



2875 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Cycle: 2, Proposal Category: GO

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. Adam Riess (PI)	The Johns Hopkins University
Dr. Stefano Casertano (CoI)	Space Telescope Science Institute
Dr. Louise Breuval (CoI)	The Johns Hopkins University
Dr. Lucas M. Macri (CoI)	NOIRLab - (AZ)
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Dr. Daniel Scolnic (CoI)	Duke University
Dr. Richard I Anderson (CoI) (ESA Member)	Ecole Polytechnique Federale de Lausanne

OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Observation Folder				
	1	NGC 2525	NIRCam Imaging	(1) NGC-2525
	13	NGC 2525	NIRCam Imaging	(1) NGC-2525
	2	NGC 3370	NIRCam Imaging	(7) NGC-3370
	3	NGC 3147	NIRCam Imaging	(3) NGC-3147
	7	NGC 4258	NIRCam Imaging	(8) NGC-4258
	10	NGC 4258	NIRCam Imaging	(8) NGC-4258
	9	NGC 5728	NIRCam Imaging	(5) NGC-5728
	12	NGC 3447	NIRCam Imaging	(9) NGC-3447
	6	NGC 5861	NIRCam Imaging	(6) NGC-5861
	14	NGC 5861	NIRCam Imaging	(6) NGC-5861

ABSTRACT

We propose an experiment to investigate the growing tension in measurements of the Hubble constant by measuring the most crowded, or “dirtiest”, extragalactic Cepheids in SNe Ia hosts, and comparing them with the least crowded ones, already observed by two teams in JWST Cycle 1. The unmatched resolution of JWST can largely resolve the local environs of HST Cepheids to separate these crucial standard candles from the photometric “chaff” that surrounds them and reduce the associated noise in their period-luminosity relations by nearly an order of magnitude. These crowded Cepheids provide the best leverage to discover unexpected crowding affecting Cepheid photometry at HST resolution. If JWST observations of the Cepheids in the proposed 6 hosts of 8 SNe Ia match HST, it will prove beyond reproach that HST measurements are reliable over the full range used to measure H_0 , while improving the least accurate of them. But if a photometric difference were found between JWST and HST, one which systematically grows with local stellar density, it would provide a clear detection of unexpected backgrounds unseen at the resolution of HST and allow us to calibrate their impact on the Tension. These observations will also advance two independent distance indicators that also calibrate SNe Ia and measure H_0 -the IR Tip of the Red Giant Branch (IR-TRGB) and Oxygen-rich Miras - providing a multi-pronged approach to demonstrate whether the H_0 tension is a robust feature of the Universe thus indicating the likely presence of missing physics in the cosmological model.

OBSERVING DESCRIPTION

We propose observations of over 250 known Cepheids in three filters in six galaxies hosting 8 SNe Ia while simultaneously measuring the TRGB in halo fields in the hosts and decontaminating the Mira Period Luminosity relation in two hosts.

Proposal 2875 - Targets - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	NGC-2525	RA: 08 05 38.0426 (121.4085108d) Dec: -11 25 37.43 (-11.42706d) Equinox: J2000	Proper Motion RA: 1.7554639958181612E-4 sec of time/yr Proper Motion Dec: -0.00414899991483253 arcsec/yr Epoch of Position: 2015.5	
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral galaxies]				
(2)	NGC-3021	RA: 09 50 57.1460 (147.7381083d) Dec: +33 33 12.94 (33.55359d) Equinox: J2000	Proper Motion RA: 2.7838802687989478E-5 sec of time/yr Proper Motion Dec: 4.04E-4 arcsec/yr Epoch of Position: 2015.5	
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral galaxies]				
(3)	NGC-3147	RA: 10 16 53.6461 (154.2235254d) Dec: +73 24 2.69 (73.40075d) Equinox: J2000	Proper Motion RA: 4.643957383299418E-4 sec of time/yr Proper Motion Dec: 0.0028 arcsec/yr Epoch of Position: 2015.5	
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral galaxies]				
(4)	NGC-2608	RA: 08 35 17.3304 (128.8222100d) Dec: +28 28 24.24 (28.47340d) Equinox: J2000	Proper Motion RA: 3.496244159672982E-5 sec of time/yr Proper Motion Dec: 5.33E-4 arcsec/yr Epoch of Position: 2015.5	
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral galaxies]				
(5)	NGC-5728	RA: 14 42 23.8919 (220.5995496d) Dec: -17 15 11.24 (-17.25312d) Equinox: J2000	Epoch of Position: 2015.5	
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral galaxies]				
(6)	NGC-5861	RA: 15 09 16.0913 (227.3170471d) Dec: -11 19 17.98 (-11.32166d) Equinox: J2000	Epoch of Position: 2015.5	
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral galaxies]				
(7)	NGC-3370	RA: 10 47 4.0735 (161.7669729d) Dec: +17 16 25.32 (17.27370d) Equinox: J2000	Epoch of Position: 2000	
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral galaxies]				

