



# 3567 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

Cycle: 2, Proposal Category: GO

## INVESTIGATORS

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| Dr. Anna Rita Gallazzi (CoI) (ESA Member)              | INAF - Osservatorio Astrofisico di Arcetri                  |
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JWST Proposal 3567 (Created: Friday, May 22, 2026, 10:01:23AM Eastern Standard Time) - Overview

| <i>Name</i>                                   | <i>Institution</i>                             |
|---|--|
| Dr. Aswin Payyoor Vijayan (CoI) (ESA Member)  | University of Sussex                           |
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**OBSERVATIONS**

| <i>Folder</i>      | <i>Observation</i> | <i>Label</i>                              | <i>Observing Template</i>        | <i>Science Target</i>             |
|--------------------|--------------------|---|----------------------------------|-----------------------------------|
| Observation Folder |                    |   |                                  |                                   |
|                    | 1                  | NIRCam imaging COS-466654                 | NIRCam Imaging                   | (28) COS-466654                   |
|                    | 9                  | NIRCam Imaging SXD S-27434                | NIRCam Imaging                   | (29) SXDS-27434                   |
|                    | 11                 | NIRCam Imaging SXD S-10017                | NIRCam Imaging                   | (30) SXDS_10017                   |
|                    | 18                 | NIRCam Imaging XM M-VID1-2075             | NIRCam Imaging                   | (31) XMM-VID1-2075                |
|                    | 16                 | NIRCam Imaging XM M-VID3-1120             | NIRCam Imaging                   | (32) XMM-VID3-1120                |
|                    | 116                | NIRCam Imaging XM M-VID3-1120 - Duplicate | NIRCam Imaging                   | (32) XMM-VID3-1120                |
|                    | 216                | NIRCam Imaging XM M-VID3-1120 - Duplicate | NIRCam Imaging                   | (32) XMM-VID3-1120                |
|                    | 17                 | NIRCam Imaging XM M-VID3-2457             | NIRCam Imaging                   | (33) XMM-VID3-2457                |
|                    | 2                  | cos-466654_v1                             | NIRSpec MultiObject Spectroscopy | (50) cweb_flag_v3_cos-466654      |
|                    | 3                  | cos-dr1-1113684_test                      | NIRSpec MultiObject Spectroscopy | (52) cweb_flag_v4_cos-dr1-1113684 |
|                    | 4                  | zf-cos-20115_v1                           | NIRSpec MultiObject Spectroscopy | (51) cweb_flag_v7_zf-cos-20115    |
|                    | 7                  | egs_31322_v5                              | NIRSpec MultiObject Spectroscopy | (53) ceers72_egs31322_v5          |
|                    | 8                  | sxds-27434_v5_fixed                       | NIRSpec MultiObject Spectroscopy | (54) sxds-27434_v0                |

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| <i>Folder</i> | <i>Observation</i> | <i>Label</i>                                    | <i>Observing Template</i>        | <i>Science Target</i> |
|---------------|--------------------|---|----------------------------------|-----------------------|
|               | 10                 | sxds-10017_v3--more_compact_more_fillers_bright | NIRSpec MultiObject Spectroscopy | (58) sxds-10017_v3    |
|               | 12                 | xmm-vid1_testing_v1_fixed                       | NIRSpec MultiObject Spectroscopy | (63) xmm-vid1-2075_v0 |
|               | 15                 | xmm-vid3-2457_v0_fixed                          | NIRSpec MultiObject Spectroscopy | (62) xmm-vid3-2457_v1 |
|               | 19                 | uds_v4_bright                                   | NIRSpec MultiObject Spectroscopy | (65) uds_testing_v4   |
|               | 214                | xmm-vid3-1020-2                                 | NIRSpec MultiObject Spectroscopy | (66) xmm-vid3-1020_v0 |

## ABSTRACT

The spectroscopic confirmation of numerous galaxies already quiescent at  $z=3.5-4$  defies our understanding of the early evolution of massive galaxies. State-of-the-art cosmological simulations struggle to reproduce the number densities and properties of such quiescent objects at increasing redshift, and completely fail at  $z\sim 4$ . While ground-based observations have been instrumental to drive the initial study of these intriguing galaxies, they are largely insufficient to derive robust stellar velocity dispersions, ages, metallicities, and rest-frame optical sizes, all fundamental ingredients to understand the physics regulating their life cycle. Here we propose to derive all these quantities for a fully representative sample of 11 spectroscopically confirmed massive quiescent galaxies at  $z=3.5-4$  with NIRSpec/MSA medium resolution spectroscopy and NIRCам imaging. The proposed observations will allow us to (1) detect slight short-timescale SFR residuals or faint AGN from emission lines; (2) derive stellar ages, metallicities, and robustly reconstruct SFHs via spectro-photometric modeling; (3) determine their stellar structure and dynamics by measuring velocity dispersion and sizes; (4) establish the existence of surrounding overdense environments, as expected given their large stellar masses. JWST is the only facility that can allow us to achieve these goals, as this program is unfeasible from the ground. This deep multiplexing spectroscopic search will have high legacy value as all main targets are in some of the most intensely studied cosmological fields with exquisite ancillary coverage and plenty of potentially interesting fillers for the MSA.

## OBSERVING DESCRIPTION

We propose to observe 11 spectroscopically confirmed quiescent objects at  $z=3.5-4$  with NIRSpec MSA with the medium resolution grism G235M+F170LP. The MSA observations are implemented using a combination of groups and exposures tailored to the brightness of each object. When not available in the archive, we request NIRCам imaging in the F150W, F200W, F356W, and F444W filters to position the slits and measure the sizes of the targets.

# Proposal 3567 - Targets - A deep dive into the physics of the first massive quiescent galaxies in the Universe

| #  | Name                      | Target Coordinates   | Targ. Coord. Corrections                    | Miscellaneous |
|--|---------------------------|--|---|---------------|
| (20)   | MSA-CATALOG-SXDS-27434    | RA: 02 17 12.0960 (34.3004000d)<br>Dec: -04 59 23.96 (-4.98999d)<br>Equinox: J2000 |   |               |
| <i>Comments:</i><br><i>Description=[]</i>  |                           |  |   |               |
| (21)   | MSA-CATALOG-SXDS-10017    | RA: 02 19 1.5576 (34.7564900d)<br>Dec: -05 18 34.63 (-5.30962d)<br>Equinox: J2000  |   |               |
| <i>Comments:</i><br><i>Description=[]</i>  |                           |  |   |               |
| (22)   | MSA-CATALOG-XMM-VID1-2075 | RA: 02 17 33.4152 (34.3892300d)<br>Dec: -05 29 0.38 (-5.48344d)<br>Equinox: J2000  |   |               |
| <i>Comments:</i><br><i>Description=[]</i>  |                           |  |   |               |
| (23)   | MSA-CATALOG-XMM-VID3-1120 | RA: 02 27 10.8384 (36.7951600d)<br>Dec: -04 34 16.74 (-4.57132d)<br>Equinox: J2000 |   |               |
| <i>Comments:</i><br><i>Description=[]</i>  |                           |  |   |               |
| (24)   | MSA-CATALOG-XMM-VID3-2457 | RA: 02 26 55.9128 (36.7329700d)<br>Dec: -04 31 54.95 (-4.53193d)<br>Equinox: J2000 |   |               |
| <i>Comments:</i><br><i>Description=[]</i>  |                           |  |   |               |
| (25)   | MSA-CATALOG-ZF-UDS        | RA: 02 17 22.6033 (34.3441804d)<br>Dec: -05 15 18.99 (-5.25527d)<br>Equinox: J2000 |   |               |
| <i>Comments:</i><br><i>Description=[]</i>  |                           |  |   |               |
| (28)   | COS-466654                | RA: 09 57 40.6999 (149.4195829d)<br>Dec: +02 00 27.18 (2.00755d)<br>Equinox: J2000 | Proper Motion RA: 0<br>Proper Motion Dec: 0 |               |
| <i>Comments:</i><br><i>Category=Galaxy</i><br><i>Description=[Elliptical galaxies]</i> |                           |  |   |               |
| (29)   | SXDS-27434                | RA: 02 17 11.6904 (34.2987100d)<br>Dec: -04 59 23.53 (-4.98987d)<br>Equinox: J2000 |   |               |
| <i>Comments:</i><br><i>Category=Galaxy</i><br><i>Description=[Elliptical galaxies]</i> |                           |  |   |               |
| (30)   | SXDS_10017                | RA: 02 19 1.5000 (34.7562500d)<br>Dec: -05 18 28.94 (-5.30804d)<br>Equinox: J2000  |   |               |
| <i>Comments:</i><br><i>Category=Galaxy</i><br><i>Description=[Elliptical galaxies]</i> |                           |  |   |               |

## Proposal 3567 - Targets - A deep dive into the physics of the first massive quiescent galaxies in the Universe

|  |                              |   |
|--|------------------------------|---|
| (31)   | XMM-VID1-2075                | RA: 02 17 32.8601 (34.3869171d)<br>Dec: -05 28 57.39 (-5.48261d)<br>Equinox: J2000  |
| <i>Comments:</i><br>Category=Galaxy<br>Description=[Elliptical galaxies] |                              |   |
| (32)   | XMM-VID3-1120                | RA: 02 27 10.0999 (36.7920829d)<br>Dec: -04 34 44.49 (-4.57903d)<br>Equinox: J2000  |
| <i>Comments:</i><br>Category=Galaxy<br>Description=[Elliptical galaxies] |                              |   |
| (33)   | XMM-VID3-2457                | RA: 02 26 56.0400 (36.7335000d)<br>Dec: -04 32 11.64 (-4.53657d)<br>Equinox: J2000  |
| <i>Comments:</i><br>Category=Galaxy<br>Description=[Elliptical galaxies] |                              |   |
| (50)   | cweb_flag_v3_cos-466654      | RA: 09 57 41.7740 (149.4240583d)<br>Dec: +02 00 55.07 (2.01530d)<br>Equinox: J2000  |
| <i>Comments:</i><br>Description=[]                                       |                              |   |
| (51)   | cweb_flag_v7_zf-cos-20115    | RA: 10 00 14.1624 (150.0590100d)<br>Dec: +02 21 48.22 (2.36339d)<br>Equinox: J2000  |
| <i>Comments:</i><br>Description=[]                                       |                              |   |
| (52)   | cweb_flag_v4_cos-dr1-1113684 | RA: 09 59 43.5134 (149.9313058d)<br>Dec: +02 07 6.65 (2.11851d)<br>Equinox: J2000   |
| <i>Comments:</i><br>Description=[]                                       |                              |   |
| (53)   | ceers72_egs31322_v5          | RA: 14 19 33.1506 (214.8881275d)<br>Dec: +52 52 29.25 (52.87479d)<br>Equinox: J2000 |
| <i>Comments:</i><br>Description=[]                                       |                              |   |
| (54)   | sxds-27434_v0                | RA: 02 17 12.0960 (34.3004000d)<br>Dec: -04 59 23.96 (-4.98999d)<br>Equinox: J2000  |
| <i>Comments:</i><br>Description=[]                                       |                              |   |
| (58)   | sxds-10017_v3                | RA: 02 19 1.5576 (34.7564900d)<br>Dec: -05 18 34.63 (-5.30962d)<br>Equinox: J2000   |
| <i>Comments:</i><br>Description=[]                                       |                              |   |

## Proposal 3567 - Targets - A deep dive into the physics of the first massive quiescent galaxies in the Universe

|   |                  |  |
|---|------------------|--|
| (62)                                      | xmm-vid3-2457_v1 | RA: 02 26 55.9128 (36.7329700d)<br>Dec: -04 31 54.95 (-4.53193d)<br>Equinox: J2000 |
| <i>Comments:</i><br><i>Description=[]</i> |                  |  |
| (63)                                      | xmm-vid1-2075_v0 | RA: 02 17 33.4152 (34.3892300d)<br>Dec: -05 29 0.38 (-5.48344d)<br>Equinox: J2000  |
| <i>Comments:</i><br><i>Description=[]</i> |                  |  |
| (65)                                      | uds_testing_v4   | RA: 02 17 22.6033 (34.3441804d)<br>Dec: -05 15 18.99 (-5.25527d)<br>Equinox: J2000 |
| <i>Comments:</i><br><i>Description=[]</i> |                  |  |
| (66)                                      | xmm-vid3-1020_v0 | RA: 02 27 10.8384 (36.7951600d)<br>Dec: -04 34 16.74 (-4.57132d)<br>Equinox: J2000 |
| <i>Comments:</i><br><i>Description=[]</i> |                  |  |

