

13532 - COS FUV Recovery after Anomalous Shutdown

Cycle: 21, Proposal Category: CAL/COS (Availability Mode: RESTRICTED)

INVESTIGATORS

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VISITS

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
01	DARK	S/C	1	01-Oct-2013 21:26:55.0	yes
02	DARK	S/C	1	01-Oct-2013 21:26:59.0	yes
03	DARK	COS/FUV S/C	1	01-Oct-2013 21:27:03.0	yes
04	DARK	S/C	1	01-Oct-2013 21:27:07.0	yes
05	DARK	S/C	1	01-Oct-2013 21:27:09.0	yes
06	DARK	COS/FUV S/C	1	01-Oct-2013 21:27:12.0	yes
07	DARK	S/C	1	01-Oct-2013 21:27:15.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
08	DARK WAVE	COS/FUV S/C	1	01-Oct-2013 21:27:20.0	yes
09	DARK	S/C	1	01-Oct-2013 21:27:23.0	yes
10	DARK WAVE	COS/FUV S/C	1	01-Oct-2013 21:27:27.0	yes
11	DARK	S/C	1	01-Oct-2013 21:27:31.0	yes
12	DARK WAVE	COS/FUV S/C	1	01-Oct-2013 21:27:35.0	yes
13	DARK	S/C	1	01-Oct-2013 21:27:38.0	yes
14	DARK WAVE	COS/FUV S/C	1	01-Oct-2013 21:27:42.0	yes
15	DARK	S/C	1	01-Oct-2013 21:27:45.0	yes
16	DARK WAVE	COS/FUV S/C	1	01-Oct-2013 21:27:49.0	yes
17	DARK	S/C	1	01-Oct-2013 21:27:52.0	yes

17 Total Orbits Used

ABSTRACT

This proposal consists of the steps for turning on and ramping up the COS FUV high voltage in a safe and conservative manner after a HV anomalous shutdown by executing a "reduced set" of visits from Cycle 19 Proposal 12810. The nature of the shutdown, i.e., over-light, HV current transient ("crackle"), ion feedback (induced by a high energy particle), or field emission (possibly caused by dust or other particulate on the QE grid or other close-by structure or hardware), and the value of the commanded HV at the time of the shutdown will determine what visits are executed. Because of gain sag, commanded HV settings updates may be required.

First, prior to execution of this proposal or selected visits from this proposal, all preliminary steps should be exercised to gather the necessary diagnostic data, e.g., science data evaluation (if a science exposure was in progress and the science data is available), memory dumps (DCE, EXEC RAM, and possibly the CS BUFFER), engineering telemetry, or other information that might provide insight as to the nature of the shutdown and

Proposal 13532 (STScI Edit Number: 1, Created: Tuesday, October 1, 2013 8:27:58 PM EST) - Overview estimated count rate.

The complete step-by-step procedure is detailed in the Observing Description, but in summary, the following is done:

Day 01 activities, visits 01-07, contain both QE grid off and on HV ramping to HVLow (100/100) with diagnostics (DCE dumps) and darks to exclude QE grid involvement in the shutdown. Subsequent to day 01, all HV ramping will be with the QE grid on with the same diagnostics and exposures. All days end with the setting of COS event flag 3 to prevent any FUV HV commanding.

Time is allotted for cognizant detector and COS instrument scientist and engineers to examine data dumps, science exposures, and engineering telemetry. If all is well, the go-ahead will be given to clear flag 3 for the next day's visits.

This proposal is modeled after the Cycle 20 Proposal 13129.

OBSERVING DESCRIPTION

This proposal consists of necessary steps for turning on and ramping up the COS FUV high voltage in a conservative manner after an anomalous shutdown. It is intended to be used for the on-orbit turn-on of the detector after such a shutdown.

Prior to execution of this proposal or selected visits from this proposal, all preliminary steps to collect diagnostic data should be exercised.

- 1. Gather the needed data
 - Do DCE dump as soon as possible
- 2. Circular buffer with 10 s of events and histograms of currents and voltages
 - Dump EXEC RAM for CVT (Current Value Table) telemetry and error logs
 - Examine exposure (if any) occurring during the anomaly
- 3. If instrument not suspended, normal readout of exposure in CS BUFFER should occur
 - CS BUFFER memory dump as may be appropriate
 - Examine engineering telemetry (including snapshots)
- 4. If event is determined to be similar to a previous event that did not damage the detector, and there does not appear to be evidence for more extended damage, we may decide on an accelerated recovery, e.g.,

- Will first go to HVLOW both without and then with the QE grid on
- If HVLOW data look normal, will consider proceeding directly to HVNOM and QE grid on
- Under some circumstances (i.e., a well understood event with essentially no risk of damage), we may consider returning directly to operations without additional testing
- 5. If event shows new or poorly understood behavior, will consult with appropriate experts prior to deciding which visits in the anomalous recovery proposal are required.
- 6. Primary criteria for deciding if event is the "same" as the 30 April event will be the temporal and spatial structure of the counts and gain
 - Sudden drop in gain followed by extended field emission
 - Primary emission localized to regions previously seen to have slightly enhanced dark rate
 - May have less information than before if shutdown occurs outside a time-tag exposure
- 7. Event will also be compared to FUSE like "crackles" that produced current transients
- 8. Shutdowns due to external or internal lamp over-light will be evaluated based on estimated level of violation to decide if damage is a concern

The sequence day, visits numbers, exposures, and rough "after by" times (end to start) are listed. Number listed in parentheses, e.g., (100/100), or 154/151 are the HV command counts for Segment A and B, respectively.

Throughout the proposal, different "after by" times, sequence containers, and new alignments are used to optimize flow, schedulability, telemetry and science data analyses, and the clearing of flag 3. When "after by" times are listed as 0.0 to 1.0 hr., this means that this step should be scheduled and executed as soon as possible after the previous visit. If scheduling determines that a longer time is required for the sequence to schedule properly, then scheduling has the right to adjust this time as they deem appropriate. The proposal is designed such that the selected visits and exposures MUST be executed in order.

Additionally, all visits are compliant with CARD 3.4.12.8 - COS FUV Mandatory Dwell Time at HVLow (1 hour dwell at HVLow before ramping to a more negative voltage) and CARD 3.4.12.9 -- COS FUV High Voltage QE Grid Operation (HV must be less negative or equal to the HVLow to switch grid on or off).

All dark exposures will be 3600 sec. with STIMS set to 30. All wave exposures will be 60 sec. with STIMs set to 2000.

V01 Uninhibit the DCE - Flag 3 must be clear to execute.

- 1. FUV Inhibit to Boot
- 2. DCE RAM Dump to capture the cause of the shutdown
- 3. FUV Boot to Operate

V02 QE off - Turn HV on - After Visit 01 by 0.0 to 1.0hr

- 1. QE off Turn HV on (0/0 do not ramp)
- 2. DCE RAM dump

V03 QE off - Ramp to HVLow - After V02 by 0.0 to 1.0hr

- 1. Ramp to HVLow (100/100)
- 2. DCE RAM dump
- 3. Dark exposure

V04 Return to Operate - After V03 by 0.0 to 1.0hr

- 1. Return to Operate (HV off)
- 2. DCE RAM dump

V05 QE on - Turn HV on - After V04 by 0.0 to 1.0hr

- 1. QE on Turn HV on (0/0 do not ramp)
- 2. DCE RAM dump

V06 QE on - Ramp to HVLow (100/100) - After V05 by 0.0 to 1.0hr

- 1. Ramp to HVLow (100/100)
- 2. DCE RAM Dump
- 3. Dark exposure

V07 Return to Operate - After V06 by 0.0 to 1.0hr

- 1. Return to Operate (HV off)
- 2. DCE RAM dump
- 3. Set flag 3

Day 2

V08 QE on - Ramp to 154/151 - After V01 by 1D to 2D for analysis. Flag 3 must be clear to execute.

Qasi_States will auto-schedule the normal Operate to HVLow transition

- 1. Install memory monitors
- 2. Ramp HV to 154/151
- 3. DCE RAM dump
- 4. Dark exposure
- 5. Wave exposure

V09 Return to Operate - After V08 by 0.0 to 1.0hr

- 1. Return to HVLow (100/100)
- 2. DCE RAM dump
- 3. Set flag 3

Day 3

V10 QE on - Ramp to 160/157 - After V08 by 1D to 2D for analysis. Flag 3 must be clear to execute.

Qasi_States will auto-schedule the normal Operate to HVLow transition

- 1. Ramp HV to 160/157
- 2. DCE RAM dump
- 3. Dark exposure
- 4. Wave exposure

V11 Return to Operate - After V10 by 0.0 to 1.0hr

- 1. Return to HVLow
- 2. DCE RAM dump
- 3. Set flag 3

Day 4

V12 QE on - Ramp to 167/163 - After V10 by 1D to 2D for analysis. Flag 3 must be clear to execute.

Qasi_States will auto-schedule the normal Operate to HVLow transition

- 1. Ramp to HV to 167/163
- 2. DCE RAM dump
- 3. Dark exposure
- 4. Wave exposure

V13 Return to Operate - After by V12 by 0.0 to 1.0hr

- 1. Return to HVLow (100/100)
- 2. DCE RAM dump
- 3. Set flag 3

Day 5

V14 QE on - Ramp to 172/169 - After V12 by 1D to 2D for analysis. Flag 3 must be clear to execute.

Qasi_States will auto-schedule the normal Operate to HVLow transition

- 1. Ramp to HV to 172/169
- 2. DCE RAM dump
- 3. Dark exposure
- 4. Wave exposure

V15 Return to Operate - After V14 by 0.0 to 1.0hr

- 1. Return to HVLow (100/100)
- 2. DCE RAM dump
- 3. Set flag 3

Day 06

V16 QE on - Ramp to HVNom (178/175) - After V14 by 1D to 2D for analysis. Flag 3 must be clear to execute.

Qasi_States will auto-schedule the normal Operate to HVLow transition

- 1. Ramp to HV to HVNom (178/175)
- 2. DCE RAM dump
- 3. Dark exposure
- 4. Wave exposure

V17 Return to HVOperate -- After V26 by 1.5hr to 2.1

- 1. Return to HVLow (100/100)
- 2. DCE RAM dump
- 3. Set flag 3

Day 07

Clear flag 3 (Real-time) - After V16 1D for analysis. Flag 3 must be clear to continue science operations.

REAL TIME JUSTIFICATION

Real-time commanding is required to clear NSSC-1 COS event flag 3 prior to visit 01 and to go ahead with the selected visits. Flag 3 must also be cleared to go ahead with science observations after the last selected visit.

ADDITIONAL COMMENTS

This is a recovery from a HV anomalous shutdown. No regular or calibration FUV science exposures are allowed during recovery.

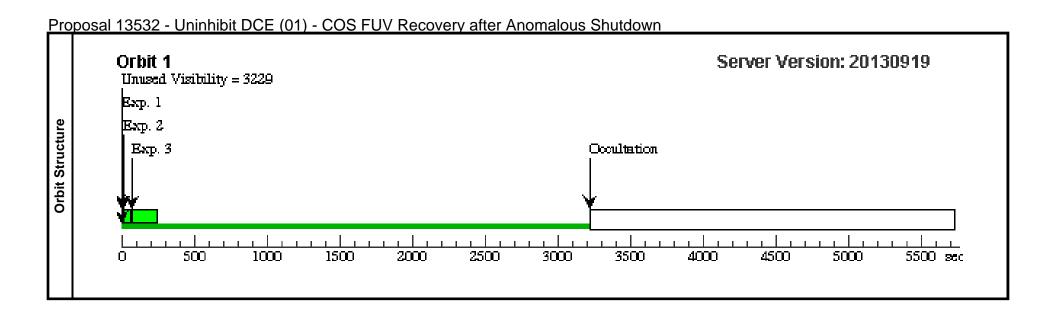
This is not a requirement but it is desirable to have real-time engineering telemetry (MA return) during the execution of this proposal.

A contingency Operations Request to place to command the FUV detector into its Inhibit mode must be in place in case a significant anomaly occurs.

ISQL is required to Id S/C exposures as COS, to set the SI interleave flag properly, to adjust SI states on DUMP and HOME alignments, and to model readouts for the DCE dump exposures. See visits/exposures for detail.

This proposal requires Special Commanding.

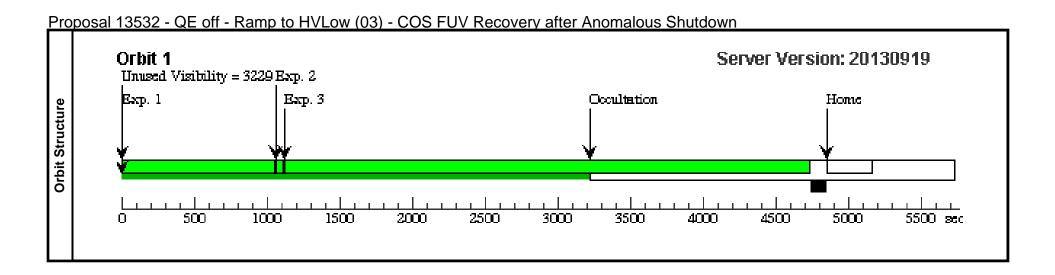
<u>Pro</u>	posal 13	<u> 532 - Uninh</u>	<u>nibit DCE (01) - COS FUV</u>	Recovery after	<u>er Anomalous</u>	Shutdown			
	Proposal 135	32, Uninhibit DC	E (01), implementation					Wed Oct 02 01:27:59	GMT 2013
	Diagnostic S	tatus: No Diagnos	stics						
	Scientific Ins	truments: S/C							
	Special Requ	irements: ON HOL	LD ; PARALLEL						
Visit	Comments: U	Ininhibit the DCE							
5	This visit uni	nhibits the DCE (se	ets dce_FUVInhibitMode == FALSE and d	loes other CS cleanup.	thus ensuring the DCF	E is in its nominal Boot sto	ate), takes diagnostics (DCE RAM dump), and transitions the	FUV
			Special commanding is used to uninhibit th						
	Prior to the b	peginning of this vis	sit, Flag 3 must be cleared by the ground v	ia real-time commandi	ng. This can be done a	s soon as the anomalous .	HV shutdown is unders	tood an the go-ahead is given to proce	eed with the
	recovery.	0 0 7						0 1	
	On Hold Con		only after an anomalous shutdown of the	FUV high voltage.					
	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1 FUV In to Boot	hibit DARK	S/C, DATA, NONE			SPEC COM INSTR ELRECOVERF;	Sequence 1-3 Non-In t in Uninhibit DCE (10 Secs (10 Secs)	
	10 1000					QASISTATES COS	01)	[==>]	
						SI OBSERVE OBSE			
						RVE;			[1]
						QASISTATES COS FUV HVLOW OPE			
						RATE			
	Comments: U	Inhibit the DCE for	r commanding by setting dce_FUVInhibitM	fode == FALSE in the	CS FSW. Several othe	r houskeeping tasks are a	lso cleaned up.		
	It is assumed	that this will be the	e first FUV activity on an SMS and that the	CS is in Operate state	. Therefore, the startin	ng FUV state is set to HVI	LOW, which is the nomi	inal SMS boundary state.	
	COI . 400 00	COS (si used and s	: :	•				•	
	~ ~	AM DARK	S/C, DATA, NONE			SPEC COM INSTR	Sequence 1-3 Non-In	60.0 \$225 (60.\$225)	1
	dump	AM DAKK	S/C, DATA, NONE			ELCOPYDCE;	t in Uninhibit DCE ([==>]	
						NEW ALIGNMENT	01)		
						;			
ŝ						QASISTATES COS SI OBSERVE OBSE			[1]
Ĭ						RVE;			1-1
Exposures						QASISTATES COS			
х						FUV OPERATE OP ERATE			
ш	Comments: C	Copy and dump DC	E RAM.						'
	From Iason	McPhata (Rarkalay	FUV detector expert, who defined the FUV	Vinitial turn on proces	lura):				
	"[I'm after]	the procedure to ge	et a memory dump of the FUV HV and AUX	X power current monito	ors (HVIA, HVIB, AUX	I). Each of these has a 10	000 (possibly 1024) san	nple buffer that monitors the current a	ıt 1ms samp
	ling (looping	through, overwriti	ng the data that is $ec{I}$ second old), and a cur	nulative histogram of t	he current values (this	would be a buffer of 256	values for each monito	r)." This information is in a DCE RAM	A dump.
	SQL: setup re	eadout entry for the	e DCE dump (qalignment, qexposure, qrea	dout), tag as COS (si_i	used and si_intrlv)			<u>, </u>	
		oot t DARK	S/C, DATA, NONE			SPEC COM INSTR	Sequence 1-3 Non-In		
	o Opera	ite				RLBTTOPF; NEW ALIGNMENT	t in Uninhibit DCE ([==>]	
						NEW ALIGNMENT;	,		
						QASISTATES COS			
						SI OBSERVE OBSE RVE;			[1]
						QASISTATES COS			
						FUV OPERATE OP			
						ERATE			
	Comments: T	ransition the DCE	from Boot to Operate. Use standard recon						
	SQL: tag as	COS (si used and s	i intrlv)						