Fixed Targets

Proposal 2875 - Targets - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

(8) NGC-4258 RA: 12 18 58.3000 (184.7429167d)
Dec: +47 17 11.00 (47.28639d)
Equinox: J2000

Comments:
Category=Galaxy
Description=[Field galaxies]

(9) NGC-3447 RA: 10 53 23.9671 (163.3498629d) Proper Motion RA: -0.286 mas/yr
Dec: +16 46 20.74 (16.77243d) Proper Motion Dec: -0.016999956642393954 mas/yr
Equinox: J2000 Parallax: 9.14E-5"
Epoch of Position: 2000

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.

Category=Galaxy
Description=[Spiral galaxies]

Proposal 2875 - Observation 1 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 1: NGC 2525 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging																																							
Diagnostics	(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.																																							
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Proposal 2875 - Observation 1 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 90 to 110 Degrees (V3 90.07457694 to 110.07457694)
Offset 86.0 arcsec, 3.0 arcsec
No Parallel Attachments

Proposal 2875 - Observation 13 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 13: NGC 2525 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging Comments: WOPR repeat of obs 1:1.																																							
Diagnostics	(Visit 13:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. (Visit 13:1) 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.																																							
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Proposal 2875 - Observation 13 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 277 to 326 Degrees (V3 277.07457694 to 326.07457694)
Offset 86.0 arcsec, 3.0 arcsec
No Parallel Attachments

Proposal 2875 - Observation 2 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 2: NGC 3370 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging									
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		
	(7)	NGC-3370	RA: 10 47 4.0735 (161.7669729d) Dec: +17 16 25.32 (17.27370d) Equinox: J2000			Epoch of Position: 2000				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral 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	INTRAMODULEBOX		4		1		NIRCam Only		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	F090W	F277W	SHALLOW4	9	1	4	4	1889.672	
	2	F150W	F277W	SHALLOW4	10	1	4	4	2104.407	
Spectral Elements	NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W		NIS	11	1	4	4	1932.619	
	2	F150W		NIS	12	1	4	4	2104.407	

Proposal 2875 - Observation 2 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 105 to 125 Degrees (V3 105.07457694 to 125.07457694)
Offset 86.0 arcsec, -3.0 arcsec
No Parallel Attachments

Proposal 2875 - Observation 3 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 3: NGC 3147 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging																																							
Diagnostics	(Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.																																							
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Spectral Elements	<table border="1"> <thead> <tr> <th>NIRCam Imaging</th> <th>Short Filter</th> <th>Long Filter</th> <th>Readout Pattern</th> <th>Groups/Int</th> <th>Integrations/Exp</th> <th>Total Integrations</th> <th>Total Dithers</th> <th>Total Exposure Time</th> <th>ETC Wkbk.Calc ID</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>F090W</td> <td>F277W</td> <td>SHALLOW4</td> <td>10</td> <td>1</td> <td>4</td> <td>4</td> <td>2104.407</td> <td></td> </tr> <tr> <td>2</td> <td>F150W</td> <td>F277W</td> <td>SHALLOW4</td> <td>6</td> <td>2</td> <td>8</td> <td>4</td> <td>2533.878</td> <td></td> </tr> </tbody> </table>										NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID	1	F090W	F277W	SHALLOW4	10	1	4	4	2104.407		2	F150W	F277W	SHALLOW4	6	2	8	4	2533.878	
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1	F090W		NIS	12	1	4	4	2104.407																																
2	F150W		NIS	14	1	4	4	2447.984																																

Proposal 2875 - Observation 3 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 240 to 180 Degrees (V3 240.07457694 to 180.07457694)
Offset 78.0 arcsec, 0.0 arcsec
No Parallel Attachments

Proposal 2875 - Observation 7 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 7: NGC 4258 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging									
	(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous		
	(8)	NGC-4258	RA: 12 18 58.3000 (184.7429167d) Dec: +47 17 11.00 (47.28639d) Equinox: J2000							
<i>Comments:</i> <i>Category=Galaxy</i> <i>Description=/Field galaxies/</i>										
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	INTRAMODULEBOX		4		1		NIRCam Only		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	F090W	F277W	SHALLOW4	7	1	4	4	1460.201	
	2	F150W	F277W	SHALLOW4	8	1	4	4	1674.936	
	3	F070W	F356W	SHALLOW4	6	1	4	4	1245.465	
	4	F115W	F356W	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	F090W		NIS	8	1	4	4	1417.254	
	2	F150W		NIS	8	1	4	4	1417.254	
	3	F090W		NIS	7	1	4	4	1245.465	
	4	F115W		NIS	7	1	4	4	1245.465	

Proposal 2875 - Observation 7 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 238 to 242 Degrees (V3 238.07457694 to 242.07457694)
No Parallel Attachments

Proposal 2875 - Observation 10 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 10: NGC 4258 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging Comments: WOPR repeat of Obs 7:1.																																																											
Diagnostics	(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.																																																											
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(8)</td> <td>NGC-4258</td> <td>RA: 12 18 58.3000 (184.7429167d) Dec: +47 17 11.00 (47.28639d) Equinox: J2000</td> <td></td> <td></td> </tr> </tbody> </table> Comments: Category=Galaxy Description=/Field galaxies/										#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	(8)	NGC-4258	RA: 12 18 58.3000 (184.7429167d) Dec: +47 17 11.00 (47.28639d) Equinox: J2000																																										
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Template	NIRCam Imaging					NIRISS Imaging																																																						
Module: ALL Subarray: FULL Target Placement: Module Gap																																																												
Dithers	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Dither Type</th> <th>Primary Dithers</th> <th>Dither Size</th> <th>Subpixel Positions</th> <th>Coordinated Parallel Subpixel Selector</th> <th>Dither Direct Images Primes</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>INTRAMODULEBOX</td> <td>4</td> <td></td> <td>1</td> <td>NIRCam Only</td> <td>NO_DITHERING</td> </tr> </tbody> </table>										#	Primary Dither Type	Primary Dithers	Dither Size	Subpixel Positions	Coordinated Parallel Subpixel Selector	Dither Direct Images Primes	1	INTRAMODULEBOX	4		1	NIRCam Only	NO_DITHERING																																				
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NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID																																																			
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Proposal 2875 - Observation 10 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 238 to 242 Degrees (V3 238.07457694 to 242.07457694)
No Parallel Attachments

Proposal 2875 - Observation 9 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 9: NGC 5728 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging									
Diagnostics	(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections			Miscellaneous	
	(5)	NGC-5728	RA: 14 42 23.8919 (220.5995496d) Dec: -17 15 11.24 (-17.25312d) Equinox: J2000			Epoch of Position: 2015.5				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral 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	F090W	F277W	SHALLOW4	9	1	4	4	1889.672	
	2	F150W	F277W	SHALLOW4	6	2	8	4	2533.878	
Spectral Elements	NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W		NIS	10	1	4	4	1760.83	
	2	F150W		NIS	14	1	4	4	2447.984	

Proposal 2875 - Observation 9 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 98 to 118 Degrees (V3 98.07457694 to 118.07457694)
Offset 85.0 arcsec, 1.5 arcsec
No Parallel Attachments

