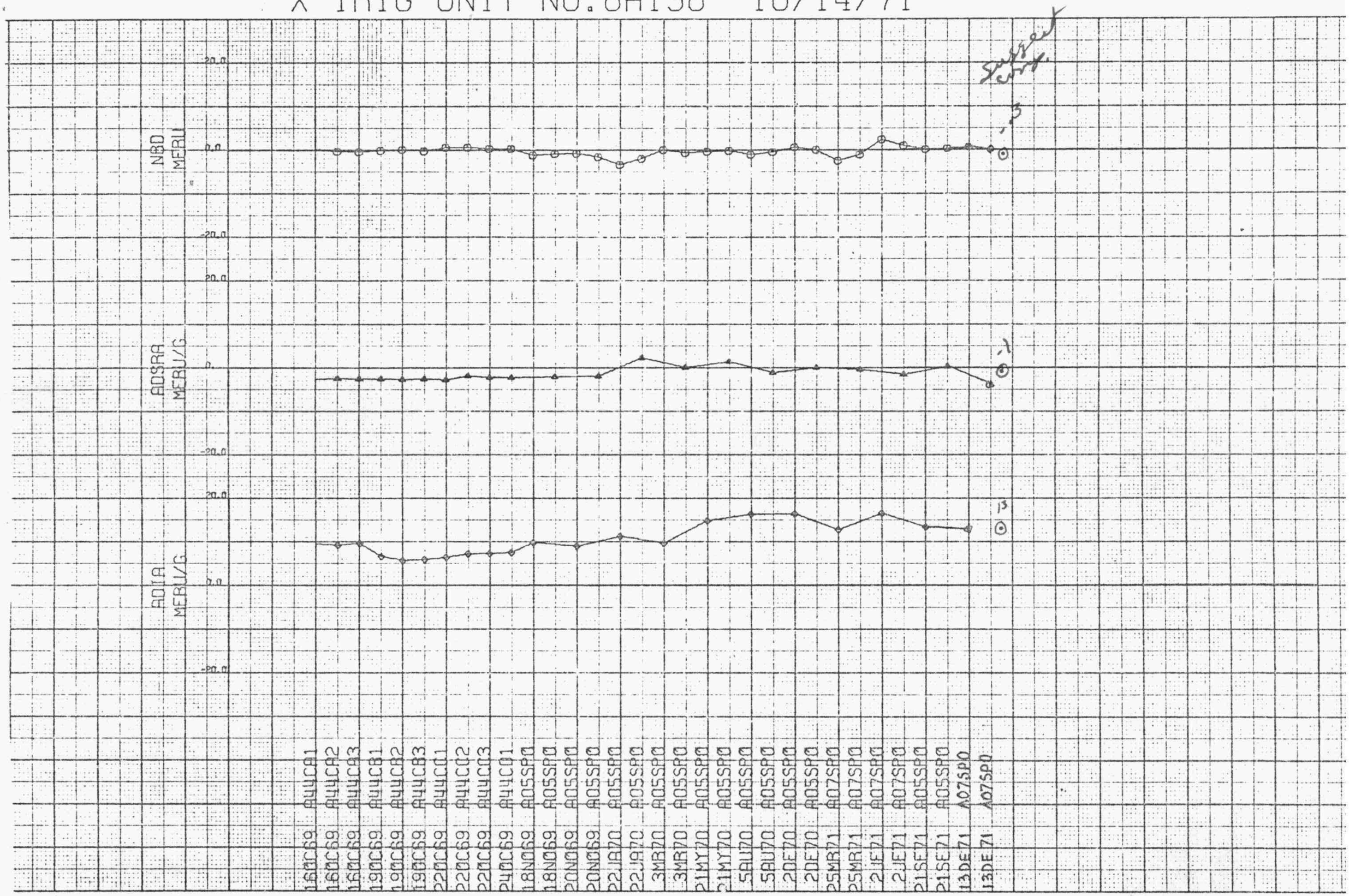
Jerry Gilmore 617-527-4642

NASA ACC	TEMP SENS	MAX SD	THERM R	SUS CAP SG	SUS CAP TG	XFR FUNC	AVG RDT	SD RDT	WH HRS	THERM SG	PAD TG	XFR RES	BIAS R	TRQE +	TRQE -	RES
3NO69	0.8		672.9	.0500			154	2.7	462							

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	NBD	ADSRA	ADIA	DELSF+	DELSF-	WHEEL RDT HOURS	I+	I-	ID	ADOA
20C69	A41	CSS								C110				
20C69	A41	CSS			(3.1)	(- 2.8)	(- 3.1)			C112			4.2	
20C69	SG 83.8, 66.9, 55.5 TG 52.8, 68.5, 80.2								REF H5241					
60C69	A43	CSS			(4.5)	(- 3.9)	(- 2.5)			156			7.0	
60C69	30EG SERVO RUN IN ERROR - RERUN AS 5DEG													
60C69	A43	CSS			(3.9)	(- 3.6)	(- 2.2)			157			5.4	
90C69	A43	CSS								152				
100C69	A45	CSS			(3.8)	(- 3.2)	(- 0.6)			150			5.6	
140C69	COMP SELECT													
140C69	A44	CSS						- 332	286	156	84.992	84.995		
150C69	COMP VERIF													
150C69	A44	CSS						- 228	280		84.999	84.996		
150C69	DEMO T/F = 1191.2													
150C69	A44	CSS						- 218	389	154	84.994	84.997		
160C69	VIB IA ALIGN = -0.25													
160C69	A44	CA1			0.2	- 2.6	9.3							
160C69	A44	CA2			- 0.3	- 2.5	9.1	- 377	413		84.995	84.997	7.9	
160C69	A44	CA3			- 0.4	- 2.6	9.5			149				
190C69	A44	CB1			- 0.1	- 2.6	6.5							
190C69	A44	CB2			0.1	- 2.7	5.6	- 294	348		84.995	84.998	6.4	
190C69	A44	CB3			- 0.2	- 2.6	5.8			154				
220C69	A44	CC1			0.6	- 2.8	6.3							
220C69	A44	CC2			0.6	- 1.9	7.1	- 373	369		84.995	84.997	7.5	
220C69	A44	CC3			0.3	- 2.3	7.2			156				
240C69	D-1	SERVO RUN FOR ENGR. REF. ONLY												
240C69	A44	CD1			0.3	- 2.3	7.4			156	462			
3NO69	ACC	& M/O TO 0814												
11NO69	UNIT INSTALLED IN IMU 33X REPLACING 7A-41.													
18NO69	A05	SPO X 33			- 1.2		9.7							
18NO69	A05	SPO X 33			- 0.9	- 2.1		- 117	594		85.001		0.0	
20NO69	A05	SPO X 33			- 0.8		8.8							
20NO69	A05	SPO X 33			- 1.6	- 2.0				573			0.0	
21NO69	GRAVITY TRANSIENT TEST SHOWS NO FLUID PROBLEMS.													
22JA70	A05	SPO X 33			- 3.4		11.1							
22JA70	A05	SPO X 33			- 2.0	2.2							- 0.1	
23JA70	A05	SPO X 33						- 93	527	630	85.004			
3MR70	A05	SPO X 33			0.0		9.5							
3MR70	A05	SPO X 33			- 0.7	0.0							0.1	
5MR70	A05	SPO X 33						- 27	561	C117 701	85.000			
7MR70	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
16MR70	IMU S/N 33 SHIPPED FROM AC/MKE TO KSC.													
2CAP70	IMU S/N 33 SHIPPED FROM KSC TO AC/MKE.													
21MY70	A05	SPO X 33			- 0.4		14.7							
21MY70	A05	SPO X 33			- 0.2	1.3				C116			- 0.2	
22MY70	A05	SPO X 33						50	651		84.999			
2JE70	A05	SPO X 33								771				
5AU70	A05	SPO X 33			- 1.1		16.2							

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	NBD	ADSRA	ADIA	DELSF+	DELSF-	WHEEL RDT HOURS	I+	I-	ID	ADOA
5AU70	A05	SPO	X	33	- 0.5	- 1.2		60	684		85.004			- 0.3
11AU70	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
11AU70										847				
20E70	A05	SPO	X	33	0.6		16.3							
20E70	A05	SPO	X	33	0.0	0.0								- 0.6
20E70	A05	SPO	X	33						C120				
30E70	A05	SPO	X	33				40	674		85.001			
5JA71	IMU S/N 33 SHIPPED FROM DEL/MKE TO KSC.													
3FE71	IMU S/N 33 SHIPPED FROM KSC TO DELCO/MKE.													
25MR71	A07	SPO	X	33	- 2.5		12.6							
25MR71	A07	SPO	X	33	- 1.1	- 0.5								0.0
26MR71	A07	SPO	X	33				- 117	517		85.002			
1AP71	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
2JE71	A07	SPO	X	33	2.4		16.4							
2JE71	A07	SPO	X	33	1.0	- 1.6								- 0.4
3JE71	A07	SPO	X	33				- 160	628		85.002			
1JL71	IMU 33 SHIPPED FROM DELCO/MKE TO KSC.													
9AU71	IMU 33 SHIPPED FROM KSC TO DELCO/MKE.													
21SE71	A05	SPO	X	33	0.1		13.2							
21SE71	A05	SPO	X	33	0.3	0.2								- 0.4
22SE71	A05	SPO	X	33				184	674		85.002			
27SE71	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
13DE71	A07	SPO	X	33	0.8		12.9							
13DE71	A07	SPO	X	33	- 0.1	- 3.7								- 0.1
20DE71	A07	SPO	X	33				94	718		84.999			
15MAR72	SPO				-1.7	- 0.2	11.4							
24 MAR	K37	G&N			+.3	+.2	10.2							

