Proposal 17329 (STScI Edit Number: 1, Created: Friday, January 26, 2024 at 11:00:29 AM Eastern Standard Time) - Overview



17329 - Cycle 31 COS FUV Characterization of Modal Gain When Changing High

Voltage

Cycle: 31, Proposal Category: CAL/COS (Availability Mode: RESTRICTED)

INVESTIGATORS

Name	Institution
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VISITS

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
2A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:20.0	yes
2C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:21.0	yes
3A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:23.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
3C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:24.0	yes
4A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:25.0	yes
4C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:26.0	yes
5A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:27.0	yes
5C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Jan-2024 11:00:28.0	yes

8 Total Orbits Used

ABSTRACT

This program uses the deuterium lamp to illuminate the regions of the detector being used to collect spectra during Cycle 31. The data obtained will be used to create gain maps of the detector. Because of the strongly varying intensity of the lamp as a function of wavelength, G130M/1309 data will be obtained for Segment A, and G160M/1600 will be used for Segment B.

Gain map data will be obtained both before and after any change is made to any nominal high voltage value on either segment, and before and after any lifetime move. Obtaining a gain map at these times will help to improve the modeling of the modal gain as a function of time and extracted charge, since it will provide data that cover the full time span of each high voltage at each LP. Improving these models will allow better predictions of the future lifetime of the detector.

Proposal 17329 (STScI Edit Number: 1, Created: Friday, January 26, 2024 at 11:00:29 AM Eastern Standard Time) - Overview **OBSERVING DESCRIPTION**

This program will obtain spectra from the deuterium lamp with enough counts to permit the construction of a gain map covering the region where the spectra fall. In order to efficiently illuminate the two segments, the G130M/1309 setting will be used for Segment A, and G160M/1600 will be used for Segment B. Both segments can safely remain on with either setting.

Gain maps should be taken before and after any high voltage change, and before and after any change in Lifetime Position. They should be obtained at the appropriate HV levels and detector locations.

The plan for Cycle 31 includes 2 one-orbit contingency visits for each HV change. These two visits will be used if a HV change is made during the cycle. One will be taken immediately before the change using the current HV values (visits 2A, 3A, 4A, or 5A), and one will be taken after at the new values (visits 2C, 3C, 4C, or 5C).

The procedure for collecting this data in each visit is given below.

* Take an exposure at LP1 to set up the aperture position and HV. This can also be used to measure the gain at LP1. These exposures will use G130M/1309 for visits 2A, 2C, 3A, and 3C; and G160M/1600 for visits 4A, 4C, 5A, and 5C.

* Adjust the HV values

* Adjust the aperture in the cross dispersion direction so that the deuterium lamp will illuminate the appropriate region on Segment A when using G130M/1309.

* Take a 440 second deuterium lamp exposure using both detector segments.

* Adjust the aperture to a second cross-dispersion location to obtain additional coverage on Segment A and take another 440 second deuterium lamp exposure.

* Adjust the aperture in the cross dispersion direction so that the deuterium lamp will illuminate the appropriate region on Segment B when using

Proposal 17329 (STScI Edit Number: 1, Created: Friday, January 26, 2024 at 11:00:29 AM Eastern Standard Time) - Overview G160M/1600.

* Take a 440 second deuterium lamp exposure using both detector segments.

* Adjust the aperture to a second cross-dispersion location to obtain additional coverage on Segment B and take another 440 second deuterium lamp exposure.

* Return the aperture to the HOME position

Note that because TRANS resets its aperture zero point when FCA exposures are taken, the aperture is explicitly moved using "QESIPARM XSTEPS", as was done in Program 13970, 14439, 14519, 14941, 15534, 15772, etc.

For reference, the soft and hard stops for the apertures are listed below. All aperture moves are within these ranges. MEB1: SOFT STOPS = -275 to 275 HARD STOPS = -282 to 285

MEB2: SOFT STOPS = -275 to 275 HARD STOPS = -284 to 283

The initial exposure of each visit uses the FCA_LP1 aperture position, LAPXSTP = -153. Thus all XAPER values are relative to that position.

Summary table:

Visit LP Grating/Segment Y Position LAPXSTP XAPER HV

Proposal 1732	9 (STSc	I Edit Number: 1	, Created	: Friday, Ja	nuary 26	5, 2024 at 11:00:2
2A/2C	2	G130M/A	1	-213	-60	173/175
2A/2C	2	G130M/A	2	-267*	-114	173/175
2A/2C	2	G160M/B	1	-215	-62	173/175
2A/2C	2	G160M/B	2	-267*	-114	173/175
3A/3C	3	G130M/A	1	-72	+81	173/175
3A/3C	3	G130M/A	2	-128	+25	173/175
3A/3C	3	G160M/B	1	-84	+69	173/175
3A/3C	3	G160M/B	2	-140	+13	173/175
4A/4C	4	G130M/A	1	-32	+121	173/175
4A/4C	4	G130M/A	2	-86	+67	173/175
4A/4C	4	G160M/B	1	-41	+112	173/175
4A/4C	4	G160M/B	2	-95	+58	173/175
5A/5C	5	G130M/A	1	-213	-60	167/169
5A/5C	5	G130M/A	2	-267*	-114	167/169
5A/5C	5	G160M/B	1	-215	-62	167/169
5A/5C	5	G160M/B	2	-267*	-114	167/169

29 AM Eastern Standard Time) - Overview

* Limited to be within the soft stops

The LP2 and LP5 aperture positions are identical, but the Y extent of the spectra on the detector is large enough to cover the detector region used for both LPs. The LP6 positions are also the same, and since the LP5 and LP6 HV values are identical, no separate LP6 visits have been created.

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Note that the HVs in the table above are the current HV values. They should be modified to reflect the HV adjustments being made. In addition, any HV changes may require a change to the regular gain map program (PID 17325).

11/15/23

Visits 5A and 5C will be executed as part of the LP5/LP6 HV change on 12/11/23. The HV values for 5C have been updated to 173/175, and the On Hold has been removed from both visits.

12/7/23

Removed the BETWEEN for visits 5A and 5C in order to allow scheduling after COS observations are started again.

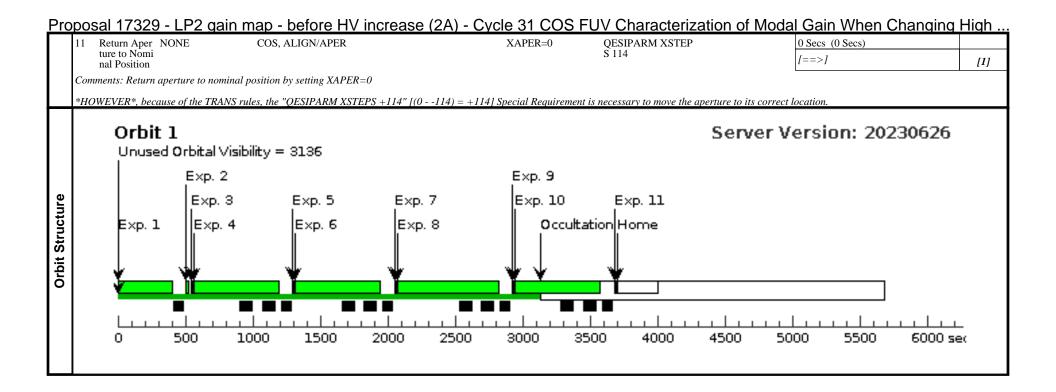
Proposal 17329 - LP2 gain map - before HV increase (2A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High ...

	Proposal 17329, LP2 gain map - before HV increase (2A), implementation	Fri Jan 26 16:00:29 GMT 2024
	Diagnostic Status: Warning	
Ξ	Scientific Instruments: S/C, COS, COS/FUV	
Vis	Special Requirements: ON HOLD ; PARALLEL	
	Comments: This visit collects data at LP2. It uses the HV values appropriate for LP2 (173/175).	
	On Hold Comments: Only needed if HV changed during Cycle 31 HV Values will have to be updated before execution!	
Diagnostics	(LP2 gain map - before HV increase (2A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orb
1		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU			125 Secs (125 Secs)	
	9 Deuterium Exposure - S			1309 A	M;			[==>]	
	et up at LP1				BUFFER-TIME=19 6;				
					FP-POS=1;				[1
					SEGMENT=BOTH;				1-
					LIFETIME-POS=L				
~				6 .1	P1	1	101 1		
Con	Adjust HV t		ture to LP1, which is near the center of S/C, DATA, NONE	the aperture range	used in this program. It a	SAA CONTOUR 31		39 Secs (39 Secs)	
2	o LP2 value		S/C, DATA, NONE			SAA CONTOUR ST SPEC COM INSTR	,	[==>]	
	8					ELHVADJPROP;		1>1	
						QASISTATES COS			
						FUV HVNOM HVN OM;			
						QESIPARM ENDC			[]
						TSA 173;			-
						QESIPARM ENDC TSB 175;			
						OESIPARM SEGM			
						ENT AB			
Con	ıments: Adjust	the HV to the LP2 v	alues.						
Sinc	e the HV is no	t increasing, exposu	$re\ time = 39\ seconds$						
3	Aperture Ad		COS, ALIGN/APER		XAPER=-60			0.0 Secs (0 Secs)	
	justment 1 f or Segment							[==>]	[]
	A								11
Con	iments: Put the	e aperture in the app	propriate position to illuminate a portio	on of the LP2 region	of the detector when illu	minating Segment A w	ith G130M/1309.		
	A LAPXSTP va	lue at LP1 is -153							
			uminate Segment A with (2130M/1300	at Position 1 for LP	2 is -213				
		value for FCA to ill	uminute Segment A with 0150m/1509						
Des	ired LAPXSTP	P value for FCA to ill R is set to -213153	Ũ	-				1	
Des	ired LAPXSTP <u>refore, XAPER</u> G130M/130	<u>s is set to -213153</u> DEUTERIUM	Ũ	G130M	CURRENT=MEDIU			440 Secs (440 Secs)	
Des	ired LAPXSTP refore, XAPER	<u>s is set to -213153</u> DEUTERIUM	e = -60	G130M 1309 A	М;			$\frac{440 \text{ Secs } (440 \text{ Secs})}{I = => J}$	
Des	<i>ired LAPXSTP</i> refore, XAPER G130M/130 9 Deuterium	<u>s is set to -213153</u> DEUTERIUM	e = -60						
Des	<i>ired LAPXSTP</i> refore, XAPER G130M/130 9 Deuterium	<u>s is set to -213153</u> DEUTERIUM	e = -60		M; BUFFER-TIME=16				
Des	<i>ired LAPXSTP</i> refore, XAPER G130M/130 9 Deuterium	<u>s is set to -213153</u> DEUTERIUM	e = -60		M; BUFFER-TIME=16 5;				[]
Des	<i>ired LAPXSTP</i> refore, XAPER G130M/130 9 Deuterium	<u>s is set to -213153</u> DEUTERIUM	e = -60		M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L				[]
Des <u>The</u> 4	<i>ired LAPXSTF</i> refore, XAPER G130M/130 9 Deuterium Exposure 1	<u>R is set to -213153</u> DEUTERIUM	e = -60 COS/FUV, TIME-TAG, FCA	1309 A	M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1		counts than the oth	[==>]	[1
Des <u>The</u> 4	<i>ired LAPXSTF</i> refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter	<u>e is set to -213153</u> DEUTERIUM	ized for Segment A. FP-POS=1 was ch	1309 A	M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th	at it has slightly more		[==>]	[1
Des <u>The</u> 4	ired LAPXSTF refore, XAPER G130M/130 9 Deuterium Exposure 1 <u>uments: Deuter</u> Aperture Ad justment 2 f	<u>R is set to -213153</u> DEUTERIUM <u>rium exposure optima</u> NONE	e = -60 COS/FUV, TIME-TAG, FCA	1309 A	M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>] her FP-POS values. 0.0 Secs (0 Secs)	[1
Des <u>The</u> 4	ired LAPXSTF refore, XAPER G130M/130 9 Deuterium Exposure 1 <u>uments: Deuter</u> Aperture Ad	<u>R is set to -213153</u> DEUTERIUM <u>rium exposure optima</u> NONE	ized for Segment A. FP-POS=1 was ch	1309 A	M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th	<u>at it has slightly more</u> QESIPARM XSTEP		[==>]	
Des: <u>The</u> 4 5	ired LAPXSTF refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f or Segment A	<u>R is set to -213153</u> DEUTERIUM <u>rium exposure optima</u> NONE	2 = -60 COS/FUV, TIME-TAG, FCA <i>ized for Segment A. FP-POS=1 was cl</i> COS, ALIGN/APER	1309 A hosen because previo	M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 <u>ous observations show th</u> XAPER=-114	<i>at it has slightly more</i> QESIPARM XSTEP S -54		[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Des <u>The</u> 4 5 Con	ired LAPXSTF refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f or Segment A ments: Put the	<u>R is set to -213153</u> DEUTERIUM rium exposure optime NONE e aperture in the app	ized for Segment A. FP-POS=1 was ch	1309 A hosen because previo	M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 <u>ous observations show th</u> XAPER=-114	<i>at it has slightly more</i> QESIPARM XSTEP S -54		[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Des <u>The</u> 4 5 Con FCA	ired LAPXSTF G130M/130 9 Deuterium Exposure 1 <u>ments: Deuter</u> Aperture Ad justment 2 f or Segment A <i>uments: Put the</i> <i>LAPXSTP va</i>	<u>R is set to -213153</u> DEUTERIUM <u>rium exposure optimu</u> NONE e aperture in the app lue at LP1 is -153	2 = -60 COS/FUV, TIME-TAG, FCA <i>ized for Segment A. FP-POS=1 was cl</i> COS, ALIGN/APER	1309 A hosen because previo on of the LP2 region	M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=-114	<i>at it has slightly more</i> QESIPARM XSTEP S -54		[==>] her FP-POS values. 0.0 Secs (0 Secs)	

Proposal 17329 - LP2 gain map - before HV increase (2A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High ...

JD0	<u>5ai 17529 - LFZ yaiitti</u>			<u>, , , , , , , , , , , , , , , , , , , </u>			
6	G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	ſ	440 Secs (440 Secs)	
	9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16		[==>]	
				5;			
				FP-POS=1;			[1]
				SEGMENT=BOTH; LIFETIME-POS=L	,		
				P1			
Cor	nments: Deuterium exposure optimiz	<i>v</i> 0	hosen because pre	vious observations show th	nat it has slightly more counts than th		
7	Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=-62	QESIPARM XSTEP S 52	0.0 Secs (0 Secs)	
	or Segment B				0.02	[==>]	[1]
Cor	nments: Put the aperture in the appro	opriate position to illuminate a portio	on of the LP2 regio	on of the detector when illu	minating Segment B with G160M/16	90.	
	A LAPXSTP value at LP1 is -153						
Des	ired LAPXSTP value for FCA to illu	ninate Segment B with G160M/1600	at Position 1 for L	LP2 is -215			
		-62. *HOWEVER*, because of the	TRANS rules, the "	QESIPARM XSTEPS 52"	[(-62114) = +52] Special Require	ment is necessary to move the aperture to	o the correct locat
ion. 8	G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	ſ	440 Secs (440 Secs)	
0	0 Deuterium		1600 A	M;		[==>]	
	Exposure 1			BUFFER-TIME=16 5;			
				FP-POS=4;			[1]
				SEGMENT=BOTH	;		[1]
				LIFETIME-POS=L			
~				P1			
Cor			chosen because pr		that it has slightly more counts than t		
9	Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-114	QESIPARM XSTEP S -52	0.0 Secs (0 Secs)	
	or Segment B						[1]
Cor	nments: Put the aperture in the appro	opriate position to illuminate a portio	on of the LP2 regio	on of the detector when illu	minating Segment B with G160M/16	90.	
	A LAPXSTP value at LP1 is -153						
Des ot.	ired LAPXSTP value for FCA to illu To leave some pad, I will set it to mat	ninate Segment B with G160M/1600 ch the G130M exposure (-267).	at Position 2 for L	<i>LP2 is -280, but the apertui</i>	re soft stop is at -275 and we don't we	ant to exceed that value when including th	he 5 step oversho
	*	· · ·	TDANS wilso the	"OFCIDADM VCTEDC 52	" [(114 62) - 52] Special Dequi	ement is necessary to move the aperture i	40 4h 0 0000004 100
atic		114. "HOWEVER", because of the	TRANS rules, the	QESIFARM ASTEPS -32	[(-11402) = -32] special Kequir	ement is necessary to move the aperture	to the correct toc
10		COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	ſ	440 Secs (440 Secs)	
	0 Deuterium Exposure 2		1600 A	M; DUEEED TIME-16		[==>]	
	1 I			BUFFER-TIME=16 5;			
				FP-POS=4;			[1]
				SEGMENT=BOTH:			
				DEGMENT=DOTIN			
				LIFETIME-POS=L			
Co	nments: Deuterium exposure optimu	ized for Segment R FP-POS-A was	chosen hecause pr	LIFETIME-POS=L P1	that it has slightly more counts than t	he other FP-POS values	
Cor	nments: Deuterium exposure optimm	ized for Segment B. FP-POS=4 was	chosen because pr	LIFETIME-POS=L P1	that it has slightly more counts than t	he other FP-POS values.	
Coi	nments: Deuterium exposure optimm	ized for Segment B. FP-POS=4 was	chosen because pr	LIFETIME-POS=L P1	that it has slightly more counts than t	he other FP-POS values.	
Cor	nments: Deuterium exposure optimm	ized for Segment B. FP-POS=4 was	chosen because pr	LIFETIME-POS=L P1	that it has slightly more counts than t	he other FP-POS values.	
Cor	nments: Deuterium exposure optimm	ized for Segment B. FP-POS=4 was	chosen because pr	LIFETIME-POS=L P1	that it has slightly more counts than t	he other FP-POS values.	



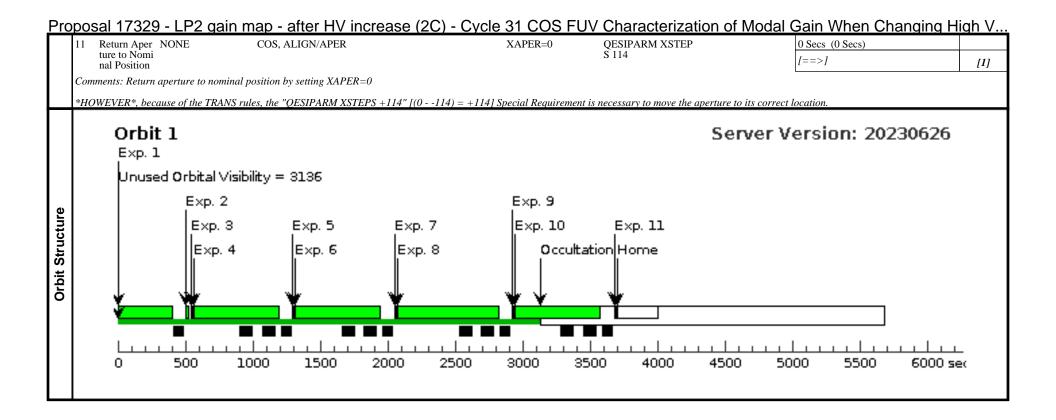
Proposal 17329 - LP2 gain map - after HV increase (2C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V...

	Proposal 17329, LP2 gain map - after HV increase (2C), implementation	Fri Jan 26 16:00:29 GMT 2024
	Diagnostic Status: Warning	
Ξ	Scientific Instruments: S/C, COS, COS/FUV	
Vis	Special Requirements: ON HOLD ; PARALLEL	
	Comments: This visit collects data at LP2. It uses the HV values appropriate for LP2 (173/175).	
	On Hold Comments: Only needed if HV changed during Cycle 31 HV Values will have to be updated before execution!	
Diagnostics	(LP2 gain map - after HV increase (2C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orl
1		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU			125 Secs (125 Secs)	
	9 Deuterium Exposure - S			1309 A	М;			[==>]	
	et up at LP1	,			BUFFER-TIME=19 6;				
					FP-POS=1;				
					SEGMENT=BOTH;				[]
					LIFETIME-POS=L				
					P1				
Con 2			ture to LP1, which is near the center of	f the aperture range	used in this program. It a			20.5 (20.5)	
2	Adjust HV t o LP2 value		S/C, DATA, NONE			SAA CONTOUR 31		39 Secs (39 Secs)	
	8					SPEC COM INSTR ELHVADJPROP;		[==>]	
						QASISTATES COS			
						FUV HVNOM HVN OM;	1		
						QESIPARM ENDC			
						TSA 173;			
						QESIPARM ENDC			
						TSB 175; QESIPARM SEGM			
						ENT AB			
Con	ıments: Adjust	the HV to the LP2 v	alues.						
Sinc	e the HV is no	t increasing, exposu	$re\ time = 39\ seconds$						
3	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=-60			0.0 Secs (0 Secs)	
	justment 1 f or Segment							[==>]	
	A								[]
Con	nments: Put the	e aperture in the app	propriate position to illuminate a portion	on of the LP2 region	n of the detector when illu	minating Segment A w	vith G130M/1309.		
FCA	A LAPXSTP va	lue at LP1 is -153							
Des	ired LAPXSTF	value for FCA to ill	uminate Segment A with G130M/1309	at Position 1 for LH	P2 is -213				
The	refore, XAPER	R is set to -213153	- = -60						
4		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU			440 Secs (440 Secs)	
	9 Deuterium Exposure 1			1309 A	M;			[==>]	
	Laposare I				BUFFER-TIME=16 5;				
					FP-POS=1;				
					11 - 103 - 1				
					SEGMENT=BOTH;				
					SEGMENT=BOTH; LIFETIME-POS=L P1				
Con			ized for Segment A. FP-POS=1 was c	hosen because previ	SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show th	at it has slightly more			
<u>Con</u> 5	Aperture Ad	NONE	<i>ized for Segment A. FP-POS=1 was c</i> COS, ALIGN/APER	hosen because previ	SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more QESIPARM XSTEF		0.0 Secs (0 Secs)	
<u>Con</u> 5	Aperture Ad justment 2 f or Segment	NONE		hosen because previ	SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show th	at it has slightly more			
5	Aperture Ad justment 2 f or Segment A	NONE	COS, ALIGN/APER		SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show th XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEF S -54)	0.0 Secs (0 Secs)	
5 Con	Aperture Ad justment 2 f or Segment A mments: Put the	NONE e aperture in the app			SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show th XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEF S -54)	0.0 Secs (0 Secs)	
5 Con FCA	Aperture Ad justment 2 f or Segment A <i>aments: Put the</i> A LAPXSTP va	NONE e aperture in the app lue at LP1 is -153	COS, ALIGN/APER	on of the LP2 region	SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show th XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEF S -54)	0.0 Secs (0 Secs)	

Proposal 17329 - LP2 gain map - after HV increase (2C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V..

