

# 15370 - COS FUV Gain Map at LP3/LP4

Cycle: 24, Proposal Category: CAL/COS (Availability Mode: RESTRICTED)

## **INVESTIGATORS**

Name	Institution	E-Mail
Dr. David J. Sahnow (PI) (Contact)	Space Telescope Science Institute	sahnow@stsci.edu
Mees Fix (CoI)	Space Telescope Science Institute	mfix@stsci.edu
Dr. Steven V. Penton (CoI)	Space Telescope Science Institute	penton@stsci.edu

## **VISITS**

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
L1	DEUTERIUM NONE	COS COS/FUV	1	26-Sep-2017 19:07:35.0	yes
L2	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Sep-2017 19:07:37.0	yes
L3	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Sep-2017 19:07:39.0	yes
M3	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Sep-2017 19:07:41.0	yes
L4	DEUTERIUM NONE	COS COS/FUV	1	26-Sep-2017 19:07:42.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used		OP Current with Visit?
M4	DEUTERIUM NONE	COS COS/FUV	1	26-Sep-2017 19:07:44.0	yes
L5	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Sep-2017 19:07:45.0	yes
M5	DARK DEUTERIUM NONE	COS COS/FUV S/C	1	26-Sep-2017 19:07:47.0	yes

<sup>8</sup> Total Orbits Used

## **ABSTRACT**

Obtain gain maps of the FUV detector before and after changes to the Lifetime Position and nominal high voltage levels. These data will be used to check that the modal gain changes as expected, and to provide anchor points for the predictions of modal gain as a function of time.

## **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.

These gain maps will be taken immediately before (visits L1, L2, L3) and after (visits L4, L5) the nominal Lifetime Position is changed from LP3 to LP4 on October 2, 2017. The visits executing before the move will use LP3 for the aperture reference; those executing after the move will use LP4.

<sup>\*</sup>Visit L1 will be taken at LIFE\_ADJ=3 at the nominal Standard Modes HV values (167/175).

<sup>\*</sup>Visit L2 will be taken at LIFE\_ADJ=3 at the nominal HV values for G130M/1222 & 1223 (171/175).

<sup>\*</sup>Visit L3 will be taken at LIFE\_ADJ=2 at the nominal Blue Mode HV values (173/175).

\*Visit L4 will be taken at LIFE\_ADJ=4 at the nominal Standard Modes HV values (163/163).

\*Visit L5 will be taken at LIFE\_ADJ=4 at the nominal HV values for G130M/1222 & 1223 (163/167).

The procedure for collecting this data in each visit is:

- \* Adjust the HV values if necessary.
- \* Adjust the aperture in the cross dispersion direction so that the deuterium lamp will illuminate the appropriate region on Segment A when using G130M/1309.
- \* Take a 400 second deuterium lamp exposure using both detector segments.
- \* Adjust the aperture to a second cross-dispersion location to obtain additional coverage on Segment A and take another 400 second deuterium lamp exposure.
- \* Adjust the aperture in the cross dispersion direction so that the deuterium lamp will illuminate the appropriate region on Segment B when using G160M/1600.
- \* Take a 400 second deuterium lamp exposure using both detector segments.
- \* Adjust the aperture to a second cross-dispersion location to obtain additional coverage on Segment B and take another 400 second deuterium lamp exposure.
- \*Return the HV values to the nominal values for the standard modes, if necessary.

Note that because TRANS resets its aperture zero point when FCA exposures are taken, the aperture is explicitly moved using "QESIPARM XSTEPS", as was done in Program 13970, 14439, 14519, 14525, 14941, etc.

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

MEB1:

SOFT STOPS = -275 to 275

HARD STOPS = -282 to 285

MEB2:

SOFT STOPS = -275 to 275

HARD STOPS = -284 to 283

## Summary:

Visits L1, L2, and L3 use a reference position of LP3, with LAPXSTP = 182.1 Visits L4 and L5 use a reference position of LP4, with LAPXSTP = 235.1

Visit	LP	Grating/Segment	Y Position	LAPXSTP	XAPER	XSTEPS	
L1,L2	3	G130M/A	1	-72	-254	N/A	
L1,L2	3	G130M/A	2	-128	-310	-56	
L1,L2	3	G160M/B	1	-84	-266	+44	
L1,L2	3	G160M/B	2	-140	-322	-56	
L3	2	G130M/A	1	-213	-395	N/A	
L3	2	G130M/A	2	-267*	-449	-54	

L3	2	G160M/B	1	-225	-407	+42
L3	2	G160M/B	2	-267*	-449	-42
L4,L5	4	G130M/A	1	-32	-267	N/A
L4,L5	4	G130M/A	2	-86	-321	-54
L4,L5	4	G160M/B	1	-41	-276	+45
L4,L5	4	G160M/B	2	-95	-330	-54

<sup>\*</sup> Limited to be within the soft stops

Visit	LP	HV	Mode
L1	3	167/175	Standard
L2	3	171/175	G130M/1222
L3	2	173/175	Blue
L4	4	163/163	Standard
L5	4	163/167	G130M/1222

\*

# Update made on 9/26/17:

Visit M3, which is intended to replace visit L3, was added. The new visit is a copy of visit L3, except it has an additional aperture move after the final deuterium exposure. This move returns the aperture to the nominal (LP3) location. Visit L3 did not allow enough time for the aperture to return to its home position.

Proposal 15370 (STScI Edit Number: 1, Created: Tuesday, September 26, 2017 6:07:48 PM EST) - Overview	
******************	
Update 2 made on 9/26/17	

Visits M4 and M5 were added to replace visits L4 and L5. Like M3, they are copies of the corresponding L visits, but with an additional aperture move added to return it to the nominal position (this time LP4).

\*

<u>Pro</u>	pposal 15370 - Before LP4 move - Standard Modes (L1) - COS FUV Gain Map at LP3/LP4	
	Proposal 15370, Before LP4 move - Standard Modes (L1), scheduled	Tue Sep 26 23:07:48 GMT 2017
۱.	Diagnostic Status: Warning	
isit	Scientific Instruments: COS, COS/FUV	
>	Special Requirements: BETWEEN 01-OCT-2017:00:00:00 AND 02-OCT-2017:00:00:00; PARALLEL	
	Comments: This visit collects data at LP3. It uses the HV values appropriate for the standard modes at LP3 before the HV increase. It should be one of the last COS visits executed before the HV change.	
ပ္သ	(Before LP4 move - Standard Modes (L1)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sti	(Aperture Adjustment 1 for Segment A (L1.001)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
12		
agr		
قا		

Proposal 15370 - Before LP4 move - Standard Modes (L1) - COS FUV Gain Map at LP3/LP4