X IRIG UNIT NØ. 8A138 10/14/71



LEGEND: ⊙ NBD △ ADSRA ◇ ADIA

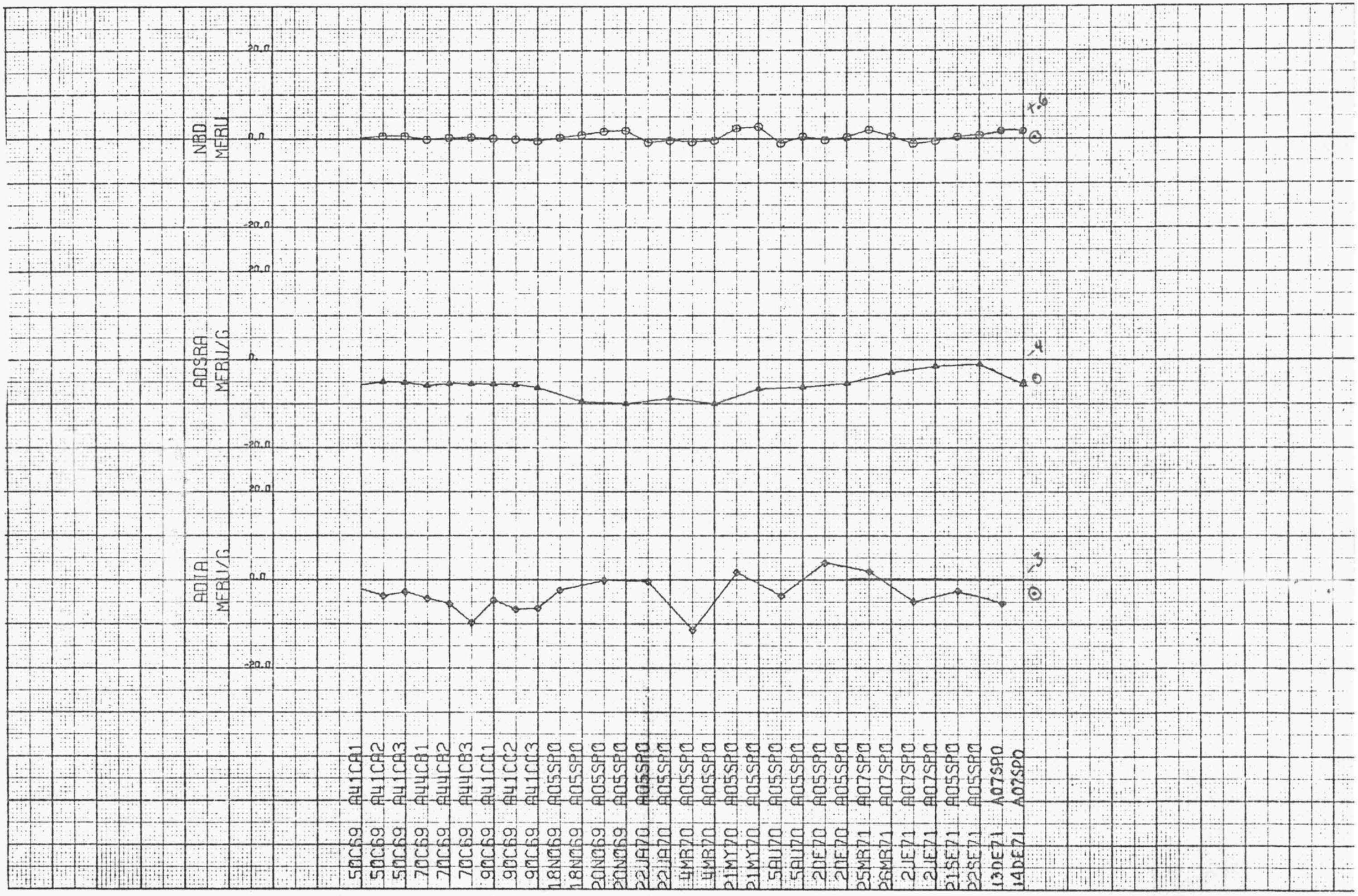
2023-1-22

NASA ACC	TEMP SENS	MAX SD	THERM R	SUS CAP SG	SUS CAP TG	XFR FUNC	AVG RDT	SD RDT	WH HRS	THERM SG	PAD TG	XFR RES	BIAS R	TRQE +	TRQE -	RES
210C69	0.8		688.5	.0470			144	2.8	438							

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	NBD	ADSRA	ADIA	DELSF+	DELSF-	WHEEL RDT	HOURS	I+	I-	ID	ADOA
22SE69	A43	CSS								C102					
22SE69	A43	CSS			(- 4.9)	(- 0.7)	(- 8.4)			C106				- 5.7	
23SE69	SG 75.2, 65.1, 41.3 TG 56.3, 65.5, 95.4								REF H5247						
25SE69	A43	CSS			(- 6.6)	(- 3.6)	(- 8.4)			141				- 8.8	
29SE69	A44	CSS			(- 6.6)	(0.1)	(- 1.7)			144				- 6.6	
30SE69	A44	CSS								146					
20OC69	COMP SELECT														
20OC69	A45	CSS						214	68	138		85.001	84.999		
30OC69	COMP VERIF IA ALIGN VERIF OOS = -3.5 / UNIT REALIGNED														
30OC69	A45	CSS						- 32	- 199			85.000	84.999		
30OC69	DEMO T/F = 1207														
30OC69	A45	CSS						- 135	- 62	142		85.000	84.998		
30OC69	VIB IA ALIGN = +0.75														
40OC69	A45	CAL								148					
40OC69	A SERVO ABORTED STARTED PRIOR TO 12 DAY BANK														
50OC69	A SERVO RESTART ABORTED EQUIPMENT PROBLEMS														
50OC69	A45	CAL								144					
50OC69	A41	CA1			0.3	- 5.7	- 2.2								
50OC69	A41	CA2			0.7	- 5.0	- 3.7	524	413			85.004	85.004	- 7.0	
50OC69	A41	CA3			0.7	- 5.2	- 2.8			142					
70OC69	A44	CB1			- 0.1	- 5.9	- 4.3								
70OC69	A44	CB2			0.3	- 5.4	- 5.5	93	68			84.997	84.999	- 4.0	
70OC69	A44	CB3			0.4	- 5.5	- 9.8			146					
90OC69	A41	CC1			0.1	- 5.6	- 4.7								
90OC69	A41	CC2			- 0.1	- 5.7	- 6.8	459	355			84.999	84.998	- 3.9	
90OC69	A41	CC3			- 0.5	- 6.4	- 6.5			145	438				
210C69	ACC. & M/O TO 0814														
11NO69	UNIT INSTALLED IN IMU 33Y REPLACING 7C-120.														
18NO69	A05	SPO	Y	33	0.3		- 2.4								
18NO69	A05	SPO	Y	33	0.9	- 9.6		174	494			85.004			- 0.7
20NO69	A05	SPO	Y	33	1.7		- 0.2								
20NO69	A05	SPO	Y	33	1.9	- 10.1					549				- 0.5
21NO69	GRAVITY TRANSIENT TEST SHOWS NO FLUID PROBLEMS.														
22JA70	A05	SPO	Y	33	- 0.8		- 0.5								
22JA70	A05	SPO	Y	33	- 0.4	- 8.8									- 0.8
23JA70	A05	SPO	Y	33				360	728		606	85.004			
4MR70	A05	SPO	Y	33	- 0.7		- 11.5								
4MR70	A05	SPO	Y	33	- 0.4	- 10.1									- 0.7
5MR70	A05	SPO	Y	33				494	794	C108	677	85.000			
7MR70	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.														
16MR70	IMU S/N 33 SHIPPED FROM AC/MKE TO KSC.														
20AP70	IMU S/N 33 SHIPPED FROM KSC TO AC/MKE.														
21MY70	A05	SPO	Y	33	2.4		1.6								
21MY70	A05	SPO	Y	33	2.8	- 6.7				C111					- 0.3
22MY70	A05	SPO	Y	33				551	975			84.999			
2JE70	A05	SPO	Y	33							746				
5AU70	A05	SPO	Y	33	- 1.1		- 3.7								

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	NBD	ADSRA	ADIA	DELSF+	DELSF-	WHEEL RDT HOURS	I+	I-	ID	ADOA
5AU70	A05	SPO	Y	33	0.5	- 6.3		584	1128		85.004			0.0
11AU70	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
11AU70										823				
2DE70	A05	SPO	Y	33	- 0.3		3.8							
2DE70	A05	SPO	Y	33	0.4	- 5.4								0.2
2DE70	A05	SPO	Y	33						C112				
3DE70	A05	SPO	Y	33				574	1085		85.004			
5JA71	IMU S/N 33 SHIPPED FROM DEL/MKE TO KSC.													
3FE71	IMU S/N 33 SHIPPED FROM KSC TO DELCO/MKE.													
25MR71	A07	SPO	Y	33	2.1		1.8							
26MR71	A07	SPO	Y	33	0.6	- 3.0		394	1008		85.002			- 0.4
1AP71	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
2JE71	A07	SPO	Y	33	- 1.1		- 5.0							
2JE71	A07	SPO	Y	33	- 0.5	- 1.5								- 0.8
3JE71	A07	SPO	Y	33				507	1128		85.002			
1JL71	IMU 33 SHIPPED FROM DELCO/MKE TO KSC.													
9AU71	IMU 33 SHIPPED FROM KSC TO DELCO/MKE.													
21SE71	A05	SPO	Y	33	0.5		- 2.6							
22SE71	A05	SPO	Y	33	0.9	- 1.1		718	1285		85.004			- 0.1
27SE71	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
13DE71	A07	SPO	Y	33	1.7		- 5.3							
14DE71	A07	SPO	Y	33	1.7	- 5.3								- 0.4
20DE71	A07	SPO	Y	33				594	1285		85.000			
13MAR72		SPO			0.1	-7.2	-5.9							
24MAR72		C-M			1.0	-6.7	-5.8							
1239														

