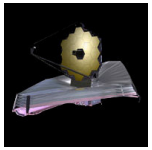

2744 - Moving Target Tracking Test

Cycle: 1, Proposal Category: ENG

INVESTIGATORS

Name	*Institution*	*E-Mail*
Mr. Tony Roman (PI)	**Space Telescope Science Institute**	**aroman@stsci.edu**
Dr. Bryan Jason Holler (CoI)	Space Telescope Science Institute	bholler@stsci.edu
Dr. John A. Stansberry (CoI)	Space Telescope Science Institute	jstans@stsci.edu

OBSERVATIONS

Folder	*Observation*	*Label*	*Observing Template*	*Science Target*
Observation Folder				
	1	Fixed Target Setup	Pointing Only	(1) SCDW020453
	2	110 mas/s	NIRCam Imaging	(2) 2010DF1
	3	110 mas/s	NIRCam Imaging	(2) 2010DF1
	10	90 mas/s asteroid	NIRCam Imaging	(2) 2010DF1
	11	90 mas/s great circle	NIRCam Imaging	(2) 2010DF1

ABSTRACT

This program tests JWST's ability to track a moving target at a rate of ~110 milliarcseconds/second. JWST's previous highest angular rate moving target observaiton was at 67 milliarcseconds/second.

OBSERVING DESCRIPTION

This program tests JWST's ability to track a moving target at a rate of ~110 milliarcseconds/second. JWST's previous highest angular rate moving target observaiton was at 67 milliarcseconds/second.

Proposal 2744 - Targets - Moving Target Tracking Test

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	SCDW020453	RA: 19 56 19.5946 (299.0816442d) Dec: -32 05 12.87 (-32.08691d) Equinox: J2000		

Comments:
Category=Unidentified
Description=[Blank field]

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(2)	2010DF1	TYPE=ASTEROID,A=1.598847473547589,E=0.5030825802004651,I=20.06571639762983,O=154.9617176108511,W=101.7261991136566,M=177.8487761717419,EQUINOX=J2000,EPOCH=30-MAY-2013:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Observation

Proposal 2744, Observation 1: Fixed Target Setup Mon Aug 29 22:00:51 GMT 2022

Diagnostic Status: Warning

Observing Template: Pointing Only

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)	SCDW020453	RA: 19 56 19.5946 (299.0816442d) Dec: -32 05 12.87 (-32.08691d) Equinox: J2000		

Comments:
Category=Unidentified
Description=[Blank field]

Template

Aperture	Duration
FGS1_FULL	1

Spectral Elements

#
1

Special Requirements

Aperture PA Range 67.18429573 to 67.18429573 Degrees (V3 68.4255 to 68.4255)
PCS Mode COARSE
No Parallel
Required
Special Commanding Pointing Only

Observation

Proposal 2744, Observation 2: 110 mas/s Mon Aug 29 22:00:51 GMT 2022

Diagnostic Status: Error

Observing Template: NIRCam Imaging

MOSS Planning Start: 01-SEP-2022:00:00:00

MOSS Planning End: 01-OCT-2022:00:00:00

Comments: DART impact time is September 26, 2022 23:14 UT +/- 10 miniutes. Observe as close as possible to that time.

Diagnostics

(110 mas/s (Obs 2)) Error (Form): JWST cannot track a moving target at an angular rate greater than 100.0 milliarcseconds/second.

(110 mas/s (Obs 2)) Error (Form): JWST cannot track a moving target at an angular rate greater than 100.0 milliarcseconds/second.

(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
(2)	2010DF1	TYPE=ASTEROID,A=1.598847473547589,E=0.5030825802004651,I=20.06571639762983,O=154.9617176108511,W=101.7261991136566,M=177.8487761717419,EQUINOX=J2000,EPOCH=30-MAY-2013:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Template

Module	Subarray
B	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	NONE		STANDARD		1

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F323N+F322W2	RAPID	2	10	10	1	311.366	

Special Requirements

Before Date 10-SEP-2022:00:00:00
Guide Star ID SCDW020453 in Guider 1

DEFAULT WINDOW: ANGULAR RATE 2010DF1 FROM JWST LESS THAN 0.115
ANGULAR RATE 2010DF1 FROM JWST GREATER THAN 0.105

Observation

Proposal 2744, Observation 3: 110 mas/s Mon Aug 29 22:00:51 GMT 2022

Diagnostic Status: Error

Observing Template: NIRCam Imaging

MOSS Planning Start: 01-SEP-2022:00:00:00

MOSS Planning End: 01-OCT-2022:00:00:00

Comments: DART impact time is September 26, 2022 23:14 UT +/- 10 miniutes. Observe as close as possible to that time.