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbi
	Aperture Ad	NONE	COS, ALIGN/APER		XAPER=-254			0.0 Secs (0 Secs)	
	justment 1 f or Segment A							[==>]	[1]
oi	mments: Put the	aperture in the ap	propriate position to illuminate a porti	ion of the LP3 region	of the detector when illi	uminating Segment A	with G130M/1309.		
)e:	sired LAPXSTP	v	lluminate Segment A with G130M/1309	9 at Position 1 for LI	P3 is -72				
1 ne 2	*	is set to -72 - 182.1 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	ī		400 Secs (400 Secs)	
_	9 Deuterium	DECTERION	COS/1 C V, TIME TAG, I CA	1309 A	M;	,		[==>]	
	Exposure 1			1307 A	BUFFER-TIME=11 1;	1		[/]	
					FP-POS=1;				[1]
					SEGMENT=BOTH	[;			[1]
					LIFETIME-POS=L P3				
Coi			nized for Segment A. FP-POS=1 was o	chosen because prev					<u>'</u>
3	Aperture Ad justment 2 f	NONE	COS, ALIGN/APER		XAPER=-310	QESIPARM XSTI S -56	EΡ	0.0 Secs (0 Secs)	
	or Segment A					5-50		[==>]	[1]
PSA Des	A LAPXSTP vali sired LAPXSTP	ue at LP3 is 182.1 value for FCA to il	propriate position to illuminate a porticular propertion of $A$ with $G130M/1309$ . $A$ = -310. *HOWEVER*, because of the $A$ such that $A$ is the $A$ is the $A$ is the $A$ in $A$ in $A$ is the $A$ in $A$	9 at Position 2 for LI	P3 is -128			ment is necessary to move the aperture to	the corre
PSA Des	A LAPXSTP valu sired LAPXSTP erefore, XAPER ution.	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182	lluminate Segment A with G130M/1309. .1 = -310. *HOWEVER*, because of t	9 at Position 2 for LI he TRANS rules, the	P3 is -128 "QESIPARM XSTEPS -5	56" [(-310254) = -		-	the corre
PSA Des	A LAPXSTP valu sired LAPXSTP erefore, XAPER ution.	ue at LP3 is 182.1 value for FCA to il	lluminate Segment A with G130M/1309	9 at Position 2 for LI the TRANS rules, the G130M	P3 is -128	56" [(-310254) = -		400 Secs (400 Secs)	the correc
PSA Des	A LAPXSTP valusired LAPXSTP erefore, XAPER ution. G130M/130	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182	lluminate Segment A with G130M/1309. .1 = -310. *HOWEVER*, because of t	9 at Position 2 for LI he TRANS rules, the	P3 is -128 "QESIPARM XSTEPS -5 CURRENT=MEDIU	56" [(-310254) = -		-	the correc
PSA Des	A LAPXSTP vali sired LAPXSTP erefore, XAPER ttion. G130M/130 9 Deuterium	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182	lluminate Segment A with G130M/1309. .1 = -310. *HOWEVER*, because of t	9 at Position 2 for LI the TRANS rules, the G130M	P3 is -128 "QESIPARM XSTEPS -5 CURRENT=MEDIUM;	56" [(-310254) = -		400 Secs (400 Secs)	the correc
PSA Des	A LAPXSTP vali sired LAPXSTP erefore, XAPER ttion. G130M/130 9 Deuterium	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182	lluminate Segment A with G130M/1309. .1 = -310. *HOWEVER*, because of t	9 at Position 2 for LI the TRANS rules, the G130M	"QESIPARM XSTEPS -5  CURRENT=MEDIUM;  BUFFER-TIME=11;  FP-POS=1;	56" [(-310254) = - J		400 Secs (400 Secs)	
PSA Des	A LAPXSTP vali sired LAPXSTP erefore, XAPER ttion. G130M/130 9 Deuterium	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182	lluminate Segment A with G130M/1309. .1 = -310. *HOWEVER*, because of t	9 at Position 2 for LI the TRANS rules, the G130M	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH	56" [(-310254) = -		400 Secs (400 Secs)	
PSA Des	A LAPXSTP vali sired LAPXSTP erefore, XAPER ttion. G130M/130 9 Deuterium	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182	lluminate Segment A with G130M/1309. .1 = -310. *HOWEVER*, because of t	9 at Position 2 for LI the TRANS rules, the G130M	"QESIPARM XSTEPS -5  CURRENT=MEDIUM;  BUFFER-TIME=11;  FP-POS=1;	56" [(-310254) = -		400 Secs (400 Secs)	
PSA Des The oca 4	A LAPXSTP valusired LAPXSTP varefore, XAPER ution. G130M/130 9 Deuterium Exposure 2	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM	lluminate Segment A with G130M/1309 .1 = -310. *HOWEVER*, because of to COS/FUV, TIME-TAG, FCA	9 at Position 2 for LI he TRANS rules, the G130M 1309 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3 ious observations show to	56" [(-310254) = - ] [; hat it has slightly mo	56] Special Require	400 Secs (400 Secs) [==>]  ther FP-POS values.	the correc
PSA Des The oca 4	A LAPXSTP valusired LAPXSTP valusired LAPXSTP value verfore, XAPER value.  G130M/130 9 Deuterium Exposure 2	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM	lluminate Segment A with G130M/1309.1 = -310. *HOWEVER*, because of to	9 at Position 2 for LI he TRANS rules, the G130M 1309 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3	56" [(-310254) = -  J  i; hat it has slightly mo	56] Special Require	400 Secs (400 Secs) [==>]  ther FP-POS values.  0.0 Secs (0 Secs)	
PSA Des The oca 4	A LAPXSTP valusired LAPXSTP varefore, XAPER ution. G130M/130 9 Deuterium Exposure 2	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM	lluminate Segment A with G130M/1309 .1 = -310. *HOWEVER*, because of to COS/FUV, TIME-TAG, FCA	9 at Position 2 for LI he TRANS rules, the G130M 1309 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3 ious observations show to	56" [(-310254) = - ] [; hat it has slightly mo	56] Special Require	400 Secs (400 Secs) [==>]  ther FP-POS values.	
PSA Des The oca 4	A LAPXSTP value sired LAPXSTP value sired LAPXSTP value cerefore, XAPER value.  G130M/130 9 Deuterium Exposure 2  mments: Deuter.  Aperture Ad justment 1 f or Segment B	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM  ium exposure optin	lluminate Segment A with G130M/1309 .1 = -310. *HOWEVER*, because of to COS/FUV, TIME-TAG, FCA	9 at Position 2 for Ll he TRANS rules, the G130M 1309 A	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3 ious observations show to XAPER=-266	56" [(-310254) = -  J I I; hat it has slightly mo QESIPARM XSTI S 44	56] Special Require The counts than the o	400 Secs (400 Secs) [==>]  ther FP-POS values.  0.0 Secs (0 Secs)	[1]
PSA Des The oca 4 Con 5	A LAPXSTP value sired LAPX	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM  ium exposure optim  NONE  aperture in the appue at LP3 is 182.1	COS/FUV, TIME-TAG, FCA  nized for Segment A. FP-POS=1 was a	9 at Position 2 for LI the TRANS rules, the G130M 1309 A  chosen because previous of the LP3 region	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3 ious observations show to XAPER=-266	56" [(-310254) = -  J I I; hat it has slightly mo QESIPARM XSTI S 44	56] Special Require The counts than the o	400 Secs (400 Secs) [==>]  ther FP-POS values.  0.0 Secs (0 Secs)	[1]
PSA Des The oca 4 4 Con 5	A LAPXSTP value sired LAPXSTP value sired LAPXSTP value and possible sired LAPXSTP value and possible sired LAPXSTP value are sired ar	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM  ium exposure optin NONE  aperture in the appue at LP3 is 182.1 value for FCA to il	COS/FUV, TIME-TAG, FCA  nized for Segment A. FP-POS=1 was a COS, ALIGN/APER  propriate position to illuminate a porticular position to illuminate Segment B with G160M/1606	9 at Position 2 for LI the TRANS rules, the G130M 1309 A  chosen because previous of the LP3 region 0 at Position 1 for LI	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3 ious observations show to XAPER=-266	J I I; Hat it has slightly mo QESIPARM XSTI S 44  uminating Segment B	se counts than the of EP with G160M/1600.	400 Secs (400 Secs) [==>]  ther FP-POS values.  0.0 Secs (0 Secs)	[1]
PSA Des The oca 4 4 Con 5	A LAPXSTP value sired LAPXSTP value sired LAPXSTP value cerefore, XAPER value.  G130M/130 9 Deuterium Exposure 2  mannents: Deuter.  Aperture Adjustment 1 f or Segment B  mannents: Put the value of A LAPXSTP value sired LAPXSTP value sired LAPXSTP value sired LAPXSTP	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM  ium exposure optin NONE  aperture in the appue at LP3 is 182.1 value for FCA to il	COS/FUV, TIME-TAG, FCA  nized for Segment A. FP-POS=1 was a COS, ALIGN/APER  propriate position to illuminate a porticular position to illuminate Segment B with G160M/1606	9 at Position 2 for LI the TRANS rules, the G130M 1309 A  chosen because previous of the LP3 region 0 at Position 1 for LI	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3 ious observations show to XAPER=-266	J I I; Hat it has slightly mo QESIPARM XSTI S 44  uminating Segment B	se counts than the of EP with G160M/1600.	A  = 3 $ A  = 3$ $ A  = 3$ $ A  = 4$ $ A $	
PSA Des The oca 4 Cor PSA Des	A LAPXSTP value sired LAPXSTP value sired LAPXSTP value and possible sired LAPXSTP value and possible sired LAPXSTP value are sired ar	ue at LP3 is 182.1 value for FCA to il is set to -128 - 182  DEUTERIUM  ium exposure optin NONE  aperture in the appue at LP3 is 182.1 value for FCA to il	COS/FUV, TIME-TAG, FCA  nized for Segment A. FP-POS=1 was a COS, ALIGN/APER  propriate position to illuminate a porticular position to illuminate Segment B with G160M/1606	9 at Position 2 for LI the TRANS rules, the G130M 1309 A  chosen because previous of the LP3 region 0 at Position 1 for LI	CURRENT=MEDIUM; BUFFER-TIME=111; FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3 ious observations show to XAPER=-266	J I I; Hat it has slightly mo QESIPARM XSTI S 44  uminating Segment B	se counts than the of EP with G160M/1600.	A  = 3 $ A  = 3$ $ A  = 3$ $ A  = 4$ $ A $	[1]

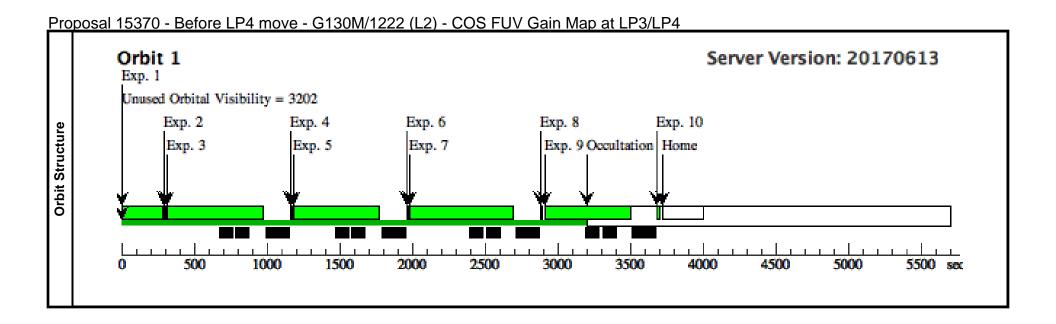
Proposal 15370 - Before LP4 move - Standard Modes (L1) - COS FUV Gain Map at LP3/LP4 G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M CURRENT=MEDIU 400 Secs (400 Secs) 0 Deuterium 1600 A *[==>1* Exposure 1 BUFFER-TIME=11 [1] FP-POS=4 Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-322 **QESIPARM XSTEP** 0.0 Secs (0 Secs) justment 2 f S -56 f = = > 1or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP3 region of the detector when illuminating Segment B with G160M/1600. PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 2 for LP3 is -140 Therefore, XAPER is set to -140 - 182.1 = -322. \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS -56" [(-322 - -266) = -56] Special Requirement is necessary to move the aperture to the correct 1 G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M CURRENT=MEDIU 400 Secs (400 Secs) 0 Deuterium 1600 A I = = > 1Exposure 2 BUFFER-TIME=11 [1] 1; FP-POS=4 Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Server Version: 20170613 Orbit 1 Unused Orbital Visibility = 3202 Exp. 3 Exp. 5 Exp. 7 Occultation Exp. 1Orbit Structure Exp. 8 Exp. 2 Exp. 4 Exp. 6 Home 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec

Pr	oposal 15370 - Before LP4 move - G130M/1222 (L2) - COS FUV Gain Map at LP3/LP4	
	Proposal 15370, Before LP4 move - G130M/1222 (L2), scheduled	Tue Sep 26 23:07:49 GMT 2017
<u>.</u>	Diagnostic Status: Warning	
J:S	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 01-OCT-2017:00:00:00 AND 02-OCT-2017:00:00:00; PARALLEL	
lacksquare	Comments: This visit collects data at LP3. It uses the HV values appropriate for G130M/1222.	
၂ တ	(Before LP4 move - G130M/1222 (L2)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sti	(Aperture Adjustment 1 for Segment A (L2.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
1 2		
ag		
Ö		

