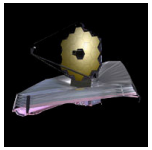

1522 - Imaging Filter Characterization

Cycle: 1, Proposal Category: CAL/MIRI

INVESTIGATORS

Name	*Institution*
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OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1		MIRI Medium Resolution Spectroscopy	(1) 1998-BC1
	91	MRS - WOPR of failed 01	MIRI Medium Resolution Spectroscopy	(4) 1999-XZ93
	2		MIRI Imaging	(1) 1998-BC1
	92	Imager - WOPR of failed 02	MIRI Imaging	(4) 1999-XZ93
	3		MIRI Medium Resolution Spectroscopy	(1) 1998-BC1
	93	MRS - WOPR of failed 03	MIRI Medium Resolution Spectroscopy	(4) 1999-XZ93

ABSTRACT

This activity will test the ground-based filter transmission functions by observing a red object through all nine MIRI imaging filters. The target will be a main-belt asteroid which will also be observed with the MRS to provide a spectrum covering the full 5-28 um wavelength range. Comparing synthetic photometry of the asteroid using the MRS spectrum of the asteroid with the actual photometry with the imager will test the filter functions and check for any possible filter leaks of red or blue light. Similar analysis on standard stars, comparing actual photometry and synthetic photometry with both model spectra and MRS spectra, will provide further tests. This activity will be performed jointly with CAL-NIS-024; combining the

observations may lead to some savings compared to the quoted time requirement.

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

OBSERVING DESCRIPTION

This CAL activity observes a moving target in the Solar System in both the MRS and the imager.

The current target chosen, 5283381 (2008 ST291), is a placeholder, and a new target will need to be selected once we are closer to launch. Consequently, integration times are still only approximate at this stage.

The previous placeholder target, 300128 Panditjasraj, remains in the target list but is currently unused.

Special requirements: Observations 1, 2, and 3 are to be executed as a non-interruptible sequence.

TIMING CONSTRAINTS

This program should be executed in the first six months of Cycle 1.

Failed or missed observations should be made up in the first six months of Cycle 1.

Proposal 1522 - Targets - Imaging Filter Characterization

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	1998-BC1	TYPE=ASTEROID,A=3.182070617342272,E=0.1494473459389163,I=0.2977520690423893,O=182.0960455266541,W=281.1257068624592,M=31.09143940924593,EQUINOX=J2000,EPOCH=08-MAR-2015:00:00:00,EpochTimeScale=TDB		
Comments: Extended=Unknown				
(2)	2008-ST291	TYPE=ASTEROID,A=98.85154329725658,E=0.5705189306438885,I=20.82443701967762,O=331.1548163028945,W=324.5677575459028,M=22.16125693651673,EQUINOX=J2000,EPOCH=10-NOV-2014:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(3)	PANDITJASRAJ	TYPE=ASTEROID,A=3.039761849215283,E=0.05717972022173207,I=0.9215774409589702,O=39.18617897249987,W=302.2992878634081,M=170.6186570531187,EQUINOX=J2000,EPOCH=19-NOV-2013:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				
(4)	1999-XZ93	TYPE=ASTEROID,A=2.643323220344898,E=0.1521254842971663,I=15.72273211704259,O=104.9676389435862,W=280.6865935321183,M=73.75697446989379,EQUINOX=J2000,EPOCH=29-MAR-2017:00:00:00,EpochTimeScale=TDB		
Comments: Extended=NO				

Observation

Proposal 1522, Observation 1 Mon Mar 13 16:00:56 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	1998-BC1	TYPE=ASTEROID,A=3.182070617342272,E=0.1494473459389163,I=0.2977520690423893,O=182.0960455266541,W=281.1257068624592,M=31.09143940924593,EQUINOX=J2000,EPOCH=08-MAR-2015:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1500W	FAST	10	1	1	27.75	105817.22