Proposal 3567 - Observation 1 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |  |                            |  |                        |   |                                    |                           |                           |                            |                        |
|-----------------------------|--|----------------------------|--|------------------------|---|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p><b>Proposal 3567, Observation 1: NIRCam imaging COS-466654</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>   |                            |  |                        |   |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam imaging COS-466654 (Obs 1)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 1:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |  |                        |   |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>   | <b>Name</b>                | <b>Target Coordinates</b>  |                        | <b>Targ. Coord. Corrections</b>             |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (28)   | COS-466654                 | RA: 09 57 40.6999 (149.4195829d)<br>Dec: +02 00 27.18 (2.00755d)<br>Equinox: J2000 |                        | Proper Motion RA: 0<br>Proper Motion Dec: 0 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/>Category=Galaxy<br/>Description=[Elliptical galaxies]</p>  |                            |  |                        |   |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>  |                            | <b>Subarray</b>  |                        |   | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL  |                            | FULL   |                        |   | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>   | <b>Primary Dither Type</b> |  | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>                 |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1  | INTRAMODULE                |  | 4                      | STANDARD                                    |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>   | <b>Short Filter</b>        | <b>Long Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>                           | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1  | F200W                      | F356W  | SHALLOW4               | 7   | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2  | F150W                      | F444W  | SHALLOW4               | 7   | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | Offset 55.0 arcsec, 35.0 arcsec  |                            |  |                        |   |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 9 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |  |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
|-----------------------------|--|----------------------------|--|------------------------|---------------------------------|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p><b>Proposal 3567, Observation 9: NIRCam Imaging SXDS-27434</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam Imaging SXDS-27434 (Obs 9)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 9:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>   | <b>Name</b>                | <b>Target Coordinates</b>  |                        | <b>Targ. Coord. Corrections</b> |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (29)   | SXDS-27434                 | RA: 02 17 11.6904 (34.2987100d)<br>Dec: -04 59 23.53 (-4.98987d)<br>Equinox: J2000 |                        |                                 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/> <i>Category=Galaxy</i><br/> <i>Description=[Elliptical galaxies]</i></p>  |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>  |                            | <b>Subarray</b>  |                        |                                 | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL  |                            | FULL   |                        |                                 | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>   | <b>Primary Dither Type</b> |  | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>     |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1  | INTRAMODULE                |  | 4                      | STANDARD                        |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>   | <b>Short Filter</b>        | <b>Long Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>               | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1  | F200W                      | F356W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2  | F150W                      | F444W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | Offset 55.0 arcsec, 35.0 arcsec  |                            |  |                        |                                 |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 11 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |  |                            |   |                        |                                 |                                    |                           |                           |                            |                        |
|-----------------------------|--|----------------------------|---|------------------------|---------------------------------|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p><b>Proposal 3567, Observation 11: NIRCam Imaging SXDS-10017</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>  |                            |   |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam Imaging SXDS-10017 (Obs 11)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 11:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |   |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>   | <b>Name</b>                | <b>Target Coordinates</b>   |                        | <b>Targ. Coord. Corrections</b> |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (30)   | SXDS_10017                 | RA: 02 19 1.5000 (34.7562500d)<br>Dec: -05 18 28.94 (-5.30804d)<br>Equinox: J2000 |                        |                                 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/> <i>Category=Galaxy</i><br/> <i>Description=[Elliptical galaxies]</i></p>  |                            |   |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>  |                            | <b>Subarray</b>   |                        |                                 | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL  |                            | FULL  |                        |                                 | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>   | <b>Primary Dither Type</b> |   | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>     |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1  | INTRAMODULE                |   | 4                      | STANDARD                        |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>   | <b>Short Filter</b>        | <b>Long Filter</b>  | <b>Readout Pattern</b> | <b>Groups/Int</b>               | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1  | F200W                      | F356W   | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2  | F150W                      | F444W   | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | Offset 55.0 arcsec, 35.0 arcsec  |                            |   |                        |                                 |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 18 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
|-----------------------------|---|----------------------------|--|------------------------|---------------------------------|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p><b>Proposal 3567, Observation 18: NIRCam Imaging XMM-VID1-2075</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>  |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam Imaging XMM-VID1-2075 (Obs 18)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 18:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>  | <b>Name</b>                | <b>Target Coordinates</b>  |                        | <b>Targ. Coord. Corrections</b> |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (31)  | XMM-VID1-2075              | RA: 02 17 32.8601 (34.3869171d)<br>Dec: -05 28 57.39 (-5.48261d)<br>Equinox: J2000 |                        |                                 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/> <i>Category=Galaxy</i><br/> <i>Description=[Elliptical galaxies]</i></p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>   |                            | <b>Subarray</b>  |                        |                                 | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL   |                            | FULL   |                        |                                 | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>  | <b>Primary Dither Type</b> |  | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>     |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1   | INTRAMODULEBOX             |  | 4                      | STANDARD                        |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>  | <b>Short Filter</b>        | <b>Long Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>               | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1   | F200W                      | F356W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2   | F150W                      | F444W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | Offset 55.0 arcsec, 35.0 arcsec   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 16 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
|-----------------------------|---|----------------------------|--|------------------------|---------------------------------|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p><b>Proposal 3567, Observation 16: NIRCam Imaging XMM-VID3-1120</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>  |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam Imaging XMM-VID3-1120 (Obs 16)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 16:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>  | <b>Name</b>                | <b>Target Coordinates</b>  |                        | <b>Targ. Coord. Corrections</b> |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (32)  | XMM-VID3-1120              | RA: 02 27 10.0999 (36.7920829d)<br>Dec: -04 34 44.49 (-4.57903d)<br>Equinox: J2000 |                        |                                 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/> <i>Category=Galaxy</i><br/> <i>Description=[Elliptical galaxies]</i></p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>   |                            | <b>Subarray</b>  |                        |                                 | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL   |                            | FULL   |                        |                                 | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>  | <b>Primary Dither Type</b> |  | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>     |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1   | INTRAMODULE                |  | 4                      | STANDARD                        |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>  | <b>Short Filter</b>        | <b>Long Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>               | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1   | F200W                      | F356W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2   | F150W                      | F444W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | <p>Offset -55.0 arcsec, 35.0 arcsec</p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 116 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
|-----------------------------|---|----------------------------|--|------------------------|---------------------------------|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p><b>Proposal 3567, Observation 116: NIRCam Imaging XMM-VID3-1120 - Duplicate</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam Imaging XMM-VID3-1120 - Duplicate (Obs 116)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 116:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>  | <b>Name</b>                | <b>Target Coordinates</b>  |                        | <b>Targ. Coord. Corrections</b> |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (32)  | XMM-VID3-1120              | RA: 02 27 10.0999 (36.7920829d)<br>Dec: -04 34 44.49 (-4.57903d)<br>Equinox: J2000 |                        |                                 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/> <i>Category=Galaxy</i><br/> <i>Description=[Elliptical galaxies]</i></p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>   |                            | <b>Subarray</b>  |                        |                                 | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL   |                            | FULL   |                        |                                 | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>  | <b>Primary Dither Type</b> |  | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>     |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1   | INTRAMODULE                |  | 4                      | STANDARD                        |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>  | <b>Short Filter</b>        | <b>Long Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>               | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1   | F200W                      | F356W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2   | F150W                      | F444W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | Offset -55.0 arcsec, 35.0 arcsec  |                            |  |                        |                                 |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 216 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
|-----------------------------|---|----------------------------|--|------------------------|---------------------------------|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p><b>Proposal 3567, Observation 216: NIRCam Imaging XMM-VID3-1120 - Duplicate</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam Imaging XMM-VID3-1120 - Duplicate (Obs 216)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 216:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>  | <b>Name</b>                | <b>Target Coordinates</b>  |                        | <b>Targ. Coord. Corrections</b> |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (32)  | XMM-VID3-1120              | RA: 02 27 10.0999 (36.7920829d)<br>Dec: -04 34 44.49 (-4.57903d)<br>Equinox: J2000 |                        |                                 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/> <i>Category=Galaxy</i><br/> <i>Description=[Elliptical galaxies]</i></p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>   |                            | <b>Subarray</b>  |                        |                                 | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL   |                            | FULL   |                        |                                 | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>  | <b>Primary Dither Type</b> |  | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>     |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1   | INTRAMODULE                |  | 4                      | STANDARD                        |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>  | <b>Short Filter</b>        | <b>Long Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>               | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1   | F200W                      | F356W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2   | F150W                      | F444W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | Offset -55.0 arcsec, 35.0 arcsec  |                            |  |                        |                                 |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 17 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
|-----------------------------|---|----------------------------|--|------------------------|---------------------------------|------------------------------------|---------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | <p>Proposal 3567, Observation 17: NIRCam Imaging XMM-VID3-2457</p> <p><b>Diagnostic Status: Warning</b></p> <p>Observing Template: NIRCam Imaging</p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Diagnostics</b>          | <p>(NIRCam Imaging XMM-VID3-2457 (Obs 17)) Warning (Form): By selecting Target Placement = Module Gap the target coordinates will not fall on any detector unless an appropriate Mosaic, set of Dithers or Offset Special Requirement is specified.</p> <p>(Visit 17:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.</p> |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>  | <b>Name</b>                | <b>Target Coordinates</b>  |                        | <b>Targ. Coord. Corrections</b> |                                    |                           | <b>Miscellaneous</b>      |                            |                        |
|                             | (33)  | XMM-VID3-2457              | RA: 02 26 56.0400 (36.7335000d)<br>Dec: -04 32 11.64 (-4.53657d)<br>Equinox: J2000 |                        |                                 |                                    |                           |                           |                            |                        |
|                             | <p><i>Comments:</i><br/>Category=Galaxy<br/>Description=[Elliptical galaxies]</p>   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |
| <b>Template</b>             | <b>Module</b>   |                            | <b>Subarray</b>  |                        |                                 | <b>Target Placement</b>            |                           |                           |                            |                        |
|                             | ALL   |                            | FULL   |                        |                                 | Module gap (large extended source) |                           |                           |                            |                        |
| <b>Dithers</b>              | <b>#</b>  | <b>Primary Dither Type</b> |  | <b>Primary Dithers</b> | <b>Subpixel Dither Type</b>     |                                    | <b>Dither Size</b>        | <b>Subpixel Positions</b> |                            |                        |
|                             | 1   | INTRAMODULE                |  | 4                      | STANDARD                        |                                    |                           | 1                         |                            |                        |
| <b>Spectral Elements</b>    | <b>#</b>  | <b>Short Filter</b>        | <b>Long Filter</b>   | <b>Readout Pattern</b> | <b>Groups/Int</b>               | <b>Integrations/Exp</b>            | <b>Total Integrations</b> | <b>Total Dithers</b>      | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1   | F200W                      | F356W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
|                             | 2   | F150W                      | F444W  | SHALLOW4               | 7                               | 1                                  | 4                         | 4                         | 1460.201                   |                        |
| <b>Special Requirements</b> | Offset 55.0 arcsec, 35.0 arcsec   |                            |  |                        |                                 |                                    |                           |                           |                            |                        |

Proposal 3567 - Observation 2 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                        |  |   |  |                  |                            |                                 |                           |                            |                    |                     |                 |
|------------------------|--|---|--|------------------|----------------------------|---------------------------------|---------------------------|----------------------------|--------------------|---------------------|-----------------|
| <b>Observation</b>     | Proposal 3567, Observation 2: cos-466654_v1<br>Diagnostic Status: Warning<br>Observing Template: NIRSspec MultiObject Spectroscopy   |   |  |                  |                            |                                 |                           |                            |                    |                     |                 |
|                        | (cos-466654_v1 (Obs 2)) Warning (Form): Config c1 (#1) has 2 filler slits affected by failed closed shutters.<br>(Visit 2:1) Warning (Form): Overheads are provisional until the Visit Planner has been run. |   |  |                  |                            |                                 |                           |                            |                    |                     |                 |
| <b>Fixed Targets</b>   | #  | Name  | Target Coordinates   |                  |                            | Targ. Coord. Corrections        |                           |                            | Miscellaneous      |                     |                 |
|                        | (50)   | cweb_flag_v3_cos-466654   | RA: 09 57 41.7740 (149.4240583d)<br>Dec: +02 00 55.07 (2.01530d)<br>Equinox: J2000 |                  |                            | Comments:<br>Description=[]     |                           |                            |                    |                     |                 |
| <b>Acquisition</b>     | #  | Reference Star Bin  | Target   | Filter           | MSA Configuration          | Readout Pattern                 | Groups/Int                | Integrations/Exp           | Total Integrations | Total Exposure Time | Optional ETC ID |
|                        | 1  | Filter: F140X; Readout: NRSRAPIDD6; 8 sources in 3 quads; [ Optimal TA Accuracy ] | SAME   | F140X            | Auto Acq MSA Config        | NRSRAPIDD6                      | 3                         | 1                          | 4                  | 687.153             |                 |
| <b>Template</b>        | TA Method  | HFF Readout Mode  | Obtain Confirmation Images   | Science Aperture | Primary Candidate List     | Filler Candidate List           | Spectral Overlap Map      | Spectral Overlap Threshold |                    |                     |                 |
|                        | MSATA  | false   | After Target ACQ and New MSA Config  | MSA Center       | main-cos466654 (1 sources) | fillers and msata (922 sources) | jwst-nirspec-g235m        | 1.5                        |                    |                     |                 |
| <b>Reference Stars</b> | Visit  | ID  | RA   | Dec              | Magnitude                  | Visit                           | ID                        | RA                         | Dec                | Magnitude           |                 |
|                        | 1  | 1198  | 149.420880   | 2.006127         | 23.01735115051269          | 1                               | 1752                      | 149.450538                 | 2.027342           | 23.30136108398437   |                 |
|                        | 1  | 1253  | 149.411394   | 2.007651         | 24.37429428100586          | 1                               | 2183                      | 149.455484                 | 2.040176           | 24.80406379699707   |                 |
|                        | 1  | 1366  | 149.434030   | 2.010630         | 24.56748580932617          | 1                               | 2708                      | 149.441013                 | 2.055813           | 23.95034088625097   |                 |
|                        | 1  | 1562  | 149.422069   | 2.018639         | 24.87958526611328          | 1                               | 2766                      | 149.447260                 | 2.058554           | 24.39893362517029   |                 |
| <b>Confirmation</b>    | #  | Confirmation Type   | Conf. Readout Pattern  | Conf. Groups/Int | Conf. Integrations/Exp     | Conf. Total Integrations        | Conf. Total Exposure Time |                            |                    |                     |                 |
|                        | 1  | c1  | NRSIRS2RAPID   | 2                | 1                          | 1                               | 43.767                    |                            |                    |                     |                 |

Proposal 3567 - Observation 2 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA  | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|--|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 149.42930833333<br>332 Degrees<br>2.0368999999999<br>997 Degrees | 245.91934951301              | 3                                  | 3             | 6                  | 10591.534           |
| MSA Scheduled Aperture PA 245.9192 to 245.9192 Degrees (V3 107.34464 to 107.34464) |                      |                        |                     |             |                   |  |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 3 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                                    |   |   |   |                              |                               |                                 |                                 |                                   |                           |                            |                        |
|------------------------------------|---|---|---|------------------------------|-------------------------------|---------------------------------|---------------------------------|-----------------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>                 | <b>Proposal 3567, Observation 3: cos-dr1-1113684_test</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: NIRSspec MultiObject Spectroscopy   |   |   |                              |                               |                                 |                                 |                                   |                           |                            |                        |
|                                    | (cos-dr1-1113684_test (Obs 3)) Warning (Form): Config c1 (#1) has 1 filler slits affected by failed closed shutters.<br>(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>      |                            |                        |
|                                    | (52)  | cweb_flag_v4_cos-dr1-1113684  | RA: 09 59 43.5134 (149.9313058d)<br>Dec: +02 07 6.65 (2.11851d)<br>Equinox: J2000 |                              |                               |                                 |                                 |                                   |                           |                            |                        |
| <i>Comments:</i><br>Description=[] |   |   |   |                              |                               |                                 |                                 |                                   |                           |                            |                        |
| <b>Acquisition</b>                 | <b>#</b>  | <b>Reference Star Bin</b>   | <b>Target</b>   | <b>Filter</b>                | <b>MSA Configuration</b>      | <b>Readout Pattern</b>          | <b>Groups/Int</b>               | <b>Integrations/Exp</b>           | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                                    | 1   | Filter: F110W; Readout: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ] | SAME  | F110W                        | Auto Acq MSA Config           | NRSRAPIDD6                      | 3                               | 1                                 | 4                         | 687.153                    |                        |
| <b>Template</b>                    | <b>TA Method</b>  | <b>HFF Readout Mode</b>   | <b>Obtain Confirmation Images</b>   | <b>Science Aperture</b>      | <b>Primary Candidate List</b> | <b>Filler Candidate List</b>    | <b>Spectral Overlap Map</b>     | <b>Spectral Overlap Threshold</b> |                           |                            |                        |
|                                    | MSATA   | false   | After Target ACQ and New MSA Config   | MSA Center                   | top (125 sources)             | low (829 sources)               | jwst-nirspec-g235m              | 1.5                               |                           |                            |                        |
| <b>Reference Stars</b>             | <b>Visit</b>  | <b>ID</b>   | <b>RA</b>   | <b>Dec</b>                   | <b>Magnitude</b>              | <b>Visit</b>                    | <b>ID</b>                       | <b>RA</b>                         | <b>Dec</b>                | <b>Magnitude</b>           |                        |
|                                    | 1   | 4581  | 149.931203  | 2.073518                     | 21.376122                     | 1                               | 7340                            | 149.920836                        | 2.095732                  | 23.92177                   |                        |
|                                    | 1   | 5511  | 149.912346  | 2.080861                     | 21.70853                      | 1                               | 8479                            | 149.914489                        | 2.104504                  | 22.369152                  |                        |
|                                    | 1   | 6425  | 149.951649  | 2.088441                     | 22.717995                     | 1                               | 9981                            | 149.909723                        | 2.115664                  | 23.711502                  |                        |
|                                    | 1   | 6920  | 149.960922  | 2.092308                     | 21.339401                     | 1                               | 10052                           | 149.953531                        | 2.116181                  | 23.5566                    |                        |
| <b>Confirmation</b>                | <b>#</b>  | <b>Confirmation Type</b>  |   | <b>Conf. Readout Pattern</b> | <b>Conf. Groups/Int</b>       | <b>Conf. Integrations/Exp</b>   | <b>Conf. Total Integrations</b> | <b>Conf. Total Exposure Time</b>  |                           |                            |                        |
|                                    | 1   | c1  |   | NRSIRS2RAPID                 | 2                             | 1                               | 1                               | 43.767                            |                           |                            |                        |