Proposal 15370 - Before LP4 move - G130M/1222 (L2) - COS FUV Gain Map at LP3/LP4

	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1 Adjust HV	t DARK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)	
	o Ğ130M/ 22 values	12				SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN OM;			
						QESIPARM ENDC TSA 171;			[1]
						QESIPARM ENDC TSB 175;			
						QESIPARM SEGM ENT AB			
	2 Aperture A		opriate G130M/1222 values.  COS, ALIGN/APER		XAPER=-254			0.0 Secs (0 Secs)	
	justment 1 or Segmen	f	COS, ALIGIVAI LK		AAI LK254			[==>]	[1]
	A Comments: But:	he aperture in the an	propriate position to illuminate a porti	on of the LD2 region	of the detector when ille	uminatina Saamant A wi	th C120M/1200		
	PSA LAPXSTP v Desired LAPXST	alue at LP3 is 182.1	luminate Segment A with G130M/1309	,		minuting segment in	0130.11,1309.		
	3 G130M/13	0 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)	
ures	9 Deuteriu Exposure 1			1309 A	M; BUFFER-TIME=11 1;			[==>]	
Exposures					FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3	;			[1]
	Comments: Deur	erium exposure optim	nized for Segment A. FP-POS=1 was c	hosen because previ	ous observations show th	hat it has slightly more o	counts than the other	FP-POS values.	
	4 Aperture A		COS, ALIGN/APER		XAPER=-310	QESIPARM XSTEP		0.0 Secs (0 Secs)	
	justment 2 or Segmen A					S -56		[==>]	[1]
	Comments: Put	he aperture in the app	propriate position to illuminate a porti	on of the LP3 region	of the detector when illu	minating Segment A wi	th G130M/1309.		
		alue at LP3 is 182.1 P value for FCA to il	luminate Segment A with G130M/1309	at Position 2 for LP	3 is -128				
	Therefore, XAPI ocation.	ER is set to -128 - 182.	0.1 = -310. *HOWEVER*, because of the	ne TRANS rules, the	"QESIPARM XSTEPS -5	[6" [(-310254) = -56]	] Special Requiremen	t is necessary to move the aperture to th	he correct l
		0 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)	
	9 Deuteriu Exposure 2			1309 A	M; BUFFER-TIME=11 1;			[==>]	
					FP-POS=1; SEGMENT=BOTH LIFETIME-POS=L P3	;			[1]
	Comments: Deur	erium exposure optim	nized for Segment A. FP-POS=1 was c	hosen because previ	ous observations show th	hat it has slightly more o	counts than the other	FP-POS values.	

Aperture Ad NONE	COS, ALIGN/APER		XAPER=-266	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				S 44	[==>]	[1]
Comments: Put the aperture in the app	propriate position to illuminate a porti	on of the LP3 regi	on of the detector when il	luminating Segment B with G160M/.	1600.	
PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il	lluminate Segment B with G160M/1600	at Position 1 for	LP3 is -84			
•	<u> </u>	· ·		4" [(-266310) = +44] Special Reg	quirement is necessary to move the apertur	re to the correct lo
G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDI	U	400 Secs (400 Secs)	
0 Deuterium Exposure 1		1600 A	M;		[==>]	
1			BUFFER-TIME=1 1;	1		[1]
			FP-POS=4			
omments: Deuterium exposure optim	nmized for Segment B. FP-POS=4 was	chosen because pr	revious observations show	that it has slightly more counts that	n the other FP-POS values.	
Aperture Ad NONE	COS, ALIGN/APER		XAPER=-322	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment B				S -56	[==>]	[1]
justment 2 f or Segment B	propriate position to illuminate a porti	on of the LP3 regi	on of the detector when il.		,	[1]
justment 2 f or Segment B  Comments: Put the aperture in the app PSA LAPXSTP value at LP3 is 182.1		, ,	,		,	[1]
justment 2 f or Segment B  Comments: Put the aperture in the app PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il	lluminate Segment B with G160M/1600	at Position 2 for I	LP3 is -140	luminating Segment B with G160M/.	1600.	
justment 2 f or Segment B  Comments: Put the aperture in the app PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il	lluminate Segment B with G160M/1600	at Position 2 for I	LP3 is -140	luminating Segment B with G160M/.	,	
justment 2 f or Segment B Comments: Put the aperture in the app PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182.	lluminate Segment B with G160M/1600	at Position 2 for I	LP3 is -140	luminating Segment B with G160M/. 56" [(-322266) = -56] Special Re	1600.	
justment 2 f or Segment B Comments: Put the aperture in the app PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. Desired LAPXSTP value for FCA to il Cherefore, Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. Desired LAPXSTP value for FCA to il Cherefore, Des	lluminate Segment B with G160M/1600.1 = -322. *HOWEVER*, because of the	at Position 2 for the TRANS rules, the	LP3 is -140 ne "QESIPARM XSTEPS - CURRENT=MEDI M;	luminating Segment B with G160M/. 56" [(-322266) = -56] Special Re	1600. equirement is necessary to move the apertu	
justment 2 f or Segment B Comments: Put the aperture in the appleSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il therefore, XAPER is set to -140 - 182. cation. G160M/160 DEUTERIUM	lluminate Segment B with G160M/1600.1 = -322. *HOWEVER*, because of the	at Position 2 for A the TRANS rules, th G160M	LP3 is -140  ne "QESIPARM XSTEPS -  CURRENT=MEDI M; BUFFER-TIME=1	luminating Segment B with G160M/. 56" [(-322266) = -56] Special Re	2000. equirement is necessary to move the apertual decession (400 Secs)	
justment 2 f or Segment B Comments: Put the aperture in the appleSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. cation. G160M/160 DEUTERIUM 0 Deuterium	lluminate Segment B with G160M/1600.1 = -322. *HOWEVER*, because of the	at Position 2 for A the TRANS rules, th G160M	LP3 is -140 ne "QESIPARM XSTEPS - CURRENT=MEDI M;	luminating Segment B with G160M/. 56" [(-322266) = -56] Special Re	2000. equirement is necessary to move the apertual decession (400 Secs)	ure to the correct i
justment 2 f or Segment B  Comments: Put the aperture in the apple SA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. cation.  G160M/160 DEUTERIUM 0 Deuterium Exposure 2	lluminate Segment B with G160M/1600.1 = -322. *HOWEVER*, because of the	at Position 2 for A the TRANS rules, the G160M 1600 A	LP3 is -140  the "QESIPARM XSTEPS -  CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=4	luminating Segment B with G160M/. 56" [(-322266) = -56] Special Re U	equirement is necessary to move the apertude $\frac{400 \text{ Secs } (400 \text{ Secs})}{I==>J}$	ure to the correct i
justment 2 f or Segment B Comments: Put the aperture in the apple SA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. Cation.  G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure optim 0 Return to no DARK	lluminate Segment B with G160M/1600.  1 = -322. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for A the TRANS rules, the G160M 1600 A	LP3 is -140  the "QESIPARM XSTEPS -  CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=4	luminating Segment B with G160M/.  56" [(-322266) = -56] Special Re  U  1  that it has slightly more counts that  SPEC COM INSTR	equirement is necessary to move the apertude $\frac{400 \text{ Secs } (400 \text{ Secs})}{I==>J}$	ure to the correct i
justment 2 f or Segment B Comments: Put the aperture in the apple SA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il therefore, XAPER is set to -140 - 182. cation.  G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure optim 0 Return to no DARK minal HV fo	lluminate Segment B with G160M/1600.  1 = -322. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA  mnized for Segment B. FP-POS=4 was	at Position 2 for A the TRANS rules, the G160M 1600 A	LP3 is -140  the "QESIPARM XSTEPS -  CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=4	luminating Segment B with G160M/.  56" [(-322266) = -56] Special Re  U  1  that it has slightly more counts that  SPEC COM INSTR  ELHVADJPROP;	equirement is necessary to move the apertude $400 \text{ Secs } (400 \text{ Secs})$ $I = = > I$ In the other FP-POS values.	ure to the correct i
justment 2 f or Segment B Comments: Put the aperture in the apple SA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. cation. G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure optim 0 Return to no DARK	lluminate Segment B with G160M/1600.  1 = -322. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA  mnized for Segment B. FP-POS=4 was	at Position 2 for A the TRANS rules, the G160M 1600 A	LP3 is -140  the "QESIPARM XSTEPS -  CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=4	luminating Segment B with G160M/.  56" [(-322266) = -56] Special Re  U  1  that it has slightly more counts that  SPEC COM INSTR	equirement is necessary to move the apertude $400 \text{ Secs} (400 \text{ Secs})$ $[==>]$ In the other FP-POS values. $39 \text{ Secs} (39 \text{ Secs})$	re to the correct i
justment 2 f or Segment B  Comments: Put the aperture in the app PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to il Cherefore, XAPER is set to -140 - 182. Decation.  G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure optim 0 Return to no DARK minal HV fo r most mode	lluminate Segment B with G160M/1600.  1 = -322. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA  mnized for Segment B. FP-POS=4 was	at Position 2 for A the TRANS rules, the G160M 1600 A	LP3 is -140  the "QESIPARM XSTEPS -  CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=4	luminating Segment B with G160M/.  56" [(-322266) = -56] Special Re  U  1  that it has slightly more counts that  SPEC COM INSTR  ELHVADJPROP;  QESIPARM ENDC	equirement is necessary to move the apertude $400 \text{ Secs} (400 \text{ Secs})$ $[==>]$ In the other FP-POS values. $39 \text{ Secs} (39 \text{ Secs})$	ure to the correct i

