

15772 - Cycle 27 COS FUV Detector Gain Maps

Cycle: 27, 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?
2A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:20.0	yes
2C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:22.0	yes
3A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:23.0	yes
3C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:25.0	yes

Proposal 15772 (STScI Edit Number: 1, Created: Wednesday, September 2, 2020 at 9:00:34 AM Eastern Standard Time) - Overview

	Targets used in Visit	Configurations used in Visit		Last Orbit Planner Run	OP Current with Visit?
3E	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:26.0	yes
4A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:28.0	yes
4B	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:29.0	yes
4C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:30.0	yes
4D	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:32.0	yes
4E	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	02-Sep-2020 10:00:34.0	yes

10 Total Orbits Used

ABSTRACT

This program uses the deuterium lamp to illuminate the regions of the detector being used to collect spectra during Cycle 27. 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, before and after any lifetime move, and at ~6 month intervals for modes where the voltage is unchanged. 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.

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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, before and after any change in Lifetime Position, and at ~6 month and ~1 year intervals when the default HV does not change. They should be obtained at the appropriate HV levels and detector locations.

The plan for Cycle 27 includes 8 one-orbit visits, and two one-orbit contingency visits:

*Visits 2A and 2C will be taken at LIFE_ADJ=2 after about 6 months and 1 year from the gain map taken at this position near the end of Cycle 26 at the nominal Blue Mode HV values (currently 173/175).

*Visits 3A and 3C will be taken at LIFE_ADJ=3 after about 6 months and 1 year from the gain map taken at this position near the end of Cycle 26 at the nominal LP3 HV values (currently 167/175).

*Visits 4A and 4C will be taken at LIFE_ADJ=4 after about 6 months and 1 year from the gain map taken at this position near the end of Cycle 26 at the HV values for the Standard Modes at LP4 (163/163).

*Visits 4B and 4D will be taken at LIFE_ADJ=4 after about 6 months and 1 year from the gain map taken at this position near the end of Cycle 26 at the HV values for G130M/1222 at LP4 (163/167).

*Two contingency visits will be used if a HV change is made during Cycle 27. One will be taken immediately before the change using the current HV values, and one will be taken after at the new values.

The procedure for collecting this data in each visit is:

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* Adjust the HV values if necessary.

* 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 400 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 400 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

G160M/1600.

* Take a 400 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 400 second deuterium lamp

exposure.

*Return the aperture to the nominal LP4 location.

*Return the HV values to the nominal values for the standard modes, if necessary.

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, etc.

For reference, the soft and hard stops for the apertures are listed below. All aperture moves should be kept within these ranges.

MEB1:

SOFT STOPS = -275 to 275

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MEB2:

SOFT STOPS = -275 to 275

HARD STOPS = -284 to 283

Summary table:

Visit	LP	Grating/Segment	Y Position	LAPXSTP	XAPER
		G1203.5/4		212	4.40
2A/2C	2	G130M/A	1	-213	-448
2A/2C	2	G130M/A	2	-267*	-502
2A/2C	2	G160M/B	1	-225	-460
2A/2C	2	G160M/B	2	-267*	-502
3A/3C	3	G130M/A	1	-72	-307
3A/3C	3	G130M/A	2	-128	-363
3A/3C	3	G160M/B	1	-84	-319
3A/3C	3	G160M/B	2	-140	-375
4A/4B/4C/4D	4	G130M/A	1	-32	-267
4A/4B/4C/4D	4	G130M/A	2	-86	-321
4A/4B/4C/4D	4	G160M/B	1	-41	-276
4A/4B/4C/4D	4	G160M/B	2	-95	-330

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Note added on 7/30/2020:

The exposures times were increased from 400 to 440 seconds for the visits that will be executed in October. This is to account for the decrease in counts that has occurred due to TDS and lamp output changes.

Note added on 8/28/2020:

The Mission Office approved two contingency visits for this program to be the "after" visits for the LP3 and LP4 HV increase on 10/5/20; vsits 3E and 4E have been added for this purpose. The "before" visits will be the regular every 6 month visits 3C, 4C, and 4D.

*Visit 3E will be taken at LIFE_ADJ=3 after the HV increase at the new nominal LP3 HV values (173/175).

*Visit 4E will be taken at LIFE_ADJ=4 after the HV increase at the new nominal LP4 HV values (167/169).

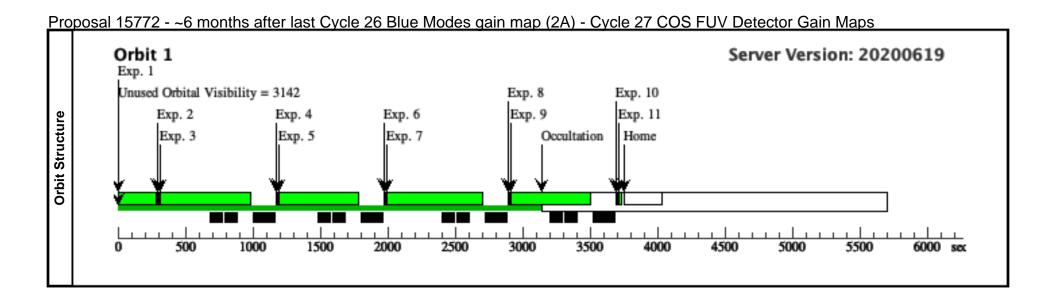
The aperture positions for visit 3E match the ones for 3A and 3C, and the aperture positions for visit 4E match those for 4A/4B/4C/4D

<u>P</u>	<u>roposal 15772 - ~6 months after last Cycle 26 Blue Modes gain map (2A) - Cycle 27 COS FUV Detector Gain Ma</u>	ıps
	Proposal 15772, ~6 months after last Cycle 26 Blue Modes gain map (2A), completed	Wed Sep 02 14:00:35 GMT 2020
<u> </u>	Diagnostic Status: Warning	
1.5	Scientific Instruments: S/C, COS, COS/FUV	
	Special Requirements: BETWEEN 01-APR-2020:00:00 AND 01-MAY-2020:00:00; PARALLEL	
L	Comments: This visit collects data at LP2. It uses the HV values appropriate for the Blue Modes (173/175).	
1 6	(~6 months after last Cycle 26 Blue Modes gain map (2A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
7	(Aperture Adjustment 1 for Segment A (2A.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - ~6 months after last Cycle 26 Blue Modes gain map (2A) - Cycle 27 COS FUV Detector Gain Maps

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Adjust HV t	DARK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)	
	o Blue Mod e values					SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN OM;			
						QESIPARM ENDC TSA 173;			[1]
						QESIPARM ENDC TSB 175;			
						QESIPARM SEGM ENT AB			
Con	J	the HV to the Blue			WADED 440			0.0.5 (0.5)	
2	Aperture Ad justment 1 f or Segment	NONE	COS, ALIGN/APER		XAPER=-448			0.0 Secs (0 Secs) [==>]	[1]
Con	A	a anartura in the an	propriate position to illuminate a porti	on of the LP2/Rlue M	Andre region of the detec	stor when illuminating S	leament A with G130M	M/1300	
Des	sired LAPXSTF	lue at LP4 is 235.1 P value for FCA to i R is set to -213 - 235	lluminate Segment A with G130M/1309 5.1 = -448	at Position 1 for LP	22 is -213			_	
3		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)	
	9 Deuterium Exposure 1			1309 A	M; BUFFER-TIME=11			[==>]	
	_	BU 1;							
					FP-POS=1;				[1]
					SEGMENT=BOTH	;			
					LIFETIME-POS=L P4				
Con	nments: Deute	rium exposure optir	nized for Segment A. FP-POS=1 was c	hosen because previ	ous observations show th	hat it has slightly more o	counts than the other	FP-POS values.	
4	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=-502	QESIPARM XSTEP		0.0 Secs (0 Secs)	
	justment 2 f or Segment A					S -54		[==>]	[1]
Con	nments: Put the	e aperture in the ap	propriate position to illuminate a porti	on of the LP2/Blue M	Modes region of the detec	tor when illuminating S	egment A with G130N	<i>I</i> /1309.	
Des	sired LAPXSTF		lluminate Segment A with G130M/1309						
	erefore, XAPER tion.	R is set to -267 - 235	5.1 = -502. *HOWEVER*, because of the	ne TRANS rules, the '	"QESIPARM XSTEPS -5	[4" [(-502448) = -54]] Special Requiremen	t is necessary to move the aperture to th	he correct
5		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU M;	J		400 Secs (400 Secs)	1
	9 Deuterium Exposure 2			1309 A	BUFFER-TIME=11 1;			[==>]	
					FP-POS=1;				[1]
					SEGMENT=BOTH	;			1 2-3
					LIFETIME-POS=L P4				
Con	nments: Deute	rium exposure optir	nized for Segment A. FP-POS=1 was c	hosen because previ	ous observations show th	hat it has slightly more o	counts than the other	FP-POS values.	

6 Aperture Ad NONE		COS, ALIGN/APER		XAPER=-460	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B					S 42	[==>]	[1]
Comments: Put the aperture	in the appro	opriate position to illuminate a porti	on of the LP2/Blue	Modes region of the det	ector when illuminating Segment B	with G160M/1600.	
PSA LAPXSTP value at LP4 Desired LAPXSTP value for		ninate Segment B with G160M/1600	at Position 1 for I	LP2 is -225			
Therefore, XAPER is set to - ocation.	225 - 235.1	= -460. *HOWEVER*, because of th	ne TRANS rules, th	e "QESIPARM XSTEPS	42" [(-460502) = +42] Special I	Requirement is necessary to move the apertu	ure to the correc
7 G160M/160 DEUTE	RIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MED	IU	400 Secs (400 Secs)	
0 Deuterium Exposure 1			1600 A	M; BUFFER-TIME=: 1:	11	[==>]	
			FP-POS=4;			[1]	
				SEGMENT=BOT	H;		1-7
				LIFETIME-POS= P4	L		
Comments: Deuterium expo	sure optimm	ized for Segment B. FP-POS=4 was	chosen because pr		w that it has slightly more counts th	an the other FP-POS values.	
8 Aperture Ad NONE justment 2 f		COS, ALIGN/APER		XAPER=-502	QESIPARM XSTEP S -42	0.0 Secs (0 Secs)	
or Segment					3 -42	[==>]	[1]
– Comments: Put the anerture	in the annre	opriate position to illuminate a porti	on of the LP2/Rlue	14 1		: 1 G160M(1600	
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Desired LAPXSTP value for ot To leave some pad, I wil Therefore, XAPER is set to - ocation.	! is 235.1 FCA to illur l set it to ma: 267 - 235.1	ninate Segment B with G160M/1600 tch the G130M exposure (-267). = -502. *HOWEVER*, because of th	at Position 2 for I	LP2 is -280, but the apera	ture soft stop is at -275 and we don' -42" [(-502460) = -42] Special I	t want to exceed that value when including t	-
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Desired LAPXSTP value for ot To leave some pad, I will Therefore, XAPER is set to ocation. Gl60M/160 DEUTE 0 Deuterium Exposure 2 Comments: Deuterium exposure 2 Comments: Deuterium exposure Noments Nominal Position Comments: Return the apert* HOWEVER*, because of the minal HV for standard m	l is 235.1 FCA to illur I set it to ma. 267 - 235.1 RIUM	ninate Segment B with G160M/1600 tch the G130M exposure (-267). = -502. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA ized for Segment B. FP-POS=4 was COS, ALIGN/APER minal position, i.e. XAPER=0. les, the "QESIPARM XSTEPS +502	at Position 2 for I ne TRANS rules, th G160M 1600 A	CP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME=1; FP-POS=4; SEGMENT=BOT LIFETIME-POS=P4 revious observations show XAPER=0	ture soft stop is at -275 and we don' -42" [(-502460) = -42] Special II III H; L w that it has slightly more counts the QESIPARM XSTEP S 502 is necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	Requirement is necessary to move the aperture $400 \mathrm{Secs} (400 \mathrm{Secs})$ $I = = > I$ $an the other FP-POS values.$ $0 \mathrm{Secs} (0 \mathrm{Secs})$ $I = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $I = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$ $0 \mathrm{secs} (0 \mathrm{Secs})$ $1 = = > I$	[1]



<u>Pr</u>	oposal 15772 - ~12 months after last Cycle 26 Blue Modes gain map (2C) - Cycle 27 COS FUV Detector Gain M	laps
	Proposal 15772, ~12 months after last Cycle 26 Blue Modes gain map (2C), scheduling	Wed Sep 02 14:00:35 GMT 2020
.±		
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 28-SEP-2020:00:00:00 AND 05-OCT-2020:00:00; PARALLEL	
	Comments: This visit collects data at LP2. It uses the HV values appropriate for the Blue Modes (173/175).	
S	(~12 months after last Cycle 26 Blue Modes gain map (2C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sti	(Aperture Adjustment 1 for Segment A (2C.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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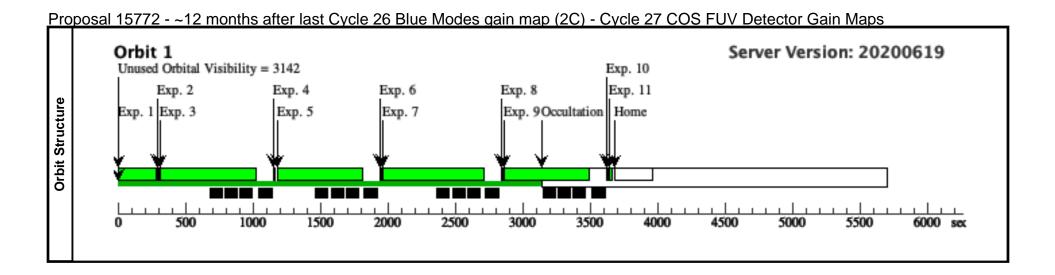
Proposal 15772 - ~12 months after last Cycle 26 Blue Modes gain map (2C) - Cycle 27 COS FUV Detector Gain Maps Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit Adjust HV t DARK S/C, DATA, NONE SAA CONTOUR 31; 295 Secs (295 Secs) o Blue Mod SPEC COM INSTR *[==>1* e values ELHLTHVF: **QASISTATES COS FUV HVLOW HVN** OM; **QESIPARM ENDC** [1] TSA 173; OESIPARM ENDC TSB 175; **OESIPARM SEGM** ENT AB Comments: Adjust the HV to the Blue Mode values. XAPER=-448 0.0 Secs (0 Secs) Aperture Ad NONE COS, ALIGN/APER justment 1 f *[==>1* or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2/Blue Modes region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 *Therefore, XAPER is set to -213 - 235.1 = -448* G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 440 Secs (440 Secs) 9 Deuterium Exposures 1309 A I ==> 1Exposure 1 BUFFER-TIME=11 FP-POS=1; [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-502 **OESIPARM XSTEP** 0.0 Secs (0 Secs) justment 2 f S -54 I==>Jor Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2/Blue Modes region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP2 is -267

Therefore, XAPER is set to -267 - 235.1 = -502. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-502 - -448) = -54] Special Requirement is necessary to move the aperture to the correct location.

	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=11	[==>]	
			1;		
			FP-POS=1;		[1]
			SEGMENT=BOTH;		
			LIFETIME-POS=L P4		

Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.

6 Aperture Ad NONE	COS, ALIGN/APER		XAPER=-460	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				S 42	[==>]	[1]
Comments: Put the aperture in	the appropriate position to illuminate a port	ion of the LP2/Blue	Modes region of the det	tector when illuminating Segment B	with G160M/1600.	
PSA LAPXSTP value at LP4 is Desired LAPXSTP value for F	235.1 CA to illuminate Segment B with G160M/160	0 at Position 1 for	LP2 is -225			
Therefore, XAPER is set to -22 ocation.	5 - 235.1 = -460. *HOWEVER*, because of t	the TRANS rules, th	ne "QESIPARM XSTEPS	42" [(-460502) = +42] Special F	Requirement is necessary to move the apertu	ure to the correc
G160M/160 DEUTERI	JM COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MED	IU	440 Secs (440 Secs)	
0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME= 1;	11	[==>]	
			FP-POS=4;			[1]
			SEGMENT=BOT	Ϋ́H;		121
			LIFETIME-POS= P4	:L		
Comments: Deuterium exposui	e optimmized for Segment B. FP-POS=4 was	s chosen because p	• .	w that it has slightly more counts the	an the other FP-POS values.	
8 Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-502	QESIPARM XSTEP S -42	0.0 Secs (0 Secs)	
or Segment				3 -42	[==>]	[1]
Comments: Put the aperture in	the appropriate position to illuminate a port	ion of the LP2/Rlue	14 1		11 0160161600	
PSA LAPXSTP value at LP4 is Desired LAPXSTP value for F ot To leave some pad, I will s	235.1 CA to illuminate Segment B with G160M/160 et it to match the G130M exposure (-267).	J	0 0			the 5 step oversh
Desired LAPXSTP value for Fo ot To leave some pad, I will s Therefore, XAPER is set to -26 ocation.	CA to illuminate Segment B with G160M/160 at it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of t	0 at Position 2 for the TRANS rules, the	LP2 is -280, but the aper ne "QESIPARM XSTEPS	ture soft stop is at -275 and we don'. -42" [(-502460) = -42] Special K	t want to exceed that value when including to equirement is necessary to move the apertu	-
Desired LAPXSTP value for Foot To leave some pad, I will so Therefore, XAPER is set to -26 ocation. G160M/160 DEUTERI 0 Deuterium	CA to illuminate Segment B with G160M/160 at it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of t	0 at Position 2 for the TRANS rules, the G160M	LP2 is -280, but the aper	ture soft stop is at -275 and we don'. -42" [(-502460) = -42] Special K	t want to exceed that value when including to the exceed that value when including to the exception of the except to move the aperture of the except to the	-
Desired LAPXSTP value for Fot To leave some pad, I will sufferefore, XAPER is set to -26 ocation. G160M/160 DEUTERI	CA to illuminate Segment B with G160M/160 at it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of t	0 at Position 2 for the TRANS rules, the	LP2 is -280, but the aper ne "QESIPARM XSTEPS CURRENT=MED	ture soft stop is at -275 and we don'42" [(-502460) = -42] Special F	t want to exceed that value when including to equirement is necessary to move the apertu	-
Desired LAPXSTP value for Foot To leave some pad, I will so Therefore, XAPER is set to -26 ocation. G160M/160 DEUTERI 0 Deuterium	CA to illuminate Segment B with G160M/160 at it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of t	0 at Position 2 for the TRANS rules, the G160M	LP2 is -280, but the aper ne "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME=	ture soft stop is at -275 and we don'42" [(-502460) = -42] Special F	t want to exceed that value when including to the exceed that value when including to the exception of the except to move the aperture of the except to the	ure to the correc
Desired LAPXSTP value for Foot To leave some pad, I will so Therefore, XAPER is set to -26 ocation. G160M/160 DEUTERI 0 Deuterium	CA to illuminate Segment B with G160M/160 at it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of t	0 at Position 2 for the TRANS rules, the G160M	LP2 is -280, but the aper ne "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1;	ture soft stop is at -275 and we don'42" [(-502460) = -42] Special K	t want to exceed that value when including to the exceed that value when including to the exception of the except to move the aperture of the except to the	-
Desired LAPXSTP value for Foot To leave some pad, I will so Therefore, XAPER is set to -26 ocation. G160M/160 DEUTERI 0 Deuterium	CA to illuminate Segment B with G160M/160 at it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of t	0 at Position 2 for the TRANS rules, the G160M	LP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4;	ture soft stop is at -275 and we don'42" [(-502460) = -42] Special K	t want to exceed that value when including to the exceed that value when including to the exception of the except to move the aperture of the except to the	ure to the correc
Desired LAPXSTP value for Foot. To leave some pad, I will	CA to illuminate Segment B with G160M/160 at it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of t	0 at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4	ture soft stop is at -275 and we don'42" [(-502460) = -42] Special F	t want to exceed that value when including a Requirement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{I==>J}$	ure to the correc
Desired LAPXSTP value for Foot. To leave some pad, I will	CA to illuminate Segment B with G160M/160 et it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of to COS/FUV, TIME-TAG, FCA	0 at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4	ture soft stop is at -275 and we don'. -42" [(-502460) = -42] Special K IU 11 TH; EL w that it has slightly more counts the QESIPARM XSTEP	t want to exceed that value when including a Requirement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{I==>J}$	ure to the correc
Desired LAPXSTP value for Foot. To leave some pad, I will	CA to illuminate Segment B with G160M/160 et it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of to the COS/FUV, TIME-TAG, FCA DM COS/FUV, TIME-TAG, FCA e optimmized for Segment B. FP-POS=4 was COS, ALIGN/APER	0 at Position 2 for the TRANS rules, the G160M 1600 A	LP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4	ture soft stop is at -275 and we don'. -42" [(-502460) = -42] Special K III III III; EL w that it has slightly more counts the	t want to exceed that value when including a Requirement is necessary to move the aperta $\frac{440 \text{ Secs } (440 \text{ Secs})}{[==>]}$ In the other FP-POS values.	ure to the correc
Desired LAPXSTP value for Fot To leave some pad, I will	CA to illuminate Segment B with G160M/160 to it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of to Segment COS/FUV, TIME-TAG, FCA	the TRANS rules, the TRANS rules, the G160M 1600 A	LP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4 revious observations show	ture soft stop is at -275 and we don't -42" [(-502460) = -42] Special K IU 11 TH; EL w that it has slightly more counts the QESIPARM XSTEP S 502	t want to exceed that value when including to the exception of the except that value when including to the except to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[an the other FP-POS values.]$ $[0.100]$ $[0.10$	[1]
Desired LAPXSTP value for Fot To leave some pad, I will	CA to illuminate Segment B with G160M/160 to it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of to JM COS/FUV, TIME-TAG, FCA e optimmized for Segment B. FP-POS=4 was COS, ALIGN/APER e to its nominal position, i.e. XAPER=0.	the TRANS rules, the TRANS rules, the G160M 1600 A	LP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4 revious observations show	ture soft stop is at -275 and we don't -42" [(-502460) = -42] Special K IU 11 TH; EL w that it has slightly more counts the QESIPARM XSTEP S 502 is necessary to move the aperture to SPEC COM INSTR	t want to exceed that value when including to the exception of the except that value when including to the except to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[an the other FP-POS values.]$ $[0.100]$ $[0.10$	[1]
Desired LAPXSTP value for Front. To leave some pad, I will some pad, I wil	CA to illuminate Segment B with G160M/160 to it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of to JM COS/FUV, TIME-TAG, FCA e optimmized for Segment B. FP-POS=4 was COS, ALIGN/APER to its nominal position, i.e. XAPER=0. FRANS rules, the "QESIPARM XSTEPS +502	the TRANS rules, the TRANS rules, the G160M 1600 A	LP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4 revious observations show	ture soft stop is at -275 and we don't -42" [(-502460) = -42] Special K IU 11 TH; EL w that it has slightly more counts the QESIPARM XSTEP S 502 is necessary to move the aperture to SPEC COM INSTR ELHVADJPROP;	t want to exceed that value when including the executive and the exceed that value when including the executive and the excess $l = -3l$ and the other FP-POS values. 0 Secs (0 Secs) $l = -3l$ to its correct location.	[1]
Desired LAPXSTP value for Fot To leave some pad, I will	CA to illuminate Segment B with G160M/160 to it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of to JM COS/FUV, TIME-TAG, FCA e optimmized for Segment B. FP-POS=4 was COS, ALIGN/APER to its nominal position, i.e. XAPER=0. FRANS rules, the "QESIPARM XSTEPS +502	the TRANS rules, the TRANS rules, the G160M 1600 A	LP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4 revious observations show	ture soft stop is at -275 and we don't -42" [(-502460) = -42] Special K IU 11 TH; EL w that it has slightly more counts the QESIPARM XSTEP S 502 is necessary to move the aperture to SPEC COM INSTR	t want to exceed that value when including the executive and the other FP-POS values. O Secs (0 Secs) $I = = > I$ Dits correct location. 39 Secs (39 Secs)	[1]
Desired LAPXSTP value for Front. To leave some pad, I will some pad, I wil	CA to illuminate Segment B with G160M/160 to it to match the G130M exposure (-267). 7 - 235.1 = -502. *HOWEVER*, because of to JM COS/FUV, TIME-TAG, FCA e optimmized for Segment B. FP-POS=4 was COS, ALIGN/APER to its nominal position, i.e. XAPER=0. FRANS rules, the "QESIPARM XSTEPS +502	the TRANS rules, the TRANS rules, the G160M 1600 A	LP2 is -280, but the aperate "QESIPARM XSTEPS CURRENT=MED M; BUFFER-TIME= 1; FP-POS=4; SEGMENT=BOT LIFETIME-POS= P4 revious observations show	ture soft stop is at -275 and we don't -42" [(-502460) = -42] Special K IU 11 TH; EL w that it has slightly more counts the QESIPARM XSTEP S 502 is necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	t want to exceed that value when including the executive and the other FP-POS values. O Secs (0 Secs) $I = = > I$ Dits correct location. 39 Secs (39 Secs)	[1]

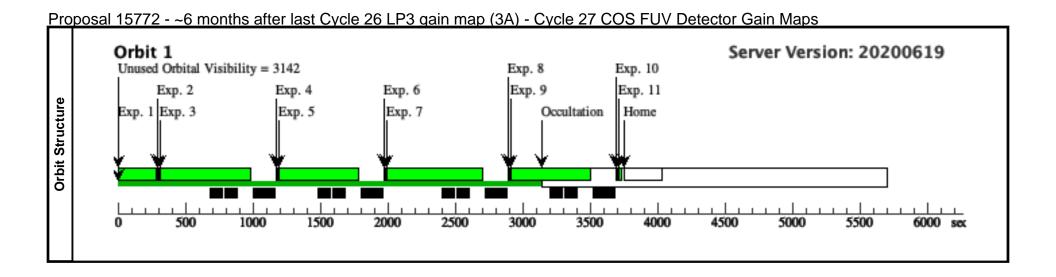


<u>Pr</u>	oposal 15772 - ~6 months after last Cycle 26 LP3 gain map (3A) - Cycle 27 COS FUV Detector Gain Maps	
	Proposal 15772, ~6 months after last Cycle 26 LP3 gain map (3A), completed	Wed Sep 02 14:00:35 GMT 2020
.±	Diagnostic Status: Warning	
J:S	Scientific Instruments: S/C, COS, COS/FUV	
1-	Special Requirements: BETWEEN 01-APR-2020:00:00:00 AND 01-MAY-2020:00:00; PARALLEL	
	Comments: This visit collects data at LP3. It uses the HV values appropriate for LP3 (167/175).	
၂ ပ္	(~6 months after last Cycle 26 LP3 gain map (3A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sţ.	(Aperture Adjustment 1 for Segment A (3A.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - ~6 months after last Cycle 26 LP3 gain map (3A) - Cycle 27 COS FUV Detector Gain Maps

	Label T	Гarget	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Adjust HV t I	DARK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)	
	o LP3 value s					SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN OM;			
						QESIPARM ENDC TSA 167;			[1]
						QESIPARM ENDC TSB 175;			
						QESIPARM SEGM ENT AB			
<i>Co</i>	Aperture Ad N	ne HV to the LP3 v	COS, ALIGN/APER		XAPER=-307			0.0 Secs (0 Secs)	
	justment 1 f or Segment A	NONE	COS, ALIGIVAFER		AAFER-30/			l==>1	[1]
Co		perture in the app	propriate position to illuminate a portio	on of the LP3 region	of the detector when illu	minating Segment A wi	th G130M/1309.		
De		alue for FCA to ill	luminate Segment A with G130M/1309	at Position 1 for LP	3 is -72				
Th		s set to -72 - 235.1		G1203.f	CURRENT MERILI	·		400 G (400 G)	1
3	G130M/130 I 9 Deuterium	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU M;			400 Secs (400 Secs)	
	Exposure 1		BUFFER-TIME=11			[==>]			
-					1;				
•					FP-POS=1;				[1]
					SEGMENT=BOTH;	;			
					LIFETIME-POS=L P4				
Co	omments: Deuteriu	ım exposure optim	ized for Segment A. FP-POS=1 was c	hosen because previ	ous observations show th	at it has slightly more o	counts than the other	FP-POS values.	
4	Aperture Ad N	NONE	COS, ALIGN/APER		XAPER=-363	QESIPARM XSTEP		0.0 Secs (0 Secs)	
	justment 2 f or Segment					S -56		[==>]	[1]
	A								
Со		perture in the app	propriate position to illuminate a portio	on of the LP3 region	of the detector when illu	minating Segment A wi	th G130M/1309.		
PS.	omments: Put the a SA LAPXSTP value	e at LP4 is 235.1	oropriate position to illuminate a portion luminate Segment A with G130M/1309			minating Segment A wi	th G130M/1309.		
PS. De	omments: Put the a SA LAPXSTP value esired LAPXSTP va	e at LP4 is 235.1 alue for FCA to ill	luminate Segment A with G130M/1309	at Position 2 for LP.	23 is -128			nt is necessary to move the aperture to t	he correct i
PS. De	omments: Put the a SA LAPXSTP value esired LAPXSTP va- verefore, XAPER is ation. G130M/130 I	e at LP4 is 235.1 alue for FCA to ill s set to -128 - 235.	luminate Segment A with G130M/1309	at Position 2 for LP. the TRANS rules, the 'G130M	23 is -128 "QESIPARM XSTEPS -50 CURRENT=MEDIU	6" [(-363307) = -56]		nt is necessary to move the aperture to t	he correct i
PS. De	omments: Put the a SA LAPXSTP value esired LAPXSTP va erefore, XAPER is ation.	e at LP4 is 235.1 alue for FCA to ill s set to -128 - 235.	Suminate Segment A with $G130M/1309$ 1 = -363. *HOWEVER*, because of the	at Position 2 for LP.	3 is -128 "QESIPARM XSTEPS -50	6" [(-363307) = -56]			he correct i
PS. De	omments: Put the a SA LAPXSTP value esired LAPXSTP value terefore, XAPER is ation. G130M/130 I 9 Deuterium	e at LP4 is 235.1 alue for FCA to ill s set to -128 - 235.	Suminate Segment A with $G130M/1309$ 1 = -363. *HOWEVER*, because of the	at Position 2 for LP. the TRANS rules, the 'G130M	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=1; SEGMENT=BOTH;	6" [(-363307) = -56]		400 Secs (400 Secs)	he correct l
PS. De	omments: Put the a SA LAPXSTP value esired LAPXSTP value terefore, XAPER is ation. G130M/130 I 9 Deuterium	e at LP4 is 235.1 alue for FCA to ill s set to -128 - 235.	Suminate Segment A with $G130M/1309$ 1 = -363. *HOWEVER*, because of the	at Position 2 for LP. the TRANS rules, the 'G130M	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=1;	6" [(-363307) = -56]		400 Secs (400 Secs)	

5	Aperture Ad NONE	COS, ALIGN/APER		XAPER=-319	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 1 f or Segment B				S 44	[==>]	[1]
Com	ments: Put the aperture in the app	propriate position to illuminate a porti	on of the LP3 region	on of the detector when illu	minating Segment B with G160M	1600.	•
	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il	luminate Segment B with G160M/1600	at Position 1 for I	LP3 is -84			
Ther catio		= -319. *HOWEVER*, because of the	e TRANS rules, the	"QESIPARM XSTEPS 44"	[(-319363) = +44] Special Re	equirement is necessary to move the aperture	e to the correct
,	G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		400 Secs (400 Secs)	
	0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11		I==>J	
				1;			
				FP-POS=4;			[1]
				SEGMENT=BOTH;			
				LIFETIME-POS=L P4			
Com	ments: Deuterium exposure optim	mized for Segment B. FP-POS=4 was	chosen because pr	revious observations show t	hat it has slightly more counts the	in the other FP-POS values.	
3	Aperture Ad NONE	COS, ALIGN/APER		XAPER=-375	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 2 f or Segment B				S -56	[==>]	[1]
		propriate position to illuminate a porti	on of the LP3 regi	on of the detector when illu	minating Segment B with G160M	/1600.	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235. on.	luminate Segment B with G160M/1600 $I = -375$. *HOWEVER*, because of the	at Position 2 for I	LP3 is -140. ne "QESIPARM XSTEPS -50	o o	Requirement is necessary to move the apertu	ure to the correc
PSA Desii Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with G160M/1600	at Position 2 for 1 the TRANS rules, th	LP3 is -140.	o o	Requirement is necessary to move the apertude 400 Secs (400 Secs)	ire to the correc
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM	luminate Segment B with G160M/1600 $I = -375$. *HOWEVER*, because of the	at Position 2 for I	LP3 is -140. Se "QESIPARM XSTEPS -50 CURRENT=MEDIU M; BUFFER-TIME=11	o o	Requirement is necessary to move the apertu	ire to the correc
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with G160M/1600 $I = -375$. *HOWEVER*, because of the	at Position 2 for 1 the TRANS rules, th	CURRENT=MEDIU M; BUFFER-TIME=11 1;	o o	Requirement is necessary to move the apertude 400 Secs (400 Secs)	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with G160M/1600 $I = -375$. *HOWEVER*, because of the	at Position 2 for 1 the TRANS rules, th	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;	o o	Requirement is necessary to move the apertude 400 Secs (400 Secs)	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with G160M/1600 $I = -375$. *HOWEVER*, because of the	at Position 2 for 1 the TRANS rules, th	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L	o o	Requirement is necessary to move the apertude 400 Secs (400 Secs)	
PSA Desi: Ther o <u>cati</u>	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for I the TRANS rules, th G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	5" [(-375319) = -56] Special R	Requirement is necessary to move the aperture $\frac{400 \text{ Secs } (400 \text{ Secs})}{[==>]}$	ire to the correc
PSA Desi Ther Ocati)	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for I the TRANS rules, th G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	5" [(-375319) = -56] Special R	Requirement is necessary to move the aperturbed $400 \mathrm{Secs} (400 \mathrm{Secs})$ $[==>]$ In the other FP-POS values.	
PSA Desid Ther Occati)	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for I the TRANS rules, th G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	5" [(-375319) = -56] Special R	Requirement is necessary to move the aperture $\frac{400 \text{ Secs } (400 \text{ Secs})}{[==>]}$	[1]
PSA Desi: Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER	at Position 2 for I the TRANS rules, th G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	6" [(-375319) = -56] Special K hat it has slightly more counts the QESIPARM XSTEP	Requirement is necessary to move the aperturbation $\frac{400 \text{ Secs } (400 \text{ Secs})}{[==>]}$ and the other FP-POS values. 0 Secs (0 Secs)	
PSA Desi: Ther ocati Com. 0	LAPXSTP value at LP4 is 235.1 red LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235.0 n. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optimal Return Aper NONE ture to Nominal Position ments: Return the aperture to its in WEVER*, because of the TRANS	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +375"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to the state of the	hat it has slightly more counts the QESIPARM XSTEP S 375	Requirement is necessary to move the aperture $400 \mathrm{Secs} (400 \mathrm{Secs})$ $[==>]$ and the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ to its correct location.	[1]
PSA Desir Ther coati) Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim. Return Aper NONE ture to Nomi nal Position ments: Return the aperture to its intents: Return the aperture to its intents.	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA COS/FUV, TIME-TAG, FCA mixed for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0.	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to the state of the	hat it has slightly more counts the QESIPARM XSTEP S 375	Requirement is necessary to move the aperture $400 \mathrm{Secs} (400 \mathrm{Secs})$ $[==>]$ and the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ $0 \mathrm{its} \mathrm{correct} \mathrm{location}.$ $39 \mathrm{Secs} (39 \mathrm{Secs})$	[1]
PSA Desir Ther coati) Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optimal Position of the true to Nominal Position ments: Return the aperture to its in the true true true to its in the true true true true true true true tru	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +375"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to the state of the	hat it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	Requirement is necessary to move the aperture $400 \mathrm{Secs} (400 \mathrm{Secs})$ $[==>]$ and the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ to its correct location.	[1]
PSA Desir Ther coati) Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim Return Aper NONE ture to Nominal Position ments: Return the aperture to its in WEVER*, because of the TRANS Return to no DARK minal HV fo	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +375"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to the state of the	hat it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC TSA 163;	Requirement is necessary to move the aperture $400 \mathrm{Secs} (400 \mathrm{Secs})$ $[==>]$ and the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ $0 \mathrm{its} \mathrm{correct} \mathrm{location}.$ $39 \mathrm{Secs} (39 \mathrm{Secs})$	[1]
PSA Desi: Ther ocati) Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il. efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optimal Position of the true to Nominal Position ments: Return the aperture to its in the true true true to its in the true true true true true true true tru	luminate Segment B with G160M/1600 1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +375"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to the state of the	hat it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	Requirement is necessary to move the aperture $400 \mathrm{Secs} (400 \mathrm{Secs})$ $[==>]$ and the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ $0 \mathrm{its} \mathrm{correct} \mathrm{location}.$ $39 \mathrm{Secs} (39 \mathrm{Secs})$	[1]

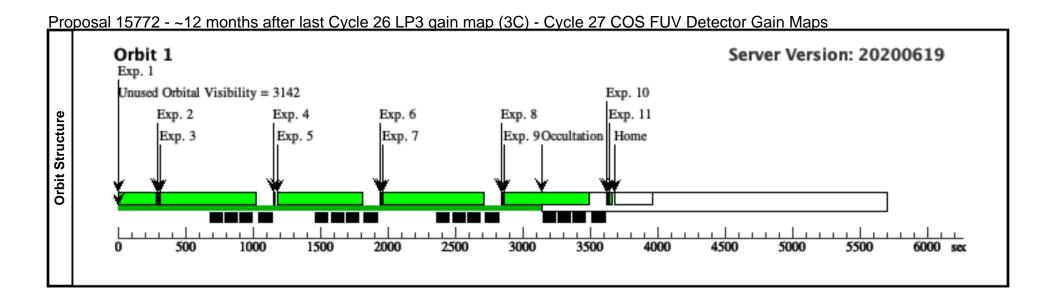


<u>Pro</u>	oposal 15772 - ~12 months after last Cycle 26 LP3 gain map (3C) - Cycle 27 COS FUV Detector Gain Maps	
	Proposal 15772, ~12 months after last Cycle 26 LP3 gain map (3C), scheduling	Wed Sep 02 14:00:35 GMT 2020
±	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 28-SEP-2020:00:00:00 AND 05-OCT-2020:00:00; PARALLEL	
	Comments: This visit collects data at LP3. It uses the HV values appropriate for LP3 (167/175).	
ပ္သ	(~12 months after last Cycle 26 LP3 gain map (3C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sţ.	(Aperture Adjustment 1 for Segment A (3C.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
1 2		
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Proposal 15772 - ~12 months after last Cycle 26 LP3 gain map (3C) - Cycle 27 COS FUV Detector Gain Maps

# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	HV t DARK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)	
o LP3	value				SPEC COM INSTR ELHLTHVF;		[==>]	
					QASISTATES COS FUV HVLOW HVN OM;			
					QESIPARM ENDC TSA 167;			[1]
					QESIPARM ENDC TSB 175;			
					QESIPARM SEGM ENT AB			
	djust the HV to the LP.							
2 Apertur justmen	e Ad NONE	COS, ALIGN/APER		XAPER=-307			0.0 Secs (0 Secs)	
or Segn	nent						[==>]	[1]
Comments: P	ut the aperture in the a	appropriate position to illuminate a porti	on of the LP3 region	of the detector when illu	minating Segment A wi	th G130M/1309.		_
	P value at LP4 is 235 XSTP value for FCA to	1 illuminate Segment A with G130M/1309	at Position 1 for LP	23 is -72				
Therefore, XA	APER is set to -72 - 235	5.1 = -307						
	/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	ſ		440 Secs (440 Secs)	
9 Deute Exposu			1309 A	M;			[==>]	
Ехрози	10 1			BUFFER-TIME=11 1;				
				FP-POS=1;				£11
				SEGMENT=BOTH;				[1]
				LIFETIME-POS=L	,			
				P4				
Comments: L	euterium exposure opt	imized for Segment A. FP-POS=1 was a	hosen because previ	ous observations show th	at it has slightly more o	counts than the other	FP-POS values.	
	e Ad NONE	COS, ALIGN/APER		XAPER=-363	QESIPARM XSTEP		0.0 Secs (0 Secs)	
justmen or Segn A					S -56		[==>]	[1]
Comments: P	ut the aperture in the a	appropriate position to illuminate a porti	on of the LP3 region	of the detector when illu	minating Segment A wi	th G130M/1309.		
PSA LAPXST	P value at LP4 is 235.	1			0 0			
		illuminate Segment A with G130M/1309 35.1 = -363. *HOWEVER*, because of the			6" [(-363307) = -56]] Special Requiremen	nt is necessary to move the aperture to the	he correc
	/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	Γ		440 Secs (440 Secs)	
9 Deute	rium		1309 A	M;			[==>]	
Exposu	re 2		150711	BUFFER-TIME=11 1;				
				FP-POS=1;				[1]
				SEGMENT=BOTH;	•			[1]
I				LIFETIME-POS=L	•			
				P4				

