



1991 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Cycle: 1, Proposal Category: GO

INVESTIGATORS

| <i>Name</i> | <i>Institution</i> |
|--|--|
| Dr. George Privon (PI) | Associated Universities, Inc. |
| Prof. Susanne Aalto (CoI) (ESA Member) | Chalmers University of Technology |
| Prof. Dimitra Rigopoulou (CoI) (ESA Member) | University of Oxford |
| Prof. Paul van der Werf (CoI) (ESA Member) | Universiteit Leiden |
| Dr. Kazushi Sakamoto (CoI) | Academia Sinica, Institute of Astronomy and Astrophysics |
| Dr. Youichi Ohyama (CoI) | Academia Sinica, Institute of Astronomy and Astrophysics |
| Prof. Aaron S. Evans (CoI) | The University of Virginia |
| Dr. Lee Armus (CoI) | California Institute of Technology |
| Dr. Tanio Diaz-Santos (CoI) (ESA Member) | FORTH - Institute of Astrophysics |
| Dr. Loreto Barcos-Munoz (CoI) | Associated Universities, Inc. |
| Mr. Niklas Falstad (CoI) (ESA Member) | Chalmers University of Technology |
| Prof. John S. Gallagher III (CoI) | Macalester College |
| Prof. Claudio Ricci (CoI) | Diego Portales University |
| Dr. Fred Lahuis (CoI) (ESA Member) | Space Research Organization Netherlands |
| Dr. Ismael Garcia Bernete (CoI) (ESA Member) | University of Oxford |
| Dr. Sean Linden (CoI) | University of Massachusetts - Amherst |

OBSERVATIONS

| <i>Folder</i> | <i>Observation</i> | <i>Label</i> | <i>Observing Template</i> | <i>Science Target</i> |
|---------------|--------------------|-----------------------|-------------------------------------|-----------------------|
| IC860 MIRI | | | | |
| | 1 | IC860-MIRI | MIRI Medium Resolution Spectroscopy | (1) IC-860 |
| | 2 | IC860-MIRI Background | MIRI Medium Resolution Spectroscopy | (2) IC-860-BKG |

| <i>Folder</i> | <i>Observation</i> | <i>Label</i> | <i>Observing Template</i> | <i>Science Target</i> |
|---------------|--------------------|-----------------------------|-------------------------------------|-----------------------|
| | 3 | IC860-NIRSpec | NIRSpec IFU Spectroscopy | (5) IC-860-NIR |
| NGC 4418 | | | | |
| | 6 | NGC4418-MIRI | MIRI Medium Resolution Spectroscopy | (3) NGC-4418 |
| | 7 | NGC4418-MIRI Backg round | MIRI Medium Resolution Spectroscopy | (4) NGC-4418-BKG |
| | 8 | NGC4418-NIRSpec | NIRSpec IFU Spectroscopy | (6) NGC-4418-NIR |

ABSTRACT

Some of the most extreme galaxy nuclei lie within our cosmic backyard. Compact Obscured Nuclei (CONs)--with sizes of tens of parsecs, luminosity densities in excess of 10^8 Lsun / pc², and gas column densities $> 10^{25}$ cm⁻²--have recently been identified in local infrared-luminous galaxies. The physical properties, power source (AGN vs star formation), and fate of these nuclei remains unclear. The rich diagnostic power of the mid-infrared, combined with the sensitivity and resolution of JWST, are crucial to understanding the CONs. A signpost of CONs is their (sub)millimeter emission from vibrationally excited HCN molecules. We propose JWST observations of two prototypical CONs -- NGC 4418 and IC 860. We will observe the 14um absorption of HCN and measure the physical conditions inside the CONs. We will also use the JWST observations to measure the molecular gas properties (via H₂ emission and CO absorption) and infer the dust grain properties and radiation field in and around the CONs. The compactness and energy densities of the CONs imply that they are be powered either by black hole accretion or by star formation with an extremely top-heavy (i.e., O star only) initial mass function. Their column densities render optical and X-ray diagnostics ineffective -- the spectroscopic capabilities of JWST are crucial to detecting any emission from highly ionized species (e.g., [Ne V], [Ne VI], [Si IX]) arising from ionized radiation leaking out of the CON. This modest time investment will reveal the physical conditions, energy source, and fate of some of the most extreme galaxy nuclei known.