Pro	posal 1353	32 - QE off -	Turn HV on (02) - COS	S FUV Recove	ery after Anon	nalous Shutdown			
	Proposal 13532,	QE off - Turn HV	on (02), implementation					Wed Oct 02 01:28:01	GMT 2013
	Diagnostic Statu	ıs: No Diagnostics							
洪	Scientific Instrum	nents: S/C							
Visit	Special Requiren	nents: AFTER 01 I	BY 0.1 H TO 1.5 H; PARALLEL						
	Comments: QE g	grid off, Turn-on H	7						
	Special command	ding will be used to	execute the FUV Operate to HV On (0/0 or approximately ~	-2500V) reconfigurati	on and will stop there. Diagnostics ar	re taken (DCE	RAM dumps) after each transition.	
	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs. Groups	Е	xp. Time (Total)/[Actual Dur.]	Orbit
	1 QE off - Tu		S/C, DATA, NONE			SAA CONTOUR 31; Sequence		0 Secs (50 Secs)	
	n HV on (0 0)	/				SPEC COM INSTR t in QE off ELOPTNQF; t in QE off V on (02)	f - Turn H	==>]	
						QASISTATES COS SI OBSERVE OBSE RVE;			[1]
						QASISTATES COS FUV OPERATE HV LOW			
Exposures	Comments: Turn	on the FUV HV wi	thout the QE grid. Do not ramp up.						
ns	2 DCE RAM	DARK	S/C, DATA, NONE			SAA CONTOUR 31; Sequence	1-2 Non-In 60	0.0 Secs (60 Secs)	
[8	dump					SPEC COM INSTR t in QE off V on (02)	f - Turn H	==>J	
Ш						ELCOPYDCE; V on (02) NEW ALIGNMENT			
						new ALIGNMENT ;			
						QASISTATES COS SI OBSERVE OBSE RVE;			[1]
						QASISTATES COS FUV HVLOW HVL OW			
	Comments: DCE	RAM copy and du	mp. See Visit 1, Exposure 2 for a comp	lete description of the	dump.				
			EE dump (qalignment, qexposure, qrea		_				
	SQL. Semp reduce	out chiry for the De	эд иштр (динултет, декровите, дтей	<i>aoni)</i> , <i>ia</i> , <i>a</i> , <i>cos</i> (<i>si_i</i>	usca ana si_miiv)				
	Orb Exp					Ser	ver Ver	sion: 20130919	
	l 1 -	sed Visibility	= 3229						
l Le		-				Occultation			
Structure		p. 2							
it St									
Orb	₩					<u> </u>			
		<u> </u>	1000 1500	2000 250	0 3000	3500 4000	4500	5000 5500 se	- :c
			•						

Dr	one	neal 1353	22 - OE off	- Ramp to HVLow (03) -	COS FIIV Re	ecovery after Ar	nomalous Shu	tdown		
H	_			to HVLow (03), implementation	JUST UV IN	COVERY AREA AR	IUIIIaiuus Jiiu	laowii	Wed Oct 02 01:28:02	GMT 2013
		iagnostic Statu		10 II v Low (00), imprementation					# Cd Oct 02 01.20.02	OWII 2015
ي: ا		8	nents: S/C, COS/	FUV						
Visit				2 BY 0.1 H TO 1.5 H; PARALLEL						
	1 ^	•		ntinue with the FUV ramp-up with the QE	off to HVLow value ((100/100).				
			ŭ.	ed and may be deleted via SQL.		•				
s				Warning (Orbit Planner): MAXIMUM DU	IRATION EXCEEDE	ED FOR INTERNAL OR	FARTH CALIB SII			
Diagnostics		es on rump e	01112011 (03))							
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Ramp to H		S/C, DATA, NONE			SAA CONTOUR 31;		1060 Secs (1060 Secs)	
		Low (100/1 0)	0				SPEC COM INSTR ELHOTHLF;	t in QE off - Ramp to HVLow (03)	[==>]	
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]
							QASISTATES COS FUV HVLOW HVL OW			
	$C \epsilon$	omments: Ramp	the FUV HV to	$HVLow$. The commanding assumes the H^{\prime}	V is already on.					1
۱,	2	DCE RAM	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	60.0 Secs (60 Secs)	
Exposures		dump					SPEC COM INSTR ELCOPYDCE;	t in QE off - Ramp to HVLow (03)	[==>]	
۱ő							NEW ALIGNMENT			
Ĭ							QASISTATES COS SI OBSERVE OBSE RVE;			[1]
							QASISTATES COS FUV HVLOW HVL OW			
	Ca	omments: DCE	RAM copy and a	lump. See Visit 1, Exposure 2 for a comple	te description of the α	dump.				
	SC	OL: setup reado	out entry for the I	OCE dump (qalignment, qexposure, qread	out) tag as COS (si 1	used and si-intrly)				
	3	Dark	DARK	COS/FUV, TIME-TAG, DEF	DEF	BUFFER-TIME=36	NEW ALIGNMENT	Sequence 1-3 Non-In	3600.0 Secs (3600 Secs)	
	١			113, 3H		00;	;	t in QE off - Ramp to	[==>1	
						STIM-RATE=30	QASISTATES COS FUV HVLOW HVL OW	HVLow (03)		[1]

OW

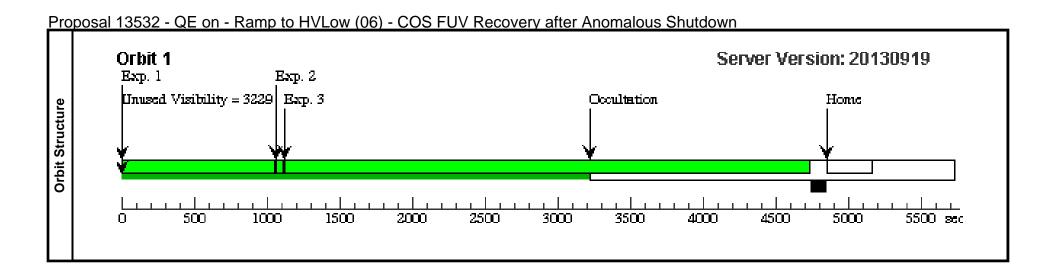


<u>Pr</u>	oposal 135	32 - Return	to Operate (04) - COS F	UV Recovery	<u> after Anoma</u>	lous Shutdown			
	Proposal 1353	2, Return to Opera	te (04), implementation					Wed Oct 02 01:28:03	GMT 2013
ı	_	tus: No Diagnostics	S						
Visit	Scientific Instr								
	-		BY 1.4 H TO 3.5 H; PARALLEL						
	Comments: Res	turn to Operate							
	Return to Oper	ate, and dump DCE	memory.						
ı	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
		O DARK	S/C, DATA, NONE				Sequence 1-2 Non-In		
	perate (H off)	V				SPEC COM INSTR RLHLTOPF;	t in Return to Operat e (04)	[==>]	
						QASISTATES COS SI OBSERVE OBSE RVE;			[1]
						QASISTATES COS FUV HVLOW OPE RATE			
es	Comments: Tu	rn off the FUV high v	voltage						
Ιŝ		M DARK	S/C, DATA, NONE			SAA CONTOUR 31:	Sequence 1-2 Non-In	60.0 Secs (60 Secs)	
Exposures	dump					SPEC COM INSTR	t in Return to Operat e (04)	[==>]	
Ιŭ						ELCOPYDCE;	` '		
						NEW ALIGNMENT ;			
						QASISTATES COS SI OBSERVE OBSE RVE;			[1]
						QASISTATES COS FUV OPERATE OP ERATE			
	Comments: DC	EE RAM copy and du	mp. See Visit 1, Exposure 2 for a comp	lete description of the d	dump.				1
			CE dump (galignment, gexposure, grea		_				
	SQL. Scrup rea	aou em y jor me De	од штр (ушутки, усхрозите, утей	1011), 14 <u>1</u> 45 COS (51_1	isca ana si_iniriv				
		b it 1 used Visibility	· = 3229				Server Vo	ersion: 20130919	
٦	Ex	p. 1							
בַּׁן	E	xp. 2				Occultation			
Structure		-							
Orbit	🖔					<u> </u>			
	_ 	500	1000 1500		0 3000	3500 4	000 4500	5000 5500 æ	- :c

Proposal 13532 - QE on - Turn HV on (05) - COS FUV Recovery after Anomalous Shutdown Proposal 13532, QE on - Turn HV on (05), implementation Wed Oct 02 01:28:03 GMT 2013 Diagnostic Status: No Diagnostics Scientific Instruments: S/C Special Requirements: AFTER 04 BY 0.1 H TO 1.5 H; PARALLEL Comments: QE grid on, HV on Special commanding will be used to execute the FUV Operate to HV On (0/0 or approximately ~ -2500V) reconfiguration and will stop there. Label Target Config, Mode, Aperture Spectral Els. Opt. Params. Special Reqs. Groups Exp. Time (Total)/[Actual Dur.] Orbit OE on - Tur DARK S/C, DATA, NONE SAA CONTOUR 31; Sequence 1-2 Non-In 50 Secs (50 Secs) SPEC COM INSTR t in QE on - Turn HV = -1n HV on (0/ on (05) ELOPTHOF; **OASISTATES COS** SI OBSERVE OBSE [1] RVE; **QASISTATES COS FUV OPERATE HV** LOW Exposures Comments: Turn on the FUV HV, including the QE grid. Do not ramp up. SAA CONTOUR 31; Sequence 1-2 Non-In 60.0 Secs (60 Secs) DCE RAM DARK S/C, DATA, NONE SPEC COM INSTR t in QE on - Turn HV dump I = = > 1ELCOPYDCE: NEW ALIGNMENT OASISTATES COS [1] SI OBSERVE OBSE RVE; **QASISTATES COS FUV HVLOW HVL** OW Comments: DCE RAM copy and dump. See Visit 1, Exposure 2 for a complete description of the dump. SQL: setup readout entry for the DCE dump (qalignment, qexposure, qreadout), tag as COS (si_used and si_intrly) Server Version: 20130919 Orbit 1 Unused Visibility = 3229 **Exp.** 1 Orbit Structure Occultation Exp. 2 500 5500 sec 1000 1500 2000 2500 3000 3500 4000 4500 5000

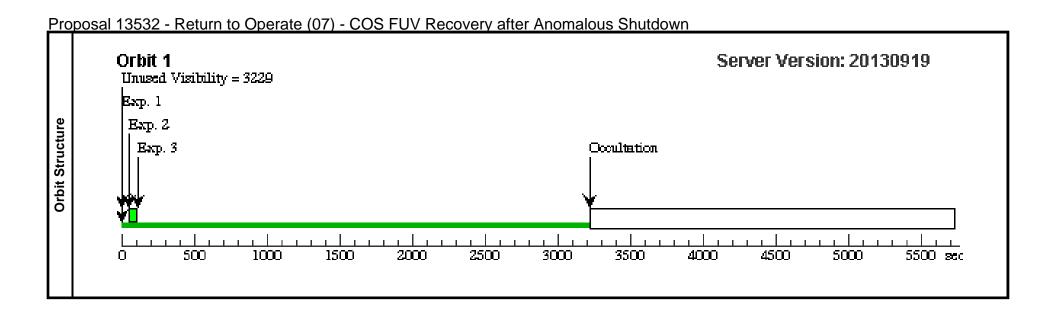
Р	ror	oosal 1353	2 - QF on	- Ramp to HVLow (06) - C	:OS FUV Re	ecovery after Ar	nomalous Shu	tdown		
Ė	_			o HVLow (06), implementation	<u>70010110</u>	COVCIY GILOI 7 II	iomaioao ema	Idowii	Wed Oct 02 01:28:04	GMT 2013
ı		Diagnostic Status	-	0 11 (20 ((0),p					., 56 55, 52 52.25.5	01111 2011
1.		Scientific Instrum	_	FUV						
4ioiX	2 5			BY 0.1 H TO 1.5 H; PARALLEL						
				the FUV high voltage up to HVLow.						
			_	ed and may be deleted via SOL.						
H	_			varning (Orbit Planner): MAXIMUM DUR	ATION EXCEEDE	D EOR INTERNAL OR	EADTH CALIB SII			
ونئومة	Diagnostics	QE on - Namp to	IIVLOW (00)) H	anning (Oloit Flanner). WAZEWEEN DOK	AHON LACELOS	D FOR INTERINAL OR	EARTH CALID SC			
	#.	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
ı	1	QE on - Ra		S/C, DATA, NONE				Sequence 1-3 Non-In	1060 Secs (1060 Secs)	
		mp to HVLo w (100/100)					SPEC COM INSTR RLOPTHLF;	t in QE on - Ramp to HVLow (06)	[==>]	
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]
							QASISTATES COS FUV OPERATE HV LOW			
	2	DCE RAM	DARK	S/C, DATA, NONE				Sequence 1-3 Non-In	60.0 Secs (60 Secs)	
	LAposales	dump					SPEC COM INSTR ELCOPYDCE;	t in QE on - Ramp to HVLow (06)	[==>]	
3	<u> </u>						NEW ALIGNMENT			
2 2	4						, QASISTATES COS SI OBSERVE OBSE			[1]
L							RVE;			
							QASISTATES COS FUV HVLOW HVL OW			
	(Comments: DCE	RAM copy and d	ump. See Visit 1, Exposure 2 for a complete	e description of the a	lump.				
ı				OCE dump (qalignment, qexposure, qreadou	1 0	•				
L	3	3 Dark	DARK	COS/FUV, TIME-TAG, DEF	DEF	BUFFER-TIME=36	NEW ALIGNMENT		3600.0 Secs (3600 Secs)	
ı						00;	;	t in QE on - Ramp to HVLow (06)	[==>]	
						STIM-RATE=30	QASISTATES COS FUV HVLOW HVL OW	(/		[1]

OW

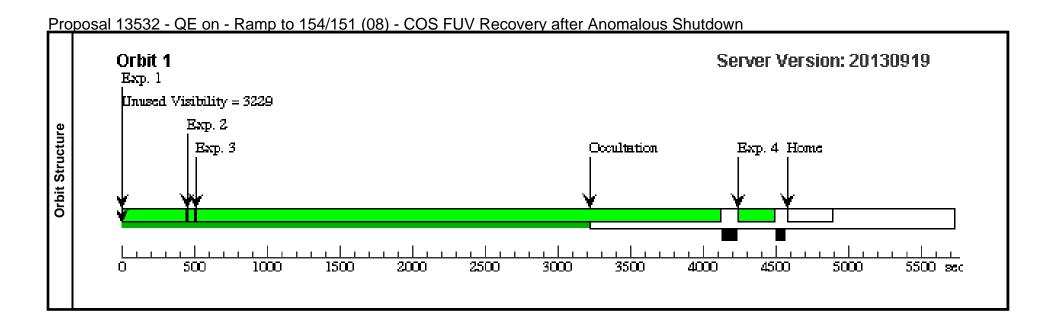


Proposal 13532 - Return to Operate (07) - COS FUV Recovery after Anomalous Shutdown

