



15513 - Detecting Isolated Black Holes through Astrometric Microlensing

Cycle: 26, 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 | (4) OB241 | WFC3/UVIS | 1 | 15-Oct-2019 14:00:51.0 | yes |
| 02 | (1) OGLE-2017-BLG-328 | WFC3/UVIS | 1 | 15-Oct-2019 14:00:53.0 | yes |
| 03 | (2) OGLE-2017-BLG-0302 | WFC3/UVIS | 1 | 15-Oct-2019 14:00:54.0 | yes |
| 04 | (1) OGLE-2017-BLG-328 | WFC3/UVIS | 1 | 15-Oct-2019 14:00:56.0 | yes |
| 05 | (4) OB241 | WFC3/UVIS | 1 | 15-Oct-2019 14:00:58.0 | yes |
| 06 | (3) OGLE-2019-BLG-1000 | WFC3/UVIS | 1 | 15-Oct-2019 14:01:00.0 | yes |
| 07 | (5) OGLE-2019-BLG-1080 | WFC3/UVIS | 1 | 15-Oct-2019 14:01:02.0 | yes |

| <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> |
|--------------|------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 61 | (3) OGLE-2019-BLG-1000 | WFC3/UVIS | 1 | 15-Oct-2019 14:01:04.0 | yes |
| 08 | (5) OGLE-2019-BLG-1080 | WFC3/UVIS | 1 | 15-Oct-2019 14:01:05.0 | yes |
| 81 | (5) OGLE-2019-BLG-1080 | WFC3/UVIS | 1 | 15-Oct-2019 14:01:06.0 | yes |

10 Total Orbits Used

ABSTRACT

A significant fraction of the mass of an old stellar population should be in the form of isolated black holes (BHs). Yet there has never been an unambiguous detection of a solitary BH. The only technique available to detect isolated BHs is astrometric microlensing--relativistic deflection of light from background stars.

We have carried out 2 HST programs aimed at the first detection of isolated BHs through astrometric microlensing. Our first program was a multi-year program where we monitored 5 microlensing events with $T > 100$ days in the Galactic bulge. We detected astrometric deflections, but the inferred masses for all these events are $< 0.5 M_{\text{sun}}$, indicating that these lenses are low-mass stars with small relative proper motions. Our second program was a large multi-cycle program where we monitored ~ 3 million stars in the Galactic bulge for 3 years to simultaneously detect microlensing events and determine their astrometric shifts. We have detected a large number of microlensing events. However, once again, none of them show appreciable astrometric deflections indicative of massive BHs.

Our results imply that either isolated BHs are more massive ($> 10 M_{\text{sun}}$), or $T \sim 100$ day events are dominated by low-mass stars moving more slowly, or BHs are much rarer. BHs with mass $> 10 M_{\text{sun}}$ are expected to have $T > 300$ days, and such very-long duration events are extremely unlikely to be caused by low-mass stars. Monitoring a few $T > 300$ -day events thus offers the last but most promising opportunity to detect isolated BHs, and distinguish between the above possibilities. After the recent upgrades, OGLE detects six $T > 300$ days events each year, here we propose to monitor 4 such events.

OBSERVING DESCRIPTION

We will employ the same observational strategy we have followed earlier. Basically, we will image each field using WFC3, primarily with the F814W filter, but also with F606W. We will employ a 6-point dithering pattern, where we will observe the target star and the reference stars at a variety of pixel phases, thereby allowing us to construct an exquisite model of the PSF, and also randomize any remaining (small) systematic errors

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related to pixelization. Our dithers will also involve offsets of ~ 100 pixels, so that we will observe the target star at different places on the detector, so that any remaining distortion errors will average out. We expect such errors to be small (< 0.01 pixel), but randomizing them will be worthwhile. The procedure described here does not require the observations at different epochs to be taken in the same ORIENT, which makes the scheduling easier.

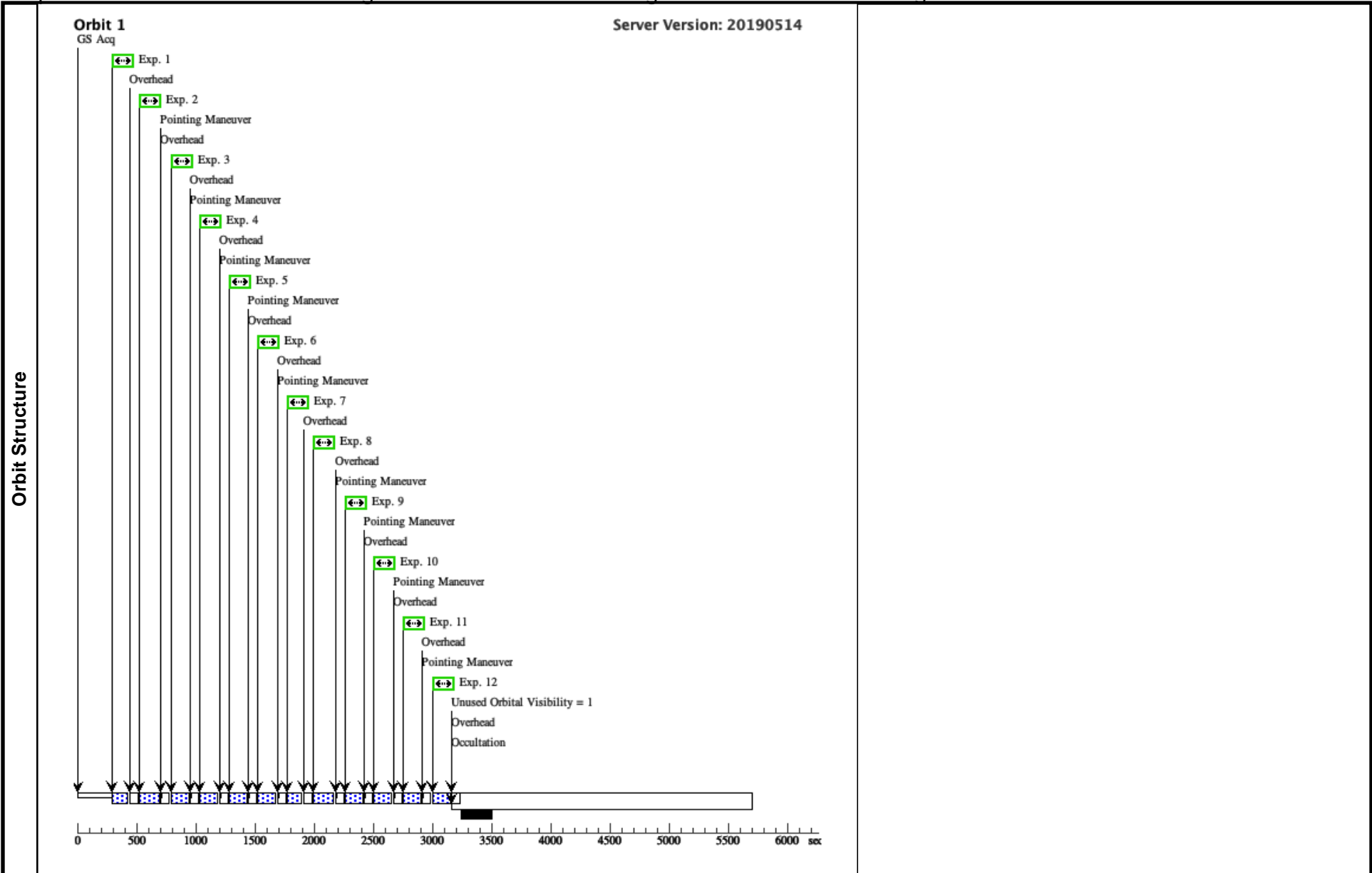
In a rich stellar field such as the Galactic bulge, there is always a large number of reference stars available in an WFC3 field, making it possible to achieve the highest possible astrometric accuracy. We will also image the field in the F606W and F814W filters. If there is blending, then the centroid shift is expected to be color dependent; V-band observations will provide additional help in evaluating the possible color-dependent blending contribution. The combined V and I-band observations will require one orbit per target at each epoch. We will observe at 5 different epochs which will be adequate to separate the proper motions from the deflections caused by lensing. For each event, we will obtain 2 observations in cycle 25, 2 observations in cycle 26, and 1 observation in cycle 27.

These observations need to be considered as ToO since the targets will be chosen after we find suitable candidates from OGLE alerts.

Proposal 15513 - Visit 01 - Detecting Isolated Black Holes through Astrometric Microlensing

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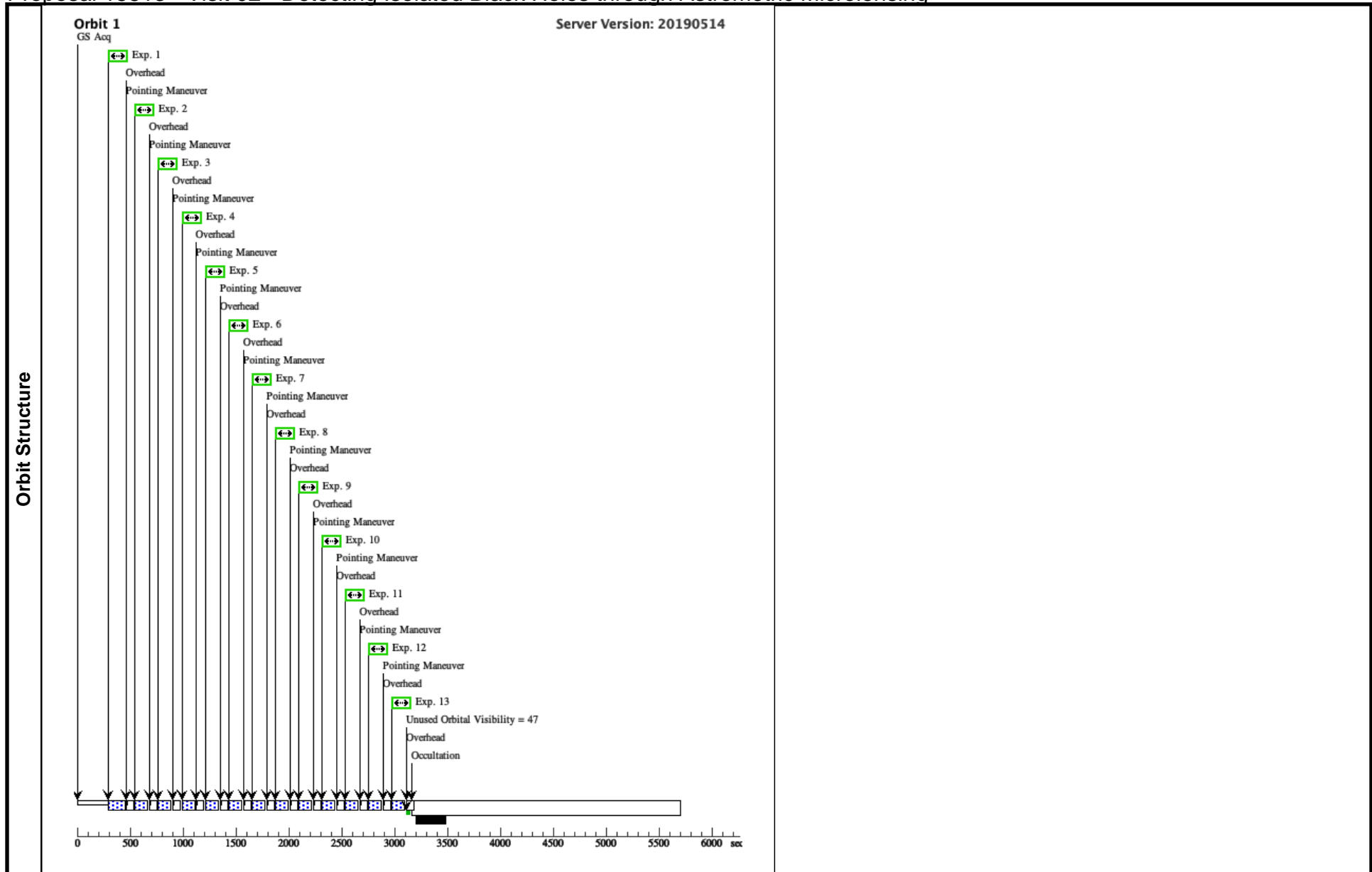
| Visit | Proposal 15513, Visit 01, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 04-MAY-2019 AND 19-MAY-2019 | | | | | | | | | |
|-----------|--|-----------|--|--------------------------------------|--------------------------|-------------------------|--------------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (4) | OB241 | RA: 17 54 10.7600 (268.5448333d) Dec: -29 39 21.90 (-29.65608d) Equinox: J2000 | | V=18+/-2 | Reference Frame: ICRS | | | | |
| | <i>Comments:</i> Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | | | 99 Secs (99 Secs) [==>] | [1] |
| | 2 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | | | 150 Secs (150 Secs) [==>] | [1] |
| | 3 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 0.1,0.1 | | 150 Secs (150 Secs) [==>] | [1] |
| | 4 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.79,2.7 9 | | 150 Secs (150 Secs) [==>] | [1] |
| | 5 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.69,2.6 9 | | 150 Secs (150 Secs) [==>] | [1] |
| | 6 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.79,2. 59 | | 150 Secs (150 Secs) [==>] | [1] |
| | 7 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.69,2. 49 | | 99 Secs (99 Secs) [==>] | [1] |
| | 8 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.69,2. 49 | | 150 Secs (150 Secs) [==>] | [1] |
| | 9 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.59,-2. 79 | | 150 Secs (150 Secs) [==>] | [1] |
| | 10 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.49,-2. 69 | | 150 Secs (150 Secs) [==>] | [1] |
| | 11 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.59,-2. 59 | | 150 Secs (150 Secs) [==>] | [1] |
| | 12 | (4) OB241 | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.49,-2. 49 | | 150 Secs (150 Secs) [==>] | [1] |



Proposal 15513 - Visit 02 - Detecting Isolated Black Holes through Astrometric Microlensing

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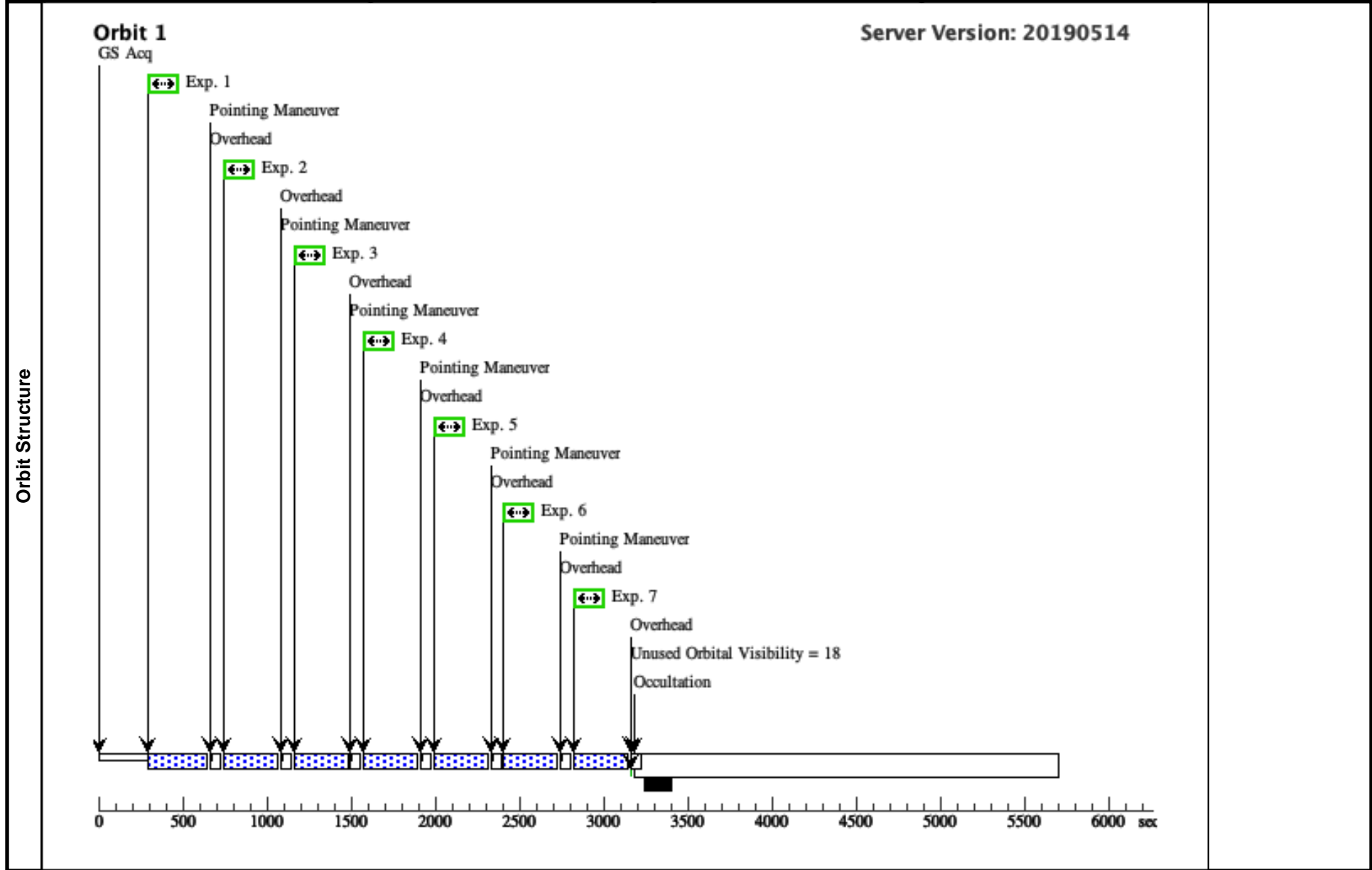
| Visit | Proposal 15513, Visit 02, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 21-JUL-2019 AND 10-AUG-2019 | | | | | | | | | |
|-----------|--|-------------------|---|-----------------------------------|--------------------------|-----------------------|--|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (1) | OGLE-2017-BLG-328 | RA: 17 54 9.5600 (268.5398333d) Dec: -28 44 52.60 (-28.74794d) Equinox: J2000 | | V=19+/-2 | Reference Frame: ICRS | | | | |
| | Comments: Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 0,0; GS ACQ SCENARI O BASE1B3 | | 125 Secs (125 Secs) [==>] | [1] |
| | 2 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.95,0 | | 125 Secs (125 Secs) [==>] | [1] |
| | 3 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.42,1.98 | | 125 Secs (125 Secs) [==>] | [1] |
| | 4 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 1.97,3.42 | | 125 Secs (125 Secs) [==>] | [1] |
| | 5 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -0.01,3.95 | | 125 Secs (125 Secs) [==>] | [1] |
| | 6 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -1.98,3.42 | | 125 Secs (125 Secs) [==>] | [1] |
| | 7 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.43,1.96 | | 125 Secs (125 Secs) [==>] | [1] |
| | 8 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.95,-0.02 | | 125 Secs (125 Secs) [==>] | [1] |
| | 9 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.41,-1.99 | | 125 Secs (125 Secs) [==>] | [1] |
| | 10 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -1.96,-3.43 | | 125 Secs (125 Secs) [==>] | [1] |
| | 11 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 0.03,-3.95 | | 125 Secs (125 Secs) [==>] | [1] |
| | 12 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 2.00,-3.41 | | 125 Secs (125 Secs) [==>] | [1] |
| | 13 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.44,-1.95 | | 125 Secs (125 Secs) [==>] | [1] |



Proposal 15513 - Visit 03 - Detecting Isolated Black Holes through Astrometric Microlensing

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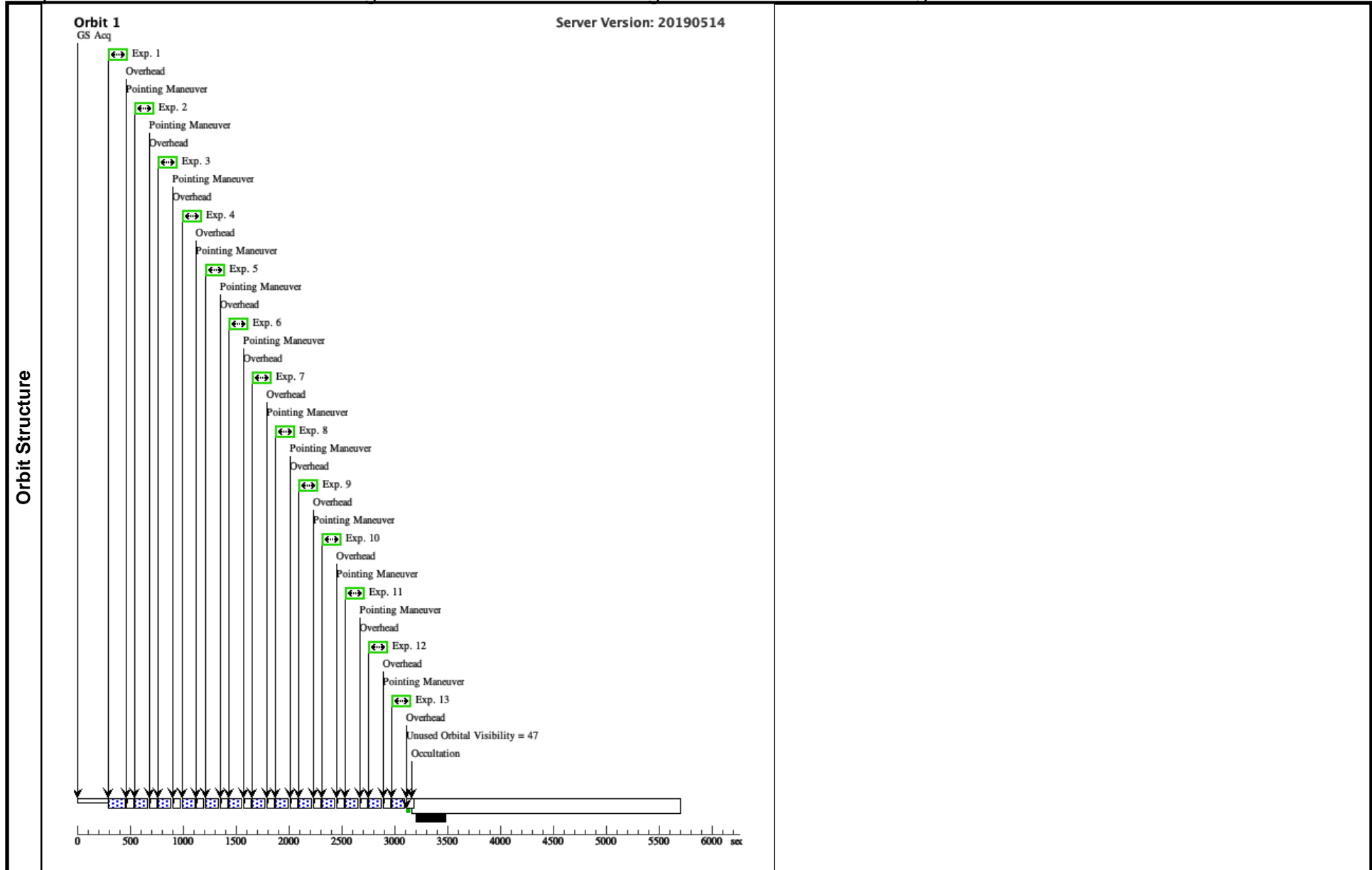
| Fixed Targets | Visit | | | | | | | | | |
|---------------|--|--------------------|--|-----------------------------------|---------------|-----------------------|--|--------|---------------------------------|-------|
| | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | |
| | Proposal 15513, Visit 03, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 05-OCT-2019 AND 01-NOV-2019 | | | | | | | | | |
| | (2) | OGLE-2017-BLG-0302 | RA: 17 41 35.9300 (265.3997083d) Dec: -34 33 19.30 (-34.55536d) Equinox: J2000 | | V=19.25+/-2 | Reference Frame: ICRS | | | | |
| | Comments: Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | | (2) OGLE-2017-BL G-0302 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=7 | POS TARG 0,0; GS ACQ SCENARI O BASE1B3 | | 325 Secs (325 Secs) [==>] | [1] |
| | 2 | | (2) OGLE-2017-BL G-0302 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=7 | POS TARG 3.95,0 | | 325 Secs (325 Secs) [==>] | [1] |
| | 3 | | (2) OGLE-2017-BL G-0302 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=7 | POS TARG 1.97,3.4 2 | | 325 Secs (325 Secs) [==>] | [1] |
| | 4 | | (2) OGLE-2017-BL G-0302 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=7 | POS TARG -1.98,3.42 | | 325 Secs (325 Secs) [==>] | [1] |
| | 5 | | (2) OGLE-2017-BL G-0302 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=7 | POS TARG -3.95,-0.02 | | 325 Secs (325 Secs) [==>] | [1] |
| | 6 | | (2) OGLE-2017-BL G-0302 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=7 | POS TARG -1.96,-3.43 | | 325 Secs (325 Secs) [==>] | [1] |
| | 7 | | (2) OGLE-2017-BL G-0302 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=7 | POS TARG 2.00,-3.41 | | 325 Secs (325 Secs) [==>] | [1] |



Proposal 15513 - Visit 04 - Detecting Isolated Black Holes through Astrometric Microlensing

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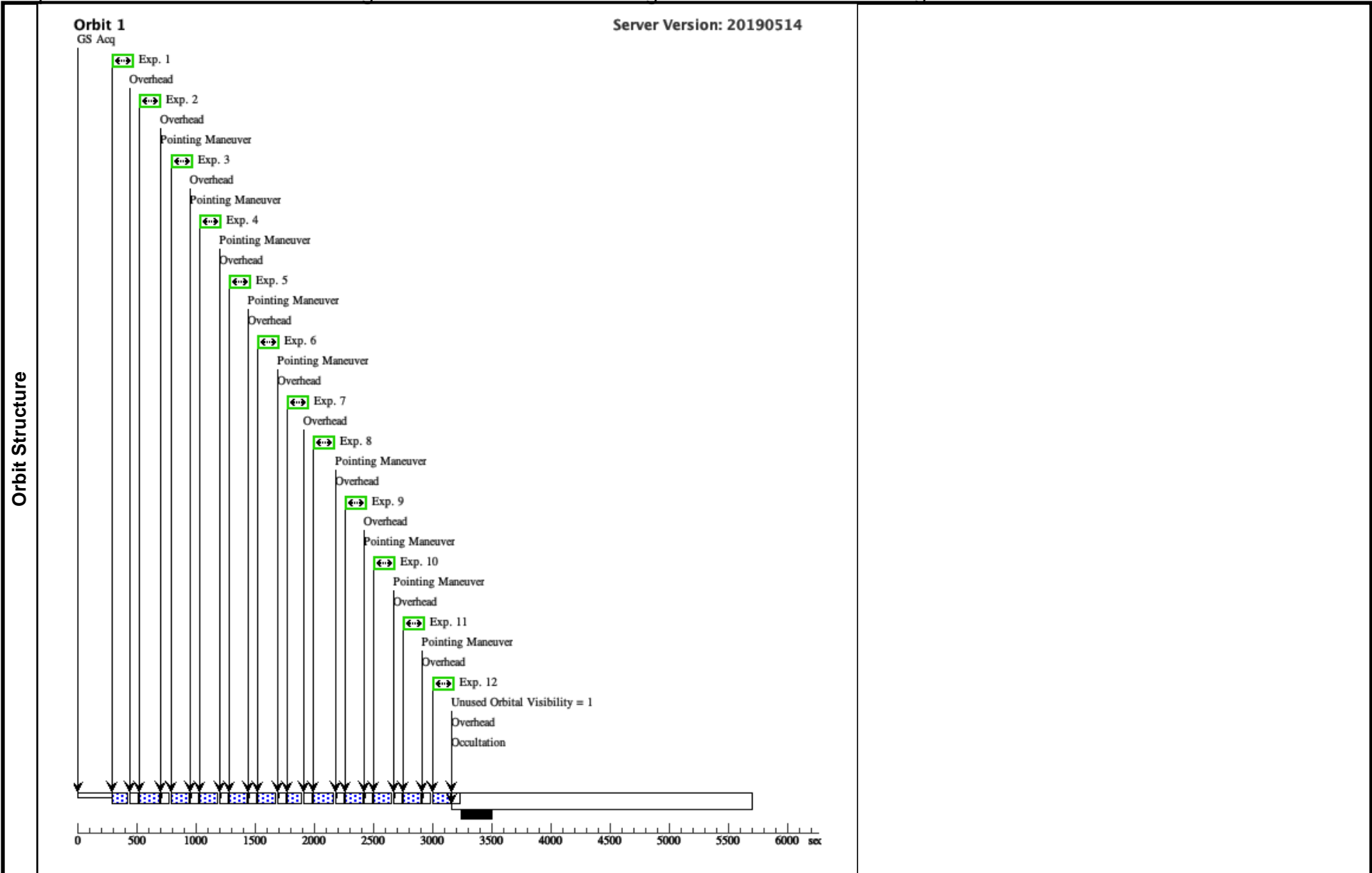
| Visit | Proposal 15513, Visit 04, scheduled Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 15-OCT-2019 AND 10-NOV-2019 | | | | | | | | | |
|-----------|--|------------------------|---|-----------------------------------|--------------------------|-----------------------|--|------------------------------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (1) | OGLE-2017-BLG-328 | RA: 17 54 9.5600 (268.5398333d) Dec: -28 44 52.60 (-28.74794d) Equinox: J2000 | | V=19+/-2 | Reference Frame: ICRS | | | | |
| | Comments: Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 0,0; GS ACQ SCENARI O BASE1B3 | | 125 Secs (125 Secs) [==>] | [1] |
| | 2 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.95,0 | | 125 Secs (125 Secs) [==>] | [1] |
| | 3 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.42,1.98 | | 125 Secs (125 Secs) [==>] | [1] |
| | 4 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 1.97,3.42 | | 125 Secs (125 Secs) [==>] | [1] |
| | 5 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -0.01,3.95 | | 125 Secs (125 Secs) [==>] | [1] |
| | 6 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -1.98,3.42 | | 125 Secs (125 Secs) [==>] | [1] |
| | 7 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.43,1.96 | | 125 Secs (125 Secs) [==>] | [1] |
| | 8 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.95,-0.02 | | 125 Secs (125 Secs) [==>] | [1] |
| | 9 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.41,-1.99 | | 125 Secs (125 Secs) [==>] | [1] |
| | 10 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -1.96,-3.43 | | 125 Secs (125 Secs) [==>] | [1] |
| | 11 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 0.03,-3.95 | | 125 Secs (125 Secs) [==>] | [1] |
| | 12 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 2.00,-3.41 | | 125 Secs (125 Secs) [==>] | [1] |
| 13 | | (1) OGLE-2017-BL G-328 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.44,-1.95 | | 125 Secs (125 Secs) [==>] | [1] | |



Proposal 15513 - Visit 05 - Detecting Isolated Black Holes through Astrometric Microlensing

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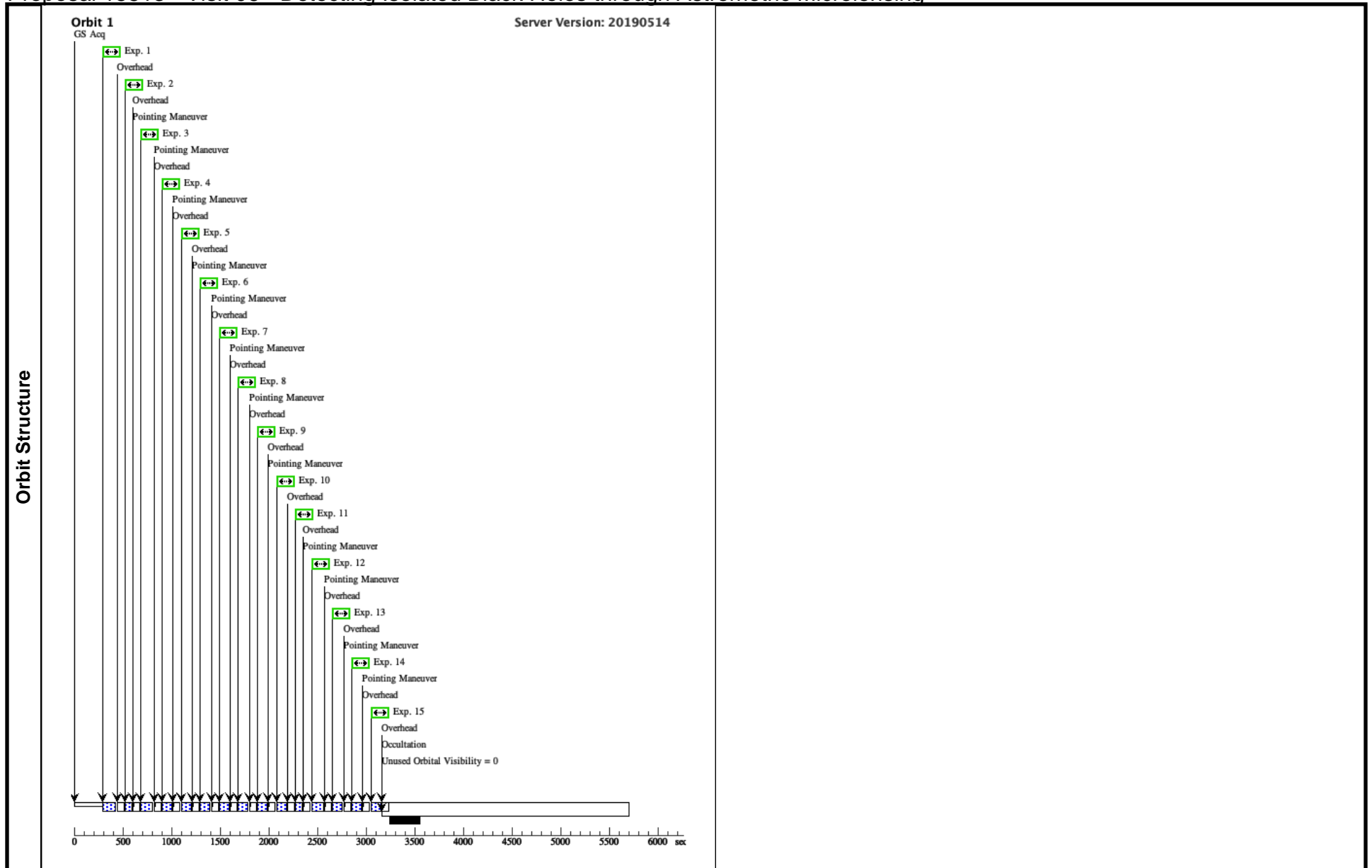
| Visit | Proposal 15513, Visit 05, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 20-JUL-2019 AND 10-AUG-2019 | | | | | | | | | |
|-----------|--|-------|--|-----------------------------------|--------------------------|-------------------------|----------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (4) | OB241 | RA: 17 54 10.7600 (268.5448333d) Dec: -29 39 21.90 (-29.65608d) Equinox: J2000 | | V=18+/-2 | Reference Frame: ICRS | | | | |
| | <i>Comments:</i> Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | | | 99 Secs (99 Secs) [==>] | [1] |
| | 2 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | | | 150 Secs (150 Secs) [==>] | [1] |
| | 3 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 0.1,0.1 | | 150 Secs (150 Secs) [==>] | [1] |
| | 4 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.79,2.79 | | 150 Secs (150 Secs) [==>] | [1] |
| | 5 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.69,2.69 | | 150 Secs (150 Secs) [==>] | [1] |
| | 6 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.79,2.59 | | 150 Secs (150 Secs) [==>] | [1] |
| | 7 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.69,2.49 | | 99 Secs (99 Secs) [==>] | [1] |
| | 8 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.69,2.49 | | 150 Secs (150 Secs) [==>] | [1] |
| | 9 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.59,-2.79 | | 150 Secs (150 Secs) [==>] | [1] |
| | 10 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.49,-2.69 | | 150 Secs (150 Secs) [==>] | [1] |
| | 11 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.59,-2.59 | | 150 Secs (150 Secs) [==>] | [1] |
| | 12 | | (4) OB241 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.49,-2.49 | | 150 Secs (150 Secs) [==>] | [1] |



Proposal 15513 - Visit 06 - Detecting Isolated Black Holes through Astrometric Microlensing

Tue Oct 15 18:01:07 GMT 2019

| Visit | Proposal 15513, Visit 06, withdrawn Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 20-JUL-2019 AND 04-AUG-2019 | | | | | | | | | |
|-----------|--|-------------------------|---|-----------------------------------|--------------------------|-----------------------|---|------------------------------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (3) | OGLE-2019-BLG-1000 | RA: 17 47 1.6700 (266.7569583d) Dec: -26 30 15.90 (-26.50442d) Equinox: J2000 | | V=19.66+/-2 | Reference Frame: ICRS | | | | |
| | Comments: Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 0,0 | | 100 Secs (100 Secs) [==>] | [1] |
| | 2 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=10 | SAME POS AS 1; GS ACQ SCENARI O BASE1B3 | | 44 Secs (44 Secs) [==>] | [1] |
| | 3 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.95,0 | | 100 Secs (100 Secs) [==>] | [1] |
| | 4 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.42,1.98 | | 100 Secs (100 Secs) [==>] | [1] |
| | 5 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 1.97,3.42 | | 100 Secs (100 Secs) [==>] | [1] |
| | 6 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -0.01,3.95 | | 100 Secs (100 Secs) [==>] | [1] |
| | 7 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -1.98,3.42 | | 100 Secs (100 Secs) [==>] | [1] |
| | 8 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.43,1.96 | | 100 Secs (100 Secs) [==>] | [1] |
| | 9 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.95,-0.02 | | 100 Secs (100 Secs) [==>] | [1] |
| | 10 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.41,-1.99 | | 100 Secs (100 Secs) [==>] | [1] |
| | 11 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=10 | POS TARG -3.41,-1.99 | | 44 Secs (44 Secs) [==>] | [1] |
| | 12 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG -1.96,-3.43 | | 100 Secs (100 Secs) [==>] | [1] |
| | 13 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 0.03,-3.95 | | 100 Secs (100 Secs) [==>] | [1] |
| | 14 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 2.00,-3.41 | | 100 Secs (100 Secs) [==>] | [1] |
| 15 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=10 | POS TARG 3.44,-1.95 | | 100 Secs (100 Secs) [==>] | [1] | |

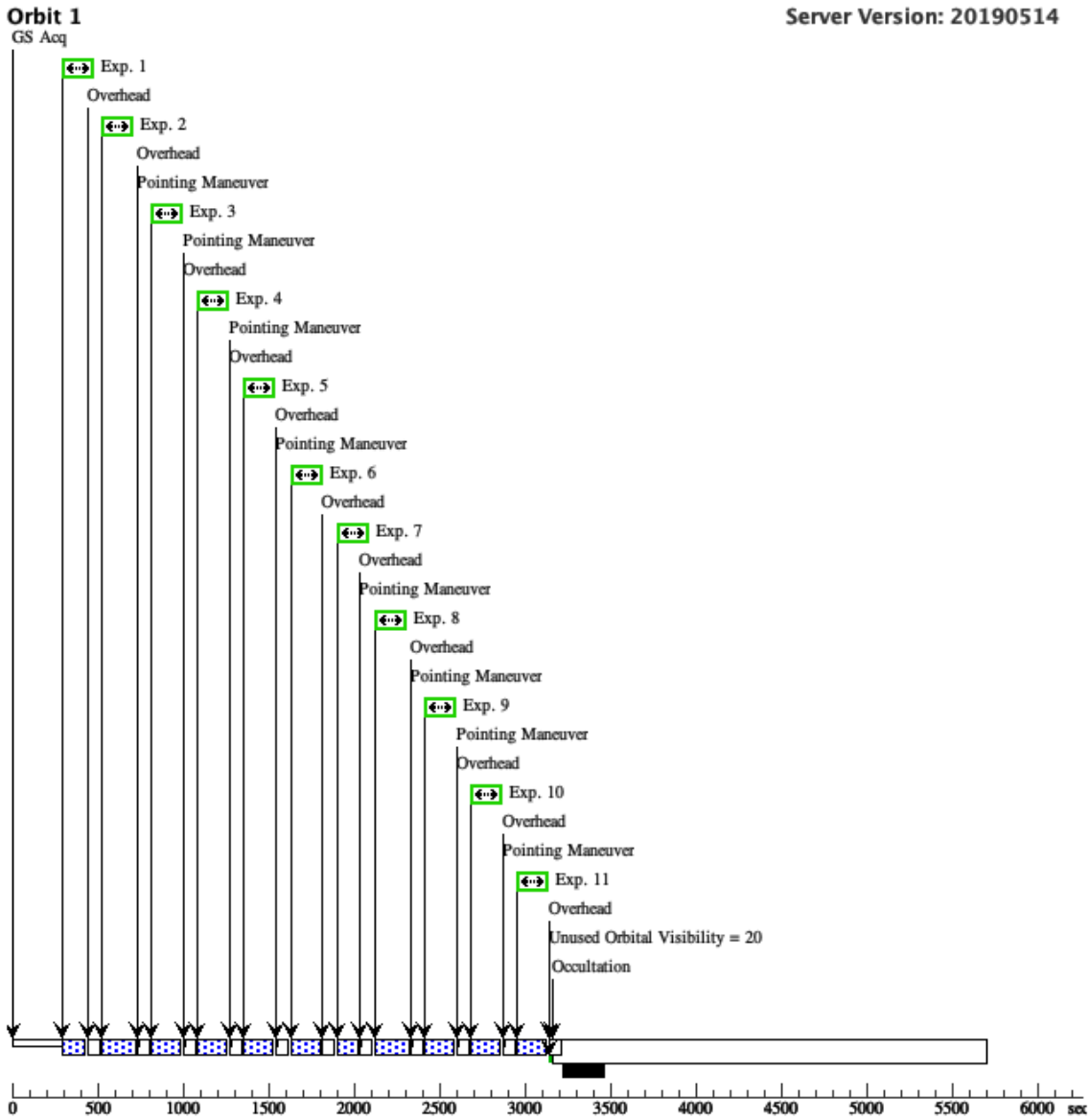


Proposal 15513 - Visit 07 - Detecting Isolated Black Holes through Astrometric Microlensing

