



15232 - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Cycle: 25, Proposal Category: GO

(Availability Mode: AVAILABLE)

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) NGC6284 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:18.0 | 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> |
|--------------|------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 02 | (2) NGC6316 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:21.0 | yes |
| 03 | (3) NGC6539 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:24.0 | yes |
| 04 | (4) NGC6569 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:27.0 | yes |
| 05 | (5) NGC6440 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:29.0 | yes |
| 06 | (6) NGC6626 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:33.0 | yes |
| 07 | (7) NGC6522 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:36.0 | yes |
| 08 | (8) NGC6553 | WFC3/UVIS | 2 | 18-Sep-2017 16:08:38.0 | yes |

16 Total Orbits Used

ABSTRACT

Globular clusters (GCs) are the only astrophysical systems that, within a Hubble time, undergo nearly all the physical processes known in stellar dynamics. Although they have been studied since the very beginning of modern Astrophysics, little is known from observations about their kinematical richness, thus preventing a complete understanding of their current dynamical state, formation and evolutionary history. Here we propose to determine the internal proper motions of stars down to the sub giant branch for a representative sample of Galactic GCs for which we are measuring line-of-sight velocities from a multi-instrument spectroscopic campaign at the ESO Very Large Telescope. The project will provide the first catalog of 3D velocities of hundreds individual stars in the cluster centers, where the most interesting dynamical processes are expected to occur. Long lasting open issues such as the accurate shape of the velocity dispersion profiles, the existence of systemic rotation and orbital anisotropy (and thus the level of relaxation), and the controversial presence of intermediate mass black holes in star clusters will be finally addressed. This will motivate the development of a new generation of fully constrained dynamical models able to properly describe the structural and dynamical properties of stellar systems and reconstruct the evolutionary paths that led to their current status.

OBSERVING DESCRIPTION

The aim of the programme is measuring the internal PMs of stars along the RGB and brighter than the SGB level, in a sample of 8 GGCs for which we determined the light-of-sight velocity component: NGC6284; NGC6316; NGC6539; NGC6569; NGC6440; NGC6626; NGC6522; NGC6553.

To do this, we propose to secure second-epoch high-resolution imaging with the WFC3-UVIS. For each cluster we plan to secure 12 properly-

Proposal 15232 (STScI Edit Number: 2, Created: Monday, September 18, 2017 3:08:39 PM EST) - Overview

dithered images (6 in each orbit) to guarantee enough precision of the PM measures. In order to maximize the information obtainable from the required observations (e.g. the construction of suitable CMDs) we plan to secure 6 exposures in the F555W filter and 6 in the F814W. Indeed both filters are perfectly suitable to accurately measure PMs of stars down to the SGB level in each cluster.

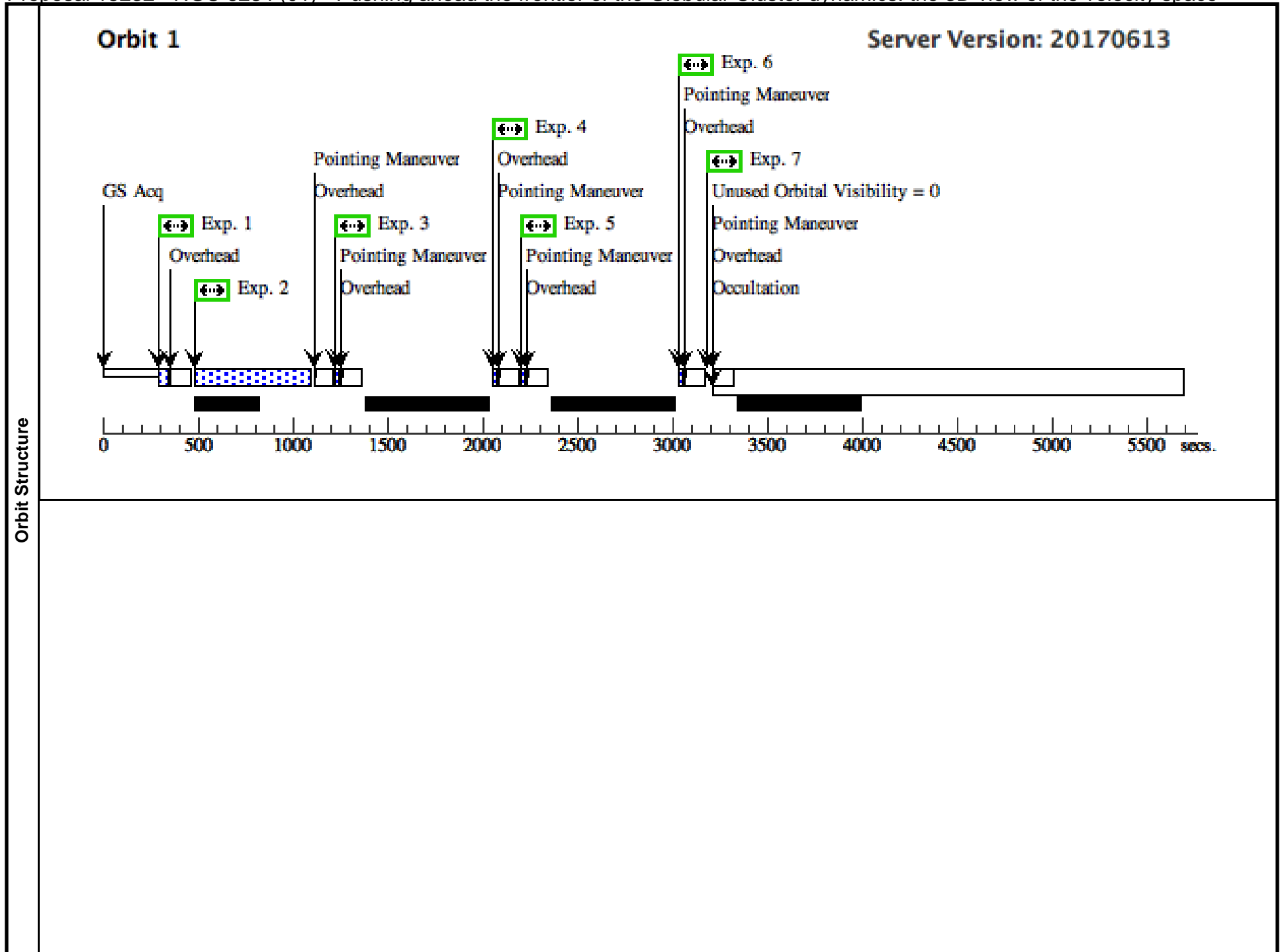
When possible a long exposure in each filter is also acquired. All the exposures have been dithered by using appropriate offsets.

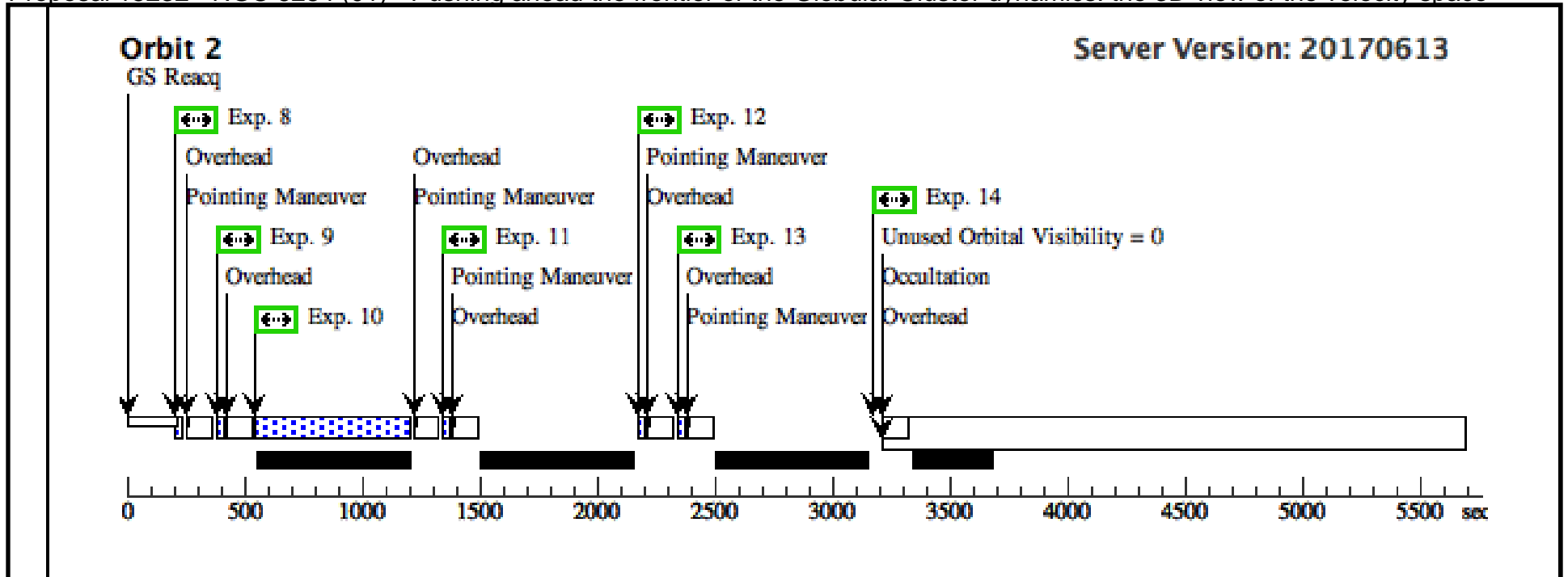
The observations are organized in 8 visits, one for each cluster. Each visit is 2-orbits long.

Proposal 15232 - NGC 6284 (01) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6284 (01), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 80D TO 95 D | | | | | | | | | | |
|-----------|---|---------------|--|-------------------------|--------------------------|----------------------|----------------------------|--------|---------------------------------|-------|--|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | |
| | (1) | NGC6284 | RA: 17 04 28.5100 (256.1187917d) Dec: -24 45 53.50 (-24.76486d) Equinox: J2000 | | | V=17.40 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit | |
| | 1 | 6284I1 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | | | 15 Secs (15 Secs) [==>] | [1] | |
| | 2 | 6284LONGI | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F814W | | SAME POS AS 1 | | 617 Secs (617 Secs) [==>] | [1] | |
| | 3 | 6284I2 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG -0.099,- 0.165 | | 15 Secs (15 Secs) [==>] | [1] | |
| | 4 | 6284I3 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.059,- .095 | | 15 Secs (15 Secs) [==>] | [1] | |
| | 5 | 6284I4 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.218,- .024 | | 15 Secs (15 Secs) [==>] | [1] | |
| | 6 | 6284I5 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.158, 070 | | 15 Secs (15 Secs) [==>] | [1] | |
| | 7 | 6284I6 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.099, 165 | | 15 Secs (15 Secs) [==>] | [1] | |
| | 8 | 6284V1 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.059, 0.095 | | 27 Secs (27 Secs) [==>] | [2] | |
| | 9 | 6284V2 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.218, .024 | | 27 Secs (27 Secs) [==>] | [2] | |
| | 10 | 6284LONG V | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F555W | | SAME POS AS 9 | | 666 Secs (666 Secs) [==>] | [2] | |
| | 11 | 6284V3 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,- 0.070 | | 27 Secs (27 Secs) [==>] | [2] | |
| | 12 | 6284V4 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,- 0.110 | | 27 Secs (27 Secs) [==>] | [2] | |
| | 13 | 6284V5 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.099, 0.052 | | 27 Secs (27 Secs) [==>] | [2] | |
| | 14 | 6284V6 | (1) NGC6284 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.040, .214 | | 27 Secs (27 Secs) [==>] | [2] | |

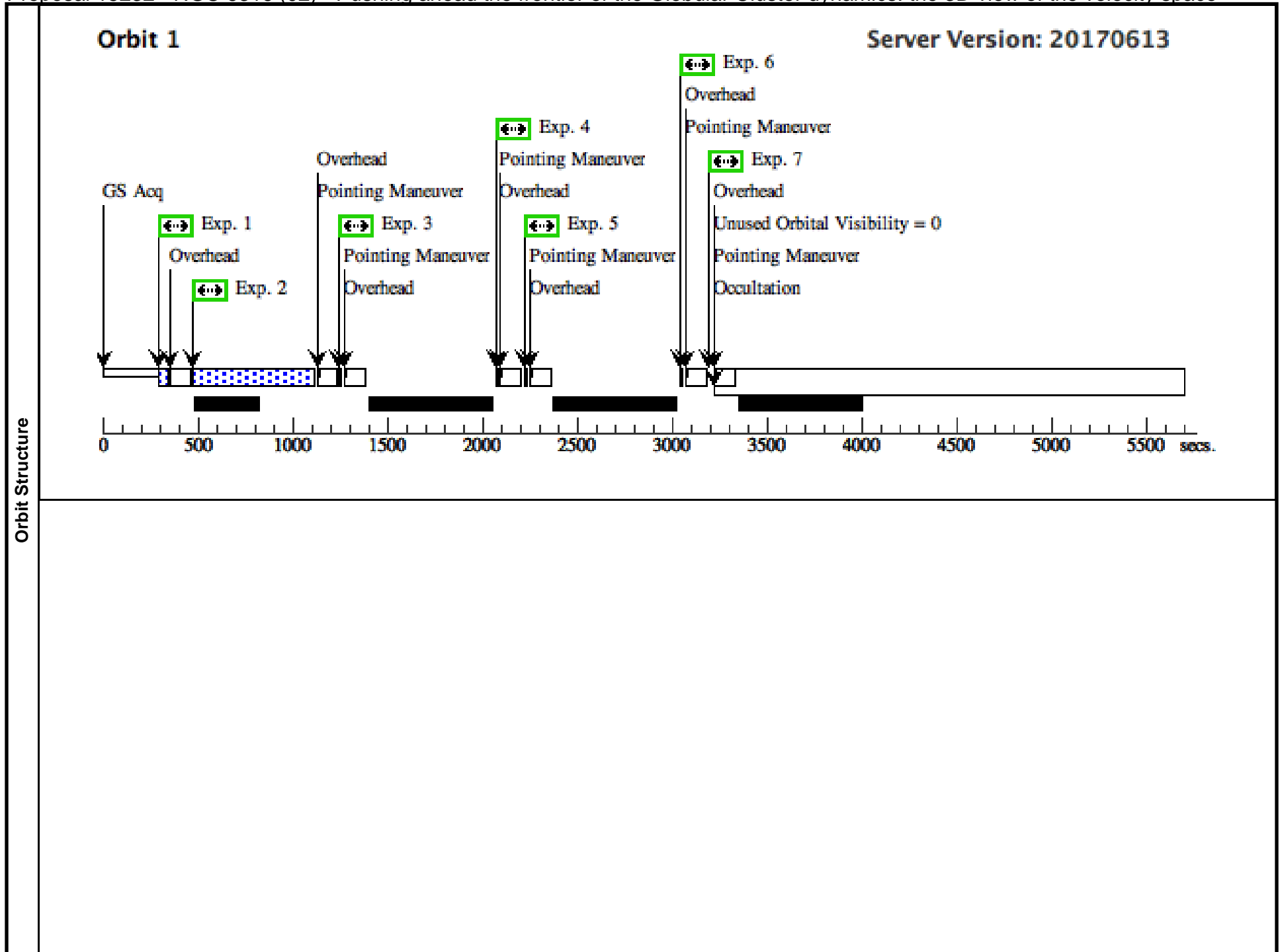


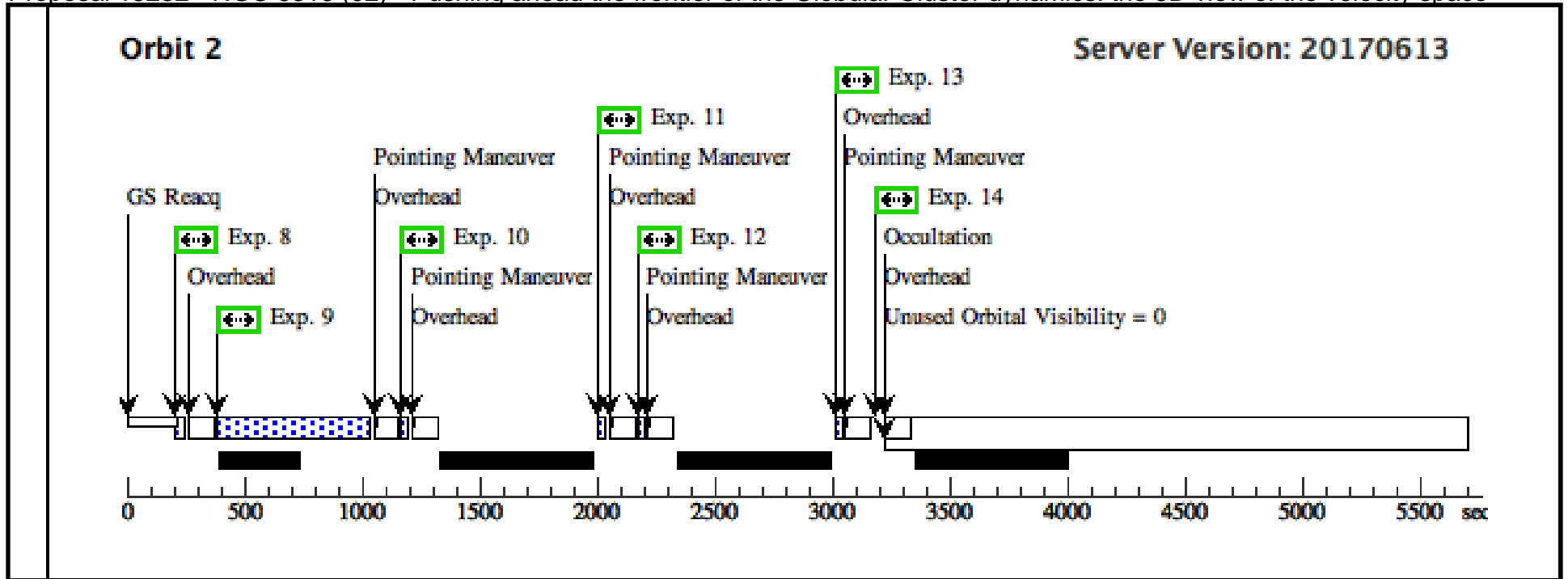


Proposal 15232 - NGC 6316 (02) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6316 (02), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 72D TO 82 D | | | | | | | | | |
|-----------|---|---------------|--|-------------------------|--------------------------|----------------------|----------------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (2) | NGC6316 | RA: 17 16 37.3000 (259.1554167d) Dec: -28 08 24.40 (-28.14011d) Equinox: J2000 | | | V=17.50 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | 6316I1 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | | | 12 Secs (12 Secs) [==>] | [1] |
| | 2 | 6316LONGI | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F814W | | SAME POS AS 1 | | 643 Secs (643 Secs) [==>] | [1] |
| | 3 | 6316I2 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG -0.099,- 0.165 | | 12 Secs (12 Secs) [==>] | [1] |
| | 4 | 6316I3 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.059,- .095 | | 12 Secs (12 Secs) [==>] | [1] |
| | 5 | 6316I4 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.218,- .024 | | 12 Secs (12 Secs) [==>] | [1] |
| | 6 | 6316I5 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.158, 070 | | 12 Secs (12 Secs) [==>] | [1] |
| | 7 | 6316I6 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.099, 165 | | 12 Secs (12 Secs) [==>] | [1] |
| | 8 | 6316V1 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.059, 0.095 | | 30 Secs (30 Secs) [==>] | [2] |
| | 9 | 6316LONG V | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F555W | | SAME POS AS 8 | | 656 Secs (656 Secs) [==>] | [2] |
| | 10 | 6316V2 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.218, 0.024 | | 30 Secs (30 Secs) [==>] | [2] |
| | 11 | 6316V3 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,- 0.070 | | 30 Secs (30 Secs) [==>] | [2] |
| | 12 | 6316V4 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,- 0.110 | | 30 Secs (30 Secs) [==>] | [2] |
| | 13 | 6316V5 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.099, 0.052 | | 30 Secs (30 Secs) [==>] | [2] |
| | 14 | 6316V6 | (2) NGC6316 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.040, 0.214 | | 30 Secs (30 Secs) [==>] | [2] |

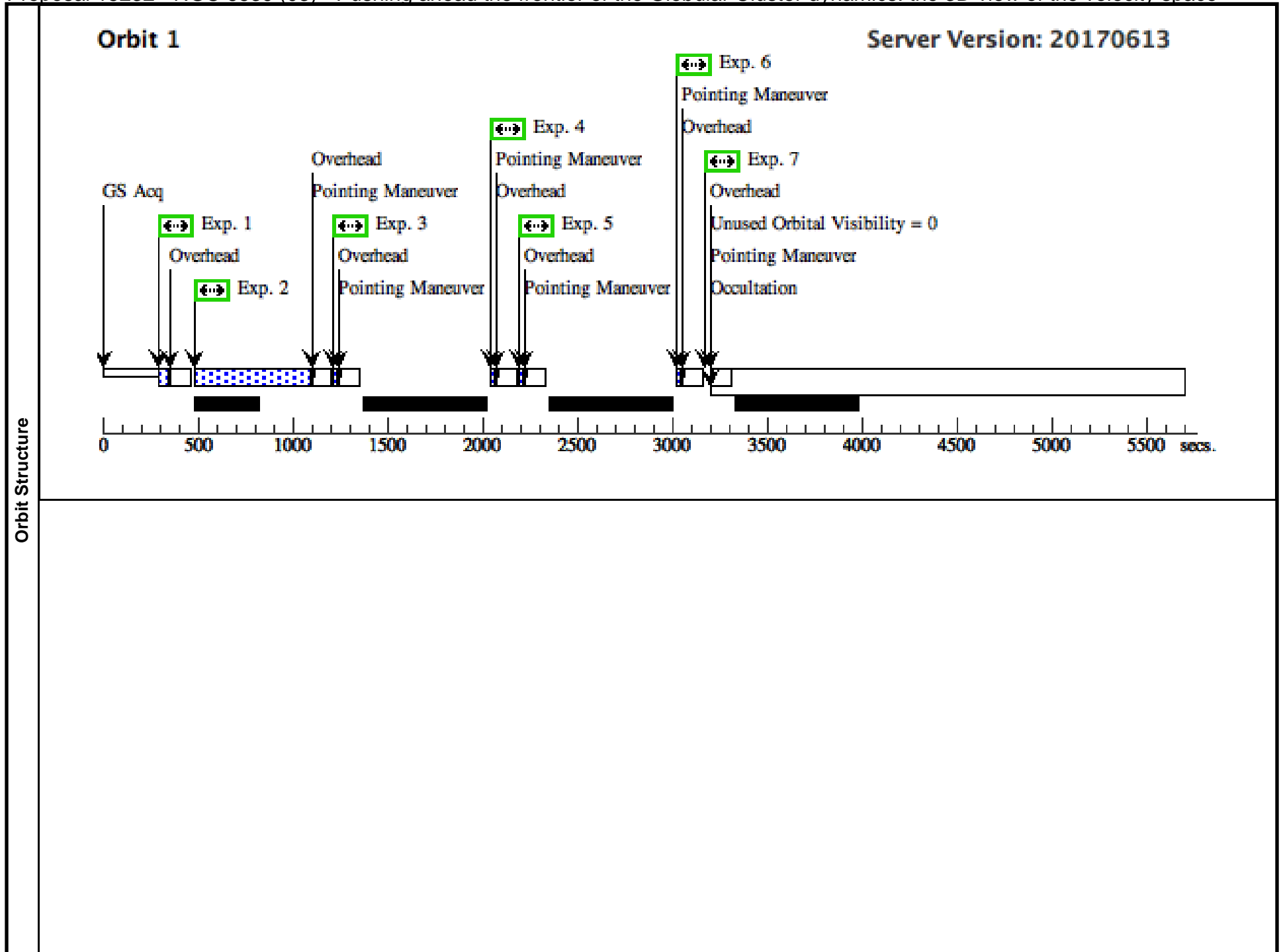


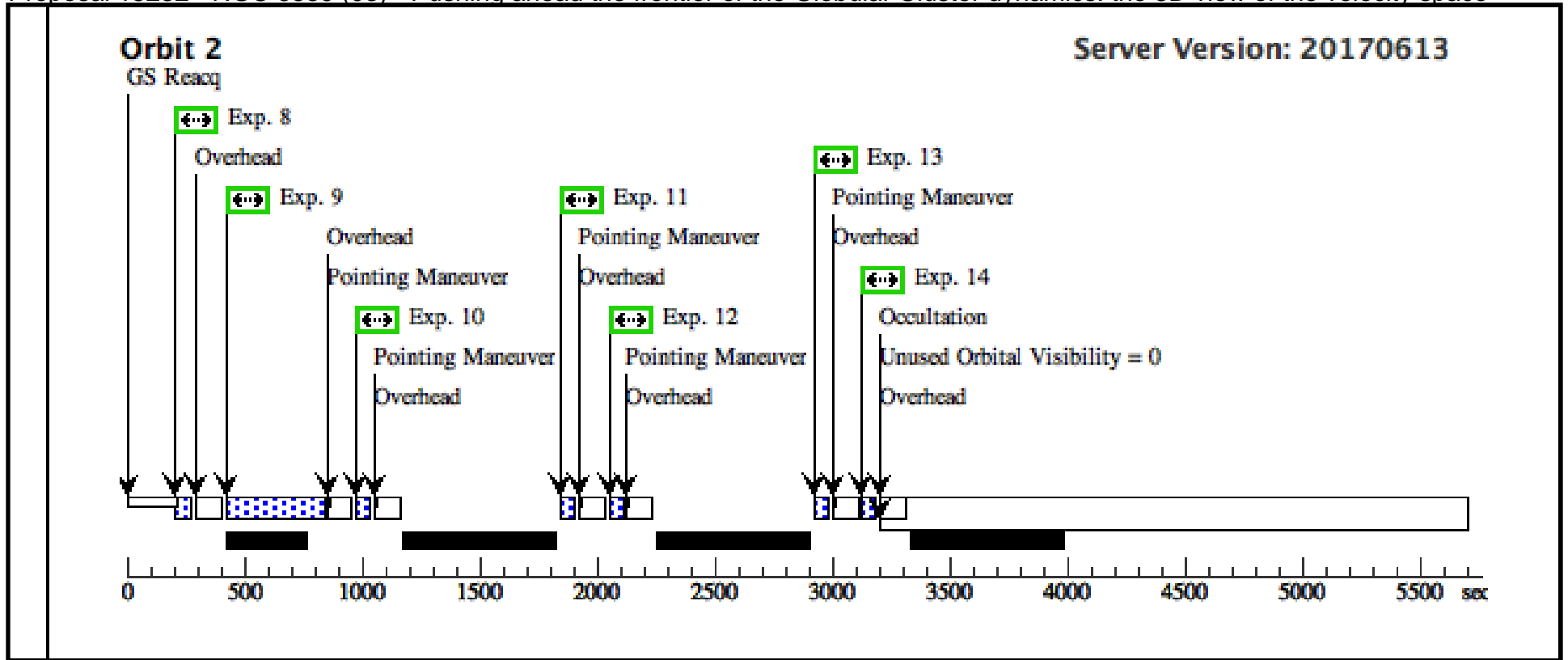


Proposal 15232 - NGC 6539 (03) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6539 (03), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 65D TO 75 D | | | | | | | | | |
|-----------|---|------------|--|-------------------------|--------------------------|-----------------------|------------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (3) | NGC6539 | RA: 18 04 49.6800 (271.2070000d) Dec: -07 35 9.10 (-7.58586d) Equinox: J2000 | | V=18.30 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | 6539I1 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | | | 16 Secs (16 Secs) [==>] | [1] |
| | 2 | 6539LONGI | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F814W | | SAME POS AS 1 | | 609 Secs (609 Secs) [==>] | [1] |
| | 3 | 6539I2 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG -0.099,-0.165 | | 16 Secs (16 Secs) [==>] | [1] |
| | 4 | 6539I3 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.059,-0.095 | | 16 Secs (16 Secs) [==>] | [1] |
| | 5 | 6539I4 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.218,-0.024 | | 16 Secs (16 Secs) [==>] | [1] |
| | 6 | 6539I5 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.158,0.070 | | 16 Secs (16 Secs) [==>] | [1] |
| | 7 | 6539I6 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.099,0.165 | | 16 Secs (16 Secs) [==>] | [1] |
| | 8 | 6539V1 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.059,0.095 | | 65 Secs (65 Secs) [==>] | [2] |
| | 9 | 6539LONG V | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F555W | | SAME POS AS 8 | | 426 Secs (426 Secs) [==>] | [2] |
| | 10 | 6539V2 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.218,0.024 | | 65 Secs (65 Secs) [==>] | [2] |
| | 11 | 6539V3 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,-0.070 | | 65 Secs (65 Secs) [==>] | [2] |
| | 12 | 6539V4 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,-0.110 | | 65 Secs (65 Secs) [==>] | [2] |
| | 13 | 6539V5 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.099,0.052 | | 65 Secs (65 Secs) [==>] | [2] |
| | 14 | 6539V6 | (3) NGC6539 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.040,0.214 | | 65 Secs (65 Secs) [==>] | [2] |