OBSERVING DESCRIPTION

We request MIRI-MRS and NIRSpec IFU observations of two low-redshift galaxies that are known to have compact, infrared emitting cores. These observations will be used to characterize their compact cores and the immediate surroundings. The observations target molecular absorption features as well as traditional AGN/SB tracers, PAH features, and other ISM tracers. Simultaneous MIRI imaging will also be obtained in F770W, F1000W, and F1130W, to target Silicate and PAH features.

Proposal 1991 - Targets - Lifting the Veil on the Most Obscured Galaxies in the Universe

| # | Name | Target Coordinates | Targ. Coord. Corrections | Miscellaneous |
|--|--------------|--|---------------------------|---------------|
| (1) | IC-860 | RA: 13 15 3.5100 (198.7646250d) Dec: +24 37 7.82 (24.61884d) Equinox: J2000 | Epoch of Position: 2015.5 | |
| <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Coordinates were refined based on high-resolution ALMA dust continuum observations.</i> Category=Galaxy Description=[Active galaxies, Galaxy nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies] Extended=YES</p> | | | | |
| (2) | IC-860-BKG | RA: 13 15 3.5100 (198.7646250d) Dec: +24 37 7.80 (24.61883d) Equinox: J2000 | Epoch of Position: 2015.5 | |
| <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Calibration Description=[Telescope/sky background] Extended=NO</p> | | | | |
| (3) | NGC-4418 | RA: 12 26 54.6100 (186.7275417d) Dec: -00 52 39.41 (-.87761d) Equinox: J2000 | Epoch of Position: 2015.5 | |
| <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Active galactic nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies] Extended=YES</p> | | | | |
| (4) | NGC-4418-BKG | RA: 12 26 54.6100 (186.7275417d) Dec: -00 52 39.41 (-.87761d) Equinox: J2000 | Epoch of Position: 2015.5 | |
| <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Calibration Description=[Telescope/sky background] Extended=NO</p> | | | | |
| (5) | IC-860-NIR | RA: 13 15 3.5100 (198.7646250d) Dec: +24 37 7.82 (24.61884d) Equinox: J2000 | Epoch of Position: 2015.5 | |
| <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Coordinates were refined based on high-resolution ALMA dust continuum observations.</i> Category=Galaxy Description=[Active galaxies, Galaxy nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies] Extended=YES</p> | | | | |
| (6) | NGC-4418-NIR | RA: 12 26 54.6100 (186.7275417d) Dec: -00 52 39.41 (-.87761d) Equinox: J2000 | Epoch of Position: 2015.5 | |
| <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Active galactic nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies] Extended=YES</p> | | | | |

Fixed Targets

Proposal 1991 - Observation 1 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Fri May 26 18:07:10 GMT 2023

| | | | | | | | | | | | | | |
|---|--|------------------|---|--------|----------------------|---------------------------|-------------------|-----------------|---------------|-------------------------|--------------------|---------------------|------------------|
| Observation | Proposal 1991, Observation 1: IC860-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[IC860-MIRI Background (Obs 2)] | | | | | | | | | | | | |
| | (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) | IC-860 | RA: 13 15 3.5100 (198.7646250d) Dec: +24 37 7.82 (24.61884d) Equinox: J2000 | | | Epoch of Position: 2015.5 | | | | | | | |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Coordinates were refined based on high-resolution ALMA dust continuum observations.</i> Category=Galaxy Description=[Active galaxies, Galaxy nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies] Extended=YES | | | | | | | | | | | | | |
| Acquisition | # | Target | | | | | | | | | | | |
| | 1 | NONE | | | | | | | | | | | |
| Template | AcqFilter | Primary Channel | | | Simultaneous Imaging | | | Imager Subarray | | Grating Wheel Direction | | | |
| | F1000W | ALL | | | YES | | | SUB256 | | NEUTRAL | | | |
| Dithers | # | Dither Type | | | Optimized For | | | Direction | | | | | |
| | 1 | 4-Point | | | EXTENDED SOURCE | | | NEGATIVE | | | | | |
| Spectral Elements | # | Wavelength Range | Detector | Filter | Readout Pattern | Groups/Int | Integrations/E xp | Exposures/Dit h | Dither | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
| | 1 | | IMAGER | F1130W | FASTR1 | 5 | 146 | 1 | Dither 1 | 4 | 584 | 1048.32 | |
| | 1 | LONG(C) | MRSLONG | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 1 | LONG(C) | MRSSHORT | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 2 | | IMAGER | F1000W | FASTR1 | 5 | 146 | 1 | Dither 1 | 4 | 584 | 1048.32 | |
| | 2 | MEDIUM(B) | MRSLONG | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | 60637 |
| | 2 | MEDIUM(B) | MRSSHORT | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 3 | | IMAGER | F770W | FASTR1 | 5 | 146 | 1 | Dither 1 | 4 | 584 | 1048.32 | |
| | 3 | SHORT(A) | MRSLONG | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 3 | SHORT(A) | MRSSHORT | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |

Proposal 1991 - Observation 1 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Special Requirements

Sequence Observations 1, 2, Non-interruptible

Proposal 1991 - Observation 2 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Fri May 26 18:07:10 GMT 2023

| | | | | | | | | | | | | | |
|---|--|-------------------------|---|---------------|------------------------|-----------------------------|---------------------------------|------------------------|---------------|--------------------------------|---------------------------|----------------------------|-------------------------|
| Observation | Proposal 1991, Observation 2: IC860-MIRI Background Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [IC860-MIRI (Obs 1)] <i>Comments: Focal plane offset specified to put target within MIRI imaging FOV. SUB256 subarray used to guard against saturation in F770W if the emission is all in a point source.</i> | | | | | | | | | | | | |
| | (Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. | | | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | | | Targ. Coord. Corrections | | | Miscellaneous | | | |
| | (2) | IC-860-BKG | RA: 13 15 3.5100 (198.7646250d) Dec: +24 37 7.80 (24.61883d) Equinox: J2000 | | | | Epoch of Position: 2015.5 | | | | | | |
| <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Calibration Description=[Telescope/sky background] Extended=NO | | | | | | | | | | | | | |
| Acquisition | # | Target | | | | | | | | | | | |
| | 1 | NONE | | | | | | | | | | | |
| Template | AcqFilter | Primary Channel | | | | Simultaneous Imaging | | Imager Subarray | | Grating Wheel Direction | | | |
| | F1500W | ALL | | | | YES | | SUB256 | | NEUTRAL | | | |
| Dithers | # | Dither Type | | | | Optimized For | | | | Direction | | | |
| | 1 | 4-Point | | | | EXTENDED SOURCE | | | | NEGATIVE | | | |
| Spectral Elements | # | Wavelength Range | Detector | Filter | Readout Pattern | Groups/Int | Integrations/E xp | Exposures/Dit h | Dither | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
| | 1 | | IMAGER | F1130W | FASTR1 | 5 | 146 | 1 | Dither 1 | 4 | 584 | 1048.32 | 60637 |
| | 1 | LONG(C) | MRSLONG | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 1 | LONG(C) | MRSSHORT | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 2 | | IMAGER | F1000W | FASTR1 | 5 | 146 | 1 | Dither 1 | 4 | 584 | 1048.32 | 60637 |
| | 2 | MEDIUM(B) | MRSLONG | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 2 | MEDIUM(B) | MRSSHORT | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 3 | | IMAGER | F770W | FASTR1 | 5 | 146 | 1 | Dither 1 | 4 | 584 | 1048.32 | 60637 |
| | 3 | SHORT(A) | MRSLONG | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |
| | 3 | SHORT(A) | MRSSHORT | | FASTR1 | 15 | 6 | 1 | Dither 1 | 4 | 24 | 1054.515 | |

Proposal 1991 - Observation 2 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Special Requirements

