AXAF COMMAND ACTION PROCEDURE

CAP #647:
DATE: 30 August 2000

ORIGINATOR: Yousaf Butt
COMMANDS CHECKED BY: Buehler, Grant,...
Time of CAP Execution (GMT): 2000:249:05:15

DESCRIPTION/RATIONALE

This CAP executes the ninth r/t test of the new "Squeegy" mode, now on the S1 back-illuminated CCD. The plan is for two separate science runs:

- S1 16 row Squeegy, 32 row exclude window, initial frame flushes
- S1 NO Squeegy control run, 32 row exclude window

This "vanilla" squeegy on S1 is the FIRST squeegy test on any backside chip.

We end by loading the 2d window which OFLS expects: W20004A014 (from 246:13:57)

This test will be attempted during the 12ks period overlapping a CTI measurement on the inbound leg of the orbit. The FOT MPers have removed the commands to execute the normal ACIS CTI measurement from the load except for the OBSID update to 61942 at 2000:249:05:31 and the stopScience command at 2000:249:08:07.

The exact start time of the first science run depends on the focal plane temperature and the radiation environment. We expect COM at 249:05:10 and the OBSID update occurs at 249:05:31. The beginning of the pass can therefore be used to dump the SSR and uplink the loads. We hope to begin the first science run as soon as possible after 249:05:15 IF conditions allow.

The SIM moves to HRC-S at approx. 249:05:14; will need to manually update OBSID in r/t to 61942 if we start earlier than 249:05:31

RESTRICTIONS/WARNINGS/NOTES/SCHEDULE REQT:

This commanding will be interleaved upon the daily load. There should be no potential conflicts except with ACIS (see discussion above), but the operators should be cognizant and soigné nevertheless. The ACIS commanding should begin as soon as the focal plane temperature and radiation environment permit. The second science run (normal CTI on S1 alone) will be stopped by a stopScience from the daily load at 249:08:07.

STEP	INSTRUCTIONS (Command/Script)	RESPONSE (TLM Verifier)
1	Uplink Loads:	
	1A_WS007_164.CLD	7021872
	1A_WS043_140.CLD	603231C
	1A_XB002_250.CLD	617498C
	1A_XB001_251.CLD	A0E1874
	1A_WB00C_134.CLD	E5B0858
	1A_WB009_133.CLD	7F9FFE4
	1A_WB00D_135.CLD	4E6F5E0
	1A_WB00E_155.CLD	52E8479
	1A_WT05B_137.CLD	9C476F5
	1A_W2014_159.CLD	E1D9C5B

	1A_XT000_190.CLD	C421014
	1A_RS000_207.CLD	4022412
	1A_RH000_151.CLD	601EE12
	1A_AA000_191.CLD	502066E
	1A_RYFS0_211.CLD	F423E81
	1A_RZFS0_217.CLD	4424581
	1A_WT05D_138.CLD	4B623D6
	1A_W2016_161.CLD	EE8E4C1
2	ACIS alerts OC when FP temperature and EPHIN rates are appropriate to start the first run ($\sim 249:05:15$).	
3	At 249:05:31 daily load changes OBSID to 61942 *BUT DO IN r/t IF NEEDED EARLIER*	
4	Enable and Activate SCS 164	WSVIDALLDN (cmdId = 1541)
5	Enable and Activate SCS 140	WSPOW0203F (cmdId = 3188)
6	Enable and Activate SCS 250	executeBep, XB1SLOMOS1 (cmd ID = 3191)
7	Enable and Activate SCS 251	executeBep, XB1SLOMO03 (cmd ID = 2160)
8	Enable and Activate SCS 134	writeBep, WB00SQUEG3 (cmdId = 2967)
9	Enable and Activate SCS 133	writeBep, WB00SQUEG2 (cmdId = 2892)
10	Enable and Activate SCS 135	writeBep, WB04SQGDLY (cmdId = 2968)
11	Enable and Activate SCS 155	writeBep, WB24_FLUSH (cmdId = 2971)
12	Enable and Activate SCS 137	loadTeBlock, WT003A2014 (cmdId = 3192)
13	Enable and Activate SCS 159	load2dBlock, W20004B014 (cmdId = 3197)
14	Enable and Activate SCS 190	startScience (cmdId = 58)
15	If execution fails (immediate *scienceReport* with abnormal *terminationCode*), skip to step 24.	
16	Enable and Activate SCS 207	bepReadReply/Config (cmdId = 66)
17	Enable and Activate SCS 151	bepReadReply/Huffman (cmdId = 68)
18	ACIS confirms receipt of bias and data	dataTeBiasMap (cmdId = *any*)
19	ACIS confirms *fepTimestamp* increment of 0x528a0 (338080 decimal) per exposure	exposureTeFaint (cmdId = *any*)
20	collect data for ~ 8.0ks	
21	However, on bad data, skip IMMEDIATELY to step 22 -	no particular need to rouse FD
22	Enable and Activate SCS 191	stopScience (cmdId = 1539)
23	ACIS confirms normal completion of science run	
24	Enable and Activate SCS 211	readPram (cmdId = 1613)
25	ACIS confirms receipt of PRAM dump	
26	Enable and Activate SCS 217	readSram (cmdId = 1602)
27	ACIS confirms receipt of SRAM dump	
28	Change OBSID to 62873	
29	*If necessary* Activate SCS 164	WSVIDALLDN (cmdId = 1541)
30	*If necessary* Activate SCS 252	WSPOW0203F (cmdId = 3188)
31	Enable and Activate SCS 138	loadTeBlock,WT003AA014 (cmdId = 3211)
32	Activate SCS 190	startScience (cmdId = 58)
33	Activate SCS 207	bepReadReply/Config (cmdId = 66)
34	Activate SCS 151	bepReadReply/Huffman (cmdId = 68)
35	ACIS confirms normal science run	
36	ENACT:SCS 161 (OFLS wants W20004A014, 246:13:57)	cmdID=3183
37	Clear and Disable SCSs 164, 140, 250, 251, 134, 133, 135, 155, 137, 159, 190, 207, 151, 191, 211, 217, 138, 161	
38	collect data for ~ 1.0ks	

39 Wait for Stop-Science from load

Approved:

Subsystem Engineer:
TST Manager/Lead:
SOT Lead:

Flight Director:
Program Manager: