



10921 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

Cycle: 15, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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|----------------------------------|--|--------------------------------|
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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) ORION-S ANY | ACS/WFC NIC3 WFPC2 | 2 | 26-Mar-2007 23:18:30.0 | yes |
| 61 | (7) ORION-S-COPY ANY | NIC3 WFPC2 | 2 | 26-Mar-2007 23:19:07.0 | yes |
| 62 | (2) HH528 ANY | NIC3 WFPC2 | 2 | 26-Mar-2007 23:19:32.0 | 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> |
|--------------|-------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 03 | (3) LL1 ANY | ACS/WFC NIC3 WFPC2 | 1 | 26-Mar-2007 23:19:48.0 | yes |
| 05 | (5) HH502 ANY | ACS/WFC NIC3 WFPC2 | 2 | 26-Mar-2007 23:20:20.0 | yes |
| 06 | (6) HH540 ANY | ACS/WFC NIC3 WFPC2 | 1 | 26-Mar-2007 23:20:39.0 | yes |
| 64 | (9) LL2-WFALL-WFPC2 ANY | NIC3 WFPC2 | 1 | 26-Mar-2007 23:20:49.0 | yes |
| 66 | (10) HH540-WFALL-WFPC2 ANY | NIC3 WFPC2 | 2 | 26-Mar-2007 23:21:02.0 | yes |

13 Total Orbits Used

ABSTRACT

The Orion Nebula is arguably the Rosetta Stone for studying a very young star cluster and how the radiation and outflowing plasma from its stars interact with ambient material. It has been the subject of numerous HST imaging studies, which means that there is good opportunity for determining tangential velocities by obtaining second epoch images during Cycle 15, which may be the last cycle for which the WFPC2 is available. These velocities in the plane-of-the-sky will allow us to determine the patterns of outflow from micro-jets smaller than the Solar System to jet driven shocks more than a parsec from their sources. Combined with radial velocities, we'll obtain spatial velocities, which are critical to determining where the embedded sources are located that produce the numerous HH objects coming from the Orion-S and BN-KL regions. We'll also be able to determine the physics that is operating in the LL Ori type of outflows (where a bipolar jet is being distorted by a slow wind coming from the nebula). We will also be able to search for runaway stars caused by the disintegration of young multiple-star systems. All of this is possible because the long-time base

of the WFPC2 and ACS observations allow a new level of astrometric precision to be obtained and to be done efficiently by making coordinated parallel observations with all images.

OBSERVING DESCRIPTION

Imaging observations will be made throughout the central region of the Orion Nebula for purposes of determining proper motions. Three pointings will be made with the WFPC2 and three in ACS. Each of the three pointings will have parallel observations (ACS and NICMOS with WFPC2 and (WFPC2 and NICMOS with ACS).

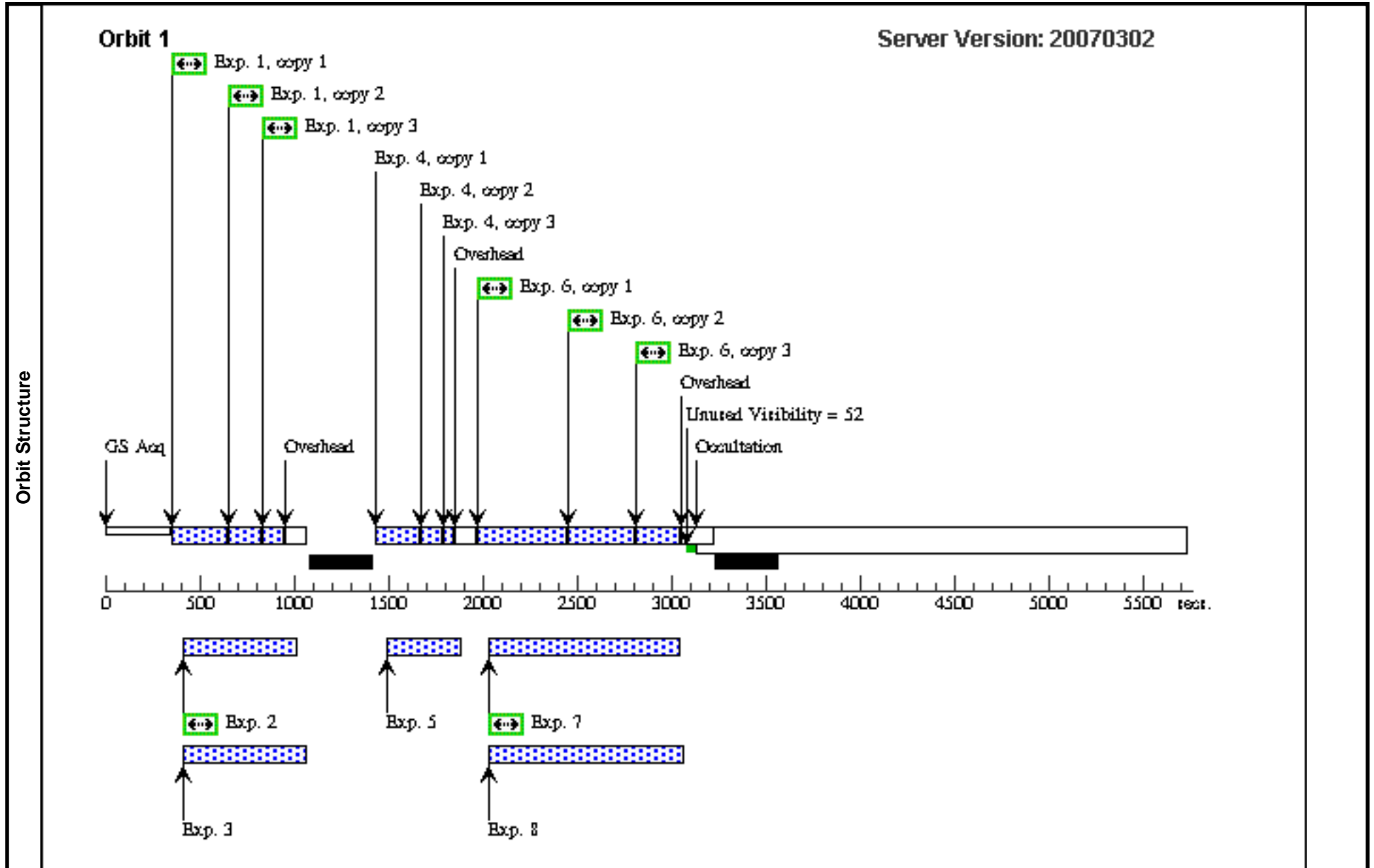
Proposal 10921 - Visit 01 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

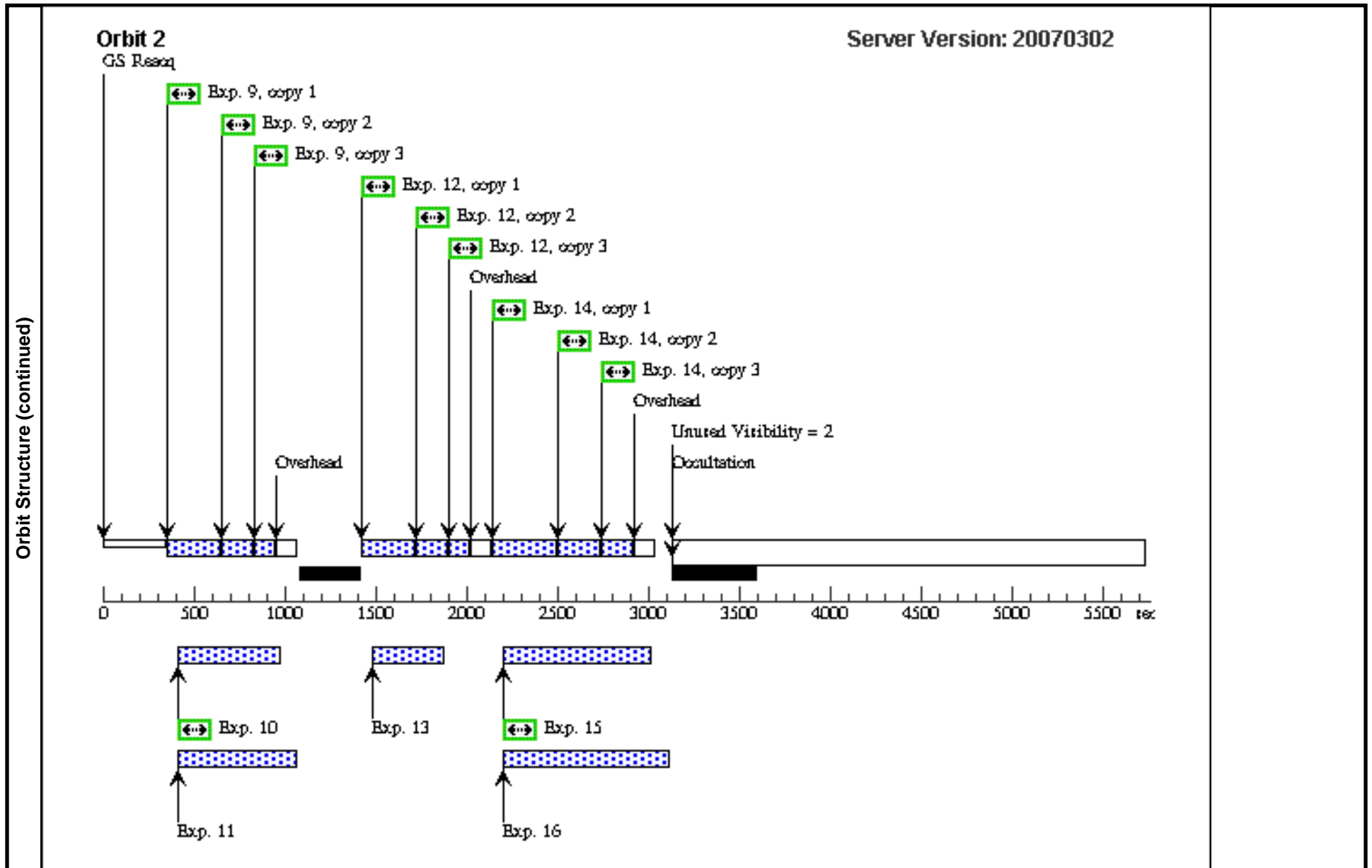
Tue Mar 27 03:21:08 GMT 2007

| | | | | | | | | | | |
|----------------------|---|--------------|--|---------------------------------|---|-----------------------|----------------------|----------------------------|---|--------------|
| Visit | Proposal 10921, Visit 01, failed Diagnostic Status: Warning Scientific Instruments: ACS/WFC, WFPC2, NIC3 Special Requirements: ORIENT 271.0D TO 271.0 D <i>Comments: Orion-S Observations</i> | | | | | | | | | |
| | (Visit 01) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME | | | | | | | | | |
| Diagnostics | | | | | | | | | | |
| | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | |
| | (1) | ORION-S | RA: 05 35 9.4400 (83.7893333d) Dec: -05 24 8.80 (-5.40244d) Equinox: J2000 | | V=14.0 V Magnitude is bogus, it is an emission-line source with no bright stars. | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (1) ORION-S | WFPC2, IMAGE, PC1 | F502N | CR-SPLIT=NO | | | Prime + Parallel Group 1-3 | 100.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] |
| | 2 | ANY | ACS/WFC, ACCUM, WFC | F658N | CR-SPLIT=NO | | | Prime + Parallel Group 1-3 | 400.0 Secs [==>] | [1] |
| | 3 | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=12 | | | Prime + Parallel Group 1-3 | [==>] | [1] |
| | 4 | (1) ORION-S | WFPC2, IMAGE, PC1 | F547M | CR-SPLIT=NO | | | Prime + Parallel Group 4-5 | 30.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] |
| | 5 | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=8 | | | Prime + Parallel Group 4-5 | [==>] | [1] |
| | 6 | (1) ORION-S | WFPC2, IMAGE, PC1 | F631N | CR-SPLIT=NO | | | Prime + Parallel Group 6-8 | 200.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] |
| | 7 | ANY | ACS/WFC, ACCUM, WFC | F658N | CR-SPLIT=NO | | | Prime + Parallel Group 6-8 | 890.0 Secs [==>] | [1] |

Proposal 10921 - Visit 01 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

| Exposures (continued) | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------------------|----|-------------|--------|------------------------|---------------|-----------------------------------|---------------|------------------------------|---|-------|
| | 8 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=18 | | Prime + Parallel Group 6-8 | [==>] | [1] |
| | 9 | (1) ORION-S | | WFPC2, IMAGE, PC1 | F656N | CR-SPLIT=NO | | Prime + Parallel Group 9-11 | 60.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [2] |
| | 10 | ANY | | ACS/WFC, ACCUM, WFC | F660N | CR-SPLIT=NO | | Prime + Parallel Group 9-11 | 400.0 Secs [==>] | [2] |
| | 11 | ANY | | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group 9-11 | [==>] | [2] |
| | 12 | (1) ORION-S | | WFPC2, IMAGE, PC1 | F658N | CR-SPLIT=NO | | Prime + Parallel Group 12-13 | 100.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [2] |
| | 13 | ANY | | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=8 | | Prime + Parallel Group 12-13 | [==>] | [2] |
| | 14 | (1) ORION-S | | WFPC2, IMAGE, PC1 | F673N | CR-SPLIT=NO | | Prime + Parallel Group 14-16 | 160.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [2] |
| | 15 | ANY | | ACS/WFC, ACCUM, WFC | F660N | CR-SPLIT=NO | | Prime + Parallel Group 14-16 | 690.0 Secs [==>] | [2] |
| | 16 | ANY | | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=16 | | Prime + Parallel Group 14-16 | [==>] | [2] |





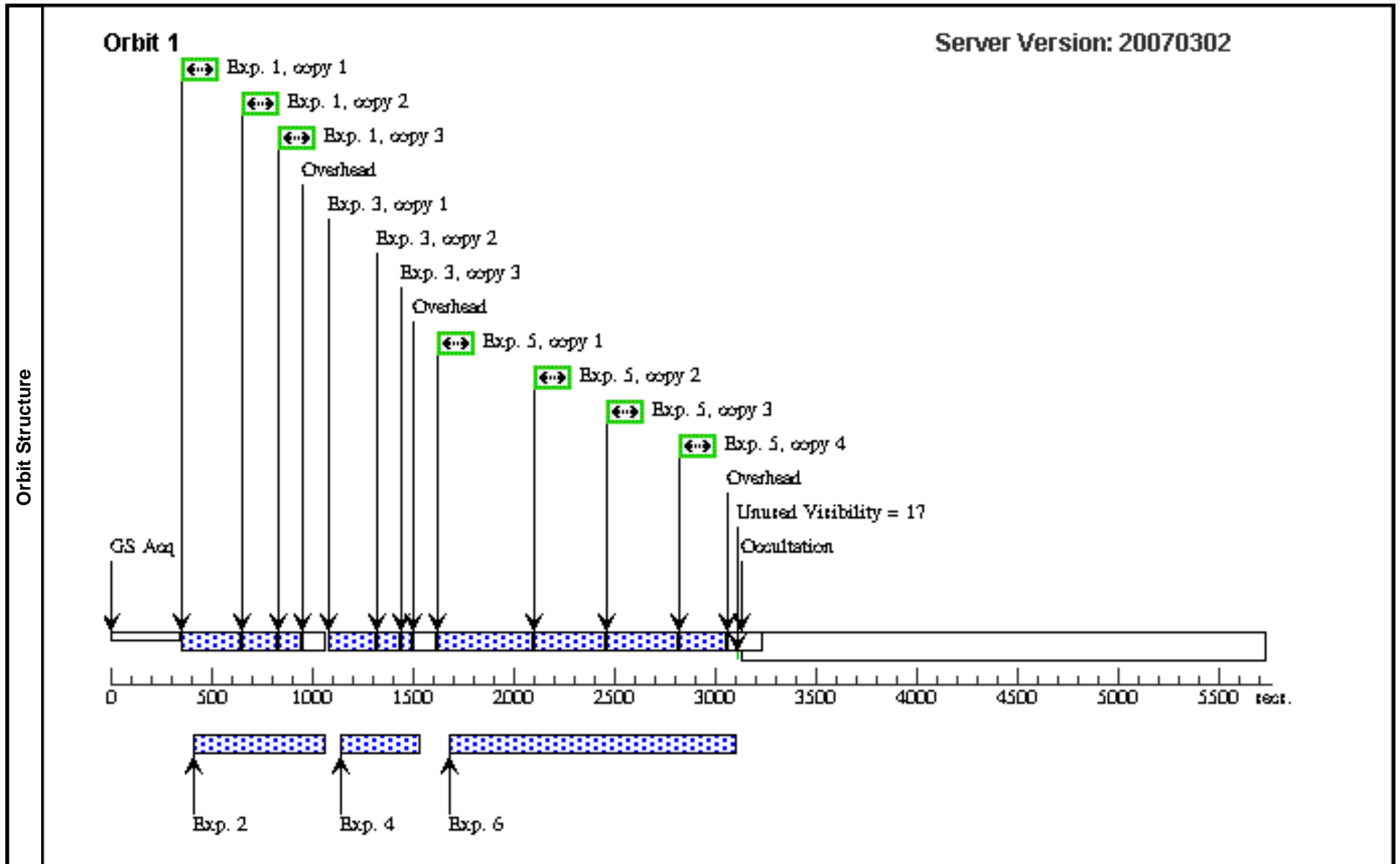
Proposal 10921 - Visit 61 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

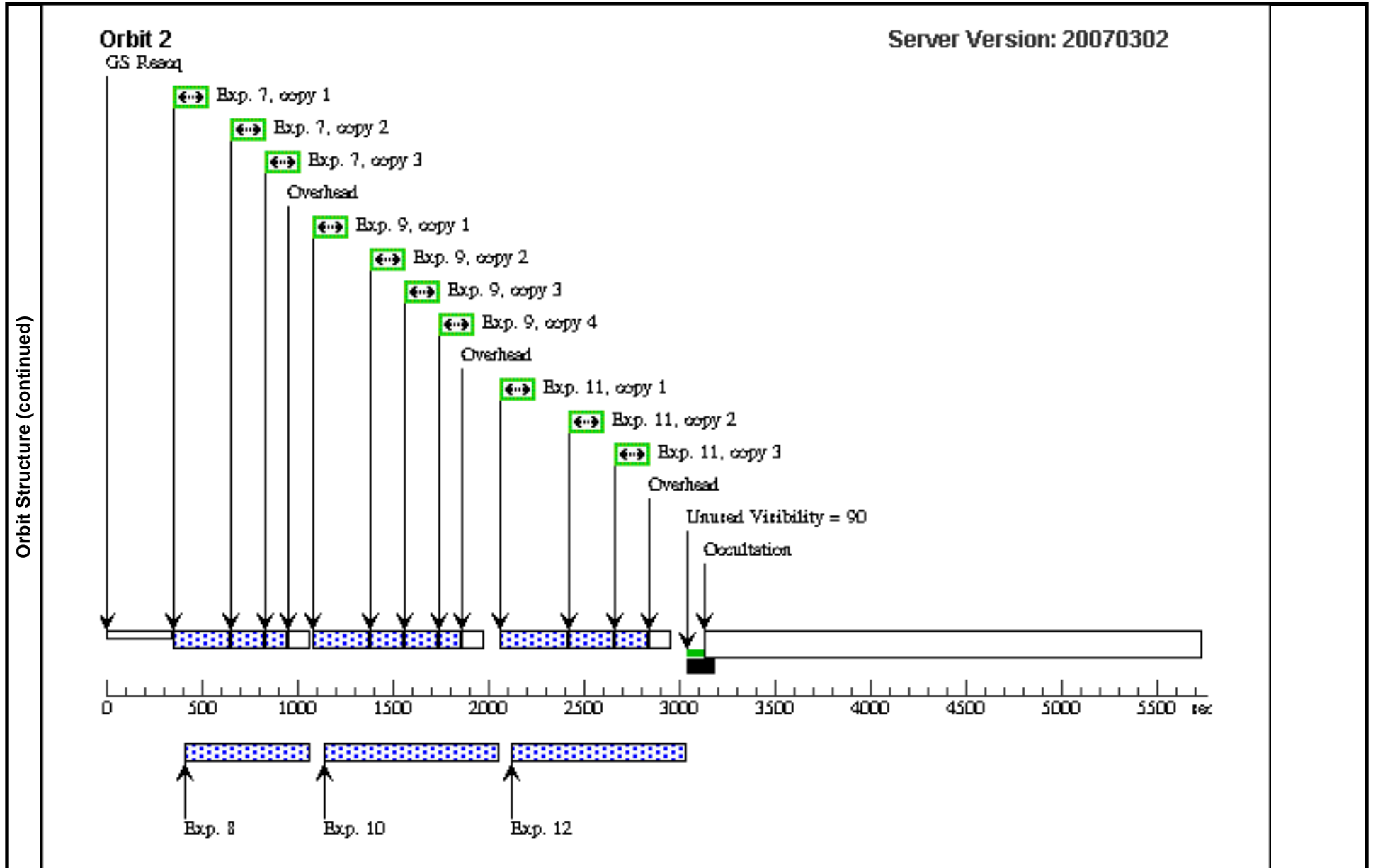
Tue Mar 27 03:21:14 GMT 2007

| Visit | Proposal 10921, Visit 61 Diagnostic Status: Warning Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 360.0D TO 360.0 D <i>Comments: Orion-S Observations repeat of visit 1, orient and target updated, GSC1 positions used to get guidestars ACS coordinated parallel removed.</i> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|--|---|--------------------|--|--------------------------|--------------------------------|----------------------------|--|---|---|-------|--|-----------------------|------------------|-------------------|-------|-------------|--|----------------------------|---|-----|---|--|-----|------------------------|-------|--------------------------------|--|----------------------------|-------|-----|---|--|------------------|-------------------|-------|-------------|--|----------------------------|--|-----|---|--|-----|------------------------|-------|-------------------------------|--|----------------------------|-------|-----|---|--|------------------|-------------------|-------|-------------|--|----------------------------|--|-----|--|--|--|--|--|
| | (Visit 61) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME (Visit 61) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Diagnosics | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Fixed Targets | <table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(7)</td> <td>ORION-S-COPY</td> <td>RA: 05 35 13.8200 (83.8075833d) Dec: -05 22 38.10 (-5.37725d) Equinox: J2000 Plate Id: (?)</td> <td></td> <td>V=14.0 V Magnitude is bogus, it is an emission-line source with no bright stars.</td> <td>Reference Frame: GSC1</td> </tr> </tbody> </table> | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | (7) | ORION-S-COPY | RA: 05 35 13.8200 (83.8075833d) Dec: -05 22 38.10 (-5.37725d) Equinox: J2000 Plate Id: (?) | | V=14.0 V Magnitude is bogus, it is an emission-line source with no bright stars. | Reference Frame: GSC1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Exposures | <table border="1"> <thead> <tr> <th>#</th> <th>Label</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>(7) ORION-S-COPY</td> <td>WFPC2, IMAGE, PC1</td> <td>F502N</td> <td>CR-SPLIT=NO</td> <td></td> <td>Prime + Parallel Group 1-2</td> <td>100.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td></td> <td>ANY</td> <td>NIC3, MULTIACCUM, NIC3</td> <td>F212N</td> <td>SAMP-SEQ=SPARS 64; NSAMP=12</td> <td></td> <td>Prime + Parallel Group 1-2</td> <td>[==>]</td> <td>[1]</td> </tr> <tr> <td>3</td> <td></td> <td>(7) ORION-S-COPY</td> <td>WFPC2, IMAGE, PC1</td> <td>F547M</td> <td>CR-SPLIT=NO</td> <td></td> <td>Prime + Parallel Group 3-4</td> <td>30.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]</td> <td>[1]</td> </tr> <tr> <td>4</td> <td></td> <td>ANY</td> <td>NIC3, MULTIACCUM, NIC3</td> <td>F212N</td> <td>SAMP-SEQ=SPARS 64; NSAMP=8</td> <td></td> <td>Prime + Parallel Group 3-4</td> <td>[==>]</td> <td>[1]</td> </tr> <tr> <td>5</td> <td></td> <td>(7) ORION-S-COPY</td> <td>WFPC2, IMAGE, PC1</td> <td>F631N</td> <td>CR-SPLIT=NO</td> <td></td> <td>Prime + Parallel Group 5-6</td> <td>200.0 Secs X 4 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]</td> <td>[1]</td> </tr> </tbody> </table> | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | 1 | | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F502N | CR-SPLIT=NO | | Prime + Parallel Group 1-2 | 100.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] | 2 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group 1-2 | [==>] | [1] | 3 | | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F547M | CR-SPLIT=NO | | Prime + Parallel Group 3-4 | 30.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] | 4 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=8 | | Prime + Parallel Group 3-4 | [==>] | [1] | 5 | | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F631N | CR-SPLIT=NO | | Prime + Parallel Group 5-6 | 200.0 Secs X 4 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] | [1] | | | | | |
| | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F502N | CR-SPLIT=NO | | Prime + Parallel Group 1-2 | 100.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 2 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group 1-2 | [==>] | [1] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 3 | | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F547M | CR-SPLIT=NO | | Prime + Parallel Group 3-4 | 30.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 4 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=8 | | Prime + Parallel Group 3-4 | [==>] | [1] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F631N | CR-SPLIT=NO | | Prime + Parallel Group 5-6 | 200.0 Secs X 4 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] | [1] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Proposal 10921 - Visit 61 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------------------|-------|------------------|------------------------|---------------|-----------------------------------|---------------|------------------------------------|--|-------|
| Exposures (continued) | 6 | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=24 | | Prime + Parallel Group up 5-6 | [==>] | [1] |
| | 7 | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F656N | CR-SPLIT=NO | | Prime + Parallel Group up 7-8 | 60.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [2] |
| | 8 | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group up 7-8 | [==>] | [2] |
| | 9 | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F658N | CR-SPLIT=NO | | Prime + Parallel Group up 9-10 | 100.0 Secs X 4 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] | [2] |
| | 10 | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=16 | | Prime + Parallel Group up 9-10 | [==>] | [2] |
| | 11 | (7) ORION-S-COPY | WFPC2, IMAGE, PC1 | F673N | CR-SPLIT=NO | | Prime + Parallel Group up 11-12 | 160.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [2] |
| | 12 | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=16 | | Prime + Parallel Group up 11-12 | [==>] | [2] |





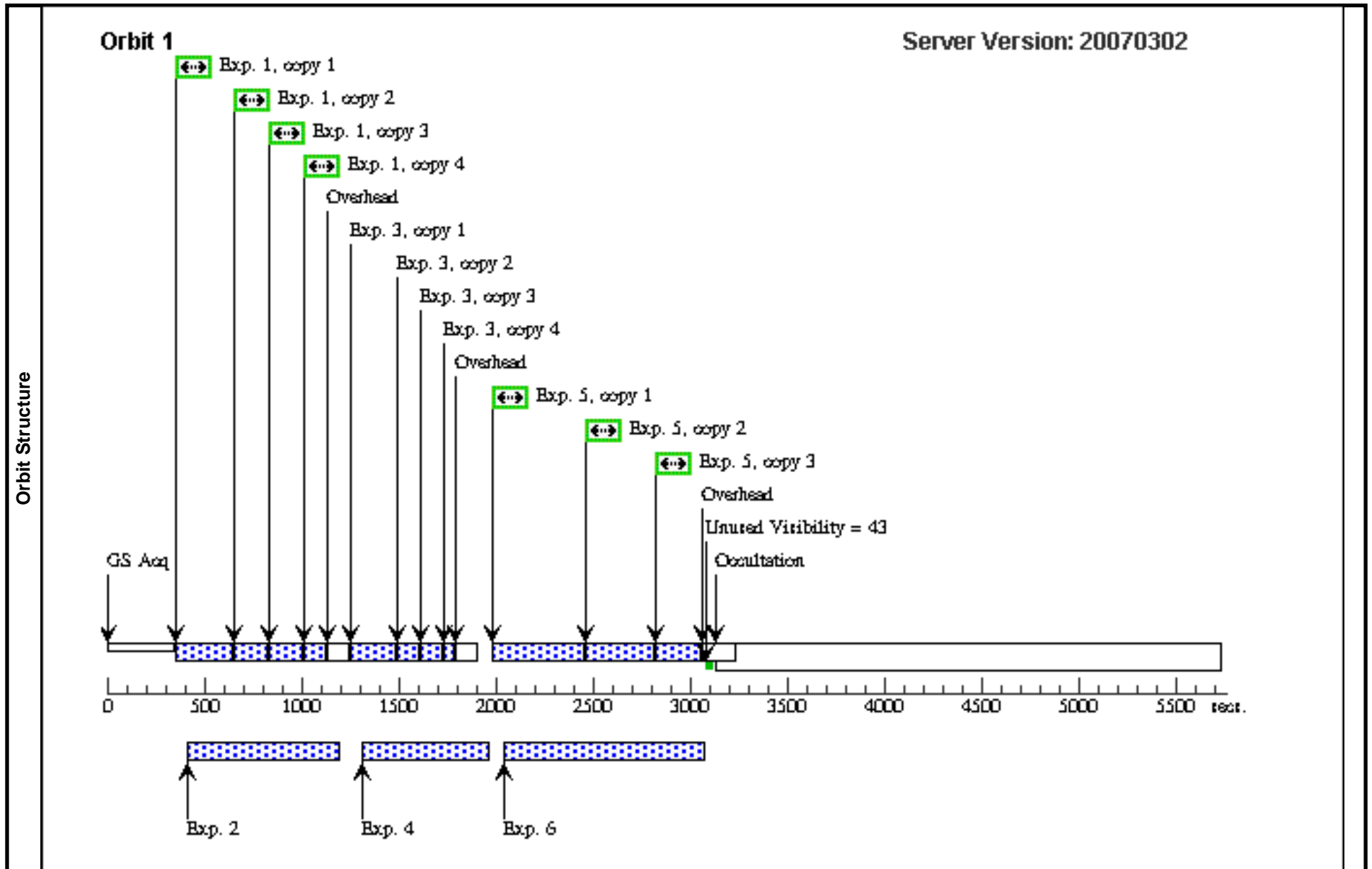
Proposal 10921 - Visit 62 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

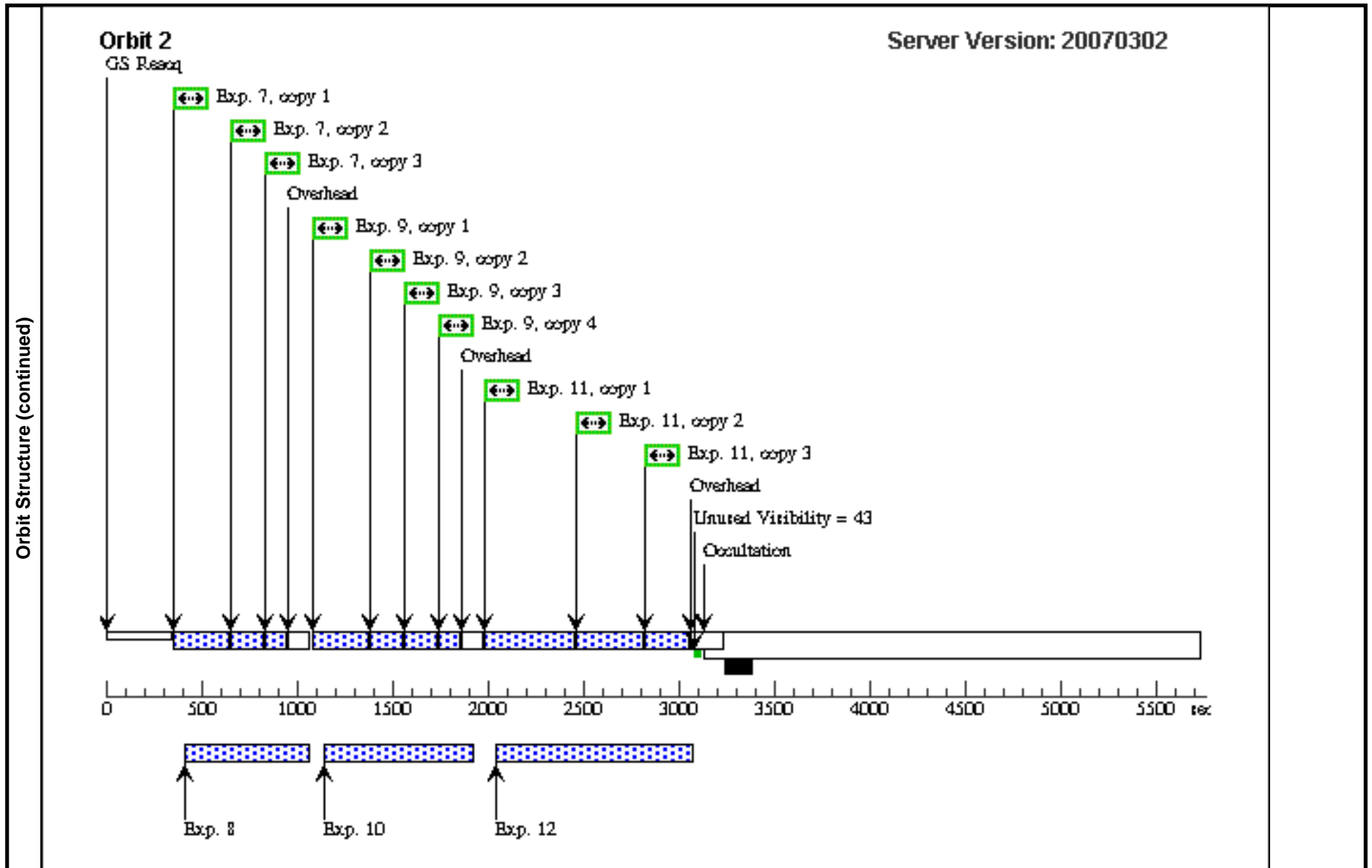
Tue Mar 27 03:21:18 GMT 2007

| | | | | | | | | | | |
|----------------------|---|--------------|--|---------------------------------|---|-----------------------|----------------------|----------------------------|--|--------------|
| Visit | Proposal 10921, Visit 62 Diagnostic Status: Warning Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 265.0D TO 265.0 D | | | | | | | | | |
| | (Visit 62) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME | | | | | | | | | |
| Diagnostics | | | | | | | | | | |
| | | | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | |
| | (2) | HH528 | RA: 05 35 11.7200 (83.7988333d) Dec: -05 25 8.40 (-5.41900d) Equinox: J2000 Plate Id: (?) | | V=14.0 V magnitude is bogus, it is an emission line object with no bright stars. | Reference Frame: GSC1 | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (2) HH528 | WFPC2, IMAGE, PC1 | F502N | CR-SPLIT=NO | | | Prime + Parallel Group 1-2 | 100.0 Secs X 4 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] | [1] |
| | 2 | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=14 | | | Prime + Parallel Group 1-2 | [==>] | [1] |
| | 3 | (2) HH528 | WFPC2, IMAGE, PC1 | F547M | CR-SPLIT=NO | | | Prime + Parallel Group 3-4 | 30.0 Secs X 4 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] | [1] |
| | 4 | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=12 | | | Prime + Parallel Group 3-4 | [==>] | [1] |
| | 5 | (2) HH528 | WFPC2, IMAGE, PC1 | F631N | CR-SPLIT=NO | | | Prime + Parallel Group 5-6 | 200.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [1] |
| | 6 | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=18 | | | Prime + Parallel Group 5-6 | [==>] | [1] |

Proposal 10921 - Visit 62 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

| Exposures (continued) | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------------------|----|-------|-----------|------------------------|---------------|-----------------------------------|---------------|------------------------------|--|-------|
| | 7 | | (2) HH528 | WFPC2, IMAGE, PC1 | F656N | CR-SPLIT=NO | | Prime + Parallel Group 7-8 | 80.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [2] |
| | 8 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group 7-8 | [==>] | [2] |
| | 9 | | (2) HH528 | WFPC2, IMAGE, PC1 | F658N | CR-SPLIT=NO | | Prime + Parallel Group 9-10 | 100.0 Secs X 4 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] | [2] |
| | 10 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=14 | | Prime + Parallel Group 9-10 | [==>] | [2] |
| | 11 | | (2) HH528 | WFPC2, IMAGE, PC1 | F673N | CR-SPLIT=NO | | Prime + Parallel Group 11-12 | 180.0 Secs X 3 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] | [2] |
| | 12 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=18 | | Prime + Parallel Group 11-12 | [==>] | [2] |

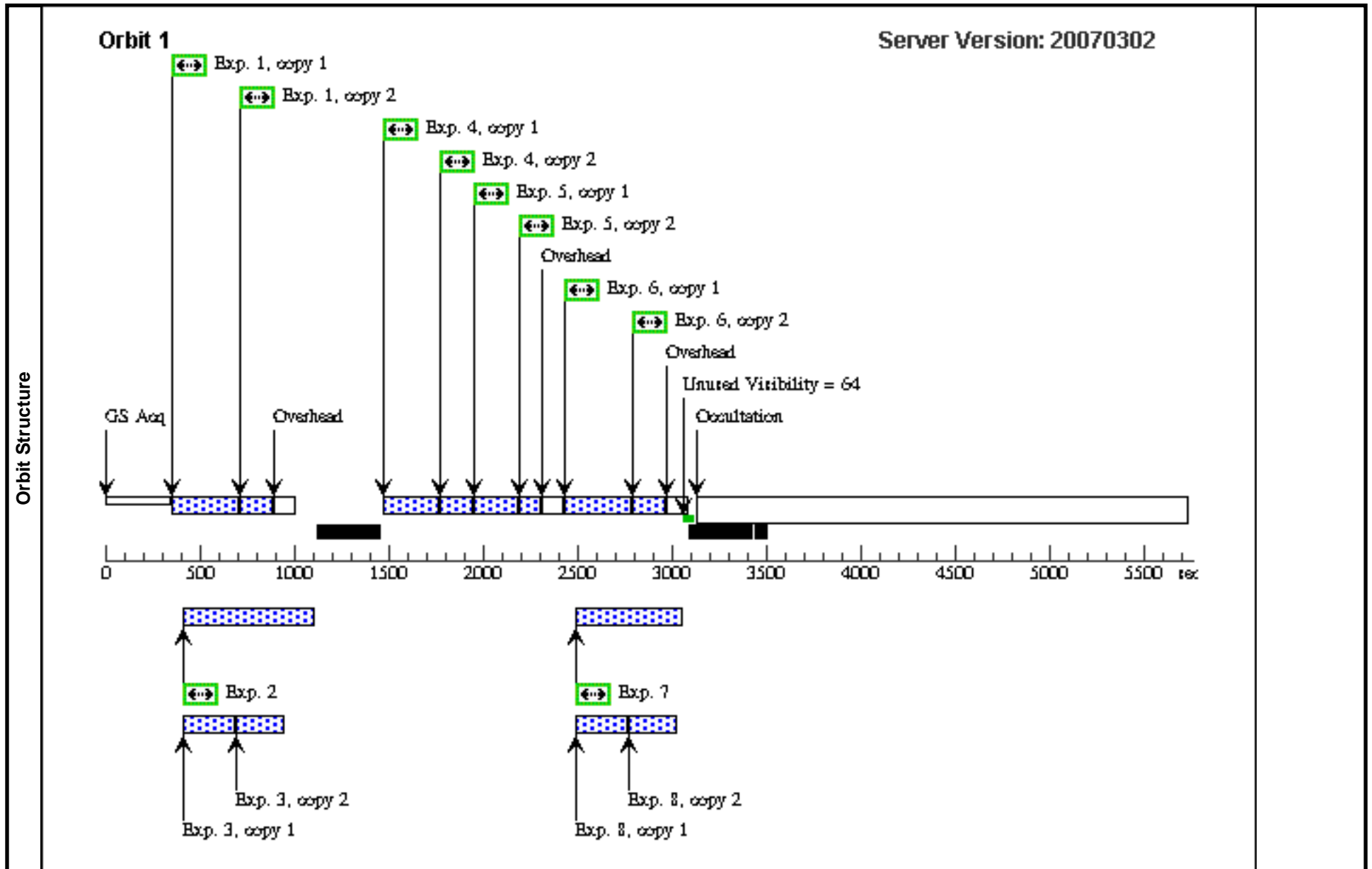




Proposal 10921 - Visit 03 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

Tue Mar 27 03:21:20 GMT 2007

| Visit | Proposal 10921, Visit 03, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC, WFPC2, NIC3 Special Requirements: ORIENT 331.0D TO 331.0 D | | | | | | | | | |
|---------------|---|---|--------|---|--------------------------|--|-----------------------|----------------------------|--|-------|
| | Diagnostics | (Visit 03) Warning: EXPOSURE TIME DECREASED FOR WFPC (Visit 03) Warning: EXPOSURE TIME DECREASED FOR WFPC (Visit 03) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME | | | | | | | | |
| Fixed Targets | | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | | (3) | LL1 | RA: 05 35 1.5500 (83.7564583d) Dec: -05 24 6.60 (-5.40183d) Equinox: J2000 Plate Id: (?) | | V=14.0 V magnitude is bogus, this is an emission line object with no bright stars. | Reference Frame: GSC1 | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (3) LL1 | | WFPC2, IMAGE, PC1 | F502N | CR-SPLIT=NO | | Prime + Parallel Group 1-3 | 140.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 2 | ANY | | ACS/WFC, ACCUM, WFC | F658N | CR-SPLIT=NO | | Prime + Parallel Group 1-3 | 490.0 Secs [==>] | [1] |
| | 3 | ANY | | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=6 | | Prime + Parallel Group 1-3 | [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 4 | (3) LL1 | | WFPC2, IMAGE, PC1 | F547M | CR-SPLIT=NO | | | 50.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 5 | (3) LL1 | | WFPC2, IMAGE, PC1 | F656N | CR-SPLIT=NO | | | 100.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 6 | (3) LL1 | | WFPC2, IMAGE, PC1 | F658N | CR-SPLIT=NO | | Prime + Parallel Group 6-8 | 150.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 7 | ANY | | ACS/WFC, ACCUM, WFC | F658N | CR-SPLIT=NO | | Prime + Parallel Group 6-8 | 440.0 Secs [==>] | [1] |
| | 8 | ANY | | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=6 | | Prime + Parallel Group 6-8 | [==>(Copy 1)] [==>(Copy 2)] | [1] |