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
ALL	NO	FULL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	POINT SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SHORT(A)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
1	SHORT(A)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	
2	MEDIUM(B)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
2	MEDIUM(B)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	
3	LONG(C)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
3	LONG(C)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	

Special Requirements	
	Before Date 25-DEC-2022 Sequence Observations 1, 2, 3, Non-interruptible DEFAULT WINDOW: ANGULAR RATE 1998-BC1 FROM JWST LESS THAN 0.03

Observation

Proposal 1522, Observation 91: MRS - WOPR of failed 01

Mon Mar 13 16:00:56 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Visit 91:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

(Visit 91:1) Informational (Form): Visit schedulable, but most scheduling windows are when JWST is pointed in direction of greatest micrometeoroid impact risk. This is likely due to scheduling special requirements.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(4)	1999-XZ93	TYPE=ASTEROID,A=2.643323220344898,E=0.1521254842971663,I=15.72273211704259,O=104.9676389435862,W=280.6865935321183,M=73.75697446989379,EQUINOX=J2000,EPOCH=29-MAR-2017:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Acquisition

#	Target
1	NONE

Template

AcqFilter	Primary Channel	Simultaneous Imaging	Imager Subarray
F1500W	ALL	NO	FULL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	POINT SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
2	MEDIUM(B)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	
3	SHORT(A)	MRSLONG		FASTR1	200	1	1	Dither 1	4	4	2220.032	
3	SHORT(A)	MRSSHORT		FASTR1	200	1	1	Dither 1	4	4	2220.032	

Special Requirements	
	Between Dates 14-MAR-2023 and 29-MAR-2023 Sequence Observations 91, 92, 93, Non-interruptible DEFAULT WINDOW: ANGULAR RATE 1999-XZ93 FROM JWST LESS THAN 0.075

Observation

Proposal 1522, Observation 2

Mon Mar 13 16:00:56 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	1998-BC1	TYPE=ASTEROID,A=3.182070617342272,E=0.1494473459389163,I=0.2977520690423893,O=182.0960455266541,W=281.1257068624592,M=31.09143940924593,EQUINOX=J2000,EPOCH=08-MAR-2015:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Template

Subarray
BRIGHTSKY

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	4-Point-Sets				1	1	POINT SOURCE	POSITIVE	DEFAULT

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F560W	FASTR1	25	1	1	Dither 1	4	4	86.528	
2	F770W	FASTR1	10	1	1	Dither 1	4	4	34.611	
3	F1000W	FASTR1	10	1	1	Dither 1	4	4	34.611	
4	F1130W	FASTR1	10	1	1	Dither 1	4	4	34.611	
5	F1280W	FASTR1	10	1	1	Dither 1	4	4	34.611	
6	F1500W	FASTR1	10	1	1	Dither 1	4	4	34.611	
7	F1800W	FASTR1	10	1	1	Dither 1	4	4	34.611	
8	F2100W	FASTR1	10	1	1	Dither 1	4	4	34.611	
9	F2550W	FASTR1	10	1	1	Dither 1	4	4	34.611	

Special Requirements	
	Sequence Observations 1, 2, 3, Non-interruptible DEFAULT WINDOW: ANGULAR RATE 1998-BC1 FROM JWST LESS THAN 0.03

Observation

Proposal 1522, Observation 92: Imager - WOPR of failed 02

Mon Mar 13 16:00:56 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Imaging

Diagnostics

(Visit 92:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(4)	1999-XZ93	TYPE=ASTEROID,A=2.643232203448 98,E=0.1521254842971663,I=15.72273211704259,O=104.9676389435862,W=280.6865935321183,M=73.75697446989379,EQUINOX=J2000,EPOCH=29-MAR-2017:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Template

Subarray
BRIGHTSKY

Dithers

#	Dither Type	Starting Point	Number of Points	Points	Starting Set	Number of Sets	Optimized For	Direction	Pattern Size
1	CYCLING	1	4		1	1			LARGE