Proposal 3567 - Observation 3 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA  | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|--|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 149.93580083333<br>333 Degrees<br>2.095625 Degrees | 246.25374943221<br>183       |                                    |               | 3                  | 3                   |
| MSA Scheduled Aperture PA 246.2535 to 246.2535 Degrees (V3 107.67897 to 107.67897) |                      |                        |                     |             |                   |  |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 4 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                                 |  |   |  |                              |                               |                                   |                                 |                                   |                           |                            |                        |
|---------------------------------|--|---|--|------------------------------|-------------------------------|-----------------------------------|---------------------------------|-----------------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>              | <b>Proposal 3567, Observation 4: zf-cos-20115_v1</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: NIRSspec MultiObject Spectroscopy                                       |   |  |                              |                               |                                   |                                 |                                   |                           |                            |                        |
|                                 | (Visit 4:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 4:1) Warning (Form): The recommended value is 8 Reference Stars for this template. |   |  |                              |                               |                                   |                                 |                                   |                           |                            |                        |
| <b>Fixed Targets</b>            | <b>#</b>   | <b>Name</b>   | <b>Target Coordinates</b>  |                              |                               | <b>Targ. Coord. Corrections</b>   |                                 |                                   | <b>Miscellaneous</b>      |                            |                        |
|                                 | (51)   | cweb_flag_v7_zf-cos-20115   | RA: 10 00 14.1624 (150.0590100d)<br>Dec: +02 21 48.22 (2.36339d)<br>Equinox: J2000 |                              |                               |                                   |                                 |                                   |                           |                            |                        |
| <i>Comments: Description=[]</i> |  |   |  |                              |                               |                                   |                                 |                                   |                           |                            |                        |
| <b>Acquisition</b>              | <b>#</b>   | <b>Reference Star Bin</b>   | <b>Target</b>  | <b>Filter</b>                | <b>MSA Configuration</b>      | <b>Readout Pattern</b>            | <b>Groups/Int</b>               | <b>Integrations/Exp</b>           | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                                 | 1  | Filter: F110W; Readout: NRSRAPIDD6; 7 sources in 4 quads; [ Optimal TA Accuracy ] | SAME   | F110W                        | Auto Acq MSA Config           | NRSRAPIDD6                        | 3                               | 1                                 | 4                         | 687.153                    |                        |
| <b>Template</b>                 | <b>TA Method</b>   | <b>HFF Readout Mode</b>   | <b>Obtain Confirmation Images</b>  | <b>Science Aperture</b>      | <b>Primary Candidate List</b> | <b>Filler Candidate List</b>      | <b>Spectral Overlap Map</b>     | <b>Spectral Overlap Threshold</b> |                           |                            |                        |
|                                 | MSATA  | false   | After Target ACQ and New MSA Config  | MSA Center                   | zf-cos-20115 (1 sources)      | every other target (3383 sources) | jwst-nirspec-g235m              | 1.5                               |                           |                            |                        |
| <b>Reference Stars</b>          | <b>Visit</b>   | <b>ID</b>   | <b>RA</b>  | <b>Dec</b>                   | <b>Magnitude</b>              | <b>Visit</b>                      | <b>ID</b>                       | <b>RA</b>                         | <b>Dec</b>                | <b>Magnitude</b>           |                        |
|                                 | 1  | 39072   | 150.091458   | 2.336053                     | 23.28796                      | 1                                 | 52099                           | 150.070080                        | 2.372557                  | 23.569838                  |                        |
|                                 | 1  | 44068   | 150.118460   | 2.350048                     | 23.491251                     | 1                                 | 55540                           | 150.098413                        | 2.382213                  | 23.541035                  |                        |
|                                 | 1  | 46940   | 150.091554   | 2.358211                     | 23.727852                     | 1                                 | 55631                           | 150.101276                        | 2.382869                  | 23.865938                  |                        |
|                                 | 1  | 51835   | 150.083595   | 2.371908                     | 21.599255                     |                                   |                                 |                                   |                           |                            |                        |
| <b>Confirmation</b>             | <b>#</b>   | <b>Confirmation Type</b>  |  | <b>Conf. Readout Pattern</b> | <b>Conf. Groups/Int</b>       | <b>Conf. Integrations/Exp</b>     | <b>Conf. Total Integrations</b> | <b>Conf. Total Exposure Time</b>  |                           |                            |                        |
|                                 | 1  | c1  |  | NRSIRS2RAPID                 | 2                             | 1                                 | 1                               | 43.767                            |                           |                            |                        |

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| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA   | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|---|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 150.09753375<br>Degrees<br>2.365613888888<br>89 Degrees | 246.59522955408<br>343       |                                    |               | 3                  | 6                   |
| MSA Scheduled Aperture PA 246.5937 to 246.5937 Degrees (V3 108.019104 to 108.019104) |                      |                        |                     |             |                   |   |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 7 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                             |  |  |   |                              |                               |   |                                 |                                   |                           |                            |                        |
|-----------------------------|--|--|---|------------------------------|-------------------------------|---|---------------------------------|-----------------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>          | Proposal 3567, Observation 7: egs_31322_v5<br>Diagnostic Status: Warning<br>Observing Template: NIRSpec MultiObject Spectroscopy   |  |   |                              |                               |   |                                 |                                   |                           |                            |                        |
|                             | (egs_31322_v5 (Obs 7)) Warning (Form): Config c1 (#1) has 2 filler slits affected by failed closed shutters.<br>(Visit 7:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 7:1) Warning (Form): The recommended value is 8 Reference Stars for this template. |  |   |                              |                               |   |                                 |                                   |                           |                            |                        |
| <b>Fixed Targets</b>        | <b>#</b>   | <b>Name</b>  | <b>Target Coordinates</b>   |                              |                               | <b>Targ. Coord. Corrections</b>   |                                 |                                   | <b>Miscellaneous</b>      |                            |                        |
|                             | (53)   | ceers72_egs31322_v5  | RA: 14 19 33.1506 (214.8881275d)<br>Dec: +52 52 29.25 (52.87479d)<br>Equinox: J2000 |                              |                               |   |                                 |                                   |                           |                            |                        |
| Comments:<br>Description=[] |  |  |   |                              |                               |   |                                 |                                   |                           |                            |                        |
| <b>Acquisition</b>          | <b>#</b>   | <b>Reference Star Bin</b>  | <b>Target</b>   | <b>Filter</b>                | <b>MSA Configuration</b>      | <b>Readout Pattern</b>  | <b>Groups/Int</b>               | <b>Integrations/Exp</b>           | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                             | 1  | Filter: CLEAR;<br>Readout:<br>NRSRAPIDD1; 6<br>sources in 3<br>quads; [ Optimal<br>TA Accuracy ] | SAME  | CLEAR                        | Auto Acq MSA<br>Config        | NRSRAPIDD1  | 3                               | 1                                 | 4                         | 257.682                    |                        |
| <b>Template</b>             | <b>TA Method</b>   | <b>HFF Readout Mode</b>  | <b>Obtain Confirmation Images</b>   | <b>Science Aperture</b>      | <b>Primary Candidate List</b> | <b>Filler Candidate List</b>  | <b>Spectral Overlap Map</b>     | <b>Spectral Overlap Threshold</b> |                           |                            |                        |
|                             | MSATA  | false  | After Target ACQ and<br>New MSA Config  | MSA Center                   | fv v5 (103 sources)           | rubies capped (1<= pr<br><=8, 2.5 < z < 7.5, mag <<br>28) v5 (5900 sources) | rwst-nirspec-g235m              | 1.5                               |                           |                            |                        |
| <b>Reference Stars</b>      | <b>Visit</b>   | <b>ID</b>  | <b>RA</b>   | <b>Dec</b>                   | <b>Magnitude</b>              | <b>Visit</b>  | <b>ID</b>                       | <b>RA</b>                         | <b>Dec</b>                | <b>Magnitude</b>           |                        |
|                             | 1  | 24359  | 214.948850  | 52.857731                    | 22.80824                      | 1   | 41673                           | 214.895726                        | 52.860228                 | 23.482077                  |                        |
|                             | 1  | 27910  | 214.940464  | 52.858724                    | 22.411156                     | 1   | 45728                           | 214.882978                        | 52.861672                 | 22.249956                  |                        |
|                             | 1  | 35287  | 214.917561  | 52.859439                    | 24.060349                     | 1   | 61793                           | 214.881538                        | 52.897293                 | 24.027082                  |                        |
| <b>Confirmation</b>         | <b>#</b>   | <b>Confirmation Type</b>   |   | <b>Conf. Readout Pattern</b> | <b>Conf. Groups/Int</b>       | <b>Conf. Integrations/Exp</b>   | <b>Conf. Total Integrations</b> | <b>Conf. Total Exposure Time</b>  |                           |                            |                        |
|                             | 1  | c1   |   | NRSIRS2RAPID                 | 2                             | 1   | 1                               | 43.767                            |                           |                            |                        |