Y IRIG UNIT NØ.8A135 10/14/71



LEGEND: ⊙ NBD ▲ ADSRA ◆ ADIA

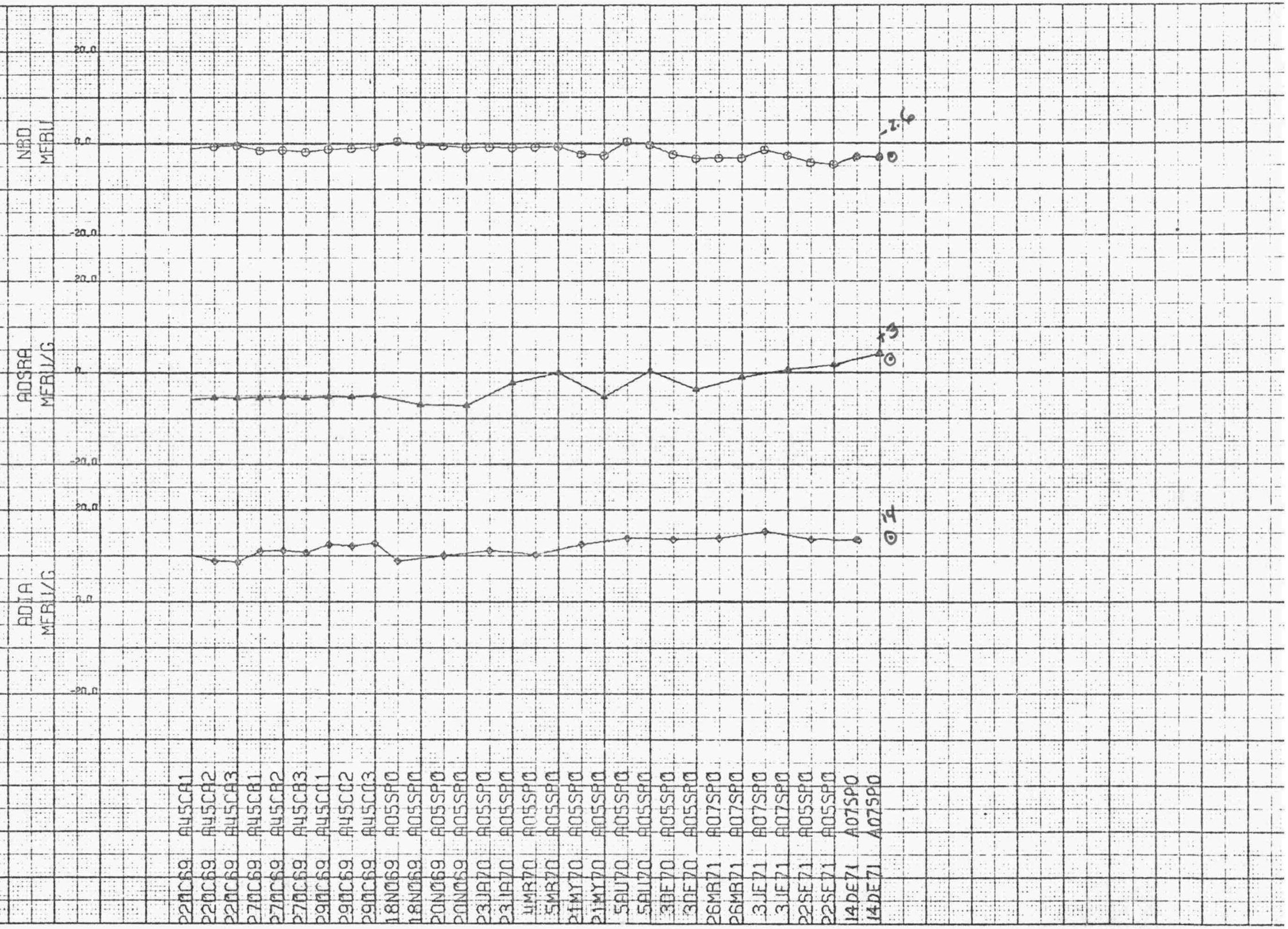
2023-1-25

NASA ACC	TEMP SENS	MAX SD	THERM R	SUS CAP SG	SUS CAP TG	XFR FUNC	AVG RDT	SD RDT	WH HRS	THERM SG	PAD TG	XFR RES	BIAS R	TRQE +	TRQE -	RES
3NO69	0.9		678.1	.0485			178	2.8	480							

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	NBD	ADSRA	ADIA	DELSF+	DELSF-	WHEEL RDT HOURS	I+	I-	ID	ADOA
25SE69	A41	CSS								C125				
25SE69	A41	CSS			(- 21.8)	(- 2.2)	(3.1)			179			4.0	
25SE69	RD OOS RE-RUN SERVO STILL OOS / PHASE ANGLE SET AT 54 DEG OK													
25SE69	A41	CSS			(- 21.8)	(- 3.7)	(2.4)						4.6	
26SE69	A41	CSS			(- 19.7)	(- 3.1)	(1.1)			C122			2.5	
28SE69	SG 81.5, 65.9, 47.7 TG 81.5, 65.9, 86.6								REF H5226					
4OC69	A41	CSS			(- 18.5)	(- 1.6)	(- 7.1)			182			4.4	
7OC69	A41	CSS			(- 20.0)	(- 3.1)	(- 2.7)			178			4.1	
7OC69	A41	CSS								174				
16OC69	COMP SELECT													
16OC69	A45	CSS						-	107 - 4	173	85.000	84.998		
17OC69	TG END COVER DENTED /UNIT REPAIRED & REALIGNED													
20OC69	COMP VERIF													
20OC69	A45	CSS						-	166 54		84.999	84.998		
20OC69	DEMO T/F = 1181, S/F OOS & HEATER,COCKED / REALIGN & REDEMO													
20OC69	A45	CSS						-	259 71	179	84.999	84.998		
20OC69	A45	CSS								180				
22OC69	VIB IA ALIGN = +1.75													
22OC69	A45	CA1			- 1.0	- 5.8	10.0							
22OC69	A45	CA2			- 0.6	- 5.4	8.8	-	563 68		85.000	84.998		
22OC69	A45	CA3			- 0.4	- 5.5	8.6			180				
26OC69	A45	CB1								181				
27OC69	B SERVO ABORTED TEST EQUIPMENT PROBLEMS													
27OC69	A45	CB1			- 1.5	- 5.4	11.0							
27OC69	A45	CB2			- 1.4	- 5.3	11.1	-	490 - 14		85.000	85.000		
27OC69	A45	CB3			- 1.8	- 5.5	10.6			180				
29OC69	A45	CC1			- 1.2	- 5.2	12.4							
29OC69	A45	CC2			- 1.1	- 5.3	12.1	-	404 225		84.997	84.999		
29OC69	A45	CC3			- 0.7	- 5.0	12.7			177	480			
3NO69	ACC. M/O TO 0814													
11NO69	UNIT INSTALLED IN IMU 33Z REPLACING 7C-15.													
18NO69	A05	SPO	Z	33	0.5		8.8							
18NO69	A05	SPO	Z	33	- 0.3	- 7.0		-	250 - 140		85.004		0.6	
20NO69	A05	SPO	Z	33	- 0.5		10.0							
20NO69	A05	SPO	Z	33	- 0.9	- 7.2					591		0.9	
21NO69	GRAVITY TRANSIENT TEST SHOWS NO FLUID PROBLEMS.													
23JA70	A05	SPO	Z	33	- 0.8		11.1							
23JA70	A05	SPO	Z	33	- 0.9	- 2.2							1.1	
26JA70	A05	SPO	Z	33				-	207 - 217		648	85.003		
4MR70	A05	SPO	Z	33	- 0.8		10.2							
5MR70	A05	SPO	Z	33	- 0.7	0.0							1.2	
5MR70	A05	SPO	Z	33				-	217 - 207	C127	719	85.000		
7MR70	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
16MR70	IMU S/N 33 SHIPPED FROM AC/MKE TO KSC.													
20AP70	IMU S/N 33 SHIPPED FROM KSC TO AC/MKE.													
21MY70	A05	SPO	Z	33	- 2.3		12.4							
21MY70	A05	SPO	Z	33	- 2.6	- 5.3				C123			1.4	