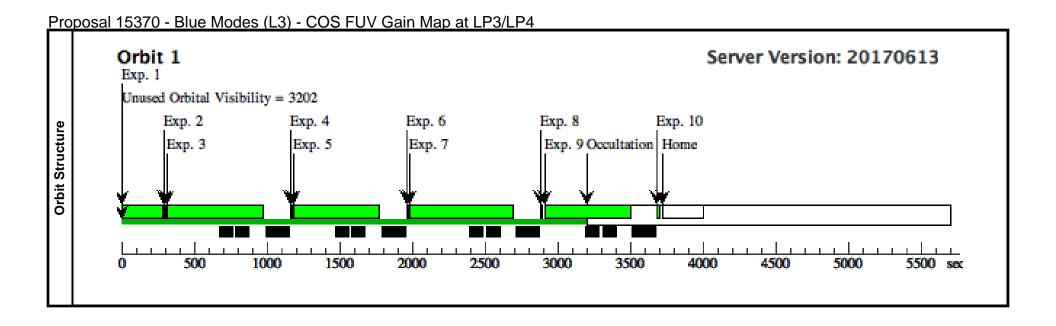


<u>Pr</u>	oposal 15370 - Blue Modes (L3) - COS FUV Gain Map at LP3/LP4	
	Proposal 15370, Blue Modes (L3), scheduling	Tue Sep 26 23:07:49 GMT 2017
.≝	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
-	Special Requirements: BETWEEN 01-OCT-2017:00:00:00 AND 02-OCT-2017:00:00:00; PARALLEL	
L	Comments: This visit collects data at LP2. It uses the HV values appropriate for the Blue Modes (173/175).	
S	(Blue Modes (L3)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Sţ.	(Aperture Adjustment 1 for Segment A (L3.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
۱ĕ		
jagn		
۵		

Proposal 15370 - Blue Modes (L3) - COS FUV Gain Map at LP3/LP4

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Adjust HV t	DARK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)	
	o Blue Mod e values					SPEC COM INSTR ELHLTHVF;		[==>]	
						QASISTATES COS FUV HVLOW HVN OM;			
						QESIPARM ENDC TSA 173;			[1]
						QESIPARM ENDC TSB 175;			
						QESIPARM SEGM ENT AB			
Com	Aperture Ad	the HV to the Blue	Mode values.  COS, ALIGN/APER		XAPER=-395			0.0 Secs (0 Secs)	1
_	justment 1 f or Segment A	1,01,2	005,1220,0122		THE DIK UND			[==>]	[1]
Com		anerture in the an	propriate position to illuminate a porti	on of the LP2/Blue M	Andes region of the detec	ctor when illuminating S	eoment A with G1	30M/1309	
PSA	LAPXSTP val	ue at LP3 is 182.1	lluminate Segment A with G130M/1309	·		· ·			
		is set to -213 - 182		an Fostion Fjor 21	2 10 210				
3		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)	
	9 Deuterium Exposure 1			1309 A	M;			[==>]	
	Exposure 1				BUFFER-TIME=11 1;				
					FP-POS=1;				[1]
					SEGMENT=BOTH	:			[1]
					LIFETIME-POS=L	*			
Com	Danta		nized for Segment A. FP-POS=1 was c		P3	hat it has aliabth mans		han ED DOS walkasa	
4	Aperture Ad		COS, ALIGN/APER	nosen because previ	XAPER=-449	QESIPARM XSTEP	ounts than the oth	0.0 Secs (0 Secs)	
·	justment 2 f or Segment A	1,01,2	005, 112101 (111 210			S -54		[==>]	[1]
Com		aperture in the ap	propriate position to illuminate a porti	on of the LP2/Blue M	Todes region of the detec	ctor when illuminating S	egment A with G1	30M/1309.	
		ue at LP3 is 182.1	1 -1 1						
			lluminate Segment A with G130M/1309	at Position 2 for LP	22 is -267				
Ther ocat		is set to -267 - 182	2.1 = -449. *HOWEVER*, because of the	ne TRANS rules, the	"QESIPARM XSTEPS -5	54" [(-449395) = -54]	Special Requiren	nent is necessary to move the aperture to th	he correct i
5		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)	
	9 Deuterium Exposure 2			1309 A	M; BUFFER-TIME=11 1:			[==>]	
					FP-POS=1;				[1]
					SEGMENT=BOTH				[ [1]
					LIFETIME-POS=L P3				
	_	. ,.							
Com	ıments: Deuter	ium exposure optin	nized for Segment A. FP-POS=1 was c	hosen because previ	ous observations show th	hat it has slightly more o	counts than the oth	her FP-POS values.	

Aperture Ad NONE	COS, ALIGN/APER		XAPER=-407	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				S 42	[==>]	[1]
Comments: Put the aperture in the	appropriate position to illuminate a porti	on of the LP2/Blue	e Modes region of the dete	ector when illuminating Segment B w	oith G160M/1600.	
PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA	.1 o illuminate Segment B with G160M/1600	at Position 1 for 1	LP2 is -225			
Therefore, XAPER is set to -225 - ocation.	182.1 = -407. *HOWEVER*, because of to	he TRANS rules, th	ne "QESIPARM XSTEPS 4	48" [(-407449) = +42] Special Re	equirement is necessary to move the aperti	ire to the correct
G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M	CURRENT=MEDI	U	400 Secs (400 Secs)	
0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=1 1:	1	[==>]	[1]
			FP-POS=4			
Comments: Deuterium exposure o	otimmized for Segment B. FP-POS=4 was	chosen because p	revious observations show	that it has slightly more counts that	n the other FP-POS values.	,
гонинения. Вешенини ехрозите ој						
Aperture Ad NONE	COS, ALIGN/APER		XAPER=-449	QESIPARM XSTEP	0.0 Secs (0 Secs)	
Aperture Ad NONE justment 2 f or Segment B		on of the LP2/Blue		S -42	[==>]	[1]
Aperture Ad NONE justment 2 f or Segment B  Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA	appropriate position to illuminate a porti .1 o illuminate Segment B with G160M/1600		e Modes region of the dete	$\hat{S}$ -42 extor when illuminating Segment B w	[==>]	
Aperture Ad NONE justment 2 f or Segment B  Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA to to. To leave some pad, I will set it	appropriate position to illuminate a porti .1 o illuminate Segment B with G160M/1600 to match the G130M exposure (-267).	at Position 2 for .	e Modes region of the dete LP2 is -280, but the apert	$\hat{S}$ -42 ector when illuminating Segment B was ure soft stop is at -275 and we don't	[==>] with G160M/1600.	the 5 step oversh
Aperture Ad NONE justment 2 f or Segment B  Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA to t To leave some pad, I will set it Therefore, XAPER is set to -267- ocation.  G 160M/160 DEUTERIUM	appropriate position to illuminate a porti .1 o illuminate Segment B with G160M/1600 to match the G130M exposure (-267). 182.1 = -449. *HOWEVER*, because of to	at Position 2 for .	e Modes region of the dete  LP2 is -280, but the apert  ne "QESIPARM XSTEPS -  CURRENT=MEDI	$\hat{S}$ -42 ector when illuminating Segment B was ure soft stop is at -275 and we don't 42" [(-449407) = -42] Special Reference	[==>] with G160M/1600.  Want to exceed that value when including	the 5 step oversh
Aperture Ad NONE justment 2 f or Segment B  Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA tot To leave some pad, I will set it Therefore, XAPER is set to -267 -	appropriate position to illuminate a porti .1 o illuminate Segment B with G160M/1600 to match the G130M exposure (-267). 182.1 = -449. *HOWEVER*, because of to	at Position 2 for the TRANS rules, the	e Modes region of the dete LP2 is -280, but the apert ne "QESIPARM XSTEPS -	$\hat{S}$ -42 ector when illuminating Segment B was ure soft stop is at -275 and we don't 42" [(-449407) = -42] Special Ref	[==>] with G160M/1600. want to exceed that value when including equirement is necessary to move the apertu	the 5 step oversh
Aperture Ad NONE justment 2 f or Segment B  Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA is ot To leave some pad, I will set it Therefore, XAPER is set to -267 - cocation.  G160M/160 DEUTERIUM 0 Deuterium	appropriate position to illuminate a porti .1 o illuminate Segment B with G160M/1600 to match the G130M exposure (-267). 182.1 = -449. *HOWEVER*, because of to	at Position 2 for the TRANS rules, the G160M	e Modes region of the dete LP2 is -280, but the apert ne "QESIPARM XSTEPS - CURRENT=MEDI M; BUFFER-TIME=1	$\hat{S}$ -42 ector when illuminating Segment B was ure soft stop is at -275 and we don't 42" [(-449407) = -42] Special Ref	[==>] with G160M/1600.  want to exceed that value when including equirement is necessary to move the apertudo Secs (400 Secs)	the 5 step oversh
Aperture Ad NONE justment 2 f or Segment B  Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA is ot To leave some pad, I will set it Therefore, XAPER is set to -267 - ocation.  G160M/160 DEUTERIUM 0 Deuterium Exposure 2	appropriate position to illuminate a porti .1 o illuminate Segment B with G160M/1600 to match the G130M exposure (-267). 182.1 = -449. *HOWEVER*, because of to	of at Position 2 for the TRANS rules, the G160M 1600 A	e Modes region of the dete  LP2 is -280, but the apert  ne "QESIPARM XSTEPS -  CURRENT=MEDI M;  BUFFER-TIME=1 1;  FP-POS=4	$\tilde{S}$ -42 ector when illuminating Segment B was ure soft stop is at -275 and we don't 42" [(-449407) = -42] Special Result	[==>] with G160M/1600.  want to exceed that value when including equirement is necessary to move the apertual of the second s	the 5 step oversh
Aperture Ad NONE justment 2 f or Segment B  Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA: ot To leave some pad, I will set it Therefore, XAPER is set to -267 - ocation.  G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure of	appropriate position to illuminate a porti 1.1 o illuminate Segment B with G160M/1600 to match the G130M exposure (-267). 182.1 = -449. *HOWEVER*, because of to COS/FUV, TIME-TAG, FCA	of at Position 2 for the TRANS rules, the G160M 1600 A	e Modes region of the dete  LP2 is -280, but the apert  ne "QESIPARM XSTEPS -  CURRENT=MEDI M;  BUFFER-TIME=1 1;  FP-POS=4	$\hat{S}$ -42  exter when illuminating Segment B was ure soft stop is at -275 and we don't 42" [(-449407) = -42] Special Results 1  1  1 that it has slightly more counts that SPEC COM INSTR	[==>] with G160M/1600.  want to exceed that value when including equirement is necessary to move the apertual of the second s	the 5 step oversh
Aperture Ad NONE justment 2 f or Segment B Comments: Put the aperture in the PSA LAPXSTP value at LP3 is 182 Desired LAPXSTP value for FCA in the seried LAPXSTP value for FCA	appropriate position to illuminate a porti 1.1 o illuminate Segment B with G160M/1600 to match the G130M exposure (-267). 182.1 = -449. *HOWEVER*, because of to COS/FUV, TIME-TAG, FCA	of at Position 2 for the TRANS rules, the G160M 1600 A	e Modes region of the dete  LP2 is -280, but the apert  ne "QESIPARM XSTEPS -  CURRENT=MEDI M;  BUFFER-TIME=1 1;  FP-POS=4	$\hat{S}$ -42 extor when illuminating Segment B was ure soft stop is at -275 and we don't 42" [(-449407) = -42] Special Results  U  that it has slightly more counts that	[==>] with G160M/1600.  want to exceed that value when including equirement is necessary to move the apertual $400  Secs  (400  Secs)$ $[==>]$ In the other FP-POS values.	the 5 step oversh

