



11892 - NUV Detector Recovery After Anomalous Shutdown

Cycle: 17, Proposal Category: CAL/COS

(Availability Mode: RESTRICTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	DARK	S/C	1	06-Apr-2009 21:21:28.0	yes
02	DARK	COS/NUV S/C	1	06-Apr-2009 21:21:32.0	yes
03	DARK	COS/NUV S/C	1	06-Apr-2009 21:21:37.0	yes
04	DARK DEUTERIUM	COS/NUV S/C	1	06-Apr-2009 21:21:40.0	yes

4 Total Orbits Used

ABSTRACT

This proposal is designed to permit recovery of the NUV-MAMA detector after an anomalous shutdown. Anomalous shutdowns can occur as a result of bright object violations which trigger the Bright Scene Detection or Software Global Monitor. Anomalous shutdowns can also occur as a

result of MAMA hardware problems. The Initial MAMA turn-on consists of three tests: a signal processing electronics check, a slow high voltage ramp-up to an intermediate voltage, and a slow high voltage ramp-up to the full operating voltage. During each of the two high voltage ramp-ups, diagnostics are performed during a dark time-tag exposure. The turn-on is followed by a MAMA Fold Analysis Test. The complete sequence is contained in visits 1 through 4. This proposal is based on SMOV proposal 11355, visit 01 and visits 03-05.

OBSERVING DESCRIPTION

Recovery from Anomalous Shutdown consists of three tests (i.e., visits) which are enabled for execution by the clearance of NSSC-1 COS event flag 2:

- (1) Signal processing electronics check. This reduces amplifier thresholds to 0.28V and monitors the ORCOUNT rate. (NUV HV is off during this procedure);
- (2) Slow, intermediate high voltage ramp-up. The NUV is ramped to an MCP voltage 300V below the nominal operating value. A dark time-tag exposure is taken during this partial ramp-up. Then another time-tag dark exposure during which the event counter is cycled through W, X, Y, Z, OR, EV and VE modes;
- (3) Slow, full high voltage ramp-up. The NUV is ramped to its nominal MCP voltage. A dark time-tag exposure is taken during this full ramp-up. Then another time-tag dark exposure is obtained during which the event counter is cycled through W, X, Y, Z, OR, EV, and VE modes.

For the Recovery from Anomalous Shutdown tests to be executed, the following conditions must have been met:

For visit 01: This is either the initial NUV Turn-on or there was an anomalous NUV HV shut down.

For visit 02: A minimum of 24 hours must have elapsed since the initial shutdown prior to beginning an intermediate HV ramp-up.

The performance of MAMA microchannel plates can be monitored using a MAMA fold analysis procedure. The fold analysis provides a measurement of the distribution of charge cloud sizes incident upon the anode giving some measure of changes in the pulse height distribution of the MCP and, therefore, MCP gain. While globally illuminating the detector with a flat field the valid event (VE) rates are monitored while various combinations of row and column folds are selected during a time-tag exposure using special commanding.

The proposal nomenclature for the various anode fold configurations is:

C2 = Column 2, R2 = Row 2, C3 = Column 3, R3 = Row 3, C4 = Column 4, R4 = Row 4, C5 = Column 5, R5 = Row 5, C6 = Column 6, and R6 =

Row 6.

The fold analysis requires specific lamp and grating settings that are set for the time-tag exposure. The following steps are then executed:

Select the count rate monitor and co-add 5 samples; Repeat this for each of the count rate monitors X, Y, Z, W, VE, EV, OR;

Disable all of the selectable folds (C2, C3, C4, C5, C6, R2, R3, R4, R5, R6);

Collect 5 samples of VE with folds C2, R2 enabled, other folds disabled;

Collect 5 samples of VE with folds C2, R3 enabled, other folds disabled;

Collect 5 samples of VE with folds C3, R2 enabled, other folds disabled;

Collect 5 samples of VE with folds C2, R4 enabled, other folds disabled;

Collect 5 samples of VE with folds C3, R3 enabled, other folds disabled;

Collect 5 samples of VE with folds C4, R2 enabled, other folds disabled;

Collect 5 samples of VE with folds C3, R4 enabled, other folds disabled;

Collect 5 samples of VE with folds C4, R3 enabled, other folds disabled;

Collect 5 samples of VE with folds C3, R5 enabled, other folds disabled;

Collect 5 samples of VE with folds C4, R4 enabled, other folds disabled;

Collect 5 samples of VE with folds C5, R3 enabled, other folds disabled;

Collect 5 samples of VE with folds C4, R5 enabled, other folds disabled;

Collect 5 samples of VE with folds C5, R4 enabled, other folds disabled;

Collect 5 samples of VE with folds C4, R6 enabled, other folds disabled;

Collect 5 samples of VE with folds C5, R5 enabled, other folds disabled;

Collect 5 samples of VE with folds C6, R4 enabled, other folds disabled;

Collect 5 samples of VE with folds C5, R6 enabled, other folds disabled;

Collect 5 samples of VE with folds C6, R5 enabled, other folds disabled;

Collect 5 samples of VE with folds C6, R6 enabled, other folds disabled;

Enable all selectable folds (C2, C3, C4, C5, C6, R2, R3, R4, R5, R6);

Co-add 5 samples of EV and 5 samples of VE counts to measure any lamp drift;

Turn off the lamp;

Select the X count rate monitor and co-add 5 samples for the dark rate;

Repeat this for each of the other count rate monitors (Y, Z, W, VE, EV, and OR);

Restore the global monitor to its normal value.

Analysis of the data is performed by creating a histogram binned by the sums of the fold numbers for columns and rows:

$C2R2 = 4$ folds

$C2R3 + C3R2 = 5$ folds

$C2R4 + C3R3 + C4R2 = 6$ folds

$C3R4 + C4R3 = 7$ folds

$C3R5 + C4R4 + C5R3 = 8$ folds

$C4R5 + C5R4 = 9$ folds

$C4R6 + C5R5 + C6R4 = 10$ folds

$C5R6 + C6R5 = 11$ folds

$C6R6 = 12$ folds

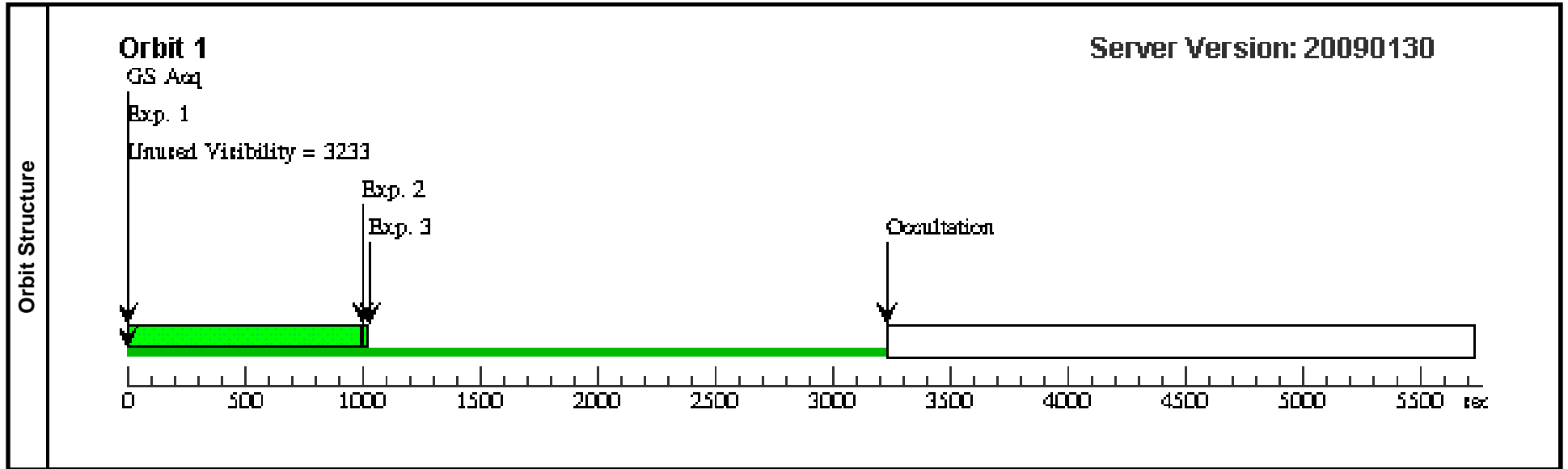
The sum of the 4 to 12 folds is equal to VE. The total number of events ≥ 4 folds is EV. The number of events greater than 12 folds is EV-VE.

Generate a plot of 4 fold/EV, 5 fold/EV through 12 fold/EV, with (EV-VE)/EV on the abscissa and with the ordinate labeled 4 fold, 5 fold..... 12 fold.

Proposal 11892 - Visit 01 - NUV Detector Recovery After Anomalous Shutdown

Tue Apr 07 01:21:43 GMT 2009

Visit	Proposal 11892, Visit 01, implementation									
	Diagnostic Status: No Diagnostics									
Exposures	Scientific Instruments: S/C									
	Special Requirements: GYRO MODE 3GOBAD; ON HOLD									
	Comments: NUV-MAMA recovery from anomalous shutdown signal processing electronics checkout procedure - Part 1. Must clear event flag 2 for the commanding to execute. Since no high voltage is involved, this visit may be scheduled within the 24 hour period following an anomalous HV shutdown. There are no exposures taken in this visit; only engineering telemetry is required. Refer to ISR STIS 98-03.									
	On Hold Comments: To be used only after an anomalous shutdown of the NUV high voltage.									
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
1	LV and Signal Processing Check	DARK	S/C, DATA, NONE			SAA CONTOUR 32; Same Alignment SPEC COM INSTR ELHDTLVN_1; QASISTATES COS SI OPERATE OPERATE; QASISTATES COS NUV HOLD HOLD		1005.0 Secs [==>]	[1]	
Comments: Special NUV LV turn on and check. Switch on LV power supply. Set nominal decode configuration. Set amplifier threshold to default (0.48V). Set software global monitor to nominal values. Collect a minimum of 30 telemetry points (OR counts). Set amplifier threshold to 0.28V. Collect a minimum of 30 telemetry points (OR Counts). Counts (W, X, Y, etc) are sampled by telemetry every 10 seconds for COS.										
2	LV Off	DARK	S/C, DATA, NONE			SAA CONTOUR 32; Same Alignment SPEC COM INSTR RLLVTHDN		30.0 Secs [==>]	[1]	
Comments: Turn NUV LV off. Use the nominal reconfiguration instruction.										
3	Set Flag 2	DARK	S/C, DATA, NONE			SAA CONTOUR 32; Same Alignment SPEC COM INSTR ELFLAG2		1.0 Secs [==>]	[1]	
Comments: Set COS event flag 2										



Proposal 11892 - Visit 02 - NUV Detector Recovery After Anomalous Shutdown

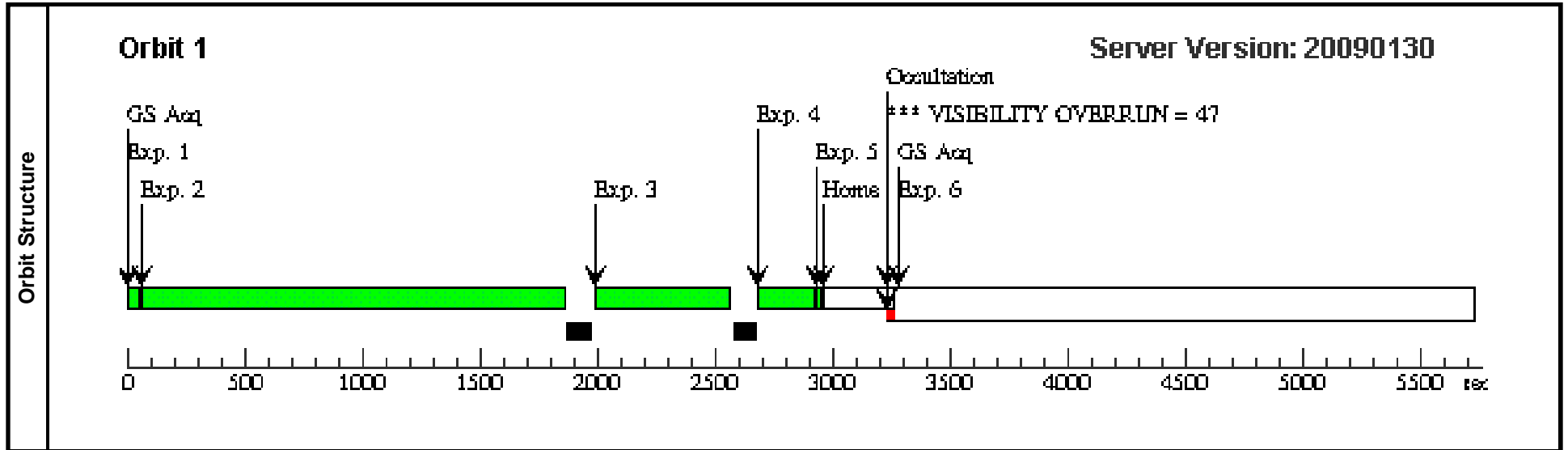
Tue Apr 07 01:21:43 GMT 2009

Visit	Proposal 11892, Visit 02, implementation Diagnostic Status: Warning Scientific Instruments: COS/NUV, S/C Special Requirements: GYRO MODE 3GOBAD; AFTER 01 BY 12 H TO 36 H; ON HOLD Comments: NUV-MAMA recovery from anomalous shutdown intermediate voltage checkout procedure - Part 2. Must clear event flag 2 for the commanding to execute. Minimum wait of 24 hours following the anomalous shutdown. Goal: 1) Ramp NUV-MAMA to intermediate MCP voltage; 2) obtain dark count telemetry. Refer to ISR STIS 98-03. On Hold Comments: To be used only after an anomalous shutdown of the NUV high voltage.																																																		
	Diagnostics (Visit 02) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU																																																		
Exposures	<table border="1"> <thead> <tr> <th>#</th> <th>Label</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>LV On</td> <td>DARK</td> <td>S/C, DATA, NONE</td> <td></td> <td></td> <td>SAA CONTOUR 32; SPEC COM INSTR ELHDTLVN_2; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV HOLD LVON</td> <td>Sequence 1-6 Non-Int</td> <td>60.0 Secs [==>]</td> <td>[1]</td> </tr> <tr> <td colspan="10"> Comments: Special NUV LV turn on. Switch on LV power supply. Set nominal decode configuration. Set amplifier threshold to default (0.48V). Set software global monitor to nominal values. </td> </tr> <tr> <td>2</td> <td>Ramp HV to -1750/-50</td> <td>DARK</td> <td>COS/NUV, TIME-TAG, DEF</td> <td>DEF</td> <td>BUFFER-TIME=2000</td> <td>SPEC COM INSTR ELHVPART2; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV LVON HVON</td> <td>Sequence 1-6 Non-Int</td> <td>1800.0 Secs [==>]</td> <td>[1]</td> </tr> <tr> <td colspan="10"> Comments: Special NUV HV turn on and slow partial HV ramp. The MCP and PC Voltage partial Ramp-ups will be performed in stages. The ramp-up within a stage is by increments of -50V. The final MCP voltage will be -1750V, 300V shy of the nominal value of -2050V. The final PC Voltage will be -50V, rather than the nominal -800V setting. Use the nominal yellow and red limits for ramping. At the end of each stage, reset the SGM to a Threshold = 100 and an Integration Period = 0.1 sec, and collect telemetry samples of OR Counts for 4 minutes. The COS rate is 1 TLM sample/10 secs; ~24 samples will be obtained. Stage 1 - MCP ramp-up (0 to -500V). Stage 2 - MCP ramp-up (-500V to -1000V). Stage 3 - MCP ramp-up (-1000V to -1500V). Stage 4 - MCP ramp-up (-1500V to -1750V). Stage 5 - PC Voltage ramp-up (+20 to -50V). </td> </tr> </tbody> </table>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	LV On	DARK	S/C, DATA, NONE			SAA CONTOUR 32; SPEC COM INSTR ELHDTLVN_2; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV HOLD LVON	Sequence 1-6 Non-Int	60.0 Secs [==>]	[1]	Comments: Special NUV LV turn on. Switch on LV power supply. Set nominal decode configuration. Set amplifier threshold to default (0.48V). Set software global monitor to nominal values.										2	Ramp HV to -1750/-50	DARK	COS/NUV, TIME-TAG, DEF	DEF	BUFFER-TIME=2000	SPEC COM INSTR ELHVPART2; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV LVON HVON	Sequence 1-6 Non-Int	1800.0 Secs [==>]	[1]	Comments: Special NUV HV turn on and slow partial HV ramp. The MCP and PC Voltage partial Ramp-ups will be performed in stages. The ramp-up within a stage is by increments of -50V. The final MCP voltage will be -1750V, 300V shy of the nominal value of -2050V. The final PC Voltage will be -50V, rather than the nominal -800V setting. Use the nominal yellow and red limits for ramping. At the end of each stage, reset the SGM to a Threshold = 100 and an Integration Period = 0.1 sec, and collect telemetry samples of OR Counts for 4 minutes. The COS rate is 1 TLM sample/10 secs; ~24 samples will be obtained. Stage 1 - MCP ramp-up (0 to -500V). Stage 2 - MCP ramp-up (-500V to -1000V). Stage 3 - MCP ramp-up (-1000V to -1500V). Stage 4 - MCP ramp-up (-1500V to -1750V). Stage 5 - PC Voltage ramp-up (+20 to -50V).									
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																																									
1	LV On	DARK	S/C, DATA, NONE			SAA CONTOUR 32; SPEC COM INSTR ELHDTLVN_2; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV HOLD LVON	Sequence 1-6 Non-Int	60.0 Secs [==>]	[1]																																										
Comments: Special NUV LV turn on. Switch on LV power supply. Set nominal decode configuration. Set amplifier threshold to default (0.48V). Set software global monitor to nominal values.																																																			
2	Ramp HV to -1750/-50	DARK	COS/NUV, TIME-TAG, DEF	DEF	BUFFER-TIME=2000	SPEC COM INSTR ELHVPART2; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV LVON HVON	Sequence 1-6 Non-Int	1800.0 Secs [==>]	[1]																																										
Comments: Special NUV HV turn on and slow partial HV ramp. The MCP and PC Voltage partial Ramp-ups will be performed in stages. The ramp-up within a stage is by increments of -50V. The final MCP voltage will be -1750V, 300V shy of the nominal value of -2050V. The final PC Voltage will be -50V, rather than the nominal -800V setting. Use the nominal yellow and red limits for ramping. At the end of each stage, reset the SGM to a Threshold = 100 and an Integration Period = 0.1 sec, and collect telemetry samples of OR Counts for 4 minutes. The COS rate is 1 TLM sample/10 secs; ~24 samples will be obtained. Stage 1 - MCP ramp-up (0 to -500V). Stage 2 - MCP ramp-up (-500V to -1000V). Stage 3 - MCP ramp-up (-1000V to -1500V). Stage 4 - MCP ramp-up (-1500V to -1750V). Stage 5 - PC Voltage ramp-up (+20 to -50V).																																																			