6	Aperture Ad NONE	COS, ALIGN/APER		XAPER=-319	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 1 f or Segment B				S 44	[==>]	[1]
Com	ments: Put the aperture in the app	propriate position to illuminate a porti	on of the LP3 region	on of the detector when illu	minating Segment B with G160M	71600.	'
	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il	luminate Segment B with G160M/1600	at Position 1 for I	LP3 is -84			
Ther catio		= -319. *HOWEVER*, because of the	e TRANS rules, the	"QESIPARM XSTEPS 44"	[(-319363) = +44] Special Re	quirement is necessary to move the apertur	e to the correct l
7	G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
	0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11		[==>]	
				1; FP-POS=4;			
				SEGMENT=BOTH;			[1]
				LIFETIME-POS=L			
Com	ments: Deuterium exposure optim	nmized for Segment B. FP-POS=4 was	chosen because pr	1 1		in the other FP-POS values.	
8	Aperture Ad NONE	COS, ALIGN/APER		XAPER=-375	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 2 f or Segment B				S -56	[==>]	[1]
							'
PSA	LAPXSTP value at LP4 is 235.1	propriate position to illuminate a porti			minating Segment B with G160M	/1600.	
PSA Desi	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.	luminate Segment B with G160M/1600	at Position 2 for I	LP3 is -140.	5" [(-375319) = -56] Special R	dequirement is necessary to move the aperture 440 Secs (440 Secs)	ire to the correct
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.5 co G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with $G160M/1600$. $I = -375$. *HOWEVER*, because of the	at Position 2 for I	LP3 is -140. ne "QESIPARM XSTEPS -50	5" [(-375319) = -56] Special R	equirement is necessary to move the apertu	ire to the correct
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM	luminate Segment B with $G160M/1600$. $I = -375$. *HOWEVER*, because of the	at Position 2 for the TRANS rules, the G160M	LP3 is -140. The "QESIPARM XSTEPS -50 CURRENT=MEDIU M; BUFFER-TIME=11	5" [(-375319) = -56] Special R	equirement is necessary to move the apertu 440 Secs (440 Secs)	ire to the correct
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.5 co G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with $G160M/1600$. $I = -375$. *HOWEVER*, because of the	at Position 2 for the TRANS rules, the G160M	CURRENT=MEDIU M; BUFFER-TIME=11 1;	5" [(-375319) = -56] Special R	equirement is necessary to move the apertu 440 Secs (440 Secs)	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.5 co G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with $G160M/1600$. $I = -375$. *HOWEVER*, because of the	at Position 2 for the TRANS rules, the G160M	LP3 is -140. The "QESIPARM XSTEPS -50 CURRENT=MEDIU M; BUFFER-TIME=11	5" [(-375319) = -56] Special R	equirement is necessary to move the apertu 440 Secs (440 Secs)	re to the correct
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.5 co G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with $G160M/1600$. $I = -375$. *HOWEVER*, because of the	at Position 2 for the TRANS rules, the G160M	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;	5" [(-375319) = -56] Special R	equirement is necessary to move the apertu 440 Secs (440 Secs)	
PSA Desi Ther ocati 9	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with $G160M/1600$. $I = -375$. *HOWEVER*, because of the	O at Position 2 for I the TRANS rules, th G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	6" [(-375319) = -56] Special R	Sequirement is necessary to move the aperturbation $I = -3I$	
PSA Desi Ther ocati 9	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.00. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with G160M/1600.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	O at Position 2 for I the TRANS rules, th G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	6" [(-375319) = -56] Special R hat it has slightly more counts the QESIPARM XSTEP	Sequirement is necessary to move the aperturbation $I = -3I$	
PSA Desi Ther ocati 9	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with G160M/1600.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	O at Position 2 for I the TRANS rules, th G160M 1600 A	LP3 is -140. The "QESIPARM XSTEPS -50 CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 Tevious observations show to	6" [(-375319) = -56] Special R	Requirement is necessary to move the aperturbed $440 \mathrm{Secs} (440 \mathrm{Secs})$ $I = = > I$ an the other FP-POS values.	
PSA Desi Ther ocati 9	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.5 on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optimal Return Aper NONE ture to Nominal Position ments: Return the aperture to its is in the control of the control o	luminate Segment B with G160M/1600.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER mominal position, i.e. XAPER=0.	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **revious observations show to the s	hat it has slightly more counts the QESIPARM XSTEP S 375	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$	[1]
PSA Desi Therrocati 9 Com 10 Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235. con. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim. Return Aper NONE ture to Nominal Position ments: Return the aperture to its in WEVER*, because of the TRANS Return to no DARK	luminate Segment B with G160M/1600.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **revious observations show to the s	hat it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$	[1]
PSA Desi Therrocati 9 Com 10 Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim. Return Aper NONE ture to Nomi nal Position ments: Return the aperture to its in WEVER*, because of the TRANS	luminate Segment B with G160M/1600.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mixed for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +375"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **revious observations show to the s	hat it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP;	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$	[1]
PSA Desi Therrocati 9 Com 10 Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235.5 on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optime NONE ture to Nominal Position ments: Return the aperture to its in the WEVER*, because of the TRANS Return to no DARK minal HV fo	luminate Segment B with G160M/1600.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mixed for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +375"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **revious observations show to the s	hat it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR	the other FP-POS values. 0 Secs (0 Secs) $[==>]$ 1 its correct location. 39 Secs (39 Secs)	[1]
PSA Desi Therrocati 9 Com 10 Com *HO	LAPXSTP value at LP4 is 235.1 red LAPXSTP value for FCA to il efore, XAPER is set to -140 - 235. on. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim Return Aper ture to Nomi nal Position ments: Return the aperture to its is WEVER*, because of the TRANS Return to no DARK minal HV fo r standard m	luminate Segment B with G160M/1600.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mixed for Segment B. FP-POS=4 was COS, ALIGN/APER cominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +375"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **revious observations show to the s	hat it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	the other FP-POS values. 0 Secs (0 Secs) $[==>]$ 1 its correct location. 39 Secs (39 Secs)	[1]

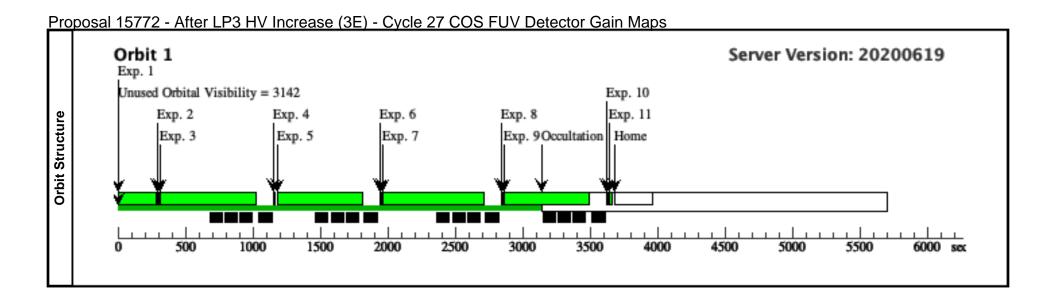


<u>Pro</u>	pposal 15772 - After LP3 HV Increase (3E) - Cycle 27 COS FUV Detector Gain Maps	
	Proposal 15772, After LP3 HV Increase (3E)	Wed Sep 02 14:00:35 GMT 2020
<u> </u>	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 05-OCT-2020:00:00:00 AND 12-OCT-2020:00:00:00; PARALLEL	
	Comments: This visit collects data at LP3. It uses the HV values appropriate for LP3 after the HV increase on 10/5/20 (173/175).	
ပ္ပ	(After LP3 HV Increase (3E)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
sti	(Aperture Adjustment 1 for Segment A (3E.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - After LP3 HV Increase (3E) - Cycle 27 COS FUV Detector Gain Maps

	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1 Adjust H	Vt DARK	S/C, DATA, NONE		- 1	SAA CONTOUR 31;		295 Secs (295 Secs)	
	o new LP values	3				SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN OM;			
						QESIPARM ENDC TSA 173;			[1]
						QESIPARM ENDC TSB 175;			
						QESIPARM SEGM ENT AB			
		<i>ust the HV to the</i> Ad NONE	new LP3 values. COS, ALIGN/APER		XAPER=-307			0.0 Secs (0 Secs)	
	justment	l f	COS, ALIGN/APER		AAPER=-307			[==>]	
	or Segme A	nt						1>1	[1]
	Comments: Put	the aperture in t	he appropriate position to illuminate a port	tion of the LP3 region	of the detector when illu	ıminating Segment A wi	th G130M/1309.		
		value at LP4 is 2 TP value for FC	235.1 A to illuminate Segment A with G130M/130	99 at Position 1 for LP	23 is -72				
	Therefore, XAI	ER is set to -72 -							
		30 DEUTERIU	M COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		440 Secs (440 Secs)	
ē	9 Deuteri Exposure			1309 A	M; BUFFER-TIME=11			[==>]	
Su					1;				
Exposures					FP-POS=1;				[1]
ш					SEGMENT=BOTH	•			
					LIFETIME-POS=L P4				
	Comments: De	ıterium exposure	optimized for Segment A. FP-POS=1 was	chosen because previ		hat it has slightly more o	counts than the other	FP-POS values.	
	4 Aperture	Ad NONE	COS, ALIGN/APER	•	XAPER=-363	QESIPARM XSTEP		0.0 Secs (0 Secs)	
	justment i or Segme A					S -56		[==>]	[1]
	Comments: Put	the aperture in t	he appropriate position to illuminate a port	tion of the LP3 region	of the detector when illu	minating Segment A wi	th G130M/1309.		
		value at LP4 is 2 TP value for FC	235.1 A to illuminate Segment A with G130M/130	09 at Position 2 for LF	23 is -128				
	Therefore, XAI ocation.	ER is set to -128	- 235.1 = -363. *HOWEVER*, because of	the TRANS rules, the	"QESIPARM XSTEPS -5	[6" [(-363307) = -56]] Special Requiremen	t is necessary to move the aperture to ti	he correct l
		30 DEUTERIU	M COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		440 Secs (440 Secs)	
	9 Deuteri Exposure			1309 A	M; BUFFER-TIME=11 1;			[==>]	
					FP-POS=1;				[1]
					SEGMENT=BOTH	•			[1]
					LIFETIME-POS=L P4				
	Comments: De	ıterium exposure	optimized for Segment A. FP-POS=1 was	chosen because previ	ous observations show th	hat it has slightly more o	counts than the other	FP-POS values.	