Tue Oct 15 18:01:08 GMT 2019

| Visit | Proposal 15513, Visit 07, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 29-JUL-2019 AND 11-AUG-2019 | | | | | | | | | |
|-----------|--|-------------------------|--|-----------------------------------|--------------------------|-----------------------|----------------------|------------------------------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (5) | OGLE-2019-BLG-1080 | RA: 18 10 4.4700 (272.5186250d) Dec: -27 52 1.40 (-27.86706d) Equinox: J2000 | | V=19.25+/-2 | Reference Frame: ICRS | | | | |
| | <i>Comments:</i> Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | | | 100 Secs (100 Secs) [==>] | [1] |
| | 2 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | | | 175 Secs (175 Secs) [==>] | [1] |
| | 3 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 3.95,0.1 | | 175 Secs (175 Secs) [==>] | [1] |
| | 4 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.79,2.79 | | 175 Secs (175 Secs) [==>] | [1] |
| | 5 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 0,3.95 | | 175 Secs (175 Secs) [==>] | [1] |
| | 6 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.79,2.8 | | 175 Secs (175 Secs) [==>] | [1] |
| | 7 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | SAME POS AS 6 | | 100 Secs (100 Secs) [==>] | [1] |
| | 8 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -3.95,0 | | 175 Secs (175 Secs) [==>] | [1] |
| | 9 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.68,-2.79 | | 175 Secs (175 Secs) [==>] | [1] |
| | 10 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -0.1,-3.95 | | 175 Secs (175 Secs) [==>] | [1] |
| 11 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.81,-2.77 | | 175 Secs (175 Secs) [==>] | [1] | |

Orbit Structure

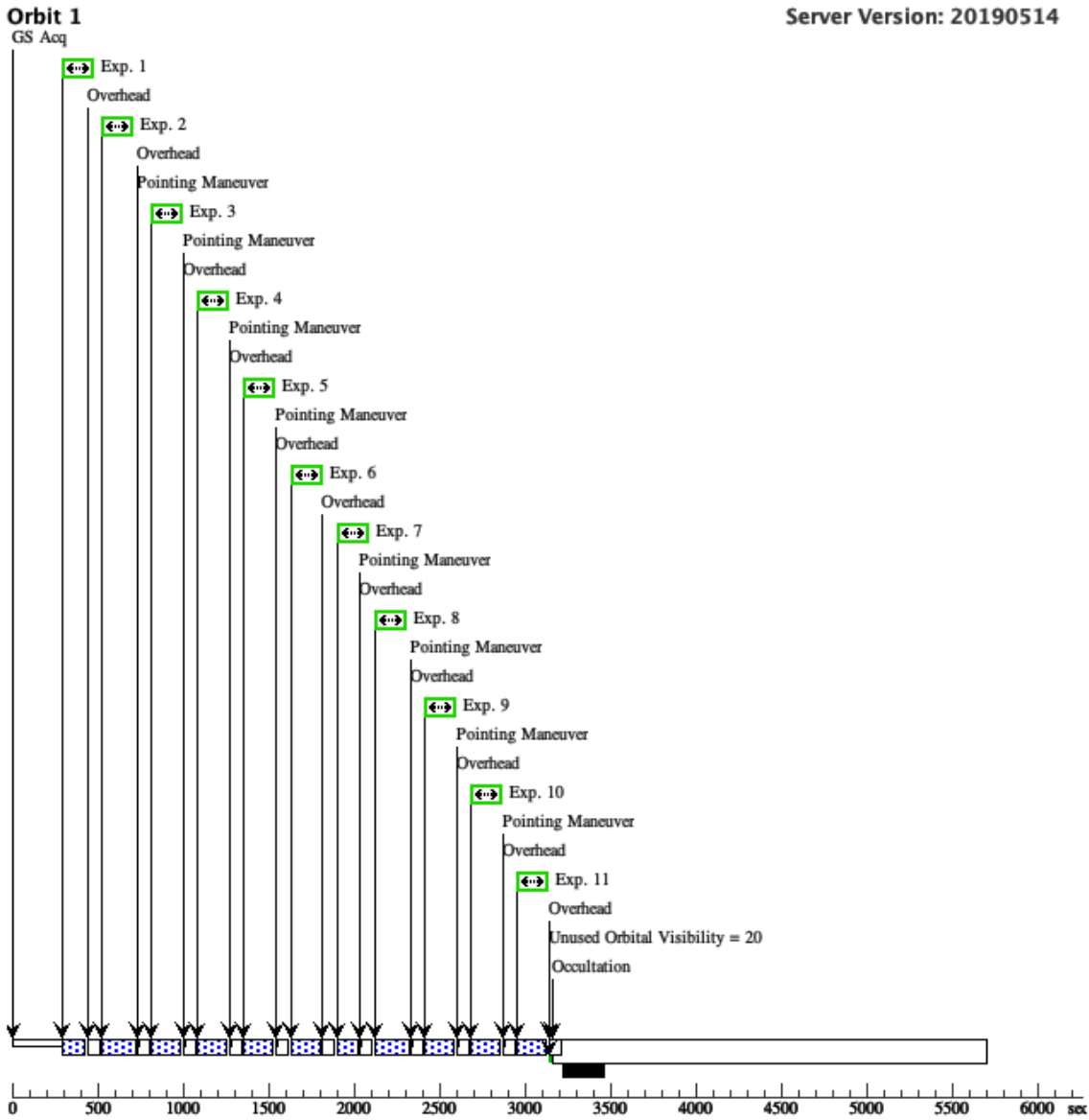


Proposal 15513 - Visit 61 - Detecting Isolated Black Holes through Astrometric Microlensing

Tue Oct 15 18:01:08 GMT 2019

| Visit | Proposal 15513, Visit 61, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 29-JUL-2019 AND 04-AUG-2019 | | | | | | | | | |
|-----------|--|-------------------------|---|-----------------------------------|--------------------------|-------------------------|--------------------------|------------------------------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (3) | OGLE-2019-BLG-1000 | RA: 17 47 1.6700 (266.7569583d) Dec: -26 30 15.90 (-26.50442d) Equinox: J2000 | | V=19.66+/-2 | Reference Frame: ICRS | | | | |
| | <i>Comments:</i> Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | | | 100 Secs (100 Secs) [==>] | [1] |
| | 2 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | | | 175 Secs (175 Secs) [==>] | [1] |
| | 3 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 3.95,0.1 | | 175 Secs (175 Secs) [==>] | [1] |
| | 4 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.79,2.7 9 | | 175 Secs (175 Secs) [==>] | [1] |
| | 5 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 0,3.95 | | 175 Secs (175 Secs) [==>] | [1] |
| | 6 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.79,2. 8 | | 175 Secs (175 Secs) [==>] | [1] |
| | 7 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=9 | SAME POS AS 6 | | 100 Secs (100 Secs) [==>] | [1] |
| | 8 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -3.95,0 | | 175 Secs (175 Secs) [==>] | [1] |
| | 9 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -2.68,-2. 79 | | 175 Secs (175 Secs) [==>] | [1] |
| | 10 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG -0.1,-3.9 5 | | 175 Secs (175 Secs) [==>] | [1] |
| 11 | | (3) OGLE-2019-BL G-1000 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=9 | POS TARG 2.81,-2. 77 | | 175 Secs (175 Secs) [==>] | [1] | |