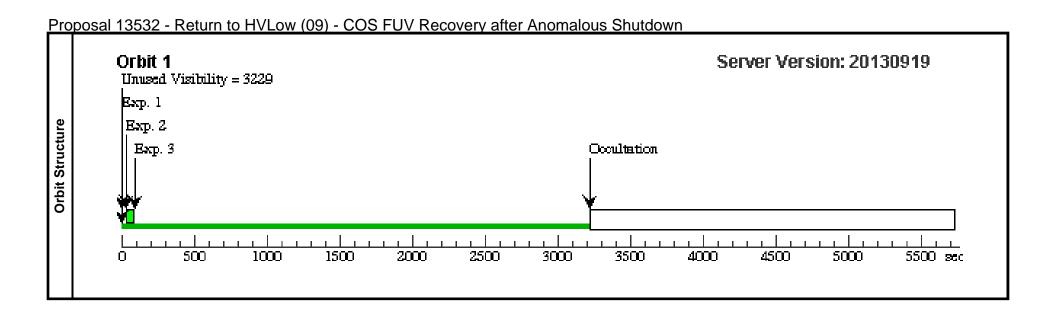
			Return to Operate ((77), implementation	<u> </u>				Wed Oct 02 01:28:04	GMT 2013
<u>+</u>	Diag	gnostic Status	s: No Diagnostics							
Visit	Scie	ntific Instrum	ents: S/C							
_	Spec	cial Requirem	ents: AFTER 06 BY	1.4 H TO 3.5 H; PARALLEL						
	Con	ıments: Returi	ı to Operate, dump D	CE memory, and set flag 3.						
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Return to O	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	50 Secs (50 Secs)	
		perate (HV off)					SPEC COM INSTR RLHLTOPF;	t in Return to Operat e (07)	[==>]	
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]
							QASISTATES COS FUV HVLOW OPE RATE			
	Con	ıments: Turn o	off the FUV high volta	ige						
S	2	DCE RAM	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	60.0 Secs (60 Secs)	
Exposures		dump					SPEC COM INSTR ELCOPYDCE;	t in Return to Operat e (07)	[==>]	
хро							NEW ALIGNMENT ;			
I Ш							QASISTATES COS SI OBSERVE OBSE RVE;			[1]
							QASISTATES COS FUV OPERATE OP ERATE			
	Con	nments: DCE l	RAM copy and dump.	See Visit 1, Exposure 2 for a comple	ete description of the a	lump.				
	SQL	.: setup readoi	ut entry for the DCE o	dump (qalignment, qexposure, qread	out), tag as COS (si_u	sed and si_intrlv)				
	3	Set flag 3	DARK	S/C, DATA, NONE			SPEC COM INSTR	Sequence 1-3 Non-In	1.0 Secs (1 Secs)	
							ELFLAG3; NEW ALIGNMENT	t in Return to Operat e (07)	[==>]	[1]
	Com	ıments: Set NS	SSC-1 COS event flag	3. This will prevent subsequent FUV	V commanding unless	it is cleared first.	TIEW ADIOTABLIT			-



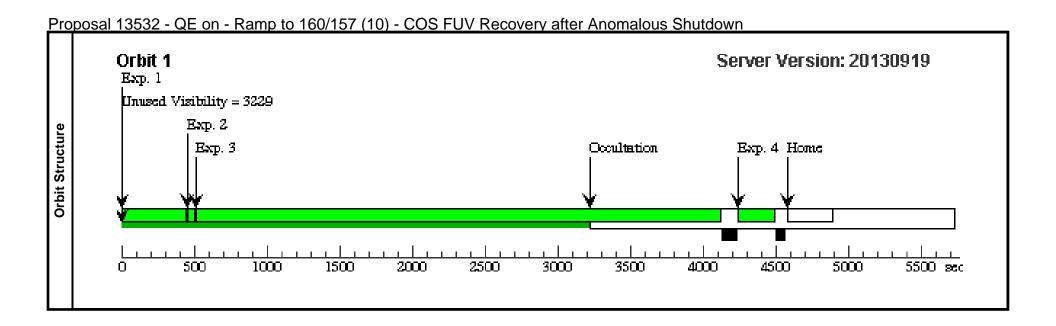
Pro	posal 1	1353	32 - QE on ·	- Ramp to 154/151 (08)	- COS FUV R	ecovery after A	nomalous Shu	utdown		
Visit	Diagnostic Scientific I Special Re	c Statu Instrun equiren	ns: Warning ments: S/C, COS/F ments: AFTER 01	BY 1.0 D TO 2.0 D; PARALLEL					Wed Oct 02 01:28:05	GMT 2013
		_	_	ltage up to a specified value (well below	HVNom).					
Diagnostics			<u>between Visits 08</u> o 154/151 (08)) W	and 09. arning (Orbit Planner): MAXIMUM DU	JRATION EXCEEDE	ED FOR INTERNAL OR	EARTH CALIB SU			
	# Labe	el	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
			4 DARK	S/C, DATA, NONE		- F	SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF;	Sequence 1-4 Non-In t in QE on - Ramp to 154/151 (08)		
							QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS FUV HVLOW HVN OM;			[1]
							QESIPARM ENDC TSA 154; QESIPARM SECPE RCT 3;			
s	Comments	: Ramı	o the FUV HV to 1	54/151 counts (A/B).			QESIPARM ENDC TSB 151			
ure	2 DCE	RAM	DARK	S/C, DATA, NONE				Sequence 1-4 Non-In	60.0 Secs (60 Secs)	
Exposure	dump	p					SPEC COM INSTR ELCOPYDCE; NEW ALIGNMENT	t in QE on - Ramp to 154/151 (08)	[==>]	
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]
							QASISTATES COS FUV HVNOM HVN OM			
			**	ump. See Visit 1, Exposure 2 for a compl CE dump (qalignment, qexposure, qreac	• •	•				
	3 Dark		DARK	COS/FUV, TIME-TAG, DEF	DEF	BUFFER-TIME=36	NEW ALIGNMENT		3600.0 Secs (3600 Secs)	
						00; STIM-RATE=30		t in QE on - Ramp to 154/151 (08)	[==>]	[1]
	4 Wave	e	WAVE	COS/FUV, TIME-TAG, WCA	G160M	CURRENT=MEDIU M;		Sequence 1-4 Non-In t in QE on - Ramp to		
					1600 A	FP-POS=3;		154/151 (08)	[==>]	[1]
						STIM-RATE=2000				1



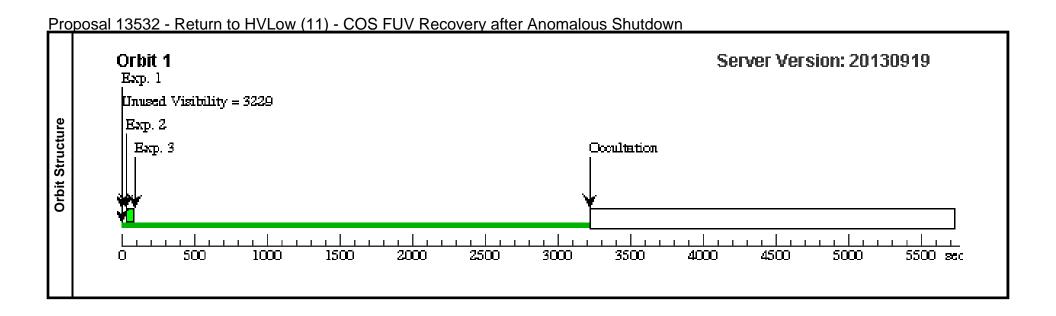
<u>Pro</u>	pos	<u>sal 13532</u>	<u> 2 - Return</u>	<u>to HVLow (09) - COS F</u>	JV Recovery a	<u>after Anomalo</u>	<u>us Shutdown</u>			
	Proj	posal 13532, R	Return to HVL	ow (09), implementation					Wed Oct 02 01:28:05	GMT 2013
<u>.</u> =	Diag	gnostic Status:	No Diagnosti	cs						
Visit	Scie	entific Instrume	nts: S/C							
_	Spec	cial Requireme	nts: AFTER 08	B BY 1.2 H TO 3.5 H; PARALLEL						
	Com	nments: Return	to HVLow, dur	np DCE memory, and set flag 3.						
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Return to H	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	35 Secs (35 Secs)	
		VLow					SPEC COM INSTR	t in Return to HVLo w (09)	[==>]	
							RLHNTHLF;	(42)		
							NEW OBSET;			
							QASISTATES COS SI OBSERVE OBSE			[1]
							RVE;			
							QASISTATES COS FUV HVNOM OPE			
							RATE			
	Com	nments: SQL: E	Inforce the seq	non-int across the obsets						
es	2	DCE RAM	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	60.0 Secs (60 Secs)	
Ϊğ		dump					SPEC COM INSTR	t in Return to HVLo w (09)	[==>]	
۱ő							ELCOPYDCE;	(42)		
Exposures							NEW ALIGNMENT :			
۱"							QASISTATES COS			[1]
							SI OBSERVE OBSE RVE;			1-5
							OASISTATES COS			
							FUV OPERATE OP			
	C	D.CE.D	416				ERATE			
	Com	nments: DCE R	'AM copy and a	lump. See Visit 1, Exposure 2 for a compl	ete description of the d	ump.				
	SQL	: setup readou	t entry for the I	OCE dump (qalignment, qexposure, qread	lout), tag as COS (si_u	sed and si_intrlv)			T	
	3	Set flag 3	DARK	S/C, DATA, NONE			SPEC COM INSTR ELFLAG3;	Sequence 1-3 Non-In t in Return to HVLo	` '	
							NEW ALIGNMENT	w (09)	[==>]	[1]
							INEW ALIGNMENT			1