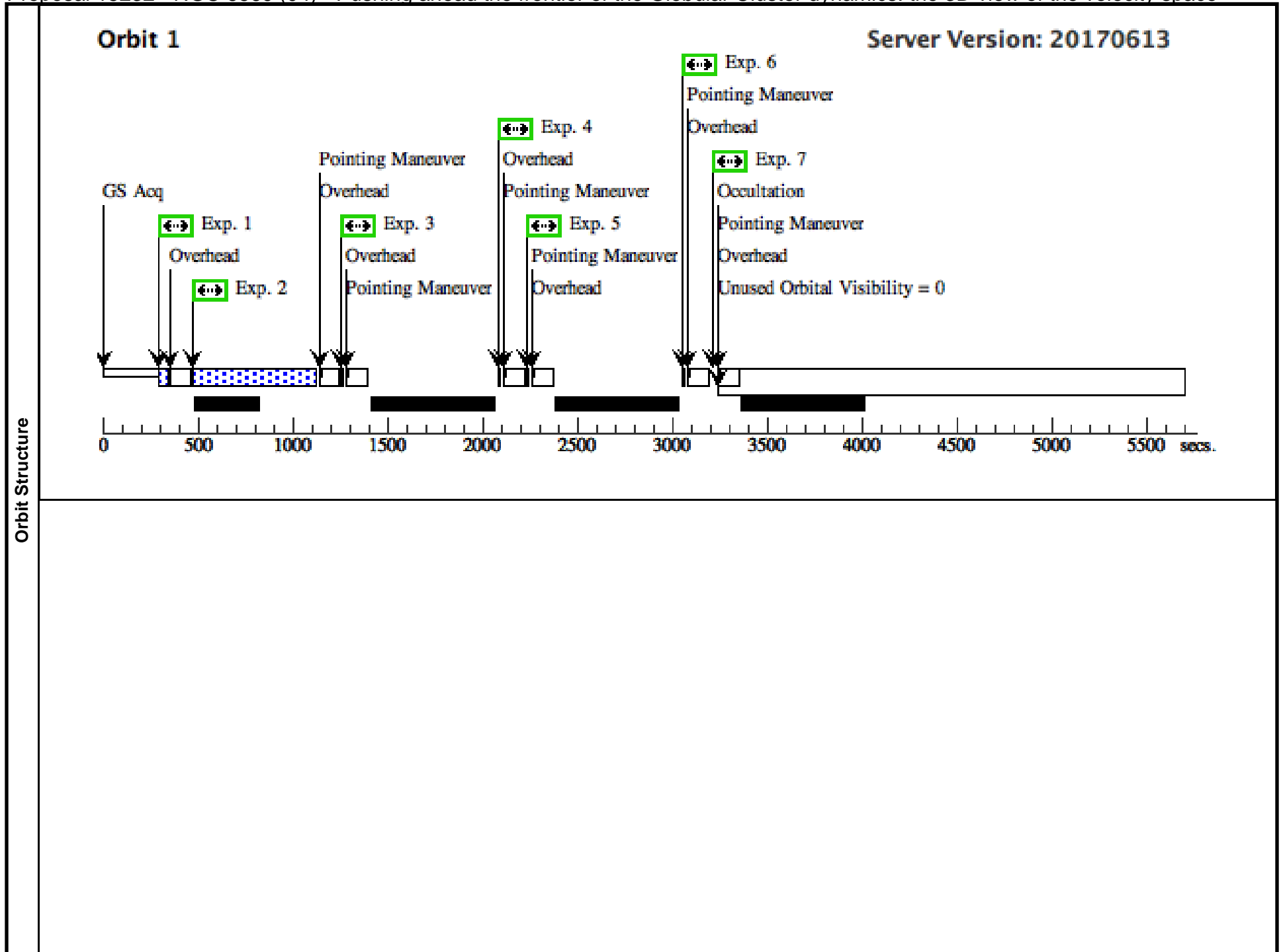


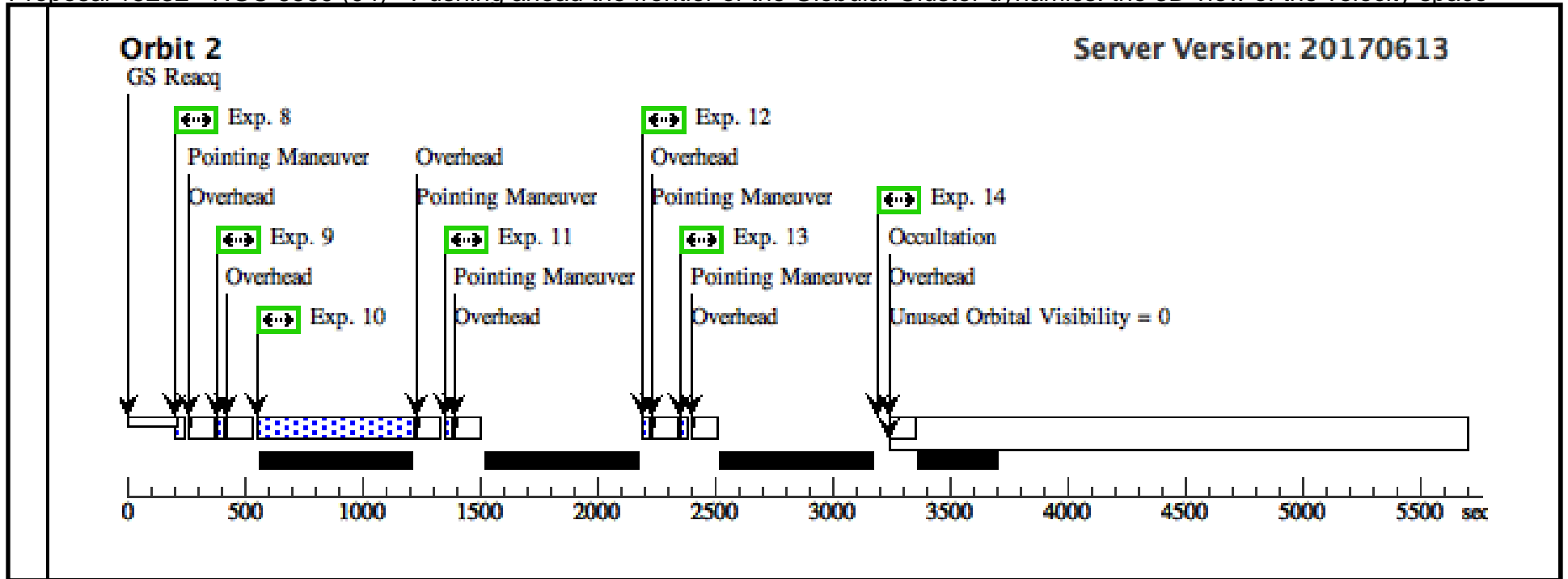


Proposal 15232 - NGC 6569 (04) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6569 (04), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 85D TO 105 D | | | | | | | | | |
|-----------|--|-------------|--|-------------------------|--------------------------|--------------------------|----------------------------|----------------------------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (4) | NGC6569 | RA: 18 13 38.8000 (273.4116667d) Dec: -31 49 36.80 (-31.82689d) Equinox: J2000 | | | V=17.50 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | 6569I1 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | | | 13 Secs (13 Secs) [==>] | [1] |
| | 2 | 6569LONGI | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F814W | | SAME POS AS 1 | | 652 Secs (652 Secs) [==>] | [1] |
| | 3 | 6569I2 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG -0.099,- 0.165 | | 13 Secs (13 Secs) [==>] | [1] |
| | 4 | 6569I3 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.059,- .095 | | 13 Secs (13 Secs) [==>] | [1] |
| | 5 | 6569I4 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.218,- .024 | | 13 Secs (13 Secs) [==>] | [1] |
| | 6 | 6569I5 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.158, 070 | | 13 Secs (13 Secs) [==>] | [1] |
| | 7 | 6569I6 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.099, 165 | | 13 Secs (13 Secs) [==>] | [1] |
| | 8 | 6569V1 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.059, 0.095 | | 30 Secs (30 Secs) [==>] | [2] |
| | 9 | 6569V2 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.218, .024 | | 30 Secs (30 Secs) [==>] | [2] |
| | 10 | 6569LONG V | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F555W | | SAME POS AS 9 | | 671 Secs (671 Secs) [==>] | [2] |
| | 11 | 6569V3 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,- 0.070 | | 30 Secs (30 Secs) [==>] | [2] |
| | 12 | 6569V4 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,- 0.110 | | 30 Secs (30 Secs) [==>] | [2] |
| | 13 | 6569V5 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.099, 0.052 | | 30 Secs (30 Secs) [==>] | [2] |
| 14 | 6569V6 | (4) NGC6569 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.040, .214 | | 30 Secs (30 Secs) [==>] | [2] | |