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	NBD	ADSRA	ADIA	DELSF+	DELSF-	WHEEL RDT HOURS	I+	I-	ID	ADOA
22MY70	A05	SPO	Z	33				- 140	- 107		85.000			
2JE70	A05	SPO	Z	33						788				
5AU70	A05	SPO	Z	33	0.4		13.8							
5AU70	A05	SPO	Z	33	- 0.3	0.4		- 83	- 50		85.008			1.2
11AU70	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
11AU70										865				
2DE70	A05	SPO	Z	33						C130				
3DE70	A05	SPO	Z	33	- 2.4		13.5							
3DE70	A05	SPO	Z	33	- 3.3	- 3.7		- 27	60		85.004			1.6
5JA71	IMU S/N 33 SHIPPED FROM DEL/MKE TO KSC.													
3FE71	IMU S/N 33 SHIPPED FROM KSC TO DELCO/MKE.													
26MR71	A07	SPO	Z	33	- 3.2		13.8							
26MR71	A07	SPO	Z	33	- 3.2	- 1.0		- 217	- 50		85.002			1.0
1AP71	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
3JE71	A07	SPO	Z	33	- 1.4		15.3							
3JE71	A07	SPO	Z	33	- 2.7	0.7		- 93	- 17		85.002			0.9
1JL71	IMU 33 SHIPPED FROM DELCO/MKE TO KSC.													
9AU71	IMU 33 SHIPPED FROM KSC TO DELCO/MKE.													
22SE71	A05	SPO	Z	33	- 4.2		13.5							
22SE71	A05	SPO	Z	33	- 4.6	1.7								1.2
23SE71	A05	SPO	Z	33				7	141		85.002			
27SE71	NO FLUID TRANSIENTS DETECTED DURING GRAVITY TRANSIENT TEST.													
14DE71	A07	SPO	Z	33	- 2.8		13.8							
14DE71	A07	SPO	Z	33	- 3.1	- 4.6								0.9
20DE71	A07	SPO	Z	33				- 127	17		85.004			
15MAR		SPO			-1.1	6.8	11.9							
24MAR	K39	GSN			-2.7	3.7	15.8							

Z IRIG UNIT NO. 8A137 10/14/71

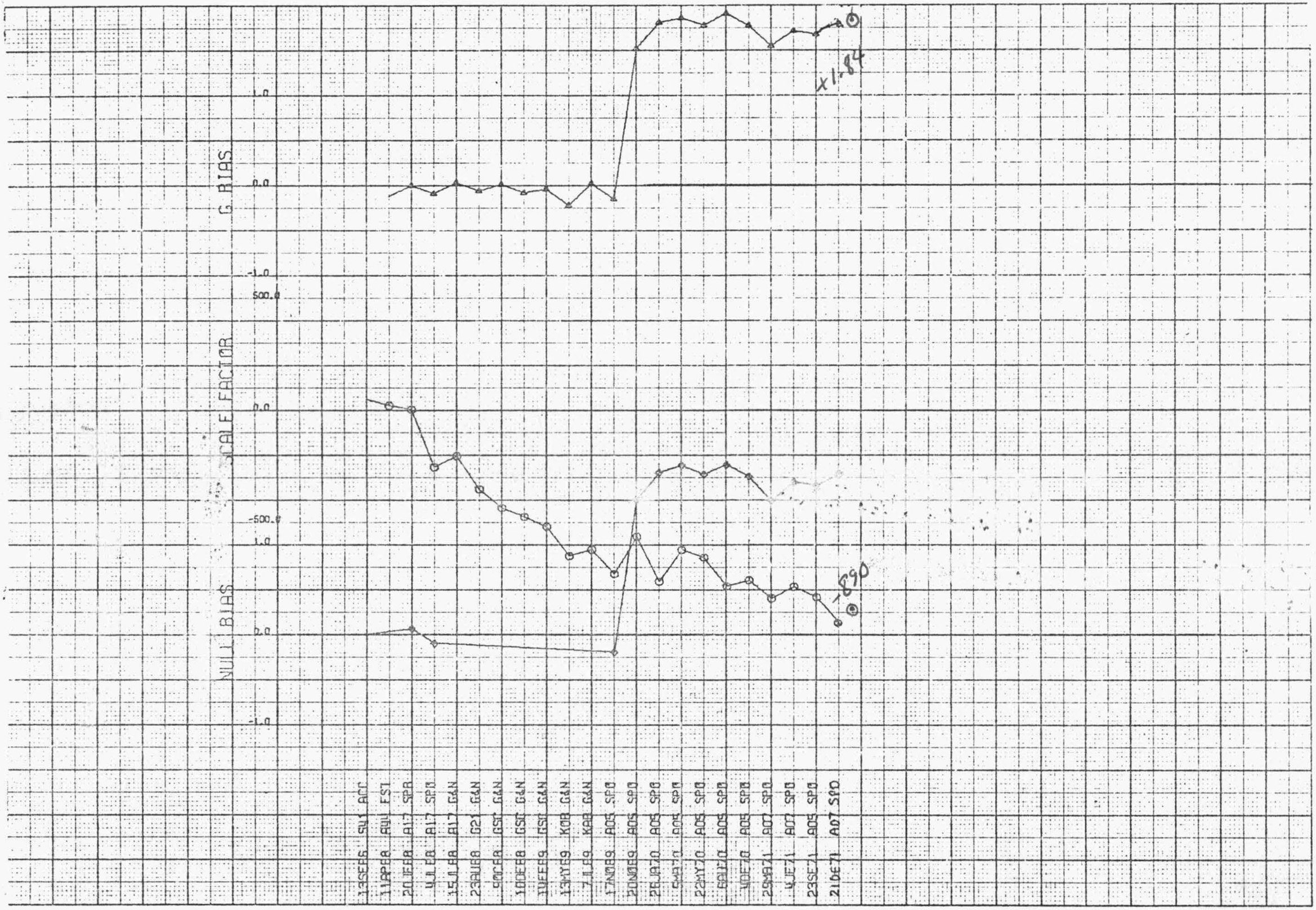


LEGEND: ⊙ NBD △ ADSRA ◇ ADIA

2023-1-28

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	DELTA SF	1G BIAS	NULL BIAS	ROT-AL-WOB ANGLE		MAX. TRANS.	TORQ MON CURRENT
13SE66	S41	ACC			48		0.00				104.7219
11AP68	A44	FST			20	-0.12					.
26AP68	UNIT ASSIGNED TO IMU S/N 33X										
20JE68	A17	SPR	X	33	(- 335)	(0.13)	(0.08)				43.7971
20JE68	A17	SPR	X	33	2	-0.00	0.06				43.7938
20JE68	AFTER DEGAUSSING AND ADJUSTMENT										
4JL68	A17	SPO	X	33	- 255	-0.09	-0.10				43.7927
4JL68	A17	SAL	X	33			(-0.09)	4	6		
9JL68	A17	SAL	X	33			(-0.16)	4	19		
15JL68	A17	G&N	X	33	- 206	0.03					43.8000
10AU68	IMU S/N 33 SHIPPED TO GAEC										
22AU68	G20	SAL	X	33 614			(0.10)	- 13	7		
23AU68	G21	G&N	X	33 607	- 354	-0.06					43.7926
9OC68	GSC	G&N	X	33 607	- 437	0.01					
10DE68	GSC	G&N	X	33 607	- 477	-0.08					
14FE69	GSC	G&N	X	33 607	- 522	-0.04					
24MR69	IMU S/N 33 SHIPPED TO KSC IN G&N SYSTEM 607, LM 6										
13MY69	KOB	G&N	X	33 607	- 651	-0.22					
7JL69	KAB	G&N	X	33	- 624	0.02					
5AU69	IMU S/N 33 REMOVED FROM 607,LM-6,REPLACED BY IMU S/N 15										
8JL69	IMU S/N 33 SHIPPED FROM KSC TO AC-MKE										
17ND69	A05	SPO	X	33	- 732	-0.15	-0.20				43.7938
17ND69	ADJUST BIAS TO 1.5 PLUS OR MINUS 0.1										
19ND69	A05	SAL	X	33			(1.47)	- 3	7		
20ND69	A05	SPO	X	33	- 566	1.52	1.50				43.7943
26JA70	A05	SPO	X	33	- 766	1.81	1.80				43.7940
26JA70	A05	SAL	X	33			(1.75)	- 14	8		
5MR70	A05	SPO	X	33	- 625	1.86	1.88				43.8000
6MR70	A05	SAL	X	33			(1.78)	- 8	9		
16MR70	IMU S/N 33 SHIPPED TO KSC										
20AP70	IMU S/N 33 SHIPPED FROM KSC TO AC/MKE.										
22MY70	A05	SPO	X	33	- 659	1.78	1.78				43.7930
25MY70	A05	SPO	X	33						0.04	
26MY70	A05	SAL	X	33			(1.68)	- 6	11		
6AU70	A05	SPO	X	33	- 786	1.91	1.89			0.06	43.7939
7AU70	A05	SAL	X	33			(1.90)	- 11	10		
4DE70	A05	SPO	X	33	- 759	1.78	1.76			0.06	43.7929
7DE70	A05	SAL	X	33			(1.61)	- 7	7		
5JA71	IMU S/N 33 SHIPPED FROM DEL/MKE TO KSC.										
3FE71	IMU 33 SHIPPED FROM KSC TO MKE										
29MR71	A07	SPO	X	33	- 839	1.55	1.49			0.06	43.7936
30MR71	A07	SAL	X	33			(1.62)	- 4	7		
4JE71	A07	SPO	X	33	- 787	1.72	1.70			0.07	43.7937
7JE71	A07	SAL	X	33			(1.60)	- 5	8		
1JL71	IMU 33 SHIPPED FROM DELCO/MKE TO KSC.										
9AU71	IMU 33 SHIPPED FROM KSC TO DELCO/MKE.										
23SE71	A05	SPO	X	33	- 833	1.68	1.66			0.04	43.7933
27SE71	A05	SAL	X	33			(1.88)	- 7	10		
21DE71	A07	SPO	X	33	- 959	1.82	1.81			0.10	43.7913
22DE71	A07	SAL	X	33			(1.85)	- 7	13		
13 MAR					-801	1.87					
24 MAR					-838	1.86					