<u> 11323 - Li z yali</u>	<u>1111ap - alter FTV Illereas</u>	<u>e (20) - Oy</u>		Characterization of	ivioual Gain when change	ng nign v
6 G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	1	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16	i	[==>]	
			5; FP-POS=1;			
			SEGMENT=BOTH			[1]
			LIFETIME-POS=L	,		
			P1			
Comments: Deuterium exposure opti 7 Aperture Ad NONE	mized for Segment A. FP-POS=1 was of COS, ALIGN/APER	chosen because pre	vious observations show th XAPER=-62	aat it has slightly more counts than QESIPARM XSTEP	the other FP-POS values. 0.0 Secs (0 Secs)	
justment 1 f or Segment B	COS, ALIOWAI EK		AAI EK02	S 52	[==>]	[1]
	ppropriate position to illuminate a porti	on of the LP2 regi	on of the detector when illu	minating Segment B with G160M/	1600.	
FCA LAPXSTP value at LP1 is -153	r i i i i i i i i i i i i i i i i i i i		,	00		
	illuminate Segment B with G160M/1600) at Position 1 for 1	LP2 is -215			
Therefore, XAPER is set to -21515	53 = -62. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS 52"	[(-62114) = +52] Special Requi	irement is necessary to move the aperture t	to the correct locat
ion. 8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	Т	440 Secs (440 Secs)	
0 Deuterium	C05/F0V, 11ME-TAO, FCA	1600 A	M;		f = > 1	
Exposure 1		100011	BUFFER-TIME=16 5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH	,		
			LIFETIME-POS=L			
Commentes Deuterium exposure enti	mmized for Segment B. FP-POS=4 was	ahasan haagusa n	P1	that it has clightly more counts tha	n the other FP POS values	
9 Aperture Ad NONE	COS, ALIGN/APER	chosen because pr	XAPER=-114	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B				Š -52	[==>]	[1]
	ppropriate position to illuminate a porti	on of the LP2 regi	on of the detector when illu	minating Segment B with G160M/.	1600.	I
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to ot. To leave some pad, I will set it to	illuminate Segment B with G160M/1600 match the G130M exposure (-267).) at Position 2 for 1	LP2 is -280, but the apertur	re soft stop is at -275 and we don't	want to exceed that value when including	the 5 step oversho
Therefore, XAPER is set to -2671: ation.	53 = -114. *HOWEVER*, because of the	e TRANS rules, the	e "QESIPARM XSTEPS -52	" [(-11462) = -52] Special Requ	uirement is necessary to move the aperture	to the correct loc
10 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	I	440 Secs (440 Secs)	
0 Deuterium Exposure 2		1600 A	M; BUFFER-TIME=16		[==>]	
			5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH	;		
			LIFETIME-POS=L P1			
Comments: Deuterium exposure opti	mmized for Segment B. FP-POS=4 was	chosen because p		that it has slightly more counts tha	n the other FP-POS values.	I
		-				



Proposal 17329 - LP3 gain map - before HV increase (3A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High ...

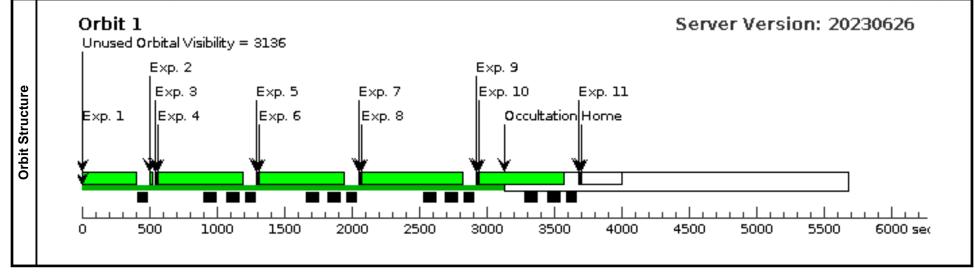
	Proposal 17329, LP3 gain map - before HV increase (3A), implementation	Fri Jan 26 16:00:29 GMT 2024
	Diagnostic Status: Warning	
Ξ	Scientific Instruments: S/C, COS, COS/FUV	
Vis	Special Requirements: ON HOLD ; PARALLEL	
	Comments: This visit collects data at LP3. It uses the HV values appropriate for LP3 (173/175).	
	On Hold Comments: Only needed if HV changed during Cycle 31 HV Values will have to be updated before execution!	
Diagnostics	(LP3 gain map - before HV increase (3A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

1	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Or
		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU			125 Secs (125 Secs)	
	9 Deuterium Exposure - S			1309 A	M;			[==>]	
	et up at LP1				BUFFER-TIME=19 6;				
					FP-POS=1;				[.
					SEGMENT=BOTH;				L
					LIFETIME-POS=L				
					P1				
Com			ure to LP1, which is near the center of	the aperture range	used in this program. It c			20.5 (20.5)	
2	Adjust HV t o LP3 value	DARK	S/C, DATA, NONE			SAA CONTOUR 31		39 Secs (39 Secs)	
	S					SPEC COM INSTR ELHVADJPROP;		[==>]	
						QASISTATES COS			
						FUV HVNOM HVN OM;	1		
						QESIPARM ENDC			[
						TSA 173;			L
						QESIPARM ENDC			
						TSB 175; OESIPARM SEGM			
						ENT AB			
Com	ments: Adjust	the HV to LP3 value	s.						
Sinc	e the HV is no	t increasing, exposur	e time = 39 seconds						
3	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=81			0.0 Secs (0 Secs)	
	justment 1 f or Segment							[==>]	[
	A								L
Con	ments: Put the	a an antice in the anne	nomuiato monision to illuurinato a monsi.	C (1 I D 2 ·					-
Con		e aperiure in ine appi	ropriale position to illuminale a portic	on of the LP3 region	of the detector when illu	minating Segment A w	vith G130M/1309.		
FCA	LAPXSTP va	lue at LP1 is -153				minating Segment A w	vith G130M/1309.		·
FCA	LAPXSTP va	lue at LP1 is -153	uminate Segment A with G130M/1309			minating Segment A w	ith G130M/1309.		
FCA Desi	LAPXSTP va ired LAPXSTP refore, XAPER	lue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309 - +81	at Position 1 for LP	3 is -72		vith G130M/1309.		
FCA Desi	LAPXSTP va ired LAPXSTP <u>refore, XAPER</u> G130M/130	lue at LP1 is -153 value for FCA to illi	uminate Segment A with G130M/1309	at Position 1 for LP G130M	3 is -72 CURRENT=MEDIU		ith G130M/1309.	440 Secs (440 Secs)	
FCA Desi	LAPXSTP va ired LAPXSTP refore, XAPER	lue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309 - +81	at Position 1 for LP	3 is -72 CURRENT=MEDIU M;		ith G130M/1309.	440 Secs (440 Secs) [==>]	
FCA Desi	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309 - +81	at Position 1 for LP G130M	3 is -72 CURRENT=MEDIU		ith G130M/1309.		
FCA Desi	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309 - +81	at Position 1 for LP G130M	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16		ith G130M/1309.		
FCA Desi	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309 - +81	at Position 1 for LP G130M	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5;		ith G130M/1309.		
FCA Desi	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309 - +81	at Position 1 for LP G130M	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L		ith G130M/1309.		
FCA Desi <u>Ther</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1	lue at LP1 is -153 value for FCA to illu <u>t is set to -72153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 <u>= +81</u> COS/FUV, TIME-TAG, FCA	at Position 1 for LP G130M 1309 A	<i>3 is -72</i> CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>]	[
FCA Desi <u>Ther</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1	lue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 - +81	at Position 1 for LP G130M 1309 A	<i>3 is -72</i> CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1		counts than the ot	[==>]	[.
FCA Desi <u>Ther</u> 4	A LAPXSTP va. ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f	lue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM	zed for Segment A. FP-POS=1 was c.	at Position 1 for LP G130M 1309 A	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more	counts than the ot	[==>] her FP-POS values.	
FCA Desi <u>Ther</u> 4	A LAPXSTP va. ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad	lue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM	zed for Segment A. FP-POS=1 was c.	at Position 1 for LP G130M 1309 A	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more QESIPARM XSTEF	counts than the ot	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Desi <u>Ther</u> 4 <u>Com</u> 5	A LAPXSTP va. ired LAPXSTP G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f or Segment A	lue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM	zed for Segment A. FP-POS=1 was c.	at Position 1 for LP G130M 1309 A	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=25	<u>at it has slightly more</u> QESIPARM XSTEF S -56	<u>counts than the ot</u>	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Desi <u>Ther</u> 4 <u>Com</u> 5	A LAPXSTP va. ired LAPXSTP G130M/130 9 Deuterium Exposure 1 Exposure 1 Aperture Ad justment 2 f or Segment A aments: Put the	lue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM	aminate Segment A with G130M/1309 <u>+ +81</u> COS/FUV, TIME-TAG, FCA <u>zed for Segment A. FP-POS=1 was c.</u> COS, ALIGN/APER	at Position 1 for LP G130M 1309 A	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=25	<u>at it has slightly more</u> QESIPARM XSTEF S -56	<u>counts than the ot</u>	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Desi <u>Ther</u> 4 5 Com FCA	A LAPXSTP va. ired LAPXSTP G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f or Segment A aments: Put the ALAPXSTP va.	lue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM <u>ium exposure optimi</u> NONE e aperture in the appu lue at LP1 is -153	aminate Segment A with G130M/1309 <u>+ +81</u> COS/FUV, TIME-TAG, FCA <u>zed for Segment A. FP-POS=1 was c.</u> COS, ALIGN/APER	at Position 1 for LP G130M 1309 A hosen because previ	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=25 of the detector when illu	<u>at it has slightly more</u> QESIPARM XSTEF S -56	<u>counts than the ot</u>	[==>] her FP-POS values. 0.0 Secs (0 Secs)	

Proposal 17329 - LP3 gain map - before HV increase (3A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High .