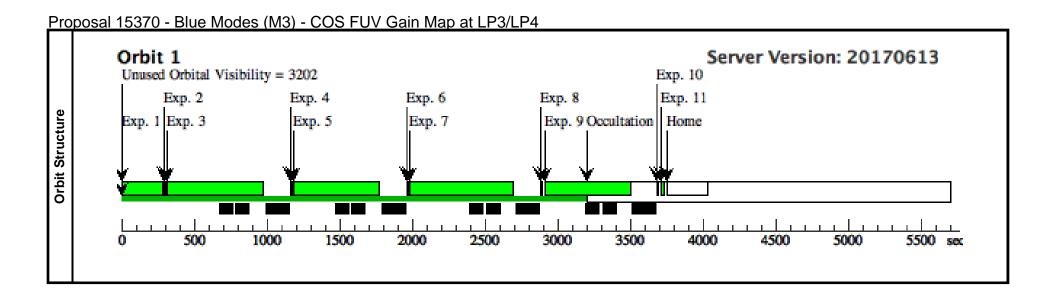


Pro	oposal 15370 - Blue Modes (M3) - COS FUV Gain Map at LP3/LP4	
	Proposal 15370, Blue Modes (M3), scheduled	Tue Sep 26 23:07:49 GMT 2017
±	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 01-OCT-2017:00:00:00 AND 02-OCT-2017:00:00:00; PARALLEL	
	Comments: This visit collects data at LP2. It uses the HV values appropriate for the Blue Modes (173/175).	
SS	(Blue Modes (M3)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
sti	(Aperture Adjustment 1 for Segment A (M3.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
12		
ag		
ق		

Proposal 15370 - Blue Modes (M3) - COS FUV Gain Map at LP3/LP4

o Blue Mod e values  Comments: Adjust the HV to the Blue Mode value  A Aperture Ad NONE COS, justment 1 f or Segment A  Comments: Put the aperture in the appropriate PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to illuminate. Therefore, XAPER is set to -213 - 182.1 = -395  G130M/130 DEUTERIUM COS, 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for S	, ALIGN/APER  position to illuminate a portion  Segment A with G130M/1309 a	·	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	U 1	egment A with G130M	295 Secs (295 Secs)  [==>]  0.0 Secs (0 Secs)  [==>]  1/1309.  400 Secs (400 Secs)  [==>]	[1]
Comments: Adjust the HV to the Blue Mode value  2 Aperture Ad NONE COS. justment 1 f or Segment A  Comments: Put the aperture in the appropriate PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to illuminate Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COS. 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for Segment A NONE COS. 10 or Segment A	, ALIGN/APER  position to illuminate a portion  Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	ELHLTHVF; QASISTATES COS FUV HVLOW HVN OM; QESIPARM ENDC TSA 173; QESIPARM ENDC TSB 175; QESIPARM SEGM ENT AB	egment A with G130M	0.0 Secs (0 Secs) [==>]  1/1309.  400 Secs (400 Secs)	[1]
2 Aperture Ad NONE COS.  justment 1 f or Segment A  Comments: Put the aperture in the appropriate  PSA LAPXSTP value at LP3 is 182.1  Desired LAPXSTP value for FCA to illuminate.  Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COS. 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for S  justment 2 f or Segment A	, ALIGN/APER  position to illuminate a portion  Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	FUV HVLOW HVN OM; QESIPARM ENDC TSA 173; QESIPARM ENDC TSB 175; QESIPARM SEGM ENT AB	egment A with G130M	[==>]  A/1309.  400 Secs (400 Secs)	[1]
2 Aperture Ad NONE justment 1 f or Segment A  Comments: Put the aperture in the appropriate PSA LAPXSTP value at LP3 is 182.1  Desired LAPXSTP value for FCA to illuminate Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COSM 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for Segment A  NONE COSMO Segment A	, ALIGN/APER  position to illuminate a portion  Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	TSA 173;  QESIPARM ENDC TSB 175;  QESIPARM SEGM ENT AB	egment A with G130M	[==>]  A/1309.  400 Secs (400 Secs)	[1]
2 Aperture Ad NONE justment 1 f or Segment A  Comments: Put the aperture in the appropriate PSA LAPXSTP value at LP3 is 182.1  Desired LAPXSTP value for FCA to illuminate Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COSM 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for Segment A  NONE COSMO Segment A	, ALIGN/APER  position to illuminate a portion  Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	TSB 175; QESIPARM SEGM ENT AB  ector when illuminating Sector when 1	egment A with G130M	[==>]  A/1309.  400 Secs (400 Secs)	
2 Aperture Ad NONE justment 1 f or Segment A  Comments: Put the aperture in the appropriate PSA LAPXSTP value at LP3 is 182.1  Desired LAPXSTP value for FCA to illuminate Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COSM 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for Segment A  NONE COSMO Segment A	, ALIGN/APER  position to illuminate a portion  Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	ENT AB  ector when illuminating Sector when 1	egment A with G130M	[==>]  A/1309.  400 Secs (400 Secs)	
2 Aperture Ad NONE justment 1 f or Segment A  Comments: Put the aperture in the appropriate PSA LAPXSTP value at LP3 is 182.1  Desired LAPXSTP value for FCA to illuminate Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COSM 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for Segment A  NONE COSMO Segment A	, ALIGN/APER  position to illuminate a portion  Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	U 1	egment A with G130M	[==>]  A/1309.  400 Secs (400 Secs)	
justment 1 f or Segment A  Comments: Put the aperture in the appropriate PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to illuminate. Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COS, 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for S justment 2 f or Segment A	position to illuminate a portion Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	U 1	egment A with G130M	[==>]  A/1309.  400 Secs (400 Secs)	
Comments: Put the aperture in the appropriate properties of the aperture in the appropriate properties of the appropriate process	Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	U 1	egment A with G130M	400 Secs (400 Secs)	[1]
PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to illuminate.  Therefore, XAPER is set to -213 - 182.1 = -395  G130M/130 DEUTERIUM COS, 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for S justment 2 f or Segment A	Segment A with G130M/1309 a	at Position 1 for LP	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	U 1	egment A with G130M	400 Secs (400 Secs)	[1]
Desired LAPXSTP value for FCA to illuminate at the Therefore, XAPER is set to -213 - 182.1 = -395  3 G130M/130 DEUTERIUM COS, 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for S 4 Aperture Ad NONE COS, justment 2 for Segment A		G130M	CURRENT=MEDI M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI	1		· · · · · · · · · · · · · · · · · · ·	[1]
3 G130M/130 DEUTERIUM COS, 9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for S  4 Aperture Ad NONE COS, justment 2 f or Segment A			M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTE	1		· · · · · · · · · · · · · · · · · · ·	[1]
9 Deuterium Exposure 1  Comments: Deuterium exposure optimized for S  4 Aperture Ad NONE COS, justment 2 f or Segment A	/FUV, TIME-TAG, FCA		M; BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTE	1		· · · · · · · · · · · · · · · · · · ·	[1]
Exposure 1  Comments: Deuterium exposure optimized for S  Aperture Ad NONE COS. justment 2 f or Segment A		1309 A	BUFFER-TIME=1 1; FP-POS=1; SEGMENT=BOTI			[==>]	[1]
4 Aperture Ad NONE COS. justment 2 f or Segment A			FP-POS=1; SEGMENT=BOTI	Н;			[1]
4 Aperture Ad NONE COS. justment 2 f or Segment A			SEGMENT=BOTI	Н;			[1]
4 Aperture Ad NONE COS. justment 2 f or Segment A				-,			
4 Aperture Ad NONE COS. justment 2 f or Segment A			LIFETIME-POS=I				
4 Aperture Ad NONE COS. justment 2 f or Segment A			P3				
justment 2 f or Segment A	Segment A.  FP-POS=1 was cho , ALIGN/APER	osen because previ			ounts than the other F		
A	, ALIGN/APEK		XAPER=-449	QESIPARM XSTEP S -54		$0.0 \operatorname{Secs} (0 \operatorname{Secs})$ $I = > I$	
Comments: Put the aperture in the appropriate						[>]	[1]
	position to illuminate a portion	of the LP2/Blue M	Modes region of the dete	ector when illuminating Se	egment A with G130M	1/1309.	
PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to illuminate .	Segment A with G130M/1309 a	ut Position 2 for LP	P2 is -267				
Therefore, XAPER is set to -267 - 182.1 = -449. ocation.	. *HOWEVER*, because of the	TRANS rules, the	"QESIPARM XSTEPS -	54" [(-449395) = -54]	Special Requirement	is necessary to move the aperture to	the correct
	/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDI	U		400 Secs (400 Secs)	
9 Deuterium Exposure 2		1309 A	M; BUFFER-TIME=1 1;	1		[==>]	
			FP-POS=1;				[1]
			SEGMENT=BOTI	Н;			' '
			LIFETIME-POS=I P3				
Comments: Deuterium exposure optimized for S						ED DOCl	