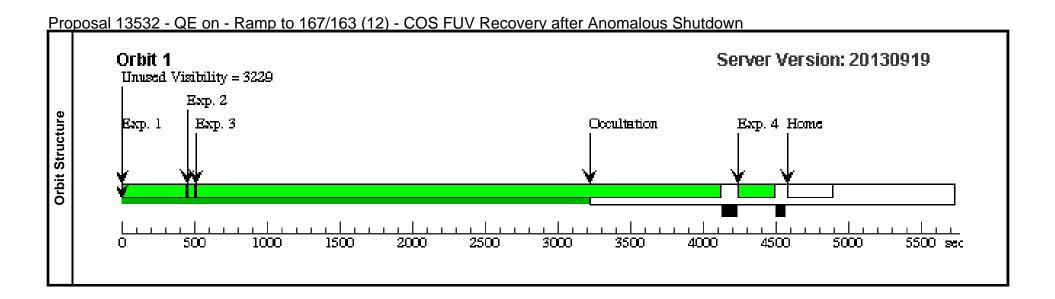
10	pos	sal 1353	<u> 32 - QE on -</u>	Ramp to 160/157 (10)	<u>- COS FUV R</u>	Recovery after A	<u>nomalous Shu</u>	<u>utdown</u>		
	_		-	160/157 (10), implementation					Wed Oct 02 01:28:06	GMT 201
		gnostic Statu	0							
VISIL			nents: S/C, COS/FU							
>	_	_		BY 1.0 D TO 2.0 D; PARALLEL						
	Com	ments: Ramp	o the FUV high vol	tage up to a specified value (higher tha	n V08, lower than HV	Nom).				
	No S	SAA Passage	between Visits 10	and 11.						
Diagnostics	(QE	on - Ramp to	o 160/157 (10)) Wa	arning (Orbit Planner): MAXIMUM DU	JRATION EXCEEDE	ED FOR INTERNAL OR	EARTH CALIB SU			
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Ramp to 16 /157	0 DARK	S/C, DATA, NONE			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF;	Sequence 1-4 Non-In t in QE on - Ramp to 160/157 (10)	451 Secs (451 Secs) [==>]	
							QASISTATES COS SI OBSERVE OBSE RVE;			
							QASISTATES COS FUV HVLOW HVN OM;			[1]
							QESIPARM ENDC TSA 160;			
							QESIPARM SECPE RCT 3;			
	-			CO/157			QESIPARM ENDC TSB 157			
2	2	DCE RAM		60/157 counts (A/B). S/C, DATA, NONE			SAA CONTOUR 31:	Sequence 1-4 Non-In	60.0 Secs. (60 Secs)	
zyposures		dump	D/ Hui	S, C, BITTI, NONE				t in QE on - Ramp to 160/157 (10)		
EX							NEW ALIGNMENT ;			
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]
							QASISTATES COS FUV HVNOM HVN OM			
			• •	mp. See Visit 1, Exposure 2 for a compl	•	•				
		Dark	DARK	CE dump (qalignment, qexposure, qread COS/FUV, TIME-TAG, DEF	DEF		NEW ALIGNMENT	Sequence 1-4 Non-In	3600.0 Secs (3600 Secs)	
	3	Dark	DAKK	COS/1 C v, ThviL-1AG, DEI	DLI	00; STIM-RATE=30	TLT ALIGHMENT	t in QE on - Ramp to 160/157 (10)	[==>]	[1]
	4	Wave	WAVE	COS/FUV, TIME-TAG, WCA	G160M	CURRENT=MEDIU		Sequence 1-4 Non-In	60 Secs (60 Secs)	
					1600 A	M; FP-POS=3;		t in QE on - Ramp to 160/157 (10)	[==>]	[1]
						STIM-RATE=2000				[1]



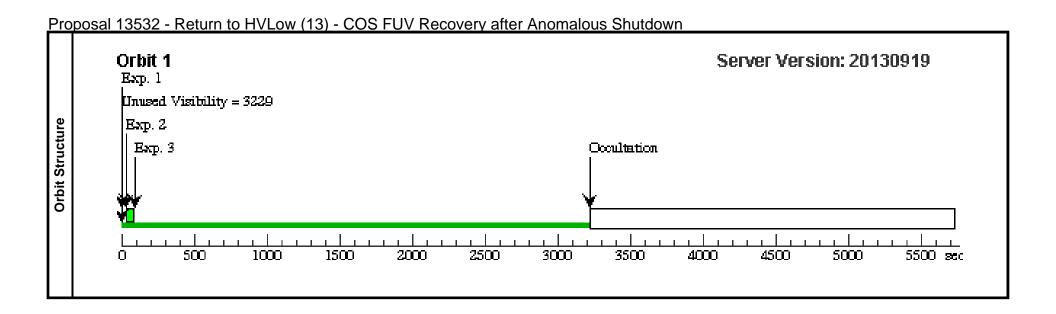
<u>Pro</u>	pos	<u>sal 13532</u>	<u> 2 - Return</u>	<u>ı to HVLow (11) - COS Fl</u>	JV Recovery a	<u>after Anomalo</u>	<u>us Shutdown</u>			
	Proj	posal 13532, R	Return to HVL	ow (11), implementation					Wed Oct 02 01:28:07	GMT 2013
.≝	Diag	gnostic Status:	No Diagnosti	cs						
Visit	Scie	entific Instrume	nts: S/C							
_	Spec	cial Requireme	nts: AFTER 10	0 BY 1.2 H TO 3.5 H; PARALLEL						
	Com	nments: Return	to HVLow, dur	np DCE memory, and set flag 3.						
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Return to H	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	35 Secs (35 Secs)	
		VLow					SPEC COM INSTR	t in Return to HVLo w (11)	[==>]	
							RLHNTHLF;	()		
							NEW OBSET;			
							QASISTATES COS SI OBSERVE OBSE			[1]
							RVE;			
							QASISTATES COS FUV HVNOM OPE			
							RATE			
	Com	nments: SQL: I	Enforce the seq	non-int across the obsets						
es	2	DCE RAM	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	60.0 Secs (60 Secs)	
֓֞֝֟֝֟֝֟֝֟֝֟֝֟֝֟֝֟֟֝֟֝֟֟֝ ֡		dump					SPEC COM INSTR	t in Return to HVLo w (11)	[==>]	
							ELCOPYDCE;	w (11)		
Exposures							NEW ALIGNMENT ;			
Ι"							OASISTATES COS			[1]
							SI OBSERVE OBSE RVE;			[1]
							OASISTATES COS			
							FUV OPERATE OP			
	_						ERATE			
	Com	nments: DCE R	'AM copy and a	lump. See Visit 1, Exposure 2 for a compl	ete description of the d	итр.				
	SQL	: setup readou	t entry for the I	DCE dump (qalignment, qexposure, qreac	lout), tag as COS (si_u	sed and si_intrlv)				,
	3	Set flag 3	DARK	S/C, DATA, NONE			SPEC COM INSTR	Sequence 1-3 Non-In	1.0 Secs (1 Secs)	
							ELFLAG3; NEW ALIGNMENT	t in Return to HVLo w (11)	[==>]	[1]
1							NEW ALIGNMENT	* *		