<u> 11529 - Li 5 yan</u>		<u> 136 (JA) - (</u>			I UI IVIUUAI GAILI VILIELI GHALIYI	<u>ing riigir.</u>
6 G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16	i	[==>]	
			5; FP-POS=1;			
			SEGMENT=BOTH			[1]
			LIFETIME-POS=L	,		
			P1			
	nized for Segment A. FP-POS=1 was c	hosen because pr	vevious observations show th XAPER=69			
7 Aperture Ad NONE justment 1 f or Segment B	COS, ALIGN/APER		XAPEK=09	QESIPARM XSTEP S 44	0.0 Secs (0 Secs) [==>]	[1]
	propriate position to illuminate a porti	on of the LP3 regi	ion of the detector when illu	uminating Segment B with G160	DM/1600.	
FCA LAPXSTP value at LP1 is -153		, ,	5	0 0		
	lluminate Segment B with G160M/1600	at Position 1 for	LP3 is -84			
Therefore, XAPER is set to -84153	= +69. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS 44"	[(+69 - +25) = +44] Special Re	equirement is necessary to move the aperture to	the correct locat
ion. 8 G160M/160 DEUTERIUM	COS/ELU/ TIME TAC ECA	C1(0)M	CUDDENT MEDI	T	440 Sec. (440 Sec.)	
0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M 1600 A	CURRENT=MEDIU M;	J	440 Secs (440 Secs)	
Exposure 1		1000 A	BUFFER-TIME=16 5;	5	[~]	
			FP-POS=4;			[1]
			SEGMENT=BOTH	;		
			LIFETIME-POS=L			
Comments: Deuterium exposure optin	nmized for Segment B. FP-POS=4 was	chosen because n	P1 previous observations show	that it has slightly more counts	than the other FP-POS values	
9 Aperture Ad NONE	COS, ALIGN/APER	<u> </u>	XAPER=13	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B				S -56	[==>]	[1]
Comments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP3 regi	ion of the detector when illu	minating Segment B with G160	<i>DM/1600.</i>	
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to il	lluminate Segment B with G160M/1600	at Position 2 for	LP3 is -140.			
Therefore, XAPER is set to -14015. ation.	3 = +13. *HOWEVER*, because of the	TRANS rules, the	e "QESIPARM XSTEPS -56	" [(+13 - +69) = -56] Special H	Requirement is necessary to move the aperture to	o the correct loc
10 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	J	440 Secs (440 Secs)	
0 Deuterium Exposure 2		1600 A	M;		[==>]	
L			BUFFER-TIME=16 5;)		
			FP-POS=4;			[1]
			SEGMENT=BOTH	•		
			LIFETIME-POS=L			
Comments: Deuterium exposure optin	nmized for Segment B. FP-POS=4 was	chosen because n	P1 previous observations show	that it has slightly more counts	than the other FP_POS values	
11 Return Aper NONE	COS, ALIGN/APER	enosen beeuwse p	XAPER=0	QESIPARM XSTEP	0 Secs (0 Secs)	
ture to Nomi nal Position				S -13	[==>]	[1]
Comments: Return aperture to nomina	al position by setting XAPER=0				1	L-J
*	1 2 0	(A) 12) 1215	· 1 p · · · · ·			
HOWEVER, because of the TRANS	rules, the "QESIPARM XSTEPS -13"	$f(0 - 13) = -13 S_{l}$	pecial Requirement is neces	sary to move the aperture to its	correct location.	





Proposal 17329 - LP3 gain map - after HV increase (3C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V...

	Proposal 17329, LP3 gain map - after HV increase (3C), implementation	Fri Jan 26 16:00:29 GMT 2024
	Diagnostic Status: Warning	
Ξ	Scientific Instruments: S/C, COS, COS/FUV	
Vis	Special Requirements: ON HOLD ; PARALLEL	
	Comments: This visit collects data at LP3. It uses the HV values appropriate for LP3 (173/175).	
	On Hold Comments: Only needed if HV changed during Cycle 31 HV Values will have to be updated before execution!	
Diagnostics	(LP3 gain map - after HV increase (3C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

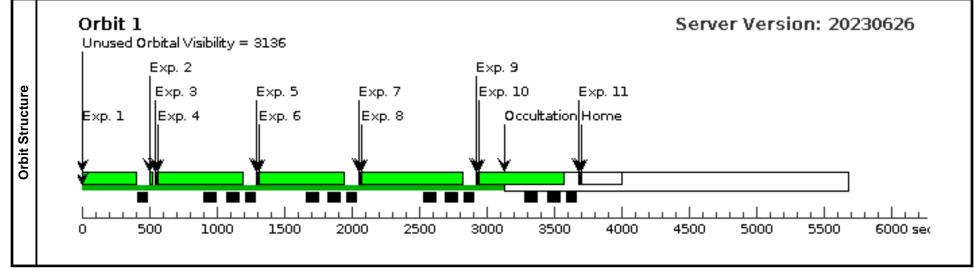
		Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Ort
	G130M/130 9 Deuterium	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M;			$\frac{125 \text{ Secs } (125 \text{ Secs})}{[==>]}$	
	Exposure - S et up at LP1			1309 A	BUFFER-TIME=19			[==>]	
	et up ut 11 1				6; ED DOS-1.				
					FP-POS=1; SEGMENT=BOTH;				[]
					LIFETIME-POS=L				
					P1				
			ire to LP1, which is near the center of	f the aperture rang	e used in this program. It a	also sets the HV to the	LP1 values.		
	Adjust HV t o LP3 value	DARK	S/C, DATA, NONE			SAA CONTOUR 31	;	39 Secs (39 Secs)	
	s					SPEC COM INSTR ELHVADJPROP;		[==>]	
						QASISTATES COS FUV HVNOM HVN OM:	1		
						QESIPARM ENDC TSA 173;			[]
						QESIPARM ENDC TSB 175;			
						QESIPARM SEGM			
Com	montos A disects	the HV to LP3 values	a			ENT AB			
	v								
	Aperture Ad	increasing, exposure	e time = 39 seconds COS, ALIGN/APER		XAPER=81			0.0 Secs (0 Secs)	
	justment 1 f	NONE	COS, ALION/AFER		AAFEK-01			[==>]	
	or Segment							1>1	
~									14
Com	ments: Put the	aperture in the appr	ropriate position to illuminate a portio	on of the LP3 regio	n of the detector when illu	minating Segment A w	ith G130M/1309.		
FCA Desir	LAPXSTP val red LAPXSTP	ue at LP1 is -153 value for FCA to illu	uminate Segment A with G130M/1309			minating Segment A w	ith G130M/1309.		
FCA Desir There	LAPXSTP val red LAPXSTP efore, XAPER	ue at LP1 is -153 value for FCA to illu is set to -72153 =	minate Segment A with G130M/1309 : +81	at Position 1 for L	P3 is -72		ith G130M/1309.		
FCA Desir <u>There</u> 4	LAPXSTP val. red LAPXSTP efore, XAPER G130M/130	ue at LP1 is -153 value for FCA to illu	uminate Segment A with G130M/1309	at Position 1 for L G130M	P3 is -72 CURRENT=MEDIU		ith G130M/1309.	440 Secs (440 Secs)	
FCA Desir <u>There</u>	LAPXSTP val red LAPXSTP efore, XAPER	ue at LP1 is -153 value for FCA to illu is set to -72153 =	minate Segment A with G130M/1309 : +81	at Position 1 for L	P3 is -72		ith G130M/1309.	440 Secs (440 Secs) [==>]	
FCA Desir <u>There</u>	LAPXSTP vali red LAPXSTP efore, XAPER G130M/130 9 Deuterium	ue at LP1 is -153 value for FCA to illu is set to -72153 =	minate Segment A with G130M/1309 : +81	at Position 1 for L G130M	P3 is -72 CURRENT=MEDIU M;		ith G130M/1309.		
FCA Desir <u>There</u>	LAPXSTP vali red LAPXSTP efore, XAPER G130M/130 9 Deuterium	ue at LP1 is -153 value for FCA to illu is set to -72153 =	minate Segment A with G130M/1309 : +81	at Position 1 for L G130M	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16		ith G130M/1309.		
FCA Desir <u>There</u> I	LAPXSTP vali red LAPXSTP efore, XAPER G130M/130 9 Deuterium	ue at LP1 is -153 value for FCA to illu is set to -72153 =	minate Segment A with G130M/1309 : +81	at Position 1 for L G130M	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;		ith G130M/1309.		
TCA Desir There	LAPXSTP vali red LAPXSTP efore, XAPER G130M/130 9 Deuterium	ue at LP1 is -153 value for FCA to illu is set to -72153 =	minate Segment A with G130M/1309 : +81	at Position 1 for L G130M	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;		ith G130M/1309.		
FCA Desir <u>There</u>	LAPXSTP val. red LAPXSTP efore, XAPER G130M/130 9 Deuterium Exposure 1	ue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM	minate Segment A with G130M/1309 : +81	G130M 1309 A	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>]	
FCA Desir There 4	LAPXSTP val. red LAPXSTP efore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuteri Aperture Ad	iue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 : +81 COS/FUV, TIME-TAG, FCA	G130M 1309 A	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more QESIPARM XSTEP	counts than the oth	[==>]	
FCA Desir F <u>here</u> F	LAPXSTP val. red LAPXSTP efore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuteri	iue at LP1 is -153 value for FCA to illu <u>is set to -72153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 <u>++81</u> COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was c	G130M 1309 A	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 vious observations show th	nat it has slightly more	counts than the oth	[==>] er FP-POS values.	
FCA Desir F <u>here</u>	LAPXSTP val. red LAPXSTP efore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deutern Aperture Ad justment 2 f or Segment A	iue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM ium exposure optimis NONE	uminate Segment A with G130M/1309 <u>++81</u> COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was c	at Position 1 for L G130M 1309 A	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 vious observations show th XAPER=25	at it has slightly more QESIPARM XSTEF S -56	<u>counts than the oth</u>	[==>] er FP-POS values. 0.0 Secs (0 Secs)	
FCA Desir There 4 4 Comr 5 Comr FCA	LAPXSTP val. red LAPXSTP efore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuteri Aperture Ad justment 2 f or Segment A ments: Put the LAPXSTP val.	iue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM ium exposure optimiz NONE aperture in the appr iue at LP1 is -153	uminate Segment A with G130M/1309 <u>x +81</u> COS/FUV, TIME-TAG, FCA <u>zed for Segment A. FP-POS=1 was c</u> COS, ALIGN/APER	at Position 1 for L G130M 1309 A hosen because prev	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 vious observations show th XAPER=25 n of the detector when illust	at it has slightly more QESIPARM XSTEF S -56	<u>counts than the oth</u>	[==>] er FP-POS values. 0.0 Secs (0 Secs)	
FCA Desir F <u>here</u> Comr Comr Comr FCA	LAPXSTP val. red LAPXSTP efore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuteri Aperture Ad justment 2 f or Segment A ments: Put the LAPXSTP val. red LAPXSTP val.	iue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM ium exposure optimit NONE aperture in the appr ue at LP1 is -153 value for FCA to illu	uminate Segment A with G130M/1309 <u>++81</u> COS/FUV, TIME-TAG, FCA <u>zed for Segment A. FP-POS=1 was c</u> COS, ALIGN/APER ropriate position to illuminate a portion uminate Segment A with G130M/1309	at Position 1 for L G130M 1309 A hosen because pret on of the LP3 regio at Position 2 for L	P3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 vious observations show th XAPER=25 n of the detector when illus P3 is -128	aat it has slightly more QESIPARM XSTER S -56 minating Segment A w	<u>counts than the oth</u>	[==>] er FP-POS values. 0.0 Secs (0 Secs)	

Proposal 17329 - LP3 gain map - after HV increase (3C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V.

Proposal 17329 - LP3 gain map - after HV increase (3C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V..