Diagnostics

(110 mas/s (Obs 3)) Error (Form): JWST cannot track a moving target at an angular rate greater than 100.0 milliarcseconds/second.

(110 mas/s (Obs 3)) Error (Form): JWST cannot track a moving target at an angular rate greater than 100.0 milliarcseconds/second.

(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
(2)	2010DF1	TYPE=ASTEROID,A=1.598847473547589,E=0.5030825802004651,I=20.06571639762983,O=154.9617176108511,W=101.7261991136566,M=177.8487761717419,EQUINOX=J2000,EPOCH=30-MAY-2013:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Template

Module	Subarray
B	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	NONE		STANDARD		1

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F323N+F322W2	RAPID	2	10	10	1	311.366	

Special Requirements

Before Date 10-SEP-2022:00:00:00
Guide Star ID SCDW021248 in Guider 2

DEFAULT WINDOW: ANGULAR RATE 2010DF1 FROM JWST LESS THAN 0.115
ANGULAR RATE 2010DF1 FROM JWST GREATER THAN 0.105

Observation

Proposal 2744, Observation 10: 90 mas/s asteroid Mon Aug 29 22:00:51 GMT 2022

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

MOSS Planning Start: 01-SEP-2022:00:00:00

MOSS Planning End: 01-OCT-2022:00:00:00

Comments: DART impact time is September 26, 2022 23:14 UT +/- 10 miniutes. Observe as close as possible to that time.

Diagnostics

(90 mas/s asteroid (Obs 10)) Warning (Form): JWST does not normally track moving targets at angular rates greater than 30.0 milliarcseconds/second. Please discuss this constraint with your program coordinator.

(90 mas/s asteroid (Obs 10)) Warning (Form): JWST does not normally track moving targets at angular rates greater than 30.0 milliarcseconds/second. Please discuss this constraint with your program coordinator.

(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(2)	2010DF1	TYPE=ASTEROID,A=1.598847473547589,E=0.5030825802004651,I=20.06571639762983,O=154.9617176108511,W=101.7261991136566,M=177.8487761717419,EQUINOX=J2000,EPOCH=30-MAY-2013:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Template

Module	Subarray
B	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	NONE		STANDARD		1

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F323N+F322W2	RAPID	2	10	10	1	311.366	

Special Requirements

Before Date 11-SEP-2022:00:00:00

DEFAULT WINDOW: ANGULAR RATE 2010DF1 FROM JWST LESS THAN 0.095
ANGULAR RATE 2010DF1 FROM JWST GREATER THAN 0.085

Observation

Proposal 2744, Observation 11: 90 mas/s great circle Mon Aug 29 22:00:51 GMT 2022

Diagnostic Status: Warning

Observing Template: NIRCam Imaging

MOSS Planning Start: 01-SEP-2022:00:00:00

MOSS Planning End: 01-OCT-2022:00:00:00

Comments: DART impact time is September 26, 2022 23:14 UT +/- 10 miniutes. Observe as close as possible to that time.

Diagnostics

(90 mas/s great circle (Obs 11)) Warning (Form): JWST does not normally track moving targets at angular rates greater than 30.0 milliarcseconds/second. Please discuss this constraint with your program coordinator.

(90 mas/s great circle (Obs 11)) Warning (Form): JWST does not normally track moving targets at angular rates greater than 30.0 milliarcseconds/second. Please discuss this constraint with your program coordinator.

(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.

Solar System Targets

#	Name	Level 1	Level 2	Level 3
(2)	2010DF1	TYPE=ASTEROID,A=1.598847473547589,E=0.5030825802004651,I=20.06571639762983,O=154.9617176108511,W=101.7261991136566,M=177.8487761717419,EQUINOX=J2000,EPOCH=30-MAY-2013:00:00:00,EpochTimeScale=TDB		

Comments: Extended=Unknown

Template

Module	Subarray
B	FULL

Dithers

#	Primary Dither Type	Primary Dithers	Subpixel Dither Type	Dither Size	Subpixel Positions
1	NONE		STANDARD		1

Spectral Elements

#	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
1	F164N+F150W2	F323N+F322W2	RAPID	2	10	10	1	311.366	

Special Requirements

Before Date 11-SEP-2022:00:00:00

DEFAULT WINDOW: ANGULAR RATE 2010DF1 FROM JWST LESS THAN 0.095
ANGULAR RATE 2010DF1 FROM JWST GREATER THAN 0.085