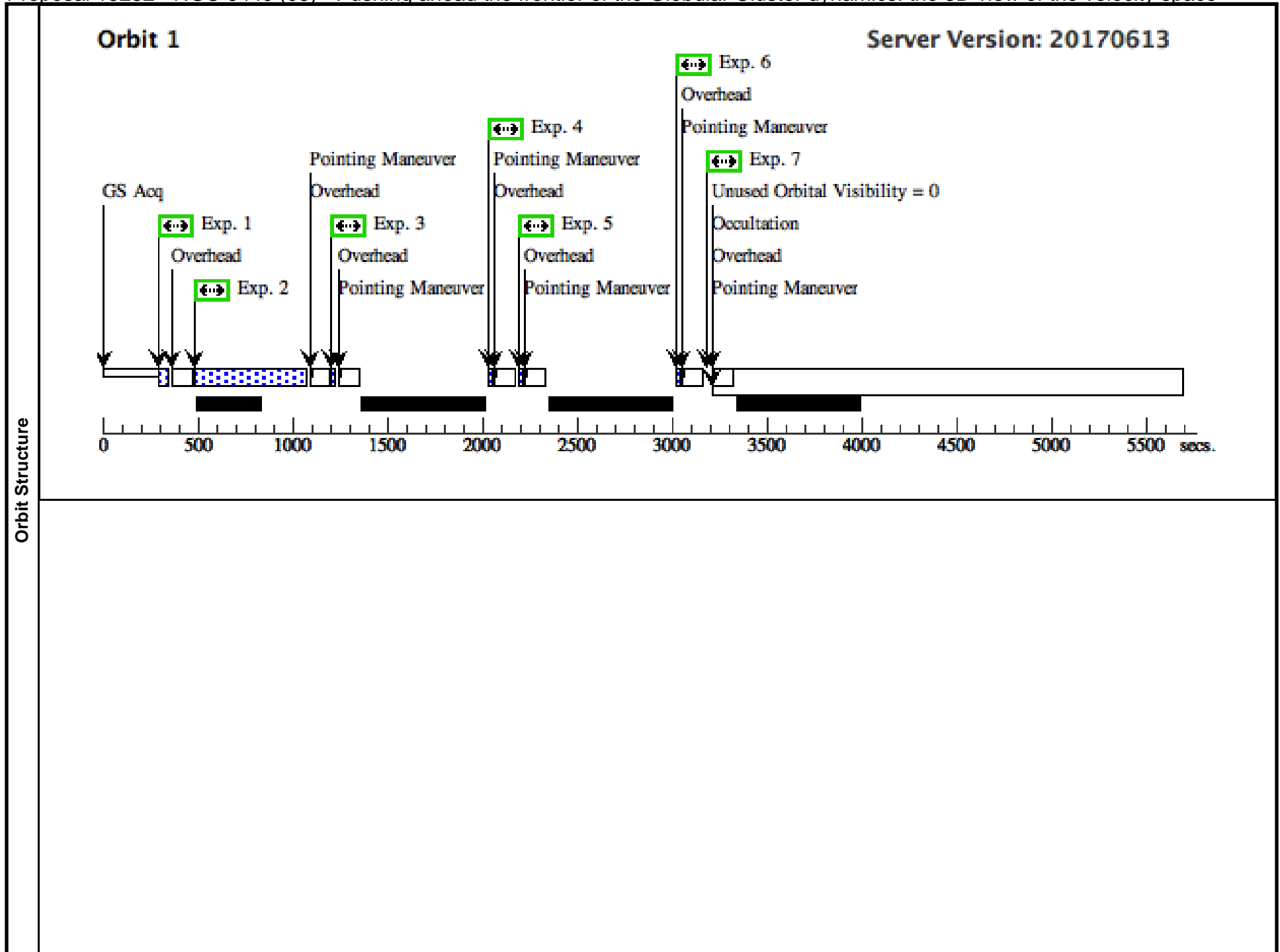


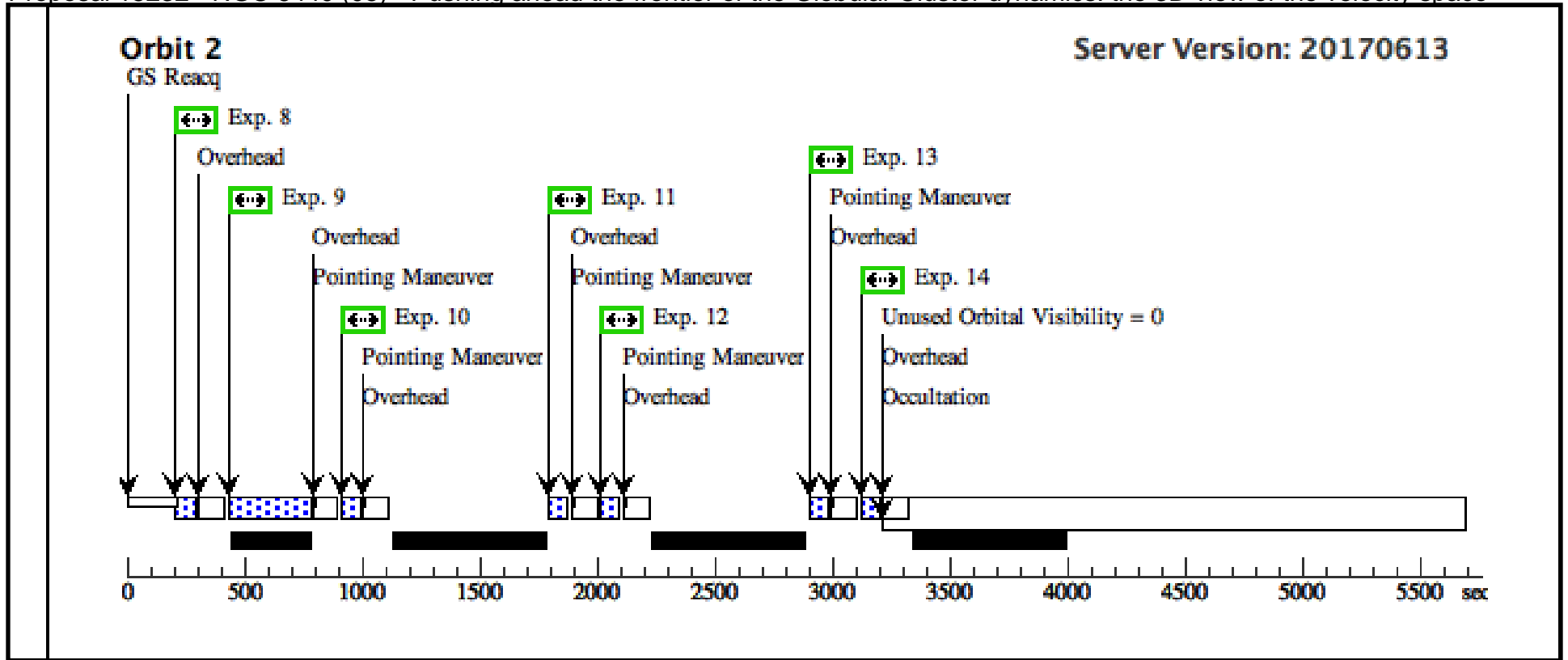


Proposal 15232 - NGC 6440 (05) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6440 (05), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 75D TO 90 D | | | | | | | | | | |
|-----------|---|------------|--|-------------------------|--------------------------|--------------|------------------------|--------|---------------------------------|-------|--|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | |
| | (5) | NGC6440 | RA: 17 48 52.8402 (267.2201675d) Dec: -20 21 37.63 (-20.36045d) Equinox: J2000 | | | V=18.70 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit | |
| | 1 | 6440I1 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | | | 21 Secs (21 Secs) [==>] | [1] | |
| | 2 | 6440LONGI | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F814W | | SAME POS AS 1 | | 591 Secs (591 Secs) [==>] | [1] | |
| | 3 | 6440I2 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG -0.099,-0.165 | | 21 Secs (21 Secs) [==>] | [1] | |
| | 4 | 6440I3 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.059,-0.095 | | 21 Secs (21 Secs) [==>] | [1] | |
| | 5 | 6440I4 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.218,-0.024 | | 21 Secs (21 Secs) [==>] | [1] | |
| | 6 | 6440I5 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.158,0.070 | | 21 Secs (21 Secs) [==>] | [1] | |
| | 7 | 6440I6 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12 | POS TARG 0.099,0.165 | | 21 Secs (21 Secs) [==>] | [1] | |
| | 8 | 6440V1 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.059,0.095 | | 79 Secs (79 Secs) [==>] | [2] | |
| | 9 | 6440LONG V | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=2.0 | SAME POS AS 8 | | 348 Secs (348 Secs) [==>] | [2] | |
| | 10 | 6440V2 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.218,0.024 | | 79 Secs (79 Secs) [==>] | [2] | |
| | 11 | 6440V3 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,-0.070 | | 79 Secs (79 Secs) [==>] | [2] | |
| | 12 | 6440V4 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.158,-0.110 | | 80 Secs (80 Secs) [==>] | [2] | |
| | 13 | 6440V5 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.099,0.052 | | 80 Secs (80 Secs) [==>] | [2] | |
| | 14 | 6440V6 | (5) NGC6440 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12 | POS TARG -0.040,0.214 | | 80 Secs (80 Secs) [==>] | [2] | |