X PIPA UNIT NO. 2AP272 10/14/71

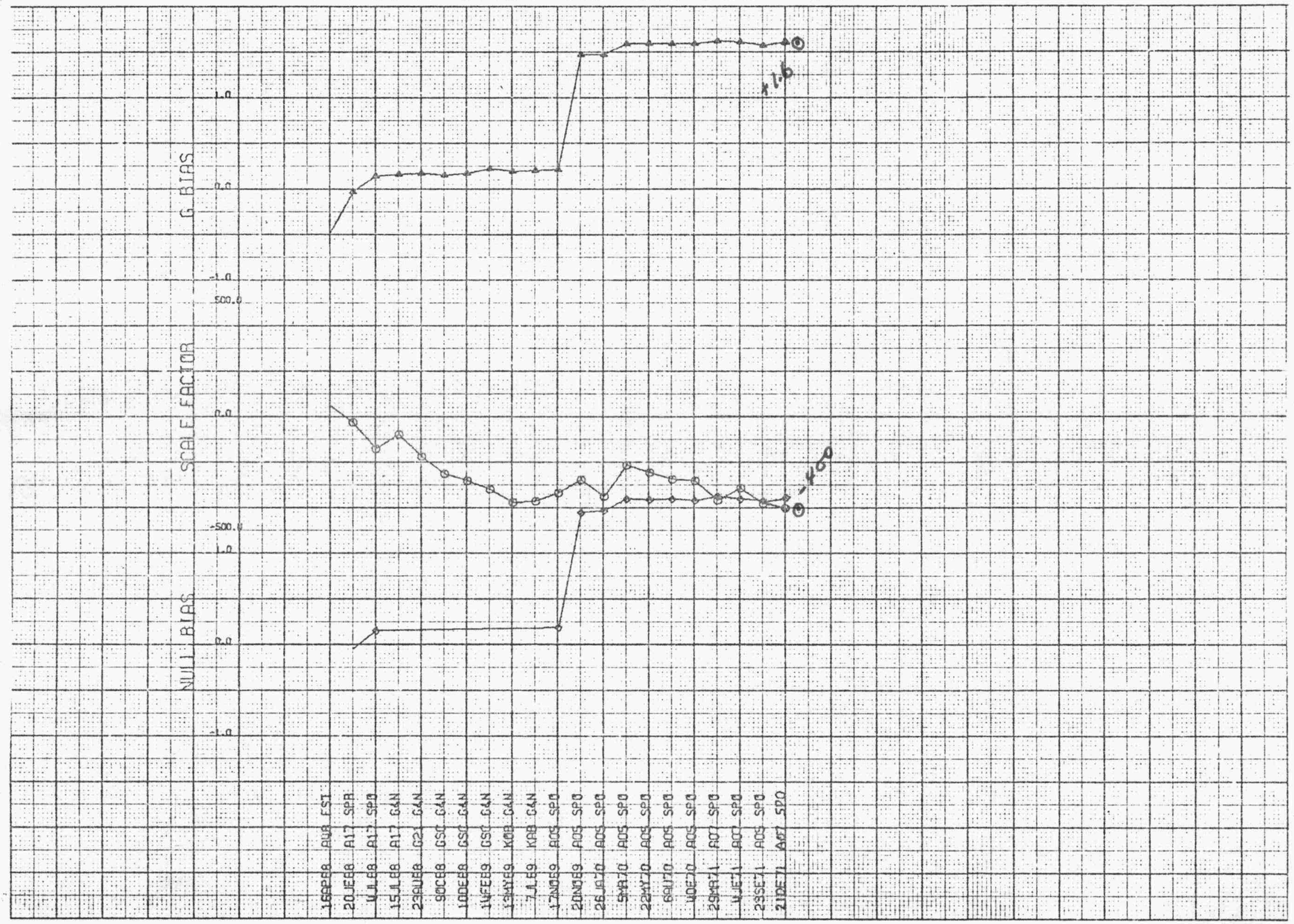


LEGEND: ⊙ SF ▲ GBIAS ◈ NBIAS _____

2023-1-30

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	DELTA SF	1G BIAS	NULL BIAS	ROT-AL-WOB ANGLE	MAX. TRANS.	TORQ MON CURRENT
16AP68	A48	FST			49	-0.48				43.4075
26AP68	UNIT ASSN TO IMU S/N 33 , Y									
20JE68	A17	SPR	Y	33	(- 262)	(-0.20)	(-0.19)			43.3854
20JE68	A17	SPR	Y	33	- 26	-0.03	-0.05			43.3856
20JE68	AFTER DEGAUSSING AND ADJUSTMENT									
4JL68	A17	SPO	Y	33	- 143	0.14	0.15			43.3850
4JL68	A17	SAL	Y	33			(0.13)	8 - 27		
9JL68	A17	SAL	Y	33			(0.18)	10 - 25		
15JL68	A17	G&N	Y	33	- 80	0.16				43.4000
10AU68	IMU S/N 33 SHIPPED TO GAEC									
22AU68	G20	SAL	Y	33			(0.18)	6 - 12		
23AU68	G21	G&N	Y	33 607	- 177	0.17				43.3862
9OC68	GSC	G&N	Y	33 607	- 253	0.15				
10DE68	GSC	G&N	Y	33 607	- 283	0.17				
14[illegible]69	GSC	G&N	Y	33 607	- 321	0.22				
24MR69	IMU S/N 33 SHIPPED TO KSC IN G&N SYSTEM 607, LM 6									
13MY69	KOB	G&N	Y	33 607	- 380	0.19				
7JL69	KAB	G&N	Y	33	- 374	0.20				
5AU69	IMU S/N 33 REMOVED FROM 607,LM-6,REPLACED BY IMU S/N 15									
8JL69	IMU S/N 33 SHIPPED FROM KSC TO AC-MKE									
17NO69	A05	SPO	Y	33	- 337	0.21	0.18			43.3880
17NO69	ADJUST BIAS TO 1.5 PLUS OR MINUS 0.1									
19NO69	A05	SAL	Y	33			(1.44)	0 - 12		
20NO69	A05	SPO	Y	33	- 279	1.47	1.44			43.3875
26JA70	A05	SPO	Y	33	- 353	1.47	1.46			43.3870
26JA70	A05	SAL	Y	33			(1.45)	6 - 13		
5MR70	A05	SPO	Y	33	- 216	1.59	1.59			43.3860
6MR70	A05	SAL	Y	33			(1.58)	3 - 13		
16MR70	IMU S/N 33 SHIPPED TO KSC									
20AP70	IMU S/N 33 SHIPPED FROM KSC TO AC/MKE.									
22MY70	A05	SPO	Y	33	- 247	1.59	1.58			43.3861
25MY70	A05	SPO	Y	33					0.03	
26MY70	A05	SAL	Y	33			(1.52)	3 - 12		
6AU70	A05	SPO	Y	33	- 277	1.59	1.59		0.03	43.3871
7AU70	A05	SAL	Y	33			(1.58)	4 - 13		
4DE70	A05	SPO	Y	33	- 283	1.59	1.57			43.3880
7DE70	A05	SPO	Y	33					0.04	
8DE70	A05	SAL	Y	33			(1.55)	4 - 14		
5JA71	IMU S/N 33 SHIPPED FROM DEL/MKE TO KSC.									
3FE71	IMU 33 SHIPPED FROM KSC TO MKE									
29MR71	A07	SPO	Y	33	- 369	1.62	1.62			43.3872
29MR71	A07	SPO	Y	33					0.04	
30MR71	A07	SAL	Y	33			(1.58)	4 - 13		
4JE71	A07	SPO	Y	33	- 316	1.61	1.59			43.3872
7JE71	A07	SPO	Y	33					0.02	
7JE71	A07	SAL	Y	33			(1.61)	4 - 14		
1JL71	IMU 33 SHIPPED FROM DELCO/MKE TO KSC.									
9AU71	IMU 33 SHIPPED FROM KSC TO DELCO/MKE.									
23SE71	A05	SPO	Y	33	- 384	1.57	1.57		0.02	43.3866
27SE71	A05	SAL	Y	33			(1.55)	2 - 14		
21DE71	A07	SPO	Y	33	- 399	1.61	1.62		0.02	43.3868
22DE71	A07	SAL	Y	33			(1.60)	4 - 12		
19-Mar					-398	1.59				
24 Mar					-421	1.60				

