



11694 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Cycle: 17, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

| <i>Name</i> | <i>Institution</i> | <i>E-Mail</i> |
|--------------------------------------|--|--------------------------------|
| Mr. David R. Law (PI) | California Institute of Technology | drlaw@astro.caltech.edu |
| Prof. Charles C. Steidel (CoI) | California Institute of Technology | ccs@astro.caltech.edu |
| Prof. Alice E. Shapley (CoI) | University of California - Los Angeles | aes@astro.ucla.edu |
| Dr. Dawn K. Erb (CoI) | Harvard University | derb@cfa.harvard.edu |
| Prof. Max Pettini (CoI) (ESA Member) | University of Cambridge | pettini@ast.cam.ac.uk |
| Dr. Naveen Reddy (CoI) | National Optical Astronomy Observatories, AURA | nar@noao.edu |

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) Q0100-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:07.0 | yes |
| 02 | (2) Q0142-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:09.0 | yes |
| 03 | (3) Q0449-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:12.0 | yes |
| 04 | (4) Q1009-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:14.0 | yes |
| 05 | (5) Q1217-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:16.0 | yes |
| 06 | (6) Q1549-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:17.0 | yes |
| 07 | (7) Q1623-FIELD1 | WFC3/IR | 3 | 14-Sep-2010 14:28:19.0 | yes |
| 08 | (8) Q1623-FIELD2 | WFC3/IR | 3 | 14-Sep-2010 14:28:21.0 | 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> |
|--------------|------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 09 | (9) Q1623-FIELD3 | WFC3/IR | 3 | 14-Sep-2010 14:28:22.0 | yes |
| 10 | (10) Q1623-FIELD4 | WFC3/IR | 3 | 14-Sep-2010 14:28:24.0 | yes |
| 11 | (11) Q1700-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:26.0 | yes |
| 12 | (12) Q2206-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:28.0 | yes |
| 13 | (13) Q2343-FIELD1 | WFC3/IR | 3 | 14-Sep-2010 14:28:29.0 | yes |
| 14 | (14) Q2343-FIELD2 | WFC3/IR | 3 | 14-Sep-2010 14:28:32.0 | yes |
| 59 | (9) Q1623-FIELD3 | WFC3/IR | 3 | 14-Sep-2010 14:28:33.0 | yes |
| 53 | (3) Q0449-FIELD | WFC3/IR | 3 | 14-Sep-2010 14:28:35.0 | yes |

48 Total Orbits Used

ABSTRACT

With the commissioning of the high-throughput large-area camera WFC3/IR, it is possible for the first time to undertake an efficient survey of the rest-frame optical morphologies of galaxies at the peak epoch of star formation in the universe. We therefore propose deep WFC3/IR imaging of over 320 spectroscopically confirmed galaxies between redshift $1.6 < z < 3.4$ in well-studied fields which lie along the line of sight to bright background QSOs. The spectra of these bright QSOs probe the IGM in the vicinity of each of the foreground galaxies along the line of sight, providing detailed information on the physical state of the gas at large galactocentric radii. In combination with our densely sampled UV/IR spectroscopy, stellar population models, and kinematic data in these fields, WFC3/IR imaging data will permit us to construct a comprehensive picture of the structure, dynamics, and star formation properties of a large population of galaxies in the early universe and their effect upon their cosmological environment.

OBSERVING DESCRIPTION

In order to best probe the rest-frame optical emission from galaxies at redshift $z \sim 2$ we have chosen the longest wavelength broadband filter available with WFC3 (F160W). Given the importance of high resolution to our project, we intend to maximize the effective angular resolution by obtaining our observations in a dithered sequence with sub-integer pixel offsets which may be drizzled together to both improve the effective angular resolution and help to eliminate cosmic rays and other artifacts from the data. We have generalized the WFC3-IR-DITHER-BOX-MIN pattern to a larger number of dither positions which best fills our available orbital time using the SPIRAL pattern. This dither pattern mimics the sub-pixel

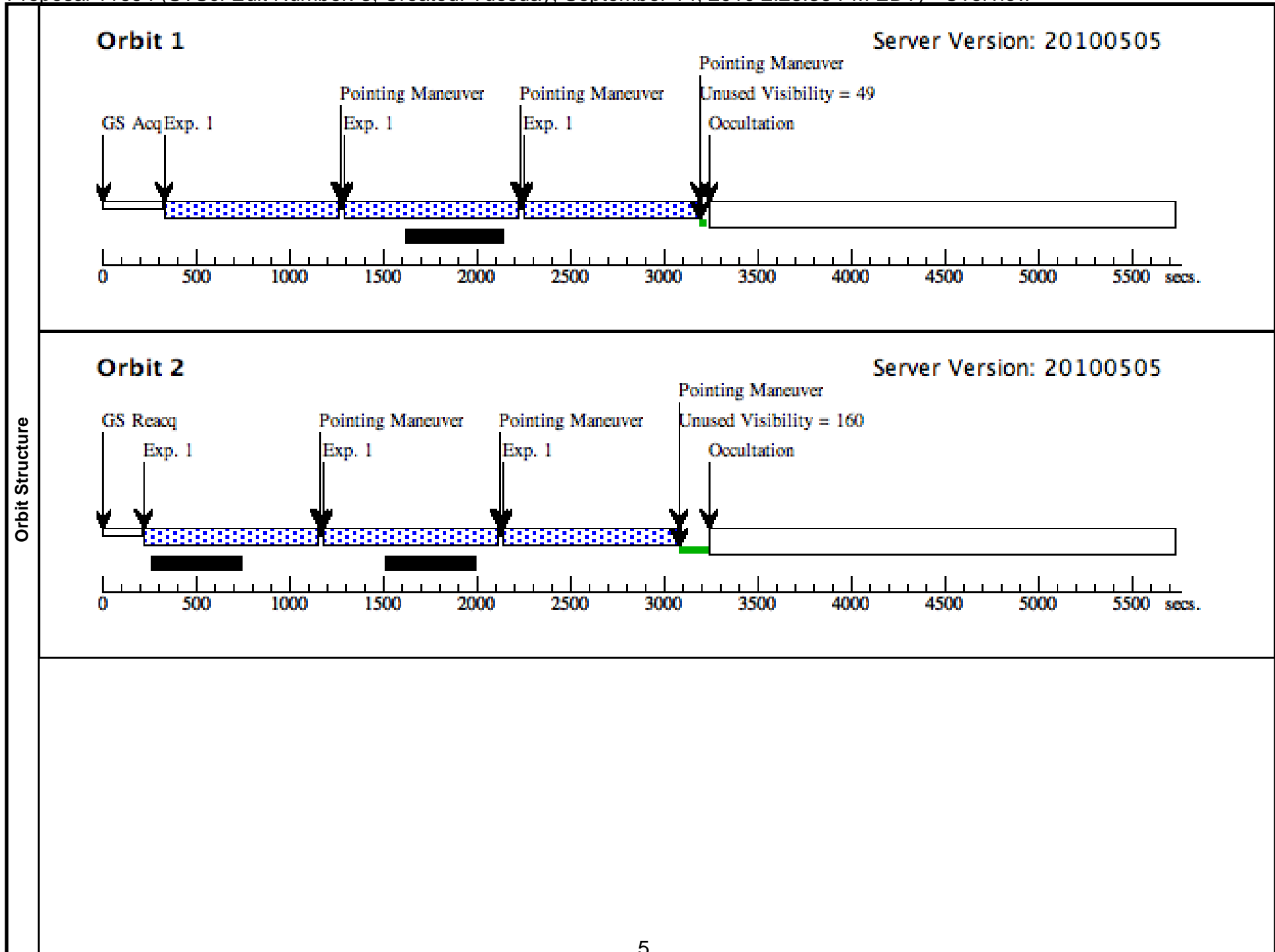
sampling of the BOX-MIN pattern.

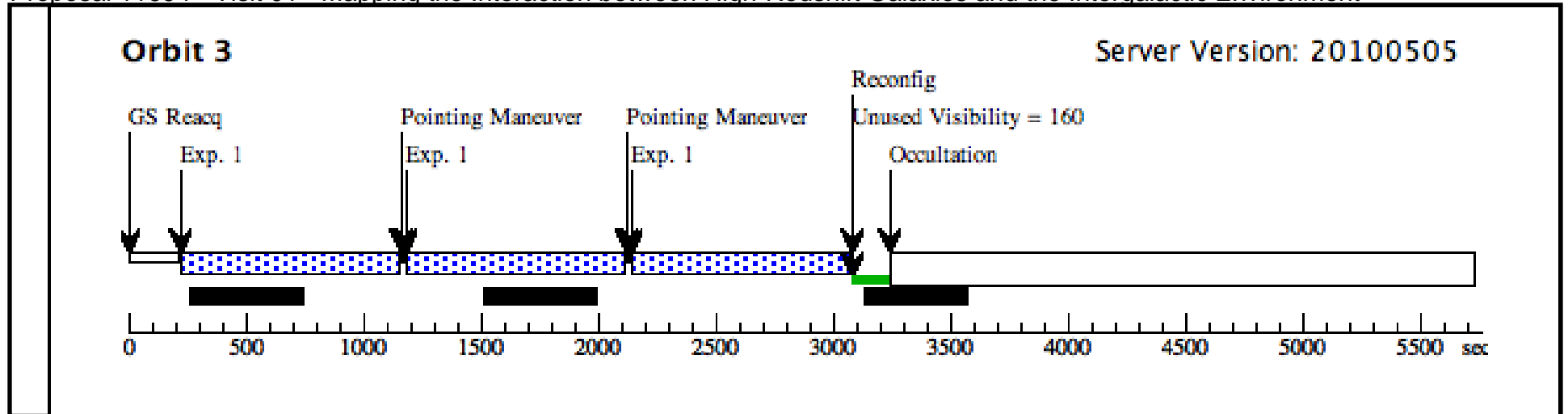
Our target fields have visibilities of 54-59 minutes per orbit, with 3 orbits per target field. Since our targets are faint galaxies, we intend to use the pseudo-fowler sampling algorithm. Specifically, the MIF900 sampling will permit us to obtain 3 exposures per orbit for a total of 9 exposures (8100 seconds) per target field. Each of these exposures corresponds to a unique dither position which fully samples a pixel uniformly with spacings of 0.33 in each coordinate.

We require no special scheduling or orientation constraints.

Proposal 11694 (STScI Edit Number: 3, Created: Tuesday, September 14, 2010 2:28:36 PM EDT) - Overview

| | | | | | | | | | | |
|----------------------|--|---|---|---------------------------------|----------------------|-----------------------------------|-----------------------------|-------------------------|--------------------------------|--------------|
| Visit | Proposal 11694, Visit 01, scheduling Tue Sep 14 18:28:36 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| (1) | | Pattern Type=SPIRAL Purpose=DITHER Number Of Points=9 Point Spacing=0.408 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=5.665 Angle Between Sides= Center Pattern=true | | | | | (1) | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (1) | Q0100-FIELD | RA: 01 03 10.5000 (15.7937500d) Dec: +13 16 29.90 (13.27497d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (1) Q0100-FIELD | | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | GS ACQ SCENARI O BASE1B3 | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] | |
| | | | | | | | | | [=>(Pattern 2)] | [1] |
| | | | | | | | | | [=>(Pattern 3)] | |
| | | | | | | | | [=>(Pattern 4)] | | |
| | | | | | | | | [=>(Pattern 5)] | [2] | |
| | | | | | | | | [=>(Pattern 6)] | | |
| | | | | | | | | [=>(Pattern 7)] | | |
| | | | | | | | | [=>(Pattern 8)] | [3] | |
| | | | | | | | | [=>(Pattern 9)] | | |