Offset -64.61746343515989 arcsec, -93.85116847032484 arcsec

Sequence Observations 1, 2, Non-interruptible

Proposal 1991 - Observation 3 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Fri May 26 18:07:10 GMT 2023

| | | | | | | | | | | | | |
|--------------------------|---|-----------------------|---|-------------------|-------------------------|---------------------------------|---------------|-------------------------|----------------------|---------------------------|----------------------------|-------------------------|
| Observation | <p>Proposal 1991, Observation 3: IC860-NIRSpec Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy</p> | | | | | | | | | | | |
| Diagnostics | (Visit 3:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. | | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | | Targ. Coord. Corrections | | | Miscellaneous | | | |
| | (5) | IC-860-NIR | RA: 13 15 3.5100 (198.7646250d) Dec: +24 37 7.82 (24.61884d) Equinox: J2000 | | | Epoch of Position: 2015.5 | | | | | | |
| | <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Coordinates were refined based on high-resolution ALMA dust continuum observations.</i> <i>Category=Galaxy</i> <i>Description=[Active galaxies, Galaxy nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies]</i> <i>Extended=YES</i></p> | | | | | | | | | | | |
| Template | TA Method | | | | | | | | | | | |
| | NONE | | | | | | | | | | | |
| Dithers | # | Dither Type | | Size | Starting Point | | | Number of Points | Points | | | |
| | 1 | 4-POINT-DITHER | | | | | | | | | | |
| Spectral Elements | # | Grating/Filter | Readout Pattern | Groups/Int | Integrations/Exp | Leakcal | Dither | Autocal | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
| | 1 | G395M/F290LP | NRSIRS2RAPID | 10 | 1 | false | true | NONE | 4 | 4 | 641.911 | 60637 |
| | 2 | G395M/F290LP | NRSIRS2RAPID | 10 | 1 | true | true | NONE | 4 | 4 | 641.911 | |

Proposal 1991 - Observation 6 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Fri May 26 18:07:10 GMT 2023

| | | | | | | | | | | | | | |
|--|--|------------------|--|--------|----------------------|---------------------------|-------------------|-----------------|---------------|-------------------------|--------------------|---------------------|------------------|
| Observation | Proposal 1991, Observation 6: NGC4418-MIRI Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observations:[NGC4418-MIRI Background (Obs 7)] | | | | | | | | | | | | |
| | (Visit 6:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. | | | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | | Targ. Coord. Corrections | | | Miscellaneous | | | | |
| | (3) | NGC-4418 | RA: 12 26 54.6100 (186.7275417d) Dec: -00 52 39.41 (-.87761d) Equinox: J2000 | | | Epoch of Position: 2015.5 | | | | | | | |
| Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Galaxy Description=[Active galactic nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies] Extended=YES | | | | | | | | | | | | | |
| Acquisition | # | Target | | | | | | | | | | | |
| | 1 | NONE | | | | | | | | | | | |
| Template | AcqFilter | Primary Channel | | | Simultaneous Imaging | | | Imager Subarray | | Grating Wheel Direction | | | |
| | F1000W | ALL | | | YES | | | SUB256 | | NEUTRAL | | | |
| Dithers | # | Dither Type | | | Optimized For | | | Direction | | | | | |
| | 1 | 4-Point | | | EXTENDED SOURCE | | | NEGATIVE | | | | | |
| Spectral Elements | # | Wavelength Range | Detector | Filter | Readout Pattern | Groups/Int | Integrations/E xp | Exposures/Dit h | Dither | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
| | 1 | | IMAGER | F1130W | FASTR1 | 5 | 15 | 1 | Dither 1 | 4 | 60 | 106.629 | |
| | 1 | LONG(C) | MRSLONG | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 1 | LONG(C) | MRSSHORT | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 2 | | IMAGER | F1000W | FASTR1 | 5 | 15 | 1 | Dither 1 | 4 | 60 | 106.629 | |
| | 2 | MEDIUM(B) | MRSLONG | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | 62181 |
| | 2 | MEDIUM(B) | MRSSHORT | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 3 | | IMAGER | F770W | FASTR1 | 5 | 15 | 1 | Dither 1 | 4 | 60 | 106.629 | |
| | 3 | SHORT(A) | MRSLONG | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 3 | SHORT(A) | MRSSHORT | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |

Proposal 1991 - Observation 6 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Special Requirements

Sequence Observations 6, 7, Non-interruptible

Proposal 1991 - Observation 7 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Fri May 26 18:07:10 GMT 2023

| | | | | | | | | | | | | | |
|--|--|------------------|--|--------|---------------------------|------------|-------------------|-----------------|---------------|-------------------------|--------------------|---------------------|------------------|
| Observation | Proposal 1991, Observation 7: NGC4418-MIRI Background Diagnostic Status: Warning Observing Template: MIRI Medium Resolution Spectroscopy Background Observation For: [NGC4418-MIRI (Obs 6)] | | | | | | | | | | | | |
| | (Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. | | | | | | | | | | | | |
| Diagnosics | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | Targ. Coord. Corrections | | | | Miscellaneous | | | | |
| | (4) | NGC-4418-BKG | RA: 12 26 54.6100 (186.7275417d) Dec: -00 52 39.41 (-.87761d) Equinox: J2000 | | Epoch of Position: 2015.5 | | | | | | | | |
| Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=Calibration Description=[Telescope/sky background] Extended=NO | | | | | | | | | | | | | |
| Acquisition | # | Target | | | | | | | | | | | |
| | 1 | NONE | | | | | | | | | | | |
| Template | AcqFilter | Primary Channel | | | Simultaneous Imaging | | | Imager Subarray | | Grating Wheel Direction | | | |
| | F1000W | ALL | | | YES | | | SUB256 | | NEUTRAL | | | |
| Dithers | # | Dither Type | | | Optimized For | | | | Direction | | | | |
| | 1 | 4-Point | | | EXTENDED SOURCE | | | | NEGATIVE | | | | |
| Spectral Elements | # | Wavelength Range | Detector | Filter | Readout Pattern | Groups/Int | Integrations/E xp | Exposures/Dit h | Dither | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
| | 1 | | IMAGER | F1130W | FASTR1 | 5 | 15 | 1 | Dither 1 | 4 | 60 | 106.629 | 62181 |
| | 1 | LONG(C) | MRSLONG | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 1 | LONG(C) | MRSSHORT | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 2 | | IMAGER | F1000W | FASTR1 | 5 | 15 | 1 | Dither 1 | 4 | 60 | 106.629 | 62181 |
| | 2 | MEDIUM(B) | MRSLONG | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 2 | MEDIUM(B) | MRSSHORT | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 3 | | IMAGER | F770W | FASTR1 | 5 | 15 | 1 | Dither 1 | 4 | 60 | 106.629 | 62181 |
| | 3 | SHORT(A) | MRSLONG | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |
| | 3 | SHORT(A) | MRSSHORT | | FASTR1 | 10 | 1 | 1 | Dither 1 | 4 | 4 | 111.002 | |

Proposal 1991 - Observation 7 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Special Requirements

Offset -64.03246049516696 arcsec, -92.68060251941844 arcsec

Sequence Observations 6, 7, Non-interruptible

Proposal 1991 - Observation 8 - Lifting the Veil on the Most Obscured Galaxies in the Universe

Fri May 26 18:07:10 GMT 2023

| | | | | | | | | | | | | |
|--------------------------|--|----------------|--|------------|-------------------|---------------------------|--------|------------------|---------------|--------------------|---------------------|------------------|
| Observation | <p>Proposal 1991, Observation 8: NGC4418-NIRSpec Diagnostic Status: Warning Observing Template: NIRSpec IFU Spectroscopy</p> | | | | | | | | | | | |
| Diagnostics | (Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. | | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | | | Targ. Coord. Corrections | | | Miscellaneous | | | |
| | (6) | NGC-4418-NIR | RA: 12 26 54.6100 (186.7275417d) Dec: -00 52 39.41 (-.87761d) Equinox: J2000 | | | Epoch of Position: 2015.5 | | | | | | |
| | <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=Galaxy Description=[Active galactic nuclei, Infrared galaxies, Lenticular galaxies, Starburst galaxies] Extended=YES</p> | | | | | | | | | | | |
| Template | <p>TA Method NONE</p> | | | | | | | | | | | |
| Dithers | # | Dither Type | | Size | Starting Point | | | Number of Points | Points | | | |
| | 1 | 4-POINT-DITHER | | | | | | | | | | |
| Spectral Elements | # | Grating/Filter | Readout Pattern | Groups/Int | Integrations/Ex p | Leakcal | Dither | Autocal | Total Dithers | Total Integrations | Total Exposure Time | ETC Wkbk.Calc ID |
| | 1 | G395M/F290LP | NRSRAPID | 8 | 1 | false | true | NONE | 4 | 4 | 386.524 | 62181 |
| | 2 | G395M/F290LP | NRSRAPID | 8 | 1 | true | true | NONE | 4 | 4 | 386.524 | |