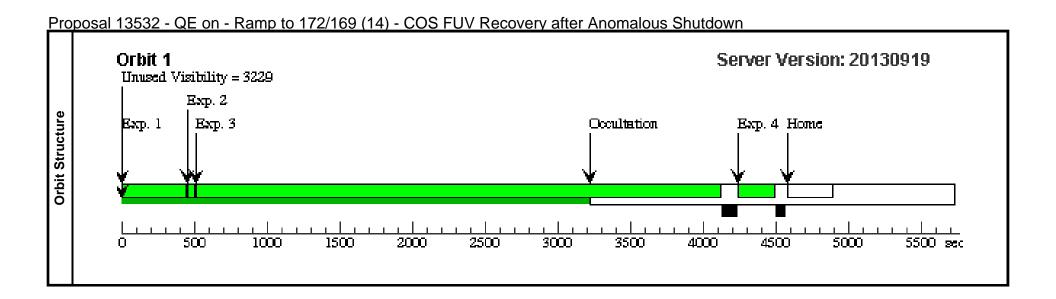
Pro	opc	osal 135	32 - QE on	- Ramp to 167/163 (12) -	COS FUV R	Recovery after A	nomalous Shi	utdown					
	Pr	oposal 13532	, QE on - Ramp t	o 167/163 (12), implementation					Wed Oct 02 01:28:07	GMT 2013			
	Di	iagnostic Stat	us: Warning										
Visit	Sc	eientific Instru	ments: S/C, COS/F	FUV									
Į≝	Sp	pecial Requirements: AFTER 10 BY 1.0 D TO 2.0 D; PARALLEL											
	Co	Comments: Ramp the FUV high voltage up to a specified value (higher than V10).											
	No	o SAA Passage	e between Visits 12	and 13.									
Diagnostics	(Q	E on - Ramp (to 167/163 (12)) W	arning (Orbit Planner): MAXIMUM DU	RATION EXCEEDE	ED FOR INTERNAL OR	EARTH CALIB SU						
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit			
	1	Ramp to 1	67 DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-4 Non-In	451 Secs (451 Secs)				
		/163				SPEC COM INSTR ELHLTHVF;	t in QE on - Ramp to 167/163 (12)	[==>]					
						S	QASISTATES COS SI OBSERVE OBSE RVE;	:					
							QASISTATES COS						
							FUV HVLOW HVN OM;			[1]			
							OESIPARM ENDC			1 2-3			
							TSA 167;						
							QESIPARM SECPE						
							RCT 3;						
	Co	ommants: Pam	on the FIW HV to	167/163 counts (A/B).			QESIPARM ENDC TSB 163						
Exposures	2	DCE RAM	1	S/C, DATA, NONE			SAA CONTOUR 31:	Sequence 1-4 Non-In	60.0 Secs (60 Secs)				
l su		dump		5. 5, 2 1 1 3 1, 1 1 3 1			SPEC COM INSTR	t in QE on - Ramp to 167/163 (12)					
၂ ရွိ							ELCOPYDCE;						
ũ							NEW ALIGNMENT						
							, QASISTATES COS SI OPERATE OPER ATE;			[1]			
							QASISTATES COS FUV HVNOM HVN OM						
	Co	omments: DCI	E RAM copy and di	ump. See Visit 1, Exposure 2 for a comple	ete description of the	dump.	O. T			1			
	SQ	QL: setup read	out entry for the D	PCE dump (qalignment, qexposure, qread	out), tag as COS (si_	used and si_intrlv)							
	3	Dark	DARK	COS/FUV, TIME-TAG, DEF	DEF	BUFFER-TIME=36 00;	NEW ALIGNMENT	Sequence 1-4 Non-In t in QE on - Ramp to	3600.0 Secs (3600 Secs)				
						STIM-RATE=30		167/163 (12)	[>]	[1]			
	4	Wave	WAVE	COS/FUV, TIME-TAG, WCA	G160M	CURRENT=MEDIU M;		Sequence 1-4 Non-In t in QE on - Ramp to					
					1600 A	FP-POS=3;		167/163 (12)	[==>]	[11			
						STIM-RATE=2000				[1]			



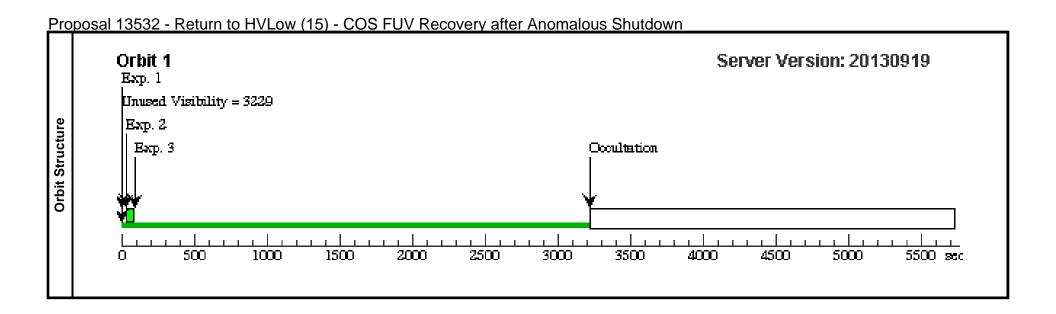
<u>Pro</u>	po:	<u>sal 13532</u>	<u> 2 - Return</u>	<u>ı to HVLow (13) - COS Fl</u>	JV Recovery a	<u>after Anomalo</u>	<u>us Shutdown</u>					
	Pro	posal 13532, R	Return to HVL	ow (13), implementation					Wed Oct 02 01:28:08	GMT 2013		
ي. ا	Dia	Diagnostic Status: No Diagnostics										
Visit	Scie	entific Instrume	ents: S/C									
_	Spe	cial Requireme	nts: AFTER 12	2 BY 1.2 H TO 3.5 H; PARALLEL								
	Con	nments: Return	to HVLow, dur	np DCE memory, and set flag 3.								
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit		
	1	Return to H	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	35 Secs (35 Secs)			
		VLow					SPEC COM INSTR RLHNTHLF;	t in Return to HVLo w (13)	[==>]			
							NEW OBSET;					
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]		
							QASISTATES COS FUV HVNOM OPE RATE					
	Con	nments: SQL: I	Enforce the seq	non-int across the obsets								
es	2	DCE RAM	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	60.0 Secs (60 Secs)			
Exposures		dump					SPEC COM INSTR ELCOPYDCE;	t in Return to HVLo w (13)	[==>]			
Ιĕ							NEW ALIGNMENT					
ШÛ							;					
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]		
							QASISTATES COS FUV OPERATE OP ERATE					
	Con	nments: DCE R	PAM copy and a	lump. See Visit 1, Exposure 2 for a comple	ete description of the d	итр.						
	SOI	: setup readou	t entry for the I	OCE dump (qalignment, qexposure, qread	lout), tag as COS (si_u	sed and si intrly)						
	3	Set flag 3	DARK	S/C, DATA, NONE			SPEC COM INSTR	Sequence 1-3 Non-In	1.0 Secs (1 Secs)			
				• • • • • • • • • • • • • • • • • • • •			ELFLAG3; NEW ALIGNMENT	t in Return to HVLo w (13)	[==>]	[1]		



Pro	posal 13	3532 - QE on	- Ramp to 172/169 (14) -	COS FUV R	Recovery after A	nomalous Shu	utdown		
Visit	Diagnostic S Scientific In Special Requ Comments: I	Status: Warning struments: S/C, COS/I tirements: AFTER 12	2 BY 1.0 D TO 2.0 D; PARALLEL oltage up to a specified value (higher than	ı V12).				Wed Oct 02 01:28:08	GMT 2013
Diagnostics			Varning (Orbit Planner): MAXIMUM DU	RATION EXCEEDE	ED FOR INTERNAL OR	EARTH CALIB SU			
	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
S	/169	to 172 DARK	S/C, DATA, NONE 172/169 counts (A/B).			SAA CONTOUR 31; SPEC COM INSTR ELHLTHVF; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 172; QESIPARM SECPE RCT 3; QESIPARM ENDC TSB 169	Sequence 1-4 Non-In t in QE on - Ramp to 172/169 (14)	451 Secs (451 Secs) [==>]	[1]
ē		AM DARK	S/C, DATA, NONE			SAA CONTOUR 31:	Sequence 1-4 Non-In	60.0 Secs. (60 Secs.)	
Exposure	dump					SPEC COM INSTR ELCOPYDCE; NEW ALIGNMENT; QASISTATES COS SI OBSERVE OBSE RVE; QASISTATES COS FUV HVNOM HVN OM	t in QE on - Ramp to 172/169 (14)	[==>]	[1]
		•	ump. See Visit 1, Exposure 2 for a comple	• •	•				
			OCE dump (qalignment, qexposure, qread	out), tag as COS (si_ DEF	-	NIEW ATTONIAGENT	Caguana 1 4 N I	2600 0 Saas (2600 Saas)	
	3 Dark	DARK	COS/FUV, TIME-TAG, DEF	DEL	BUFFER-TIME=36 00; STIM-RATE=30	NEW ALIGNMENT	t in QE on - Ramp to 172/169 (14)	3600.0 Secs (3600 Secs) [==>]	[1]
	4 Wave	WAVE	COS/FUV, TIME-TAG, WCA	G160M	CURRENT=MEDIU		Sequence 1-4 Non-In	60 Secs (60 Secs)	
				1600 A	M; FP-POS=3; STIM-RATE=2000		t in QE on - Ramp to 172/169 (14)	[==>]	[1]