νpo	301 17 520				000100	Onaracienzation of Moda	I Gain which Ghanging	TIIGH V.
6		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU		440 Secs (440 Secs)	
	9 Deuterium Exposure 2			1309 A	M; DUEEED TIME-16		[==>]	
					BUFFER-TIME=16 5;			
					FP-POS=1;			[1]
					SEGMENT=BOTH;			
					LIFETIME-POS=L P1			
Con	ments · Deuter	ium exposure optimiz	ed for Segment A FP-POS-1 was ch	osen hecause previo		at it has slightly more counts than the other	r FP-POS values	
7	Aperture Ad		COS, ALIGN/APER	osen beeuuse previe	XAPER=69	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 1 f or Segment B					S 44	[==>]	[1]
Com	ments: Put the	aperture in the appro	opriate position to illuminate a portio	n of the LP3 region	of the detector when illu	minating Segment B with G160M/1600.		
FCA	A LAPXSTP val	ue at LP1 is -153						
			minate Segment B with G160M/1600	at Position 1 for LP.	3 is -84			
The	refore, XAPER	is set to -84153 =	+69. *HOWEVER*, because of the T	RANS rules, the "QI	ESIPARM XSTEPS 44" [(+69 - +25) = +44] Special Requirement is	s necessary to move the aperture to th	e correct locat
ion.	G1 (0) (/1 (0)			G1 (0) (440.0 (440.0)	
8	0 Deuterium	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	CURRENT=MEDIU M;		440 Secs (440 Secs)	
	Exposure 1			1000 A	BUFFER-TIME=16		[==>]	
					5; ED DOS 4:			
					FP-POS=4; SEGMENT=BOTH;			[1]
					LIFETIME-POS=L			
					P1			
Con	ments: Deuter	ium exposure optimm	ized for Segment B. FP-POS=4 was c	hosen because prev	ious observations show t	hat it has slightly more counts than the other	er FP-POS values.	
9	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=13	QESIPARM XSTEP S -56	0.0 Secs (0 Secs)	
	justment 2 f or Segment B					5-30	[==>]	[1]
Com	ments: Put the	aperture in the appro	opriate position to illuminate a portio	n of the LP3 region	of the detector when illu	minating Segment B with G160M/1600.		
FCA Desi	LAPXSTP val ired LAPXSTP	ue at LP1 is -153 value for FCA to illur	minate Segment B with G160M/1600	at Position 2 for LP.	3 is -140.			
Ther ation		is set to -140153 =	+13. *HOWEVER*, because of the	TRANS rules, the "Q	DESIPARM XSTEPS -56'	" [(+13 - +69) = -56] Special Requirement	is necessary to move the aperture to t	he correct loc
10	G160M/160 0 Deuterium	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU M;		440 Secs (440 Secs)	
	Exposure 2			1600 A	BUFFER-TIME=16		[==>]	
					5;			
					FP-POS=4;			[1]
					SEGMENT=BOTH;			
					LIFETIME-POS=L P1			
Con	iments: Deuter	ium exposure optimm	ized for Segment B. FP-POS=4 was o	hosen because prev		hat it has slightly more counts than the oth	er FP-POS values.	I
	Return Aper		COS, ALIGN/APER		XAPER=0	QESIPARM XSTEP	0 Secs (0 Secs)	
	ture to Nomi nal Position					Š -13	[==>]	[1]
Con		aperture to nominal	position by setting XAPER=0				L	1-1
HC	DWEVER, bec	ause of the TRANS ru	les, the "QESIPARM XSTEPS -13" [(0 - 13) = -13] Speci	al Requirement is necess	sary to move the aperture to its correct loca	tion.	





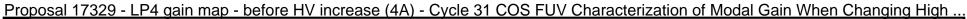
Proposal 17329 - LP4 gain map - before HV increase (4A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High ...

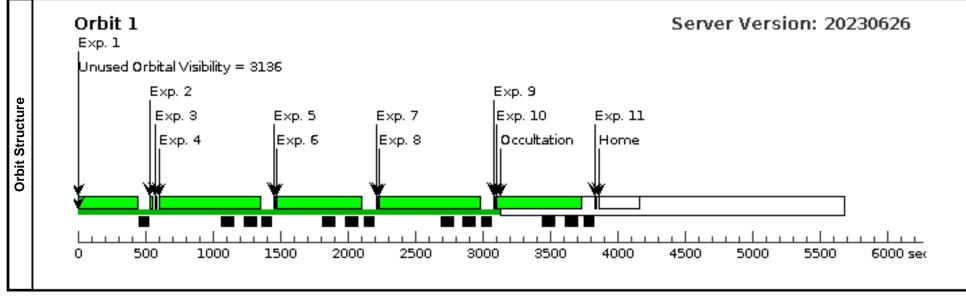
	Proposal 17329, LP4 gain map - before HV increase (4A), implementation	Fri Jan 26 16:00:29 GMT 2024
	Diagnostic Status: Warning	
Ξ	Scientific Instruments: S/C, COS, COS/FUV	
Vis	Special Requirements: ON HOLD ; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for LP4 (173/175).	
	On Hold Comments: Only needed if HV changed during Cycle 31 HV Values will have to be updated before execution!	
Diagnostics	(LP4 gain map - before HV increase (4A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

1	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Or
		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU			125 Secs (125 Secs)	
	0 Deuterium Exposure - S			1600 A	M;			[==>]	
	et up at LP1				BUFFER-TIME=19 6;				
					FP-POS=4;				[
					SEGMENT=BOTH;	:			L
					LIFETIME-POS=L				
					P1				
<u>Con</u> 2	<u>iments: Short e</u> Adjust HV t		ure to LP1, which is near the center of S/C. DATA. NONE	f the aperture range	used in this program. It c	also sets the HV to the SAA CONTOUR 3		39 Secs (39 Secs)	
2	o LP4 value	DAKK	S/C, DATA, NONE			SAA CONTOUR 3 SPEC COM INSTR	·	59 Secs (59 Secs)	-
	S					ELHVADJPROP;		[>]	
						QASISTATES COS			
						FUV HVNOM HV OM;	N		
						QESIPARM ENDC			1
						TSA 173;			
						QESIPARM ENDC TSB 175;			
						QESIPARM SEGM	ſ		
						ENT AB			
Con	nments: Adjust	the HV to LP4 value	25.						
Sinc	e the HV is no	t increasing, exposur	re time = 39 seconds						
3	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=121			0.0 Secs (0 Secs)	
	justment 1 f or Segment							[==>]	[
	A								L .
	monte. Dut the								
Con	imenis. I ui ine	e aperture in the app	ropriate position to illuminate a portio	on of the LP3 region	of the detector when illu	minating Segment A v	vith G130M/1309.		1
FCA	LAPXSTP va	lue at LP1 is -153			U Contraction of the second se	minating Segment A v	vith G130M/1309.		
FCA Des	LAPXSTP va ired LAPXSTP	lue at LP1 is -153 Value for FCA to illi	uminate Segment A with G130M/1309		U Contraction of the second se	minating Segment A v	vith G130M/1309.		
FCA Des	A LAPXSTP va ired LAPXSTP refore, XAPER	lue at LP1 is -153 value for FCA to illi t is set to -32153 =	uminate Segment A with G130M/1309 = +121	at Position 1 for LF	4 is -32		vith G130M/1309.	440 Socs (440 Socs)	
FCA Des	A LAPXSTP va ired LAPXSTP refore, XAPER	lue at LP1 is -153 value for FCA to illi <u>tis set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309	at Position 1 for LF	U Contraction of the second se		vith G130M/1309.	440 Secs (440 Secs)	
FCA Des	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130	lue at LP1 is -153 value for FCA to illi <u>tis set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121	at Position 1 for LF	4 is -32 CURRENT=MEDIU		vith G130M/1309.	440 Secs (440 Secs) [==>]	
FCA Des	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi <u>tis set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121	at Position 1 for LF	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5;		vith G130M/1309.		
FCA Des	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi <u>tis set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121	at Position 1 for LF	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1;		vith G130M/1309.		
FCA Des	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi <u>tis set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121	at Position 1 for LF	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;		vith G130M/1309.		
FCA Des	<i>LAPXSTP va</i> <i>ired LAPXSTP</i> <i>refore, XAPER</i> G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illi <u>tis set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121	at Position 1 for LF	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1;		vith G130M/1309.		
FCA Des <u>The</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1	lue at LP1 is -153 value for FCA to illi 2 is set to -32153 = DEUTERIUM	uminate Segment A with G130M/1309 = +121	G130M 1309 A	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>]	
FCA Des <u>The</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 Exposure 1 <u>uments: Deuter</u> Aperture Ad	lue at LP1 is -153 value for FCA to illi <u>2 is set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA	G130M 1309 A	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more QESIPARM XSTE	e counts than the ot	[==>]	
FCA Des <u>The</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f	lue at LP1 is -153 value for FCA to illi <u>2 is set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was c	G130M 1309 A	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	tat it has slightly more	e counts than the ot	[==>] her FP-POS values.	
FCA Des <u>The</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 Exposure 1 <u>uments: Deuter</u> Aperture Ad	lue at LP1 is -153 value for FCA to illi <u>2 is set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was c	G130M 1309 A	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more QESIPARM XSTE	e counts than the ot	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Des <u>The</u> 4 5	A LAPXSTP va ired LAPXSTP G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f or Segment A	lue at LP1 is -153 value for FCA to illi <u>e is set to -32153 =</u> DEUTERIUM	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was c	at Position 1 for LF G130M 1309 A	<i>V4 is -32</i> CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=67	at it has slightly more QESIPARM XSTE S -54	<u>e counts than the ot</u> P	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Des <u>The</u> 4 <u>Con</u> 5 Con	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 Exposure 1 Aperture Ad justment 2 f or Segment A uments: Put the A LAPXSTP va	lue at LP1 is -153 value for FCA to illi <u>2 is set to -32153 =</u> DEUTERIUM <u>rium exposure optimi</u> NONE e aperture in the app lue at LP1 is -153	uminate Segment A with G130M/1309 <u>= +121</u> COS/FUV, TIME-TAG, FCA <u>ized for Segment A. FP-POS=1 was c</u> COS, ALIGN/APER ropriate position to illuminate a portio	at Position 1 for LF G130M 1309 A hosen because previ	<i>24 is -32</i> CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=67 of the detector when illu	at it has slightly more QESIPARM XSTE S -54	<u>e counts than the ot</u> P	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Des T <u>he</u> 4 Con FCA	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 Exposure 1 Aperture Ad justment 2 f or Segment A uments: Put the A LAPXSTP va	lue at LP1 is -153 value for FCA to illi <u>2 is set to -32153 =</u> DEUTERIUM <u>rium exposure optimi</u> NONE e aperture in the app lue at LP1 is -153	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA i <u>zed for Segment A. FP-POS=1 was c</u> COS, ALIGN/APER	at Position 1 for LF G130M 1309 A hosen because previ	<i>24 is -32</i> CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=67 of the detector when illu	at it has slightly more QESIPARM XSTE S -54	<u>e counts than the ot</u> P	[==>] her FP-POS values. 0.0 Secs (0 Secs)	

Proposal 17329 - LP4 gain map - before HV increase (4A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High .

