



6608 - CAL-FGS-202 Geometric Distortion and Scale

Cycle: 3, 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>
Cycle 3 Epoch 1				
	1	FGS1	FGS External Calibration	(1) LMC-ASTROMETRIC
	2	FGS2	FGS External Calibration	(1) LMC-ASTROMETRIC
Cycle 3 Epoch 2				
	3	FGS1	FGS External Calibration	(1) LMC-ASTROMETRIC
	4	FGS2	FGS External Calibration	(1) LMC-ASTROMETRIC

ABSTRACT

This proposal monitors the geometric distortion & pixel scale of both FGS Guide channels. The LMC astrometric field is imaged via FGS in calibration mode, obtaining full frame images at 5 different positions within the astrometric field for each of the two channels. The mid-point of the catalog will be placed at the center of the FGS channel being calibrated (the other channel will be guiding). This will ensure that (1) the same stars are used to calibrate FGS1 and FGS2, and (2) we will thus obtain an accurate measure of the relative sensitivity of Guiders 1 & 2. This program is similar to FGS Cycle 2 4494. Epoch 1 observations should be done Sep-Oct 2024. Epoch 2 observations should be done Apr-May 2025.

This calibration program may change in response to system developments and the final Cycle 3 science program.

OBSERVING DESCRIPTION

FGS geometric calibration images: the mid-point of the catalog will be placed at the center of the FGS channel being calibrated (the other channel will be executing the guide function on a single guide star, which need not be an entry in the LMC catalog). This will assure that:

- (1) the same stars are used to calibrate FGS1 and FGS2,
- (2) we will thus obtain an accurate measure of the relative sensitivity of guiders 1 & 2

The imaging channel will operate in 'calibration mode' using the FGS External Calibration APT template. A 5-point primary dither pattern is used to acquire full frame images of the star field.

Since NIRCam and NIRISS will also be using the LMC astrometric field for the same purpose, it would be of benefit to FGS if they observed the same stars as FGS, as this would provide color information to the FGS team that can be used to refine our understanding of the FGS sensitivity.

TIMING CONSTRAINTS

Observations 1 & 2 should be done Sep-Oct 2024.

Observations 1 & 2 should be grouped within 2 days.

Observations 3 & 4 should be done Apr-May 2025.

Observations 3 & 4 should be grouped within 2 days.

Proposal 6608 - Targets - CAL-FGS-202 Geometric Distortion and Scale

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	LMC-ASTROMETRIC	RA: 05 21 57.3030 (80.4887625d) Dec: -69 29 57.90 (-69.49942d) Equinox: J2000		Comments: This location in LMC was taken from earlier HST observations to establish an astrometric calibration field common to HST and JWST missions [REFERENCE proposal or paper] The RA, DEC was changed to match the coordinates in program 1018 old/cyc1: 05 22 40.0000, -69 32 0.00 new/cyc2/1018: 05 21 57.3030, -69 29 57.90 Category=Calibration Description=[Astrometric]

Proposal 6608 - Observation 1 - CAL-FGS-202 Geometric Distortion and Scale

Fri Jun 21 18:00:25 GMT 2024

Observation	<p>Proposal 6608, Observation 1: FGS1</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS External Calibration</p> <p><i>Comments: For this observation, the mid-point of the catalog will be placed at the center of the FGS1 channel (FGS2 will be executing the guide function on a single guide star, which need not be an entry in the LMC catalog).</i></p>																						
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Special Requirements	<p>Between Dates 01-SEP-2024 and 31-OCT-2024</p> <p>Sequence Visits , Non-interruptible</p> <p>Visits Same PA</p> <p>Group Observations 1, 2 within 2 Days</p>																						

Proposal 6608 - Observation 2 - CAL-FGS-202 Geometric Distortion and Scale

Fri Jun 21 18:00:25 GMT 2024

Observation	<p>Proposal 6608, Observation 2: FGS2</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS External Calibration</p> <p><i>Comments: For this observation, the mid-point of the catalog will be placed at the center of the FGS2 channel (FGS1 will be executing the guide function on a single guide star, which need not be an entry in the LMC catalog).</i></p>																						
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Proposal 6608 - Observation 3 - CAL-FGS-202 Geometric Distortion and Scale

Fri Jun 21 18:00:25 GMT 2024

Observation	<p>Proposal 6608, Observation 3: FGS1</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: FGS External Calibration</p> <p><i>Comments: For this observation, the mid-point of the catalog will be placed at the center of the FGS1 channel (FGS2 will be executing the guide function on a single guide star, which need not be an entry in the LMC catalog).</i></p>																						
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Proposal 6608 - Observation 4 - CAL-FGS-202 Geometric Distortion and Scale

Fri Jun 21 18:00:25 GMT 2024

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