



## 1507 - AMI Sub80 Fractional Throughput

Cycle: 1, Proposal Category: CAL/NIRISS

### INVESTIGATORS

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### OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1		NIRISS External Calibration	(1) TYC-4227-658-1

### ABSTRACT

Observations will be made of the single star ETV 4227-658-1 in the SUB80 read-out in regular imaging and then with the NRM in the beam to measure the fractional throughput of the mask for photometric calibration purposes. This measurement differs from the full frame measurement because there will be signal losses out of the small sub-array, hence the fractional throughput measured here will not be the same as measured with the full frame imaging.

This calibration program is provisional and may change in response to system developments and the final science program.

### OBSERVING DESCRIPTION

Observations will be made of the single star TYC-4227-658-1, which is in the continuous viewing zone and which is of the proper brightness to be observed in the SUB80 read-out in regular imaging for the four AMI filters. A second observation of the source will be made with the NRM in the

beam for the four filters. Comparison of these observations will provide the relative photometric correction factors between the acquisition images and the NRM observations for NIRISS science observations. This assumes that the aperture losses can be accurately calculated from PSF models.

# Proposal 1507 - Targets - AMI Sub80 Fractional Throughput

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
	(1)	TYC-4227-658-1	RA: 18 36 45.5205 (279.1896688d) Dec: +66 07 27.70 (66.12436d) Equinox: J2000  <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[A dwarfs]		
(2)	HD-49306	RA: 06 42 25.5453 (100.6064387d) Dec: -67 50 35.16 (-67.84310d) Equinox: J2000  <i>Comments: This star would be used if only one filter measurement of the throughput is deemed necessary. It is safer to measure all four AMI filters. This star is selected for getting a clean measurement rapidly in the F480M filter. It is too bright for making the measurement in the other AMI filters without saturation.</i>  Spectral type A0V, WISE W2 magnitude 6.767 +/- 0.021. (However the core of the PSF is saturated in WISE W2. The K magnitude is 6/755 +/- 0.029, consistent with zero colour from K to M-band.) Category=Star Description=[A dwarfs] Extended=NO	Proper Motion RA: -20.289 mas/yr Proper Motion Dec: 37.575 mas/yr Parallax: 0.00775" Epoch of Position: 2015		

# Proposal 1507 - Observation 1 - AMI Sub80 Fractional Throughput

Thu Jun 30 19:00:58 GMT 2022

<b>Observation</b>	<b>Proposal 1507, Observation 1</b> <b>Diagnostic Status: Warning</b> Observing Template: NIRISS External Calibration											
<b>Diagnostics</b>	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.											
<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>			<b>Targ. Coord. Corrections</b>			<b>Miscellaneous</b>			
	(1)	TYC-4227-658-1	RA: 18 36 45.5205 (279.1896688d) Dec: +66 07 27.70 (66.12436d) Equinox: J2000									
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Star Description=[A dwarfs]											
<b>Acquisition</b>	<b>#</b>	<b>Target</b>	<b>Acquisition Mode</b>	<b>Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>		
	1	1 TYC-4227-658-1	AMIFAINT	F480M	NISRAPID	11	1	1	0.622	23225		
<b>Template</b>	<b>Pointing Type</b> PRIME											
<b>Dithers</b>	<b>#</b>	<b>Pattern Type</b>			<b>Image Dithers</b>		<b>Primary Dithers</b>		<b>Subpixel Positions</b>		<b>Pattern Size</b>	
	1	AMI					NONE		NONE			
<b>Spectral Elements</b>	<b>#</b>	<b>Subarray</b>	<b>Aperture</b>	<b>Filter Wheel</b>	<b>Pupil Wheel</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	SUB80		F480M	NRM	NISRAPID	60	50	1	50	231.116	
	2	SUB80		F380M	NRM	NISRAPID	30	50	1	50	117.956	
	3	SUB80		F430M	NRM	NISRAPID	40	50	1	50	155.676	
	4	SUB80		F277W	NRM	NISRAPID	10	30	1	30	25.51	
	5	SUB80		F277W	CLEARP	NISRAPID	3	30	1	30	9.667	
	6	SUB80		F430M	CLEARP	NISRAPID	8	50	1	50	34.972	
	7	SUB80		F380M	CLEARP	NISRAPID	8	50	1	50	34.972	
	8	SUB80		F480M	CLEARP	NISRAPID	8	60	1	60	41.966	