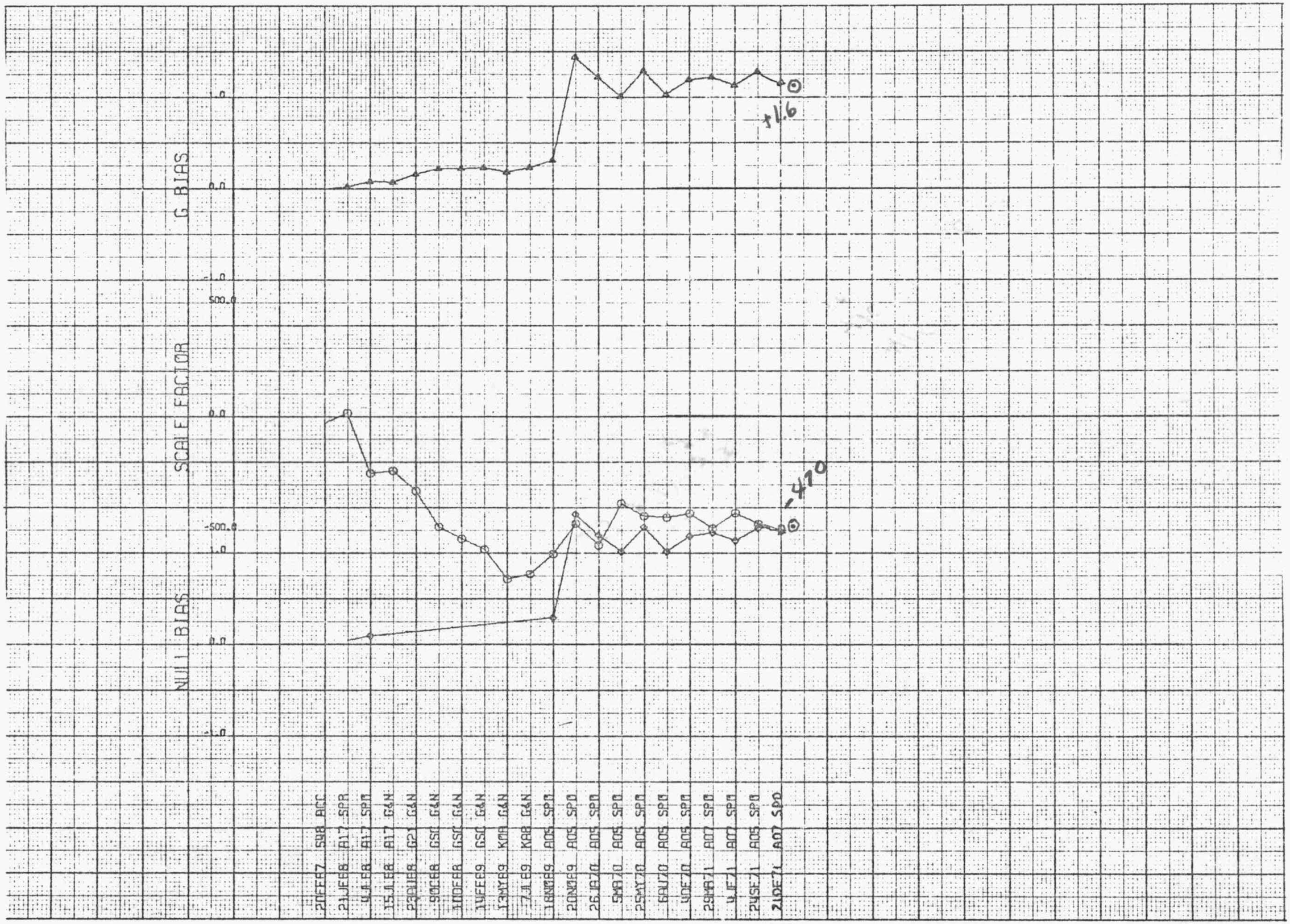
Y PIPA UNIT NO. 3AP338 10/14/71



LEGEND: ⊙ SF ▲ GBIAS ⊙ NBIAS

DATE	LOC	TST TYP	IMU ASSN	G&N SYS	DELTA SF	1G BIAS	NULL BIAS	ROT-AL-WOB ANGLE	MAX. TRANS.	TORQ MON CURRENT
20FE67	S48	ACC			- 29	0.00				105.2691
26AP68	UNIT ASSIGNED TO IMU S/N 33Z									
20JE68	A17	SPR	Z 33		(175)	(-0.06)	(-0.10)			43.9972
21JE68	A17	SPR	Z 33		17	0.02	0.04			43.9927
21JE68	AFTER DEGAUSSING AND ADJUSTMENT									
4JL68	A17	SPO	Z 33		- 251	0.08	0.09			43.9923
4JL68	A17	SAL	Z 33				(0.08)	2		
9JL68	A17	SAL	Z 33				(0.01)	- 1		
15JL68	A17	G&N	Z 33		- 240	0.07				
10AU68	IMU S/N 33 SHIPPED TO GAEC									
22AU68	G20	SAL	Z 33				(0.10)	9		
23AU68	G21	G&N	Z 33	607	- 328	0.16				43.9933
90C68	GSC	G&N	Z 33	607	- 485	0.22				
10DE68	GSC	G&N	Z 33	607	- 540	0.22				
14FE69	GSC	G&N	Z 33	607	- 585	0.23				
24MR69	IMU S/N 33 SHIPPED TO KSC IN G&N SYSTEM 607, LM 6									
13MY69	KOB	G&N	Z 33	607	- 715	0.18				
7JL69	KAB	G&N	Z 33		- 693	0.23				
5AU69	IMU S/N 33 REMOVED FROM 607,LM-6,REPLACED BY IMU S/N 15									
8JL69	IMU S/N 33 SHIPPED FROM KSC TO AC-MKE									
18NO69	A05	SPO	Z 33		- 606	0.31	0.29			43.9938
18NO69	ADJUST BIAS TO 1.5 PLUS OR MINUS 0.1									
19NO69	A05	SAL	Z 33				(1.44)	9		
20NO69	A05	SPO	Z 33		- 472	1.44	1.42			43.9948
26JA70	A05	SPO	Z 33		- 568	1.22	1.19			43.9942
26JA70	A05	SAL	Z 33				(1.21)	8		
5MR70	A05	SPO	Z 33		- 384	1.01	1.01			43.9929
6MR70	A05	SAL	Z 33				(0.96)	10		
16MR70	IMU S/N 33 SHIPPED TO KSC									
20AP70	IMU S/N 33 SHIPPED FROM KSC TO AC/MKE.									
25MY70	A05	SPO	Z 33		- 440	1.29	1.28		0.06	43.9926
26MY70	A05	SAL	Z 33				(1.13)	8		
6AU70	A05	SPO	Z 33		- 445	1.03	1.01			43.9942
7AU70	A05	SPO	Z 33						0.00	
7AU70	A05	SAL	Z 33				(1.05)	11		
4DE70	A05	SPO	Z 33		- 428	1.19	1.18			43.9952
7DE70	A05	SPO	Z 33						0.04	
7DE70	A05	SAL	Z 33				(1.16)	11		
5JA71	IMU S/N 33 SHIPPED FROM DEL/MKE TO KSC.									
3FE71	IMU 33 SHIPPED FROM KSC TO MKE									
29MR71	A07	SPO	Z 33		- 493	1.22	1.22			43.9944
30MR71	A07	SPO	Z 33						0.05	
30MR71	A07	SAL	Z 33				(1.21)	12		
4JE71	A07	SPO	Z 33		- 426	1.13	1.13			43.9944
7JE71	A07	SPO	Z 33						0.03	
7JE71	A07	SAL	Z 33				(1.13)	10		
1JL71	IMU 33 SHIPPED FROM DELCO/MKE TO KSC.									
9AU71	IMU 33 SHIPPED FROM KSC TO DELCO/MKE.									
24SE71	A05	SPO	Z 33		- 473	1.28	1.27			43.9936
27SE71	A05	SPO	Z 33						0.04	
27SE71	A05	SAL	Z 33				(1.29)	8		
21DE71	A07	SPO	Z 33		- 491	1.16	1.15		0.05	43.9955
22DE71	A07	SAL	Z 33				(1.18)	12		
15mar					-443	1.16				
24mar					-527	1.23				

Z PIPA UNIT NO. 2AP294 10/14/71



LEGEND: ⊙ SF ▲ GBIAS ◇ NBIAS

2023-1-34

A. Silver

Massachusetts Institute of Technology
Charles Stark Draper Laboratory

23S Memo 72-11

TO: Distribution
FROM: D. J. Grief
DATE: 17 February 1972
SUBJECT: Apollo 16 Support Personnel

The following motel reservations have been made for personnel attending the Apollo 16 Launch on 16 April 1972.

Siesta Motel - Titusville - Guaranteed for 13th, 14th and 15th.
Room rate approximately $26.00 per day double occupancy.

1. Dr. H. W. Johnson
2. Dr. and Mrs. Draper
3. R. A. Duffy and G. Silver *
4. Dr. and Mrs. W. Wrigley
5. Mr. and Mrs. R. Ragan *
6. P. Felleman and R. Sheridan *
7. Mr. and Mrs. S. Femino *

*Advanced payment has been made for these rooms. Please return room receipts to D. Grief DL7-142 for voucher submittal.

Motel "6" Cocoa Beach - Reserved for 13th, 14th and 15th.
Room rate approximately $10.00 per day double occupancy.

1. Mr. and Mrs. R. Larson
2. Mr. and Mrs. R. Lones
3. Jane Partridge
4. D. Brown and C. Ogren
5. J. Higgins and W. Salzberg
6. Mr. and Mrs. D. Dolan

Clearance requirements are being arranged through this office.

Travel arrangements should be made individually.

Any question concerning duty assignment or reservation arrangements should be directed to either P. Felleman or myself.

Distribution:

Attendees	D. Hoag	R. Battin
R. O'Donnell	L. Larson	H. Lanning
J. Stevenson	N. Sears	E. Hall

G. Silver

Massachusetts Institute of Technology

Charles Stark Draper Laboratory

23S Memo 72-11 Rev 1

TO: Distribution

FROM: D. Grief

DATE: 3 March 1972

SUBJECT: Revision to 23S Memo 72-11 dated 17 February 1972, Apollo 16 Support Personnel

Some changes have been necessary in room allocations for the Apollo 16 launch as indicated below:

Siesta Motel

1. Dr. J.R. Killian Jr.
2. Dr. H.W. Johnson
3. Dr. & Mrs. C.S. Draper
4. Dr. & Mrs. W. Wrigley
5. Mr. & Mrs. R. Ragan
6. Mr. & Mrs. S. Femino
7. Mr. & Mrs. W. Saltzberg
8. Mr. G. Silver & Mr. R. Brown
9. Mr. P. Felleman & Mr. R. Sheridan

Motel "6"

1. Mr. & Mrs. R. Larson
2. Mr. & Mrs. R. Lones & Family
3. Mr. & Mrs. C. Ogren
4. Mr. & Mrs. J. Higgins
5. Mr. & Mrs. D. Dolan
6. Miss Jayne Partridge

If any changes are to be made, please advise P. Felleman.