Proposal 11892 - Visit 02 - NUV Detector Recovery After Anomalous Shutdown

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3	Cycle SGM	DARK	COS/NUV, TIME-TAG, DEF	DEF	BUFFER-TIME=72 0	SPEC COM INSTR ELHVDARK2; NEW ALIGNMENT	Sequence 1-6 Non-In- t	570.0 Secs [==>]	[1]
<p><i>Comments: Special NUV DARK. Obtain an NUV DARK while at -1750V. During the exposure, set Software Global Monitor to an SGM Threshold = 200 and an Integration Period = 0.1 secs. Collect a minimum of 5 samples of W, X, Y, Z, OR, EV, and VE events. Because this is a COS exposure, the obset will end with a HOME Alignment. That HOME must have its COS NUV qasi_states reset via ISQL to have start_state = end_state = HOLD.</i></p>									
4	HV Off	DARK	S/C, DATA, NONE			SAA CONTOUR 32; SPEC COM INSTR ELHVTLVN_2; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV HVON LVON	Sequence 1-6 Non-In- t	250.0 Secs [==>]	[1]
<p><i>Comments: Special NUV HV turn off. Ramp down PC & MCP high voltage, and turn the HV off.</i></p>									
5	LV Off	DARK	S/C, DATA, NONE			SAA CONTOUR 32; SPEC COM INSTR RLLVTHDN; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV LVON HOLD	Sequence 1-6 Non-In- t	30.0 Secs [==>]	[1]
<p><i>Comments: Turn NUV LV off. Use the nominal reconfiguration instruction.</i></p>									
6	Set Flag 2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELFLAG2; NEW OBSET	Sequence 1-6 Non-In- t	1.0 Secs [==>]	[1]
<p><i>Comments: Set COS event flag 2. The NEW OBSET special requirement forces the HOME alignment to occur before this activity.</i></p>									

Exposures (continued)



Proposal 11892 - Visit 03 - NUV Detector Recovery After Anomalous Shutdown

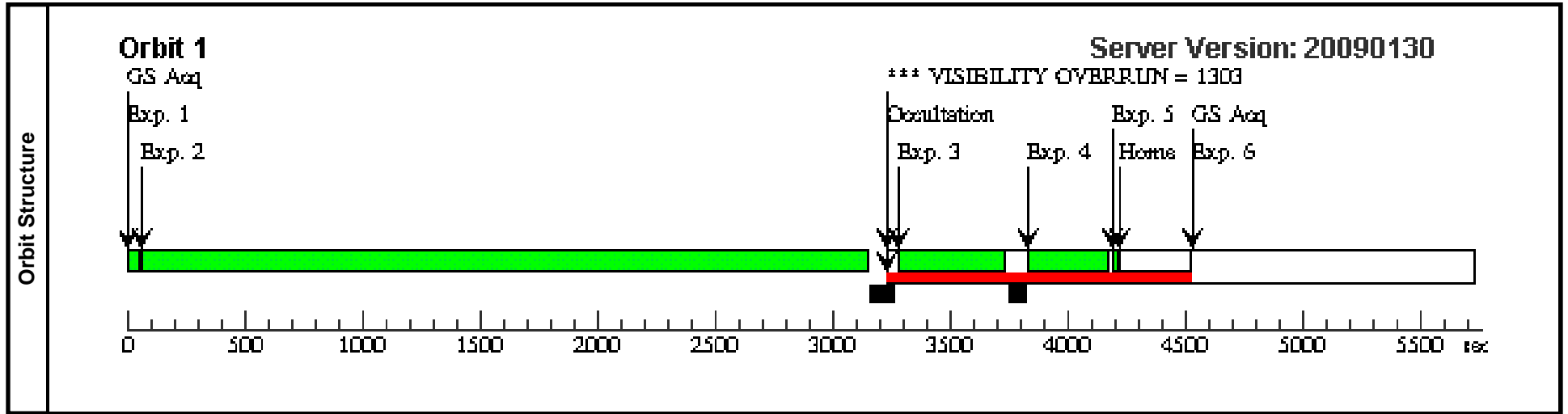
Tue Apr 07 01:21:44 GMT 2009

Visit	Proposal 11892, Visit 03, implementation Diagnostic Status: Warning Scientific Instruments: COS/NUV, S/C Special Requirements: GYRO MODE 3GOBAD; AFTER 02 BY 24 H TO 48 H; ON HOLD <i>Comments: NUV-MAMA recovery from anomalous shutdown nominal high voltage checkout procedure - Part 3. NSSC-1 COS event flag 2 must be clear for the commanding to execute.</i> <i>On Hold Comments: To be used only after an anomalous shutdown of the NUV high voltage.</i>									
	Diagnostics	(Visit 03) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU								
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	LV On	DARK	S/C, DATA, NONE			SAA CONTOUR 32; SPEC COM INSTR ELHDTLVN_3; QASISTATES COS SI OPERATE OBSE RVE; QASISTATES COS NUV HOLD LVON	Sequence 1-6 Non-In t	60.0 Secs [==>]	[1]
<i>Comments: Special NUV LV turn on. Switch on LV power supply. Set nominal decode configuration. Set amplifier threshold to default (0.48V). Set software global monitor to nominal values. Enable SDF.</i>										
2	Ramp HV to -2050/-800 (Nominal HV)	DARK	COS/NUV, TIME-TAG, DEF	DEF	BUFFER-TIME=33 00	SPEC COM INSTR ELHVPART3; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV LVON HVON	Sequence 1-6 Non-In t	3090.0 Secs [==>]	[1]	
<i>Comments: Special NUV HV turn on & slow full ramp up. The MCP and Field Voltage Ramp-ups will be performed in stages. The ramp-up within a stage is by increments of 50V. Use the nominal yellow and red limits for ramping. At the end of each stage, reset the SGM to a Threshold = 100 and an Integration Period = 0.1 sec, and collect telemetry samples of Z Counts for 4 minutes. The COS rate is 1 TLM sample/10 secs; ~24 samples will be obtained. Stage 1 - MCP ramp-up (0 to -500V) Stage 2 - MCP ramp-up (-500V to -1000V) Stage 3 - MCP ramp-up (-1000V to -1500V) Stage 4 - MCP ramp-up (-1500V to -1750V) Stage 5 - PC Voltage ramp-up (+20 to -50V) Stage 6 - MCP ramp-up (-1750V to -1850V) Stage 7 - MCP ramp-up (-1850V to -1950V) Stage 8 - Final MCP ramp-up (-1950V to -2050V) Stage 9 - Final PC Voltage ramp-up (-50V to -800V)</i>										

