AXAF COMMAND ACTION PROCEDURE

CAP #595:
DATE: 14 April 2000

ORIGINATOR: Plucinsky
COMMANDS CHECKED BY: Buehler
Time of CAP Execution (GMT): 2000:106:22:30

DESCRIPTION/RATIONALE

This CAP executes the second test of the new "Squeegy" mode on the S0 CCD. The plan is for three seperate science runs:

- S0 16 row Squeegy, 32 row exclude window
- S0 8 row Squeegy, 32 row exclude window
- S0 NO Squeegy control run, 32 row exclude window

This test will be attempted during the 10ks period overlapping a CTI measurement on the out bound leg of the orbit. The FOT MPers have removed the commands to execute the normal ACIS CTI measurement from the load except for the final *stopScience* command, so there is less conflict with the load. However, the change of OBSID to 62083 at TIME=2000:106:23:29 still exists in the load. We will plan on using OBSID 62083 for the first Squeegy science run; however we have three OBSIDs reserved for this test. The exact start time of the first science run depends on the focal plane temperature and the radiation environment. Therefore, we might set the OBSID to 62083 in this CAP, start the science run, and the load will set the OBSID to 62083 again.

We do not expect the focal plane temperature to be at -120 C at the beginning of the pass at 106:22:20. 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 at 106:23:30. We therefore hope to get 3 science runs of $\sim$ 2.5 ks each executed during this pass of 14.4 ks. If we are behind schedule we will deduct time from the final (non-Squeegy) science run.

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 sodden nevertheless. The ACIS commanding should begin as soon as the focal plane temperature and radiation environment permit. The third science run (normal CTI on S0 alone) will be stopped by a stopScience from the daily load.

STEP	INSTRUCTIONS (Command/Script)	RESPONSE (TLM Verifier)
1	Uplink Loads:	
	1A_WS007_164.CLD	7021872
	1A_WS041_252.CLD	50391DC
	1A_XB000_250.CLD	417494C
	1A_XB001_251.CLD	A0E1874
	1A_WB008_132.CLD	15AF653
	1A_WB009_133.CLD	7F9FFE4
	1A_WB00A_134.CLD	A7C4AB1

	1A_WT050_136.CLD	E10538E
	1A_W2008_159.CLD	25513F2
	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_WB00B_135.CLD	4844D32
	1A_WT051_137.CLD	1125490
	1A_WT04F_139.CLD	50E019C
2	ACIS alerts OC when FP temperature and EPHIN rates are appropriate to start the first run ($\sim 23:30$).	
3	Change OBSID to 62803 if load has not already done so	
4	Enable and Activate SCS 164	WSVIDALLDN (cmdId = 1541)
5	Enable and Activate SCS 252	WSPOW0103F (cmdId = 2163)
6	Enable and Activate SCS 250	executeBep, XB1SLOMO02 (cmd ID = 2166)
7	Enable and Activate SCS 251	executeBep, XB1SLOMO03 (cmd ID = 2160)
8	Enable and Activate SCS 132	writeBep, WB00SQUEG1 (cmdId = 2890)
9	Enable and Activate SCS 133	writeBep, WB00SQUEG2 (cmdId = 2892)
10	Enable and Activate SCS 134	writeBep, WB00_16SQ (cmdId = 2895)
11	Enable and Activate SCS 136	loadTeBlock, WT00334014 (cmdId = 2883)
12	Enable and Activate SCS 159	load2dBlock, W20003D014 (cmdId = 2844)
13	Enable and Activate SCS 190	startScience (cmdId = 58)
14	If execution fails (immediate *scienceReport* with abnormal *terminationCode*), skip to step 23.	
15	Enable and Activate SCS 207	bepReadReply/Config (cmdId = 66)
16	Enable and Activate SCS 151	bepReadReply/Huffman (cmdId = 68)
17	ACIS confirms receipt of bias and data	dataTeBiasMap (cmdId = *any*)
18	ACIS confirms *fepTimestamp* increment of 0x528a0 (338080 decimal) per exposure	exposureTeFaint (cmdId = *any*)
19	collect data for $\sim$ 2.5ks	
20	On bad data, skip to step 21	
21	Enable and Activate SCS 191	stopScience (cmdId = 1539)
22	ACIS confirms normal completion of science run	
23	Enable and Activate SCS 211	readPram (cmdId = 1613)
24	ACIS confirms receipt of PRAM dump	
25	Enable and Activate SCS 217	readSram (cmdId = 1602)
26	ACIS confirms receipt of SRAM dump	
27	Change OBSID to 62892	
28	*If necessary* Enable and Activate SCS 164	WSVIDALLDN (cmdId = 1541)
29	*If necessary* Enable and Activate SCS 252	WSPOW0103F (cmdId = 2163)
30	Enable and Activate SCS 250	executeBep, XB1SLOMO02 (cmd ID = 2166)
31	Enable and Activate SCS 251	executeBep, XB1SLOMO03 (cmd ID = 2160)
32	Enable and Activate SCS 132	writeBep, WB00SQUEG1 (cmdId = 2890)
33	Enable and Activate SCS 133	writeBep, WB00SQUEG2 (cmdId = 2892)
34	Enable and Activate SCS 135	writeBep, WB00_8SQ (cmdId = 2897)
35	Enable and Activate SCS 137	loadTeBlock, WT00336014 (cmdId = 2886)
36	Enable and Activate SCS 190	startScience (cmdId = 58)

37	If execution fails (immediate *scienceReport* with abnormal *terminationCode*), skip to step 47.	
38	Enable and Activate SCS 207	bepReadReply/Config (cmdId = 66)
39	Enable and Activate SCS 151	bepReadReply/Huffman (cmdId = 68)
40	ACIS confirms receipt of bias and data	dataTeBiasMap (cmdId = *any*)
41	ACIS confirms *fepTimestamp* increment of 0x528e0 (338144 decimal) per exposure	exposureTeFaint (cmdId = *any*)
42	collect data for $\sim$ 2.5ks	
43	On bad data, skip to step 45	
44	Clear and Disable SCSs 250, 251, 132, 133, 134, 135, 136, and 137	
45	Enable and Activate SCS 191	stopScience (cmdId = 1539)
46	ACIS confirms normal completion of science run	
47	Enable and Activate SCS 211	readPram (cmdId = 1613)
48	ACIS confirms receipt of PRAM dump	
49	Enable and Activate SCS 217	readSram (cmdId = 1602)
50	ACIS confirms receipt of SRAM dump	
51	Change OBSID to 62891	
52	*If necessary* Enable and Activate SCS 164	WSVIDALLDN (cmdId = 1541)
53	*If necessary* Enable and Activate SCS 252	WSPOW0103F (cmdId = 2163)
54	Enable and Activate SCS 139	loadTeBlock,WT0032C014 (cmdId = 2866)
55	Enable and Activate SCS 190	startScience (cmdId = 58)
56	Enable and Activate SCS 207	bepReadReply/Config (cmdId = 66)
57	Enable and Activate SCS 151	bepReadReply/Huffman (cmdId = 68)
58	ACIS confirms normal science run	
59	Clear and Disable SCS 191, 164, 252, 159, 190, 211, 217, 207, 151, and 139	
60	collect data for $\sim$ 2.5ks	

Approved:

Subsystem Engineer:
TST Manager/Lead:
SOT Lead:

Flight Director:
Program Manager: