



16424 - Radio galaxy harassment caught in the act

Cycle: 28, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

| <i>Visit</i> | <i>Targets used in Visit</i> | <i>Configurations used in Visit</i> | <i>Orbits Used</i> | <i>Last Orbit Planner Run</i> | <i>OP Current with Visit?</i> |
|--------------|------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 01 | (1) NGC-3568 | ACS/WFC | 1 | 30-Sep-2020 10:00:20.0 | yes |
| 02 | (1) NGC-3568 | WFC3/UVIS | 1 | 30-Sep-2020 10:00:21.0 | yes |

2 Total Orbits Used

ABSTRACT

While AGN negative feedback on star formation has become a key ingredient on cosmic structure formation, the importance of AGN positive feedback, induced star formation from jet-cloud interaction, has also be realized. There are few direct examples of AGN positive feedback in the nearby universe. Recently, we have discovered potentially the closest example of AGN positive feedback in a nearby galaxy group where the radio jet of the central galaxy hits a spiral galaxy 154 kpc away in projection to trigger star formation at the side of interaction! As a rare and unique example important to study AGN positive feedback and SF conditions, we request a Chandra observation, along with joint time from VLA and HST,

Proposal 16424 (STScI Edit Number: 0, Created: Wednesday, September 30, 2020 at 9:00:21 AM Eastern Standard Time) - Overview for the necessary multi-wavelength studies.

OBSERVING DESCRIPTION

We will observe NGC 3568 with three filters F275W, F475W and F814W in two orbits to study the young stellar population and its relation with the radio plasma of NGC 3557. F475W and F814W observations will be done in one orbit with ACS/WFC, while the F275W observation will be done in another orbit with WFC3/UVIS. The ACS data in two high-throughput filters allow detections of faint features (e.g., individual star cluster associations, dust) and a detailed color map of the galaxy to ~ 12 pc. The F275W data will add important information on the SF in the last several 10^7 years and the F275W - F475W color is a very good age indicator.

Proposal 16424 - Visit 01 - Radio galaxy harassment caught in the act

Wed Sep 30 14:00:22 GMT 2020

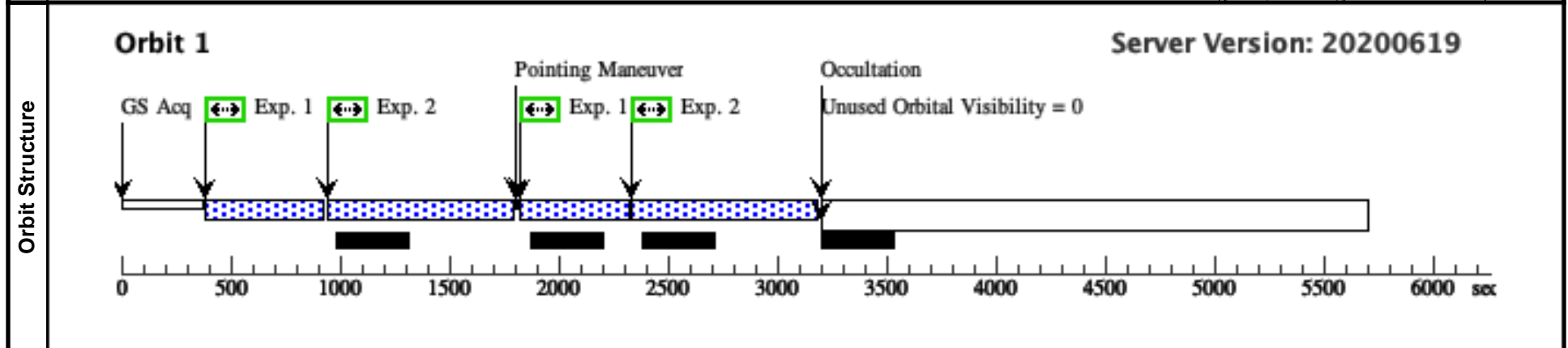
| | | | |
|--------------|---|--|--|
| Visit | Proposal 16424, Visit 01, implementation | | |
| | Diagnostic Status: No Diagnostics | | |
| | Scientific Instruments: ACS/WFC | | |
| | Special Requirements: (none) | | |

| Patterns | # | Primary Pattern | Secondary Pattern | Exposures |
|-----------------|-----|--|--|-----------|
| | (1) | Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.034 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=85.29 Angle Between Sides= Center Pattern=false | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|-----|----------|--|--------------------------|---------|-------------------------|
| | (1) | NGC-3568 | RA: 11 10 48.1760 (167.7007333d) Dec: -37 26 51.85 (-37.44774d) Equinox: J2000 | Epoch of Position: 2000 | V=12.58 | Reference Frame: SIMBAD |

Comments:
 Category=GALAXY
 Description=[EMISSION LINE NEBULA, RADIO GALAXY, SPIRAL, STAR FORMING REGION]
 Extended=YES

| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|--------------|---------------------|---------------------|----------------------|---------------|--------------|---------------|-------------------------------------|-------------------------------------|---------------------|
| | 1 | (1) NGC-3568 | ACS/WFC, ACCUM, WFC | F814W | | | | | Pattern 1, Exps 1-2 in Visit 01 (1) | 337 Secs (674 Secs) |
| | | | | | | | | | [=>(Pattern 1)] [=>(Pattern 2)] | [1] |
| 2 | (1) NGC-3568 | ACS/WFC, ACCUM, WFC | F475W | | | | | Pattern 1, Exps 1-2 in Visit 01 (1) | 683 Secs (1366 Secs) | |
| | | | | | | | | | [=>(Pattern 1)] [=>(Pattern 2)] | [1] |



Proposal 16424 - Visit 02 - Radio galaxy harassment caught in the act

Wed Sep 30 14:00:22 GMT 2020

| | | | |
|--------------|-----------------------------------|--|--|
| Visit | Proposal 16424, Visit 02 | | |
| | Diagnostic Status: Warning | | |
| | Scientific Instruments: WFC3/UVIS | | |
| | Special Requirements: (none) | | |

| | | | |
|--------------------|--|--|--|
| Diagnostics | (Exposure 1 (Pattern 2, Exps 1-1 in Visit 02)) Warning (Form): FLASH level may be too high for this exposure or a long subexposure. See extended explanation in the diagnostic browser | | |
|--------------------|--|--|--|

| | | | | |
|-----------------|----------|--|--------------------------|------------------|
| Patterns | # | Primary Pattern | Secondary Pattern | Exposures |
| | (2) | Pattern Type=WFC3-UVIS-MOS-DITH-LINE Purpose=MOSAIC Number Of Points=3 Point Spacing=2.4 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=85.754 Angle Between Sides= Center Pattern=true | | (1) |

| | | | | | | |
|----------------------|----------|-------------|--|---------------------------------|---------------|-------------------------|
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
| | (1) | NGC-3568 | RA: 11 10 48.1760 (167.7007333d) Dec: -37 26 51.85 (-37.44774d) Equinox: J2000 | Epoch of Position: 2000 | V=12.58 | Reference Frame: SIMBAD |

Comments:
 Category=GALAXY
 Description=[EMISSION LINE NEBULA, RADIO GALAXY, SPIRAL, STAR FORMING REGION]
 Extended=YES

| | | | | | | | | | | |
|------------------|----------|--------------|---------------|-------------------------------|----------------------|---------------------|----------------------|-------------------------------------|---|--------------|
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | | (1) NGC-3568 | WFC3/UVIS, ACCUM, UVIS-CENTER | F275W | FLASH=20.0 | | Pattern 2, Exps 1-1 in Visit 02 (2) | 843 Secs (2529 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |

