



4514 - Dynamics of the Andromeda Galaxy Satellite System

Cycle: 3, Proposal Category: GTO

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. Roeland P. van der Marel (PI)	Space Telescope Science Institute
Dr. Sangmo Tony Sohn (CoI) (Contact)	Space Telescope Science Institute
Dr. Jay Anderson (CoI)	Space Telescope Science Institute
Dr. Andrea Bellini (CoI)	Space Telescope Science Institute
Dr. Mattia Libralato (CoI) (ESA Member)	Space Telescope Science Institute - ESA - JWST
Dr. Laura L. Watkins (CoI) (ESA Member)	Space Telescope Science Institute - ESA

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1		NIRCam Imaging	(1) ANDROMEDA-XXII
	2		NIRCam Imaging	(2) ANDROMEDA-XIV
	3		NIRCam Imaging	(3) ANDROMEDA-XVII

ABSTRACT

We will observe three dwarf spheroidal companions of the Andromeda Galaxy M31, to determine their bulk proper motions. The targets are And XXII, XIV, and XVII, and their PMs will help advance our dynamical understanding of the M31 system. Proper motions will be determined either from comparison to existing HST data, or from comparison to similar JWST observations obtained in GTO Cycles 1.

OBSERVING DESCRIPTION

We will image four satellite galaxies of M31 with NIRCAM using the F150W+F277W filters. We will also obtain parallel field images with NIRISS with F150W. To minimize systematic errors in the proper motion determination, it is essential that the observations be obtained at the same

JWST Proposal 4514 (Created: Monday, July 3, 2023 at 3:06:49 PM Eastern Standard Time) - Overview

telescope orientations as for our corresponding Cycle 1 observations. For those targets that have yet to execute in Cycle 1, the orientations in this Cycle 3 program will be updated after the Cycle 1 observations have been completed.

Proposal 4514 - Targets - Dynamics of the Andromeda Galaxy Satellite System

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	ANDROMEDA-XXII	RA: 01 27 40.0000 (21.9166667d) Dec: +28 05 25.00 (28.09028d) Equinox: J2000	Epoch of Position: 2000	
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Category=Galaxy</i> <i>Description=[Dwarf galaxies, Dwarf spheroidal galaxies]</i></p>				
(2)	ANDROMEDA-XIV	RA: 00 51 35.0520 (12.8960500d) Dec: +29 41 19.90 (29.68886d) Equinox: J2000		
<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Dwarf galaxies, Dwarf spheroidal galaxies]</i> <i>Extended=NO</i></p>				
(3)	ANDROMEDA-XVII	RA: 00 37 6.4800 (9.2770000d) Dec: +44 19 18.01 (44.32167d) Equinox: J2000		
<p><i>Comments:</i> <i>Category=Galaxy</i> <i>Description=[Dwarf galaxies, Dwarf spheroidal galaxies]</i> <i>Extended=NO</i></p>				

Fixed Targets

Proposal 4514 - Observation 1 - Dynamics of the Andromeda Galaxy Satellite System

Mon Jul 03 20:06:49 GMT 2023

Observation	Proposal 4514, Observation 1 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging Comments: We use an "offset" special requirement to put the target near the center of NIRCam's B module.										
	(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)	ANDROMEDA-XXII	RA: 01 27 40.0000 (21.9166667d) Dec: +28 05 25.00 (28.09028d) Equinox: J2000			Epoch of Position: 2000					
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Dwarf galaxies, Dwarf spheroidal galaxies]											
Template	NIRCam Imaging					NIRISS Imaging					
	Module: ALL Subarray: FULL Target Placement: Module Gap										
Dithers	#	Primary Dither Type		Primary Dithers		Dither Size		Subpixel Positions		Coordinated Parallel Subpixel Selector	Dither Direct Images Primes
	1	NONE						1		4-POINT-SMALL-WITH-NIRISS	NO_DITHERING
Spectral Elements	NIRCam Imaging		Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1		F150W	F277W	SHALLOW4	6	1	4	4	4	1245.465
Spectral Elements	NIRISS Imaging		Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1		F150W		NISRAPID	6	4	4	16	16	1202.518

Proposal 4514 - Observation 1 - Dynamics of the Andromeda Galaxy Satellite System

Special Requirements

Offset 88.0 arcsec, 0.0 arcsec
No Parallel Attachments

Proposal 4514 - Observation 2 - Dynamics of the Andromeda Galaxy Satellite System

Mon Jul 03 20:06:49 GMT 2023

Observation	Proposal 4514, Observation 2 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging <i>Comments: We use an "offset" special requirement to put the target near the center of NIRCam's B module. We also use the "PA range" special requirement to match the orientation our field to that of the Cycle 1 observation.</i>									
	(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Diagnosics										
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous		
	(2)	ANDROMEDA-XIV	RA: 00 51 35.0520 (12.8960500d) Dec: +29 41 19.90 (29.68886d) Equinox: J2000							
<i>Comments:</i> Category=Galaxy Description=[Dwarf galaxies, Dwarf spheroidal galaxies] Extended=NO										
Template	NIRCam Imaging					NIRISS Imaging				
	Module: ALL Subarray: FULL Target Placement: Module Gap									
Dithers	#	Primary Dither Type		Primary Dithers	Dither Size	Subpixel Positions		Coordinated Parallel Subpixel Selector	Dither Direct Images Primes	
	1	NONE				1		4-POINT-SMALL-WITH-NIRISS	NO_DITHERING	
Spectral Elements	NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F150W	F277W	SHALLOW4	6	1	4	4	1245.465	
Spectral Elements	NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F150W		NISRAPID	6	4	4	16	1202.518	

Proposal 4514 - Observation 2 - Dynamics of the Andromeda Galaxy Satellite System

Special Requirements

Aperture PA Range 82.15 to 82.15 Degrees (V3 82.2213531 to 82.2213531)
Offset 88.0 arcsec, 0.0 arcsec
No Parallel Attachments

Proposal 4514 - Observation 3 - Dynamics of the Andromeda Galaxy Satellite System

Mon Jul 03 20:06:49 GMT 2023

Observation	Proposal 4514, Observation 3 Diagnostic Status: Warning Observing Template: NIRCcam Imaging Coordinated Parallel Template(s): NIRISS Imaging <i>Comments: We use an "offset" special requirement to put the target near the center of NIRCcam's B module. The PA range will have to be adjusted to match the Cycle 1 GTO observations when that is completed.</i>									
	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Diagnosics										
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous		
	(3)	ANDROMEDA-XVII	RA: 00 37 6.4800 (9.2770000d) Dec: +44 19 18.01 (44.32167d) Equinox: J2000							
<i>Comments: Category=Galaxy Description=[Dwarf galaxies, Dwarf spheroidal galaxies] Extended=NO</i>										
Template	NIRCcam Imaging					NIRISS Imaging				
	Module: ALL Subarray: FULL Target Placement: Module Gap									
Dithers	#	Primary Dither Type		Primary Dithers	Dither Size	Subpixel Positions		Coordinated Parallel Subpixel Selector		Dither Direct Images Primes
	1	NONE				1		4-POINT-SMALL-WITH-NIRISS		NO_DITHERING
Spectral Elements	NIRCcam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID
	1	F150W	F277W	SHALLOW4	6	1	4	4	1245.465	
Spectral Elements	NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F150W		NISRAPID	6	4	4	16	1202.518	

Proposal 4514 - Observation 3 - Dynamics of the Andromeda Galaxy Satellite System

Special Requirements

Offset 88.0 arcsec, 0.0 arcsec
No Parallel Attachments