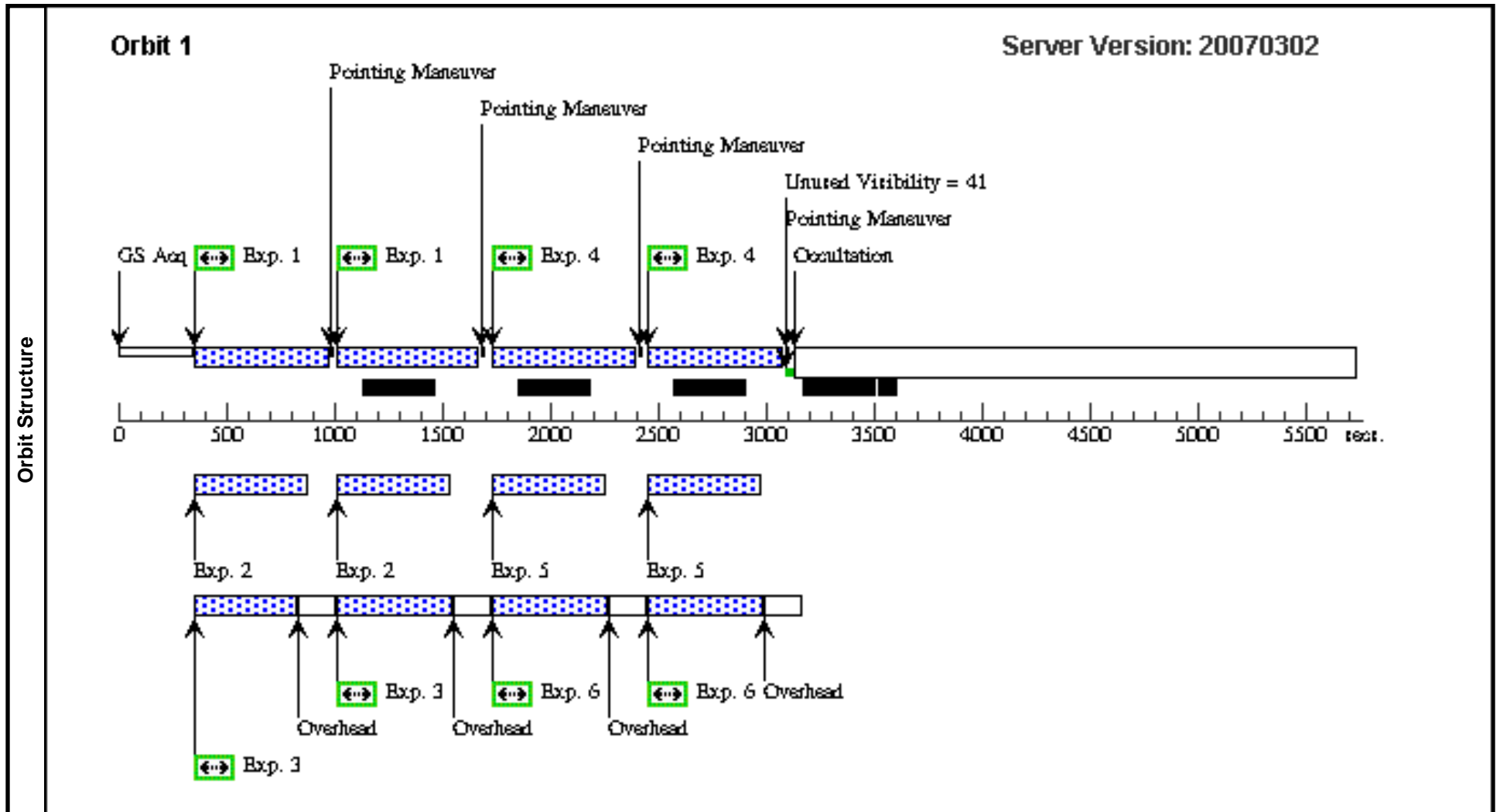
Proposal 10921 - Visit 05 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

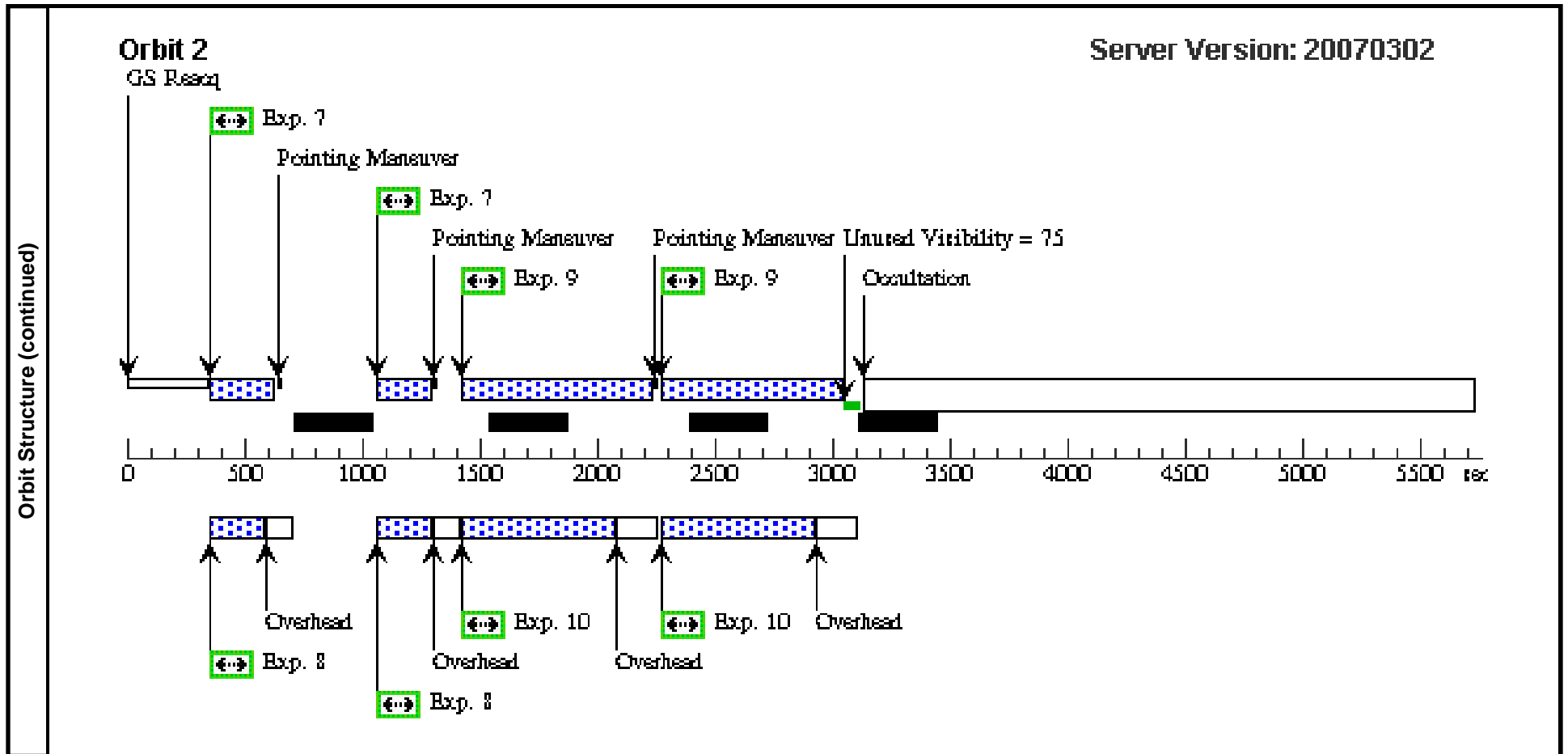
Tue Mar 27 03:21:22 GMT 2007

| | | | | | | | | | | | |
|----------------------|---|--|--|---|---------------------------------|--------------------------------|--|---|---|------------------|--------------|
| Visit | Proposal 10921, Visit 05, completed Diagnostic Status: Warning Scientific Instruments: ACS/WFC, WFPC2, NIC3 Special Requirements: ORIENT 327.0D TO 337.0 D | | | | | | | | | | |
| | Diagnostics | (Visit 05) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME (Visit 05) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME | | | | | | | | | |
| Patterns | | # | Primary Pattern | | | | Secondary Pattern | | | Exposures | |
| | (1) | Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing= | | Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false | | | | | (1-3), (4-6), (7-8), (9-10) | | |
| Fixed Targets | # | Name | Target Coordinates | | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (5) | HH502 | RA: 05 35 28.1300 (83.8672083d) Dec: -05 29 34.60 (-5.49294d) Equinox: J2000 | | | | V=14.0 V magnitude is bogus, this is an emission line object with no bright stars. | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | | Orbit |
| | 1 | | (5) HH502 | ACS/WFC, ACCUM, WFC | F658N | CR-SPLIT=NO | | Pattern 1-3 (1) Prime + Parallel Group 1-3 | 530.0 Secs [==>415.0 Secs (Pattern 1)] [==>(Pattern 2)] | [1] | |
| | 2 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=10 | | Pattern 1-3 (1) Prime + Parallel Group 1-3 | [==>(Pattern 1)] [==>(Pattern 2)] | [1] | |
| | 3 | | ANY | WFPC2, IMAGE, PC1 | F656N | CR-SPLIT=NO | | Pattern 1-3 (1) Prime + Parallel Group 1-3 | 350.0 Secs [==>300.0 Secs (Pattern 1)] [==>(Pattern 2)] | [1] | |
| | 4 | | (5) HH502 | ACS/WFC, ACCUM, WFC | F660N | CR-SPLIT=NO | | Pattern 4-6 (1) Prime + Parallel Group 4-6 | 500.0 Secs [==>(Pattern 1)] [==>(Pattern 2)] | [1] | |
| | 5 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=10 | | Pattern 4-6 (1) Prime + Parallel Group 4-6 | [==>(Pattern 1)] [==>(Pattern 2)] | [1] | |

Proposal 10921 - Visit 05 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

| Exposures (continued) | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------------------|----|-------|-----------|----------------------|---------------|--------------|---------------|---|--|-------|
| | 6 | | ANY | WFPC2, IMAGE, PC1 | F658N | CR-SPLIT=NO | | Pattern 4-6 (1) Prime + Parallel Group 4-6 | 350.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] | [1] |
| | 7 | | (5) HH502 | ACS/WFC, ACCUM, WFC | F550M | CR-SPLIT=NO | | Pattern 7-8 (1) Prime + Parallel Group 7-8 | 100.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] | [2] |
| | 8 | | ANY | WFPC2, IMAGE, PC1 | F547M | CR-SPLIT=NO | | Pattern 7-8 (1) Prime + Parallel Group 7-8 | 100.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] | [2] |
| | 9 | | (5) HH502 | ACS/WFC, ACCUM, WFC | F502N | CR-SPLIT=NO | | Pattern 9-10 (1) Prime + Parallel Group 9-10 | 650.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] | [2] |
| | 10 | | ANY | WFPC2, IMAGE, PC1 | F502N | CR-SPLIT=NO | | Pattern 9-10 (1) Prime + Parallel Group 9-10 | 500.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] | [2] |





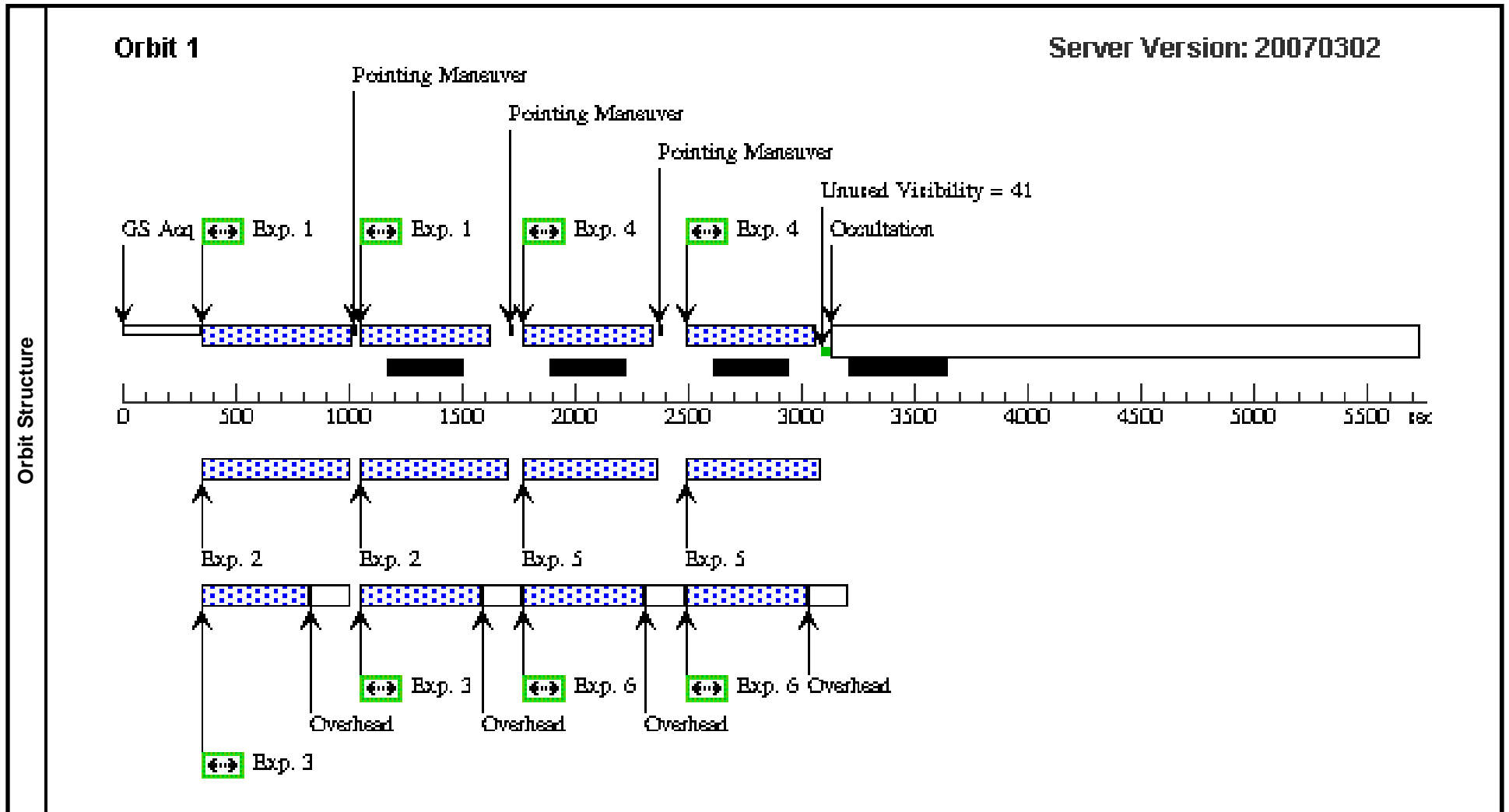
Proposal 10921 - Visit 06 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

Tue Mar 27 03:21:25 GMT 2007

| | | | | | | | | | | | | |
|----------------------|--|--|--|-----------------------------|---------------------------------|---|--|---|---|------------------|--------------|-----|
| Visit | Proposal 10921, Visit 06, failed Diagnostic Status: Warning Scientific Instruments: ACS/WFC, WFPC2, NIC3 Special Requirements: ORIENT 302.0D TO 302.0 D | | | | | | | | | | | |
| | (Visit 06) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME (Visit 06) Warning: PARALLELS SIGNIFICANTLY EXTEND ALIGNMENT TIME | | | | | | | | | | | |
| Diagnosics | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Patterns | # | Primary Pattern | | | | Secondary Pattern | | | | Exposures | | |
| | (1) | Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing= | | | | Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false | | | | (1-3), (4-6) | | |
| Fixed Targets | # | Name | Target Coordinates | | Targ. Coord. Corrections | | Fluxes | | Miscellaneous | | | |
| | (6) | HH540 | RA: 05 35 17.8400 (83.8243333d) Dec: -05 29 30.70 (-5.49186d) Equinox: J2000 | | | | V=14.0 V magnitude is bogus, this is an emission line object with no bright stars. | | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | | Orbit | |
| | 1 | | (6) HH540 | ACS/WFC, ACCUM, WFC | F658N | CR-SPLIT=NO | | Pattern 1-3 (1) Prime + Parallel Group 1-3 | 453.0 Secs | | [1] | |
| | | | | | | | | | [==>(Pattern 1)] | | | |
| | | | | | | | | | [==>(Pattern 2)] | | | |
| | 2 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; | NSAMP=12 | | Pattern 1-3 (1) Prime + Parallel Group 1-3 | | | [1] |
| | | | | | | | | | [==>(Pattern 1)] | | | |
| | | | | | | | | [==>(Pattern 2)] | | | | |
| 3 | | ANY | WFPC2, IMAGE, PC1 | F656N | CR-SPLIT=NO | | | Pattern 1-3 (1) Prime + Parallel Group 1-3 | 350.0 Secs | | [1] | |
| | | | | | | | | [==>300.0 Secs (Pattern 1)] | | | | |
| | | | | | | | | [==>(Pattern 2)] | | | | |
| 4 | | (6) HH540 | ACS/WFC, ACCUM, WFC | F658N | CR-SPLIT=NO | | | Pattern 4-6 (1) Prime + Parallel Group 4-6 | 453.0 Secs | | [1] | |
| | | | | | | | | [==>(Pattern 1)] | | | | |
| | | | | | | | | [==>(Pattern 2)] | | | | |
| 5 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; | NSAMP=11 | | Pattern 4-6 (1) Prime + Parallel Group 4-6 | | | [1] | |
| | | | | | | | | [==>(Pattern 1)] | | | | |
| | | | | | | | | [==>(Pattern 2)] | | | | |

Proposal 10921 - Visit 06 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

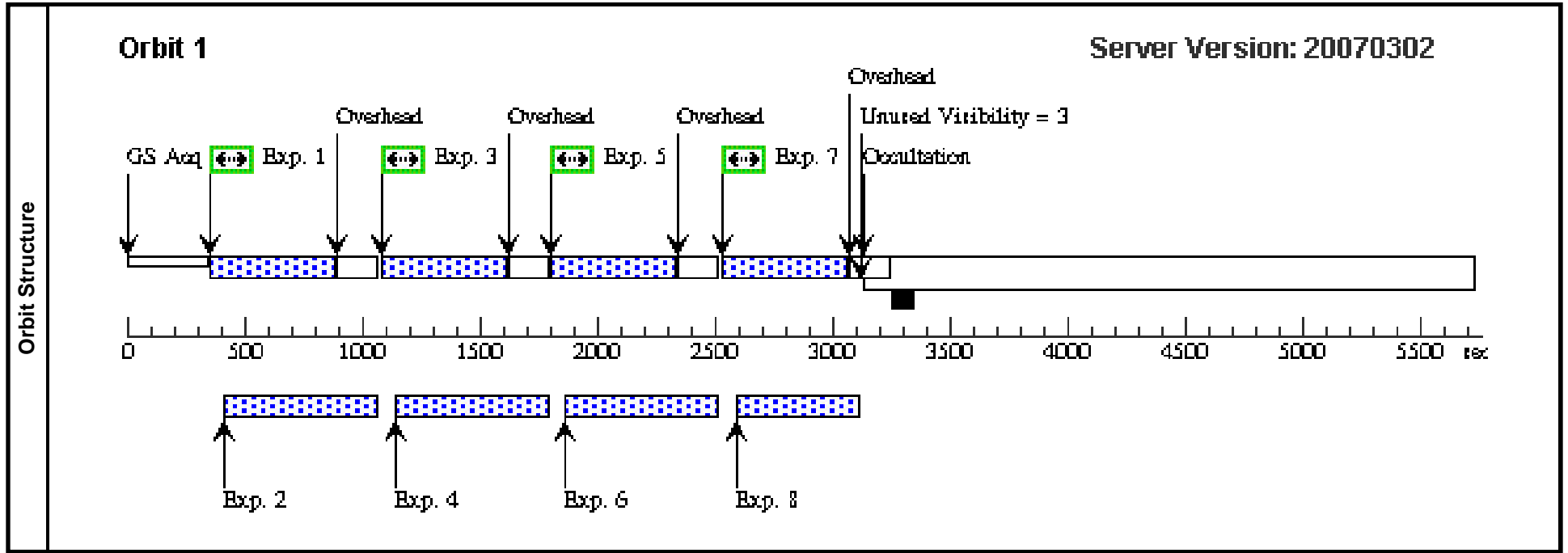
| Exposures (continued) | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------------------|---|-------|--------|----------------------|---------------|--------------|---------------|---|--|-------|
| | 6 | | ANY | WFPC2, IMAGE, PC1 | F658N | CR-SPLIT=NO | | Pattern 4-6 (1) Prime + Parallel Group 4-6 | 350.0 Secs [=>(Pattern 1)] [=>(Pattern 2)] | [1] |



Proposal 10921 - Visit 64 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

Tue Mar 27 03:21:26 GMT 2007

| Visit | Proposal 10921, Visit 64, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 358.0D TO 360.0 D Comments: This is the WFPC2 substitute for ACS Visit 6 to HH 540. | | | | | | | | | |
|-----------|---|-----------------|---|------------------------|--------------------------|--------------------------------|---------------|----------------------------|-------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (9) | LL2-WFALL-WFPC2 | RA: 05 34 36.1100 (83.6504583d) Dec: -05 22 40.50 (-5.37792d) Equinox: J2000 Plate Id: (?) | | V=10.0 | Reference Frame: GSC1 | | | | |
| | Comments: V magnitude is a dummy value as this is an extended source. | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | F656N | (9) LL2-WFALL-WFPC2 | WFPC2, IMAGE, WFALL | F656N | CR-SPLIT=NO | | Prime + Parallel Group 1-2 | 400.0 Secs [==>] | [1] |
| | 2 | NIC3 F212N | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group 1-2 | [==>] | [1] |
| | 3 | | (9) LL2-WFALL-WFPC2 | WFPC2, IMAGE, WFALL | F656N | CR-SPLIT=NO | | Prime + Parallel Group 3-4 | 400.0 Secs [==>] | [1] |
| | 4 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group 3-4 | [==>] | [1] |
| | 5 | | (9) LL2-WFALL-WFPC2 | WFPC2, IMAGE, WFALL | F656N | CR-SPLIT=NO | | Prime + Parallel Group 5-6 | 400.0 Secs [==>] | [1] |
| | 6 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=12 | | Prime + Parallel Group 5-6 | [==>] | [1] |
| | 7 | | (9) LL2-WFALL-WFPC2 | WFPC2, IMAGE, WFALL | F656N | CR-SPLIT=NO | | Prime + Parallel Group 7-8 | 400.0 Secs [==>] | [1] |
| | 8 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=10 | | Prime + Parallel Group 7-8 | [==>] | [1] |



Proposal 10921 - Visit 66 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

Tue Mar 27 03:21:28 GMT 2007

| Visit | Proposal 10921, Visit 66, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2, NIC3 Special Requirements: ORIENT 310.0D TO 320.0 D Comments: <i>This is the WFPC2 substitute on HH 540 for ACS visit 6.</i> | | | | | | | | | |
|-----------|--|-------------------|---|------------------------|--------------------------|-----------------------------------|-----------------------|-----------------------------|--|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (10) | HH540-WFALL-WFPC2 | RA: 05 35 19.6800 (83.8320000d) Dec: -05 27 36.10 (-5.46003d) Equinox: J2000 Plate Id: (?) | | | V=10.0 | Reference Frame: GSC1 | | | |
| | Comments: <i>V magnitude is a dummy value as this is an extended source.</i> | | | | | | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (10) HH540-WFAL L-WFPC2 | WFPC2, IMAGE, WFALL | F656N | CR-SPLIT=NO | | Prime + Parallel Group 1-2 | 300.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 2 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=16 | | Prime + Parallel Group 1-2 | [==>] | [1] |
| | 3 | | (10) HH540-WFAL L-WFPC2 | WFPC2, IMAGE, WFALL | F658N | CR-SPLIT=NO | | Prime + Parallel Group 3-4 | 400.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 4 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=16 | | Prime + Parallel Group 3-4 | [==>] | [1] |
| | 5 | | (10) HH540-WFAL L-WFPC2 | WFPC2, IMAGE, WFALL | F547M | CR-SPLIT=NO | | Prime + Parallel Group 5-6 | 40.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 6 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=6 | | Prime + Parallel Group 5-6 | [==>] | [1] |
| | 7 | | (10) HH540-WFAL L-WFPC2 | WFPC2, IMAGE, WFALL | F502N | CR-SPLIT=NO | | Prime + Parallel Group 7-8 | 500.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [2] |
| | 8 | | ANY | NIC3, MULTIACCUM, NIC3 | F212N | SAMP-SEQ=SPARS 64; NSAMP=24 | | Prime + Parallel Group 7-8 | [==>] | [2] |
| | 9 | | (10) HH540-WFAL L-WFPC2 | WFPC2, IMAGE, WFALL | F673N | CR-SPLIT=NO | | Prime + Parallel Group 9-10 | 400.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [2] |

Proposal 10921 - Visit 66 - Tangential Velocities of Objects in the Orion Nebula and Locating the Embedded Outflow Sources.

| Exposures (continued) | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------------------|----|-------|--------|------------------------|---------------|-----------------------------------|---------------|-----------------------------------|-------------------------|-------|
| | 10 | | ANY | NIC3, MULTIACCUM, NIC3 | F215N | SAMP-SEQ=SPARS 64; NSAMP=20 | | Prime + Parallel Group up 9-10 | [==>] | [2] |