5	Aperture Ad NONE	COS, ALIGN/APER		XAPER=-319	QESIPARM XSTEP	0.0 Secs (0 Secs)	I
	justment 1 f or Segment B				S 44	[==>]	[1]
Com	nments: Put the aperture in the ap	ppropriate position to illuminate a porti	on of the LP3 regi	on of the detector when illi	uminating Segment B with G160M	/1600.	
	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i	illuminate Segment B with G160M/1600	at Position 1 for I	LP3 is -84			
Ther catio		1 = -319. *HOWEVER*, because of the	e TRANS rules, the	"QESIPARM XSTEPS 44	" [(-319363) = +44] Special Re	quirement is necessary to move the apertur	re to the correc
7	G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	J	440 Secs (440 Secs)	
	0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11		[==>]	
	•			1;			
				FP-POS=4;			[1]
				SEGMENT=BOTH	•		
				LIFETIME-POS=L P4			
Com	nments: Deuterium exposure optii	mmized for Segment B. FP-POS=4 was	chosen because p	revious observations show		un the other FP-POS values.	
8	Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-375	QESIPARM XSTEP S -56	0.0 Secs (0 Secs)	
	or Segment				5-50	[==>]	[1]
PSA Desi	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i	illuminate Segment B with G160M/1600	at Position 2 for I	LP3 is -140.			
PSA Desi	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 235 ion.	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th	at Position 2 for the TRANS rules, the	LP3 is -140. ne "QESIPARM XSTEPS -5	66" [(-375319) = -56] Special R	Requirement is necessary to move the apertu	ure to the corre
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 235 ion. G160M/160 DEUTERIUM 0 Deuterium	illuminate Segment B with G160M/1600	at Position 2 for the TRANS rules, the G160M	LP3 is -140.	66" [(-375319) = -56] Special R	Sequirement is necessary to move the apertu 440 Secs (440 Secs)	ure to the corre
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 233 ion. G160M/160 DEUTERIUM	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th	at Position 2 for the TRANS rules, the	LP3 is -140. Se "QESIPARM XSTEPS -5 CURRENT=MEDIUM; BUFFER-TIME=11	56" [(-375319) = -56] Special R	Requirement is necessary to move the apertu	ure to the corre
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 235 ion. G160M/160 DEUTERIUM 0 Deuterium	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th	at Position 2 for the TRANS rules, the G160M	CURRENT=MEDIUM; BUFFER-TIME=111;	56" [(-375319) = -56] Special R	Sequirement is necessary to move the apertu 440 Secs (440 Secs)	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 235 ion. G160M/160 DEUTERIUM 0 Deuterium	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th	at Position 2 for the TRANS rules, the G160M	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4;	56" [(-375319) = -56] Special R	Sequirement is necessary to move the apertu 440 Secs (440 Secs)	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 235 ion. G160M/160 DEUTERIUM 0 Deuterium	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th	at Position 2 for the TRANS rules, the G160M	CURRENT=MEDIUM; BUFFER-TIME=111;	56" [(-375319) = -56] Special R	Sequirement is necessary to move the apertu 440 Secs (440 Secs)	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to it refore, XAPER is set to -140 - 235 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4	56" [(-375319) = -56] Special R	Dequirement is necessary to move the apertude $440 \text{ Secs } (440 \text{ Secs})$ $I = = > I$	ure to the correc
PSA Desi Ther Ther Ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to it refore, XAPER is set to -140 - 233 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th COS/FUV, TIME-TAG, FCA	at Position 2 for the TRANS rules, the G160M 1600 A	LP3 is -140. The "QESIPARM XSTEPS -5" CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 Tevious observations show	io (Requirement is necessary to move the apertude $440 \mathrm{Secs} (440 \mathrm{Secs})$ $I = = > I$ un the other FP-POS values.	
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 233 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4	56" [(-375319) = -56] Special R	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[====]$ $[=====]$ $[=====]$ $[=====]$ $[=====]$ $[=====]$ $[=====]$ $[======]$ $[======]$ $[======]$ $[======]$ $[======]$ $[=======]$ $[=======]$ $[========]$ $[====================================$	[1]
PSA Desi Ther ocati	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 232 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 DEUTERIUM 0 Deuterium Exposure optin Return Aper NONE ture to Nomi nal Position	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER	at Position 2 for the TRANS rules, the G160M 1600 A	LP3 is -140. The "QESIPARM XSTEPS -5" CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 Tevious observations show	Ge" [(-375319) = -56] Special R ; that it has slightly more counts the QESIPARM XSTEP	Requirement is necessary to move the apertude $440 \mathrm{Secs} (440 \mathrm{Secs})$ $I = = > I$ un the other FP-POS values.	
PSA Desi Ther ocati O Com	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 233 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 DEUTERIUM ODEUTERIUM ODEUTERIUM ODEUTERIUM ODEUTERIUM Exposure 2	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th COS/FUV, TIME-TAG, FCA	at Position 2 for A the TRANS rules, th G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	Ge" [(-375319) = -56] Special R that it has slightly more counts the QESIPARM XSTEP S 375	Requirement is necessary to move the aperturbation of the second	[1]
PSA Desi Ther ocati Com 0	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 233 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 DEUTERIUM ODEUTERIUM ODEUTERIUM ODEUTERIUM ODEUTERIUM Exposure 2 DEUTERIUM ODEUTERIUM ODEUTERI	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0.	at Position 2 for A the TRANS rules, th G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR	Requirement is necessary to move the aperturbation of the second	[1]
PSA Desi Ther ocati) Com *HO	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i refore, XAPER is set to -140 - 232 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 DEUTERIUM 0 Deuterium Exposure optime None ture to Nomi nal Position nal Position naments: Return the aperture to its DWEVER*, because of the TRANS	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +375	at Position 2 for A the TRANS rules, th G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 375 snecessary to move the aperture to SPEC COM INSTR ELHVADJPROP;	Requirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ an the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ we its correct location.	[1]
PSA Desi Ther ocati) Com *HO	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to it refore, XAPER is set to -140 - 235 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Deuterium Exposure 2 Deuterium exposure optin Return Aper NONE ture to Nominal Position Deuterium the aperture to its DWEVER*, because of the TRANSE Return to no DARK minal HV fo	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +375	at Position 2 for A the TRANS rules, th G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 375 necessary to move the aperture to SPEC COM INSTR	Requirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ an the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ o its correct location. $39 \mathrm{Secs} (39 \mathrm{Secs})$	(1)
PSA Desi Ther ocati) Com *HO	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to it refore, XAPER is set to -140 - 235 ion. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Deuterium exposure optimely represented by the comments: Deuterium exposure optimely represented by the comments of the co	illuminate Segment B with G160M/1600 5.1 = -375. *HOWEVER*, because of th COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +375	at Position 2 for A the TRANS rules, th G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 375 **necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	Requirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ an the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ o its correct location. $39 \mathrm{Secs} (39 \mathrm{Secs})$	[1]

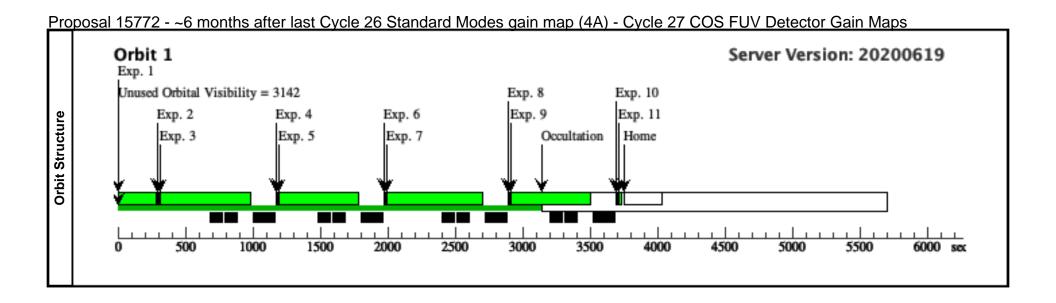


<u>Pr</u>	oposal 15772 - ~6 months after last Cycle 26 Standard Modes gain map (4A) - Cycle 27 COS FUV Detector Gair	n Maps
	Proposal 15772, ~6 months after last Cycle 26 Standard Modes gain map (4A), completed	Wed Sep 02 14:00:35 GMT 2020
±	Diagnostic Status: Warning	
J:S	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 01-APR-2020:00:00 AND 01-MAY-2020:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for the Standard Modes (163/163).	
၂ ဗ	(~6 months after last Cycle 26 Standard Modes gain map (4A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Į.į	(Aperture Adjustment 1 for Segment A (4A.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - ~6 months after last Cycle 26 Standard Modes gain map (4A) - Cycle 27 COS FUV Detector Gain Maps Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit Adjust HV t DARK S/C, DATA, NONE SAA CONTOUR 31; 295 Secs (295 Secs) o LP4 value SPEC COM INSTR *[==>1* ELHLTHVF: **QASISTATES COS FUV HVLOW HVN** OM; **QESIPARM ENDC** [1] TSA 163; OESIPARM ENDC TSB 163; **OESIPARM SEGM** ENT AB Comments: Adjust the HV to the LP4 Standard Modes values. COS, ALIGN/APER XAPER=-267 0.0 Secs (0 Secs) Aperture Ad NONE justment 1 f *[==>1* or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 *Therefore, XAPER is set to -32 - 235.1 = -267* G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 400 Secs (400 Secs) 9 Deuterium Exposures 1309 A I = = > 1Exposure 1 BUFFER-TIME=11 FP-POS=1: [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-321 **OESIPARM XSTEP** 0.0 Secs (0 Secs) justment 2 f S -54 I==>Jor Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86 - 235.1 = -321. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-321 - -267) = -54] Special Requirement is necessary to move the aperture to the correct lo cation. G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 400 Secs (400 Secs) 9 Deuterium M; 1309 A [==>1 Exposure 2 BUFFER-TIME=11

FP-POS=1; [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.

Aperture Ad NONE	COS, ALIGN/APER		XAPER=-276	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				S 45	[==>]	[1]
omments: Put the aperture in the a	ppropriate position to illuminate a porti	on of the LP4 region	on of the detector when illu	uminating Segment B with G160M	1/1600.	
SA LAPXSTP value at LP4 is 235 esired LAPXSTP value for FCA to	l illuminate Segment B with G160M/1600	at Position 1 for I	LP4 is -41			
herefore, XAPER is set to -41 - 233 ation.	5.1 = -276. *HOWEVER*, because of the	e TRANS rules, the	"QESIPARM XSTEPS 45"	" [(-276321) = +45] Special R	equirement is necessary to move the apertur	re to the correct
G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	J	400 Secs (400 Secs)	
0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11 1;		[==>]	
			FP-POS=4;			[1]
			SEGMENT=BOTH	•		[1]
			LIFETIME-POS=L P4			
omments: Deuterium exposure opt	immized for Segment B. FP-POS=4 was	chosen because pi		that it has slightly more counts th	an the other FP-POS values.	
Aperture Ad NONE	COS, ALIGN/APER		XAPER=-330	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B				S -54	[==>]	[1]
2						
SA LAPXSTP value at LP4 is 235.	ppropriate position to illuminate a porti l illuminate Segment B with G160M/1600			uminating Segment B with G160M	I/1600.	
SA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to	l illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for I	LP4 is -95.	!" [(-330276) = -54] Special R	equirement is necessary to move the apertur	re to the correct
SA LAPXSTP value at LP4 is 235 lesired LAPXSTP value for FCA to herefore, XAPER is set to -95 - 235 ution.	illuminate Segment B with G160M/1600	at Position 2 for I	LP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIUM; BUFFER-TIME=11	!" [(-330276) = -54] Special R		re to the correct
SA LAPXSTP value at LP4 is 235 Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 232 ation. G160M/160 DEUTERIUM 0 Deuterium	l illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a e TRANS rules, the G160M	CURRENT=MEDIUM; BUFFER-TIME=111;	!" [(-330276) = -54] Special R	equirement is necessary to move the apertur 400 Secs (400 Secs)	
SA LAPXSTP value at LP4 is 235 Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 232 ation. G160M/160 DEUTERIUM 0 Deuterium	l illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a e TRANS rules, the G160M	LP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIUM; BUFFER-TIME=11	!" [(-330276) = -54] Special R	equirement is necessary to move the apertur 400 Secs (400 Secs)	re to the correct
SA LAPXSTP value at LP4 is 235 Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 232 ation. G160M/160 DEUTERIUM 0 Deuterium	l illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a e TRANS rules, the G160M	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;	!" [(-330276) = -54] Special R	equirement is necessary to move the apertur 400 Secs (400 Secs)	
SA LAPXSTP value at LP4 is 235. Lesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 232 tition. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	l illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	O at Position 2 for 1 to TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4	!" [(-330276) = -54] Special R] ; ; that it has slightly more counts th	equirement is necessary to move the apertur 400 Secs (400 Secs) [==>]	
SA LAPXSTP value at LP4 is 235. Lesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 235 tition. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600, 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	O at Position 2 for 1 to TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4	(" [(-330276) = -54] Special R that it has slightly more counts the QESIPARM XSTEP	equirement is necessary to move the apertur 400 Secs (400 Secs) [==>]	
SA LAPXSTP value at LP4 is 235. lesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 232 tition. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600.5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	O at Position 2 for 1 to TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4	!" [(-330276) = -54] Special R] ; ; that it has slightly more counts th	equirement is necessary to move the apertur $ \frac{400 \text{ Secs } (400 \text{ Secs})}{[==>]} $ an the other FP-POS values.	
SA LAPXSTP value at LP4 is 235 Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 233 ation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Somments: Deuterium exposure option of the comments of the commen	illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER s nominal position, i.e. XAPER=0.	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	t" [(-330276) = -54] Special R that it has slightly more counts the QESIPARM XSTEP S 330	equirement is necessary to move the apertur	[1]
SA LAPXSTP value at LP4 is 235 Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 232 ation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Somments: Deuterium exposure opt ture to Nominal Position Comments: Return the aperture to it HOWEVER*, because of the TRAN 1 Return to no DARK	illuminate Segment B with G160M/1600. 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 330 Senecessary to move the aperture to SPEC COM INSTR	equirement is necessary to move the apertur	[1]
SA LAPXSTP value at LP4 is 235. Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 232 to 100. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Somments: Deuterium exposure option to Nominal Position Comments: Return the aperture to its thowever*, because of the TRAN	illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER s nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +330"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 330 Spec COM INSTR ELHVADJPROP;	equirement is necessary to move the apertur	[1]
SA LAPXSTP value at LP4 is 235 Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 233 ation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Somments: Deuterium exposure option ture to Nominal Position Comments: Return the aperture to inthe HOWEVER*, because of the TRAN 1 Return to no DARK minal HV fo	illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER s nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +330"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 330 Senecessary to move the aperture to SPEC COM INSTR	equirement is necessary to move the apertur	[1]
SA LAPXSTP value at LP4 is 235 Sesired LAPXSTP value for FCA to therefore, XAPER is set to -95 - 233 ation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Somments: Deuterium exposure option and Position and Position Somments: Return the aperture to in the Aperture to Nominal Position of the TRAN of t	illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER s nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +330"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=4; SEGMENT=BOTH LIFETIME-POS=L P4 revious observations show XAPER=0	that it has slightly more counts the QESIPARM XSTEP S 330 Senecessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	equirement is necessary to move the apertur	[1]

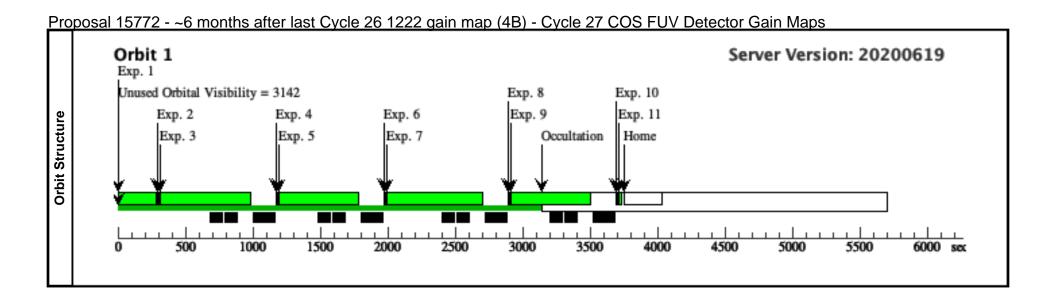


<u>Pr</u>	oposal 15772 - ~6 months after last Cycle 26 1222 gain map (4B) - Cycle 27 COS FUV Detector Gain Maps	
	Proposal 15772, ~6 months after last Cycle 26 1222 gain map (4B), completed	Wed Sep 02 14:00:35 GMT 2020
==	Diagnostic Status: Warning	
] is	Scientific Instruments: S/C, COS, COS/FUV	
-	Special Requirements: BETWEEN 01-APR-2020:00:00 AND 01-MAY-2020:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for G130M/1222 (163/167).	
၂ ဗ	(~6 months after last Cycle 26 1222 gain map (4B)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
sti	(Aperture Adjustment 1 for Segment A (4B.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - ~6 months after last Cycle 26 1222 gain map (4B) - Cycle 27 COS FUV Detector Gain Maps

1	Label Tai	get	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1 -	Adjust HV t DA	RK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)	
	o LP4 1222 values					SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN OM;			
						QESIPARM ENDC TSA 163;			[1]
						QESIPARM ENDC TSB 167;			
						QESIPARM SEGM ENT AB			
Com	ments: Adjust the I				V. DDD 0.5				
2	Aperture Ad NO justment 1 f	NE	COS, ALIGN/APER		XAPER=-267			0.0 Secs (0 Secs)	
	or Segment A							[==>]	[1]
Com	nments: Put the ape	rture in the appr	opriate position to illuminate a porti	on of the LP4 region	of the detector when illu	minating Segment A wi	th G130M/1309.		,
	LAPXSTP value at		minate Segment A with G130M/1309	at Position 1 for LP	24 is -32				
	refore, XAPER is se	3	o .	ai I osiiion I jor Ei	710 02				
3	G130M/130 DE		COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	ı		400 Secs (400 Secs)	
	9 Deuterium		., .	1309 A	M;			[==>1	
	Exposure 1				BUFFER-TIME=11				
					1; ED DOS-1:				
1					FP-POS=1; SEGMENT=BOTH;				[1]
					LIFETIME-POS=L	,			
					P4				
Com			zed for Segment A. FP-POS=1 was c	hosen because previ			counts than the other		1
4	Aperture Ad NO justment 2 f	NE	COS, ALIGN/APER		XAPER=-321	QESIPARM XSTEP S -54		0.0 Secs (0 Secs)	
	or Segment A					5-54		[==>]	[1]
Com	ments: Put the ape	rture in the appr	opriate position to illuminate a porti	on of the LP4 region	of the detector when illu	minating Segment A wi	th G130M/1309.		· ·
PSΔ	LAPXSTP value at ired LAPXSTP valu		minate Segment A with G130M/1309	at Position 2 for LP	4 is -86				
	C WARER:	t to -86 - 235.1	= -321. *HOWEVER*, because of the	TRANS rules, the "Q	QESIPARM XSTEPS -54	" [(-321267) = -54]	Special Requirement	is necessary to move the aperture to the	e correct lo
Desi			GOG/FUNI ED 4F ELG FGA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)	
Desi Ther	on. G130M/130 DE	UTERIUM	COS/FUV, TIME-TAG, FCA						
Desi Ther catio	on.	UTERIUM	COS/FUV, TIME-TAG, FCA	1309 A	M; BUFFER-TIME=11 1;			[==>]	
Desi Ther catio	G130M/130 DE 9 Deuterium	UTERIUM	COS/FUV, TIME-TAG, FCA	1309 A	BUFFER-TIME=11			[==>]	m.
Desi Ther	G130M/130 DE 9 Deuterium	UTERIUM	COS/FUV, TIME-TAG, FCA	1309 A	BUFFER-TIME=11 1;			[==>]	[1]
Desi Ther	G130M/130 DE 9 Deuterium	UTERIUM	COS/FUV, TIME-TAG, FCA	1309 A	BUFFER-TIME=11 1; FP-POS=1;			[==>]	[1]

6 Aperture Ad NONE justment 1 f or Segment B	COS, ALIGN/APER			OESIPARM XSTEP	III () Secs (I) Secs)	1
D	000,122010124		XAPER=-276	QESIPARM XSTEP S 45	0.0 Secs (0 Secs) [==>]	[1]
Comments: Put the aperture in the ap	ppropriate position to illuminate a porti	on of the LP4 region	on of the detector when illu	minating Segment B with G160M/	1600.	•
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to a	illuminate Segment B with G160M/1600	at Position 1 for I	LP4 is -41			
Therefore, XAPER is set to -41 - 235. cation.	1 = -276. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS 45"	[(-276321) = +45] Special Red	quirement is necessary to move the aperture	e to the correct l
7 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		400 Secs (400 Secs)	
0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11 1;		[==>]	
			FP-POS=4;			[1]
			SEGMENT=BOTH;			[-]
			LIFETIME-POS=L P4			
Comments: Deuterium exposure opti	mmized for Segment B. FP-POS=4 was	chosen because pi	• •	hat it has slightly more counts tha	n the other FP-POS values.	I
8 Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-330	QESIPARM XSTEP S -54	0.0 Secs (0 Secs)	
or Segment B				3-54	[==>]	[1]
Comments: Put the aperture in the a	opropriate position to illuminate a porti	on of the LP4 region	on of the detector when illu	minating Segment B with G160M/	1600.	•
Desirea LAPXSIP value for FCA to	illuminate Segment B with G160M/1600					
		v		" [(-330276) = -54] Special Red	quirement is necessary to move the aperture	e to the correct le
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM		G160M	c "QESIPARM XSTEPS -54 CURRENT=MEDIU		400 Secs (400 Secs)	e to the correct l
Therefore, XAPER is set to -95 - 235. cation.	1 = -330. *HOWEVER*, because of the	? TRANS rules, the	e "QESIPARM XSTEPS -54			e to the correct l
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium	1 = -330. *HOWEVER*, because of the	G160M	CURRENT=MEDIU M; BUFFER-TIME=11		400 Secs (400 Secs)	e to the correct le
Therefore, XAPER is set to -95 - 235. cation. G160M/160 DEUTERIUM 0 Deuterium	1 = -330. *HOWEVER*, because of the	G160M	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH;		400 Secs (400 Secs)	
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium	1 = -330. *HOWEVER*, because of the	G160M	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;		400 Secs (400 Secs)	
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	1 = -330. *HOWEVER*, because of the	G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4		400 Secs (400 Secs) [==>]	
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure option 10 Return Aper NONE	1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	hat it has slightly more counts tha QESIPARM XSTEP	$\frac{400 \operatorname{Secs} (400 \operatorname{Secs})}{[==>]}$ In the other FP-POS values. $0 \operatorname{Secs} (0 \operatorname{Secs})$	
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure opti. 10 Return Aper NONE ture to Nomi nal Position	1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER	G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	hat it has slightly more counts tha	400 Secs (400 Secs) [==>] In the other FP-POS values.	
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure option 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to its	T = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0.	G160M G1600 A 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to	hat it has slightly more counts that QESIPARM XSTEP S 330	$ \begin{array}{c} 400 \operatorname{Secs} (400 \operatorname{Secs}) \\ [==>] \\ \underline{n \text{ the other } FP\text{-}POS \text{ values.}} \\ 0 \operatorname{Secs} (0 \operatorname{Secs}) \\ [==>] \end{array} $	[1]
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure option 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to its *HOWEVER*, because of the TRANS 11 Return to no DARK	1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER	G160M G1600 A 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to	hat it has slightly more counts that QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR	$ \begin{array}{c} 400 \operatorname{Secs} (400 \operatorname{Secs}) \\ [==>] \\ \underline{n \text{ the other } FP\text{-}POS \text{ values.}} \\ 0 \operatorname{Secs} (0 \operatorname{Secs}) \\ [==>] \end{array} $	[1]
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure option 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to its *HOWEVER*, because of the TRANS.	T = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0. Strules, the "QESIPARM XSTEPS +330"	G160M G1600 A 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to	hat it has slightly more counts that QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP;		[1]
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure opti. 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to its *HOWEVER*, because of the TRAN. 11 Return to no DARK minal HV fo	T = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0. Strules, the "QESIPARM XSTEPS +330"	G160M G1600 A 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to	hat it has slightly more counts that QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR	[==>] $[==>]$ $n the other FP-POS values.$ $0 Secs (0 Secs)$ $[==>]$ $its correct location.$ $39 Secs (39 Secs)$	[1]
Therefore, XAPER is set to -95 - 235. cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure opti. 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to its *HOWEVER*, because of the TRAN. 11 Return to no minal HV fo r standard m	T = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mmized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0. Strules, the "QESIPARM XSTEPS +330"	G160M G1600 A 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to	hat it has slightly more counts that QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	[==>] $[==>]$ $n the other FP-POS values.$ $0 Secs (0 Secs)$ $[==>]$ $its correct location.$ $39 Secs (39 Secs)$	[1]

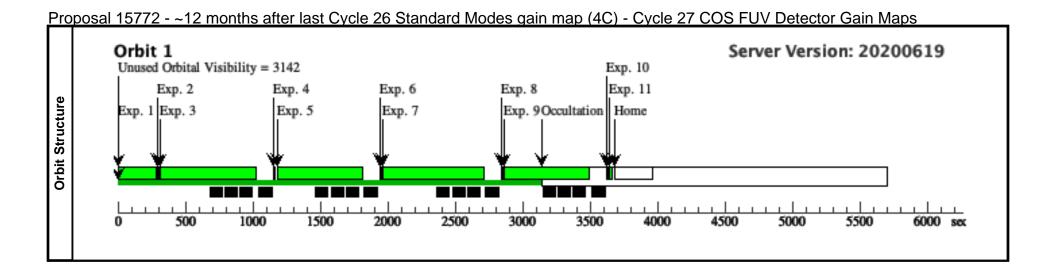


<u>Pro</u>	oposal 15772 - ~12 months after last Cycle 26 Standard Modes gain map (4C) - Cycle 27 COS FUV Detector Ga	in Maps
	Proposal 15772, ~12 months after last Cycle 26 Standard Modes gain map (4C), scheduling	Wed Sep 02 14:00:35 GMT 2020
±	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 28-SEP-2020:00:00:00 AND 05-OCT-2020:00:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for the Standard Modes (163/163).	
ပ္သ	(~12 months after last Cycle 26 Standard Modes gain map (4C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Stil	(Aperture Adjustment 1 for Segment A (4C.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - ~12 months after last Cycle 26 Standard Modes gain map (4C) - Cycle 27 COS FUV Detector Gain Maps Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit Adjust HV t DARK S/C, DATA, NONE SAA CONTOUR 31; 295 Secs (295 Secs) o LP4 value SPEC COM INSTR *[==>1* ELHLTHVF: **QASISTATES COS FUV HVLOW HVN** OM; **QESIPARM ENDC** [1] TSA 163; OESIPARM ENDC TSB 163; **OESIPARM SEGM** ENT AB Comments: Adjust the HV to the LP4 Standard Modes values. COS, ALIGN/APER XAPER=-267 0.0 Secs (0 Secs) Aperture Ad NONE justment 1 f *[==>1* or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 *Therefore, XAPER is set to -32 - 235.1 = -267* G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 440 Secs (440 Secs) 9 Deuterium Exposures 1309 A I ==> 1Exposure 1 BUFFER-TIME=11 FP-POS=1: [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-321 **OESIPARM XSTEP** 0.0 Secs (0 Secs) justment 2 f S -54 I==>Jor Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86 - 235.1 = -321. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-321 - -267) = -54] Special Requirement is necessary to move the aperture to the correct lo cation. G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 440 Secs (440 Secs) 9 Deuterium M; 1309 A [==>1 Exposure 2 BUFFER-TIME=11 FP-POS=1; [1] SEGMENT=BOTH; LIFETIME-POS=L

Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.

	Aperture Ad NONE	COS, ALIGN/APER		XAPER=-276	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 1 f or Segment B				S 45	[==>]	[1]
omi	nents: Put the aperture in the app	propriate position to illuminate a porti	on of the LP4 region	on of the detector when illu	minating Segment B with G160M	71600.	•
	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill	luminate Segment B with G160M/1600	at Position 1 for I	LP4 is -41			
here atio		= -276. *HOWEVER*, because of the	e TRANS rules, the	"QESIPARM XSTEPS 45"	[(-276321) = +45] Special Re	quirement is necessary to move the apertur	re to the correct
	G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
	0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11		I==>J	
				1;			
				FP-POS=4;			[1]
				SEGMENT=BOTH;			
				LIFETIME-POS=L P4			
omi	vents: Deuterium exposure optim	mized for Segment B. FP-POS=4 was	chosen because pr	evious observations show t	hat it has slightly more counts the	in the other FP-POS values.	<u>'</u>
	Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-330	QESIPARM XSTEP S -54	0.0 Secs (0 Secs)	
	or Segment				3-34	I==>J	[1]
	В		64 104			(1600	
SA .	nents: Put the aperture in the app LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill	ropriate position to illuminate a porti luminate Segment B with G160M/1600			minating Segment B with G100M,	1000.	
PSA Desir Desir There	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1	luminate Segment B with G160M/1600	at Position 2 for I	LP4 is -95.		quirement is necessary to move the apertured 440 Secs (440 Secs)	re to the correct
PSA Desir There	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 i.	luminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the	at Position 2 for I	CURRENT=MEDIU M; BUFFER-TIME=11		quirement is necessary to move the apertur	re to the correct
SA Desir There	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 i. G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11		quirement is necessary to move the apertur 440 Secs (440 Secs)	
PSA Desir There	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 i. G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11		quirement is necessary to move the apertur 440 Secs (440 Secs)	
PSA Desir There	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 i. G160M/160 DEUTERIUM 0 Deuterium	luminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;		quirement is necessary to move the apertur 440 Secs (440 Secs)	
SSA A Desir There atio	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 i. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	luminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	' [(-330276) = -54] Special Re	quirement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{[==>]}$	re to the correct
PSA A Desir There ation	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill efore, XAPER is set to -95 - 235.1 . G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim Return Aper NONE	duminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for 1 TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	hat it has slightly more counts the	quirement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{[==>]}$	
PSA A Desir There ation	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 . G160M/160 DEUTERIUM 0 Deuterium Exposure 2	duminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was	at Position 2 for 1 TRANS rules, the G160M 1600 A	CP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show to	' [(-330276) = -54] Special Re	quirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$	
PSA A Desir Comments of the second of the se	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to illustrate, XAPER is set to -95 - 235.1 i. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Ments: Deuterium exposure optimal Return Aper NONE ture to Nominal Position ments: Return the aperture to its ments: Return the aper	duminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER nominal position, i.e. XAPER=0.	at Position 2 for 1 TRANS rules, the G160M 1600 A	CLP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 Evious observations show to the state of th	hat it has slightly more counts the QESIPARM XSTEP S 330	quirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ In the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$	[1]
SA A Desir Common On Common On Commo	APXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 a. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Ments: Deuterium exposure optim Return Aper NONE ture to Nomi nal Position ments: Return the aperture to its n WEVER*, because of the TRANS Return to no DARK	duminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER	at Position 2 for 1 TRANS rules, the G160M 1600 A	CLP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 Evious observations show to the state of th	hat it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR	quirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ In the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$	[1]
SSA . Desiring Thereation 0	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill fore, XAPER is set to -95 - 235.1 . G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim Return Aper NONE ture to Nomi nal Position ments: Return the aperture to its n WEVER*, because of the TRANS	duminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER aominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +330"	at Position 2 for 1 TRANS rules, the G160M 1600 A	CLP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 Evious observations show to the state of th	hat it has slightly more counts the QESIPARM XSTEP S 330 mecessary to move the aperture to SPEC COM INSTR ELHVADJPROP;	quirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ In the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$ $[==>]$ wits correct location.	[1]
SSA . Desir hereation Common	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to illefore, XAPER is set to -95 - 235.1 a. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim Return Aper NONE ture to Nomi nal Position ments: Return the aperture to its now NEVER*, because of the TRANS of Return to no DARK minal HV fo	duminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER aominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +330"	at Position 2 for 1 TRANS rules, the G160M 1600 A	CLP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 Evious observations show to the state of th	hat it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR	quirement is necessary to move the aperture $440 \operatorname{Secs} (440 \operatorname{Secs})$ $[==>]$ In the other FP-POS values. 0 Secs (0 Secs) $[==>]$ Its correct location. 39 Secs (39 Secs)	[1]
SSA . Desir hereation Common	LAPXSTP value at LP4 is 235.1 ed LAPXSTP value for FCA to ill efore, XAPER is set to -95 - 235.1 . G160M/160 DEUTERIUM 0 Deuterium Exposure 2 ments: Deuterium exposure optim Return Aper NONE ture to Nomi nal Position ments: Return the aperture to its n WEVER*, because of the TRANS minal HV fo r standard m	duminate Segment B with G160M/1600 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was COS, ALIGN/APER aominal position, i.e. XAPER=0. rules, the "QESIPARM XSTEPS +330"	at Position 2 for 1 TRANS rules, the G160M 1600 A	CLP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 Evious observations show to the state of th	hat it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	quirement is necessary to move the aperture $440 \operatorname{Secs} (440 \operatorname{Secs})$ $[==>]$ In the other FP-POS values. 0 Secs (0 Secs) $[==>]$ Its correct location. 39 Secs (39 Secs)	[1]

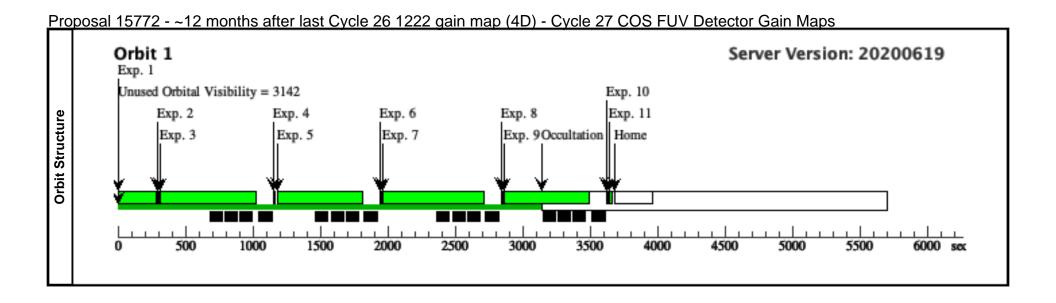


<u>Pro</u>	posal 15772 - ~12 months after last Cycle 26 1222 gain map (4D) - Cycle 27 COS FUV Detector Gain Maps	
	Proposal 15772, ~12 months after last Cycle 26 1222 gain map (4D), scheduling	Wed Sep 02 14:00:35 GMT 2020
±	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
-	Special Requirements: BETWEEN 28-SEP-2020:00:00:00 AND 05-OCT-2020:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for G130M/1222 (163/167).	
SS	(~12 months after last Cycle 26 1222 gain map (4D)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sţ.	(Aperture Adjustment 1 for Segment A (4D.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - ~12 months after last Cycle 26 1222 gain map (4D) - Cycle 27 COS FUV Detector Gain Maps

	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1 Adjust HV	V	S/C, DATA, NONE	~ F · · · · · · · · · · · · · · · · · · ·		SAA CONTOUR 31;		295 Secs (295 Secs)	
	o LP4 1222 values	2	, , , , , , , , , , , , , , , , , , , ,			SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN OM;			
						QESIPARM ENDC TSA 163;			[1]
						QESIPARM ENDC TSB 167;			
						QESIPARM SEGM ENT AB			
		st the HV to the LP4 12			VADED 267			0.0 S (0.5)	1
	2 Aperture Ac justment 1 f	i	COS, ALIGN/APER		XAPER=-267			$0.0 \operatorname{Secs} (0 \operatorname{Secs})$ $I = > I$	
	or Segment A								[1]
		he aperture in the app	ropriate position to illuminate a porti	on of the LP4 region	of the detector when illu	minating Segment A wi	th G130M/1309.		
		alue at LP4 is 235.1 P value for FCA to illi	uminate Segment A with G130M/1309	at Position 1 for LP	24 is -32				
	Therefore, XAPE	R is set to -32 - 235.1	= -267						
) DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	ī		440 Secs (440 Secs)	
Exposures	9 Deuteriun Exposure 1	n		1309 A	M; BUFFER-TIME=11			[==>]	
su	•				1;				
bo					FP-POS=1;				[1]
ш					SEGMENT=BOTH	;			
					LIFETIME-POS=L P4				
	Comments: Deute	erium exposure optimi	ized for Segment A. FP-POS=1 was a	chosen because previ	ious observations show th	nat it has slightly more o	counts than the other	FP-POS values.	
	4 Aperture Ac justment 2 f		COS, ALIGN/APER		XAPER=-321	QESIPARM XSTEP S -54		0.0 Secs (0 Secs)	
	or Segment A					3 - 34		[==>]	[1]
	Comments: Put th	he aperture in the app	ropriate position to illuminate a porti	on of the LP4 region	of the detector when illu	minating Segment A wi	th G130M/1309.		
		alue at LP4 is 235.1 P value for FCA to illi	uminate Segment A with G130M/1309	at Position 2 for LP	24 is -86				
	Therefore, XAPE. cation.	R is set to -86 - 235.1	= -321. *HOWEVER*, because of the	e TRANS rules, the "9	QESIPARM XSTEPS -54	" [(-321267) = -54]	Special Requirement	is necessary to move the aperture to the	correct lo
	5 G130M/130 9 Deuteriun	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	ī		440 Secs (440 Secs)	
	Exposure 2			1309 A	M; BUFFER-TIME=11 1;			[==>]	
					FP-POS=1;				[1]
					SEGMENT=BOTH	;			
					LIFETIME-POS=L P4				
1	Comments: Deute	erium exposure optimi	ized for Segment A. FP-POS=1 was c	chosen because previ	ous observations show th	nat it has slightly more o	counts than the other	FP-POS values.	

Aperture Ad NONE	COS, ALIGN/APER		XAPER=-276	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				S 45	[==>]	[1]
omments: Put the aperture in the	appropriate position to illuminate a porti	on of the LP4 regi	on of the detector when illu	minating Segment B with G160M	1/1600.	
SA LAPXSTP value at LP4 is 235. esired LAPXSTP value for FCA to	1 o illuminate Segment B with G160M/1600	at Position 1 for 1	LP4 is -41			
herefore, XAPER is set to -41 - 23 ation.	5.1 = -276. *HOWEVER*, because of the	e TRANS rules, the	e "QESIPARM XSTEPS 45"	' [(-276321) = +45] Special R	equirement is necessary to move the apertur	re to the correct lo
G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	ī	440 Secs (440 Secs)	
0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11 1;		[==>]	
			FP-POS=4;			[1]
			SEGMENT=BOTH;	;		
			LIFETIME-POS=L P4			
Comments: Deuterium exposure op	timmized for Segment B. FP-POS=4 was	chosen because p	revious observations show t	that it has slightly more counts th	nan the other FP-POS values.	
Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-330	QESIPARM XSTEP S -54	0.0 Secs (0 Secs)	
or Segment				5 51	[==>]	[1]
PSA LAPXSTP value at LP4 is 235.	uppropriate position to illuminate a porti 1 o illuminate Segment B with G160M/1600		v	minating Segment B with G160M	1/1600.	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.	1 1 2 3 3 3 3 4 3 5 5 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	at Position 2 for a	LP4 is -95. e "QESIPARM XSTEPS -54	" [(-330276) = -54] Special R	equirement is necessary to move the apertur	e to the correct lo
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23	1 illuminate Segment B with G160M/1600	at Position 2 for a e TRANS rules, the	LP4 is -95.	" [(-330276) = -54] Special R	dequirement is necessary to move the aperture 440 Secs (440 Secs)	e to the correct lo
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 eation. DG160M/160 DEUTERIUM	1 1 2 3 3 3 3 4 3 5 5 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	at Position 2 for a	LP4 is -95. 2 "QESIPARM XSTEPS -54 CURRENT=MEDIU	" [(-330276) = -54] Special R	equirement is necessary to move the apertur	re to the correct lo
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 Section. D G160M/160 DEUTERIUM O Deuterium	1 1 2 3 3 3 3 4 3 5 5 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	at Position 2 for a e TRANS rules, the	LP4 is -95. 2 "QESIPARM XSTEPS -54 CURRENT=MEDIU M; BUFFER-TIME=11	" [(-330276) = -54] Special R	dequirement is necessary to move the aperture 440 Secs (440 Secs)	re to the correct le
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation. G160M/160 DEUTERIUM 0 Deuterium	1 1 2 3 3 3 3 4 3 5 5 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	at Position 2 for a e TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH;	" [(-330276) = -54] Special R	dequirement is necessary to move the aperture 440 Secs (440 Secs)	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation. D G160M/160 DEUTERIUM 0 Deuterium	1 1 2 3 3 3 3 4 3 5 5 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	at Position 2 for a e TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;	" [(-330276) = -54] Special R	dequirement is necessary to move the aperture 440 Secs (440 Secs)	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	1 1 2 3 3 3 3 4 3 5 5 5 7 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8	O at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	" [(-330276) = -54] Special R	Requirement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{[==>]}$	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 nation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure op 0 Return Aper NONE ture to Nomi	to illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	O at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	" [(-330276) = -54] Special R that it has slightly more counts the QESIPARM XSTEP	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===]$	[1]
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 eation. D G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure op ture to Nomi nal Position	timmized for Segment B. FP-POS=4 was	O at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	" [(-330276) = -54] Special R	Requirement is necessary to move the aperture $\frac{440 \mathrm{Secs}}{[==>]}$	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation. D G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure op 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to in the comments and the comments are the comments and the comments are the comments are the comments and the comments are the comme	timmized for Segment B. FP-POS=4 was	at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show if	"[(-330276) = -54] Special R that it has slightly more counts the QESIPARM XSTEP S 330	equirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $\frac{\mathrm{dan the other FP-POS values.}}{0 \mathrm{Secs} (0 \mathrm{Secs})}$ $[==>]$	[1]
Comments: Deuterium exposure op ture to Nomi nal Position Comments: Return the aperture to is *HOWEVER*, because of the TRAI	timmized for Segment B. FP-POS=4 was COS, ALIGN/APER ts nominal position, i.e. XAPER=0.	at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show if	" [(-330276) = -54] Special R that it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture SPEC COM INSTR	equirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $\frac{\mathrm{dan the other FP-POS values.}}{0 \mathrm{Secs} (0 \mathrm{Secs})}$ $[==>]$	[1]
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 Eation. D G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure op 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to is *HOWEVER*, because of the TRAI 11 Return to no DARK minal HV fo r standard m	timmized for Segment B. FP-POS=4 was COS, ALIGN/APER ts nominal position, i.e. XAPER=0. NS rules, the "QESIPARM XSTEPS +330"	at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show if	" [(-330276) = -54] Special R that it has slightly more counts th QESIPARM XSTEP S 330 necessary to move the aperture SPEC COM INSTR ELHVADJPROP;	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ to its correct location.	[1]
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation. O G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure op 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to in *HOWEVER*, because of the TRAME 11 Return to no DARK minal HV fo	timmized for Segment B. FP-POS=4 was COS, ALIGN/APER ts nominal position, i.e. XAPER=0. NS rules, the "QESIPARM XSTEPS +330"	at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show if	" [(-330276) = -54] Special R that it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture of SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC TSA 163;	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[====]$ $[=====]$ $[====]$ $[====]$ $[====]$ $[=====]$ $[=====]$ $[=====]$ $[=====]$ $[======]$ $[======]$ $[=======]$ $[========]$ $[====================================$	[1]
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure op 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to is *HOWEVER*, because of the TRAI 11 Return to no DARK minal HV fo r standard m	timmized for Segment B. FP-POS=4 was COS, ALIGN/APER ts nominal position, i.e. XAPER=0. NS rules, the "QESIPARM XSTEPS +330"	at Position 2 for A e TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 revious observations show if	"[(-330276) = -54] Special R that it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture of SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	dequirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[===>]$ $[====]$ $[=====]$ $[====]$ $[====]$ $[====]$ $[=====]$ $[=====]$ $[=====]$ $[=====]$ $[======]$ $[======]$ $[=======]$ $[========]$ $[====================================$	[1]



<u>Pro</u>	oposal 15772 - After LP4 HV Increase (4E) - Cycle 27 COS FUV Detector Gain Maps	
	Proposal 15772, After LP4 HV Increase (4E)	Wed Sep 02 14:00:35 GMT 2020
±	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 05-OCT-2020:00:00:00 AND 12-OCT-2020:00:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for LP4 after the HV increase on 10/5/20 (167/169).	
S	(After LP4 HV Increase (4E)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sti	(Aperture Adjustment 1 for Segment A (4E.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
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Proposal 15772 - After LP4 HV Increase (4E) - Cycle 27 COS FUV Detector Gain Maps

Label Target Config.Mode.Aperture Spectral Els. Ont. Params. Special Regs.

Label Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Adjust HV t DARK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)	
o new LP4 values				SPEC COM INSTR ELHLTHVF;		[==>]	
				QASISTATES COS FUV HVLOW HVN OM;			
				QESIPARM ENDC TSA 167;			[1]
				QESIPARM ENDC TSB 169;			
				QESIPARM SEGM ENT AB			
			YAPER267			0.0 Secs (0 Secs)	
justment 1 f or Segment	COS, ALIGIVAI EK		AAI LK=-207			[==>]	[1]
		Ca IDA :	6.1 1 1		4. G120M/1200		
SA LAPXSTP value at LP4 is 235.1 esired LAPXSTP value for FCA to it	lluminate Segment A with G130M/1309						
G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M		J		440 Secs (440 Secs)	
9 Deuterium Exposure 1		1309 A	BUFFER-TIME=11			[==>]	
			FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L	;			[1]
ommants: Dautarium avnosura ontin	nized for Segment A FP POS-1 was a	shasan hacausa nravi		hat it has slightly more	counts than the other	ED DOS values	
	*	nosen because previ			counts than the other		
justment 2 f or Segment				S -54		[==>]	[1]
	propriate position to illuminate a porti	on of the LP4 region	of the detector when illi	ıminatinə Seoment A wit	th G130M/1309		
SA LAPXSTP value at LP4 is 235.1				minimum segment i vii	m 0130m/130/.		
	1 = -321. *HOWEVER*, because of the	TRANS rules, the "Q	QESIPARM XSTEPS -54	!" [(-321267) = -54] ;	Special Requirement	is necessary to move the aperture to the	e correct lo
G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M		J		440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	BUFFER-TIME=11			[==>]	
			FP-POS=1; SEGMENT=BOTH				[1]
	Adjust HV t DARK o new LP4 values omments: Adjust the HV to the LP4 Aperture Ad NONE justment 1 f or Segment A omments: Put the aperture in the aperture LAPXSTP value at LP4 is 235.1 esired LAPXSTP value for FCA to interefore, XAPER is set to -32 - 235. G130M/130 DEUTERIUM 9 Deuterium Exposure 1 omments: Deuterium exposure optime Aperture Ad NONE justment 2 f or Segment A omments: Put the aperture in the aperture in the aperture in the aperture Interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interefore, XAPER is set to -86 - 235. It esired LAPXSTP value for FCA to interest for the total value	Adjust HV t DARK o new LP4 values S/C, DATA, NONE Onew LP4 values Aperture Ad NONE COS, ALIGN/APER justment 1 f or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the segment A with G130M/1309 therefore, XAPER is set to -32 - 235.1 = -267 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA 9 Deuterium exposure optimized for Segment A. FP-POS=1 was a comments: Put the aperture in the appropriate position to illuminate a portion of Segment A.	Adjust HV t DARK o new LP4 values **Onmments: Adjust the HV to the LP4 Standard Modes values.** Aperture Ad NONE COS, ALIGN/APER justment 1 f or Segment A **Acomments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region **SA LAPXSTP value at LP4 is 235.1 **esired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LF1 **herefore, XAPER is set to -32 - 235.1 = -267 **GI30M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M **9 Deuterium Exposure 1 **Ontments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous **Aperture Ad NONE COS, ALIGN/APER **pustment 2 f or Segment A **Aperture Ad NONE COS, ALIGN/APER **pustment 2 f or Segment A **Acomments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region **SA LAPXSTP value at LP4 is 235.1 **esired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LF1 **herefore, XAPER is set to -86 - 235.1 = -321. **HOWEVER*, because of the TRANS rules, the "tition." **GI30M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M **9 Deuterium COS/FUV, TIME-TAG, FCA G130M **9 Deuterium COS/FUV, TIME-TAG, FCA G130M **1019 A	Adjust HV t DARK o new LP4 values Monments: Adjust the HV to the LP4 Standard Modes values. Aperture Ad NONE COS, ALIGN/APER XAPER=-267 justment 1 f or Segment A SA LAPXSTP value at LP4 is 235.1 estred LAPXSTP value for FCA to illuminate Segment A. FP-POS=1 was chosen because previous observations show to Aperture Ad NONE COS, ALIGN/APER 340. Aperture Ad NONE COS, ALIGN/APER G130M/1309 A Position 1 for LP4 is -32 therefore, XAPER is set to -32 · 235.1 = -267 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIUM Suppose 1 BUFFER-TIME=11 1; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=1, SEGMENT-BOTH LIFETIME-POS-1, SEGMENT-BOTH LIFETIME-POS-1	Adjust HV1 DARK SC, DATA, NONE Onew LP4 Values SAA CONTOUR 31; SPEC COM INSTRELHLITHY: OASISTATES COS FUV HVLOW HVN OM; OGESIPARM ENDC TSA 167; OESIPARM ENDC TSB 169; OESIPARM SEGM ENT AB OMMents: Adjust the HV to the LP4 Standard Modes values. Aperture Ad NONE JOSEPH AN NONE COS, ALIGN/APER JOSEPH AN NONE COS, ALIGN/APER JOSEPH AN AVIS SALAPXSTP value at LP4 is 235.1 esired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 therefore, XAPER is set to -32 - 245.1 = -267 G130M/130 DEUTERIUM COSAFUV, TIME-TAG, FCA G130M M. BUFFER-TIME-11 [: FP-POS=1; SEGMENT-BOTH; LIFETIME-POS=L P4 OMMents: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more at Segment 2 for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more or Segment Of Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more or Segment Of the detector when illuminating Segment A with G130M/1309 at Position 2 for LP4 is -86 therefore, XAPER is set to -86 - 235.1 = -321. *HOWEVER*, because of the TRANS rules, the "QENIPARM XSTEPS 54" (1-321 - 267) = -54] G130M/130 PD-euterium Exposure 2 G130M/130 PD-euterium Exposure 3 G130M/130 PD-euterium Exposure 4 G130M/130 PD-euterium Exposure 4 G130M/130 PD-euterium Exposure 5	Adjust HV 1 DARK Ones LP4 values SC, DATA, NONE OCITIES 169; OESIPARM ENDC TSB 169; OESIPARM ENDC TSB 169; OESIPARM SEGM ENT AB ADJUST THE ABOUT TH	Adjust V DARK SC, DATA, NONE SPECCOM 1871; 29 Sec (29 Sec) 7 1 1 1 1 1 1 1 1 1

	COS ALIGNIADED		XAPER=-276	OECIDADM VCTED	0.0 Secs (0 Secs)	
6 Aperture Ad NONE justment 1 f or Segment B	COS, ALIGN/APER		AAFER=-2/0	QESIPARM XSTEP S 45	[==>]	[1]
Comments: Put the aperture in the a	ppropriate position to illuminate a porti	on of the LP4 region	on of the detector when illu	minating Segment B with G160M	/1600.	•
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to	illuminate Segment B with G160M/1600	at Position 1 for I	LP4 is -41			
Therefore, XAPER is set to -41 - 235 cation.	.1 = -276. *HOWEVER*, because of the	e TRANS rules, the	"QESIPARM XSTEPS 45"	[(-276321) = +45] Special Re	equirement is necessary to move the apertur	e to the correct le
7 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11 1;		[==>]	
			FP-POS=4;			[1]
			SEGMENT=BOTH;			
			LIFETIME-POS=L P4			
Comments: Deuterium exposure opti	immized for Segment B. FP-POS=4 was	chosen because pi	revious observations show i	hat it has slightly more counts th	an the other FP-POS values.	
8 Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-330	QESIPARM XSTEP S -54	0.0 Secs (0 Secs)	
or Segment B				3-34	[==>]	[1]
_	ppropriate position to illuminate a porti	on of the LP4 regi		: .: G	/1600	
PSA LAPXSTP value at LP4 is 235.1		,	·	minating Segment B with G100M	1000.	
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to	illuminate Segment B with G160M/1600	at Position 2 for I	LP4 is -95.		equirement is necessary to move the apertur	re to the correct lo
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. 9 G160M/160 DEUTERIUM	illuminate Segment B with G160M/1600	at Position 2 for 1 TRANS rules, the	LP4 is -95. "QESIPARM XSTEPS -54 CURRENT=MEDIU	" [(-330276) = -54] Special Re	equirement is necessary to move the apertured 440 Secs (440 Secs)	re to the correct le
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation.	illuminate Segment B with G160M/1600 .1 = -330. *HOWEVER*, because of the	at Position 2 for I	LP4 is -95. P. "QESIPARM XSTEPS -54	" [(-330276) = -54] Special Re	equirement is necessary to move the apertur	re to the correct la
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM 0 Deuterium	illuminate Segment B with G160M/1600 .1 = -330. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11	" [(-330276) = -54] Special Re	equirement is necessary to move the apertured 440 Secs (440 Secs)	re to the correct le
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM 0 Deuterium	illuminate Segment B with G160M/1600 .1 = -330. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH;	" [(-330276) = -54] Special Re	equirement is necessary to move the apertured 440 Secs (440 Secs)	
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM 0 Deuterium	illuminate Segment B with G160M/1600 .1 = -330. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;	" [(-330276) = -54] Special Re	equirement is necessary to move the apertured 440 Secs (440 Secs)	
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600 1.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for I TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	" [(-330276) = -54] Special Re	equirement is necessary to move the aperture $440 \text{ Secs } (440 \text{ Secs})$ $I = = > I$	
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure opti 10 Return Aper NONE	illuminate Segment B with G160M/1600 1.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for I TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	" [(-330276) = -54] Special Re hat it has slightly more counts the QESIPARM XSTEP	equirement is necessary to move the aperture $\frac{440 \mathrm{Secs} (440 \mathrm{Secs})}{[==>]}$ and the other FP-POS values. $0 \mathrm{Secs} (0 \mathrm{Secs})$	[1]
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure opti Return Aper NONE ture to Nomi nal Position	illuminate Segment B with G160M/1600 illuminate Segment B with G160M/1600 COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER	at Position 2 for I TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	" [(-330276) = -54] Special Re	equirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $I = = > I$ an the other FP-POS values.	
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM Deuterium Exposure 2 Comments: Deuterium exposure opti Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to its	illuminate Segment B with G160M/1600 illuminate Segment B with G160M/1600 COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **REVIOUS Observations show in the content of th	hat it has slightly more counts the QESIPARM XSTEP S 330	equirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $I = = > J$ $an the other FP-POS values.$ $0 \mathrm{Secs} (0 \mathrm{Secs})$ $I = = > J$	[1]
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM Deuterium Exposure 2 Comments: Deuterium exposure opti Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to it: *HOWEVER*, because of the TRAN Return to no DARK	illuminate Segment B with G160M/1600 illuminate Segment B with G160M/1600 COS/FUV, TIME-TAG, FCA COS/FUV, TIME-TAG, FCA COS, ALIGN/APER s nominal position, i.e. XAPER=0.	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **REVIOUS Observations show in the content of th	hat it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR	equirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $I = = > J$ $an the other FP-POS values.$ $0 \mathrm{Secs} (0 \mathrm{Secs})$ $I = = > J$	[1]
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure opti Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to it: *HOWEVER*, because of the TRAN Minal HV fo r standard m	illuminate Segment B with G160M/1600 .1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER s nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +330"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **REVIOUS Observations show in the content of th	hat it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP;	equirement is necessary to move the aperture $440 \mathrm{Secs} (440 \mathrm{Secs})$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$	[1]
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. G160M/160 DEUTERIUM Deuterium Exposure 2 Comments: Deuterium exposure opti Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to it. *HOWEVER*, because of the TRAN Return to no DARK minal HV fo	illuminate Segment B with G160M/1600 .1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER s nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +330"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **REVIOUS Observations show in the content of th	hat it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC TSA 167;	equirement is necessary to move the aperture $440 \operatorname{Secs} (440 \operatorname{Secs})$ $I = = > I$ $an the other FP-POS values.$ $0 \operatorname{Secs} (0 \operatorname{Secs})$ $I = = > I$ $0 \text{ its correct location.}$ $39 \operatorname{Secs} (39 \operatorname{Secs})$	[1]
PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 235 cation. 9 G160M/160 DEUTERIUM 0 Deuterium Exposure 2 Comments: Deuterium exposure opti 10 Return Aper NONE ture to Nomi nal Position Comments: Return the aperture to it: *HOWEVER*, because of the TRAN 11 Return to no minal HV fo r standard m	illuminate Segment B with G160M/1600 .1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA immized for Segment B. FP-POS=4 was COS, ALIGN/APER s nominal position, i.e. XAPER=0. S rules, the "QESIPARM XSTEPS +330"	at Position 2 for the TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4 **REVIOUS Observations show in the content of th	hat it has slightly more counts the QESIPARM XSTEP S 330 necessary to move the aperture to SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	equirement is necessary to move the aperture $440 \operatorname{Secs} (440 \operatorname{Secs})$ $I = = > I$ $an the other FP-POS values.$ $0 \operatorname{Secs} (0 \operatorname{Secs})$ $I = = > I$ $0 \text{ its correct location.}$ $39 \operatorname{Secs} (39 \operatorname{Secs})$	[1]