<u> 17523 - Li 4 yani</u>		<u>136 (4A) - C</u>			i or moual Gain when Changi	ng mgn .
6 G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	I	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16	i	[==>]	
			5; FP-POS=1;			(1)
			SEGMENT=BOTH	:		[1]
			LIFETIME-POS=L	, ,		
Compared Devices		1 1	P1			
7 Aperture Ad NONE	nized for Segment A. FP-POS=1 was c COS, ALIGN/APER	nosen because pre	XAPER=112	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				S 45	[==>]	[1]
Comments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP3 regi	on of the detector when illu	minating Segment B with G160	М/1600.	
FCA LAPXSTP value at LP1 is -153						
Desired LAPXSTP value for FCA to it	lluminate Segment B with G160M/1600	at Position 1 for 1	LP4 is -41			
	= +112. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS 45"	[(+112 - +67) = +45] Special	Requirement is necessary to move the aperture to	o the correct lo
cation. 8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	I	440 Secs (440 Secs)	
0 Deuterium Exposure 1		1600 A	М;		[==>]	
Exposure 1			BUFFER-TIME=16 5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH	;		
			LIFETIME-POS=L P1			
Comments: Deuterium exposure optin	nmized for Segment B. FP-POS=4 was	chosen because p		that it has slightly more counts t	than the other FP-POS values.	
9 Aperture Ad NONE	COS, ALIGN/APER	·	XAPER=58	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B				S -54	[==>]	[1]
Comments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP3 regi	on of the detector when illu	minating Segment B with G160.	<i>M/1600.</i>	
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it	lluminate Segment B with G160M/1600	at Position 2 for	LP3 is -95.			
ation.	= +58. *HOWEVER*, because of the	TRANS rules, the '	"QESIPARM XSTEPS -54"	[(+58 - +112) = -54] Special R	Requirement is necessary to move the aperture to	the correct loc
10 G160M/160 DEUTERIUM 0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU M:	I	440 Secs (440 Secs)	
Exposure 2		1600 A	BUFFER-TIME=16		[==>]	
			5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH	• •		
			LIFETIME-POS=L P1			
Comments: Deuterium exposure optim	nmized for Segment B. FP-POS=4 was	chosen because p	revious observations show	that it has slightly more counts t	than the other FP-POS values.	
11 Return Aper NONE ture to Nomi	COS, ALIGN/APER		XAPER=0	QESIPARM XSTEP S -58	0 Secs (0 Secs)	
nal Position				06-6	[==>]	[1]
Comments: Return aperture to nomine	al position by setting XAPER=0					
HOWEVER, because of the TRANS	rules, the "QESIPARM XSTEPS -58"	f(0 - 58) = -58] Sp	ecial Requirement is neces.	sary to move the aperture to its	correct location.	





Proposal 17329 - LP4 gain map - after HV increase (4C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V...

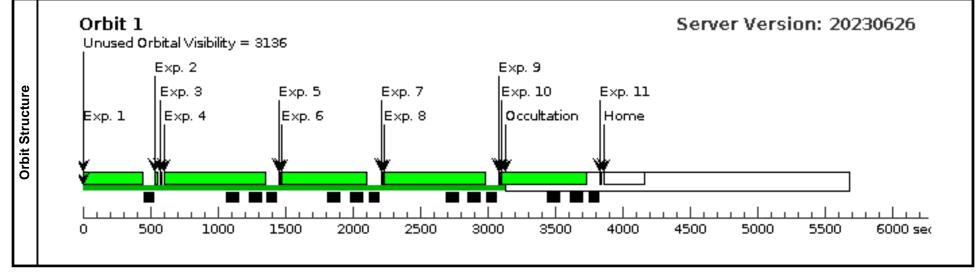
	Proposal 17329, LP4 gain map - after HV increase (4C), implementation	Fri Jan 26 16:00:29 GMT 2024
	Diagnostic Status: Warning	
Ξ	Scientific Instruments: S/C, COS, COS/FUV	
Vis	Special Requirements: ON HOLD ; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for LP4 (173/175).	
	On Hold Comments: Only needed if HV changed during Cycle 31 HV Values will have to be updated before execution!	
Diagnostics	(LP4 gain map - after HV increase (4C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

1	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Or
		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU			125 Secs (125 Secs)	
	0 Deuterium Exposure - S			1600 A	M;			[==>]	
	et up at LP1				BUFFER-TIME=19 6;				
					FP-POS=4;				, r
					SEGMENT=BOTH;				[
					LIFETIME-POS=L				
					P1				
<u>Con</u> 2	<u>iments: Short e</u> Adjust HV t		ure to LP1, which is near the center of S/C. DATA. NONE	^{the} aperture range	used in this program. It a			20 Saga (20 Saga)	
2	o LP4 value	DAKK	S/C, DATA, NONE			SAA CONTOUR 31 SPEC COM INSTR		39 Secs (39 Secs) $I = > I$	
	S					ELHVADJPROP;		[==>]	
						QASISTATES COS			
						FUV HVNOM HVN OM;	1		
						QESIPARM ENDC			[
						TSA 173;			L
						QESIPARM ENDC TSB 175:			
						OESIPARM SEGM			
						ENT AB			
Con	nments: Adjust	the HV to LP4 value	<i>s</i> .						
Sinc	e the HV is no	t increasing, exposur	e time = 39 seconds						
3	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=121			0.0 Secs (0 Secs)	
	justment 1 f or Segment							[==>]	[
	A								1
Con	iments: Put the	e aperture in the appr	ropriate position to illuminate a portic	on of the LP4 region	of the detector when illu	minating Segment A w	vith G130M/1309.		
	I A PYSTP va	1							
		lue at LP1 is -153							
			uminate Segment A with G130M/1309	at Position 1 for LF	24 is -32				
Desi	ired LAPXSTP refore, XAPER	value for FCA to illu is set to -32153 =	= +121	v					
Des	ired LAPXSTP <u>refore, XAPER</u> G130M/130	value for FCA to illi	0	G130M	CURRENT=MEDIU			440 Secs (440 Secs)	
Desi	ired LAPXSTP refore, XAPER	value for FCA to illu is set to -32153 =	= +121	v	CURRENT=MEDIU M;			440 Secs (440 Secs) [==>]	
Desi	ired LAPXSTP r <u>efore, XAPER</u> G130M/130 9 Deuterium	value for FCA to illu is set to -32153 =	= +121	G130M	CURRENT=MEDIU			· · · · · · · · · · · · · · · · · · ·	
Desi	ired LAPXSTP r <u>efore, XAPER</u> G130M/130 9 Deuterium	value for FCA to illu is set to -32153 =	= +121	G130M	CURRENT=MEDIU M; BUFFER-TIME=16			· · · · · · · · · · · · · · · · · · ·	[
Desi	ired LAPXSTP r <u>efore, XAPER</u> G130M/130 9 Deuterium	value for FCA to illu is set to -32153 =	= +121	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5;			· · · · · · · · · · · · · · · · · · ·	[
Desi	ired LAPXSTP r <u>efore, XAPER</u> G130M/130 9 Deuterium	value for FCA to illu is set to -32153 =	= +121	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L			· · · · · · · · · · · · · · · · · · ·	
Dest <u>Thei</u> 4	<i>ired LAPXSTP</i> r <u>efore, XAPER</u> G130M/130 9 Deuterium Exposure 1	value for FCA to illi is set to -32153 = DEUTERIUM	= +121 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1		counts than the ot	[==>]	[
Desi <u>Thei</u> 4	<i>ired LAPXSTP</i> r <u>efore, XAPER</u> G130M/130 9 Deuterium Exposure 1	value for FCA to illi is set to -32153 = DEUTERIUM	= +121	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>]	[
Dest <u>Thei</u> 4	ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f	value for FCA to illi is set to -32153 = DEUTERIUM	= +121 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was ch	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th	at it has slightly more		[==>] her FP-POS values.	
Desi <u>Thei</u> 4	ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad	value for FCA to illi is set to -32153 = DEUTERIUM	= +121 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was ch	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th	<u>at it has slightly more</u> QESIPARM XSTEI		[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Dess <u>Ther</u> 4 5	ired LAPXSTP G130M/130 9 Deuterium Exposure 1 <u>uments: Deuter</u> Aperture Ad justment 2 f or Segment A	value for FCA to illi <u>is set to -32153 =</u> DEUTERIUM ^{cium} exposure optimi. NONE	= +121 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was ch	G130M 1309 A hosen because previo	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=67	<u>at it has slightly more</u> QESIPARM XSTEF S -54	2	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Dess <u>Ther</u> 4 <u>Com</u> 5	ired LAPXSTP G130M/130 9 Deuterium Exposure 1 <u>ments: Deuter</u> Aperture Ad justment 2 f or Segment A ments: Put the	value for FCA to illu is set to -32153 = DEUTERIUM <u>rium exposure optimi</u> NONE e aperture in the appr	<u>= +121</u> COS/FUV, TIME-TAG, FCA <u>seed for Segment A. FP-POS=1 was ch</u> COS, ALIGN/APER	G130M 1309 A hosen because previo	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=67	<u>at it has slightly more</u> QESIPARM XSTEF S -54	2	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Dess <u>Ther</u> 4 5 <i>Con</i> <i>FCA</i>	ments: Deuteri Aperture Ad justment 2 f or Segment A uments: Put the ALAPXSTP va	value for FCA to illu is set to -32153 = DEUTERIUM ium exposure optimi NONE e aperture in the appu lue at LP1 is -153	<u>= +121</u> COS/FUV, TIME-TAG, FCA <u>seed for Segment A. FP-POS=1 was ch</u> COS, ALIGN/APER	G130M 1309 A hosen because previo	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=67 of the detector when illus	<u>at it has slightly more</u> QESIPARM XSTEF S -54	2	[==>] her FP-POS values. 0.0 Secs (0 Secs)	

Proposal 17329 - LP4 gain map - after HV increase (4C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V..

μ0.	501 17 523	<u>- Li + yain n</u>			<u>51000100</u>	Characterization of would		ngn v
6		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU		440 Secs (440 Secs)	
	9 Deuterium Exposure 2			1309 A	M; BUFFER-TIME=16		[==>]	
					5;			
					FP-POS=1;			[1]
					SEGMENT=BOTH;			
					LIFETIME-POS=L P1			
Con	iments: Deuter	ium exposure optimize	ed for Segment A. FP-POS=1 was ch	osen because previoi		at it has slightly more counts than the other l	FP-POS values.	
7	Aperture Ad		COS, ALIGN/APER		XAPER=112	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 1 f or Segment B					S 45	[==>]	[1]
Con	ments: Put the	aperture in the appro	opriate position to illuminate a portion	n of the LP4 region o	f the detector when illu	minating Segment B with G160M/1600.		
		ue at LP1 is -153 value for FCA to illur	ninate Segment B with G160M/1600 a	ut Position 1 for LP4	is -41			
The	refore, XAPER					[(+112 - +67) = +45] Special Requirement	is necessary to move the aperture to the	e correct lo
catio 8		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
-	0 Deuterium			1600 A	M;		[==>]	1
	Exposure 1				BUFFER-TIME=16 5;			
					FP-POS=4;			[1]
					SEGMENT=BOTH;			
					LIFETIME-POS=L P1			
Con	ments: Deuter	ium exposure optimm	ized for Segment B_FP-POS=4 was cl	hosen hecause previa		hat it has slightly more counts than the other	EP-POS values	
9	Aperture Ad		COS, ALIGN/APER	leben beetinse previe	XAPER=58	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 2 f or Segment B					S -54	[==>]	[1]
Con	ments: Put the	aperture in the appro	opriate position to illuminate a portion	n of the LP4 region o୍	f the detector when illu	minating Segment B with G160M/1600.		
		ue at LP1 is -153 value for FCA to illur	ninate Segment B with G160M/1600 a	t Position 2 for LP4	is -95.			
The atio		is set to -95153 =	+58. *HOWEVER*, because of the Th	RANS rules, the "QE.	SIPARM XSTEPS -54"	[(+58 - +112) = -54] Special Requirement is	s necessary to move the aperture to the	correct loc
10	G160M/160 0 Deuterium	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
	Exposure 2			1600 A	M; BUFFER-TIME=16		[==>]	
					5;			
					FP-POS=4;			[1]
					SEGMENT=BOTH;			
					LIFETIME-POS=L P1			
Con	ments: Deuter	ium exposure optimm	ized for Segment B. FP-POS=4 was cl	hosen because previo		hat it has slightly more counts than the other	FP-POS values.	1
	Return Aper		COS, ALIGN/APER		XAPER=0	QESIPARM XSTEP	0 Secs (0 Secs)	
1	ture to Nomi nal Position					S -58	[==>]	[1]
Con		aperture to nominal p	position by setting XAPER=0					
				(1, 50) = 501	1 Paquinamentia mana	ary to move the aperture to its correct locati		
_*H(WEVEK [*] , Deci	ause of the IKANS ru	ies, ine QESIPAKM XSIEPS -58" [[(7 - 38) = -38] Specia	u Requirement is necess	ary to move the aperture to its correct locati	on.	