Proposal 2875 - Observation 12 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	<p>Proposal 2875, Observation 12: NGC 3447</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRCam Imaging</p> <p>Coordinated Parallel Template(s): NIRISS Imaging</p>																																							
Diagnostics	(Visit 12:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.																																							
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(9)</td> <td>NGC-3447</td> <td>RA: 10 53 23.9671 (163.3498629d) Dec: +16 46 20.74 (16.77243d) Equinox: J2000</td> <td>Proper Motion RA: -0.286 mas/yr Proper Motion Dec: -0.016999956642393954 mas/yr Parallax: 9.14E-5" Epoch of Position: 2000</td> <td></td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM.</i></p> <p><i>Category=Galaxy</i> <i>Description=[Spiral galaxies]</i></p>										#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous	(9)	NGC-3447	RA: 10 53 23.9671 (163.3498629d) Dec: +16 46 20.74 (16.77243d) Equinox: J2000	Proper Motion RA: -0.286 mas/yr Proper Motion Dec: -0.016999956642393954 mas/yr Parallax: 9.14E-5" Epoch of Position: 2000																					
#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous																																				
(9)	NGC-3447	RA: 10 53 23.9671 (163.3498629d) Dec: +16 46 20.74 (16.77243d) Equinox: J2000	Proper Motion RA: -0.286 mas/yr Proper Motion Dec: -0.016999956642393954 mas/yr Parallax: 9.14E-5" Epoch of Position: 2000																																					
Template	NIRCam Imaging					NIRISS Imaging																																		
	<p>Module: ALL</p> <p>Subarray: FULL</p> <p>Target Placement: Module Gap</p>																																							
Dithers	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Dither Type</th> <th>Primary Dithers</th> <th>Dither Size</th> <th>Subpixel Positions</th> <th>Coordinated Parallel Subpixel Selector</th> <th>Dither Direct Images Primes</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>NONE</td> <td></td> <td></td> <td>1</td> <td>4-POINT-SMALL-WITH-NIRISS</td> <td>NO_DITHERING</td> </tr> </tbody> </table>										#	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																
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NIRCam Imaging	Short Filter	Long Filter	Readout Pattern	Groups/Int	Integrations/Exp	Total Integrations	Total Dithers	Total Exposure Time	ETC Wkbk.Calc ID																															
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NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID																															
1	F090W		NIS	10	1	4	4	1760.83																																
2	F150W		NIS	14	1	4	4	2447.984																																

Proposal 2875 - Observation 12 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 115 to 120 Degrees (V3 115.07457694 to 120.07457694)
Offset 62.0 arcsec, -5.0 arcsec
No Parallel Attachments

Proposal 2875 - Observation 6 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 6: NGC 5861 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging									
	(Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous		
	(6)	NGC-5861	RA: 15 09 16.0913 (227.3170471d) Dec: -11 19 17.98 (-11.32166d) Equinox: J2000			Epoch of Position: 2015.5				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Spiral 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	F090W	F277W	SHALLOW4	9	1	4	4	1889.672	
	2	F150W	F277W	SHALLOW4	6	2	8	4	2533.878	
Spectral Elements	NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W		NIS	10	1	4	4	1760.83	
	2	F150W		NIS	14	1	4	4	2447.984	

Proposal 2875 - Observation 6 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 97 to 117 Degrees (V3 97.07457694 to 117.07457694)
Offset 86.0 arcsec, 15.0 arcsec
No Parallel Attachments

Proposal 2875 - Observation 14 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Wed Jul 10 21:00:11 GMT 2024

Observation	Proposal 2875, Observation 14: NGC 5861 Diagnostic Status: Warning Observing Template: NIRCam Imaging Coordinated Parallel Template(s): NIRISS Imaging Comments: WOPR repeat of 6:1 which was skipped. See WOPR 89160.									
	(Visit 14:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.									
Fixed Targets	#	Name	Target Coordinates			Targ. Coord. Corrections		Miscellaneous		
	(6)	NGC-5861	RA: 15 09 16.0913 (227.3170471d) Dec: -11 19 17.98 (-11.32166d) Equinox: J2000			Epoch of Position: 2015.5				
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Spiral 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	F090W	F277W	SHALLOW4	9	1	4	4	1889.672	
	2	F150W	F277W	SHALLOW4	6	2	8	4	2533.878	
Spectral Elements	NIRISS Imaging	Filter	Grism	Readout Pattern	Groups/Int	Integrations/Exp	Total Dithers	Total Integrations	Total Exposure Time	ETC Wkbk.Calc ID
	1	F090W		NIS	10	1	4	4	1760.83	
	2	F150W		NIS	14	1	4	4	2447.984	

Proposal 2875 - Observation 14 - Scrutinizing the Dirtiest Cepheids, a Test of the Hubble Tension

Special Requirements

Aperture PA Range 97 to 117 Degrees (V3 97.07457694 to 117.07457694)
Offset 86.0 arcsec, 15.0 arcsec
No Parallel Attachments