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| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA  | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|--|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 214.90378516666<br>667 Degrees<br>52.875141666666<br>664 Degrees | 359.52001991422<br>577       |                                    |               | 3                  | 6                   |
| MSA Scheduled Aperture PA 359.5075 to 359.5075 Degrees (V3 220.93298 to 220.93298) |                      |                        |                     |             |                   |  |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 8 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                        |  |   |  |                  |                             |                                  |                           |                            |                    |                     |                 |
|------------------------|--|---|--|------------------|-----------------------------|----------------------------------|---------------------------|----------------------------|--------------------|---------------------|-----------------|
| <b>Observation</b>     | Proposal 3567, Observation 8: sxds-27434_v5_fixed<br>Diagnostic Status: Warning<br>Observing Template: NIRSspec MultiObject Spectroscopy |   |  |                  |                             |                                  |                           |                            |                    |                     |                 |
|                        | (Visit 8:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.  |   |  |                  |                             |                                  |                           |                            |                    |                     |                 |
| <b>Fixed Targets</b>   | #  | Name  | Target Coordinates   |                  |                             | Targ. Coord. Corrections         |                           |                            | Miscellaneous      |                     |                 |
|                        | (54)   | sxds-27434_v0   | RA: 02 17 12.0960 (34.3004000d)<br>Dec: -04 59 23.96 (-4.98999d)<br>Equinox: J2000 |                  |                             | Comments:<br>Description=[]      |                           |                            |                    |                     |                 |
| <b>Acquisition</b>     | #  | Reference Star Bin  | Target   | Filter           | MSA Configuration           | Readout Pattern                  | Groups/Int                | Integrations/Exp           | Total Integrations | Total Exposure Time | Optional ETC ID |
|                        | 1  | Filter: F140X; Readout: NRSRAPIDD6; 8 sources in 3 quads; [ Optimal TA Accuracy ] | SAME   | F140X            | Auto Acq MSA Config         | NRSRAPIDD6                       | 3                         | 1                          | 4                  | 687.153             |                 |
| <b>Template</b>        | TA Method  | HFF Readout Mode  | Obtain Confirmation Images   | Science Aperture | Primary Candidate List      | Filler Candidate List            | Spectral Overlap Map      | Spectral Overlap Threshold |                    |                     |                 |
|                        | MSATA  | false   | After Target ACQ and New MSA Config  | MSA Center       | Main-sxds-27434 (1 sources) | Fillers-sxds-27434 (604 sources) | jwst-nirspec-g235m        | 1.5                        |                    |                     |                 |
| <b>Reference Stars</b> | Visit  | ID  | RA   | Dec              | Magnitude                   | Visit                            | ID                        | RA                         | Dec                | Magnitude           |                 |
|                        | 1  | 22  | 34.318421  | -5.049501        | 24.59972888451090           | 1                                | 133                       | 34.303345                  | -5.027347          | 24.00722885131836   |                 |
|                        | 1  | 105   | 34.287323  | -5.032082        | 23.8106726946886            | 1                                | 169                       | 34.292620                  | -5.017579          | 23.69847353645226   |                 |
|                        | 1  | 126   | 34.297392  | -5.027702        | 24.79670524597168           | 1                                | 264                       | 34.311711                  | -4.989523          | 23.91186714172363   |                 |
|                        | 1  | 132   | 34.291963  | -5.027449        | 23.23416900634765           | 1                                | 292                       | 34.306943                  | -4.984482          | 24.22350311279297   |                 |
| <b>Confirmation</b>    | #  | Confirmation Type   | Conf. Readout Pattern  | Conf. Groups/Int | Conf. Integrations/Exp      | Conf. Total Integrations         | Conf. Total Exposure Time |                            |                    |                     |                 |
|                        | 1  | c1  | NRSIRS2RAPID   | 2                | 1                           | 1                                | 43.767                    |                            |                    |                     |                 |

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| Spectral Elements    | #  | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA  | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|----------------------|--|------------------------|---------------------|-------------|-------------------|--|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|                      |  | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 34.31432875<br>Degrees -<br>5.020877777777<br>98 Degrees | 31.396815821730<br>563       |                                    |               | 3                  | 3                   |
| Special Requirements | MSA Scheduled Aperture PA 31.3981 to 31.3981 Degrees (V3 252.82353 to 252.82353) |                        |                     |             |                   |  |                              |                                    |               |                    |                     |

# Proposal 3567 - Observation 10 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                                 |  |   |   |                         |                               |                                 |                                  |                                   |                           |                            |                        |
|---------------------------------|--|---|---|-------------------------|-------------------------------|---------------------------------|----------------------------------|-----------------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>              | <b>Proposal 3567, Observation 10: sxds-10017_v3--more_compact_more_fillers_bright</b><br><b>Diagnostic Status: Warning</b><br>Observing Template: NIRSpec MultiObject Spectroscopy   |   |   |                         |                               |                                 |                                  |                                   |                           |                            |                        |
|                                 | (sxds-10017_v3--more_compact_more_fillers_bright (Obs 10)) Warning (Form): Config c1 (#1) has 1 filler slits affected by failed closed shutters.<br>(Visit 10:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.<br>(Visit 10:1) Warning (Form): The recommended value is 8 Reference Stars for this template. |   |   |                         |                               |                                 |                                  |                                   |                           |                            |                        |
| <b>Fixed Targets</b>            | <b>#</b>   | <b>Name</b>   | <b>Target Coordinates</b>   |                         |                               | <b>Targ. Coord. Corrections</b> |                                  |                                   | <b>Miscellaneous</b>      |                            |                        |
|                                 | (58)   | sxds-10017_v3   | RA: 02 19 1.5576 (34.7564900d)<br>Dec: -05 18 34.63 (-5.30962d)<br>Equinox: J2000 |                         |                               |                                 |                                  |                                   |                           |                            |                        |
| <i>Comments: Description=[]</i> |  |   |   |                         |                               |                                 |                                  |                                   |                           |                            |                        |
| <b>Acquisition</b>              | <b>#</b>   | <b>Reference Star Bin</b>   | <b>Target</b>   | <b>Filter</b>           | <b>MSA Configuration</b>      | <b>Readout Pattern</b>          | <b>Groups/Int</b>                | <b>Integrations/Exp</b>           | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                                 | 1  | Filter: F140X; Readout: NRSRAPIDD6; 7 sources in 4 quads; [ Optimal TA Accuracy ] | SAME  | F140X                   | Auto Acq MSA Config           | NRSRAPIDD6                      | 3                                | 1                                 | 4                         | 687.153                    |                        |
| <b>Template</b>                 | <b>TA Method</b>   | <b>HFF Readout Mode</b>   | <b>Obtain Confirmation Images</b>   | <b>Science Aperture</b> | <b>Primary Candidate List</b> | <b>Filler Candidate List</b>    | <b>Spectral Overlap Map</b>      | <b>Spectral Overlap Threshold</b> |                           |                            |                        |
|                                 | MSATA  | false   | After Target ACQ and New MSA Config   | MSA Center              | main-v3 (1 sources)           | fills-v3-nircam (1427 sources)  | jwst-nirspec-g235m               | 1.5                               |                           |                            |                        |
| <b>Reference Stars</b>          | <b>Visit</b>   | <b>ID</b>   | <b>RA</b>   | <b>Dec</b>              | <b>Magnitude</b>              | <b>Visit</b>                    | <b>ID</b>                        | <b>RA</b>                         | <b>Dec</b>                | <b>Magnitude</b>           |                        |
|                                 | 1  | 7   | 34.774207   | -5.369315               | 22.45897555413183             | 1                               | 607                              | 34.752968                         | -5.314052                 | 22.91161727905273          |                        |
|                                 | 1  | 316   | 34.742307   | -5.340841               | 22.94054197512918             | 1                               | 635                              | 34.762403                         | -5.312275                 | 24.9188232421875           |                        |
|                                 | 1  | 348   | 34.757265   | -5.338597               | 24.51619720458984             | 1                               | 695                              | 34.756280                         | -5.308090                 | 24.28407096862793          |                        |
|                                 | 1  | 469   | 34.781136   | -5.326156               | 24.28046989440918             |                                 |                                  |                                   |                           |                            |                        |
| <b>Confirmation</b>             | <b>#</b>   | <b>Confirmation Type</b>  | <b>Conf. Readout Pattern</b>  | <b>Conf. Groups/Int</b> | <b>Conf. Integrations/Exp</b> | <b>Conf. Total Integrations</b> | <b>Conf. Total Exposure Time</b> |                                   |                           |                            |                        |
|                                 | 1  | c1  | NRSIRS2RAPID  | 3                       | 1                             | 1                               | 58.356                           |                                   |                           |                            |                        |

