



# 7503 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Cycle: 4, Proposal Category: GO

## INVESTIGATORS

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## OBSERVATIONS

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
Obs				

<i>Folder</i>	<i>Observation</i>	<i>Label</i>	<i>Observing Template</i>	<i>Science Target</i>
1		XID717	NIRSpec IFU Spectroscopy	(1) XID717
2		XID100	NIRSpec IFU Spectroscopy	(2) XID100
3		XID490	NIRSpec IFU Spectroscopy	(3) XID490
4		XID12	NIRSpec IFU Spectroscopy	(4) XID12
5		XID53	NIRSpec IFU Spectroscopy	(14) XID53
6		XID262	NIRSpec IFU Spectroscopy	(5) XID262
7		XID439	NIRSpec IFU Spectroscopy	(6) XID439
8		XID504	NIRSpec IFU Spectroscopy	(7) XID504
9		XID492	NIRSpec IFU Spectroscopy	(8) XID492
10		LID283	NIRSpec IFU Spectroscopy	(9) LID_283
11		CID700	NIRSpec IFU Spectroscopy	(10) CID_700
12		CID965	NIRSpec IFU Spectroscopy	(13) CID_965
13		COS_845652	NIRSpec IFU Spectroscopy	(11) COSMOS2015-845652
14		COS_658951	NIRSpec IFU Spectroscopy	(12) COSMOS2015-658951
15		AEGIS34	NIRSpec IFU Spectroscopy	(15) AEGIS-34

## ABSTRACT

JWST observations have revealed the presence of a new population of high-redshift AGN identified through the detection of broad permitted emission lines, or thanks to narrow line ratio diagnostics, but undetected or very weak in the X-ray band, challenging traditional AGN classification paradigms. This raises the question of whether such AGN represent a more extreme version of the known Compton Thick (CT) AGN population or are fundamentally different AGN types to the ones detected in X-ray surveys.

Several JWST programs have targeted this newly discovered AGN population, but they lack an adequate control sample of X-ray detected CT AGN. We aim to address this gap with a systematic study of 15 X-ray detected CT-AGN at  $z > 2.5$ .

In this proposal, we will assemble the first statistical sample of CT-AGN at cosmic noon observed with NIRSpec.

This large sample will allow us not only to put into context the properties of the newly discovered AGN from public surveys, but also to characterize the evolution of CT AGN properties across cosmic time, assess the extent of misclassification between X-ray and optical classification, and analyze outflows and host galaxy properties. Our observations will exploit NIRSpec/IFU high-resolution gratings to explore the main optical emission lines, ultimately enhancing our understanding of obscured black hole accretion in the early Universe.

**OBSERVING DESCRIPTION**

This proposal aims to observe 15 Compton thick X-ray selected AGN at  $z > 2.5$  with NIRSpec IFU high-resolution gratings (G235H/F170LP and or G395H/F290LP depending on the redshift) to cover the main optical emission lines.

The main goal is to obtain a parent sample to the JWST-selected AGN population to statistically compare the properties of X-ray selected, but obscure AGN with the JWST-selected, X-ray undetected AGN.

We will use a medium cycling pattern with 8-point dithers to accurately sample the PSF and a variable number of groups per integration depending on the brightness of each target. We compute with the ETC v.4 the exposure time to achieve a similar level of S/N for each target such that we will be able to achieve the main goals of this proposal.

We will use NRSIRS2 readout pattern mode to reduce the data volume.

We will not perform Target Acquisition, since the absolute JWST pointing accuracy of 0.1arcsec is more than sufficient given the size of our targets.

We do not require background exposures since we will derive the background from emission-free spaxels in our FOV.

We constrained the PA to avoid MSA leakage of bright sources, when possible, but our dithering strategy allows us to minimize the potential impact of MSA leakage.

# Proposal 7503 - Targets - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early Universe

#	Name	Target Coordinates	Targ. Coord. Corrections	Miscellaneous
(1)	XID717	RA: 03 33 7.2010 (53.2800042d) Dec: -27 47 55.58 (-27.79877d) 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=[Active galactic nuclei] Extended=YES				
(2)	XID100	RA: 03 32 3.9840 (53.0166000d) Dec: -27 44 41.45 (-27.74485d) 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=[Active galactic nuclei] Extended=YES				
(3)	XID490	RA: 03 32 35.7300 (53.1488750d) Dec: -27 49 16.20 (-27.82117d) 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=[Active galactic nuclei] Extended=YES				
(4)	XID12	RA: 03 31 45.1590 (52.9381625d) Dec: -27 49 49.57 (-27.83044d) 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=[Active galactic nuclei] Extended=YES				
(5)	XID262	RA: 03 32 18.8321 (53.0784671d) Dec: -27 51 35.48 (-27.85986d) 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=[Active galactic nuclei] Extended=YES				
(6)	XID439	RA: 12 37 3.9800 (189.2665833d) Dec: +62 11 57.40 (62.19928d) 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=[Active galactic nuclei] Extended=YES				
(7)	XID504	RA: 12 37 14.6822 (189.3111758d) Dec: +62 18 39.42 (62.31095d) 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=[Active galactic nuclei] Extended=YES				

Fixed Targets

# Proposal 7503 - Targets - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early Universe

(8)	XID492	RA: 12 37 12.0600 (189.3002500d) Dec: +62 12 11.90 (62.20331d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>            Category=Galaxy            Description=[Active galactic nuclei]            Extended=YES</p>			
(9)	LID_283	RA: 10 01 45.5800 (150.4399167d) Dec: +02 42 12.60 (2.70350d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>            Category=Galaxy            Description=[Active galactic nuclei]            Extended=YES</p>			
(10)	CID_700	RA: 09 59 24.3600 (149.8515000d) Dec: +02 25 36.70 (2.42686d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>            Category=Galaxy            Description=[Active galactic nuclei]            Extended=YES</p>			
(11)	COSMOS2015-845652	RA: 10 00 51.5900 (150.2149583d) Dec: +02 34 57.60 (2.58267d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>            Category=Galaxy            Description=[Active galactic nuclei]            Extended=YES</p>			
(12)	COSMOS2015-658951	RA: 10 01 12.1800 (150.3007500d) Dec: +02 18 1.90 (2.30053d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>            Category=Galaxy            Description=[Active galactic nuclei]            Extended=YES</p>			
(13)	CID_965	RA: 10 00 36.5200 (150.1521667d) Dec: +02 18 28.30 (2.30786d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>            Category=Galaxy            Description=[Active galactic nuclei]            Extended=YES</p>			
(14)	XID53	RA: 03 31 53.8871 (52.9745296d) Dec: -27 47 16.19 (-27.78783d) Equinox: J2000	Epoch of Position: 2000
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>            Category=Galaxy            Description=[Active galactic nuclei]            Extended=YES</p>			

## Proposal 7503 - Targets - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early Universe

(15)	AEGIS-34	RA: 14 18 11.2352 (214.5468133d)	Epoch of Position: 2000
		Dec: +52 30 12.55 (52.50349d)	
		Equinox: J2000	

*Comments:*

*Category=Galaxy*

*Description=[Active galactic nuclei, High-redshift galaxies]*

*Extended=YES*

Proposal 7503 - Observation 1 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 1: XID717</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<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)	XID717	RA: 03 33 7.2010 (53.2800042d) Dec: -27 47 55.58 (-27.79877d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Ex p</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	15	1	false	true	NONE	8	8	8870.045	
	2	G395H/F290LP	NRSIRS2	22	1	false	true	NONE	8	8	12954.934	
<b>Special Requirements</b>	<p>Aperture PA Range 125.97164917 to 188.97164917 Degrees (V3 347.0 to 50.0)</p> <p>Aperture PA Range 308.97164917 to 338.97164917 Degrees (V3 170.0 to 200.0)</p>											

Proposal 7503 - Observation 2 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early Universe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 2: XID100</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 2:1) 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>			
	(2)	XID100	RA: 03 32 3.9840 (53.0166000d) Dec: -27 44 41.45 (-27.74485d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>		<b>Points</b>			
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	15	1	false	true	NONE	8	8	8870.045	
<b>Special Requirements</b>	<p>Aperture PA Range 139.97164917 to 148.97164917 Degrees (V3 1.0 to 10.0)</p> <p>Aperture PA Range 185.97164917 to 206.97164917 Degrees (V3 47.0 to 68.0)</p> <p>Aperture PA Range 293.97164917 to 307.97164917 Degrees (V3 155.0 to 169.0)</p> <p>Aperture PA Range 352.97164917 to 62.97164917 Degrees (V3 214.0 to 284.0)</p>											

Proposal 7503 - Observation 3 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 3: XID490</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 3:1) 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>			
	(3)	XID490	RA: 03 32 35.7300 (53.1488750d) Dec: -27 49 16.20 (-27.82117d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Ex p</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	10	1	false	true	NONE	8	8	5952.267	
<b>Special Requirements</b>	Aperture PA Range 183.97164917 to 143.97164917 Degrees (V3 45.0 to 5.0)											

Proposal 7503 - Observation 4 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 4: XID12</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 4:1) 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>			
	(4)	XID12	RA: 03 31 45.1590 (52.9381625d) Dec: -27 49 49.57 (-27.83044d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Ex p</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	10	1	false	true	NONE	8	8	5952.267	
<b>Special Requirements</b>	<p>Aperture PA Range 155.97164917 to 173.97164917 Degrees (V3 17.0 to 35.0)</p> <p>Aperture PA Range 241.97164917 to 251.97164917 Degrees (V3 103.0 to 113.0)</p> <p>Aperture PA Range 259.97164917 to 313.97164917 Degrees (V3 121.0 to 175.0)</p>											

Proposal 7503 - Observation 5 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 5: XID53</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 5:1) 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>			
	(14)	XID53	RA: 03 31 53.8871 (52.9745296d) Dec: -27 47 16.19 (-27.78783d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>		<b>Points</b>			
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	14	1	false	true	NONE	8	8	8286.49	
<b>Special Requirements</b>	Aperture PA Range 284.97164917 to 187.97164917 Degrees (V3 146.0 to 49.0)											

Proposal 7503 - Observation 6 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 6: XID262</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 6:1) 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>			
	(5)	XID262	RA: 03 32 18.8321 (53.0784671d) Dec: -27 51 35.48 (-27.85986d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Ex p</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRS	14	1	false	true	NONE	8	8	4895.967	
<b>Special Requirements</b>	Aperture PA Range 281.97164917 to 200.97164917 Degrees (V3 143.0 to 62.0)											

Proposal 7503 - Observation 7 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 7: XID439</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 7:1) 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>			
	(6)	XID439	RA: 12 37 3.9800 (189.2665833d) Dec: +62 11 57.40 (62.19928d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	14	1	false	true	NONE	8	8	8286.49	
<b>Special Requirements</b>	Aperture PA Range 231.97164917 to 41.97164917 Degrees (V3 93.0 to 263.0)											

Proposal 7503 - Observation 8 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 8: XID504</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 8:1) 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>			
	(7)	XID504	RA: 12 37 14.6822 (189.3111758d) Dec: +62 18 39.42 (62.31095d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	10	1	false	true	NONE	8	8	5952.267	
<b>Special Requirements</b>	<p>Aperture PA Range 101.97164917 to 111.97164917 Degrees (V3 323.0 to 333.0)</p> <p>Aperture PA Range 270.97164917 to 51.97164917 Degrees (V3 132.0 to 273.0)</p>											

Proposal 7503 - Observation 9 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 9: XID492</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSspec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 9:1) 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>			
	(8)	XID492	RA: 12 37 12.0600 (189.3002500d) Dec: +62 12 11.90 (62.20331d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	10	1	false	true	NONE	8	8	5952.267	
<b>Special Requirements</b>	Aperture PA Range 153.97164917 to 308.97164917 Degrees (V3 15.0 to 170.0)											

Proposal 7503 - Observation 10 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 10: LID283</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 10:1) 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>			
	(9)	LID_283	RA: 10 01 45.5800 (150.4399167d) Dec: +02 42 12.60 (2.70350d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Ex p</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	8	1	false	true	NONE	8	8	4785.156	
<b>Special Requirements</b>	<p>Aperture PA Range 227.97164917 to 262.97164917 Degrees (V3 89.0 to 124.0)</p> <p>Aperture PA Range 342.97164917 to 145.97164917 Degrees (V3 204.0 to 7.0)</p>											

