



4494 - CAL-FGS-201 Internal Lamp Flat Field

Cycle: 2, Proposal Category: CAL/FGS

INVESTIGATORS

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OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Epoch 1				
	1	G1 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field
	2	G1 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field
	3	G2 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field
	4	G2 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field
Epoch 2				
	5	G1 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field
	6	G1 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field
	7	G2 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field
	8	G2 full frame only	FGS Internal Flat	(1) Northern-FGS-Lamp-field

ABSTRACT

This will monitor the flat field of the FGS channels. There is significant structure in the lamp flats, however, these lamp flat fields are good for monitoring trends in the response of the detector over time. The internal calibration lamp shall be used, so Fine Guiding will not be possible, hence ACS will be under coarse control. Exposures will use full frame images. Each exposure is repeated five times for cosmic ray rejection. After the full frame data are obtained, a 1 arcminute telescope offset is to be executed and the imaging sequence is to be repeated to allow for sky-source removal

(the FGS has no shutter or opaque element). Epoch 1 observations should be done Oct-Dec 2023 timeframe. Epoch 2 observations should be done within the Mar-Apr 2024 timeframe.

This calibration program may change in response to system developments and final Cycle 2 science program.

OBSERVING DESCRIPTION

This will monitor the state of the flat field of the FGS channels, but will not be used to actually calibrate the flat field since the lamp images contain significant structure. Exposures will use full frame images (no sub-arrays). Each exposure is repeated five times for cosmic ray rejection. Due to a bug in OSS script that executes the LAMP exposures (lamps are turned off prior to a dither, but are not re-activated), we have modified the exposures so that each Guider has two Observations without dithers, but on targetst separated by $(x,y) = (30"30")$. This results in the FGS FOV being placed at a different patch of sky to facilitate star rremoval, but causes two independent execution of the Lamp script without a dither, bypassing the OSS bug and resulting in two exposures/FGS with LAMP=ON in both. This offset will allow for sky-source removal (the FGS has no shutter or opaque element).

Since the FGS lacks a shutter, the images will be of lamp plus sky. Therefore it is important that the sky contribution can be removed so that the lamp data can be used to monitor FGS response over time. For this reason it is necessary and important to choose a "target" field that is sparsely populated with "external" source. An additional constraint is to satisfy the MAZ requirement. The "target" (or more appropriately, the "pointing direction") selected here ("Northern-FGS_Lamp-Field") at ecliptic coordinates = $(80.196, +57.42)$ is a sparse field that apparently satisfies the MAZ constraints for the selected ranges of dates specified for the execution of the exposures.

Note: Here are the nominal dates for executing the observations.

TIMING CONSTRAINTS

Observations 1, 2, 3, 4 should be done within Oct-Dec 2023.

Observations (1&2) and ((3&4) are non-interruptible.

Observations 5,6,7, 8 should be done within Mar-Apr 2024.

Observations (5&6) and (7&8) are non-interruptible.

JWST Proposal 4494 (Created: Wednesday, May 3, 2023 at 2:01:24 PM Eastern Standard Time) - Overview

However, since we did not get the lamp exposure at the second "dither" point in the earlier cycles (due to the OSS bug), we have advanced the "epoch 1" observations to become scheduable as early as June 2023. In later cycles, if we continue to acquire Lamp data, we will adjust the timing for "epoch 1" observations.

Proposal 4494 - Targets - CAL-FGS-201 Internal Lamp Flat Field

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000		
<i>Comments:</i> Category=Calibration Description=[Telescope/sky background]					

Proposal 4494 - Observation 1 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 1: G1 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER1			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Between Dates 01-JUN-2023 and 31-DEC-2023</p> <p>No Parallel Attachments</p> <p>Group Observations 1, 2, Non-interruptible</p>						

Proposal 4494 - Observation 2 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 2: G1 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER1			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Offset 30.0 arcsec, 30.0 arcsec No Parallel Attachments</p> <p>Group Observations 1, 2, Non-interruptible</p>						

Proposal 4494 - Observation 3 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 3: G2 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER2			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Between Dates 01-JUN-2023 and 31-DEC-2023</p> <p>No Parallel Attachments</p> <p>Group Observations 3, 4, Non-interruptible</p>						

Proposal 4494 - Observation 4 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 4: G2 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER2			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Offset 30.0 arcsec, 30.0 arcsec No Parallel Attachments</p> <p>Group Observations 3, 4, Non-interruptible</p>						

Proposal 4494 - Observation 5 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 5: G1 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 5:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER1			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Between Dates 01-MAR-2024 and 30-APR-2024</p> <p>No Parallel Attachments</p> <p>Group Observations 5, 6, Non-interruptible</p>						

Proposal 4494 - Observation 6 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 6: G1 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER1			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Offset 30.0 arcsec, 30.0 arcsec No Parallel Attachments</p> <p>Group Observations 5, 6, Non-interruptible</p>						

Proposal 4494 - Observation 7 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 7: G2 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER2			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Between Dates 01-MAR-2024 and 30-APR-2024</p> <p>No Parallel Attachments</p> <p>Group Observations 7, 8, Non-interruptible</p>						

Proposal 4494 - Observation 8 - CAL-FGS-201 Internal Lamp Flat Field

Wed May 03 19:01:24 GMT 2023

Observation	<p>Proposal 4494, Observation 8: G2 full frame only</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS Internal Flat</p>						
Diagnostics	(Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous		
	(1)	Northern-FGS-Lamp-field	RA: 03 55 19.8930 (58.8328875d) Dec: +79 47 48.78 (79.79688d) Equinox: J2000				
	<p><i>Comments:</i> <i>Category=Calibration</i> <i>Description=[Telescope/sky background]</i></p>						
Template	Detector			Calibration Type			
	GUIDER2			FULLONLY			
Dithers	#	Primary Dithers			Subpixel Positions		
	1	1			1		
Spectral Elements	#	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time ETC Wkbk.Calc ID
	1	FGSRAPID	10	5	1	5	590.522
Special Requirements	<p>Offset 30.0 arcsec, 30.0 arcsec No Parallel Attachments</p> <p>Group Observations 7, 8, Non-interruptible</p>						