Distribution:

Attendees
R. O'Donnell
J. Stevenson
D. Hoag
L. Larson
N. Sears
R. Battin
H. Lanning
E. Hall

G. Silver

Massachusetts Institute of Technology
Charles Stark Draper Laboratory

23S Memo 72-11 Rev 2

TO: Distribution
FROM: D. Grief
DATE: 27 March 1972
SUBJECT: Revision to 23S Memo 72-11 dated 17 February 1972, Apollo 16 Support Personnel

Some changes have been necessary in room allocations for the Apollo 16 launch as indicated below:

Siesta Motel

1. P. Felleman
2. Dr. and Mrs. H.W. Johnson
3. Dr. & Mrs. C.S. Draper
4. Dr. & Mrs. W. Wrigley
5. Mr. & Mrs. R. Ragan
6. Mr. & Mrs. S. Femino
7. Mr. & Mrs. W. Saltzberg
8. Mr. and Mrs. R. Brown
9. Mr. G. Silver and Mr. R. Sheridan

Motel "6"

1. Mr. & Mrs. R. Larson
2. Mr. & Mrs. R. Lones & Family
3. Mr. & Mrs. C. Ogren
4. Mr. & Mrs. J. Higgins
5. Mr. & Mrs. D. Dolan
6. Miss Jayne Partridge

If any changes are to be made, please advise P. Felleman.

Distribution:

Attendees
R. O'Donnell
J. Stevenson
D. Hoag
L. Larson
N. Sears
R. Battin
H. Lanning
E. Hall

A Division of Massachusetts Institute of Technology

The Charles Stark Draper Laboratory

68 Albany Street, Cambridge, Massachusetts 02139 Telephone (617) 864-6900

23M- 19 - 72

To: Phil Felleman

From: Ken Goodwin

Date: April 5, 1972

Subject: ASPO 45 Schedule

ALL TIMES CST

Date	0000 to 0800	0800 to 1600	1600 to 2400	Event
Sun 16 April		Lawton	/Goodwin	Launch & TLI
Mon 17 April	Reasor	Lawton	Goodwin	MCC#2
Tues 18 April	Reasor	Lawton	Goodwin	MCC#3
Wed 19 April	Reasor	Lawton	Cook/Olsson	LOI
Thurs 20 April	Reasor	Gilbert/Goodwin	Olsson/Cook	DESCENT
Fri 21 April	Lawton	Goodwin	Reasor	EVA#2
Sat 22 April	Lawton	Goodwin	Reasor	EVA#3
Sun 23 April	Lawton	Gilbert/Goodwin	Reasor	ASCENT
Mon 24 April	Lawton	Gilbert	Reasor	PLANE CHANGE
Tues 25 April	Goodwin	Reasor	Lawton	TEI
Wed 26 April	Goodwin	Reasor	Lawton	EVA
Thurs 27 April	Goodwin	Reasor	Lawton	MCC#6
Fri 28 April	Goodwin	Reasor	Lawton	ENTRY

Personnel and Phone Numbers (AC 713)

Tony Cook	9-944-0241
Rom Gilbert	9-333-3000
Ken Goodwin	9-623-8368
Tom Lawton	9-334-2040
Ed Olsson	9-488-5606
George Reasor	9-534-4723
George Silver	9-488-6540
Cambridge	87-617-865-7336
ASPO 45	483-3451
MIT/SPAN	483-6134
AGC	483-5666
MIT Office (Mary)	483-4807

Distribution:
MIT/KSC
MIT/MSC (10)
G. Edmonds
B. Werner (2)
R. Lones
C. Finch EG7

APOLLO 16 SCAMA COMMUNICATORS

DATE		0800-1600	1600-2400	2400-0800
Sunday	4/16/72	Werner	McOuat	Prince
Monday	4/17/72	Kido	Grace	Woolsey
Tuesday	4/18/72	Werner	McOuat	Prince
Wednesday	4/19/72	Kido	Grace	Woolsey
Thursday	4/20/72	Werner	McOuat	Prince
Friday	4/21/72	Kido	Grace	Woolsey
Saturday	4/22/72	Werner	McOuat	Prince
Sunday	4/23/72	Kido	Grace	Woolsey
Monday	4/24/72	Werner	McOuat	Prince
Tuesday	4/25/72	Kido	Grace	Woolsey
Wednesday	4/26/72	Werner	McOuat	Prince
Thursday	4/27/72	Kido	Grace	Woolsey
Friday	4/28/72	Werner	/ / /	/ / /

Hardware Specialists (require access to front half)

TABLE II

G&N System	Office	Home Phone
Lones, Robert	821-529	664-2753
Edmonds, George	821-577	864-8942
Grace, Ed	821-201	456-3526
Laats, Ain	6414	729-8896
Harrison, Jim	821-270	924-1332
ISS and Inertial Components		
Gilmore, Jerry - General*	821-271	527-4642
McKern, Dick	821-275	449-0339
Lory, Charles	821-272	527-7205
Feldman, Julius - GYROS	821-256	244-4839
Bukow, George - ACCELEROMETERS	821-254	963-7479
Booth, Bob	821-277	285-3569
Optics		
Karthas, George*	821-512	332-7642
Yorgy, Larry - SERVO	821-322	922-1714
Parr, Tom - ONBOARD NAVIGATION	821-331	484-2065
PSA, PAS and CDU Electronics		
Cushing, Ray*	821-556	887-8670
Thermal		
Hickey, Ed*	821-405	785-0850
Jurgelewicz, Charles	821-422	769-1005
Katz, Bert	821-521	277-5682
Computer		
Hall, Eldon*	821-471	326-8526
Hopkins, Al	821-451	868-4898
Bowler, Don	821-473	924-2394

*Principle Contacts

TABLE II (Cont'd)

Radar	Office	Home Phone
Johnson, Leonard*	821-567	749-0085
Tanner, Walter	821-333	358-7909
Saltzberg, William	821-568	899-1822
Blanchard, Earl	821-322	843-2279

*Principle Contacts

R. Lones
System Test Group

George P. Edmonds, Jr.
System Test Group

Distribution:
E. Grace
W. Prince
V. Megna
M. Adams
J. Harrison
D. Hoag
J. Gilmore
P. Heinemann
G. Cox
L. Johnson
G. Bukow
R. Sheridan
J. St. Amand
I. Johnson
MIT at KSC/MSC
J. Suomala
D. Dolan (Central Files)
R. Werner
G. Edmonds
R. Lones
A. Laats
R. McKern
G. Karthas
K. Kido
S. Copps
J. Lawrence
K. Goodwin
C. Lorgy
P. Felleman
G. Silver
J. Feldman
L. Yorgy
T. Parr
R. Cushing
E. Hickey
C. Jurgelewicz
B. Katz
E. Hall
A. Hopkins
D. Grief
N. Sears
R. Booth
H. McOuat
W. Woolsey

APOLLO 16 MAJOR EVENTS

EVENT	DATE/TIME (CENTRAL STANDARD)		GET
Launch	April 16	11:54	00:00
TLI	April 16	15:53	03:59
MCC-1	April 16	23:33	11:39
MCC-2	April 17	18:33	30:39
MCC-3	April 18	16:23	52:29
MCC-4	April 19	09:23	69:29
Lunar Orbit Insertion	April 19	14:23	74:29
Descent Orbit Insertion	April 19	18:30	78:36
Undocking	April 20	12:08	96:14
CSM Circularization	April 20	13:36	97:42
Powered Descent	April 20	14:29	98:35
EVA-1 (7 hrs)	April 20	18:19	102:25
EVA-2 (7 hrs)	April 21	16:44	124:50
EVA-3 (7 hrs)	April 22	16:19	148:25
CSM Lunar Plane Change -1	April 22	20:23	152:29
Ascent	April 23	15:39	171:45
Docking	April 23	17:34	173:50
CSM Lunar Plane Change -2	April 24	13:08	198:14
Trans-Earth Insertion	April 25	18:15	222.21
Trans-Earth EVA	April 26	13:49	241:55
MCC-5	April 26	11:15	239:21
MCC-6	April 27	16:17	268:23
MCC-7	April 28	11:17	287:23
Splashdown	April 28	14:30	290:36

APOLLO 16 SPAN SUPPORT

	SUN 16	MON 17	TUE 18	WED 19	THU 20	FRI 21	SAT 22	SUN 23	MON 24	TUE 25	WED 26	THU 27	FRI 28
0800-1600	SC	SC	PF	GS	RL	SC	PF	GS	RL	SC	PF	GS	RL
1600-2400	HOAG	RL	SC	PF	GS	RL	SC	PF	GS	RL	SC	PF	—
0000-0800	~~LAUTON~~ PF	GS	RL	SC	PF	GS	RL	SC	PF	GS	RL	SC	—

SC - STEVE COPPS
RL - RUSS LARSON
GS - GEORGE SILVER
PF - PHIL FELLEMAN

4/6/72

OPTICS DEBRIEFING

1. We think we have an explanation for the P23 SXT inverted image at 9 hours. It is probably caused by a unique set of geometry conditions. We are continuing to look at this.

2. In regard to the backing off of the eye guard, we would like Ken to demonstrate his procedure for using the locking rings for the SCT and SXT.

3. Like to talk about focussing problems. Handle each instrument separately.

    a. SCT - Would you elaborate on the exact focussing problem. Couldn't focus, wouldn't hold focus, or inconvenient to focus.

    b. SXT - Read comment on page 6-5. Have Ken demonstrate his procedure to focus SXT on the reticle.