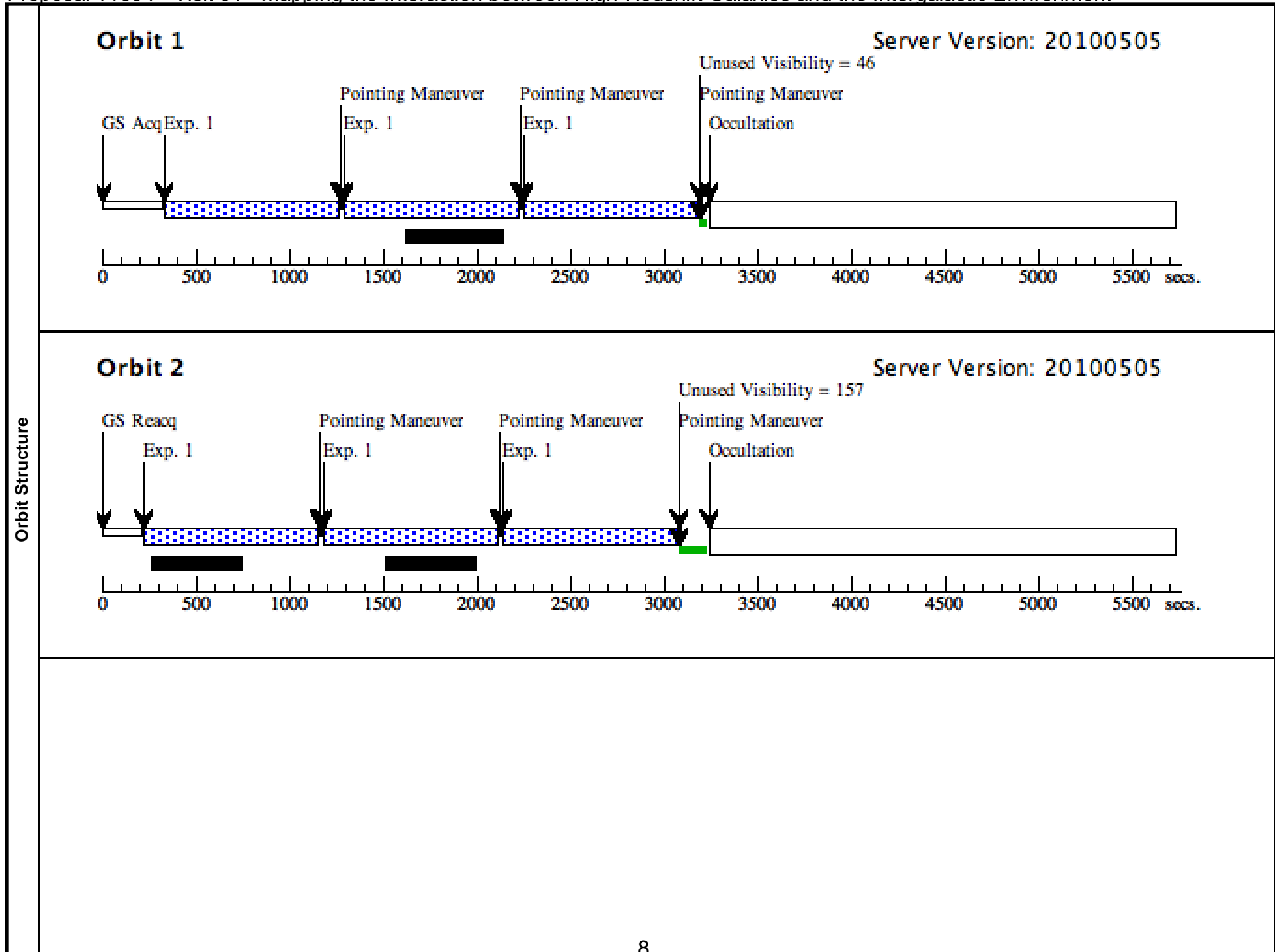


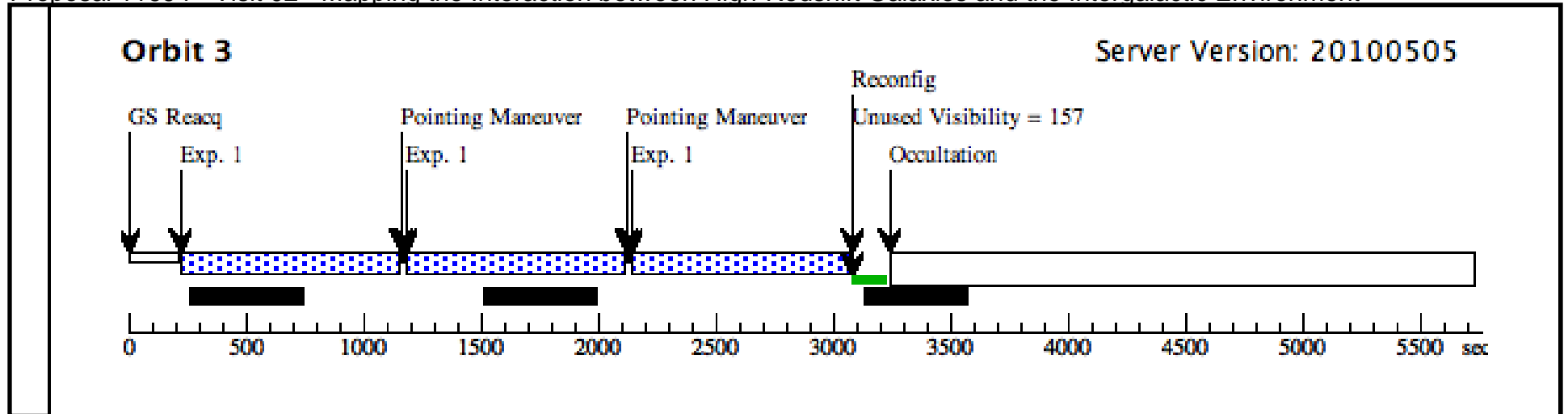


Proposal 11694 - Visit 01 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:36 GMT 2010

| Visit | Proposal 11694, Visit 02, scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|--|---------------------|--|---------------------------|---------------|-----------------------------------|-----------------------|-------------------------|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (2) | Q0142-FIELD | RA: 01 45 16.7000 (26.3195833d) Dec: -09 45 11.70 (-9.75325d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (2) Q0142-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] |
| | | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] |
| | | | | | | | | | | |