Proposal 11892 - Visit 03 - NUV Detector Recovery After Anomalous Shutdown

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3	Cycle SGM	DARK	COS/NUV, TIME-TAG, DEF	DEF	BUFFER-TIME=72 0	SPEC COM INSTR ELHVDARK3; NEW ALIGNMENT	Sequence 1-6 Non-In- t	450.0 Secs [==>]	[1]
<p><i>Comments: Special NUV DARK. Obtain an NUV DARK while ramped up. During the exposure, set Software Global Monitor to an SGM Threshold = 200 and an Integration Period = 0.1 secs. Collect a minimum of 5 samples of W, X, Y, Z, OR, EV, and VE events. Because this is a COS exposure, the obset will end with a HOME Alignment. That HOME must have its COS NUV qasi_states reset via ISQL to have start_state = end_state = HOLD.</i></p>									
4	HV Off	DARK	S/C, DATA, NONE			SAA CONTOUR 32; SPEC COM INSTR ELHVTLVN_3; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV HVON LVON	Sequence 1-6 Non-In- t	355.0 Secs [==>]	[1]
<p><i>Comments: Special NUV HV turn off. Ramp down PC & MCP high voltage, and turn the HV off.</i></p>									
5	LV Off	DARK	S/C, DATA, NONE			SAA CONTOUR 32; SPEC COM INSTR RLLVTHDN; NEW ALIGNMENT ; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS NUV LVON HOLD	Sequence 1-6 Non-In- t	30.0 Secs [==>]	[1]
<p><i>Comments: Turn NUV LV off. Use the nominal reconfiguration instruction.</i></p>									
6	Set Flag 2	DARK	S/C, DATA, NONE			SPEC COM INSTR ELFLAG2; NEW OBSET	Sequence 1-6 Non-In- t	1.0 Secs [==>]	[1]
<p><i>Comments: Set COS event flag 2. The NEW OBSET special requirement forces the HOME alignment to occur before this activity.</i></p>									

Exposures (continued)



Proposal 11892 - Visit 04 - NUV Detector Recovery After Anomalous Shutdown

Tue Apr 07 01:21:45 GMT 2009

Visit	<p>Proposal 11892, Visit 04, implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: COS/NUV, S/C</p> <p>Special Requirements: GYRO MODE 3GOBAD; AFTER 03 BY 24 H TO 48 H; ON HOLD</p> <p><i>Comments: NUV-MAMA recovery from anomalous shutdown Fold Distribution procedure - Part 4.</i></p> <p><i>On Hold Comments: To be used only after an anomalous shutdown of the NUV high voltage.</i></p>									
	<p>(Visit 04) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU</p>									
Diagnosics										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	Fold Test Setup	DARK	S/C, DATA, NONE			SAA CONTOUR 32; Same Alignment SPEC COM INSTR ELFOLDSET		20.0 Secs [==>]	[1]
<p><i>Comments: Special setup for NUV Fold Analysis Test.</i></p> <p><i>Set the Software Global Monitor to 150,000 ORCOUNTS per sec (sufficient to allow for spike at lamp turn-on).</i></p>										