justment 1 f or Segment  Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2/Blue Modes region of the detector when illuminating Segment B with G160M/1600.  PSA LAPXSTP value at LP3 is 182.1  Desired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 1 for LP2 is -225  Therefore, XAPER is set to -225 - 182.1 = -407. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS 48" [(-407449) = +42] Special Requirement is necessary to move the apercurion.  7 G160M/160 DEUTERIUM OS/FUV, TIME-TAG, FCA G160M WI; BUFFER-TIME=11 I; FP-POS=4  Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.  8 Aperture Ad NONE COS, ALIGN/APER XAPER=-449 QESIPARM XSTEP S -42  Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2/Blue Modes region of the detector when illuminating Segment B with G160M/1600.	
PSA LAPXSTP value at LP3 is 182.1 Desired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 1 for LP2 is -225  Therefore, XAPER is set to -225 - 182.1 = -407. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS 48" [(-407449) = +42] Special Requirement is necessary to move the approximate to the capture of the transfer of the tr	
resired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 1 for LP2 is -225  rerefore, XAPER is set to -225 - 182.1 = -407. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS 48" [(-407449) = +42] Special Requirement is necessary to move the again.  G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M	
G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4  Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.  Aperture Ad NONE COS, ALIGN/APER XAPER=-449 QESIPARM XSTEP gustment 2 for Segment B. FP-POS=4  COS, ALIGN/APER S-42 $[I=>]$ $I=>$	
O Deuterium Exposure 1  1600 A  M; BUFFER-TIME=11 1; FP-POS=4  Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.  Aperture Ad NONE COS, ALIGN/APER  Aperture 2 f or Segment B  O Deuterium Exposure 1  S Aperture Ad NONE COS, ALIGN/APER  XAPER=-449  O CSIPARM XSTEP S -42  [==>]  O O Secs (0 Secs) [==>]	[1]
Exposure 1  BUFFER-TIME=11 1; FP-POS=4  Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.  Aperture Ad NONE COS, ALIGN/APER XAPER=-449  Justment 2 f  Or Segment B  S -42  [==>]  [==>]  O. Secs (0 Secs)  [==>]	[1]
Somments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.  Aperture Ad NONE COS, ALIGN/APER XAPER=-449 QESIPARM XSTEP giustment 2 f or Segment B S -42    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.    Comments: Deuterium exposure optimized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts that the other FP-POS values.   Comments: Deuterium	[1]
Aperture Ad NONE COS, ALIGN/APER XAPER=-449 QESIPARM XSTEP gustment 2 f or Segment B. FP-POS = 4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.  On Segment B. FP-POS = 4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.  On Secs (0 Secs)  [==>]	
Aperture Ad NONE COS, ALIGN/APER XAPER=-449 QESIPARM XSTEP S -42	
Aperture Ad NONE COS, ALIGN/APER XAPER=-449 QESIPARM XSTEP S -42	
or Segment B	
В	
Comments: Put the aperture in the appropriate position to illuminate a portion of the LP2/Blue Modes region of the detector when illuminating Segment B with G160M/1600.	[1]
Therefore, XAPER is set to -267 - 182.1 = -449. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -42" [(-449407) = -42] Special Requirement is necessary to move the appearation.	perture to the correct
9 G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M CURRENT=MEDIU 400 Secs (400 Secs) 0 Deuterium M:	
Exposure 2 1600 A BUFFER-TIME=11 [==>]	
1;	[1]
FP-POS=4	
Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values.	
10 Return Aper NONE COS, ALIGN/APER XAPER=0 QESIPARM XSTEP 0.0 Secs (0 Secs) ture to Nomi S 449	
nal Position [==>]	[1]
Comments: Return the aperture to its nominal position, i.e. XAPER=0 *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS +449" [(0449) = +449] Special Requirement is necessary to move the aperture to the correct location.	
11 Return to no DARK S/C, DATA, NONE SPEC COM INSTR 39 Secs (39 Secs)	
minal HV fo r standard m  ELHVADJPROP; [==>]	
odes QESIPARM ENDC TSA 167:	[1]
QESIPARM ENDC TSB 175	
Comments: Set HV to nominal values used for the standard modes.	
Exposure Time is 39 seconds since the HV is not increasing on either segment.	



<u>Pro</u>	pposal 15370 - After LP4 move - Standard Modes (L4) - COS FUV Gain Map at LP3/LP4	
	Proposal 15370, After LP4 move - Standard Modes (L4), scheduling	Tue Sep 26 23:07:49 GMT 2017
.±	Diagnostic Status: Warning	
/is	Scientific Instruments: COS, COS/FUV	
1	Special Requirements: BETWEEN 02-OCT-2017:00:00:00 AND 03-OCT-2017:00:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for the Standard Modes at LP4 (163/163).	
ပ္သ	(After LP4 move - Standard Modes (L4)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
SĘ.	(Aperture Adjustment 1 for Segment A (L4.001)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
۱ë		
iag		
ä		

Proposal 15370 - After LP4 move - Standard Modes (L4) - COS FUV Gain Map at LP3/LP4 Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit Aperture Ad NONE COS, ALIGN/APER XAPER=-267 0.0 Secs (0 Secs) justment 1 f [==>] or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 *Therefore, XAPER is set to -32 - 235.1 = -267* G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 400 Secs (400 Secs) 9 Deuterium M; 1309 A I = = > 1Exposure 1 BUFFER-TIME=11 FP-POS=1: [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-321 **OESIPARM XSTEP** 0.0 Secs (0 Secs) justment 2 f S -54 I = = > 1or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86 - 235.1 = -321. \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-321 - -267) = -54] Special Requirement is necessary to move the aperture to the correct lo cation. COS/FUV, TIME-TAG, FCA G130M/130 DEUTERIUM G130M CURRENT=MEDIU 400 Secs (400 Secs)

9 Deuterium	1309 A	M;	I==>1	1
Exposure 2		BUFFER-TIME=11	,	l
		1;		1
		FP-POS=1;		[1]
		SEGMENT=BOTH;		
		LIFETIME-POS=L		1
		P4		<u> </u>
Comments: Deuterium exposure optimized for Se	gment A. FP-POS=1 was chosen because previou	s observations show that it has slightly more counts than the other F	P-POS values.	

5 Aperture Ad NONE	COS,	ALIGN/APER	XAPER=-27	QESIPARM 2	XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment				S 45		[==>]	[1]
D							

Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment B with G160M/1600.

#### PSA LAPXSTP value at LP4 is 235.1

Desired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 1 for LP4 is -41

Therefore, XAPER is set to -41 - 235.1 = -276. \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS 45" [(-276 - -321) = +45] Special Requirement is necessary to move the aperture to the correct lo cation.

Proposal 15370 - After LP4 move - Standard Modes (L4) - COS FUV Gain Map at LP3/LP4 COS/FUV, TIME-TAG, FCA G160M/160 DEUTERIUM G160M CURRENT=MEDIU 400 Secs (400 Secs) 0 Deuterium M: 1600 A I = = > 1Exposure 1 BUFFER-TIME=11 FP-POS=4; [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-330 0.0 Secs (0 Secs) **QESIPARM XSTEP** justment 2 f S -54 f = = > 1or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment B with G160M/1600. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 2 for LP4 is -95. Therefore, XAPER is set to -95 - 235.1 = -330. \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-330 - -276) = -54] Special Requirement is necessary to move the aperture to the correct lo G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M CURRENT=MEDIU 400 Secs (400 Secs) 0 Deuterium 1600 A *[==>1* Exposure 2 BUFFER-TIME=11 1; FP-POS=4; [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Server Version: 20170613 Orbit 1 Exp. 1 Unused Orbital Visibility = 3202 Occultation Exp. 3 Exp. 7 Exp. 5 Orbit Structure Exp. 8 Exp. 2 Home 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec

Pro	oposal 15370 - After LP4 move - Standard Modes (M4) - COS FUV Gain Map at LP3/LP4	
	Proposal 15370, After LP4 move - Standard Modes (M4)	Tue Sep 26 23:07:49 GMT 2017
±	Diagnostic Status: Warning	
/is	Scientific Instruments: COS, COS/FUV	
-	Special Requirements: BETWEEN 02-OCT-2017:00:00:00 AND 03-OCT-2017:00:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for the Standard Modes at LP4 (163/163).	
SS	(After LP4 move - Standard Modes (M4)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
sti	(Aperture Adjustment 1 for Segment A (M4.001)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
1 2		
ag		
ق		

Proposal 15370 - After LP4 move - Standard Modes (M4) - COS FUV Gain Map at LP3/LP4 Label **Target** Config, Mode, Aperture Spectral Els. Opt. Params. Special Regs. Groups Exp. Time (Total)/[Actual Dur.] Orbit Aperture Ad NONE COS, ALIGN/APER XAPER=-267 0.0 Secs (0 Secs) justment 1 f [==>] or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32 *Therefore, XAPER is set to -32 - 235.1 = -267* G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 400 Secs (400 Secs) 9 Deuterium M; 1309 A I = = > 1Exposure 1 BUFFER-TIME=11 FP-POS=1: [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-321 **OESIPARM XSTEP** 0.0 Secs (0 Secs) justment 2 f S -54 I = = > 1or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment A with G130M/1309. Exposures PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86 Therefore, XAPER is set to -86 - 235.1 = -321. \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-321 - -267) = -54] Special Requirement is necessary to move the aperture to the correct lo cation. G130M/130 DEUTERIUM COS/FUV, TIME-TAG, FCA G130M CURRENT=MEDIU 400 Secs (400 Secs) 9 Deuterium M; 1309 A I = = > 1Exposure 2 BUFFER-TIME=11 FP-POS=1: [1] SEGMENT=BOTH: LIFETIME-POS=L Comments: Deuterium exposure optimized for Segment A. FP-POS=1 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Aperture Ad NONE COS, ALIGN/APER XAPER=-276 **OESIPARM XSTEP** 0.0 Secs (0 Secs) S 45 justment 1 f *[==>1* or Segment [1]

Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment B with G160M/1600.

#### PSA LAPXSTP value at LP4 is 235.1

Desired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 1 for LP4 is -41

Therefore, XAPER is set to -41 - 235.1 = -276. \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS 45" [(-276 - -321) = +45] Special Requirement is necessary to move the aperture to the correct lo cation.

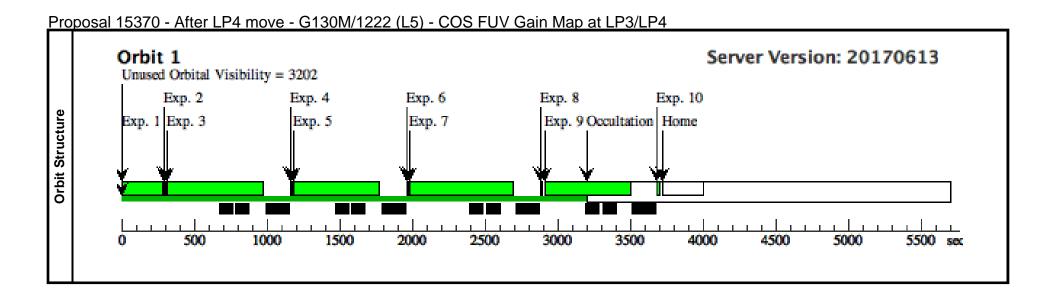
Proposal 15370 - After LP4 move - Standard Modes (M4) - COS FUV Gain Map at LP3/LP4 G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M CURRENT=MEDIU 400 Secs (400 Secs) 0 Deuterium M: 1600 A I = = > 1Exposure 1 BUFFER-TIME=11 FP-POS=4; [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. COS, ALIGN/APER XAPER=-330 0.0 Secs (0 Secs) Aperture Ad NONE **QESIPARM XSTEP** S -54 justment 2 f *[==>1* or Segment [1] Comments: Put the aperture in the appropriate position to illuminate a portion of the LP4 region of the detector when illuminating Segment B with G160M/1600. PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment B with G160M/1600 at Position 2 for LP4 is -95. Therefore, XAPER is set to -95 - 235.1 = -330. \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-330 - -276) = -54] Special Requirement is necessary to move the aperture to the correct lo G160M/160 DEUTERIUM COS/FUV, TIME-TAG, FCA G160M CURRENT=MEDIU 400 Secs (400 Secs) 0 Deuterium 1600 A *[==>1* Exposure 2 BUFFER-TIME=11 1: FP-POS=4; [1] SEGMENT=BOTH; LIFETIME-POS=L Comments: Deuterium exposure optimmized for Segment B. FP-POS=4 was chosen because previous observations show that it has slightly more counts than the other FP-POS values. Return Aper NONE COS, ALIGN/APER XAPER=0 **OESIPARM XSTEP** 0.0 Secs (0 Secs) S 330 ture to Nomi I = = > 1[1] nal Position Comments: Return the aperture to its nominal position, i.e. XAPER=0 \*HOWEVER\*, because of the TRANS rules, the "QESIPARM XSTEPS +330" [(0 - -330) = +330] Special Requirement is necessary to move the aperture to the correct location. Server Version: 20170613 Orbit 1 Occultation Unused Orbital Visibility = 3202 Exp. 1Exp. 3 Exp. 5 Exp. 7 Exp. 9 Orbit Structure Exp. 2 Exp. 8 Home 1000 1500 2000 2500 3000 3500 5000 4000 4500 5500

<u>Pro</u>	oposal 15370 - After LP4 move - G130M/1222 (L5) - COS FUV Gain Map at LP3/LP4	
	Proposal 15370, After LP4 move - G130M/1222 (L5), scheduling	Tue Sep 26 23:07:49 GMT 2017
.=	Diagnostic Status: Warning	
/is	Scientific Instruments: S/C, COS, COS/FUV	
1	Special Requirements: BETWEEN 02-OCT-2017:00:00:00 AND 03-OCT-2017:00:00:00; PARALLEL	
	Comments: This visit collects data at LP4. It uses the HV values appropriate for G130M/1222 & 1223 at LP4 (163/167).	
ဗ္ဗ	(After LP4 move - G130M/1222 (L5)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU	
Stil	(Aperture Adjustment 1 for Segment A (L5.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.	
1 2		
ag		
ق		

Proposal 15370 - After LP4 move - G130M/1222 (L5) - COS FUV Gain Map at LP3/LP4

#	Label Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Regs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit		
1	Adjust HV t DARK	S/C, DATA, NONE			SAA CONTOUR 31;		295 Secs (295 Secs)			
	o LP4 G130 M/1222 valu es				SPEC COM INSTR ELHLTHVF;		[==>]			
	Co				QASISTATES COS FUV HVLOW HVN OM;					
					QESIPARM ENDC TSA 163;			[1]		
					QESIPARM ENDC TSB 167;					
					QESIPARM SEGM ENT AB					
(	Comments: Adjust the HV to the Ll							1		
2	Aperture Ad NONE justment 1 f	COS, ALIGN/APER		XAPER=-267			0.0 Secs (0 Secs)			
	or Segment A						[==>]	[1]		
(	Comments: Put the aperture in the	appropriate position to illuminate a port	ion of the LP4 region	of the detector when illu	minating Segment A wi	th G130M/1309.		•		
	PSA LAPXSTP value at LP4 is 235 Desired LAPXSTP value for FCA t	.1 o illuminate Segment A with G130M/130	9 at Position 1 for LF	24 is -32						
7	herefore, XAPER is set to -32 - 23	35.1 = -267								
3	G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)			
es	9 Deuterium Exposure 1		1309 A	M;			[==>]			
ms I	— <b></b>			BUFFER-TIME=11 1;						
Exposures				FP-POS=1;				[1]		
ן ב				SEGMENT=BOTH	;			1-3		
				LIFETIME-POS=L P4						
(	Comments: Deuterium exposure or	otimized for Segment A. FP-POS=1 was	chosen because previ	± ·	nat it has slightly more	counts than the othe	r FP-POS values.			
4	Aperture Ad NONE	COS, ALIGN/APER	, , , , , , , , , , , , , , , , , , ,	XAPER=-321	QESIPARM XSTEP		0.0 Secs (0 Secs)			
	justment 2 f or Segment A				S -54		[==>]	[1]		
(		appropriate position to illuminate a port	ion of the LP4 region	of the detector when illu	minating Segment A wi	th G130M/1309.				
I	SA LAPXSTP value at LP4 is 235	7.1			0 0					
7	Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86  Therefore, XAPER is set to -86 - 235.1 = -321. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-321267) = -54] Special Requirement is necessary to move the aperture to the correct lo cation.									
5	G130M/130 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)			
	9 Deuterium Exposure 2		1309 A	M;			[==>]			
	1			BUFFER-TIME=11 1;						
				FP-POS=1;				[1]		
				SEGMENT=BOTH	•			1 2-3		
							1	1		
				LIFETIME-POS=L P4						

	COS, ALIGN/APER		XAPER=-276	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 1 f or Segment B				S 45	[==>]	[1]
Comments: Put the aperture in the	appropriate position to illuminate a porti	on of the LP4 regi	on of the detector when illu	ninating Segment B with G160M/	1600.	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to	1 o illuminate Segment B with G160M/1600	at Position 1 for	LP4 is -41			
Therefore, XAPER is set to -41 - 23 cation.	5.1 = -276. *HOWEVER*, because of the	e TRANS rules, the	g "QESIPARM XSTEPS 45"	[(-276321) = +45] Special Red	quirement is necessary to move the aperture	e to the correct l
7 G160M/160 DEUTERIUM	COS/FUV, TIME-TAG, FCA	G160M 1600 A	CURRENT=MEDIU	J	400 Secs (400 Secs)	
0 Deuterium Exposure 1			M; BUFFER-TIME=11		[==>]	
			1;			
			FP-POS=4;			[1]
			SEGMENT=BOTH;			
			LIFETIME-POS=L P4			
Comments: Deuterium exposure op	timmized for Segment B. FP-POS=4 was	chosen because p	revious observations show t	hat it has slightly more counts tha	n the other FP-POS values.	
Aperture Ad NONE	COS, ALIGN/APER		XAPER=-330	QESIPARM XSTEP	0.0 Secs (0 Secs)	
justment 2 f or Segment				S -54	[==>J	[1]
В						, ,
•		on of the LP4 regi	on of the detector when illu	ninating Segment B with G160M/.	1600.	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.	1 o illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a TRANS rules, the	LP4 is -95. 2 "QESIPARM XSTEPS -54"		quirement is necessary to move the aperture	e to the correct la
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.  G160M/160 DEUTERIUM 0 Deuterium	1 o illuminate Segment B with G160M/1600	at Position 2 for	LP4 is -95.			e to the correct l
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.  G160M/160 DEUTERIUM	1 o illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a TRANS rules, the	LP4 is -95.  2 "QESIPARM XSTEPS -54"  CURRENT=MEDIU M;  BUFFER-TIME=11		quirement is necessary to move the aperture 400 Secs (400 Secs)	e to the correct l
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.  G160M/160 DEUTERIUM 0 Deuterium	1 o illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a TRANS rules, the	LP4 is -95. 2 "QESIPARM XSTEPS -54"  CURRENT=MEDIU M;  BUFFER-TIME=11 1;		quirement is necessary to move the aperture 400 Secs (400 Secs)	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.  G160M/160 DEUTERIUM 0 Deuterium	1 o illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a TRANS rules, the	LP4 is -95.  2 "QESIPARM XSTEPS -54"  CURRENT=MEDIU M;  BUFFER-TIME=11		quirement is necessary to move the aperture 400 Secs (400 Secs)	te to the correct le
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.  G160M/160 DEUTERIUM 0 Deuterium	1 o illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a TRANS rules, the	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4;		quirement is necessary to move the aperture 400 Secs (400 Secs)	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.  G160M/160 DEUTERIUM 0 Deuterium Exposure 2	1 o illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the	at Position 2 for a TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	' [(-330276) = -54] Special Red	quirement is necessary to move the aperture $\frac{400 \text{ Secs }}{[==>]}$	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 cation.  D G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure op 10 Return to no DARK	1 1 2 illuminate Segment B with G160M/1600 5.1 = -330. *HOWEVER*, because of the COS/FUV, TIME-TAG, FCA	at Position 2 for a TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	hat it has slightly more counts that	quirement is necessary to move the aperture	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 eation.  D G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure op 10 Return to no DARK minal HV fo r standard m	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	at Position 2 for a TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	hat it has slightly more counts that  SPEC COM INSTR ELHVADJPROP;	quirement is necessary to move the aperture $\frac{400  \mathrm{Secs}  (400  \mathrm{Secs})}{[==>]}$	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 eation.  O G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure op 10 Return to no DARK minal HV fo	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	at Position 2 for a TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	hat it has slightly more counts that  SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC TSA 163;	quirement is necessary to move the aperture	
PSA LAPXSTP value at LP4 is 235. Desired LAPXSTP value for FCA to Therefore, XAPER is set to -95 - 23 eation.  D G160M/160 DEUTERIUM 0 Deuterium Exposure 2  Comments: Deuterium exposure op 10 Return to no DARK minal HV fo r standard m	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	at Position 2 for a TRANS rules, the G160M 1600 A	CURRENT=MEDIU M; BUFFER-TIME=11 1; FP-POS=4; SEGMENT=BOTH; LIFETIME-POS=L P4	hat it has slightly more counts that  SPEC COM INSTR ELHVADJPROP; QESIPARM ENDC	quirement is necessary to move the aperture	[1]