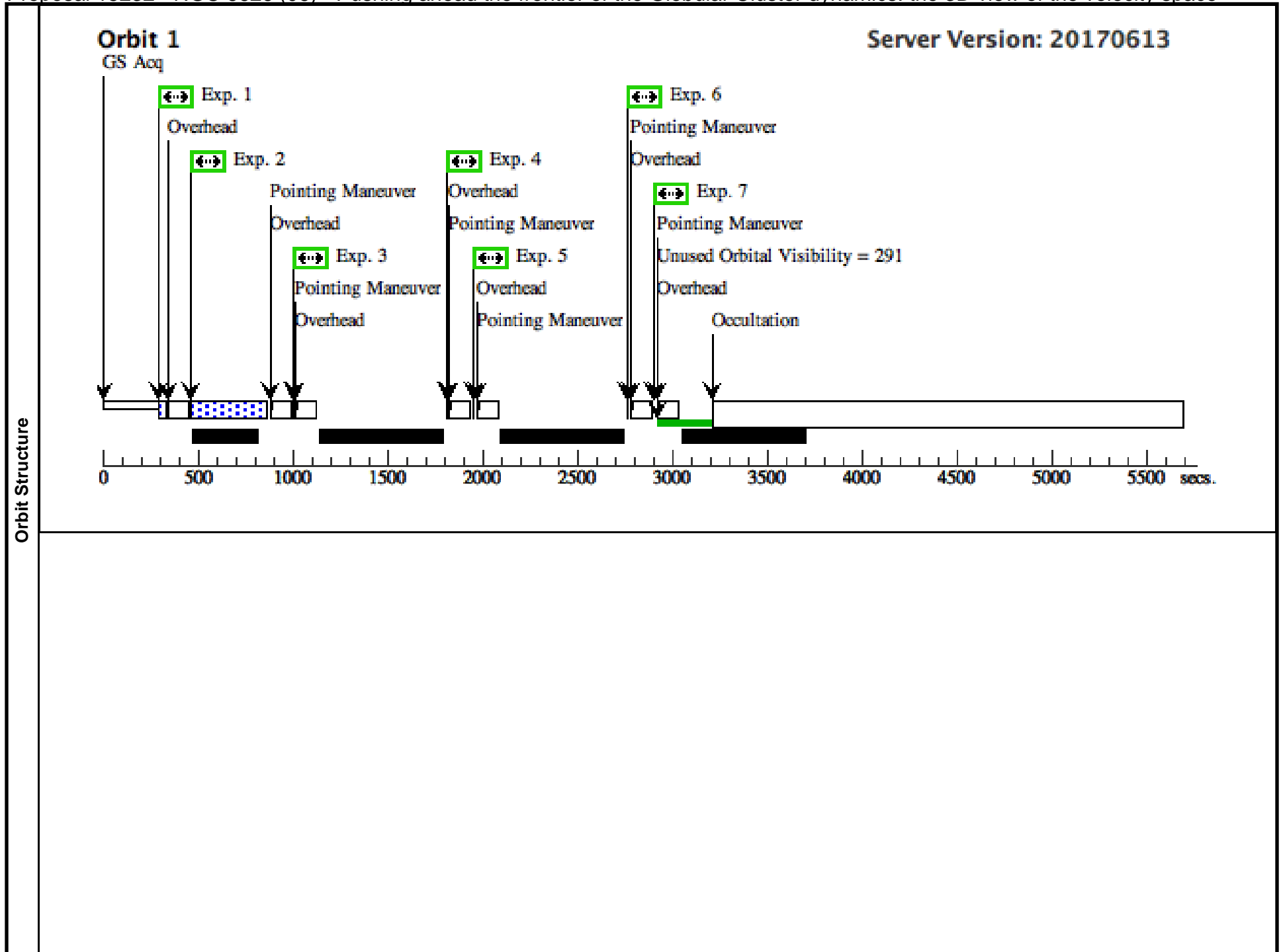


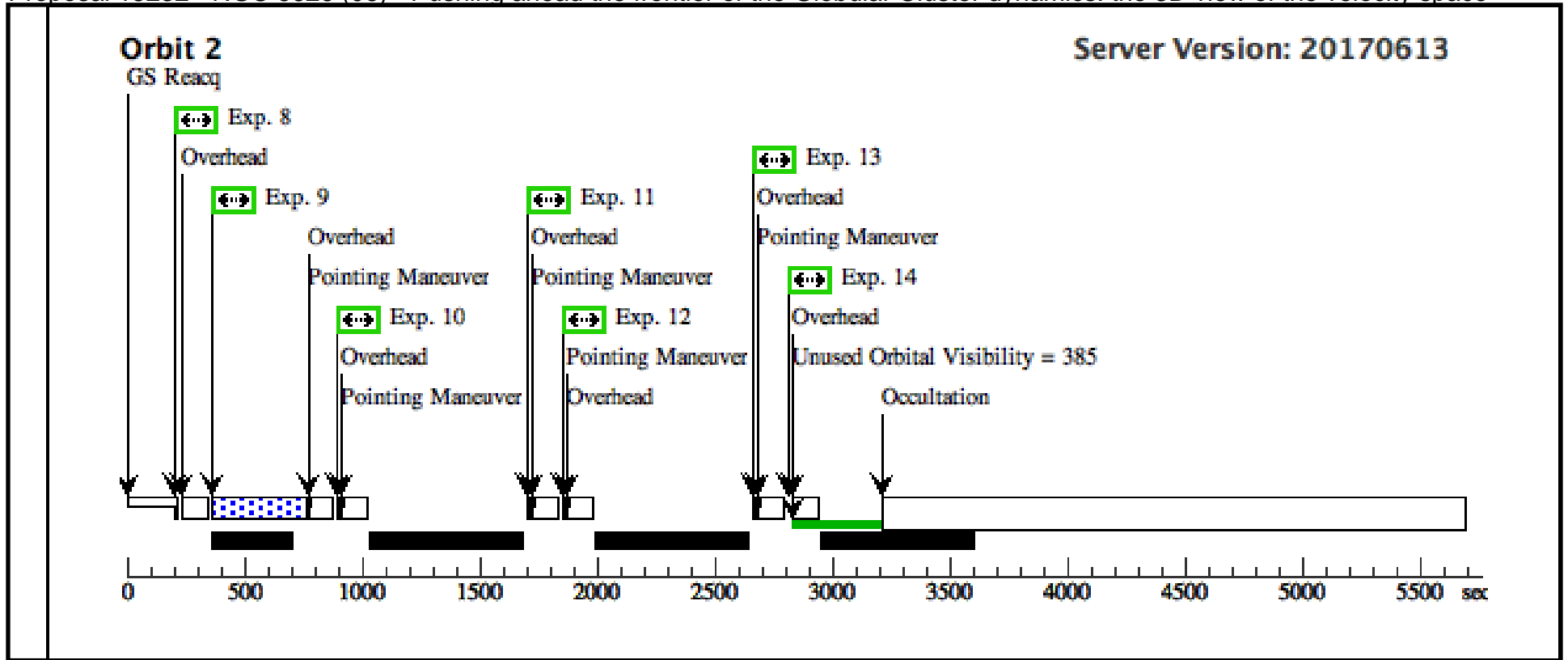


Proposal 15232 - NGC 6626 (06) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6626 (06), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 50D TO 75 D | | | | | | | | | |
|-----------|---|---------------|--|-------------------------|--------------------------|-----------------------|----------------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (6) | NGC6626 | RA: 18 24 32.7324 (276.1363850d) Dec: -24 52 13.07 (-24.87030d) Equinox: J2000 | | V=15.5 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | 6626I1 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | | | 2 Secs (2 Secs) [==>] | [1] |
| | 2 | 6626LONGI | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=3 | SAME POS AS 1 | | 400 Secs (400 Secs) [==>] | [1] |
| | 3 | 6626I2 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG -0.099,- 0.165 | | 2 Secs (2 Secs) [==>] | [1] |
| | 4 | 6626I3 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.059,- .095 | | 2 Secs (2 Secs) [==>] | [1] |
| | 5 | 6626I4 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.218,- .024 | | 2 Secs (2 Secs) [==>] | [1] |
| | 6 | 6626I5 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.158, 070 | | 2 Secs (2 Secs) [==>] | [1] |
| | 7 | 6626I6 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.099, 165 | | 2 Secs (2 Secs) [==>] | [1] |
| | 8 | 6626V1 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.059, 0.095 | | 5 Secs (5 Secs) [==>] | [2] |
| | 9 | 6626LONG V | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=1 | SAME POS AS 8 | | 400 Secs (400 Secs) [==>] | [2] |
| | 10 | 6626V2 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.218, .024 | | 5 Secs (5 Secs) [==>] | [2] |
| | 11 | 6626V3 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.158,- 0.070 | | 5 Secs (5 Secs) [==>] | [2] |
| | 12 | 6626V4 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.158,- 0.110 | | 5 Secs (5 Secs) [==>] | [2] |
| | 13 | 6626V5 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.099, 0.052 | | 5 Secs (5 Secs) [==>] | [2] |
| | 14 | 6626V6 | (6) NGC6626 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.040, .214 | | 5 Secs (5 Secs) [==>] | [2] |