Proposal 11892 - Visit 04 - NUV Detector Recovery After Anomalous Shutdown

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
2	Fold Test	DEUTERIUM	COS/NUV, TIME-TAG, FCA	G185M 1850 A	CURRENT=MEDIU M; BUFFER-TIME=27 00	SPEC COM INSTR ELFOLDTST; QESIPARM TARG TYPE FOLD	Same Alignment	2300.0 Secs [==>]	[1]
Exposures (continued)	<p><i>Comments: Special NUV Fold Analysis Test.</i> <i>The FAT will be conducted during a deuterium lamp time-tag exposure. The exposure specification will ensure that the FCA aperture will be used, that the OSMs will be positioned at NCM1FLAT and G185M/1850, and that the lamp current is set to MEDIUM. Qesiparm TARGTYPE must be specified as FOLD so that the instructions will command the proper FAT lamp. Note that the FAT commanding will turn the lamp off during the exposure, and the exposure commanding will issue a redundant lamp off command after the exposure.</i></p> <p><i>Set Software Global monitor (SGM Threshold = 100000, SGM Integration period = 1 sec.)</i> <i>(a) Collect counter samples during flat field illumination. Collect 5 samples X events, Collect 5 samples Y events, Collect 5 samples Z events, Collect 5 samples W events, Collect 5 samples VE events, Collect 5 samples EV events, Collect 5 samples OR events. The TLM sample rate for COS is one sample / 10 seconds.</i> <i>(b) Disable MAMA Folds: C2, C3, C4, C5, C6, R2, R3, R4, R5, R6</i> <i>(c) Conduct fold analysis. Collect 5 samples VE for following 19 combinations of MAMA folds:</i> <i>(1) Enabled: C2, R2; Disabled: C3, C4, C5, C6, R3, R4, R5, R6</i> <i>(2) Enabled: C2, R3; Disabled: C3, C4, C5, C6, R2, R4, R5, R6</i> <i>(3) Enabled: C3, R2; Disabled: C2, C4, C5, C6, R3, R4, R5, R6</i> <i>(4) Enabled: C2, R4; Disabled: C3, C4, C5, C6, R2, R3, R5, R6</i> <i>(5) Enabled: C3, R3; Disabled: C2, C4, C5, C6, R2, R4, R5, R6</i> <i>(6) Enabled: C4, R2; Disabled: C2, C3, C5, C6, R3, R4, R5, R6</i> <i>(7) Enabled: C3, R4; Disabled: C2, C4, C5, C6, R2, R3, R5, R6</i> <i>(8) Enabled: C4, R3; Disabled: C2, C3, C5, C6, R2, R4, R5, R6</i> <i>(9) Enabled: C3, R5; Disabled: C2, C4, C5, C6, R2, R3, R4, R6</i> <i>(10) Enabled: C4, R4; Disabled: C2, C3, C5, C6, R2, R3, R5, R6</i> <i>(11) Enabled: C5, R3; Disabled: C2, C3, C4, C6, R2, R4, R5, R6</i> <i>(12) Enabled: C4, R5; Disabled: C2, C3, C5, C6, R2, R3, R4, R6</i> <i>(13) Enabled: C5, R4; Disabled: C2, C3, C4, C6, R2, R3, R5, R6</i> <i>(14) Enabled: C4, R6; Disabled: C2, C3, C5, C6, R2, R3, R4, R5</i> <i>(15) Enabled: C5, R5; Disabled: C2, C3, C4, C6, R2, R3, R4, R6</i> <i>(16) Enabled: C6, R4; Disabled: C2, C3, C4, C5, R2, R3, R5, R6</i> <i>(17) Enabled: C5, R6; Disabled: C2, C3, C4, C6, R2, R3, R4, R5</i> <i>(18) Enabled: C6, R5; Disabled: C2, C3, C4, C5, R2, R3, R4, R6</i> <i>(19) Enabled: C6, R6; Disabled: C2, C3, C4, C5, R2, R3, R4, R5</i> <i>(d) Enable MAMA folds C2, C3, C4, C5, C6, R2, R3, R4, R5, R6</i> <i>(e) Check lamp stability by checking EV and VE: Collect 5 samples events (EV). Collect 5 samples Valid Events (VE)</i> <i>(f) Turn off the FAT lamp</i> <i>(g) Collect event counter data for detector dark count rate. Collect 5 samples X dark events. Collect 5 samples Y dark events. Collect 5 samples Z dark events. Collect 5 samples W dark events. Collect 5 samples VE dark events. Collect 5 samples EV dark events. Collect 5 samples OR dark events</i> <i>(h) At completion of procedure reset SGM to nominal operating level</i></p>								

