

16829 - Cycle 29 COS FUV Detector Gain Maps

Cycle: 29, 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	21-May-2022 07:00:20.0	yes
2C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	21-May-2022 07:00:22.0	yes
3A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	21-May-2022 07:00:23.0	yes
3C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	21-May-2022 07:00:25.0	yes

Proposal 16829 (STScI Edit Number: 0, Created: Saturday, May 21, 2022 at 6:00:31 AM Eastern Standard Time) - Overview

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
4A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	21-May-2022 07:00:26.0	yes
4C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	21-May-2022 07:00:28.0	yes
5A	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	21-May-2022 07:00:29.0	yes
5C	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	21-May-2022 07:00:31.0	yes

⁸ Total Orbits Used

ABSTRACT

This program uses the deuterium lamp to illuminate the regions of the detector being used to collect spectra during Cycle 29. 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 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.

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.

Proposal 16829 (STScI Edit Number: 0, Created: Saturday, May 21, 2022 at 6:00:31 AM Eastern Standard Time) - Overview Gain maps should be taken 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 Lifetime Positions.

The plan for Cycle 29 includes 8 one-orbit visits:

*Visits 2A and 2C will be taken at LP2 after about 6 months and 1 year from the gain map taken at this position near the end of Cycle 28 at the nominal LP2 HV values (currently 173/175).

*Visits 3A and 3C will be taken at LP3 after about 6 months and 1 year from the gain map taken at this position near the end of Cycle 28 at the nominal LP3 HV values (currently 173/175).

*Visits 4A and 4C will be taken at LP4 after about 6 months and 1 year from the gain map taken at this position at the beginning of Cycle 29 at the nominal LP4 HV values (173/169).

*Visits 5A and 5C will be taken at LP5 after about 6 months and 1 year from the gain map taken at this position at the beginning of Cycle 29 at the nominal LP5 HV values (167/169).

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

- * Take an exposure at LP1 to set up the aperture position and HV. This can also be used to measure the gain at LP1. These exposures will use G130M/1309 for visits 2A, 2C, 3A, and 3C; and G160M/1600 for visits 4A, 4C, 5A, and 5C.
- * Adjust the HV values
- * Adjust the aperture in the cross dispersion direction so that the deuterium lamp will illuminate the appropriate region on Segment A when using G130M/1309.

Proposal 16829 (STScI Edit Number: 0, Created: Saturday, May 21, 2022 at 6:00:31 AM Eastern Standard Time) - Overview

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

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

exposure.

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

G160M/1600.

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

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

exposure.

* Return the aperture to the HOME position

Note that because TRANS resets its aperture zero point when FCA exposures are taken, the aperture is explicitly moved using "QESIPARM

XSTEPS", as was done in Program 13970, 14439, 14519, 14941, 15534, 15772, etc.

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

MEB1:

SOFT STOPS = -275 to 275

HARD STOPS = -282 to 285

MEB2:

SOFT STOPS = -275 to 275

HARD STOPS = -284 to 283

Proposal 16829 (STScl Edit Number: 0, Created: Saturday, May 21, 2022 at 6:00:31 AM Eastern Standard Time) - Overview The initial exposure of each visit uses the FCA_LP1 aperture position, LAPXSTP = -153. Thus all XAPER values are relative to that position.

Summary table:

Visit	LP	Grating/Segment	Y Position	LAPXSTP	XAPER
2A/2C	2	G130M/A	1	-213	-60
2A/2C	2	G130M/A	2	-267*	-114
2A/2C	2	G160M/B	1	-225	-72
2A/2C	2	G160M/B	2	-267*	-114
3A/3C	3	G130M/A	1	-72	+81
3A/3C	3	G130M/A	2	-128	+25
3A/3C	3	G160M/B	1	-84	+69
3A/3C	3	G160M/B	2	-140	+13
4A/4C	4	G130M/A	1	-32	+121
4A/4C	4	G130M/A	2	-86	+67
4A/4C	4	G160M/B	1	-41	+112
4A/4C	4	G160M/B	2	-95	+58
5A/5C	5	G130M/A	1	-213	-60
5A/5C	5	G130M/A	2	-267*	-114
5A/5C	5	G160M/B	1	-225	-72
5A/5C	5	G160M/B	2	-267*	-114

Proposal 16829 (STScI Edit Number: 0, Created: Saturday, May 21, 2022 at 6:00:31 AM Eastern Standard Time) - Overview

* Limited to be within the soft stops

The LP2 and LP5 aperture positions are identical, but the Y extent of the spectra on the detector is large enough to cover the detector region used for both LPs.

5/20/22

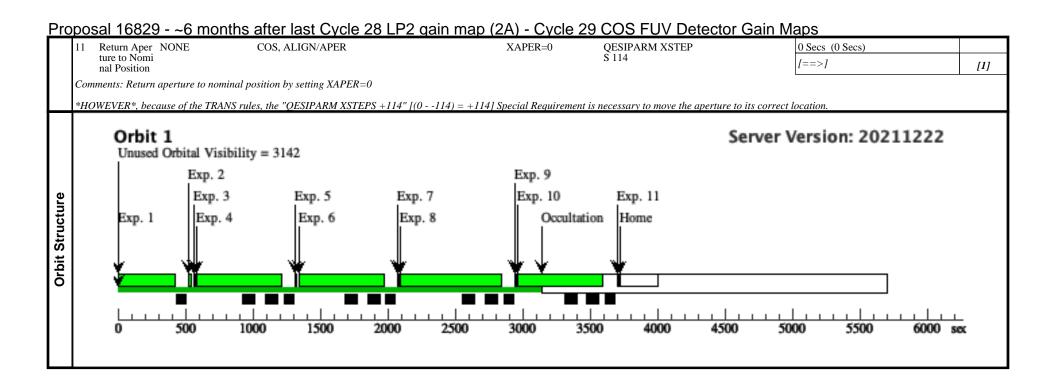
Since we will be changing the FUVB HV for LP4 from 169 to 175 in June 2022, the HV values specified for visit 4C were changed from 173/169 to 173/175.

oposal 16829 - ~6 months after last Cycle 28 LP2 gain map (2A) - Cycle 29 COS FUV Detector Gain Maps	
Proposal 16829, ~6 months after last Cycle 28 LP2 gain map (2A), completed	Sat May 21 11:00:31 GMT 2022
Diagnostic Status: Warning	
Scientific Instruments: S/C, COS, COS/FUV	
Special Requirements: BETWEEN 01-APR-2022:00:00:00 AND 01-MAY-2022:00:00:00; PARALLEL	
Comments: This visit collects data at LP2. It uses the HV values appropriate for LP2 (173/175).	
(~6 months after last Cycle 28 LP2 gain map (2A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
	Diagnostic Status: Warning Scientific Instruments: S/C, COS, COS/FUV Special Requirements: BETWEEN 01-APR-2022:00:00:00 AND 01-MAY-2022:00:00:00; PARALLEL Comments: This visit collects data at LP2. It uses the HV values appropriate for LP2 (173/175). (~6 months after last Cycle 28 LP2 gain map (2A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

Proposal 16829 - ~6 months after last Cycle 28 LP2 gain map (2A) - Cycle 29 COS FUV Detector Gain Maps

	<u>oel</u>	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU			125 Secs (125 Secs)	
	euterium osure - S			1309 A	M;			[==>]	
et uj	p at LP1				BUFFER-TIME=19 6;				
					FP-POS=1;				[1]
					SEGMENT=BOTH;				[1]
					LIFETIME-POS=L				
					P1				
Comment	s: Short e	xposure to set apert	ture to LP1, which is near the center o	of the aperture range	used in this program. It a	lso sets the HV to the	LP1 values.		
	ust HV t	DARK	S/C, DATA, NONE			SAA CONTOUR 3	1;	39 Secs (39 Secs)	
o LI s	P2 value					SPEC COM INSTE		[==>]	
3						ELHVADJPROP;			
						QASISTATES COS FUV HVNOM HV			
						OM;	•		
						QESIPARM ENDO			[1]
						TSA 173;			
						QESIPARM ENDO			
						QESIPARM SEGM	Ī		
						ENT AB	<u>.</u>		
Comment	s: Adjust t	the HV to the LP2 v	alues.						
Since the	HV is not	increasing exposus	re time = 39 seconds						
	erture Ad	V- 1	COS, ALIGN/APER		XAPER=-60			0.0 Secs (0 Secs)	
<i>2</i> 11pc	rture rtu								
	ment 1 f		,		THI LICE OF				+
or S	ment 1 f Segment		,		MARINE 00			[==>]	[1]
or S A	legment		propriate position to illuminate a porti	on of the LP2 region		minatino Seoment A 1	with G130M/1309		[1]
or S A Comment	segment s: Put the	aperture in the app	propriate position to illuminate a porti	on of the LP2 region		minating Segment A	with G130M/1309.		[1]
or S A Comment. FCA LAP	Segment s: Put the eXSTP vali	aperture in the app ue at LP1 is -153			of the detector when illu	minating Segment A	vith G130M/1309.		[1]
or S A Comment. FCA LAP Desired L	segment s: Put the eXSTP vali APXSTP	aperture in the app we at LP1 is -153 value for FCA to ill	uminate Segment A with G130M/1309		of the detector when illu	minating Segment A	with G130M/1309.		[1]
or S A Comment. FCA LAP Desired L Therefore	egment s: Put the PXSTP vali APXSTP;	aperture in the app ue at LP1 is -153 value for FCA to ill is set to -213153	Suminate Segment A with $G130M/1309$ $S=-60$	at Position 1 for LP	of the detector when illu 2 is -213	minating Segment A v	with G130M/1309.	[==>]	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13	egment S: Put the PXSTP valu APXSTP c, XAPER 80M/130	aperture in the app we at LP1 is -153 value for FCA to ill	uminate Segment A with G130M/1309	O at Position 1 for LP	of the detector when illum 2 is -213 CURRENT=MEDIU	minating Segment A t	with G130M/1309.	[==>] 440 Secs (440 Secs)	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 De	egment s: Put the PXSTP vali APXSTP;	aperture in the app ue at LP1 is -153 value for FCA to ill is set to -213153	Suminate Segment A with $G130M/1309$ $S=-60$	at Position 1 for LP	of the detector when illus 2 is -213 CURRENT=MEDIU M;	minating Segment A	with G130M/1309.	[==>]	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 De	egment as: Put the exsTP valu APXSTP c, XAPER 30M/130 euterium	aperture in the app ue at LP1 is -153 value for FCA to ill is set to -213153	Suminate Segment A with $G130M/1309$ $S=-60$	O at Position 1 for LP	of the detector when illum 2 is -213 CURRENT=MEDIU	minating Segment A	with G130M/1309.	[==>] 440 Secs (440 Secs)	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 De	egment as: Put the exsTP valu APXSTP c, XAPER 30M/130 euterium	aperture in the app ue at LP1 is -153 value for FCA to ill is set to -213153	Suminate Segment A with $G130M/1309$ $S=-60$	O at Position 1 for LP	of the detector when illum 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16	minating Segment A	vith G130M/1309.	[==>] 440 Secs (440 Secs)	
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 De	egment as: Put the exsTP valu APXSTP c, XAPER 30M/130 euterium	aperture in the app ue at LP1 is -153 value for FCA to ill is set to -213153	Suminate Segment A with $G130M/1309$ $S=-60$	O at Position 1 for LP	of the detector when illum 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5;		with G130M/1309.	[==>] 440 Secs (440 Secs)	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 De	egment as: Put the exsTP valu APXSTP c, XAPER 30M/130 euterium	aperture in the app ue at LP1 is -153 value for FCA to ill is set to -213153	Suminate Segment A with $G130M/1309$ $S=-60$	O at Position 1 for LP	of the detector when illust 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;		vith G130M/1309.	[==>] 440 Secs (440 Secs)	
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 Do Exp	egment s: Put the eXSTP valu APXSTP e, XAPER 60M/130 euterium oosure 1	aperture in the app we at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM	Juminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	of the detector when illust 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>] 440 Secs (440 Secs) [==>]	
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 Do Exp	egment s: Put the eXSTP valu APXSTP e, XAPER 60M/130 euterium oosure 1	aperture in the app we at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM	Juminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was a	G130M 1309 A	of the detector when illumed its -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the			[==>] 440 Secs (440 Secs) [==>]	
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 Do Exp	egment s: Put the eXSTP valu APXSTP e, XAPER 60M/130 euterium eosure 1	aperture in the app we at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM	Juminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	of the detector when illust 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more	e counts than the oth	[==>] 440 Secs (440 Secs) [==>]	
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 Do Exp Comment. 5 Ape justi	egment s: Put the eXSTP valu APXSTP e, XAPER 60M/130 euterium cosure 1 ext. Deuteri erture Ad ment 2 f	aperture in the app we at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM	Juminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was a	G130M 1309 A	of the detector when illumed its -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly mor	e counts than the oth	[==>] 440 Secs (440 Secs) [==>]	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 Do Exp Comment. 5 Ape justi	egment s: Put the eXSTP valu APXSTP e, XAPER 60M/130 euterium eosure 1	aperture in the app we at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM	Juminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was a	G130M 1309 A	of the detector when illumed its -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more	e counts than the oth	[==>] 440 Secs (440 Secs) [==>] ler FP-POS values. 0.0 Secs (0 Secs)	
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 Do Exp Comment. 5 Ape justs or S A	egment s: Put the eXSTP valu APXSTP e, XAPER 60M/130 euterium ossure 1 exture Ad ment 2 f egment	aperture in the app ue at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM DEUTERIUM	Juminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was a	G130M 1309 A	of the detector when illum 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly mor QESIPARM XSTE S -54	<i>e counts than the oth</i> P	[==>] 440 Secs (440 Secs) [==>] ler FP-POS values. 0.0 Secs (0 Secs)	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 D0 Exp Comment. 5 Ape justi or S A Comment.	egment s: Put the PXSTP valu APXSTP c, XAPER SOM/130 euterium sosure 1 s: Deuteri erture Ad ment 2 f degment s: Put the	aperture in the appue at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM ium exposure optima NONE aperture in the app	tuminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was a COS, ALIGN/APER	G130M 1309 A	of the detector when illum 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly mor QESIPARM XSTE S -54	<i>e counts than the oth</i> P	[==>] 440 Secs (440 Secs) [==>] ler FP-POS values. 0.0 Secs (0 Secs)	[1]
or S A Comment. FCA LAP Desired L Therefore 4 G13 9 Do Exp Comment. 5 Ape justs or S A Comment. FCA LAP	egment s: Put the exsTP valu APXSTP ex, XAPER 60M/130 euterium cosure 1 exture Ad ment 2 f egment exs: Put the exsTP valu exsTP valu	aperture in the appue at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM The exposure optime NONE aperture in the appue at LP1 is -153	tuminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was a COS, ALIGN/APER	G130M 1309 A 2 Chosen because previous	of the detector when illusticated as a constant of the detector when illustica	at it has slightly mor QESIPARM XSTE S -54	<i>e counts than the oth</i> P	[==>] 440 Secs (440 Secs) [==>] ler FP-POS values. 0.0 Secs (0 Secs)	[1]
or S A Comment. Comment. Therefore Gister of S A Comment. Comment. Comment. Comment. Comment. FCA LAP Desired L	egment s: Put the PXSTP valu APXSTP c, XAPER 80M/130 euterium sosure 1 erture Ad ment 2 f egment s: Put the PXSTP valu APXSTP	aperture in the appue at LP1 is -153 value for FCA to ill is set to -213153 DEUTERIUM ium exposure optima NONE aperture in the appue at LP1 is -153 value for FCA to ill	tuminate Segment A with G130M/1309 = -60 COS/FUV, TIME-TAG, FCA ized for Segment A. FP-POS=1 was a composition to illuminate a portion to illuminate a portion to illuminate Segment A with G130M/1309	G130M 1309 A 1309 of the LP2 region Output Description 2 for LP	of the detector when illum 2 is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show th XAPER=-114 of the detector when illum 2 is -267	at it has slightly more QESIPARM XSTE S -54 minating Segment A	e counts than the oth P vith G130M/1309.	[==>] 440 Secs (440 Secs) [==>] ler FP-POS values. 0.0 Secs (0 Secs)	(1)

	ns after last Cycle 28 LF			COS FOV Detector (
6 G130M/130 DEUTERIUM 9 Deuterium	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU		440 Secs (440 Secs)	
Exposure 2		1309 A	M; BUFFER-TIME=16		[==>]	
			5; FP-POS=1;			
			SEGMENT=BOTH;			[1]
			LIFETIME-POS=L			
			P1			
Comments: Deuterium exposure optin	nized for Segment A. FP-POS=1 was c	chosen because pro	evious observations show the	at it has slightly more counts than t		
7 Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=-72	QESIPARM XSTEP S 42	0.0 Secs (0 Secs)	
or Segment B				5 42	[==>]	[1]
Comments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP2 regi	ion of the detector when illur	ninating Segment B with G160M/1	600.	
Therefore, XAPER is set to -22515.	Illuminate Segment B with $G160M/1600$ 3 = -72. *HOWEVER*, because of the	v		(-72114) = +42] Special Requir	rement is necessary to move the aperture	to the correct local
ion. 8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
0 Deuterium		1600 A	M;		[==>]	
Exposure 1			BUFFER-TIME=16			
			5; FP-POS=4;			
			SEGMENT=BOTH;			[1]
			LIFETIME-POS=L			
			P1			
Comments: Deuterium exposure optin	nmized for Segment B. FP-POS=4 was	chosen because p	revious observations show th	hat it has slightly more counts than	the other FP-POS values.	
9 Aperture Ad NONE	COS, ALIGN/APER		XAPER=-114	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B				S -42	[==>]	[1]
Comments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP2 regi	ion of the detector when illur	ninating Segment B with G160M/1	600.	
ot. To leave some pad, I will set it to n	match the G130M exposure (-267).				want to exceed that value when including	
Therefore, XAPER is set to -26715. ation.	3 = -114. *HOWEVER*, because of the	e TRANS rules, the	e "QESIPARM XSTEPS -42"	' [(-11472) = -42] Special Requ	irement is necessary to move the aperture	e to the correct loc
10 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
0 Deuterium Exposure 2		1600 A	M;		I==>J	
r			BUFFER-TIME=16 5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH;			[1]
			LIFETIME-POS=L P1			
Comments: Deuterium exposure optin	nmized for Segment B. FP-POS=4 was	chosen because p	revious observations show th	hat it has slightly more counts than	the other FP-POS values.	
_		_				



<u>Pr</u>	oposal 16829 - ~12 months after last Cycle 28 LP2 gain map (2C) - Cycle 29 COS FUV Detector Gain Maps	
	Proposal 16829, ~12 months after last Cycle 28 LP2 gain map (2C), scheduling	Sat May 21 11:00:31 GMT 2022
.±	Diagnostic Status: Warning	
/isi	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 01-OCT-2022:00:00:00 AND 01-NOV-2022:00:00:00; PARALLEL	
┖	Comments: This visit collects data at LP2. It uses the HV values appropriate for LP2 (173/175).	
S	(~12 months after last Cycle 28 LP2 gain map (2C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
i ,		
2		
ag		
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Proposal 16829 - ~12 months after last Cycle 28 LP2 gain map (2C) - Cycle 29 COS FUV Detector Gain Maps

GISMAT-30 DRITTBRUM COSFUV, TIME-TAG, PCA GISMM CURRENT-MEDIU 128 Secs (128 Secs) f==>	# Label Tar	get	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposure - S at up at I.Pl BUFFER-TIME-19 GP-POS-1; SEGMENT-BOTH: LIFETIME-POS-1 Comments: Short exposure to set apperture to IP1, which is near the center of the apperture range used in this program, It also sets the HV to the IP1 values. Adjust HV 1 DARK S.C. DATA, NONE ARX S.C. DATA, NONE ARX S.C. DATA, NONE SEC. COM INSTIT FEVALIPPORT GESTPARM BEROT TSA, 173; OSSIPARM BEROT TSA, 173; OSSIPA		UTERIUM	COS/FUV, TIME-TAG, FCA	G130M				125 Secs (125 Secs)	
et up at LPI FP-POS-1; SEGMENT-BOTH: LIFETIME-POS-1, LIFETIME				1309 A	,			I = => J	
FP-POS-1; SEGMENT-BOTH; LITETINI-POS-L PI Comments: Short exposure to set aperture to LPI, which is near the center of the aperture range used in this program. It also sets the HV to the LPI values. 2 Adjust HV t. DARK SC, DATA, NONE 3 PSEC COM INSTR EI-HVADIPROP, QASISTATES COS FILV HVNOM HVN ONE, QUSIPARM ENDC TSA 173; QUSIPARM ENDC TSA 173; QUSIPARM ENDC TSA 173; QUSIPARM SEGM ENT AB Comments: Adjust the HV to the LP2 values. Since the HV is not increasing, exposure time = 39 seconds 3 Aperture Ad, NONE justment IT of Segment A NONE Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FEALAPNSTP value of PI is -153 Desired ALPXSTP value for PCA to illuminate Segment A with G130M/1309 at Position I for LP2 is -213 Therefore, XAPER is set to -213133 = -60 CONSTRUCT ON THE TAG, FCA G130M CURRENT-MEDIU 440 Sets (440 Sets) LETTINE-POS-L PP-POS-L SEGMENT-BOTH; LITETINE-POS-L PP-POS-L SEGMENT-	et up at LP1								
SEGMENT-BOTH: LIFETIME-POST					*				[11
LIFETIME-POS-L Pl									[1]
Pi Comments: Short exposure to set operatore to LP1, which is near the center of the apertare range used in this program. It also sets the HV to the LP1 values. SAA CONTOUR 31; 39 Secs (39 Secs) 1=>7					<i>'</i>				
2 Adjust HV DARK S.C. DATA, NONE SAA CONTOUR 31; 39 Secs (39 Secs) [==2]									
SPEC COM INSTRE ELIVADPROP. ASSISTANTS COS HUV HAVNOM HAVN OWN. ORN. OESTPARM ENDC TSA 173. OESTPARM SEOM ENT AB Comments: Adjust the HV to the LP2 values. Comments: Pat the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value on LP1 is -153 Therefore, XAPER is set to -213 - 153 = -60 4 G130M/130 DEUTERIUM COSFUV, TIME-TAG, FCA G130M CURRENT—BEDIU Segment A with G130M/1309 at Position I for LP2 is -213 Therefore, XAPER is set to -213 - 153 = -60 4 G130M/130 DEUTERIUM COSFUV, TIME-TAG, FCA G130M M. Segment I Se	Comments: Short expos	ure to set apertui	re to LP1, which is near the center o	f the aperture range	used in this program. It a	lso sets the HV to the	LP1 values.		·
SPECUM STREAM ENDS BEHLWADIPROP: OASISTATES COS HUV HVNOM HVN OM: OESIPARM ENDC TSA 173: OESIPARM ENDC TSB 175: OO Sees (0 Sees) [=>] [=>] OO Sees (0 Sees) [=>] Intercentary and the appropriate position to illuminate a portion of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for 1P2 is -213 Therefore, XAPER is set to -215: -153 = -60 4 G130M130 DEUTERIUM COSFUV, TIME-TAG, FCA G130M CURRENT=MEDIU A G130M130 DEUTERIUM COSFUV, TIME-TAG, FCA G130M CURRENT=MEDIU B Deuterium Exposure 1 SEGMENT=BOTH: LIFETIME=16 S: FP-POS=1: SEGMENT=BOTH: LIFETIME-POS=1. PF-POS=1: SEGMENT=BOTH: LIFETIME-POS=1. PF-POS=1: SEGMENT=BOTH: LIFETIME-POS=1. PF-POS=1: SEGMENT=BOTH: LIFETIME-POS=1. OSSPARM XSTEP OO Sees (0 Sees) [=>] ON Sees (0 Sees) [=>] Comments: Put the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCALAPXSTP value at LP1 is -153		RK	S/C, DATA, NONE			SAA CONTOUR 3	1;	39 Secs (39 Secs)	
FUV HVNOM HVN OM: OR: OR: PARK ENDE TSA 173; OESIPARM ENDE TSA 173; OESIPARM ENDE TSB 175; OESIPARM SEGM ENT AB USE. Comments: Adjust the HV to the LP2 values.								[==>]	
OESIPARM ENDC TSA 173; OESIPARM SEGM ENT AB Comments: Adjust the HV to the LP2 values. Since the HV is not increasing, exposure time = 39 seconds 3 Aperture Ad NONE COS, ALIGN/APER XAPER=60 [] justment 1 f of Segment Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. ECA LAPXSTP value at LP1 is -153 PEP-OS values. OESIPARM SEGM ENT AB O.0 Secs (0 Secs) [] (] O.0 Secs (0 Secs) [] (] (] (] O.0 Secs (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS SECS (0 Secs) [] (] (] (] OOS						FUV HVNOM HVI			
GESIPARM ENDC TSB 175: QESIPARM SEGM ENT AB Comments: Adjust the HV to the LP2 values. Since the HV is not increasing, exposure time = 39 seconds 3 Aperture Ad NONE justment 1 for Segment COS, ALIGN/APER ACCOMMENTS: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 G130M CURRENT=MEDIU J1309 A M: SUPPER-TIME=16 S: FP-POS=1: SEGMENT=BOTH; LIFETIME-POS=1 SEGMENT=BOTH; LIFETIME-POS=1 SEGMENT=BOTH; LIFETIME-POS=1 SEGMENT=BOTH; LIFETIME-POS=1 SEGMENT=BOTH; LIFETIME-POS=1 SEGMENT=BOTH; J150MM XSTEP SO, Segment A O, Secs (0 Secs) J150MM XSTEP So, Segment A O, Secs (0 Secs) J150MM XSTEP So, Segment A O, Secs (0 Secs) J150MM XSTEP So, Segment A O, Segment A O, Segment A O, Secs (0 Secs) J150MM J150M/1309. FCA LAPXSTP value at LP1 is -153						*			
TSB 175: QESIPARM SEGM ENT AB Comments: Adjust the HV to the LP2 values. Since the HV is not increasing, exposure time = 39 seconds 3 Aperture Ad NONE justment 1 f or Segment A COS, ALIGN/APER XAPER=-60 [2=>] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. ECA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213 - 153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M M.; Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP justment 2 f or Segment A Segment A SEGMENT SEGMENT SEGMENT SEGMENT A with G130M/1309. ECALAPXSTP value at LP is -153									[1]
ENT AB Comments: Adjust the HV to the LP2 values. Since the HV is not increasing, exposure time = 39 seconds 3 Aperture Ad NONE COS, ALIGN/APER XAPER=60 [] 1 or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. ECA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M UNITAGE SEGMENT=BOTH: Exposure 1 SEGMENT=BOTH: LIFETIME=16 5: FP-POS=1; SEGMENT=BOTH: LIFETIME-POS=L PITTIME=16 5: FP-POS=1 S-54 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=114 QESIPARM XSTEP S-54 ON Segment A SEGMENT SEGMENT SEGMENT A with G130M/1309. ECALAPXSTP value at LP1 is -153 ECON ALIGN/APER APER: a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309.									
Since the HV is not increasing, exposure time = 39 seconds 3									
3 Aperture Ad NONE justment 1 f or Segment A A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 9 Deuterium Exposure 1 BUFFER-TIME=16 5; FFP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP 0.0 Secs (0 Secs) Justinen 2 f or Segment A A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153	Comments: Adjust the I	IV to the LP2 val	ues.						
Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU M: 9 Deuterium Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=114 QESIPARM XSTEP justment 2 f or Segment A. FP-POS=1 was chosen because previous of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153	Since the HV is not incr	easina exposure	time = 30 seconds						
Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU M: 9 Deuterium Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=114 QESIPARM XSTEP justment 2 f or Segment A. FP-POS=1 was chosen because previous of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153					XAPER=-60			0.0 Secs (0 Secs)	
Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU M: 9 Deuterium Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=114 QESIPARM XSTEP justment 2 f or Segment A. FP-POS=1 was chosen because previous of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153	justment 1 f	NE.	COS, ALIGIVAI LIC		And Lite 00				
Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU M: 9 Deuterium Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=114 QESIPARM XSTEP justment 2 f or Segment A. FP-POS=1 was chosen because previous of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153								11	[1]
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU M: 9 Deuterium Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=114 QESIPARM XSTEP S-54 Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153		rture in the appro	opriate position to illuminate a porti	on of the LP2 region	of the detector when illur	ninating Segment A v	vith G130M/1309.		
Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP2 is -213 Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU MISSUPPORT M	1	**	F F		-,				
Therefore, XAPER is set to -213153 = -60 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 9 Deuterium Exposure 1 1309 A M: BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER justment 2 f or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153			minate Segment A with G130M/1309	at Position 1 for LP.	2 is -213				
4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU M; 9 Deuterium Exposure 1 8 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP S -54 Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153			-	th 1 opinion 1 jor 21 .	210 210				
9 Deuterium Exposure 1 1309 A M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER Justment 2 f or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153				G1203.f	CURRENT MERMI			140.5 (440.5)	
Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP 0.0 Secs (0 Secs) [==>] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153		UTERIUM	COS/FUV, TIME-TAG, FCA					· · · · · · · · · · · · · · · · · · ·	
5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP justment 2 f or Segment A S -54 Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153	Exposure 1			1309 A	,			[==>]	
SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP S -54 or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153									
LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP S -54 or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153					FP-POS=1;				[1]
P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP S -54 or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153					SEGMENT=BOTH;				[-]
P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=-114 QESIPARM XSTEP S -54 or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153					LIFETIME-POS=L				
5 Aperture Ad NONE COS, ALIGN/APER XAPER=114 QESIPARM XSTEP S -54 Justment 2 f									
justment 2 f or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153	Comments: Deuterium	exposure optimize	ed for Segment A. FP-POS=1 was c	hosen because previo	ous observations show the	at it has slightly more	counts than the other	FP-POS values.	
or Segment A Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153		NE	COS, ALIGN/APER		XAPER=-114		2	0.0 Secs (0 Secs)	
Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2 region of the detector when illuminating Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153	or Segment					S -54		[==>]	[1]
FCA LAPXSTP value at LP1 is -153		rture in the appro	opriate position to illuminate a porti	on of the LP2 region	of the detector when illus	ninatino Seoment A 1	vith G130M/1309		-1
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP2 is -267	•	**	opridic position to tituminate a porte	on of the Li 2 region	of the detector when titul	mmanng segmeni 11 v	viin G130M/1307.		
Destrea LAI ASTI value for F.CA to illuminate segment A with GISOM/ISO9 at Fostiton 2 for LF2 is -20/	FCA LAPXSTP value at	t LP1 is -153	minate Seamont A with C120M/1200	at Position 2 for I D	2 is 267				
	Desirea LAFASIF Valu	e joi i CA to illui	mmae segmem A wun G150W/1509	u Fosition 2 jor LP.	2 is -20/				
Therefore, XAPER is set to -267153 = -114. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-11460) = -54] Special Requirement is necessary to move the aperture to the coation.		t to -267153 =	-114. *HOWEVER*, because of the	e TRANS rules, the "Q	QESIPARM XSTEPS -54'	[(-11460) = -54]	Special Requirement i	s necessary to move the aperture to the	correct

6 G130M/130 DEUTERIUM 9 Deuterium Exposure 2	COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16		440 Secs (440 Secs) [==>]	
		1309 A	BUFFER-TIME=16		[==>]	
			5;			
			FP-POS=1;			[1]
			SEGMENT=BOTH;			[1]
			LIFETIME-POS=L			
			P1			
	mized for Segment A. FP-POS=1 was c	hosen because pre			1	
7 Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=-72	QESIPARM XSTEP S 42	$0.0 \operatorname{Secs} (0 \operatorname{Secs})$ $I = > I$	
or Segment B					[==>]	[1]
_	ppropriate position to illuminate a portio	on of the LP2 regi	on of the detector when illu	minating Segment B with G160M/10	600.	
·	illuminate Segment B with G160M/1600			(-72114) = +42] Special Requir	rement is necessary to move the aperture	to the correct loca.
8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
0 Deuterium	005,101,11112,110,1011	1600 A	M;		[==>]	
Exposure 1			BUFFER-TIME=16 5;		,	
			FP-POS=4;			
			SEGMENT=BOTH;			[1]
			LIFETIME-POS=L			
			P1			
Comments: Deuterium exposure optii 9 Aperture Ad NONE	mmized for Segment B. FP-POS=4 was COS, ALIGN/APER	chosen because pr	revious observations show t XAPER=-114		0.0 Secs (0 Secs)	
justment 2 f or Segment	COS, ALION/APER		AAFER=-114	QESIPARM XSTEP S -42	[==>]	[1]
B		64 102		' ' C		
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to i ot. To leave some pad, I will set it to i Therefore, XAPER is set to -26715	match the G130M exposure (-267).	at Position 2 for 1	LP2 is -280, but the apertur	e soft stop is at -275 and we don't w	ont to exceed that value when including irement is necessary to move the aperture	
ation. 10 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
0 Deuterium	COS/10 V, TIME-1AG, 1 CA	1600 A	M;		[==>]	
Exposure 2		100071	BUFFER-TIME=16		1>1	
			5;			
			FP-POS=4; SEGMENT=BOTH;			[1]
			LIFETIME-POS=L			
Comments: Deuterium exposure opti	mmized for Segment B. FP-POS=4 was	chosen because pi	revious observations show t	hat it has slightly more counts than	the other FP-POS values.	·

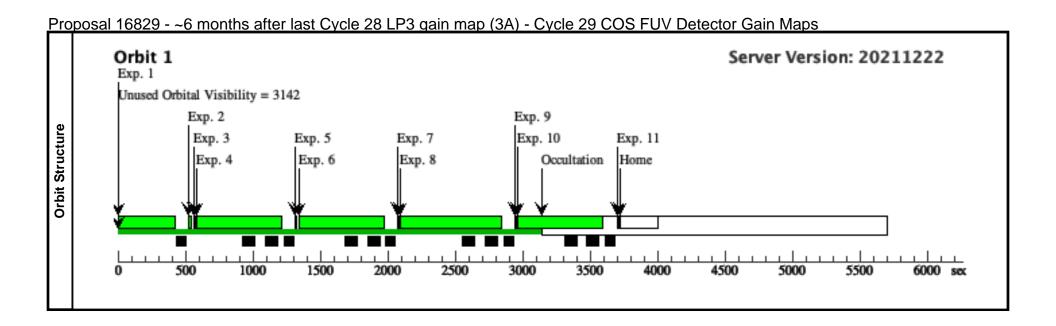
Proposal 16829 - ~12 months after last Cycle 28 LP2 gain map (2C) - Cycle 29 COS FUV Detector Gain Maps Return Aper ture to Nomi nal Position QESIPARM XSTEP COS, ALIGN/APER XAPER=0 0 Secs (0 Secs) S 114 [==>] [1] Comments: Return aperture to nominal position by setting XAPER=0 *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS +114" [(0 - -114) = +114] Special Requirement is necessary to move the aperture to its correct location. Orbit 1 Server Version: 20211222 Unused Orbital Visibility = 3142 Exp. 2 Exp. 9 Exp. 3 Exp. 10 Exp. 5 Exp. 7 Exp. 11 **Orbit Structure** Occultation Exp. 4 Exp. 6 Exp. 8 Home Exp. 1 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 6000 sec 500

<u>P</u>	oposal 16829 - ~6 months after last Cycle 28 LP3 gain map (3A) - Cycle 29 COS FUV Detector Gain Maps	
	Proposal 16829, ~6 months after last Cycle 28 LP3 gain map (3A), completed	Sat May 21 11:00:31 GMT 2022
1.5	Diagnostic Status: Warning	
1 :	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 01-APR-2022:00:00:00 AND 01-MAY-2022:00:00:00; PARALLEL	
L	Comments: This visit collects data at LP3. It uses the HV values appropriate for LP3 (173/175).	
18	(~6 months after last Cycle 28 LP3 gain map (3A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
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Proposal 16829 - ~6 months after last Cycle 28 LP3 gain map (3A) - Cycle 29 COS FUV Detector Gain Maps

1 G130M/130	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU			125 Secs (125 Secs)	
9 Deuterium Exposure - S			1309 A	M;			[==>]	
et up at LP1				BUFFER-TIME=19 6;				
				FP-POS=1;				
				SEGMENT=BOTH;				[1]
				LIFETIME-POS=L				
				P1				
Comments: Short ex	xposure to set aperti	ure to LP1, which is near the center o	f the aperture range	used in this program. It a	lso sets the HV to the	LP1 values.		
2 Adjust HV t	DARK	S/C, DATA, NONE			SAA CONTOUR 3	1;	39 Secs (39 Secs)	
o LP3 value					SPEC COM INSTR		f==>1	
S					ELHVADJPROP;			
					QASISTATES COS			
					FUV HVNOM HVNOM;	•		
					QESIPARM ENDC			[1]
					TSA 173;			
					QESIPARM ENDC			
					TSB 175;			
					QESIPARM SEGM ENT AB			
Comments: Adjust th	the HV to LP3 value	s.						
3 Aperture Ad justment 1 f or Segment A				VADED 01			0.0.5 (0.5.)	$\overline{}$
3 Aperture Ad i justment 1 f	NONE	COS, ALIGN/APER		XAPER=81			0.0 Secs (0 Secs)	+
or Segment							[==>]	111
								[1]
I C . D . d			Cd ID2	6.1 1		:4 G120M/1200		[1]
Comments: Put the	aperture in the app	ropriate position to illuminate a porti	on of the LP3 region	of the detector when illu	ninating Segment A w	vith G130M/1309.		
FCA LAPXSTP valu	ue at LP1 is -153				ninating Segment A w	vith G130M/1309.		
FCA LAPXSTP valu	ue at LP1 is -153	ropriate position to illuminate a portion and a portion in the contract of the			ninating Segment A w	vith G130M/1309.		
FCA LAPXSTP valu	ue at LP1 is -153 value for FCA to illi	uminate Segment A with G130M/1309			ninating Segment A w	vith G130M/1309.		
FCA LAPXSTP valu Desired LAPXSTP v Therefore, XAPER i. 4 G130M/130	ue at LP1 is -153 value for FCA to illi	uminate Segment A with G130M/1309		3 is -72 CURRENT=MEDIU	ninating Segment A w	vith G130M/1309.	440 Secs (440 Secs)	
FCA LAPXSTP valu Desired LAPXSTP v Therefore, XAPER i. 4 G130M/130 1 9 Deuterium	ue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309: +81	at Position 1 for LP	3 is -72 CURRENT=MEDIU M;	ninating Segment A w	vith G130M/1309.	440 Secs (440 Secs) [==>]	
FCA LAPXSTP valu Desired LAPXSTP v Therefore, XAPER i 4 G130M/130	ue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309: +81	O at Position 1 for LP	3 is -72 CURRENT=MEDIU M; BUFFER-TIME=16	ninating Segment A w	vith G130M/1309.	` ′	
FCA LAPXSTP valu Desired LAPXSTP v Therefore, XAPER i. 4 G130M/130 1 9 Deuterium	ue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309: +81	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5;	ninating Segment A w	vith G130M/1309.	` ′	
FCA LAPXSTP valu Desired LAPXSTP v Therefore, XAPER i. 4 G130M/130 1 9 Deuterium	ue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309: +81	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;	ninating Segment A w	vith G130M/1309.	` ′	[1]
FCA LAPXSTP valu Desired LAPXSTP v Therefore, XAPER i. 4 G130M/130 1 9 Deuterium	ue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309: +81	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;	ninating Segment A w	vith G130M/1309.	` ′	
FCA LAPXSTP valu Desired LAPXSTP v Therefore, XAPER i. 4 G130M/130 1 9 Deuterium	ue at LP1 is -153 value for FCA to illi is set to -72153 =	uminate Segment A with G130M/1309: +81	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;	minating Segment A w	vith G130M/1309.	` ′	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER i. 4 G130M/130 9 Deuterium Exposure 1	ue at LP1 is -153 value for FCA to illi is set to -72153 = DEUTERIUM	uminate Segment A with G130M/1309: +81	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>]	
FCA LAPXSTP value Desired LAPXSTP v Therefore, XAPER i. 4 G130M/130 9 Deuterium Exposure 1 Comments: Deuteriu	ue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM	uminate Segment A with G130M/1309 : +81 COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was a	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more	e counts than the othe	[==>] r FP-POS values.	
FCA LAPXSTP value Desired LAPXSTP value Desired LAPXSTP value Therefore, XAPER i. 4 G130M/130 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad justment 2 f	ue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM	uminate Segment A with G130M/1309 = +81 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the		e counts than the othe	[==>]	[1]
FCA LAPXSTP value Desired LAPXSTP value Desired LAPXSTP value Therefore, XAPER i. 4 G130M/130 9 Deuterium Exposure 1 Comments: Deuterium Exposure 1 5 Aperture Addingustment 2 for Segment	ue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM	uminate Segment A with G130M/1309 : +81 COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was a	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more QESIPARM XSTEI	e counts than the othe	[==>] r FP-POS values. 0.0 Secs (0 Secs)	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad justment 2 f or Segment A	ue at LP1 is -153 value for FCA to illi is set to -72153 = DEUTERIUM Tum exposure optimi NONE	uminate Segment A with G130M/1309 : +81 COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was a	G130M G1309 A 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Ous observations show the	at it has slightly more QESIPARM XSTEI S -56	e counts than the othe	[==>] r FP-POS values. 0.0 Secs (0 Secs)	[1]
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER i. 4 G130M/130 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad justment 2 f or Segment A Comments: Put the comments: Put the comments: Put the comments and comments and comments are comments.	ue at LP1 is -153 value for FCA to illu is set to -72153 = DEUTERIUM um exposure optimi NONE aperture in the appr	uminate Segment A with G130M/1309 : +81 COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was a	G130M G1309 A 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Ous observations show the	at it has slightly more QESIPARM XSTEI S -56	e counts than the othe	[==>] r FP-POS values. 0.0 Secs (0 Secs)	[1]
FCA LAPXSTP value Desired LAPXSTP value Desired LAPXSTP value 4 G130M/130 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad justment 2 f or Segment A Comments: Put the of FCA LAPXSTP value	ue at LP1 is -153 value for FCA to illuis set to -72153 = DEUTERIUM Tum exposure optimi NONE aperture in the apprine at LP1 is -153	uminate Segment A with G130M/1309 = +81 COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was of COS, ALIGN/APER ropriate position to illuminate a portion	G130M G1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Ous observations show the XAPER=25 of the detector when illur	at it has slightly more QESIPARM XSTEI S -56	e counts than the othe	[==>] r FP-POS values. 0.0 Secs (0 Secs)	[1]
FCA LAPXSTP value Desired LAPXSTP value Desired LAPXSTP value Therefore, XAPER i. G130M/130 9 Deuterium Exposure 1 Comments: Deuterium A perture Ad justment 2 f or Segment A Comments: Put the comments: Put the comments: Put the comments of the commen	ue at LP1 is -153 value for FCA to illuis set to -72153 = DEUTERIUM Tum exposure optimi NONE aperture in the apprine at LP1 is -153	uminate Segment A with G130M/1309 : +81 COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was a	G130M G1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Ous observations show the XAPER=25 of the detector when illur	at it has slightly more QESIPARM XSTEI S -56	e counts than the othe	[==>] r FP-POS values. 0.0 Secs (0 Secs)	[1]
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Adjustment 2 f or Segment A Comments: Put the office of the property of the pr	we at LP1 is -153 value for FCA to illuis set to -72153 = DEUTERIUM Tum exposure optimi NONE aperture in the apprine at LP1 is -153 value for FCA to illui	uminate Segment A with G130M/1309 = +81 COS/FUV, TIME-TAG, FCA zed for Segment A. FP-POS=1 was of COS, ALIGN/APER ropriate position to illuminate a portional control of the control o	G130M G1309 A 1309 A on of the LP3 region at Position 2 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Dus observations show the XAPER=25 of the detector when illum 3 is -128	at it has slightly more QESIPARM XSTEI S -56 ninating Segment A w	e counts than the other ovith G130M/1309.	[==>] r FP-POS values. 0.0 Secs (0 Secs)	(1)

6						Bain Maps	
	G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU		440 Secs (440 Secs)	
l	9 Deuterium Exposure 2		1309 A	M;		[==>]	
	Exposure 2			BUFFER-TIME=16 5;			
				FP-POS=1;			[1]
				SEGMENT=BOTH:	:		[1]
				LIFETIME-POS=L			
				P1			
Com		ized for Segment A. FP-POS=1 was o	hosen because pre				
7	Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=69	QESIPARM XSTEP S 44	0.0 Secs (0 Secs)	
ì	or Segment B					[==>]	[1]
Com	ments: Put the aperture in the app	ropriate position to illuminate a porti	on of the LP3 regio	on of the detector when illu	minating Segment B with G160M/1	600.	•
	LAPXSTP value at LP1 is -153	D C	or Desident 1 feet	: D2 := 04			
	v	uminate Segment B with G160M/1600					
Ther ion.	efore, XAPER is set to -84153 =	= +69. *HOWEVER*, because of the	TRANS rules, the "	QESIPARM XSTEPS 44" [(+69 - +25) = +44] Special Requir	rement is necessary to move the aperture to	o the correct local
8	G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU	ſ	440 Secs (440 Secs)	
l	0 Deuterium Exposure 1		1600 A	M;		[==>]	
	•			BUFFER-TIME=16 5;			
l				FP-POS=4;			[1]
				SEGMENT=BOTH;	;		
				LIFETIME-POS=L			
Com	ments: Deuterium exposure optim	mized for Segment B. FP-POS=4 was	chosen because pr	P1 revious observations show i	that it has slightly more counts than	the other FP-POS values.	
00	Aperture Ad NONE	COS, ALIGN/APER	enosen occumse pr	XAPER=13	QESIPARM XSTEP	0.0 Secs (0 Secs)	
9					S -56	[==>]	
9	justment 2 f or Segment B					[>]	[1]
9 Com	justment 2 f or Segment B	ropriate position to illuminate a porti	on of the LP3 regio	on of the detector when illu			[1]
	justment 2 f or Segment B ments: Put the aperture in the app	ropriate position to illuminate a porti	on of the LP3 regio	on of the detector when illu			[1]
FCA	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153	ropriate position to illuminate a porti uminate Segment B with G160M/1600					[1]
FCA Desi Ther	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illi refore, XAPER is set to -140153	uminate Segment B with G160M/1600	at Position 2 for I	LP3 is -140.	minating Segment B with G160M/1		
FCA Desi Ther ation	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illi refore, XAPER is set to -140153	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the	at Position 2 for I	LP3 is -140.	minating Segment B with $G160M/I$ " $[(+13 - +69) = -56]$ Special Requ	irement is necessary to move the aperture	
FCA Desi Ther ation	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrates, XAPER is set to -140153 t. G160M/160 DEUTERIUM 0 Deuterium	uminate Segment B with G160M/1600	at Position 2 for I	.P3 is -140. "QESIPARM XSTEPS -56	minating Segment B with $G160M/I$ " $[(+13 - +69) = -56]$ Special Requ	irement is necessary to move the aperture 440 Secs (440 Secs)	
FCA Desi Ther ation	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrates, XAPER is set to -140153 a. G160M/160 DEUTERIUM	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16	minating Segment B with G160M/1- $"[(+13 - +69) = -56]$ Special Requ	irement is necessary to move the aperture	
FCA Desi Ther ation	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrates, XAPER is set to -140153 t. G160M/160 DEUTERIUM 0 Deuterium	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=16 5;	minating Segment B with G160M/1- $"[(+13 - +69) = -56]$ Special Requ	irement is necessary to move the aperture 440 Secs (440 Secs)	to the correct loc
FCA Desi Ther ation	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrates, XAPER is set to -140153 t. G160M/160 DEUTERIUM 0 Deuterium	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4;	minating Segment B with G160M/I $^{\prime\prime}$ [(+13 - +69) = -56] Special Requ	irement is necessary to move the aperture 440 Secs (440 Secs)	
FCA Desi Ther ation	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrates, XAPER is set to -140153 t. G160M/160 DEUTERIUM 0 Deuterium	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH;	minating Segment B with G160M/I $^{\prime\prime}$ [(+13 - +69) = -56] Special Requ	irement is necessary to move the aperture 440 Secs (440 Secs)	to the correct loc
FCA Desi Ther ation	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrates, XAPER is set to -140153 t. G160M/160 DEUTERIUM 0 Deuterium	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4;	minating Segment B with G160M/I $^{\prime\prime}$ [(+13 - +69) = -56] Special Requ	irement is necessary to move the aperture 440 Secs (440 Secs)	to the correct loc
FCA Desi Ther ation 10	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate fore, XAPER is set to -140153 i. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was	at Position 2 for I TRANS rules, the G160M 1600 A	CP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	minating Segment B with G160M/I " $[(+13 - +69) = -56]$ Special Requirements that it has slightly more counts than	irement is necessary to move the aperture 440 Secs (440 Secs) [==>] the other FP-POS values.	to the correct loc
FCA Desi Ther ation 10	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate for EA to illustrate for EA to illustrate for EA to 140153 a. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for I TRANS rules, the G160M 1600 A	CP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	minating Segment B with G160M/In " [(+13 - +69) = -56] Special Requ that it has slightly more counts than QESIPARM XSTEP	the other FP-POS values. 0 Secs (0 Secs)	to the correct loc
FCA Desi Ther ation 10	justment 2 f or Segment B ments: Put the aperture in the app. LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate fore, XAPER is set to -140153 i. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	uminate Segment B with G160M/1600 = +13. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA mized for Segment B. FP-POS=4 was	at Position 2 for I TRANS rules, the G160M 1600 A	CP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	minating Segment B with G160M/I " $[(+13 - +69) = -56]$ Special Requirements that it has slightly more counts than	irement is necessary to move the aperture 440 Secs (440 Secs) [==>] the other FP-POS values.	to the correct loc

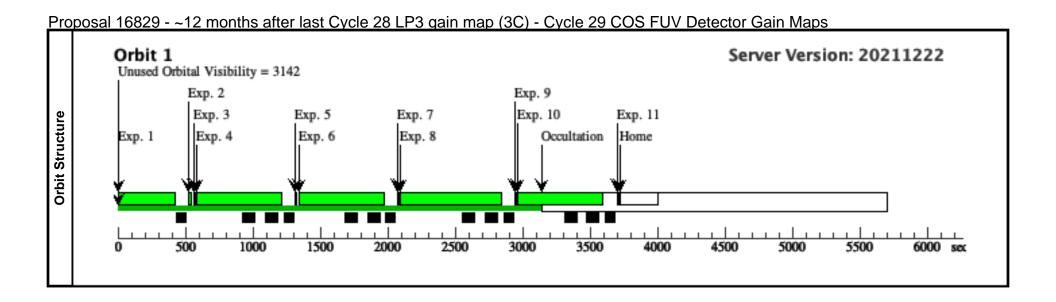


<u>Pı</u>	oposal 16829 - ~12 months after last Cycle 28 LP3 gain map (3C) - Cycle 29 COS FUV Detector Gain Maps	
	Proposal 16829, ~12 months after last Cycle 28 LP3 gain map (3C), scheduling	Sat May 21 11:00:31 GMT 2022
ı.±	Diagnostic Status: Warning	
į	Scientific Instruments: S/C, COS, COS/FUV	
_	Special Requirements: BETWEEN 01-OCT-2022:00:00:00 AND 01-NOV-2022:00:00:00; PARALLEL	
L	Comments: This visit collects data at LP3. It uses the HV values appropriate for LP3 (173/175).	
٤	(~12 months after last Cycle 28 LP3 gain map (3C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
<u>.</u>		
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Proposal 16829 - ~12 months after last Cycle 28 LP3 gain map (3C) - Cycle 29 COS FUV Detector Gain Maps

	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1 G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU			125 Secs (125 Secs)	
9 Deuterium Exposure - S		1309 A	M;			[==>]	
et up at LP1			BUFFER-TIME=19 6;				
			FP-POS=1;				
			SEGMENT=BOTH;				[1]
			LIFETIME-POS=L				
			P1				
Comments: Short exposure to set a	perture to LP1, which is near the center o	of the aperture range	used in this program. It a	elso sets the HV to the	LP1 values.		•
2 Adjust HV t DARK	S/C, DATA, NONE			SAA CONTOUR 31	l;	39 Secs (39 Secs)	
o LP3 value s				SPEC COM INSTR ELHVADJPROP;		[==>]	
				QASISTATES COS FUV HVNOM HVN			
				OM;	•		
				QESIPARM ENDC TSA 173;			[1]
				QESIPARM ENDC TSB 175;			
				QESIPARM SEGM ENT AB			
Comments: Adjust the HV to LP3	values			LIVI ND			
V							
Since the HV is not increasing, exp			**** DED 04				1
3 Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=81			0.0 Secs (0 Secs)	
or Segment A						[==>]	[1]
Comments: Put the aperture in the	appropriate position to illuminate a porti	ion of the LP3 region	of the detector when illu	minating Segment A w	ith G130M/1309.		
FCA LAPXSTP value at LP1 is -15							
Desired LAPXSTP value for FCA	53 to illuminate Segment A with G130M/1309	9 at Position 1 for LP	23 is -72				
Desired LAPXSTP value for FCA to Therefore, XAPER is set to -721	to illuminate Segment A with G130M/1309	at Position 1 for LF	23 is -72				
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM	to illuminate Segment A with G130M/1309 $153 = +81$	O at Position 1 for LP	CURRENT=MEDIU			440 Secs (440 Secs)	
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM 9 Deuterium	to illuminate Segment A with G130M/1309 $153 = +81$		CURRENT=MEDIU M;			440 Secs (440 Secs) [==>]	
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM	to illuminate Segment A with G130M/1309 $153 = +81$	G130M	CURRENT=MEDIU M; BUFFER-TIME=16			` ´	
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM 9 Deuterium	to illuminate Segment A with G130M/1309 $153 = +81$	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5;			` ´	
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM 9 Deuterium	to illuminate Segment A with G130M/1309 $153 = +81$	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;			` ´	[1]
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM 9 Deuterium	to illuminate Segment A with G130M/1309 $153 = +81$	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;			` ´	[1]
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM 9 Deuterium	to illuminate Segment A with G130M/1309 $153 = +81$	G130M	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;			` ´	[1]
Therefore, XAPER is set to -7214 G130M/130 DEUTERIUM 9 Deuterium Exposure 1	to illuminate Segment A with G130M/1309 $153 = +81$	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more	counts than the other	[==>]	[1]
Therefore, XAPER is set to -721 G130M/130 DEUTERIUM 9 Deuterium Exposure 1 Comments: Deuterium exposure of 5 Aperture Ad NONE	to illuminate Segment A with G130M/1309 153 = +81 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	QESIPARM XSTE		[==>]	[1]
Therefore, XAPER is set to -72	to illuminate Segment A with G130M/1309 153 = +81 COS/FUV, TIME-TAG, FCA ptimized for Segment A. FP-POS=1 was o	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>] FP-POS values.	[1]
Therefore, XAPER is set to -72	to illuminate Segment A with G130M/1309 153 = +81 COS/FUV, TIME-TAG, FCA ptimized for Segment A. FP-POS=1 was o	G130M 1309 A chosen because previ	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show th XAPER=25	QESIPARM XSTER S -56)	[==>] FP-POS values. 0.0 Secs (0 Secs)	
Therefore, XAPER is set to -721 G130M/130 DEUTERIUM 9 Deuterium Exposure 1 Comments: Deuterium exposure of Aperture Ad NONE justment 2 f or Segment A Comments: Put the aperture in the FCA LAPXSTP value at LP1 is -13	to illuminate Segment A with G130M/1309 153 = +81 COS/FUV, TIME-TAG, FCA Dimized for Segment A. FP-POS=1 was a COS, ALIGN/APER appropriate position to illuminate a porti	G130M 1309 A chosen because previ	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show the XAPER=25	QESIPARM XSTER S -56)	[==>] FP-POS values. 0.0 Secs (0 Secs)	
Therefore, XAPER is set to -72	to illuminate Segment A with G130M/1309 153 = +81 COS/FUV, TIME-TAG, FCA patimized for Segment A. FP-POS=1 was a COS, ALIGN/APER appropriate position to illuminate a porti	G130M 1309 A Chosen because previ ion of the LP3 region O at Position 2 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ious observations show th XAPER=25	QESIPARM XSTEI S -56 minating Segment A w	oith G130M/1309.	[==>] FP-POS values. 0.0 Secs (0 Secs) [==>]	[1]

	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	Г	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M;		[==>]	
Exposure 2			BUFFER-TIME=16 5;			
			FP-POS=1;			[1]
			SEGMENT=BOTH:	;		[11]
			LIFETIME-POS=L			
Commentes Deutenium expecuse ent	imized for Segment A. FP-POS=1 was o	ahasan baaausa ne	P1	eat it has slightly more counts than	the other ED DOS values	
7 Aperture Ad NONE	COS, ALIGN/APER	nosen because pro	XAPER=69	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				Š 44	[==>]	[1]
Comments: Put the aperture in the a	appropriate position to illuminate a porti	on of the LP3 regi	on of the detector when illu	minating Segment B with G160M/.	1600.	
FCA LAPXSTP value at LP1 is -153			•			
	illuminate Segment B with G160M/1600	at Position 1 for	LP3 is -84			
Therefore, XAPER is set to -8415	3 = +69. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS 44" [(+69 - +25) = +44] Special Requ	irement is necessary to move the aperture t	to the correct locat
ion.	COCKETAL TIME TACKED	CLOM	CURRENT MERIL	,	440.5 (440.5)	
8 G160M/160 DEUTERIUM 0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M 1600 A	CURRENT=MEDIU M;		440 Secs (440 Secs) [==>]	
Exposure 1		1000 A	BUFFER-TIME=16		[>]	
			5; ED DOS-4:			
			FP-POS=4; SEGMENT=BOTH:			[1]
			LIFETIME-POS=L	,		
			P1			
	immized for Segment B. FP-POS=4 was	chosen because p				
9 Aperture Ad NONE	immized for Segment B. FP-POS=4 was COS, ALIGN/APER	chosen because p	xAPER=13	QESIPARM XSTEP	0.0 Secs (0 Secs)	
		chosen because p				[1]
9 Aperture Ad NONE justment 2 f or Segment B			XAPER=13	QESIPARM XSTEP S -56	0.0 Secs (0 Secs) [==>]	[1]
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153	COS, ALIGN/APER appropriate position to illuminate a porti	on of the LP3 regi	XAPER=13 on of the detector when illu	QESIPARM XSTEP S -56	0.0 Secs (0 Secs) [==>]	[1]
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153	COS, ALIGN/APER appropriate position to illuminate a porti	on of the LP3 regi	XAPER=13 on of the detector when illu	QESIPARM XSTEP S -56	0.0 Secs (0 Secs) [==>]	[1]
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401	COS, ALIGN/APER appropriate position to illuminate a porti illuminate Segment B with G160M/1600	on of the LP3 regi at Position 2 for	XAPER=13 on of the detector when illu LP3 is -140.	QESIPARM XSTEP S -56 minating Segment B with G160M/.	0.0 Secs (0 Secs) [==>]	
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation.	COS, ALIGN/APER appropriate position to illuminate a portical illuminate Segment B with G160M/1600 $53 = +13$. *HOWEVER*, because of the	on of the LP3 regi at Position 2 for TRANS rules, the	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56	QESIPARM XSTEP S -56 minating Segment B with G160M/ " $[(+13 - +69) = -56]$ Special Requ	0.0 Secs (0 Secs) [==>] 1600. uirement is necessary to move the aperture	
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER appropriate position to illuminate a porti illuminate Segment B with G160M/1600	on of the LP3 regi at Position 2 for	XAPER=13 on of the detector when illu LP3 is -140.	QESIPARM XSTEP S -56 minating Segment B with G160M/ " $[(+13 - +69) = -56]$ Special Requ	[l] 0.0 Secs (0 Secs) $[l] = >]$ $line boundaries a line boundaries and the second of t$	
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM	COS, ALIGN/APER appropriate position to illuminate a portical illuminate Segment B with G160M/1600 $53 = +13$. *HOWEVER*, because of the	on of the LP3 regi at Position 2 for TRANS rules, the G160M	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16	QESIPARM XSTEP S - 56 minating Segment B with G160M/s " $[(+13 - +69) = -56]$ Special Requ	0.0 Secs (0 Secs) [==>] 1600. uirement is necessary to move the aperture	
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER appropriate position to illuminate a portical illuminate Segment B with G160M/1600 $53 = +13$. *HOWEVER*, because of the	on of the LP3 regi at Position 2 for TRANS rules, the G160M	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5;	QESIPARM XSTEP S - 56 minating Segment B with G160M/s " $[(+13 - +69) = -56]$ Special Requ	[l] 0.0 Secs (0 Secs) $[l] = >]$ $line boundaries a line boundaries and the second of t$	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER appropriate position to illuminate a portical illuminate Segment B with G160M/1600 $53 = +13$. *HOWEVER*, because of the	on of the LP3 regi at Position 2 for TRANS rules, the G160M	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4;	QESIPARM XSTEP S - 56 minating Segment B with G160M/. " $[(+13 - +69) = -56]$ Special Req.	[l] 0.0 Secs (0 Secs) $[l] = >]$ $line boundaries a line boundaries and the second of t$	
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER appropriate position to illuminate a portical illuminate Segment B with G160M/1600 $53 = +13$. *HOWEVER*, because of the	on of the LP3 regi at Position 2 for TRANS rules, the G160M	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH;	QESIPARM XSTEP S - 56 minating Segment B with G160M/. " $[(+13 - +69) = -56]$ Special Req.	[l] 0.0 Secs (0 Secs) $[l] = >]$ $line boundaries a line boundaries and the second of t$	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER appropriate position to illuminate a portical illuminate Segment B with G160M/1600 $53 = +13$. *HOWEVER*, because of the	on of the LP3 regi at Position 2 for TRANS rules, the G160M	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4;	QESIPARM XSTEP S - 56 minating Segment B with G160M/. " $[(+13 - +69) = -56]$ Special Req.	[l] 0.0 Secs (0 Secs) $[l] = >]$ $line boundaries a line boundaries and the second of t$	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	COS, ALIGN/APER appropriate position to illuminate a porticate illuminate Segment B with G160M/1600 53 = +13. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	on of the LP3 regi 0 at Position 2 for 2 TRANS rules, the G160M 1600 A	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1 revious observations show in	QESIPARM XSTEP S - 56 minating Segment B with G160M/. " [(+13 - +69) = -56] Special Req. that it has slightly more counts tha	[e] 0.0 Secs (0 Secs) $[e] = >]$ $[o] 1600.$ $[o] 440 Secs (0 Secs)$ $[e] = >]$ $[o] 440 Secs (440 Secs)$ $[e] = >]$ $[o] 600.$ $[o] 600.$ $[o] 600.$ $[o] 600.$ $[o] 600.$ $[o] 700.$ $[o]$	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -1401 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	COS, ALIGN/APER appropriate position to illuminate a portical illuminate Segment B with G160M/1600 53 = +13. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	on of the LP3 regi 0 at Position 2 for 2 TRANS rules, the G160M 1600 A	XAPER=13 on of the detector when illu LP3 is -140. "QESIPARM XSTEPS -56 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	QESIPARM XSTEP S - 56 minating Segment B with G160M/. " $[(+13 - +69) = -56]$ Special Req.	[e] 0.0 Secs (0 Secs) $[e] = >]$ $[e] 1600.$ $[e] 440 Secs (440 Secs)$ $[e] = >]$	to the correct loc

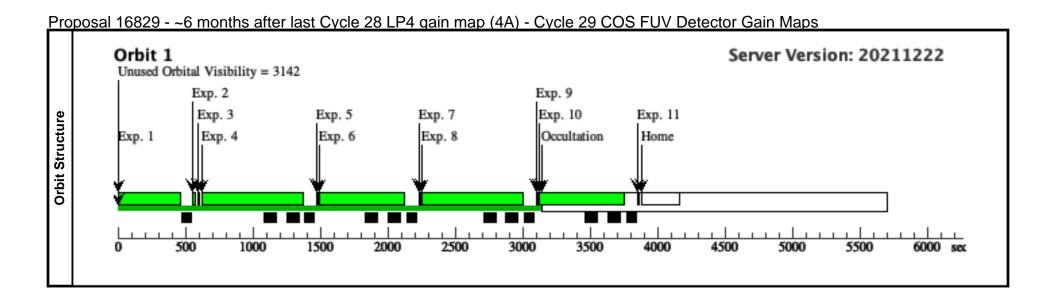


<u>P</u>	oposal 16829 - ~6 months after last Cycle 28 LP4 gain map (4A) - Cycle 29 COS FUV Detector Gain Maps	
	Proposal 16829, ~6 months after last Cycle 28 LP4 gain map (4A), completed	Sat May 21 11:00:32 GMT 2022
<u>.</u> ±	Diagnostic Status: Warning	
1 :	Scientific Instruments: S/C, COS, COS/FUV	
[Special Requirements: BETWEEN 01-APR-2022:00:00:00 AND 01-MAY-2022:00:00:00; PARALLEL	
L	Comments: This visit collects data at LP4. It uses the HV values appropriate for LP4 (173/169).	
٤	(~6 months after last Cycle 28 LP4 gain map (4A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
7		
2		
5		
ع		

Proposal 16829 - ~6 months after last Cycle 28 LP4 gain map (4A) - Cycle 29 COS FUV Detector Gain Maps

1 G160M/160 I	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU			125 Secs (125 Secs)	
0 Deuterium Exposure - S			1600 A	M;			I = => J	
et up at LP1				BUFFER-TIME=19 6;				
				FP-POS=1;				[1]
				SEGMENT=BOTH;				[1]
				LIFETIME-POS=L				
				P1				
		ure to LP1, which is near the center o	f the aperture range	used in this program. It a	lso sets the HV to the	LP1 values.		
2 Adjust HV t I o LP4 value	DARK	S/C, DATA, NONE			SAA CONTOUR 3		39 Secs (39 Secs)	_
S S					SPEC COM INSTR ELHVADJPROP;		[==>]	
					QASISTATES COS FUV HVNOM HVI			
					OM; QESIPARM ENDO			[1]
					TSA 173; QESIPARM ENDO			
					TSB 169; QESIPARM SEGM]		
					ENT AB			
Comments: Adjust th	he HV to LP4 value	S.						
Since the HV is not in	increasing, exposur	re time = 39 seconds						-
3 Aperture Ad N	NONE	COS, ALIGN/APER		XAPER=121			0.0 Secs (0 Secs)	
justment 1 f or Segment A							[==>]	
								[1]
Comments: Put the a	aperture in the app	ropriate position to illuminate a porti	on of the LP3 region	of the detector when illu	ninating Segment A v	vith G130M/1309.		[1]
FCA LAPXSTP value	te at LP1 is -153		v		ninating Segment A v	vith G130M/1309.		
FCA LAPXSTP value Desired LAPXSTP ve	te at LP1 is -153 value for FCA to illi	uminate Segment A with G130M/1309	v		ninating Segment A v	with G130M/1309.		
FCA LAPXSTP value Desired LAPXSTP vo Therefore, XAPER is 4 G130M/130 I	te at LP1 is -153 ralue for FCA to illi s set to -32153 =	uminate Segment A with G130M/1309	v		ninating Segment A v	vith G130M/1309.	440 Secs (440 Secs)	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium	te at LP1 is -153 ralue for FCA to illi s set to -32153 =	uminate Segment A with G130M/1309 = +121	at Position 1 for LP	4 is -32	ninating Segment A v	with G130M/1309.	440 Secs (440 Secs) [==>]	
FCA LAPXSTP value Desired LAPXSTP vo Therefore, XAPER is 4 G130M/130 I	te at LP1 is -153 ralue for FCA to illi s set to -32153 =	uminate Segment A with G130M/1309 = +121	at Position 1 for LP	4 is -32 CURRENT=MEDIU M; BUFFER-TIME=16	ninating Segment A v	with G130M/1309.	` ′	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium	te at LP1 is -153 ralue for FCA to illi s set to -32153 =	uminate Segment A with G130M/1309 = +121	at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5;	ninating Segment A v	with G130M/1309.	` ′	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium	te at LP1 is -153 ralue for FCA to illi s set to -32153 =	uminate Segment A with G130M/1309 = +121	at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;	ninating Segment A v	with G130M/1309.	` ′	[1]
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium	te at LP1 is -153 ralue for FCA to illi s set to -32153 =	uminate Segment A with G130M/1309 = +121	at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;	ninating Segment A v	with G130M/1309.	` ′	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium	te at LP1 is -153 ralue for FCA to illi s set to -32153 =	uminate Segment A with G130M/1309 = +121	at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;	ninating Segment A v	vith G130M/1309.	` ′	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium Exposure 1	e at LP1 is -153 alue for FCA to illi s set to -32153 = DEUTERIUM	uminate Segment A with G130M/1309 = +121	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			[==>]	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad N	te at LP1 is -153 value for FCA to illt s set to -32153 = DEUTERIUM	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more QESIPARM XSTE	e counts than the othe	[==>]	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 I 9 Deuterium Exposure 1 Comments: Deuteriu	te at LP1 is -153 value for FCA to illt s set to -32153 = DEUTERIUM	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more	e counts than the othe	[==>] er FP-POS values.	
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 If 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad N justment 2 f or Segment A	e at LP1 is -153 value for FCA to illu s set to -32153 = DEUTERIUM um exposure optimi NONE	uminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA Seed for Segment A. FP-POS=1 was a COS, ALIGN/APER	G130M G1309 A 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Ous observations show the	at it has slightly more QESIPARM XSTE S -54	e counts than the othe	[==>] or FP-POS values. 0.0 Secs (0 Secs)	[1]
FCA LAPXSTP value Desired LAPXSTP value Therefore, XAPER is 4 G130M/130 If 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad N justment 2 f or Segment A Comments: Put the activities FCA LAPXSTP value	e at LP1 is -153 value for FCA to illus s set to -32153 = DEUTERIUM um exposure optimi NONE apperture in the applicate at LP1 is -153	tuminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA Example 1	G130M 1309 A hosen because previous	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the XAPER=67 of the detector when illustrates	at it has slightly more QESIPARM XSTE S -54	e counts than the othe	[==>] or FP-POS values. 0.0 Secs (0 Secs)	[1]
FCA LAPXSTP value Desired LAPXSTP value Desired LAPXSTP value 4 G130M/130 If 9 Deuterium Exposure 1 Comments: Deuterium 5 Aperture Ad 1 justment 2 f or Segment A Comments: Put the act of the properties of t	te at LP1 is -153 value for FCA to illusts set to -32153 = DEUTERIUM The exposure optimination of the appropriate of the a	tuminate Segment A with G130M/1309 = +121 COS/FUV, TIME-TAG, FCA Example 1	G130M G1309 A 1309 A hosen because previous on of the LP3 region at Position 2 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Dus observations show the XAPER=67 of the detector when illurated 4 is -86	at it has slightly more QESIPARM XSTE S -54 ninating Segment A v	e counts than the other P with G130M/1309.	[==>] or FP-POS values. 0.0 Secs (0 Secs)	[1]

	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	ſ	440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16		[==>]	
			5;			
			FP-POS=1;			[1]
			SEGMENT=BOTH; LIFETIME-POS=L	;		
			P1			
Comments: Deuterium exposure opt	imized for Segment A. FP-POS=1 was c	hosen because pre	evious observations show th	aat it has slightly more counts than t	he other FP-POS values.	
7 Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=112	QESIPARM XSTEP S 45	0.0 Secs (0 Secs)	
or Segment B				3 43	[==>]	[1]
Comments: Put the aperture in the a	ppropriate position to illuminate a porti	on of the LP3 regi	on of the detector when illu	minating Segment B with G160M/1	600.	
·	illuminate Segment B with G160M/1600	v		[(+112 - +67) = +45] Special Req	uirement is necessary to move the apertur	e to the correct lo
8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
0 Deuterium		1600 A	M;		[==>]	
Exposure 1			BUFFER-TIME=16 5;			
			FP-POS=4:			[1]
			SEGMENT=BOTH;			[1]
			LIFETIME-POS=L			
C D	· · · · · · · · · · · · · · · · · · ·	, ,	P1	a est total and	d d ED DOG 1	
	immized for Segment B. FP-POS=4 was	chosen because pi				
	COS ALIGN/ADED		V A DED-59	OECIDADM YCTED		
9 Aperture Ad NONE justment 2 f or Segment B	COS, ALIGN/APER		XAPER=58	QESIPARM XSTEP S -54	0.0 Secs (0 Secs) [==>]	[1]
9 Aperture Ad NONE justment 2 f or Segment B	,	on of the LP3 regi		S -54	[==>]	[1]
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a	ppropriate position to illuminate a porti	on of the LP3 region		S -54	[==>]	[1]
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a	ppropriate position to illuminate a porti	,	on of the detector when illu	S -54	[==>]	[1]
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to	ppropriate position to illuminate a porti illuminate Segment B with G160M/1600	at Position 2 for I	on of the detector when illu LP3 is -95.	\widetilde{S} -54 minating Segment B with G160M/I	[==>]	<u> </u>
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM	ppropriate position to illuminate a porti illuminate Segment B with G160M/1600	at Position 2 for I	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU	\vec{S} -54 minating Segment B with G160M/I $[(+58 - +112) = -54]$ Special Requ	[==>] 600.	<u> </u>
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	ppropriate position to illuminate a porti- illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the	at Position 2 for I	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M;	\vec{S} -54 minating Segment B with G160M/I $[(+58 - +112) = -54]$ Special Requ	[==>] foot. irement is necessary to move the aperture	<u> </u>
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM	ppropriate position to illuminate a porti- illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the '	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU	\vec{S} -54 minating Segment B with G160M/I $[(+58 - +112) = -54]$ Special Requ	[==>] foot. irement is necessary to move the aperture 440 Secs (440 Secs)	<u> </u>
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	ppropriate position to illuminate a porti- illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the '	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16	\vec{S} -54 minating Segment B with G160M/I $[(+58 - +112) = -54]$ Special Requ	[==>] foot. irement is necessary to move the aperture 440 Secs (440 Secs)	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	ppropriate position to illuminate a porti- illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the '	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5;	\tilde{S} -54 minating Segment B with G160M/1 $[(+58 - +112) = -54]$ Special Requ	[==>] foot. irement is necessary to move the aperture 440 Secs (440 Secs)	<u> </u>
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	ppropriate position to illuminate a porti- illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the	at Position 2 for 1 TRANS rules, the '	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L	\tilde{S} -54 minating Segment B with G160M/1 $[(+58 - +112) = -54]$ Special Requ	[==>] foot. irement is necessary to move the aperture 440 Secs (440 Secs)	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	Gat Position 2 for ITRANS rules, the 'G160M 1600 A	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	\tilde{S} -54 minating Segment B with G160M/1 $[(+58 - +112) = -54]$ Special Requ	[==>] [==>] [==>] 440 Secs (440 Secs) [==>]	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	ppropriate position to illuminate a porti illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	Gat Position 2 for ITRANS rules, the 'G160M 1600 A	on of the detector when illu LP3 is -95. "QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1 revious observations show to	\tilde{S} -54 minating Segment B with G160M/1- $[(+58 - +112) = -54]$ Special Requires that it has slightly more counts than	[==>] foot. $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ $[==>]$ the other FP-POS values.	to the correct loc
9 Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the a FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to Therefore, XAPER is set to -9515 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	illuminate Segment B with G160M/1600 3 = +58. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	Gat Position 2 for ITRANS rules, the 'G160M 1600 A	on of the detector when illu LP3 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	\tilde{S} -54 minating Segment B with G160M/1 $[(+58 - +112) = -54]$ Special Requ	[==>] [==>] [==>] 440 Secs (440 Secs) [==>]	to the correct loc

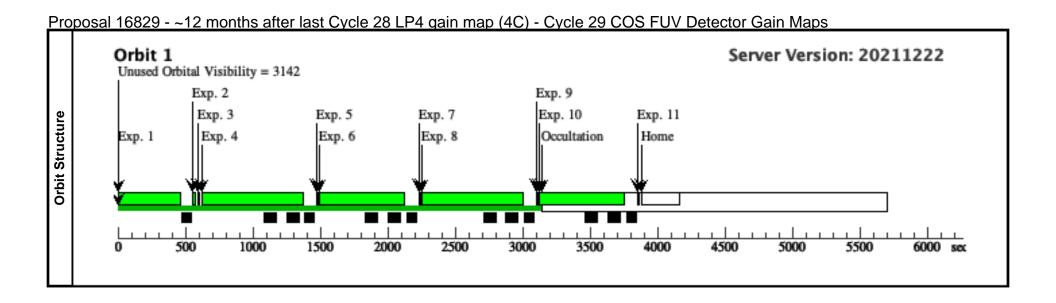


Pr	oposal 16829 - ~12 months after last Cycle 28 LP4 gain map (4C) - Cycle 29 COS FUV Detector Gain Maps	
	Proposal 16829, ~12 months after last Cycle 28 LP4 gain map (4C), scheduling	Sat May 21 11:00:32 GMT 2022
±	Diagnostic Status: Warning	
/isit	Scientific Instruments: S/C, COS, COS/FUV	
-	Special Requirements: BETWEEN 01-OCT-2022:00:00:00 AND 01-NOV-2022:00:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for LP4 (173/175).	
၂ တ	(~12 months after last Cycle 28 LP4 gain map (4C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
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Proposal 16829 - ~12 months after last Cycle 28 LP4 gain map (4C) - Cycle 29 COS FUV Detector Gain Maps

1 O Description DESTERRIUM COS FUV, TIME-TAG, FCA G160M CURRENT-MEDIU [15] [160 c A BUTTER-TIME-19 [160 c A BUTTER-TIME-10 [160 c A BUTTER-TIME-	Orbi
Exposure S et up at LP1 8 8 1000 A 1000 A 1000 BUTFER-TIME-19 8 1000 A 1000 BUTFER-TIME-19 8 1000 BUTFER-TIME-19 1000	
Scomments: Short exposure to set aperture to LP1, which is near the center of the aperture range used in this program. It also sets the IIV to the LP1 values. SAA CONTOUR 31: 39 Secs 39 Sec	
FP-POS-L: SEGMENT-BOTH; LIFETIME-POS-L Adjust FVF: DARK S.C, DATA, NONE SPEC COMMENTER OASTATES COS FUF HYNOM HYN OA: OASTATES COS FUF HYNOM HYN OA: OESTRARM REDC TSA 173; OESTRARM SEGM ENT AB Comments: Adjust the HV to LPI values. Comments: Past the aperture in the appropriate position to illuminate a portion of the LPI region of the detector when illuminating Segment A with G130M/1309. FCA LAPXNP value at LPI is 1-153 Description Description of the LPI region of the detector when illuminating Segment A with G130M/1309. FCA LAPXNP value at LPI is 1-153 Description Description of Description Office of Segment A with G130M/1309 at Position 1 for LPI is 2-2 Description APPER is set to 22 - 183 = +121 Comments: Destretion exposure optimized for Segment A vith G130M/1309 at Position 1 for LPI is 1-53 ECOMMENT: Destretion exposure optimized for Segment A - 1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1	
SEGMENT-BOTH:	
LIFETIME-POS-L PIT Comments: Short exposure to set aperture to LPL, which is near the center of the aperture range used in this program. It also sets the HV to the LPJ values. 2 Adjust HV+1 DARK SC, DATA, NONE 3 ASA CONTOUR 31: 39 Secs (39 Secs) 39 Secs (39 Secs) 30 Secs (39 Secs) 30 Secs (39 Secs) 30 Secs (39 Secs) 30 Secs (30 Secs) 30 Secs (30 Secs) 31 Aperture All NONE 32 Aperture All NONE 33 Aperture All NONE 34 Aperture All NONE 35 Secs (40 Secs) 4 Secs (40 Secs) 4 Secs (40 Secs) 5 Secs (40 Secs) 6 Secs (4	[1]
PI Comments: Short exposite to set aperture to LP1, which is near the center of the aperture range used to this program. Re also sets the HV to the LP1 value. Pa Value Pa Val	
2. ALIGN-HV-1 DARK S.C. DATA, NONE S.PACCOM INSTREMENDOR 1. INVADIPEOP OASISTATES COS FIVE HV-1 VADUE OESPARM ENDO TSA 173. OESPARM E	
Comments: Put the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309 at Position 1 for LP4 is -32 Comments: Put the appropriate position to Segment A with G130M/1309 at Position 1 for LP4 is -32 Comments: Detertion exposure optimized for Segment A. FP-POS=1 was chosen becomes previous observations show that it has slightly more counts than the other FP-POS values. Comments: Detertion exposure optimized for Segment A. FP-POS=1 was chosen becomes previous observations show that it has slightly more counts than the other FP-POS values. Comments: Put the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. CURRENT=MEDIU Segment A.	•
Signature of the LPV is not increasing, exposure time = 39 seconds Comments: Adjust the HV to LP4 values. Since the HV is not increasing, exposure time = 39 seconds Aperture All NONE COS, ALIGN/APER COS,	
Comments: Adjust the IIV to LP4 values. Comments: Description of the IIV to III value and NONE COS, ALIGNAPER XAPER Sample of the detector when illuminating Segment A with G130M/1309. I=>	
Comments: Adjust the HV to LP4 values.	
Segiparm Endo	
Comments: Adjust the HV to LP4 values. Since the HV is not increasing, exposure time = 39 seconds 3 Aperture Ad NONE cos, ALIGN/APER XAPER=121 0.0 Secs (0 Secs) Justinent 1 f or Segment A vith G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 Therefore, XAPER is set to -32153 = +121 40 Secs (440 Secs) JE=>J 40 Secs (440 Secs) JE=>J GEMENT=BOTH, LIFETIME=16 S; FP-POS=1; SEGMENT=BOTH, LIFETIME=POS=L P1 JETHME-POS=L P1 JETHME-POS	[1]
ENT AB	
Since the HV is not increasing, exposure time = 39 seconds 3 Aperture Ad NONE COS, ALIGN/APER XAPER=121	
3 Aperture Ad NONE 15 COS, ALIGN/APER XAPER=121	
justment 1 f or Segment A 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 Therefore, XAPER is set to -32153 = +121 4 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M BUFFER-TIME=16 5; FP-POS=1: Exposure 1 Exposure 1 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. 5 Aperture Ad NONE COS, ALIGN/APER APER COS, ALIGN/APER Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. 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. 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the constant than the constant in the	
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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 Therefore, XAPER is set to -32153 = +121 4 G130M/130 DEUTERIUM 9 Deuterium Exposure 1 SEGMENT=BOTH: LIFETIME=16 5; FP-POS=1; SEGMENT=BOTH: LIFETIME-POS = LP1 EComments: 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. 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. 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. FCA LAPXSTP value at LP1 is -153 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value at LP1 is -153 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the or the second of the sec	
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44 G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU M; 9 Deuterium Exposure 1 BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=67 QESIPARM XSTEP S-54 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the comments and the content of the comment is necessary to move the aperture to the comments. Comments: Put the aperture in the appropriate position to illuminate Segment A with G130M/1309. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86	
9 Deuterium Exposure 1 1309 A M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE Segment A NONE Segment COS, ALIGN/APER XAPER=67 QESIPARM XSTEP S-54 [==>] 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the commendation of the comments o	
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$ \begin{array}{c} \text{BUFFER-HIME=10} \\ \text{S}; \\ \text{FP-POS=1}; \\ \text{SEGMENT=BOTH}; \\ \text{LIFETIME-POS=L} \\ \text{P1} \\ \\ \\ \text{S} \\ \text{Aperture Ad NONE} \\ \text{S} \\ \text{OS, ALIGN/APER} \\ \text{A} \\ \text{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.} \\ \text{FCA LAPXSTP value at LP1 is -153} \\ \text{Desired LaPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86} \\ Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the description of the detector of the det$	
FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=67 QESIPARM XSTEP S -54 [==>] 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the Comments of the Comments	
SEGMENT=BOTH; LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=67 QESIPARM XSTEP S -54 [==>] 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the desired to the Comment of the Comment	[11
LIFETIME-POS=L P1 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. 5 Aperture Ad NONE COS, ALIGN/APER XAPER=67 QESIPARM XSTEP S -54 [==>] 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the comments are considered.	[1]
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5 Aperture Ad NONE COS, ALIGN/APER XAPER=67 QESIPARM XSTEP S -54 [==>] 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. FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the company to move the company to move the aperture to the company to move the aperture	
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Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86153 = +67. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(+67 - +121) = -54] Special Requirement is necessary to move the aperture to the continuous contents.	
ation.	correct

6							
	G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU		440 Secs (440 Secs)	
	9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16		[==>]	
				5;			
				FP-POS=1;			[1]
				SEGMENT=BOTH;			
				LIFETIME-POS=L P1			
Com	ments: Deuterium exposure optim	nized for Segment A. FP-POS=1 was o	hosen because pre	evious observations show th	at it has slightly more counts than	the other FP-POS values.	•
7	Aperture Ad NONE	COS, ALIGN/APER		XAPER=112	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 1 f or Segment B				S 45	[==>]	[1]
Com	ments: Put the aperture in the app	propriate position to illuminate a porti	on of the LP4 region	on of the detector when illu	ninating Segment B with G160M/	71600.	
Desi		luminate Segment B with G160M/1600	v				
Ther catio		= +112. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS 45"	[(+112 - +67) = +45] Special Re	quirement is necessary to move the aperture	to the correct lo
8	G160M/160 DEUTERIUM 0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
	Exposure 1		1600 A	M; BUFFER-TIME=16		[==>]	
				5;			
				FP-POS=4;			[1]
				SEGMENT=BOTH;			
				LIFETIME-POS=L P1			
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 tha	n the other FP-POS values.	
<i>Com</i>	Aperture Ad NONE	mized for Segment B. FP-POS=4 was COS, ALIGN/APER	chosen because pr	revious observations show t XAPER=58	QESIPARM XSTEP	n the other FP-POS values. 0.0 Secs (0 Secs)	
<u>Com</u> 9			chosen because pi				[1]
9	Aperture Ad NONE justment 2 f or Segment B			XAPER=58	QESIPARM XSTEP S -54	0.0 Secs (0 Secs) [==>]	[1]
9 Com	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app	COS, ALIGN/APER		XAPER=58	QESIPARM XSTEP S -54	0.0 Secs (0 Secs) [==>]	[1]
9 Com FCA	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the apple LAPXSTP value at LP1 is -153	COS, ALIGN/APER	on of the LP4 regio	XAPER=58 on of the detector when illu	QESIPARM XSTEP S -54	0.0 Secs (0 Secs) [==>]	[1]
9 Com FCA Desi Ther	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate to -95153	COS, ALIGN/APER oropriate position to illuminate a porti luminate Segment B with G160M/1600	on of the LP4 region	XAPER=58 on of the detector when illu. LP4 is -95.	QESIPARM XSTEP S -54 ninating Segment B with G160M/	0.0 Secs (0 Secs) [==>]	
9 Com FCA Desi	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate for the second control of the	COS, ALIGN/APER oropriate position to illuminate a porti luminate Segment B with G160M/1600	on of the LP4 region	XAPER=58 on of the detector when illu. LP4 is -95.	QESIPARM XSTEP S -54 ninating Segment B with G160M/	0.0 Secs (0 Secs) [==>] [1600.	
9 Com FCA Desi Ther ation	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to ill refore, XAPER is set to -95153 t. G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER propriate position to illuminate a portion to illuminate a portion to the sum of the $a_{\rm c} = +58.$ *HOWEVER*, because of the	on of the LP4 region of at Position 2 for I TRANS rules, the	XAPER=58 on of the detector when illustrates LP4 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M;	QESIPARM XSTEP S -54 ninating Segment B with G160M/	0.0 Secs (0 Secs) [==>] [1600. uirement is necessary to move the aperture if	
9 Com FCA Desi Ther ation	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate for the second control of the	COS, ALIGN/APER propriate position to illuminate a portion to illuminate a portion to the sum of the $a_{\rm c} = +58.$ *HOWEVER*, because of the	on of the LP4 region on at Position 2 for I TRANS rules, the ' G160M	XAPER=58 on of the detector when illustrates LP4 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16	QESIPARM XSTEP S -54 ninating Segment B with G160M/	[l] 0.0 Secs (0 Secs) $[l] = > J$ $[1600]$ $[l] uirement is necessary to move the aperture of the second seco$	
9 Com FCA Desi Ther ation	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to ill refore, XAPER is set to -95153 t. G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER propriate position to illuminate a portion to illuminate a portion to the sum of the $a_{\rm c} = +58.$ *HOWEVER*, because of the	on of the LP4 region on at Position 2 for I TRANS rules, the ' G160M	XAPER=58 on of the detector when illustrates and selection when illustrates are selected with the selection of the detector when illustrates are selected with the selection of	QESIPARM XSTEP S -54 ninating Segment B with G160M/	[l] 0.0 Secs (0 Secs) $[l] = > J$ $[1600]$ $[l] uirement is necessary to move the aperture of the second seco$	to the correct loc
9 Com FCA Desi Ther atior	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to ill refore, XAPER is set to -95153 t. G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER propriate position to illuminate a portion to illuminate a portion to the sum of the $a_{\rm c} = +58.$ *HOWEVER*, because of the	on of the LP4 region on at Position 2 for I TRANS rules, the ' G160M	XAPER=58 on of the detector when illustrates -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4;	QESIPARM XSTEP S -54 ninating Segment B with G160M/	[l] 0.0 Secs (0 Secs) $[l] = > J$ $[1600]$ $[l] uirement is necessary to move the aperture of the second seco$	
9 Com FCA Desi Ther ation	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to ill refore, XAPER is set to -95153 t. G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER propriate position to illuminate a portion to illuminate a portion to the sum of the $a_{\rm c} = +58.$ *HOWEVER*, because of the	on of the LP4 region on at Position 2 for I TRANS rules, the ' G160M	XAPER=58 on of the detector when illustrates -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH;	QESIPARM XSTEP S -54 ninating Segment B with G160M/	[l] 0.0 Secs (0 Secs) $[l] = > J$ $[1600]$ $[l] uirement is necessary to move the aperture of the second seco$	to the correct loc
9 Com FCA Desi Ther ation	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the app LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to ill refore, XAPER is set to -95153 t. G160M/160 DEUTERIUM 0 Deuterium	COS, ALIGN/APER propriate position to illuminate a portion to illuminate a portion to the sum of the $a_{\rm c} = +58.$ *HOWEVER*, because of the	on of the LP4 region on at Position 2 for I TRANS rules, the ' G160M	XAPER=58 on of the detector when illustrates -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4;	QESIPARM XSTEP S -54 ninating Segment B with G160M/	[l] 0.0 Secs (0 Secs) $[l] = > J$ $[1600]$ $[l] uirement is necessary to move the aperture of the second seco$	to the correct loc
9 Com FCA Desi Ther ation 10	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the apple LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate for Apple 1. Set to -95153 i. G160M/160 DEUTERIUM 0 Deuterium Exposure 2	COS, ALIGN/APER propriate position to illuminate a porticuminate Segment B with G160M/1600 = +58. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	on of the LP4 region of at Position 2 for I TRANS rules, the ' G160M 1600 A	XAPER=58 on of the detector when illustry LP4 is -95. 'QESIPARM XSTEPS -54" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1 revious observations show t	QESIPARM XSTEP S -54 minating Segment B with G160M/ $(+58 - +112) = -54$] Special Requart to the slightly more counts that	$[e] 0.0 \text{ Secs } (0 \text{ Secs})$ $[e] = > J$ $[flood.]$ $[flood] 440 \text{ Secs } (440 \text{ Secs})$ $[flood] [flood] [flood = 100 \text{ MeV}]$ $[flood] 440 \text{ Secs } (440 \text{ Secs})$ $[flood] [flood = 100 \text{ MeV}]$ $[flood = 100 \text$	to the correct loc
9 Com FCA Desi Ther ation 10	Aperture Ad NONE justment 2 f or Segment B ments: Put the aperture in the apple LAPXSTP value at LP1 is -153 red LAPXSTP value for FCA to illustrate for APER is set to -95153 to 100 Deuterium Exposure 2	COS, ALIGN/APER propriate position to illuminate a porticuluminate Segment B with G160M/1600 = +58. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	on of the LP4 region of at Position 2 for I TRANS rules, the ' G160M 1600 A	XAPER=58 on of the detector when illustrates and the detector when illustrates are seen as a se	QESIPARM XSTEP S -54 minating Segment B with G160M/ $[(+58 - +112) = -54]$ Special Req	[l] 0.0 Secs (0 Secs) $[l] [l] [l] [l] [l] [l] [l] [l] [l] [l]$	to the correct loc

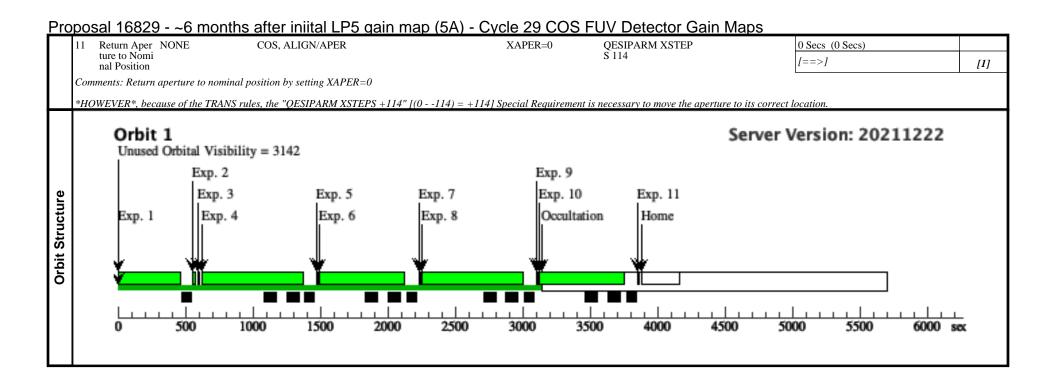


<u>Pr</u>	oposal 16829 - ~6 months after iniital LP5 gain map (5A) - Cycle 29 COS FUV Detector Gain Maps	
	Proposal 16829, ~6 months after iniital LP5 gain map (5A), completed	Sat May 21 11:00:32 GMT 2022
±	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
-	Special Requirements: BETWEEN 01-APR-2022:00:00:00 AND 01-MAY-2022:00:00:00; PARALLEL	
<u> </u>	Comments: This visit collects data at LP5. It uses the HV values appropriate for LP5 (167/169).	
S	(~6 months after iniital LP5 gain map (5A)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
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Proposal 16829 - ~6 months after iniital LP5 gain map (5A) - Cycle 29 COS FUV Detector Gain Maps

1 G160M/160 DEU	get	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	UTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU			125 Secs (125 Secs)	
0 Deuterium Exposure - S			1600 A	M;			[==>]	
et up at LP1				BUFFER-TIME=19 6;				
•				FP-POS=1;				
								[1]
				SEGMENT=BOTH;				
				LIFETIME-POS=L P1				
Comments: Short exposi	ure to set apertur	re to LP1, which is near the center o	f the aperture range	used in this program. It a	lso sets the HV to the	LP1 values.		
2 Adjust HV t DAI		S/C, DATA, NONE		, ,	SAA CONTOUR 31		39 Secs (39 Secs)	
o LP5 value					SPEC COM INSTR		[==>]	
S					ELHVADJPROP;			
					QASISTATES COS			
					FUV HVNOM HVN OM;			
					QESIPARM ENDC			[1]
					TSA 167;			[1]
					QESIPARM ENDC			
					TSB 169;			
					QESIPARM SEGM ENT AB			
Comments: Adjust the H	IV to I P5 values				LIVI AD			
J								
Since the HV is not incre							1	
3 Aperture Ad NOI justment 1 f	NE	COS, ALIGN/APER		XAPER=-60			0.0 Secs (0 Secs)	
or Segment							[==>]	1
							1>1	[11]
A							[>]	[1]
	rture in the appro	priate position to illuminate a porti	on of the LP5 region	of the detector when illu	minating Segment A w	ith G130M/1309.	[>]	[1]
	11	priate position to illuminate a porti	on of the LP5 region	of the detector when illu	minating Segment A w	ith G130M/1309.	[/]	[1]
Comments: Put the aper	t LP1 is -153	priate position to illuminate a porti ninate Segment A with G130M/1309	·		minating Segment A w	ith G130M/1309.		[1]
Comments: Put the aper	t LP1 is -153 e for FCA to illun	ninate Segment A with G130M/1309	·		minating Segment A w	ith G130M/1309.		[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value	t LP1 is -153 e for FCA to illun t to -213153 =	ninate Segment A with G130M/1309	·		minating Segment A w	ith G130M/1309.	440 Secs (440 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium	t LP1 is -153 e for FCA to illun t to -213153 =	ninate Segment A with G130M/1309	at Position 1 for LF	75 is -213	minating Segment A w	ith G130M/1309.		[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU	t LP1 is -153 e for FCA to illun t to -213153 =	ninate Segment A with G130M/1309	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16	minating Segment A w	ith G130M/1309.	440 Secs (440 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium	t LP1 is -153 e for FCA to illun t to -213153 =	ninate Segment A with G130M/1309	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5;	minating Segment A w	ith G130M/1309.	440 Secs (440 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium	t LP1 is -153 e for FCA to illun t to -213153 =	ninate Segment A with G130M/1309	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;	minating Segment A w	ith G130M/1309.	440 Secs (440 Secs)	
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium	t LP1 is -153 e for FCA to illun t to -213153 =	ninate Segment A with G130M/1309	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;	minating Segment A w	ith G130M/1309.	440 Secs (440 Secs)	
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium	t LP1 is -153 e for FCA to illun t to -213153 =	ninate Segment A with G130M/1309	O at Position 1 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L	minating Segment A w	ith G130M/1309.	440 Secs (440 Secs)	
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium Exposure 1	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1			440 Secs (440 Secs) [==>]	
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium Exposure 1	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA rd for Segment A. FP-POS=1 was c	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more	counts than the other	440 Secs (440 Secs) [==>] FP-POS values.	
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium Exposure 1 Comments: Deuterium e	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1		counts than the other	440 Secs (440 Secs) [==>] FP-POS values. 0.0 Secs (0 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium Exposure 1 Comments: Deuterium et 5 Aperture Ad NO1 justment 2 f or Segment	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA rd for Segment A. FP-POS=1 was c	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more QESIPARM XSTEF	counts than the other	440 Secs (440 Secs) [==>] FP-POS values.	
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium Exposure 1 Comments: Deuterium e 5 Aperture Ad NOI justment 2 f or Segment A	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM exposure optimize	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA rd for Segment A. FP-POS=1 was a	G130M 1309 A 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more QESIPARM XSTEF S -54	counts than the other	440 Secs (440 Secs) [==>] FP-POS values. 0.0 Secs (0 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set 4 G130M/130 DEU 9 Deuterium Exposure 1 Comments: Deuterium et 5 Aperture Ad NOI justment 2 f or Segment A	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM exposure optimize	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA rd for Segment A. FP-POS=1 was c	G130M 1309 A 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more QESIPARM XSTEF S -54	counts than the other	440 Secs (440 Secs) [==>] FP-POS values. 0.0 Secs (0 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set G130M/130 DEU 9 Deuterium Exposure 1 Comments: Deuterium et A NOI justment 2 f or Segment A Comments: Put the aper FCA LAPXSTP value at	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM exposure optimize NE rture in the appro	rinate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA red for Segment A. FP-POS=1 was compared to the	G130M G1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the XAPER=-114 of the detector when illumed the state of the detector when illumed the state of the s	at it has slightly more QESIPARM XSTEF S -54	counts than the other	440 Secs (440 Secs) [==>] FP-POS values. 0.0 Secs (0 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set G130M/130 DEU 9 Deuterium Exposure 1 Comments: Deuterium et A NOI justment 2 f or Segment A Comments: Put the aper FCA LAPXSTP value at	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM exposure optimize NE rture in the appro	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA rd for Segment A. FP-POS=1 was a	G130M G1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the XAPER=-114 of the detector when illumed the state of the detector when illumed the state of the s	at it has slightly more QESIPARM XSTEF S -54	counts than the other	440 Secs (440 Secs) [==>] FP-POS values. 0.0 Secs (0 Secs)	[1]
Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value Therefore, XAPER is set G130M/130 9 Deuterium Exposure 1 Comments: Deuterium et Aperture Ad NOI justment 2 f or Segment A Comments: Put the aper FCA LAPXSTP value at Desired LAPXSTP value	t LP1 is -153 e for FCA to illun t to -213153 = UTERIUM exposure optimize NE tture in the appro	ninate Segment A with G130M/1309 -60 COS/FUV, TIME-TAG, FCA red for Segment A. FP-POS=1 was of COS, ALIGN/APER priate position to illuminate a portioninate Segment A with G130M/1309	G130M G1309 A 1309 A thosen because previous of the LP5 region at Position 2 for LP	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Ous observations show the XAPER=-114 of the detector when illured is 25 is -267	at it has slightly more QESIPARM XSTEF S -54 minating Segment A w	counts than the other	440 Secs (440 Secs) [==>] FP-POS values. 0.0 Secs (0 Secs)	[1]

9 Deuterium	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU		440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=16 5;		[==>]	
			FP-POS=1;			[1]
			SEGMENT=BOTH;			
			LIFETIME-POS=L P1			
Comments: Deuterium exposure opti	mized for Segment A. FP-POS=1 was c	hosen because prev	vious observations show th	at it has slightly more counts than the	other FP-POS values.	
7 Aperture Ad NONE justment 1 f or Segment B	COS, ALIGN/APER		XAPER=-72	QESIPARM XSTEP S 42	0.0 Secs (0 Secs)	
					[==>]	[1]
Comments: Put the aperture in the ap	opropriate position to illuminate a porti	on of the LP5 regio	n of the detector when illur	ninating Segment B with G160M/160	0.	
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to i	illuminate Segment B with G160M/1600	at Position 1 for L	P5 is -225			
Therefore, XAPER is set to -22515 ion.	53 = -72. *HOWEVER*, because of the	TRANS rules, the "	QESIPARM XSTEPS 42" [(-72114) = +42] Special Requirer	ment is necessary to move the aperture	to the correct loc
8 G160M/160 DEUTERIUM 0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU M;		440 Secs (440 Secs)	
Exposure 1		1600 A	BUFFER-TIME=16 5;		[==>]	
			FP-POS=4;			[1]
			SEGMENT=BOTH;			
			LIFETIME-POS=L P1			
Comments: Deuterium exposure opti	mmized for Segment B. FP-POS=4 was	chosen because pre	evious observations show t	hat it has slightly more counts than th	ne other FP-POS values.	
9 Aperture Ad NONE	COS, ALIGN/APER		XAPER=-114	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B				S -42	[==>]	[1]
	opropriate position to illuminate a porti	on of the LP5 regio	n of the detector when illur	ninating Segment B with G160M/160	0.	
Comments: Put the aperture in the ap						
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to i	illuminate Segment B with G160M/1600 match the G130M exposure (-267)	at Position 2 for L	P5 is -280, but the apertur	e soft stop is at -275 and we don't wa	nt to exceed that value when including	the 5 step oversho
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to i ot. To leave some pad, I will set it to i	illuminate Segment B with G160M/1600 match the G130M exposure (-267). 53 = -114. *HOWEVER*, because of the		-			-
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it of. To leave some pad, I will set it to it. Therefore, XAPER is set to -26715 ation. 10 G160M/160 DEUTERIUM	match the $G\bar{1}30M$ exposure (-267).		"QESIPARM XSTEPS -42" CURRENT=MEDIU			-
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it ot. To leave some pad, I will set it to it Therefore, XAPER is set to -26715 ation.	match the GI30M exposure (-267). 53 = -114. *HOWEVER*, because of the	e TRANS rules, the	"QESIPARM XSTEPS -42" CURRENT=MEDIU M; BUFFER-TIME=16		ement is necessary to move the aperture	
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it of the control of the contr	match the GI30M exposure (-267). 53 = -114. *HOWEVER*, because of the	G160M	"QESIPARM XSTEPS -42" CURRENT=MEDIU M;		ement is necessary to move the aperture 440 Secs (440 Secs)	e to the correct lo
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it of. To leave some pad, I will set it to it. Therefore, XAPER is set to -26715 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	match the GI30M exposure (-267). 53 = -114. *HOWEVER*, because of the	G160M	"QESIPARM XSTEPS -42" CURRENT=MEDIU M; BUFFER-TIME=16 5;		ement is necessary to move the aperture 440 Secs (440 Secs)	-
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it of. To leave some pad, I will set it to it. Therefore, XAPER is set to -26715 ation. 10 G160M/160 DEUTERIUM 0 Deuterium	match the GI30M exposure (-267). 53 = -114. *HOWEVER*, because of the	G160M	"QESIPARM XSTEPS -42" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4;		ement is necessary to move the aperture 440 Secs (440 Secs)	e to the correct lo
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it ot. To leave some pad, I will set it to it Therefore, XAPER is set to -26715 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	match the GI30M exposure (-267). 53 = -114. *HOWEVER*, because of the	g TRANS rules, the G160M 1600 A	"QESIPARM XSTEPS -42" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	' [(-11472) = -42] Special Require	ement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{I = = > J}$	e to the correct lo
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it ot. To leave some pad, I will set it to it Therefore, XAPER is set to -26715 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	match the GI30M exposure (-267). 53 = -114. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	g TRANS rules, the G160M 1600 A	"QESIPARM XSTEPS -42" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	' [(-11472) = -42] Special Require	ement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{I = = > J}$	e to the correct lo
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to it ot. To leave some pad, I will set it to it Therefore, XAPER is set to -26715 ation. 10 G160M/160 DEUTERIUM 0 Deuterium Exposure 2	match the GI30M exposure (-267). 53 = -114. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	g TRANS rules, the G160M 1600 A	"QESIPARM XSTEPS -42" CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P1	' [(-11472) = -42] Special Require	ement is necessary to move the aperture $\frac{440 \text{ Secs } (440 \text{ Secs})}{I = = > J}$	e to the correct lo



<u>Pro</u>	pposal 16829 - ~12 months after initial LP5 gain map (5C) - Cycle 29 COS FUV Detector Gain Maps	
	Proposal 16829, ~12 months after initial LP5 gain map (5C), scheduling	Sat May 21 11:00:32 GMT 2022
±	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 01-OCT-2022:00:00:00 AND 01-NOV-2022:00:00:00; PARALLEL	
	Comments: This visit collects data at LP5. It uses the HV values appropriate for LP5 (167/169).	
S	(~12 months after initial LP5 gain map (5C)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sti		
2		
ag		
ق		

Proposal 16829 - ~12 months after initial LP5 gain map (5C) - Cycle 29 COS FUV Detector Gain Maps

C1 (0) 1/1 (0	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU			125 Secs (125 Secs)	
0 Deuterium Exposure - S			1600 A	M;			[==>]	
et up at LP1				BUFFER-TIME=19 6;				
•				FP-POS=1;				
								[1]
				SEGMENT=BOTH;				
				LIFETIME-POS=L P1				
Comments: Short e	exposure to set aper	ture to LP1, which is near the center o	f the aperture range		lso sets the HV to the	LP1 values.		
Adjust HV t		S/C, DATA, NONE			SAA CONTOUR 31		39 Secs (39 Secs)	
o ĽP5 value					SPEC COM INSTR		[==>]	
S					ELHVADJPROP;			
					QASISTATES COS			
					FUV HVNOM HVN OM;			
					QESIPARM ENDC			[1]
					TSA 167;			[1]
					QESIPARM ENDC			
					TSB 169;			
					QESIPARM SEGM			
					ENT AB			
Comments: Adjust	the HV to the LP5 v	values.						
Since the HV is no	t increasing, exposu	re time = 39 seconds						
Aperture Ad	NONE	COS, ALIGN/APER		XAPER=-60			0.0 Secs (0 Secs)	
		,		111 11 11 00			0.0 Bees (0 Bees)	
justment 1 f				711 11 21X 00			[==>]	
								[1]
justment 1 f or Segment A		propriate position to illuminate a porti	on of the LP5 region		ninating Segment A w	ith G130M/1309.		[1]
justment 1 f or Segment A Comments: Put the	e aperture in the app	,	on of the LP5 region		ninating Segment A w	ith G130M/1309.		[1]
justment 1 f or Segment A Comments: Put the	e aperture in the app lue at LP1 is -153	,	·	of the detector when illu	ninating Segment A w	ith G130M/1309.		[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP	e aperture in the app lue at LP1 is -153 value for FCA to ill	propriate position to illuminate a porti luminate Segment A with G130M/1309	·	of the detector when illu	ninating Segment A w	ith G130M/1309.		[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER	e aperture in the app lue at LP1 is -153 value for FCA to ill is set to -213153	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	at Position 1 for LF	of the detector when illu 5 is -213	ninating Segment A w	ith G130M/1309.	[==>]	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium	e aperture in the app lue at LP1 is -153 value for FCA to ill	propriate position to illuminate a porti luminate Segment A with G130M/1309	O at Position 1 for LP	of the detector when illu	ninating Segment A w	ith G130M/1309.	[==>] 440 Secs (440 Secs)	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130	e aperture in the app lue at LP1 is -153 value for FCA to ill is set to -213153	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	at Position 1 for LF	of the detector when illum 25 is -213 CURRENT=MEDIU	ninating Segment A w	ith G130M/1309.	[==>]	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium	e aperture in the app lue at LP1 is -153 value for FCA to ill is set to -213153	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	O at Position 1 for LP	of the detector when illusted is -213 CURRENT=MEDIU M;	ninating Segment A w	ith G130M/1309.	[==>] 440 Secs (440 Secs)	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium	e aperture in the app lue at LP1 is -153 value for FCA to ill is set to -213153	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	O at Position 1 for LP	of the detector when illusted is -213 CURRENT=MEDIU M; BUFFER-TIME=16	ninating Segment A w	ith G130M/1309.	[==>] 440 Secs (440 Secs)	
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium	e aperture in the app lue at LP1 is -153 value for FCA to ill is set to -213153	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	O at Position 1 for LP	of the detector when illusted in the second of the detector when illusted in the second of the secon	ninating Segment A w	ith G130M/1309.	[==>] 440 Secs (440 Secs)	
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium	e aperture in the app lue at LP1 is -153 value for FCA to ill is set to -213153	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	O at Position 1 for LP	of the detector when illumes is a 213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1;	ninating Segment A w	ith G130M/1309.	[==>] 440 Secs (440 Secs)	
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium	e aperture in the app lue at LP1 is -153 value for FCA to ill is set to -213153	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	O at Position 1 for LP	of the detector when illusted is -213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH;	ninating Segment A w	ith G130M/1309.	[==>] 440 Secs (440 Secs)	
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium Exposure 1	e aperture in the app lue at LP1 is -153 value for FCA to ili is set to -213153 DEUTERIUM	propriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more	counts than the other	==> 440 Secs (440 Secs)	
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium Exposure 1	e aperture in the app lue at LP1 is -153 value for FCA to ili is set to -213153 DEUTERIUM	oropriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1	at it has slightly more QESIPARM XSTEP	counts than the other	[==>] 440 Secs (440 Secs) [==>]	
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Gesired LAPXSTP G130M/130 9 Deuterium Exposure 1 Comments: Deuter Aperture Ad justment 2 f	e aperture in the app lue at LP1 is -153 value for FCA to ili is set to -213153 DEUTERIUM	oropriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more	counts than the other	==> 440 Secs (440 Secs)	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Therefore, XAPER G130M/130 9 Deuterium Exposure 1	e aperture in the app lue at LP1 is -153 value for FCA to ili is set to -213153 DEUTERIUM	oropriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60 COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the	at it has slightly more QESIPARM XSTEP	counts than the other	==>	
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP G130M/130 9 Deuterium Exposure 1 Comments: Deuter Aperture Ad justment 2 f or Segment A	e aperture in the applue at LP1 is -153 value for FCA to iliss set to -213153 DEUTERIUM rium exposure optim NONE	oropriate position to illuminate a porti luminate Segment A with G130M/1309 3 = -60 COS/FUV, TIME-TAG, FCA	G130M G1309 A 1309 A	of the detector when illusted in the detector when illusted is 213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the XAPER=-114	at it has slightly more QESIPARM XSTEP S -54	counts than the other	==>	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP G130M/130 9 Deuterium Exposure 1 Comments: Deuter of Aperture Ad justment 2 f or Segment A Comments: Put the Comments: Put the	e aperture in the applue at LP1 is -153 value for FCA to ilis set to -213153 DEUTERIUM The exposure optime NONE	oropriate position to illuminate a porticuminate Segment A with G130M/1309 B = -60 COS/FUV, TIME-TAG, FCA dized for Segment A. FP-POS=1 was a COS, ALIGN/APER	G130M G1309 A 1309 A	of the detector when illusted in the detector when illusted is 213 CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 ous observations show the XAPER=-114	at it has slightly more QESIPARM XSTEP S -54	counts than the other	==>	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP Gesired LAPXSTP Va G130M/130 9 Deuterium Exposure 1 Comments: Deuter Adjustment 2 f or Segment A Comments: Put the FCA LAPXSTP va	e aperture in the applue at LP1 is -153 value for FCA to ilis set to -213153 DEUTERIUM The exposure optime NONE The aperture in the applue at LP1 is -153	propriate position to illuminate a porticuminate Segment A with G130M/1309 B = -60 COS/FUV, TIME-TAG, FCA mized for Segment A. FP-POS=1 was a COS, ALIGN/APER propriate position to illuminate a porticuminate a porticum	G130M 1309 A Chosen because previous of the LP5 region	CURRENT=MEDIU M; BUFFER-TIME=16 5; FP-POS=1; SEGMENT=BOTH; LIFETIME-POS=L P1 Ous observations show th XAPER=-114	at it has slightly more QESIPARM XSTEP S -54	counts than the other	==>	[1]
justment 1 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP G130M/130 9 Deuterium Exposure 1 Comments: Deuter Aperture Ad justment 2 f or Segment A Comments: Put the FCA LAPXSTP va Desired LAPXSTP va	e aperture in the applue at LP1 is -153 value for FCA to ili is set to -213153 DEUTERIUM The interpolation of the applue at LP1 is -153 value for FCA to ili	oropriate position to illuminate a porticuminate Segment A with G130M/1309 8 = -60 COS/FUV, TIME-TAG, FCA dized for Segment A. FP-POS=1 was a compared to the compared to t	G130M G1309 A 1309 A on of the LP5 region Output Description 2 for LP	of the detector when illusted in the detector when illusted is selected with the selection when illusted in the detector when	at it has slightly more QESIPARM XSTEP S -54 ninating Segment A w	counts than the other ith G130M/1309.	==>	

<u>posai 16829 - ~12 mor</u>	nths after initial LP5 gain	map (5C)	<u>- Cycle 29 COS F</u>	UV Detector Gain M	aps	
6 G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU		440 Secs (440 Secs)	
9 Deuterium Exposure 2		1309 A	M;		I = => J	
			BUFFER-TIME=16 5;			
			FP-POS=1;			[1]
			SEGMENT=BOTH;			
			LIFETIME-POS=L			
Comments: Douterium exposure enti	imized for Segment A. FP-POS=1 was c	chosan hacausa nr	P1	at it has slightly more counts than t	the other EP POS values	
7 Aperture Ad NONE	COS, ALIGN/APER	nosen because pres		QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B	COS, TEIGHT I EK			\$ 42	[==>]	[1]
_	ppropriate position to illuminate a porti	ion of the LP5 regi	on of the detector when illum	inating Segment B with G160M/1	600.	
v	illuminate Segment B with G160M/1600	•		-72114) = +42] Special Requir	rement is necessary to move the aperture t	to the correct loca.
8 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU		440 Secs (440 Secs)	
0 Deuterium Exposure 1	,	1600 A	M;		[==>]	
Exposure 1			BUFFER-TIME=16 5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH;			[1]
			LIFETIME-POS=L			
			P1			
	immized for Segment B. FP-POS=4 was	chosen because p				
9 Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-114	QESIPARM XSTEP S -42	0.0 Secs (0 Secs)	
or Segment B					[==>]	[1]
Comments: Put the aperture in the ap	ppropriate position to illuminate a porti	ion of the LP5 regi	on of the detector when illum	inating Segment B with G160M/1	600.	
FCA LAPXSTP value at LP1 is -153 Desired LAPXSTP value for FCA to ot. To leave some pad, I will set it to	illuminate Segment B with G160M/1600	at Position 2 for	LP5 is -280, but the aperture	soft stop is at -275 and we don't v	want to exceed that value when including	the 5 step oversho
ation.		·		[(-11472) = -42] Special Requi	uirement is necessary to move the aperture	e to the correct loc
10 G160M/160 DEUTERIUM 0 Deuterium	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDIU M;		440 Secs (440 Secs)	
Exposure 2		1600 A	BUFFER-TIME=16		[==>]	
			5;			
			FP-POS=4;			[1]
			SEGMENT=BOTH;			
			LIFETIME-POS=L P1			
C	immized for Segment B. FP-POS=4 was	1 1		and it I am aliabeta an area and all and	the other ER ROS waters	
Comments. Dettertum exposure opti	mmizeu joi Segmeni B. FF-FOS=4 was	cnosen because p	revious observations snow in	at it has stignity more counts than	the other FF-FOS values.	