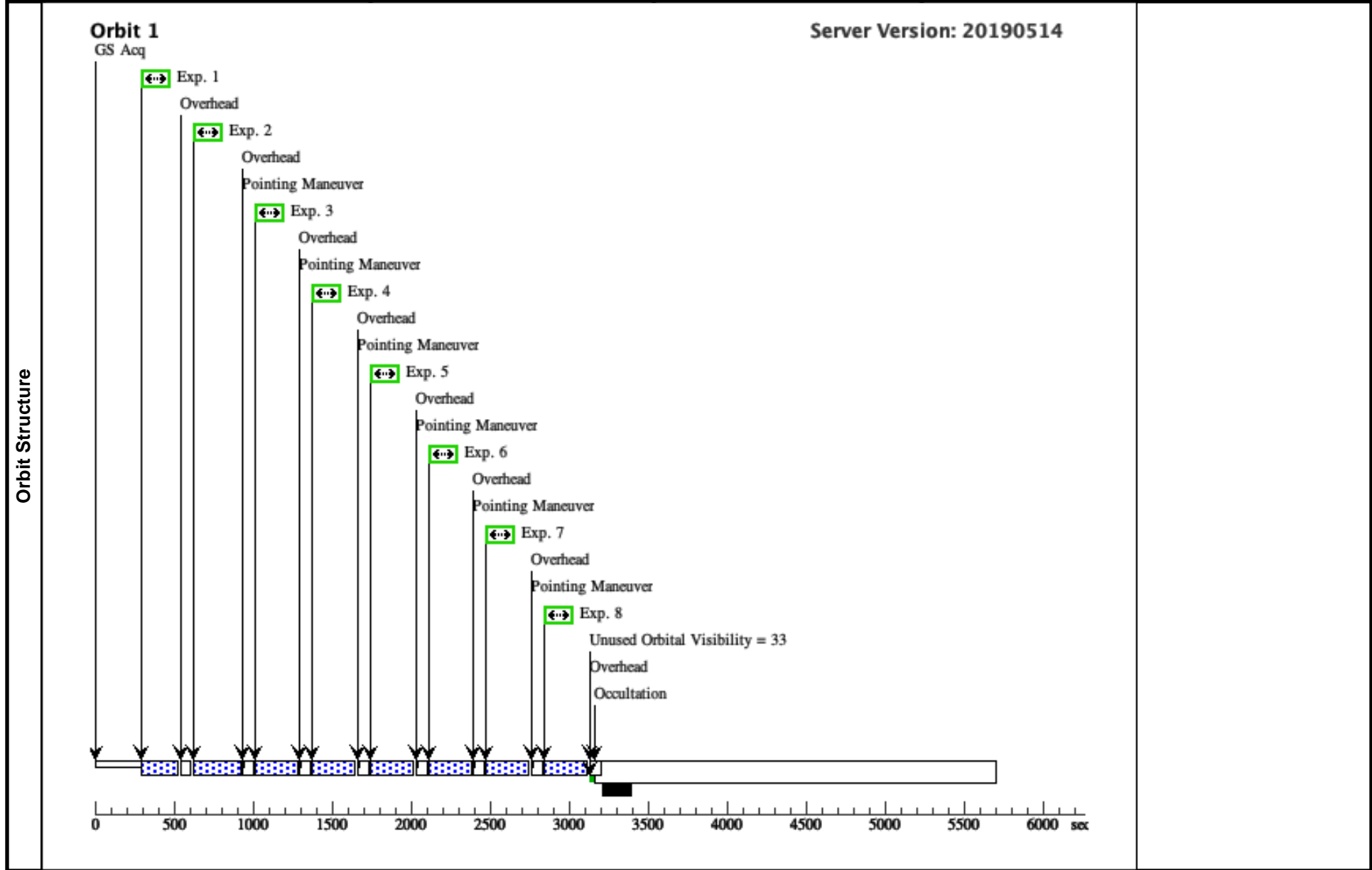
Orbit Structure



Proposal 15513 - Visit 08 - Detecting Isolated Black Holes through Astrometric Microlensing

Tue Oct 15 18:01:08 GMT 2019

| Visit | Proposal 15513, Visit 08, scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 20-OCT-2019 AND 30-NOV-2019 | | | | | | | | | |
|-----------|---|-------------------------|--|-----------------------------------|--------------------------|-----------------------|----------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (5) | OGLE-2019-BLG-1080 | RA: 18 10 4.4700 (272.5186250d) Dec: -27 52 1.40 (-27.86706d) Equinox: J2000 | | V=19.25+/-2 | Reference Frame: ICRS | | | | |
| | <i>Comments:</i> Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=7 | | | 200 Secs (200 Secs) [==>] | [1] |
| | 2 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | | | 275 Secs (275 Secs) [==>] | [1] |
| | 3 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | POS TARG 3.95,0.1 | | 275 Secs (275 Secs) [==>] | [1] |
| | 4 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | POS TARG 2.79,2.79 | | 275 Secs (275 Secs) [==>] | [1] |
| | 5 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | POS TARG 0,3.95 | | 275 Secs (275 Secs) [==>] | [1] |
| | 6 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | POS TARG -2.79,2.8 | | 275 Secs (275 Secs) [==>] | [1] |
| | 7 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | POS TARG -3.95,0 | | 275 Secs (275 Secs) [==>] | [1] |
| | 8 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | POS TARG -2.68,-2.79 | | 275 Secs (275 Secs) [==>] | [1] |



Proposal 15513 - Visit 81 - Detecting Isolated Black Holes through Astrometric Microlensing

Tue Oct 15 18:01:08 GMT 2019

| Visit | Proposal 15513, Visit 81 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 20-OCT-2019 AND 30-NOV-2019 | | | | | | | | | |
|-----------|---|-------------------------|--|-----------------------------------|--------------------------|-------------------------|--------------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (5) | OGLE-2019-BLG-1080 | RA: 18 10 4.4700 (272.5186250d) Dec: -27 52 1.40 (-27.86706d) Equinox: J2000 | | V=19.25+/-2 | Reference Frame: ICRS | | | | |
| | <i>Comments:</i> Category=EXT-STAR Description=[A0-A3 III-I] | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | | | 224 Secs (224 Secs) [==>] | [1] |
| | 2 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=6 | | | 225 Secs (225 Secs) [==>] | [1] |
| | 3 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=6 | POS TARG 3.95,0.1 | | 225 Secs (225 Secs) [==>] | [1] |
| | 4 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=6 | POS TARG 2.79,2.7 9 | | 225 Secs (225 Secs) [==>] | [1] |
| | 5 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=6 | POS TARG 0,3.95 | | 225 Secs (225 Secs) [==>] | [1] |
| | 6 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F814W | CR-SPLIT=NO; FLASH=8 | POS TARG 0,3.95 | | 224 Secs (224 Secs) [==>] | [1] |
| | 7 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=6 | POS TARG -2.79,2. 8 | | 225 Secs (225 Secs) [==>] | [1] |
| | 8 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=6 | POS TARG -3.95,0 | | 225 Secs (225 Secs) [==>] | [1] |
| | 9 | (5) OGLE-2019-BL G-1080 | (5) OGLE-2019-BL G-1080 | WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB | F606W | CR-SPLIT=NO; FLASH=6 | POS TARG -2.68,-2. 79 | | 225 Secs (225 Secs) [==>] | [1] |

