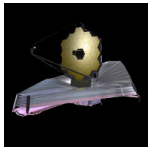

4470 - NIRISS Deep Imaging PSFs

Cycle: 2, Proposal Category: CAL/NIRISS

INVESTIGATORS

Name	*Institution*
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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1		NIRISS Imaging	(1) CL-MELOTTE-111-AV-1898
	2		NIRISS External Calibration	(1) CL-MELOTTE-111-AV-1898

ABSTRACT

We request time to make deep imaging PSF observations of a bright, isolated star to measure the faint PSF wings. The purpose of the observations is to provide template PSFs for bright, saturated stars to allow profile fitting photometry using only the PSF wings. Such measurements have been valuable for the Spitzer Space Telescope, and in the NIRISS case are needed because most of the stars seen in imaging mode that are in existing photometric catalougues (2MASS or WISE, for example) are saturated even in short NIRISS exposures.

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

OBSERVING DESCRIPTION

We request a series of imaging observations of a bright, isolated star in the 12 NIRISS imaging filters. These include both full frame images where the core is saturated but which allow the wings of the PSF to be measured and a short observation in the SUB64 calibration sub-array to get a measurement of the stellar core for accurate photometry. The combination of these observations will allow tempate PSFs out to the far wings for profile-fitting photometry of saturated stars. This approach has been valuable for the Spitzer Space Telescope due to the stability of the detector and the PSF. We expect NIRISS to be similarly stable, and hence that with the PSF wing templates from this observation we will be able to make accurate photometric measurements of saturated stars in general imaging fields. This is important because most of the available all-sky photometry at the NIRISS wavelengths is for stars that will saturate in even a short NIRISS observation (the 2MASS catalogue, for example). We need this capability to allow direct comparison of NIRISS photometry to these widely used catalogues.

Proposal 4470 - Targets - NIRISS Deep Imaging PSFs

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	CL-MELOTTE-111-AV-1898	RA: 12 29 49.5769 (187.4565704d) Dec: +27 07 49.53 (27.13042d) Equinox: J2000	Proper Motion RA: -0.0012011630353686595 sec of time/yr Proper Motion Dec: 0.006455 arcsec/yr Parallax: 0.0009475" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[G dwarfs]
Extended=NO

Observation

Proposal 4470, Observation 1

Mon May 01 13:00:29 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRISS Imaging

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)	CL-MELOTTE-111-AV-1898	RA: 12 29 49.5769 (187.4565704d) Dec: +27 07 49.53 (27.13042d) Equinox: J2000	Proper Motion RA: -0.0012011630353686595 sec of time/yr Proper Motion Dec: 0.006455 arcsec/yr Parallax: 0.0009475" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[G dwarfs]
Extended=NO

Dithers

#	Image Dithers	Pattern Size
1	4	MEDIUM

Spectral Elements

#	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F090W		NISRAPID	2	3	4	12	386.524	
2	F115W		NISRAPID	2	3	4	12	386.524	
3	F140M		NISRAPID	2	3	4	12	386.524	
4	F150W		NISRAPID	2	3	4	12	386.524	
5	F158M		NISRAPID	2	3	4	12	386.524	
6	F200W		NISRAPID	2	3	4	12	386.524	
7	F277W		NISRAPID	2	3	4	12	386.524	
8	F356W		NISRAPID	2	3	4	12	386.524	
9	F380M		NISRAPID	2	3	4	12	386.524	
10	F430M		NISRAPID	2	3	4	12	386.524	
11	F444W		NISRAPID	2	5	4	20	644.206	
12	F480M		NISRAPID	15	1	4	4	687.153	

Observation

Proposal 4470, Observation 2

Mon May 01 13:00:29 GMT 2023

Diagnostic Status: Warning

Observing Template: NIRISS External Calibration

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)	CL-MELOTTE-111-AV-1898	RA: 12 29 49.5769 (187.4565704d) Dec: +27 07 49.53 (27.13042d) Equinox: J2000	Proper Motion RA: -0.0012011630353686595 sec of time/yr Proper Motion Dec: 0.006455 arcsec/yr Parallax: 0.0009475" Epoch of Position: 2015.5	

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=Star
Description=[G dwarfs]
Extended=NO

Acquisition

#	Target
1	NONE

Template

Pointing Type
PRIME

Dithers

#	Pattern Type	Image Dithers	Primary Dithers	Subpixel Positions	Pattern Size
1	IMAGING	4			

Spectral Elements

#	Subarray	Aperture	Filter Wheel	Pupil Wheel	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SUB64	DEFAULT APERTURE	CLEAR	F090W	NISRAPID	5	1	4	4	1.174	
2	SUB64	DEFAULT APERTURE	CLEAR	F115W	NISRAPID	5	1	4	4	1.174	
3	SUB64	DEFAULT APERTURE	CLEAR	F140M	NISRAPID	5	1	4	4	1.174	
4	SUB64	DEFAULT APERTURE	CLEAR	F150W	NISRAPID	5	1	4	4	1.174	
5	SUB64	DEFAULT APERTURE	CLEAR	F158M	NISRAPID	5	1	4	4	1.174	
6	SUB64	DEFAULT APERTURE	CLEAR	F200W	NISRAPID	5	1	4	4	1.174	
7	SUB64	DEFAULT APERTURE	F277W	CLEARP	NISRAPID	5	1	4	4	1.174	
8	SUB64	DEFAULT APERTURE	F356W	CLEARP	NISRAPID	5	1	4	4	1.174	
9	SUB64	DEFAULT APERTURE	F380M	CLEARP	NISRAPID	20	1	4	4	3.904	
10	SUB64	DEFAULT APERTURE	F430M	CLEARP	NISRAPID	20	1	4	4	3.904	
11	SUB64	DEFAULT APERTURE	F444W	CLEARP	NISRAPID	20	1	4	4	3.904	
12	SUB64	DEFAULT APERTURE	F480M	CLEARP	NISRAPID	20	1	4	4	3.904	