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| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA   | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|---|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 34.767370833333<br>33 Degrees -<br>5.337058333333<br>46 Degrees | 32.472899940812<br>05        |                                    | 3             | 6                  | 11904.534           |
| MSA Scheduled Aperture PA 32.4740 to 32.4740 Degrees (V3 253.8994 to 253.8994) |                      |                        |                     |             |                   |   |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 12 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                                     |  |  |   |                         |                               |  |                                  |                                   |                           |                            |                        |
|-------------------------------------|--|--|---|-------------------------|-------------------------------|--|----------------------------------|-----------------------------------|---------------------------|----------------------------|------------------------|
| <b>Observation</b>                  | Proposal 3567, Observation 12: xmm-vid1_testing_v1_fixed<br>Diagnostic Status: Warning<br>Observing Template: NIRSpec MultiObject Spectroscopy |  |   |                         |                               |  |                                  |                                   |                           |                            |                        |
|                                     | (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>      |                            |                        |
|                                     | (63)   | xmm-vid1-2075_v0   | RA: 02 17 33.4152 (34.3892300d)<br>Dec: -05 29 0.38 (-5.48344d)<br>Equinox: J2000 |                         |                               |  |                                  |                                   |                           |                            |                        |
| <i>Comments:<br/>Description=[]</i> |  |  |   |                         |                               |  |                                  |                                   |                           |                            |                        |
| <b>Acquisition</b>                  | <b>#</b>   | <b>Reference Star Bin</b>  | <b>Target</b>   | <b>Filter</b>           | <b>MSA Configuration</b>      | <b>Readout Pattern</b>                 | <b>Groups/Int</b>                | <b>Integrations/Exp</b>           | <b>Total Integrations</b> | <b>Total Exposure Time</b> | <b>Optional ETC ID</b> |
|                                     | 1  | Filter: F140X;<br>Readout:<br>NRSRAPIDD6; 8<br>sources in 3<br>quads; [ Optimal<br>TA Accuracy ] | SAME  | F140X                   | Auto Acq MSA<br>Config        | NRSRAPIDD6                             | 3                                | 1                                 | 4                         | 687.153                    |                        |
| <b>Template</b>                     | <b>TA Method</b>   | <b>HFF Readout Mode</b>  | <b>Obtain Confirmation Images</b>   | <b>Science Aperture</b> | <b>Primary Candidate List</b> | <b>Filler Candidate List</b>           | <b>Spectral Overlap Map</b>      | <b>Spectral Overlap Threshold</b> |                           |                            |                        |
|                                     | MSATA  | false  | After Target ACQ and<br>New MSA Config  | MSA Center              | xmm-vid1-2075 (1<br>sources)  | fillers-xmm-vid1-2075<br>(739 sources) | jwst-nirspec-g235m               | 1.5                               |                           |                            |                        |
| <b>Reference Stars</b>              | <b>Visit</b>   | <b>ID</b>  | <b>RA</b>   | <b>Dec</b>              | <b>Magnitude</b>              | <b>Visit</b>                           | <b>ID</b>                        | <b>RA</b>                         | <b>Dec</b>                | <b>Magnitude</b>           |                        |
|                                     | 1  | 198  | 34.403232   | -5.538664               | 24.193913                     | 1                                      | 2746                             | 34.383939                         | -5.492994                 | 23.34355                   |                        |
|                                     | 1  | 243  | 34.400926   | -5.537495               | 24.40349                      | 1                                      | 3171                             | 34.395166                         | -5.485345                 | 23.558336                  |                        |
|                                     | 1  | 661  | 34.412126   | -5.530701               | 23.63173                      | 1                                      | 3443                             | 34.388397                         | -5.481518                 | 24.754774                  |                        |
|                                     | 1  | 1972   | 34.409759   | -5.513140               | 24.122484                     | 1                                      | 3527                             | 34.385524                         | -5.479914                 | 24.26536                   |                        |
| <b>Confirmation</b>                 | <b>#</b>   | <b>Confirmation Type</b>   | <b>Conf. Readout Pattern</b>  | <b>Conf. Groups/Int</b> | <b>Conf. Integrations/Exp</b> | <b>Conf. Total Integrations</b>        | <b>Conf. Total Exposure Time</b> |                                   |                           |                            |                        |
|                                     | 1  | c1   | NRSIRS2RAPID  | 2                       | 1                             | 1                                      | 43.767                           |                                   |                           |                            |                        |

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| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA   | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|---|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 34.395082916666<br>66 Degrees -<br>5.511775 Degrees | 31.376318460083<br>574       |                                    |               | 3                  | 3                   |
| MSA Scheduled Aperture PA 31.3769 to 31.3769 Degrees (V3 252.80237 to 252.80237) |                      |                        |                     |             |                   |   |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 15 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                                 |  |   |  |                  |                               |                                   |                           |                            |                    |                     |
|---------------------------------|--|---|--|------------------|-------------------------------|-----------------------------------|---------------------------|----------------------------|--------------------|---------------------|
| <b>Observation</b>              | Proposal 3567, Observation 15: xmm-vid3-2457_v0_fixed<br>Diagnostic Status: Warning<br>Observing Template: NIRSspec MultiObject Spectroscopy |   |  |                  |                               |                                   |                           |                            |                    |                     |
|                                 | (Visit 15:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.   |   |  |                  |                               |                                   |                           |                            |                    |                     |
| <b>Fixed Targets</b>            | #  | Name  | Target Coordinates   |                  |                               | Targ. Coord. Corrections          |                           |                            | Miscellaneous      |                     |
|                                 | (62)   | xmm-vid3-2457_v1  | RA: 02 26 55.9128 (36.7329700d)<br>Dec: -04 31 54.95 (-4.53193d)<br>Equinox: J2000 |                  |                               |                                   |                           |                            |                    |                     |
| <i>Comments: Description=[]</i> |  |   |  |                  |                               |                                   |                           |                            |                    |                     |
| <b>Acquisition</b>              | #  | Reference Star Bin  | Target   | Filter           | MSA Configuration             | Readout Pattern                   | Groups/Int                | Integrations/Exp           | Total Integrations | Total Exposure Time |
|                                 | 1  | Filter: F140X; Readout: NRSRAPIDD6; 8 sources in 3 quads; [ Optimal TA Accuracy ] | SAME   | F140X            | Auto Acq MSA Config           | NRSRAPIDD6                        | 3                         | 1                          | 4                  | 687.153             |
| <b>Template</b>                 | TA Method  | HFF Readout Mode  | Obtain Confirmation Images   | Science Aperture | Primary Candidate List        | Filler Candidate List             | Spectral Overlap Map      | Spectral Overlap Threshold |                    |                     |
|                                 | MSATA  | false   | After Target ACQ and New MSA Config  | MSA Center       | top-xmm-vid3-2457 (1 sources) | fills-xmm-vid3-2457 (918 sources) | jwst-nirspec-g235m        | 1.5                        |                    |                     |
| <b>Reference Stars</b>          | Visit  | ID  | RA   | Dec              | Magnitude                     | Visit                             | ID                        | RA                         | Dec                | Magnitude           |
|                                 | 1  | 1020  | 36.747358  | -4.585434        | 23.369154                     | 1                                 | 3285                      | 36.736799                  | -4.547720          | 23.70298            |
|                                 | 1  | 1290  | 36.725590  | -4.582089        | 23.843369                     | 1                                 | 3560                      | 36.747696                  | -4.543209          | 23.05291            |
|                                 | 1  | 1897  | 36.716670  | -4.575046        | 23.176317                     | 1                                 | 3730                      | 36.727658                  | -4.540886          | 24.582045           |
|                                 | 1  | 3284  | 36.723252  | -4.547667        | 23.839579                     | 1                                 | 3805                      | 36.745770                  | -4.539869          | 24.323336           |
| <b>Confirmation</b>             | #  | Confirmation Type   | Conf. Readout Pattern  | Conf. Groups/Int | Conf. Integrations/Exp        | Conf. Total Integrations          | Conf. Total Exposure Time |                            |                    |                     |
|                                 | 1  | c1  | NRSIRS2RAPID   | 2                | 1                             | 1                                 | 43.767                    |                            |                    |                     |