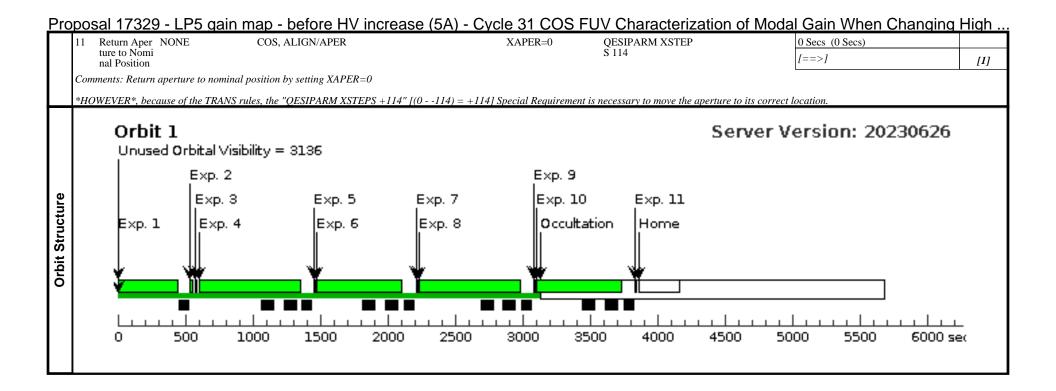
Proposal 17329 - LP5 gain map - before HV increase (5A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High ...

Г		Proposal 17329, LP5 gain map - before HV increase (5A), completed	Fri Jan 26 16:00:29 GMT 2024
		Diagnostic Status: Warning	
	/IS	Scientific Instruments: S/C, COS, COS/FUV	
1		Special Requirements: PARALLEL	
		Comments: This visit collects data at LP5. It uses the HV values appropriate for LP5 (167/169).	
	Diagnostics	(LP5 gain map - before HV increase (5A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

1	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Or
		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU			125 Secs (125 Secs)	
	0 Deuterium Exposure - S			1600 A	M;			[==>]	
	et up at LP1				BUFFER-TIME=19 6;				
					FP-POS=4;				[
					SEGMENT=BOTH;				1
					LIFETIME-POS=L				
_					P1				
Con 2	<u>iments: Short e</u> Adjust HV t		ure to LP1, which is near the center of S/C. DATA. NONE	the aperture range	used in this program. It a	ulso sets the HV to the		39 Secs (39 Secs)	
2	o LP5 value	DAKK	S/C, DATA, NONE			SAA CONTOUR 3	·	59 Secs (59 Secs)	
	S					ELHVADJPROP;		[==>]	
						QASISTATES COS			
						FUV HVNOM HVN OM;	N		
						QESIPARM ENDC			[
						TSA 167;			
						QESIPARM ENDC TSB 169:			
						QESIPARM SEGM			
						ENT AB			
Con	nments: Adjust	the HV to LP5 value	25.						
Sinc	e the HV is no	t increasing, exposur	re time = 39 seconds					1	
3	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=-60			0.0 Secs (0 Secs)	
	justment 1 f or Segment							[==>]	[
	A								1
Con	iments: Put the	anorture in the ann	ropriate position to illuminate a portion	on of the IPS region	of the detector where illes				
00		e aperiare în îne app	ropride position to tituminate a portio	m of the Li 5 region	of the detector when titu	minating Segment A w	vith G130M/1309.		•
FCA	A LAPXSTP va	lue at LP1 is -153			U Contraction of the second se	minating Segment A w	vith G130M/1309.		
FCA Desi	A LAPXSTP va ired LAPXSTP	lue at LP1 is -153 value for FCA to illi	uminate Segment A with G130M/1309		U Contraction of the second se	minating Segment A w	vith G130M/1309.		
FCA Desi	A LAPXSTP va ired LAPXSTP refore, XAPER	lue at LP1 is -153 value for FCA to illa	uminate Segment A with G130M/1309 = -60	at Position 1 for LF	25 is -213		vith G130M/1309.	440 Sacs (440 Sacs)	
FCA Desi	A LAPXSTP va ired LAPXSTP refore, XAPER	lue at LP1 is -153 value for FCA to illi	uminate Segment A with G130M/1309	at Position 1 for LF	U Contraction of the second se		vith G130M/1309.	440 Secs (440 Secs)	
FCA Desi	A LAPXSTP va ired LAPXSTP <u>refore, XAPER</u> G130M/130	lue at LP1 is -153 value for FCA to illa	uminate Segment A with G130M/1309 = -60	at Position 1 for LF	CURRENT=MEDIU		vith G130M/1309.	440 Secs (440 Secs) [==>]	
FCA Desi	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illa	uminate Segment A with G130M/1309 = -60	at Position 1 for LF	CURRENT=MEDIU M; BUFFER-TIME=16 5;		vith G130M/1309.	· · · · · · · · · · · · · · · · · · ·	
FCA Desi	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illa	uminate Segment A with G130M/1309 = -60	at Position 1 for LF	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;		vith G130M/1309.	· · · · · · · · · · · · · · · · · · ·	
FCA Desi	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illa	uminate Segment A with G130M/1309 = -60	at Position 1 for LF	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;		vith G130M/1309.	· · · · · · · · · · · · · · · · · · ·	[
FCA Desi	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium	lue at LP1 is -153 value for FCA to illa	uminate Segment A with G130M/1309 = -60	at Position 1 for LF	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;		vith G130M/1309.	· · · · · · · · · · · · · · · · · · ·	[
FCA Dest <u>The</u> t 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1	lue at LP1 is -153 value for FCA to illi <u>t is set to -213153</u> DEUTERIUM	uminate Segment A with G130M/1309 = -60	at Position 1 for LF G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>]	
FCA Dest <u>Thei</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad	lue at LP1 is -153 value for FCA to illi <u>is set to -213153</u> DEUTERIUM	uminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA	at Position 1 for LF G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more QESIPARM XSTEI	e counts than the of	[==>]	[
FCA Dest <u>Thei</u> 4	A LAPXSTP va ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 mments: Deuter	lue at LP1 is -153 value for FCA to illi <u>is set to -213153</u> DEUTERIUM	uminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA	at Position 1 for LF G130M 1309 A	25 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th	at it has slightly more	e counts than the of	[==>] her FP-POS values.	
FCA Dess <u>The</u> 4 5	A LAPXSTP va ired LAPXSTP G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f or Segment A	lue at LP1 is -153 value for FCA to illi is set to -213153 DEUTERIUM	uminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA <u>ized for Segment A. FP-POS=1 was c</u> COS, ALIGN/APER	at Position 1 for LF G130M 1309 A	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 <i>ous observations show th</i> XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEI S -54	<u>e counts than the of</u> P	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Dess <u>Ther</u> 4 5	A LAPXSTP va ired LAPXSTP G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad justment 2 f or Segment A	lue at LP1 is -153 value for FCA to illi is set to -213153 DEUTERIUM	uminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA	at Position 1 for LF G130M 1309 A	<i>CURRENT=MEDIU</i> M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 <i>ous observations show th</i> XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEI S -54	<u>e counts than the of</u> P	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Dest <u>Ther</u> 4 5 Con FCA	A LAPXSTP va ired LAPXSTP G130M/130 9 Deuterium Exposure 1 <u>ments: Deuter</u> Aperture Ad justment 2 f or Segment A uments: Put the A LAPXSTP va	lue at LP1 is -153 value for FCA to illi <u>is set to -213153</u> DEUTERIUM DEUTERIUM vone vone	uminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA <u>ized for Segment A. FP-POS=1 was c</u> COS, ALIGN/APER ropriate position to illuminate a portio	at Position 1 for LP G130M 1309 A hosen because previ	25 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=-114 of the detector when illust	<u>at it has slightly more</u> QESIPARM XSTEI S -54	<u>e counts than the of</u> P	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
FCA Dest 4 4 5 Con FCA Dest	A LAPXSTP va ired LAPXSTP G130M/130 9 Deuterium Exposure 1 <u>uments: Deuter</u> Aperture Ad justment 2 f or Segment A uments: Put the A LAPXSTP va ired LAPXSTP va	lue at LP1 is -153 value for FCA to illi is set to -213153 DEUTERIUM ium exposure optimi NONE e aperture in the app lue at LP1 is -153 value for FCA to illi	uminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was c COS, ALIGN/APER ropriate position to illuminate a portion uminate Segment A with G130M/1309	at Position 1 for LF G130M 1309 A hosen because previ	25 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=-114 of the detector when illus	at it has slightly more QESIPARM XSTEI S -54 minating Segment A w	<u>e counts than the ot</u> P vith G130M/1309.	[==>] her FP-POS values. 0.0 Secs (0 Secs)	

Proposal 17329 - LP5 gain map - before HV increase (5A) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High .