Proposal 7503 - Observation 11 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 11: CID700</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 11:1) 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>			
	(10)	CID_700	RA: 09 59 24.3600 (149.8515000d) Dec: +02 25 36.70 (2.42686d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	10	1	false	true	NONE	8	8	5952.267	
<b>Special Requirements</b>	Aperture PA Range 109.97164917 to 32.97164917 Degrees (V3 331.0 to 254.0)											

Proposal 7503 - Observation 12 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p>Proposal 7503, Observation 12: CID965</p> <p>Diagnostic Status: Warning</p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 12:1) 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>			
	(13)	CID_965	RA: 10 00 36.5200 (150.1521667d) Dec: +02 18 28.30 (2.30786d) Equinox: J2000			Epoch of Position: 2000						
	<p>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Active galactic nuclei] Extended=YES</p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>		<b>Points</b>			
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	8	1	false	true	NONE	8	8	4785.156	
<b>Special Requirements</b>	<p>Aperture PA Range 116.97164917 to 181.97164917 Degrees (V3 338.0 to 43.0)</p> <p>Aperture PA Range 215.97164917 to 225.97164917 Degrees (V3 77.0 to 87.0)</p> <p>Aperture PA Range 248.97164917 to 49.97164917 Degrees (V3 110.0 to 271.0)</p>											

Proposal 7503 - Observation 13 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p>Proposal 7503, Observation 13: COS_845652</p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 13:1) 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>			
	(11)	COSMOS2015-845652	RA: 10 00 51.5900 (150.2149583d) Dec: +02 34 57.60 (2.58267d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>	<b>Points</b>				
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G395H/F290LP	NRSIRS2	25	1	false	true	NONE	8	8	14705.601	
<b>Special Requirements</b>	<p>Aperture PA Range 249.97164917 to 273.97164917 Degrees (V3 111.0 to 135.0)</p> <p>Aperture PA Range 328.97164917 to 62.97164917 Degrees (V3 190.0 to 284.0)</p>											

Proposal 7503 - Observation 14 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p>Proposal 7503, Observation 14: COS_658951</p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 14:1) 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>			
	(12)	COSMOS2015-658951	RA: 10 01 12.1800 (150.3007500d) Dec: +02 18 1.90 (2.30053d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Category=Galaxy</i></p> <p><i>Description=[Active galactic nuclei]</i></p> <p><i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>		<b>Points</b>			
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	15	1	false	true	NONE	8	8	8870.045	

Proposal 7503 - Observation 15 - CACTUS: Comprehensive Analysis of Compton-Thick AGN in the early UniverSe

Wed Mar 19 23:00:22 GMT 2025

<b>Observation</b>	<p><b>Proposal 7503, Observation 15: AEGIS34</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRSpec IFU Spectroscopy</p>											
<b>Diagnostics</b>	(Visit 15:1) 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>			
	(15)	AEGIS-34	RA: 14 18 11.2352 (214.5468133d) Dec: +52 30 12.55 (52.50349d) Equinox: J2000			Epoch of Position: 2000						
	<p><i>Comments:</i>  <i>Category=Galaxy</i>  <i>Description=[Active galactic nuclei, High-redshift galaxies]</i>  <i>Extended=YES</i></p>											
<b>Template</b>	<b>TA Method</b>						<b>HFF Readout Mode</b>					
	NONE						false					
<b>Dithers</b>	<b>#</b>	<b>Dither Type</b>		<b>Size</b>	<b>Starting Point</b>		<b>Number of Points</b>		<b>Points</b>			
	1	CYCLING		MEDIUM	1		8					
<b>Spectral Elements</b>	<b>#</b>	<b>Grating/Filter</b>	<b>Readout Pattern</b>	<b>Groups/Int</b>	<b>Integrations/Exp</b>	<b>Leakcal</b>	<b>Dither</b>	<b>Autocal</b>	<b>Total Dithers</b>	<b>Total Integrations</b>	<b>Total Exposure Time</b>	<b>ETC Wkbk.Calc ID</b>
	1	G235H/F170LP	NRSIRS2	12	1	false	true	NONE	8	8	7119.378	
<b>Special Requirements</b>	Aperture PA Range 151.97164917 to 22.97164917 Degrees (V3 13.0 to 244.0)											