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| Spectral Elements    | #  | Exposure Specification | MSA Configuration | Nod Pattern       | Pointing   | Aperture PA     | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|----------------------|--|------------------------|-------------------|-------------------|--|-----------------|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|                      | 1  | 1<br>(G235M/F170LP)    | c1                | 3 Shutter Slitlet | 36.740030833333<br>336 Degrees -<br>4.566158333333<br>06 Degrees | 32.954476546336 | 41                           |                                    |               | 3                  | 3                   |
| Special Requirements | MSA Scheduled Aperture PA 32.9551 to 32.9551 Degrees (V3 254.38054 to 254.38054) |                        |                   |                   |  |                 |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 19 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                        |   |   |  |                  |                         |                                   |                           |                            |                    |                     |                 |
|------------------------|---|---|--|------------------|-------------------------|-----------------------------------|---------------------------|----------------------------|--------------------|---------------------|-----------------|
| <b>Observation</b>     | Proposal 3567, Observation 19: uds_v4_bright<br>Diagnostic Status: Warning<br>Observing Template: NIRSspec MultiObject Spectroscopy |   |  |                  |                         |                                   |                           |                            |                    |                     |                 |
|                        | (Visit 19:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.  |   |  |                  |                         |                                   |                           |                            |                    |                     |                 |
| <b>Fixed Targets</b>   | #   | Name  | Target Coordinates   |                  |                         | Targ. Coord. Corrections          |                           |                            | Miscellaneous      |                     |                 |
|                        | (65)  | uds_testing_v4  | RA: 02 17 22.6033 (34.3441804d)<br>Dec: -05 15 18.99 (-5.25527d)<br>Equinox: J2000 |                  |                         | Comments:<br>Description=[]       |                           |                            |                    |                     |                 |
| <b>Acquisition</b>     | #   | Reference Star Bin  | Target   | Filter           | MSA Configuration       | Readout Pattern                   | Groups/Int                | Integrations/Exp           | Total Integrations | Total Exposure Time | Optional ETC ID |
|                        | 1   | Filter: F140X; Readout: NRSRAPIDD6; 8 sources in 4 quads; [ Optimal TA Accuracy ] | SAME   | F140X            | Auto Acq MSA Config     | NRSRAPIDD6                        | 3                         | 1                          | 4                  | 687.153             |                 |
| <b>Template</b>        | TA Method   | HFF Readout Mode  | Obtain Confirmation Images   | Science Aperture | Primary Candidate List  | Filler Candidate List             | Spectral Overlap Map      | Spectral Overlap Threshold |                    |                     |                 |
|                        | MSATA   | false   | After Target ACQ and New MSA Config  | MSA Center       | top_can_uds (1 sources) | low_uds_bright_rub (2269 sources) | jwst-nirspec-g235m        | 1.5                        |                    |                     |                 |
| <b>Reference Stars</b> | Visit   | ID  | RA   | Dec              | Magnitude               | Visit                             | ID                        | RA                         | Dec                | Magnitude           |                 |
|                        | 1   | 35555   | 34.430044  | -5.156127        | 23.52675056457519       | 1                                 | 166773                    | 34.421652                  | -5.111622          | 23.85280036926269   |                 |
|                        | 1   | 48731   | 34.414816  | -5.137342        | 24.29569053649902       | 1                                 | 168514                    | 34.441294                  | -5.109214          | 24.14768028259277   |                 |
|                        | 1   | 153909  | 34.442309  | -5.129960        | 23.77334976196289       | 1                                 | 172241                    | 34.444250                  | -5.104290          | 24.30341339111328   |                 |
|                        | 1   | 155028  | 34.454635  | -5.128448        | 22.45578575134277       | 1                                 | 173043                    | 34.428761                  | -5.103131          | 23.72966575622558   |                 |
| <b>Confirmation</b>    | #   | Confirmation Type   | Conf. Readout Pattern  | Conf. Groups/Int | Conf. Integrations/Exp  | Conf. Total Integrations          | Conf. Total Exposure Time |                            |                    |                     |                 |
|                        | 1   | c1  | NRSIRS2RAPID   | 2                | 1                       | 1                                 | 43.767                    |                            |                    |                     |                 |

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| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA   | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|---|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 34.433650833333<br>33 Degrees -<br>5.1313777777778<br>Degrees | 32.442408200929<br>7         |                                    | 3             | 6                  | 10591.534           |
| MSA Scheduled Aperture PA 32.4504 to 32.4504 Degrees (V3 253.87584 to 253.87584) |                      |                        |                     |             |                   |   |                              |                                    |               |                    |                     |

Proposal 3567 - Observation 214 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

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|                        |  |   |  |                  |                        |                             |                           |                            |                    |                     |                 |
|------------------------|--|---|--|------------------|------------------------|-----------------------------|---------------------------|----------------------------|--------------------|---------------------|-----------------|
| <b>Observation</b>     | Proposal 3567, Observation 214: xmm-vid3-1020-2<br>Diagnostic Status: Warning<br>Observing Template: NIRSspec MultiObject Spectroscopy |   |  |                  |                        |                             |                           |                            |                    |                     |                 |
|                        | (Visit 214:1) Warning (Form): Overheads are provisional until the Visit Planner has been run.  |   |  |                  |                        |                             |                           |                            |                    |                     |                 |
| <b>Fixed Targets</b>   | #  | Name  | Target Coordinates   |                  |                        | Targ. Coord. Corrections    |                           |                            | Miscellaneous      |                     |                 |
|                        | (66)   | xmm-vid3-1020_v0  | RA: 02 27 10.8384 (36.7951600d)<br>Dec: -04 34 16.74 (-4.57132d)<br>Equinox: J2000 |                  |                        | Comments:<br>Description=[] |                           |                            |                    |                     |                 |
| <b>Acquisition</b>     | #  | Reference Star Bin  | Target   | Filter           | MSA Configuration      | Readout Pattern             | Groups/Int                | Integrations/Exp           | Total Integrations | Total Exposure Time | Optional ETC ID |
|                        | 1  | Filter: F140X; Readout: NRSRAPIDD6; 8 sources in 3 quads; [ Optimal TA Accuracy ] | SAME   | F140X            | Auto Acq MSA Config    | NRSRAPIDD6                  | 3                         | 1                          | 4                  | 687.153             |                 |
| <b>Template</b>        | TA Method  | HFF Readout Mode  | Obtain Confirmation Images   | Science Aperture | Primary Candidate List | Filler Candidate List       | Spectral Overlap Map      | Spectral Overlap Threshold |                    |                     |                 |
|                        | MSATA  | false   | After Target ACQ and New MSA Config  | MSA Center       | main (3 sources)       | filler (2473 sources)       | jwst-nirspec-g235m        | 1.5                        |                    |                     |                 |
| <b>Reference Stars</b> | Visit  | ID  | RA   | Dec              | Magnitude              | Visit                       | ID                        | RA                         | Dec                | Magnitude           |                 |
|                        | 1  | 19544   | 36.790666  | -4.587680        | 23.53476333618164      | 1                           | 23608                     | 36.779977                  | -4.548652          | 24.80887222290039   |                 |
|                        | 1  | 20235   | 36.785359  | -4.582608        | 24.53339958190918      | 1                           | 23880                     | 36.776778                  | -4.545918          | 24.170578002929688  |                 |
|                        | 1  | 20256   | 36.791446  | -4.582422        | 24.72796630859375      | 1                           | 25268                     | 36.781079                  | -4.535935          | 23.466297149658203  |                 |
|                        | 1  | 21591   | 36.751126  | -4.572375        | 22.36010551452636      | 1                           | 25965                     | 36.765764                  | -4.530482          | 24.852972030639657  |                 |
| <b>Confirmation</b>    | #  | Confirmation Type   | Conf. Readout Pattern  | Conf. Groups/Int | Conf. Integrations/Exp | Conf. Total Integrations    | Conf. Total Exposure Time |                            |                    |                     |                 |
|                        | 1  | c1  | NRSIRS2RAPID   | 2                | 1                      | 1                           | 43.767                    |                            |                    |                     |                 |

Proposal 3567 - Observation 214 - A deep dive into the physics of the first massive quiescent galaxies in the Universe

| Spectral Elements  | #                    | Exposure Specification | MSA Configuration   | Nod Pattern | Pointing          | Aperture PA   | Dispersion Offset (Shutters) | Cross-Dispersion Offset (Shutters) | Total Dithers | Total Integrations | Total Exposure Time |
|--|----------------------|------------------------|---------------------|-------------|-------------------|---|------------------------------|------------------------------------|---------------|--------------------|---------------------|
|  | Special Requirements | 1                      | 1<br>(G235M/F170LP) | c1          | 3 Shutter Slitlet | 36.77875 Degrees<br>-<br>4.56208611111111<br>14 Degrees | 33.041865366814<br>17        |                                    |               | 3                  | 3                   |
| MSA Scheduled Aperture PA 33.0405 to 33.0405 Degrees (V3 254.46596 to 254.46596) |                      |                        |                     |             |                   |   |                              |                                    |               |                    |                     |