Proposal 15370 - After LP4 move - G130M/1222 (M5) - COS FUV Gain Map at LP3/LP4							
	Proposal 15370, After LP4 move - G130M/1222 (M5)	Tue Sep 26 23:07:49 GMT 2017					
±	Diagnostic Status: Warning						
/is	Scientific Instruments: S/C, COS, COS/FUV						
-	Special Requirements: BETWEEN 02-OCT-2017:00:00:00 AND 03-OCT-2017:00:00:00; PARALLEL						
	Comments: This visit collects data at LP4. It uses the HV values appropriate for G130M/1222 & 1223 at LP4 (163/167).						
SS	(After LP4 move - G130M/1222 (M5)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU						
sti	(Aperture Adjustment 1 for Segment A (M5.002)) Warning (Form): This ALIGN/APER exposure should be preceded by a science exposure to define the starting position for the scan.						
1 2							
ag							
ق							

Proposal 15370 - After LP4 move - G130M/1222 (M5) - COS FUV Gain Map at LP3/LP4

	# Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1 Adjust HV t		S/C, DATA, NONE			SAA CONTOUR 31;	;	295 Secs (295 Secs)		
	o LP4 G130 M/1222 valu es					SPEC COM INSTR ELHLTHVF;		[==>]		
	CS					QASISTATES COS FUV HVLOW HVN OM;				
						QESIPARM ENDC TSA 163;			[1]	
						QESIPARM ENDC TSB 167;				
						QESIPARM SEGM ENT AB				
		t the HV to the LP4 v								
	2 Aperture Adjustment 1 f	NONE	COS, ALIGN/APER		XAPER=-267			0.0 Secs (0 Secs)		
	or Segment A							[==>]	[1]	
	Comments: Put th	ne aperture in the app	propriate position to illuminate a porti	on of the LP4 region	of the detector when illu	minating Segment A wi	ith G130M/1309.			
	PSA LAPXSTP value at LP4 is 235.1 Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 1 for LP4 is -32									
	Therefore, XAPE	R is set to -32 - 235.1	' = -267							
		DEUTERIUM	COS/FUV, TIME-TAG, FCA	G130M	CURRENT=MEDIU	J		400 Secs (400 Secs)		
res	9 Deuterium Exposure 1	1		1309 A	M;			[==>]		
su					BUFFER-TIME=11 1;					
Exposures					FP-POS=1;				[1]	
Ě					SEGMENT=BOTH;	,				
					LIFETIME-POS=L P4					
	Comments: Deute	erium exposure optim	nized for Segment A. FP-POS=1 was c	hosen because previ	± ·	nat it has slightly more	counts than the other	FP-POS values.		
	4 Aperture Ac		COS, ALIGN/APER	-	XAPER=-321	QESIPARM XSTEP		0.0 Secs (0 Secs)		
	justment 2 f or Segment A	•				S -54		[==>]	[1]	
		ne aperture in the app	propriate position to illuminate a porti	on of the LP4 region	of the detector when illu	minating Segment A wi	ith 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.  PSA LAPXSTP value at LP4 is 235.1  Desired LAPXSTP value for FCA to illuminate Segment A with G130M/1309 at Position 2 for LP4 is -86									
	Therefore, XAPER is set to -86 - 235.1 = -321. *HOWEVER*, because of the TRANS rules, the "QESIPARM XSTEPS -54" [(-321267) = -54] Special Requirement is necessary to move the aperture to the correct lo cation.									
	5 G130M/130 DEUTI 9 Deuterium Exposure 2		UTERIUM COS/FUV, TIME-TAG, FCA	G130M 1309 A	CURRENT=MEDIU	J		400 Secs (400 Secs)		
		1			M;			[==>]		
					BUFFER-TIME=11 1;					
					FP-POS=1;				[1]	
					SEGMENT=BOTH:	•			123	
					LIFETIME-POS=L					
	Commenter De d		in allow Coom and A. ER ROS 1	haan haarra	P4	and it has all the	annuta dans da as	ED DOS valves	1	
	Comments. Deute	нит ехроѕите орит	nized for Segment A. FP-POS=1 was c	nosen vecause previ	ous ooservations snow th	ш и низ зидниу тоге (	counts than the other	11-1 OS values.		

po	<u>sai 15370 - After LP</u> 2	4 move - G130M/1222 (I	M5) - COS	FUV Gain Map a	at LP3/LP4		
6	Aperture Ad NONE	COS, ALIGN/APER		XAPER=-276	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	justment 1 f or Segment B				S 45	[==>]	[1]
Con	nments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP4 regi	ion of the detector when illu	minating Segment B with G160M	7/1600.	
	LAPXSTP value at LP4 is 235.1 ired LAPXSTP value for FCA to i	lluminate Segment B with G160M/1600	at Position 1 for	LP4 is -41			
The: cati	•	I = -276. *HOWEVER*, because of the	e TRANS rules, the	e "QESIPARM XSTEPS 45"	' [(-276321) = +45] Special Re	equirement is necessary to move the aperture	e to the correct lo
7	G160M/160 DEUTERIUM	ERIUM COS/FUV, TIME-TAG, FCA		CURRENT=MEDIU	i	400 Secs (400 Secs)	
	0 Deuterium Exposure 1		1600 A	M; BUFFER-TIME=11		[==>]	
				1;			
				FP-POS=4;	_		[1]
				SEGMENT=BOTH: LIFETIME-POS=L	;		
				P4			
		nmized for Segment B. FP-POS=4 was	chosen because p				
8	Aperture Ad NONE justment 2 f	COS, ALIGN/APER		XAPER=-330	QESIPARM XSTEP S -54	$0.0 \operatorname{Secs} (0 \operatorname{Secs})$ $I = > I$	
	or Segment B					1>1	[1]
Con	nments: Put the aperture in the ap	propriate position to illuminate a porti	on of the LP4 regi	ion of the detector when illu	uminating Segment B with G160M	1/1600.	•
	refore, XAPER is set to -95 - 235.	lluminate Segment B with G160M/1600  1 = -330. *HOWEVER*, because of the			"" [(-330276) = -54] Special Re	equirement is necessary to move the aperture	e to the correct lo
9	G160M/160 DEUTERIUM 0 Deuterium	RIUM COS/FUV, TIME-TAG, FCA	G160M 1600 A	CURRENT=MEDIU M;		400 Secs (400 Secs)	
	Exposure 2			BUFFER-TIME=11 1;		[==>]	
				FP-POS=4;			[1]
				SEGMENT=BOTH	;		[1]
				LIFETIME-POS=L P4			
Con	nments: Deuterium exposure optir	nmized for Segment B. FP-POS=4 was	chosen because p	1.	that it has slightly more counts th	an the other FP-POS values.	
10	Return Aper NONE	COS, ALIGN/APER		XAPER=0	QESIPARM XSTEP	0.0 Secs (0 Secs)	
	ture to Nomi nal Position				S 330	[==>J	[1]
Con *H(	nments: Return the aperture to its DWEVER* because of the TRANS	nominal position, i.e. XAPER=0 S rules, the "QESIPARM XSTEPS +330	I''' I(0330) = +3	3301 Special Requirement is	necessary to move the anerture to	o the correct location	
11	Return to no DARK	S/C, DATA, NONE	7(0 220) 12	e of special requirement is	SPEC COM INSTR	39 Secs (39 Secs)	
	minal HV fo r standard m				ELHVADJPROP;	[==>J	
	odes				QESIPARM ENDC TSA 163;		[1]
					QESIPARM ENDC TSB 163		
Con	nments: Set HV to nominal values	used for the standard modes.					
Ехр	osure Time is 39 seconds since the	e HV is not increasing on either segmen	nt.				