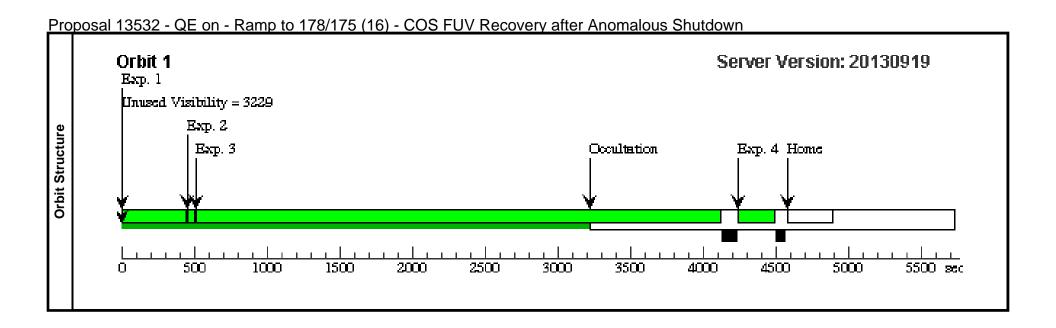


Pro	po:	<u>sal 13532</u>	<u> 2 - Return t</u>	<u>o HVLow (15) - COS Fl</u>	JV Recovery a	<u>after Anomalo</u>	<u>us Shutdown</u>						
	Pro	posal 13532, F	Return to HVLow	(15), implementation					Wed Oct 02 01:28:08	GMT 2013			
ي. ا	Dia	iagnostic Status: No Diagnostics											
Visit	Scie	entific Instrume	ents: S/C										
^	Spec	cial Requireme											
	Con	nments: Return	to HVLow, dump	DCE memory, and set flag 3.									
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit			
	1		DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	35 Secs (35 Secs)				
		VLow					SPEC COM INSTR RLHNTHLF;	t in Return to HVLo w (15)	[==>]				
							NEW OBSET;						
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]			
							QASISTATES COS FUV HVNOM OPE RATE						
	Con	nments: SQL:	Enforce the seq no	on-int across the obsets									
es	2	DCE RAM	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	60.0 Secs (60 Secs)				
Exposures		dump					SPEC COM INSTR ELCOPYDCE;	t in Return to HVLo w (15)	[==>]				
Exp							NEW ALIGNMENT ;						
							QASISTATES COS SI OBSERVE OBSE RVE;			[1]			
							QASISTATES COS FUV OPERATE OP ERATE						
	Con	nments: DCE R	AM copy and dun	np. See Visit 1, Exposure 2 for a compl	ete description of the d	ump.							
	SQL	: setup readou	t entry for the DC	E dump (qalignment, qexposure, qread	lout), tag as COS (si_u	sed and si_intrlv)							
	3	Set flag 3	DARK	S/C, DATA, NONE	· · · · · ·		SPEC COM INSTR	Sequence 1-3 Non-In	1.0 Secs (1 Secs)				
							ELFLAG3; NEW ALIGNMENT	t in Return to HVLo w (15)	[==>]	[1]			



			- Ramp to 178/175 (16) -	COSTOVIC	ecovery after A	Homaious One	ataowii	Wed Oct 02 01:28:09	GMT 2013				
	Diagnostic Stat	, .) 176/175 (10), implementation					wed Oct 02 01.28.09	GWI 201.				
sit	8	8	IIV										
		cientific Instruments: S/C, COS/FUV pecial Requirements: AFTER 14 BY 1.0 D TO 2.0 D; PARALLEL											
-			ltage up to 178/175.										
		e between Visits 16	•										
Ś			arning (Orbit Planner): MAXIMUM DUI	RATION EXCEEDE	D FOR INTERNAL OR	EARTH CALIB SU							
Diagnostics	((=												
	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit				
	1 Ramp to 1	78 DARK	S/C, DATA, NONE				Sequence 1-4 Non-In	451 Secs (451 Secs)					
	/175					SPEC COM INSTR RLHLTHNF;	t in QE on - Ramp to 178/175 (16)	[==>]					
						QASISTATES COS SI OBSERVE OBSE RVE;			[1]				
						QASISTATES COS FUV HVLOW HVN OM							
			78/175 counts (A/B, the nominal HVNom	values).				T					
	2 DCE RAM dump	I DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-4 Non-In t in QE on - Ramp to						
es	dump					SPEC COM INSTR ELCOPYDCE;	178/175 (16)	[==>]					
sur						NEW ALIGNMENT							
Exposures					QASISTATES COS SI OBSERVE OBSE RVE:		[1]						
						QASISTATES COS FUV HVNOM HVN OM							
	Comments: DCI	E RAM copy and du	ump. See Visit 1, Exposure 2 for a complet	te description of the d	dump.				,				
	SOL: setup read	out entry for the D	CE dump (qalignment, qexposure, qreado	out) tao as COS (si 1	used and si_intrly)								
	3 Dark	DARK	COS/FUV, TIME-TAG, DEF	DEF		NEW ALIGNMENT	Sequence 1-4 Non-In	3600.0 Secs (3600 Secs)					
			COS/TOV, TIME-TAG, DEF		00; STIM-RATE=30		t in QE on - Ramp to 178/175 (16)	[==>]	[1]				
	4 Wave	WAVE	COS/FUV, TIME-TAG, WCA	G160M	CURRENT=MEDIU		Sequence 1-4 Non-In	60 Secs (60 Secs)					
				1600 A	M;		t in QE on - Ramp to	J==>1					

STIM-RATE=2000



Proposal 13532 - Return to HVLow (17) - COS FUV Recovery after Anomalous Shutdown

Pro	pos	sai 13532	<u> 2 - Return to l</u>	<u> HVLow (17) - COS FU</u>	v Recovery a	arter Anomaic	ous Snutdown						
	Proj	posal 13532, R	Return to HVLow (17	7), implementation					Wed Oct 02 01:28:09	GMT 2013			
⊭	Diagnostic Status: No Diagnostics												
Visit	Scie	cientific Instruments: S/C											
-	Spec	cial Requireme	nts: AFTER 16 BY 1	1.2 H TO 3.5 H; PARALLEL									
	Com	ıments: Return	to HVLow, dump DC	EE memory, and set flag 3.									
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit			
	1	Return to H	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	Sequence 1-3 Non-In	35 Secs (35 Secs)				
		VLow					SPEC COM INSTR RLHNTHLF;	t in Return to HVLo w (17)	[==>]				
							NEW OBSET;						
			QASISTATES COS SI OBSERVE OBSE RVE;		[1]								
							QASISTATES COS FUV HVNOM OPE RATE						
	Com	ıments: SQL:	Enforce seq non-int a	cross the obsets									
es	2	DCE RAM D	DARK	S/C, DATA, NONE			SAA CONTOUR 31;	1; Sequence 1-3 Non-In	60.0 Secs (60 Secs)				
Exposures		dump					SPEC COM INSTR ELCOPYDCE;	t in Return to HVLo w (17)	[==>]				
χbα							NEW ALIGNMENT						
"							QASISTATES COS SI OBSERVE OBSE			[1]			
							RVE;						
							QASISTATES COS FUV OPERATE OP ERATE						
	Com	ıments: DCE R	AM copy and dump.	See Visit 1, Exposure 2 for a complet	te description of the d	итр.							
	SOL	· setun readou	t entry for the DCE d	ump (qalignment, qexposure, qreado	out) tag as COS (si u	sed and si_intrly)							
	3	Set flag 3	DARK	S/C, DATA, NONE	,g us cos (st_u	sea and st_initity)	SPEC COM INSTR	Sequence 1-3 Non-In	1.0 Secs (1 Secs)				
	5	SSt Hug S	2. mu	E, C, 21111, 11011L			ELFLAG3; t in Return to HVL	t in Return to HVLo	[==>]				
							NEW ALIGNMENT	w (17)	L 7 J	[1]			
	Com	ıments: Set NS	SC-1 COS event flag .	3. This will prevent subsequent FUV	commanding unless	it is cleared first.							