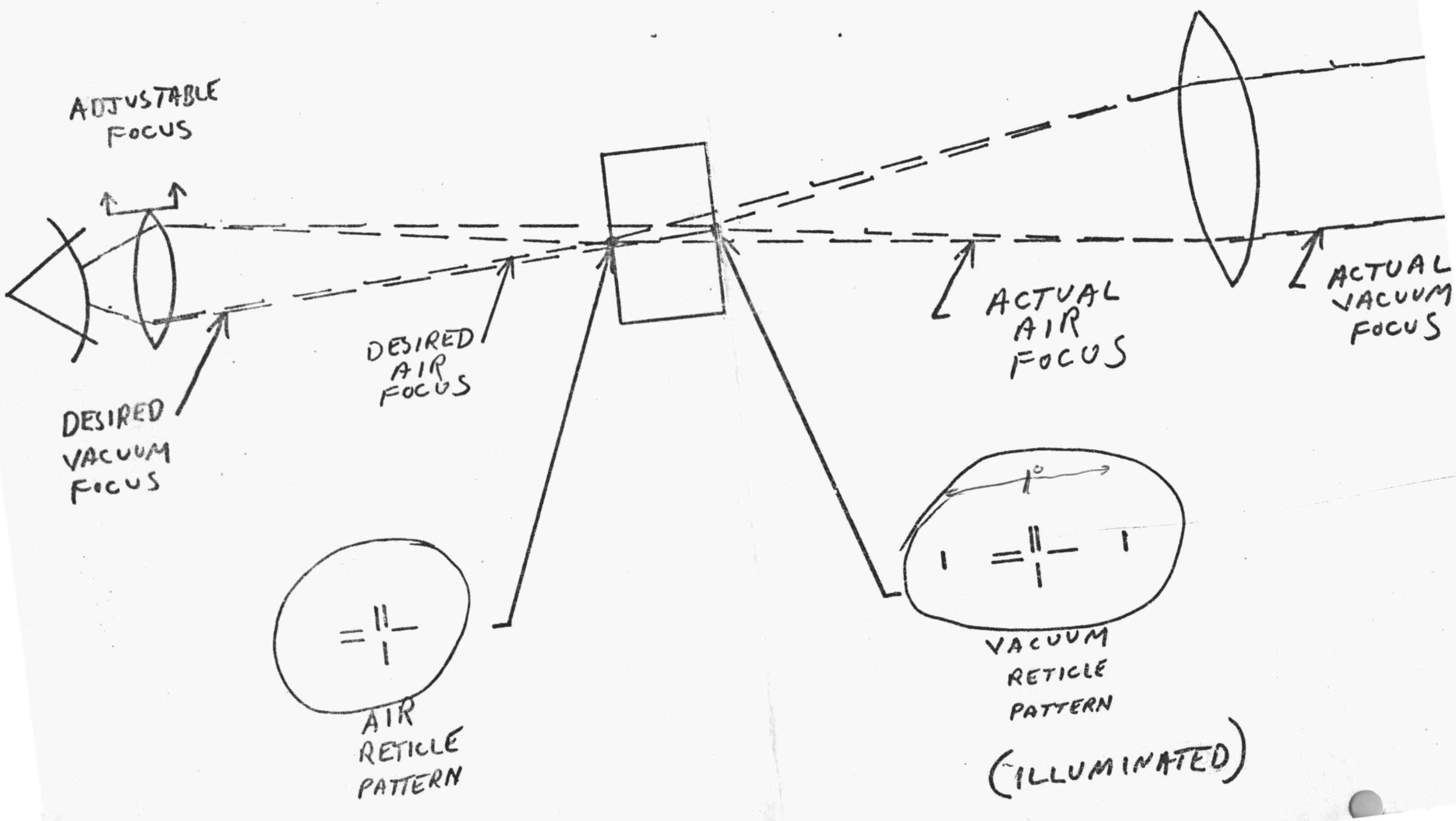
4. Clarify red dot in SXT at 176 hours in Flight Plan.
   Any movement with respect to reticle and SXT motion.
   Reticle intensity.
   Number of times red dot was seen in flight.

5. Noisy OUA and jerky motion.

    a. Clarify optics configuration when jerky motion was observed.

    b. What were you looking at to detect jerkiness. (SXT, SCT, TPAC?)
       GET
       Sh. & Trunn. angles
       RPM - noise

OUA SXT FOCUS



CM 113 3-29-72 APOLLO 16 CDDT P02

EST TIME	OGA	IGA	MGA	
04:06				P02 start
04:59	16.37	90.16	359.96	CDU DES. 16.37 89.99 0.00
05:00	162.37	90.08	359.98	
05:02	162.37	89.97	0.02	
05:05	162.37	89.96	0.03	TARG1 +253.19 -2.21 TARG2 +291.18 -2.016
05:10	162.35	89.95	0.03	
05:15	.25	.95	.02	
05:20	.14	.96	.03	
05:25	.04	.96	.02	
05:30	161.98	.96	.03	
05:45	.88	.96	.03	
06:00	.87	.96	.03	
06:15	.87	.96	.03	
06:30	.87	.96	.03	
06:45	.88	.96	.03	
07:00	161.87	89.96	0.03	
07:15	.87	.96	.03	7:25 OPTICS CAL
07:30	.88	.96	.03	
07:31	.88	.96	.03	① -.009 +.007 +.024 N93
07:35	.88	.96	.03	② -.006 +.010 +.028 N93
07:40	.88	.96	.03	③ -.009 +.007 +.024 N93
07:45	.87	.96	.03	
08:00	161.87	89.96	0.03	
08:01	.87	.96	.03	④ -.006 +.010 +.034 N93
08:15	.87	.96	.03	
08:30	.87	.96	.03	
08:32	.87	.95	.03	⑤ -.001 +.010 +.034 N93
08:45	.87	.96	.03	
09:00	.87	.96	.03	⑥ -.001 +.010 +.034 N93

Block II/LM

DATA SHEET
IMU PERFORMANCE TEST

G&N SYSTEM	SPACECRAFT	DATE
216	113	3-27-70
TEST LOCATION	**TIME OF TEST** ZULU	**TCP NO.**
LC-39A	1204	[illegible] COOT

A. Record the following test data:

TIME (Z)	POSITION (R3)	QUANTITY	LINE	DISPLAY
0716	1	+ NBDY-ADOAY	1	(+) 1.10
0739	2	+ NBDZ-ADOAZ	2	(-) 2.20
1202	2	-X PIPA G	3	(-) 179.47308
[illegible]	2	-NBDX + ADIAX	4	(+) 10.35
1416	3	+NBDX - ADOAX	5	(-) 1.21
[illegible]	4	+NBDY + ADSRAY	6	(-) 12.39
[illegible]	4	-Z PIPA G	7	(-) 179.70618
[illegible]	4	+NBDZ + ADIAZ	8	(+) 13.98
1631	5	+Y PIPA G	9	(+) 181.66492
[illegible]	6	-Y PIPA G	10	(-) 179.33377
[illegible]	7	-NBDX + .707 ADSRAX- .707 ADOAX	11	(-) 2.55
1700	8	.707 (–NBDZ – NBDY) + .5 (ADSRAY+ADSRAZ+ADIAZ-ADIAY)	12	(+) 3.30
1722	9	-NBDZ+.707ADSRAZ-.707ADOAZ	13	(-) 1.71
[illegible]	10	.707 (NBDY-NBDX) + .5 (ADIAY-ADIAX+ADSRAX+ADOAY)	14	(-) 12.45
1801	11	-NBDX - ADOAX	15	(+) 3.14
	11	+Z PIPA G	16	(+) 179.47931
	12	NBDY + ADOAY	17	(+) 0.43
	12	+X PIPA G	18	(-) 171.43898
	13	NBDZ + ADOAZ	19	(-) 3.14

IMU PERFORMANCE CRITERIA

VEHICLE NO.	GSN NO.	IMU NO.	DATE
CM 113	216	29	3-28-72

PROCEDURE	LOCATION	TIME
0007 CDDT	LC-39A	1216 Z START

CALCULATION IDENTIFIER	PARAMETER	Xi-3	Xi-2	Xi-1	Xi	D1	D2	D3
01	SFx	-253	-254	-280	-266	14	40	41
02	SFy	-1276	-1279	-1304	-1320	16	41	44
03	SFz	-464	-379	-369	-396	27	37	122
04	Bias x	-0.12	-0.04	-0.03	0	.03	.04	.12
05	Bias y	1.11	1.15	1.17	1.17	0	.02	.06
06	Bias z	-0.45	-0.15	-0.11	-0.11	0	.04	.34
07	NBDx	-2.4	-2.0	-1.3	-1.7	.4	1.1	1.5
08	NBDy	0.3	0.1	-2.0	0.7	2.7	4.8	5.0
09	NBDz	-1.7	-1.3	-2.7	-2.1	.6	2.0	2.4
10	ADOAx *	-0.4	-0.5	-0.5	-.4			
11	ADOZy *	-0.3	-0.1	0.5	-.3			
12	ADOAz *	0.2	0.3	0.2	0			
13	ADSRAx	-11.0	-11.8	-10.6	-10.7	.1	1.3	2.1
14	ADSRAy	-15.0	-13.3	-11.3	-13.1	1.8	3.8	5.5
15	ADSRAz	-5.7	-5.0	-5.0	-5.4	.4	.4	1.1
16	ADIAx	7.8	5.8	9.0	8.5	.5	3.7	5.7
18	ADIAz	14.4	14.1	15.5	16.1	.6	2.1	2.4
17	ADIAy (x) Pos 10	-6.6	-8.2	-6.8	-8.8	2.0	3.4	5.0
19	ADIAy (x) Pos 8	-1.6	-7.5	-3.5	-7.0	3.5	7.5	13.4