<u> 11329 - LES Yain</u>		<u>ase (JA) - C</u>			INDUAL GAILT WHEN CHAIL	<u>ying mgm.</u>
6 G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16	;	[==>]	
			5;			
			FP-POS=1; SEGMENT=BOTH			[1]
			LIFETIME-POS=L	,		
			P1			
Comments: Deuterium exposure optin	nized for Segment A. FP-POS=1 was a	chosen because pre				
7 Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=-62	QESIPARM XSTEP S 52	0.0 Secs (0 Secs)	
or Segment B					[==>]	[1]
Comments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP5 regio	on of the detector when illu	uminating Segment B with G160M/16	00.	
FCA LAPXSTP value at LP1 is -153						
Desired LAPXSTP value for FCA to it	lluminate Segment B with G160M/1600) at Position 1 for I	LP5 is -215			
	3 = -62. *HOWEVER*, because of the	TRANS rules, the '	'QESIPARM XSTEPS 52"	[(-62114) = +52] Special Require	ement is necessary to move the aperture to	o the correct locat
ion. 8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	I	440 Secs (440 Secs)	
0 Deuterium		1600 A	M;		[==>]	
Exposure 1			BUFFER-TIME=16 5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH			[1]
			LIFETIME-POS=L			
			P1			
9 Aperture Ad NONE	nmized for Segment B. FP-POS=4 was COS, ALIGN/APER	chosen because pr	XAPER=-114	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f	COS, ALIONAI EK		AAI EK=-114	S -52	[==>]	
or Segment B						[1]
Comments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP5 regio	on of the detector when illu	minating Segment B with G160M/16	00.	
FCA LAPXSTP value at LP1 is -153						
<i>Desired LAPXSTP value for FCA to it</i> <i>ot. To leave some pad, I will set it to n</i>	lluminate Segment B with G160M/1600 natch the G130M exposure (-267).) at Position 2 for I	<i>P5 is -280, but the apertuing</i>	re soft stop is at -275 and we don't we	ant to exceed that value when including t	he 5 step oversho
Therefore XAPFR is set to -26715	3114 *HOWFVFR* because of th	e TRANS rules the	"OFSIPARM XSTEPS -57	2" [(-11462)521 Special Reavi	rement is necessary to move the aperture	to the correct loc
ation.	5 = 114. HOWEVER, because of in	e mento ruco, ne	~		ement is necessary to move the uperture	
10 G160M/160 DEUTERIUM 0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU M;	J	440 Secs (440 Secs)	
Exposure 2		1600 A	BUFFER-TIME=16		[==>]	
			5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH	•		
			LIFETIME-POS=L P1			
Comments: Deuterium exposure optim	nmized for Segment B. FP-POS=4 was	chosen because pr		that it has slightly more counts than i	the other FP-POS values.	
······································	,	· · · · · · · · · · · · · · · · · · ·		0		
1						



Proposal 17329 - LP5 gain map - after HV increase (5C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V...

Г		Proposal 17329, LP5 gain map - after HV increase (5C), completed	Fri Jan 26 16:00:29 GMT 2024
Visit	ᄇ	Diagnostic Status: Warning	
	/IS	Scientific Instruments: S/C, COS, COS/FUV	
1		Special Requirements: PARALLEL	
		Comments: This visit collects data at LP5. It uses the HV values appropriate for LP5 after the update on 12/11/23 (173/175).	
	Diagnostics	(LP5 gain map - after HV increase (5C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	

1	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Or
		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU			125 Secs (125 Secs)	
	0 Deuterium Exposure - S			1600 A	M;			[==>]	
	et up at LP1				BUFFER-TIME=19 6;				
					FP-POS=4;				
					SEGMENT=BOTH;				[-
					LIFETIME-POS=L				
					P1				
<u>Con</u> 2	<u>aments: Short e</u> Adjust HV t		ure to LP1, which is near the center of S/C. DATA. NONE	"the aperture range	used in this program. It a	<u>ulso sets the HV to the</u> SAA CONTOUR 31		39 Secs (39 Secs)	
2	o LP5 value	DAKK	S/C, DATA, NONE			SAA CONTOUR ST SPEC COM INSTR		59 Secs (59 Secs)	
	S					ELHVADJPROP;		[==>]	
						QASISTATES COS			
						FUV HVNOM HVN OM;	1		
						QESIPARM ENDC			[
						TSA 173;			
						QESIPARM ENDC TSB 175:			
						OESIPARM SEGM			
						ENT AB			
Con	aments: Adjust	the HV to LP5 value	s.						
Sinc	e the HV is no	t increasing, exposur	re time = 39 seconds						
3 Aperture Ad NONE	NONE	COS, ALIGN/APER		XAPER=-60			0.0 Secs (0 Secs)		
	justment 1 f or Segment							[==>]	[
	A								1
Con	ments: Put the	e aperture in the app	ropriate position to illuminate a portio	on of the LP5 region	of the detector when illu	minating Segment A w	vith G130M/1309.		
FCA LAPXSTP value at LP1 is -153									
				at Position 1 for LP	'S 18 -213				
Des	ired LAPXSTP	value for FCA to illi	uminate Segment A with G130M/1309	ai i osmon i jor Ei					
Des	ired LAPXSTP refore, XAPER	value for FCA to illi is set to -213153	= -60	v				440 5 (440 5)	
Des	ired LAPXSTP refore, XAPER	value for FCA to illi is set to -213153 DEUTERIUM	0	G130M	CURRENT=MEDIU M;			440 Secs (440 Secs)	
Des	ired LAPXSTP <u>refore, XAPER</u> G130M/130	value for FCA to illi is set to -213153 DEUTERIUM	= -60	v	CURRENT=MEDIU			440 Secs (440 Secs) [==>]	
Des	<i>refore, XAPER</i> G130M/130 9 Deuterium	value for FCA to illi is set to -213153 DEUTERIUM	= -60	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5;				
Desi	<i>refore, XAPER</i> G130M/130 9 Deuterium	value for FCA to illi is set to -213153 DEUTERIUM	= -60	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;				[.
Des	<i>refore, XAPER</i> G130M/130 9 Deuterium	value for FCA to illi is set to -213153 DEUTERIUM	= -60	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;				[
Des	<i>refore, XAPER</i> G130M/130 9 Deuterium	value for FCA to illi is set to -213153 DEUTERIUM	= -60	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L				[
Desi <u>Thei</u> 4	<i>ired LAPXSTP</i> <u>refore, XAPER</u> G130M/130 9 Deuterium Exposure 1	2 value for FCA to illi 2 <u>is set to -213153</u> DEUTERIUM	= -60	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1		counts than the ot	[==>]	[.
Desi <u>Thei</u> 4	ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad	value for FCA to illi <u>e is set to -213153</u> DEUTERIUM ^r ium exposure optimi	= -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	<u>at it has slightly more</u> QESIPARM XSTEF		[==>]	[1
Desi <u>Thei</u> 4	ired LAPXSTP <u>refore, XAPER</u> G130M/130 9 Deuterium Exposure 1 <u>uments: Deuter</u> Aperture Ad justment 2 f	value for FCA to illi <u>e is set to -213153</u> DEUTERIUM ^r ium exposure optimi	= -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th	at it has slightly more		[==>] her FP-POS values.	
Desi <u>Thei</u> 4	ired LAPXSTP refore, XAPER G130M/130 9 Deuterium Exposure 1 ments: Deuter Aperture Ad	value for FCA to illi <u>e is set to -213153</u> DEUTERIUM ^r ium exposure optimi	= -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th	<u>at it has slightly more</u> QESIPARM XSTEF		[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Dess <u>Ther</u> 4 5	ired LAPXSTP G130M/130 9 Deuterium Exposure 1 uments: Deuter Aperture Ad justment 2 f or Segment A	² value for FCA to illi <u>2 is set to -213153</u> DEUTERIUM <u>rium exposure optimi</u> NONE	= -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A hosen because previo	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEF S -54	2	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Dest <u>Ther</u> 4 <u>Con</u> 5 <i>Con</i>	<i>refore, XAPER</i> G130M/130 9 Deuterium Exposure 1 <i>ments: Deuter</i> Aperture Ad justment 2 f or Segment A <i>aments: Put the</i> <i>LAPXSTP va</i>	value for FCA to illu <u>e is set to -213153</u> DEUTERIUM <u>rium exposure optimi</u> NONE e aperture in the appu lue at LP1 is -153	= -60 COS/FUV, TIME-TAG, FCA <i>ized for Segment A. FP-POS=1 was cl</i> COS, ALIGN/APER ropriate position to illuminate a portio	G130M 1309 A hosen because previo	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEF S -54	2	[==>] her FP-POS values. 0.0 Secs (0 Secs)	
Dess <u>Ther</u> 4 5 <i>Con</i> <i>FCA</i>	<i>refore, XAPER</i> G130M/130 9 Deuterium Exposure 1 <i>ments: Deuter</i> Aperture Ad justment 2 f or Segment A <i>aments: Put the</i> <i>LAPXSTP va</i>	value for FCA to illu <u>e is set to -213153</u> DEUTERIUM <u>rium exposure optimi</u> NONE e aperture in the appu lue at LP1 is -153	= -60 COS/FUV, TIME-TAG, FCA <i>ized for Segment A. FP-POS=1 was co</i> COS, ALIGN/APER	G130M 1309 A hosen because previo	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=-114	<u>at it has slightly more</u> QESIPARM XSTEF S -54	2	[==>] her FP-POS values. 0.0 Secs (0 Secs)	

Proposal 17329 - LP5 gain map - after HV increase (5C) - Cycle 31 COS FUV Characterization of Modal Gain When Changing High V..

<u> 11023 - Li 5 gan</u>	<u>i map - anei i i i mureas</u>	<u>e (JC) - Cy</u>		Characterization of	would Gain when Change	<u>ng ngn v</u>
6 G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16	i	[==>]	
			5; FP-POS=1;			
			SEGMENT=BOTH			[1]
			LIFETIME-POS=L	,		
			P1			
	mized for Segment A. FP-POS=1 was c	hosen because pre				
7 Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=-62	QESIPARM XSTEP S 52	0.0 Secs (0 Secs)	
or Segment B						[1]
Comments: Put the aperture in the ap	ppropriate position to illuminate a porti	on of the LP5 regi	on of the detector when illu	minating Segment B with G160M/	1600.	
FCA LAPXSTP value at LP1 is -153						
Desired LAPXSTP value for FCA to	illuminate Segment B with G160M/1600	at Position 1 for 1	LP5 is -215			
	53 = -62. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS 52"	[(-62114) = +52] Special Requi	irement is necessary to move the aperture t	to the correct locat
ion. 8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	J	440 Secs (440 Secs)	
0 Deuterium		1600 A	M;		[==>]	
Exposure 1			BUFFER-TIME=16 5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH	;		[-]
			LIFETIME-POS=L			
Comments: Deuterium exposure opti	mmized for Segment B. FP-POS=4 was	chosen because p	P1	that it has slightly more counts tha	in the other FP POS values	
9 Aperture Ad NONE	COS, ALIGN/APER	chosen because pr	XAPER=-114	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B	, ,			S -52	[==>]	[1]
	ppropriate position to illuminate a porti	on of the LP5 regi	on of the detector when illu	minating Segment B with G160M/.	1600.	I
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to to ot. To leave some pad, I will set it to	illuminate Segment B with G160M/1600 match the G130M exposure (-267).	at Position 2 for 1	LP5 is -280, but the apertur	re soft stop is at -275 and we don't	want to exceed that value when including t	the 5 step oversho
Therefore, XAPER is set to -26715 ation.	53 = -114. *HOWEVER*, because of the	e TRANS rules, the	e "QESIPARM XSTEPS -52	2" [(-11462) = -52] Special Requ	uirement is necessary to move the aperture	to the correct loc
10 G160M/160 DEUTERIUM 0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU M:	J	440 Secs (440 Secs)	
Exposure 2		1600 A	BUFFER-TIME=16		[==>]	
			5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH	;		
			LIFETIME-POS=L P1			
Comments: Deuterium exposure optic	mmized for Segment B. FP-POS=4 was	chosen because p	revious observations show	that it has slightly more counts tha	in the other FP-POS values.	I