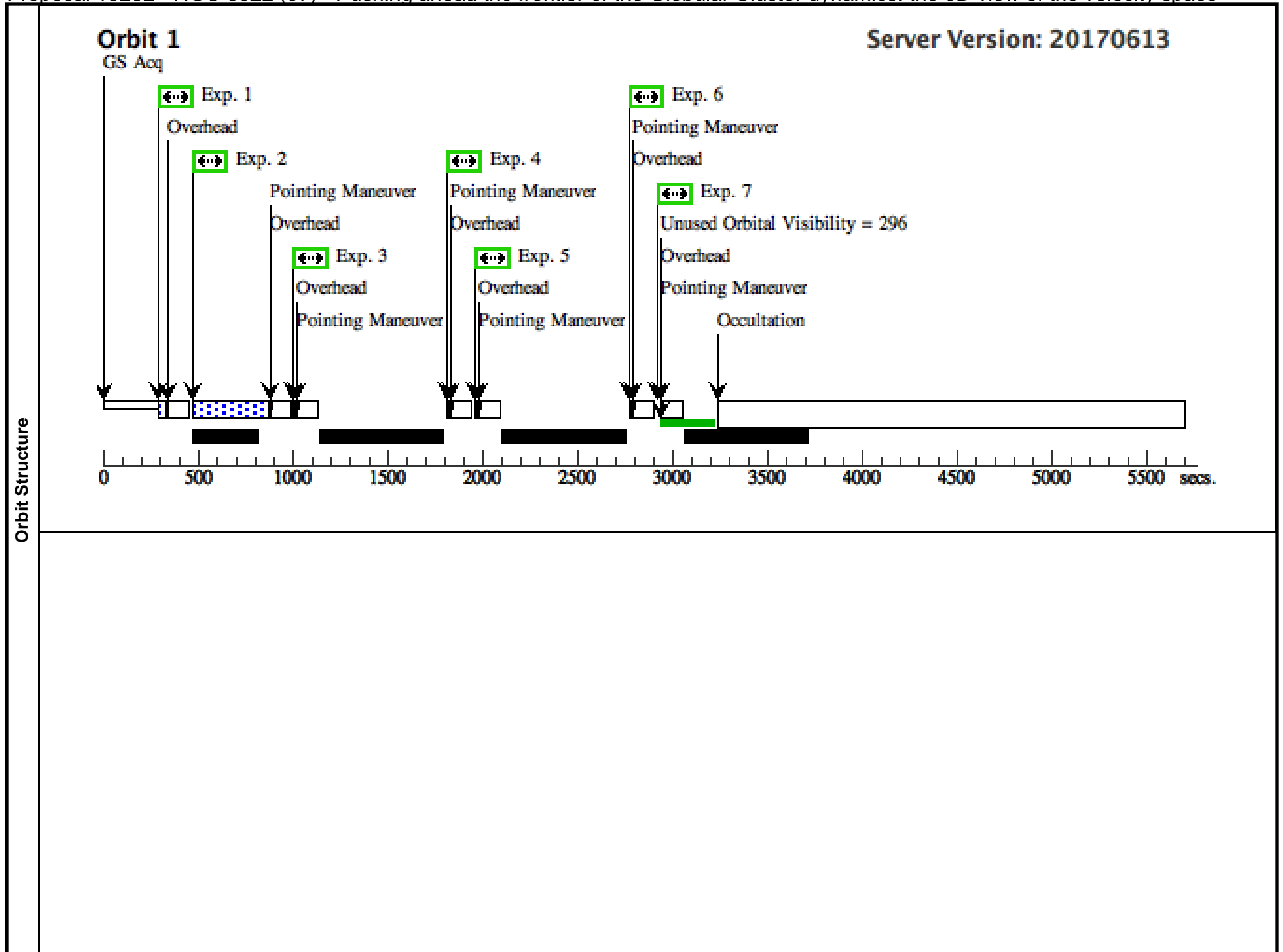


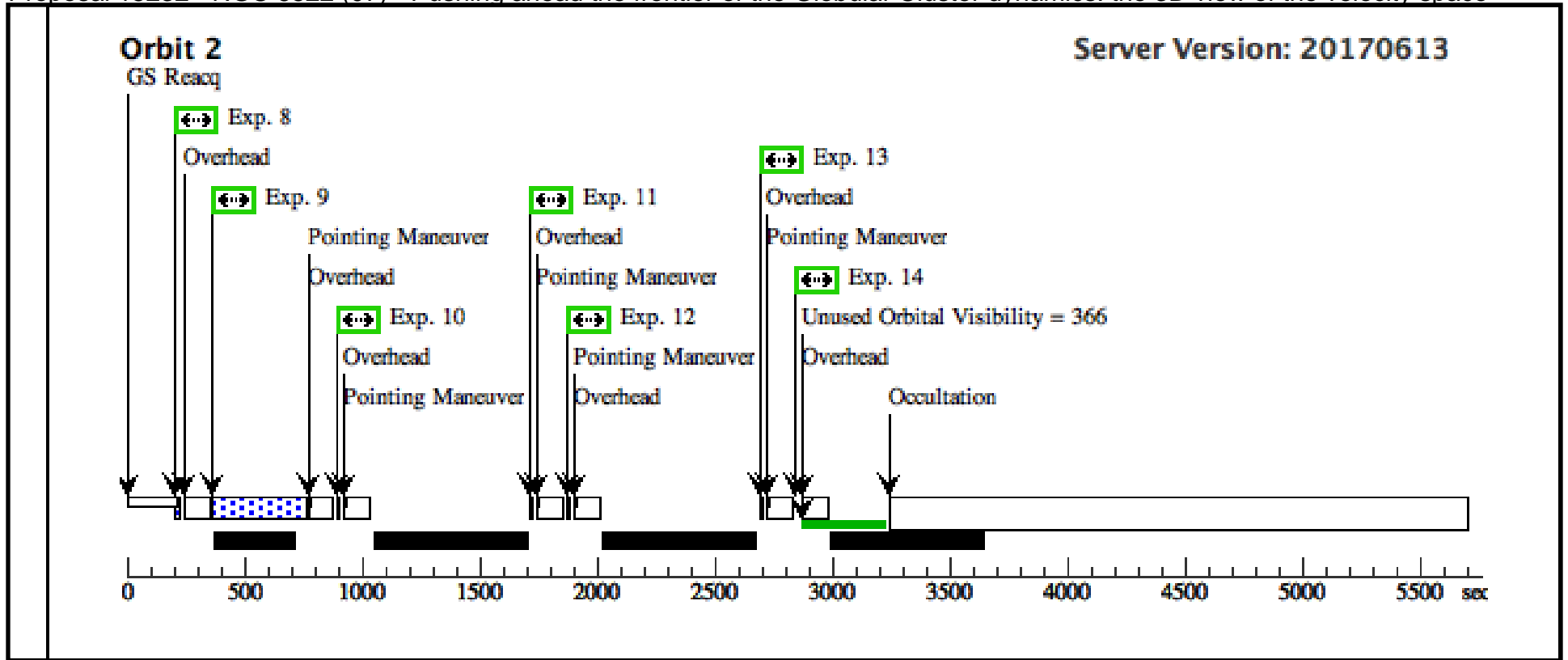


Proposal 15232 - NGC 6522 (07) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6522 (07), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none) | | | | | | | | | |
|-----------|---|---------------|---|-------------------------|--------------------------|-----------------------|----------------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (7) | NGC6522 | RA: 18 03 35.0200 (270.8959167d) Dec: -30 02 5.00 (-30.03472d) Equinox: J2000 | | V=16.50 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | 6522I1 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | | | 5 Secs (5 Secs) [==>] | [1] |
| | 2 | 6522LONGI | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=3 | SAME POS AS 1 | | 400 Secs (400 Secs) [==>] | [1] |
| | 3 | 6522I2 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG -0.099,- 0.165 | | 5 Secs (5 Secs) [==>] | [1] |
| | 4 | 6522I3 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.059,- .095 | | 5 Secs (5 Secs) [==>] | [1] |
| | 5 | 6522I4 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.218,- .024 | | 5 Secs (5 Secs) [==>] | [1] |
| | 6 | 6522I5 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.158, 070 | | 5 Secs (5 Secs) [==>] | [1] |
| | 7 | 6522I6 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.099, 165 | | 5 Secs (5 Secs) [==>] | [1] |
| | 8 | 6522V1 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.059, 0.095 | | 12 Secs (12 Secs) [==>] | [2] |
| | 9 | 6522LONG V | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=1 | SAME POS AS 8 | | 400 Secs (400 Secs) [==>] | [2] |
| | 10 | 6522V2 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.218, 0.024 | | 12 Secs (12 Secs) [==>] | [2] |
| | 11 | 6522V3 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.158,- 0.070 | | 12 Secs (12 Secs) [==>] | [2] |
| | 12 | 6522V4 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.158,- 0.110 | | 12 Secs (12 Secs) [==>] | [2] |
| | 13 | 6522V5 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.099, 0.052 | | 12 Secs (12 Secs) [==>] | [2] |
| | 14 | 6522V6 | (7) NGC6522 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.040, 0.214 | | 12 Secs (12 Secs) [==>] | [2] |





Proposal 15232 - NGC 6553 (08) - Pushing ahead the frontier of the Globular Cluster dynamics: the 3D view of the velocity space

Mon Sep 18 20:08:40 GMT 2017

| Visit | Proposal 15232, NGC 6553 (08), implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none) | | | | | | | | | |
|-----------|---|---------------|--|-------------------------|--------------------------|-----------------------|----------------------------|--------|---------------------------------|-------|
| | Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | |
| | (8) | NGC6553 | RA: 18 09 17.6000 (272.3233333d) Dec: -25 54 31.30 (-25.90869d) Equinox: J2000 | | V=16.60 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
| | 1 | 6553I1 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | | | 5 Secs (5 Secs) [==>] | [1] |
| | 2 | 6553LONGI | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=3 | SAME POS AS 1 | | 400 Secs (400 Secs) [==>] | [1] |
| | 3 | 6553I2 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG -0.099,- 0.165 | | 5 Secs (5 Secs) [==>] | [1] |
| | 4 | 6553I3 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.059,- .095 | | 5 Secs (5 Secs) [==>] | [1] |
| | 5 | 6553I4 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.218,- .024 | | 5 Secs (5 Secs) [==>] | [1] |
| | 6 | 6553I5 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.158, 070 | | 5 Secs (5 Secs) [==>] | [1] |
| | 7 | 6553I6 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F814W | FLASH=12; BLADE=A | POS TARG 0.099, 165 | | 5 Secs (5 Secs) [==>] | [1] |
| | 8 | 6553V1 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.059, 0.095 | | 13 Secs (13 Secs) [==>] | [2] |
| | 9 | 6553LONG V | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=1 | SAME POS AS 8 | | 400 Secs (400 Secs) [==>] | [2] |
| | 10 | 6553V2 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.218, 0.024 | | 13 Secs (13 Secs) [==>] | [2] |
| | 11 | 6553V3 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.158,- 0.070 | | 13 Secs (13 Secs) [==>] | [2] |
| | 12 | 6553V4 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.158,- 0.110 | | 13 Secs (13 Secs) [==>] | [2] |
| | 13 | 6553V5 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.099, 0.052 | | 13 Secs (13 Secs) [==>] | [2] |
| | 14 | 6553V6 | (8) NGC6553 | WFC3/UVIS, ACCUM, UVIS1 | F555W | FLASH=12; BLADE=A | POS TARG -0.040, 0.214 | | 13 Secs (13 Secs) [==>] | [2] |