Spectral Elements

#	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	F560W	FASTR1	20	1	1	Dither 1	4	4	69.222	
2	F770W	FASTR1	10	1	1	Dither 1	4	4	34.611	
3	F1000W	FASTR1	10	1	1	Dither 1	4	4	34.611	
4	F1130W	FASTR1	10	1	1	Dither 1	4	4	34.611	
5	F1280W	FASTR1	10	1	1	Dither 1	4	4	34.611	
6	F1500W	FASTR1	10	1	1	Dither 1	4	4	34.611	
7	F1800W	FASTR1	10	1	1	Dither 1	4	4	34.611	
8	F2100W	FASTR1	10	1	1	Dither 1	4	4	34.611	
9	F2550W	FASTR1	10	1	1	Dither 1	4	4	34.611	

Special Requirements	
	Sequence Observations 91, 92, 93, Non-interruptible DEFAULT WINDOW: ANGULAR RATE 1999-XZ93 FROM JWST LESS THAN 0.075

Observation

Proposal 1522, Observation 3 Mon Mar 13 16:00:56 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(1)	1998-BC1	TYPE=ASTEROID,A=3.182070617342272,E=0.1494473459389163,I=0.2977520690423893,O=182.0960455266541,W=281.1257068624592,M=31.09143940924593,EQUINOX=J2000,EPOCH=08-MAR-2015:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1500W	FAST	10	1	1	27.75	105817.22

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
ALL	NO	FULL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	POINT SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SHORT(A)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
1	SHORT(A)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	
2	MEDIUM(B)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
2	MEDIUM(B)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	
3	LONG(C)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
3	LONG(C)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	

Special Requirements	
	Sequence Observations 1, 2, 3, Non-interruptible DEFAULT WINDOW: ANGULAR RATE 1998-BC1 FROM JWST LESS THAN 0.03

Observation

Proposal 1522, Observation 93: MRS - WOPR of failed 03

Mon Mar 13 16:00:56 GMT 2023

Diagnostic Status: Warning

Observing Template: MIRI Medium Resolution Spectroscopy

Diagnostics

(Visit 93:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(4)	1999-XZ93	TYPE=ASTEROID,A=2.643232203440898,E=0.1521254842971663,I=15.72273211704259,O=104.9676389435862,W=280.6865935321183,M=73.75697446989379,EQUINOX=J2000,EPOCH=29-MAR-2017:00:00:00,EpochTimeScale=TDB		

Comments: Extended=NO

Acquisition

#	Target	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	SAME	F1500W	FAST	10	1	1	27.75	105817.22

Template

Primary Channel	Simultaneous Imaging	Imager Subarray
ALL	NO	FULL

Dithers

#	Dither Type	Optimized For	Direction
1	4-Point	POINT SOURCE	NEGATIVE

Spectral Elements

#	Wavelength Range	Detector	Filter	Readout Pattern	Groups/Int	Integrations/Exp	Exposures/Dith	Dither	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
1	LONG(C)	MRSLONG		FASTR1	50	1	1	Dither 1	4	4	555.008	
1	LONG(C)	MRSSHORT		FASTR1	50	1	1	Dither 1	4	4	555.008	
2	MEDIUM(B)	MRSLONG		FASTR1	100	1	1	Dither 1	4	4	1110.016	
2	MEDIUM(B)	MRSSHORT		FASTR1	100	1	1	Dither 1	4	4	1110.016	
3	SHORT(A)	MRSLONG		FASTR1	200	1	1	Dither 1	4	4	2220.032	
3	SHORT(A)	MRSSHORT		FASTR1	200	1	1	Dither 1	4	4	2220.032	

Special Requirements	
	Sequence Observations 91, 92, 93, Non-interruptible DEFAULT WINDOW: ANGULAR RATE 1999-XZ93 FROM JWST LESS THAN 0.075