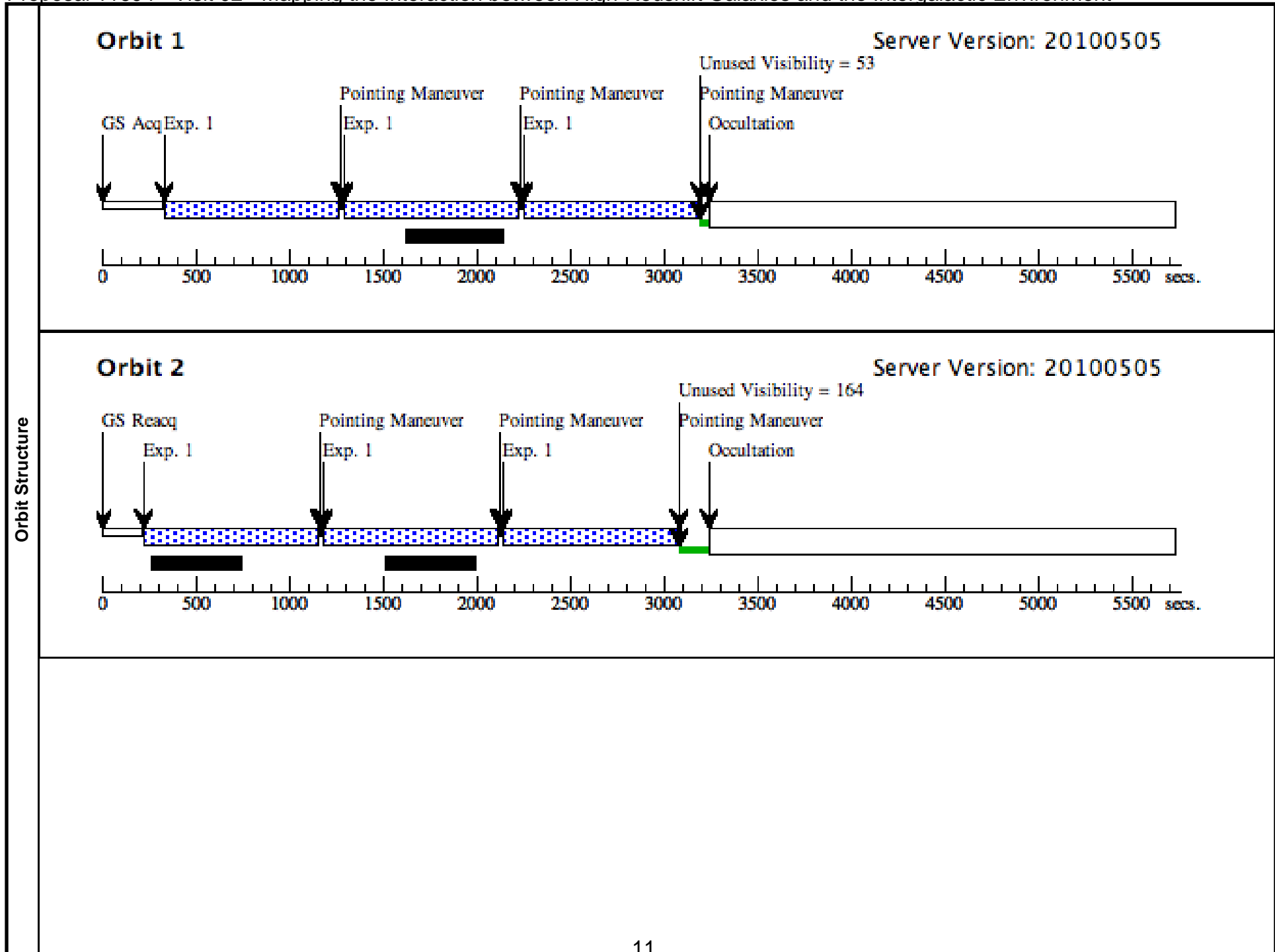


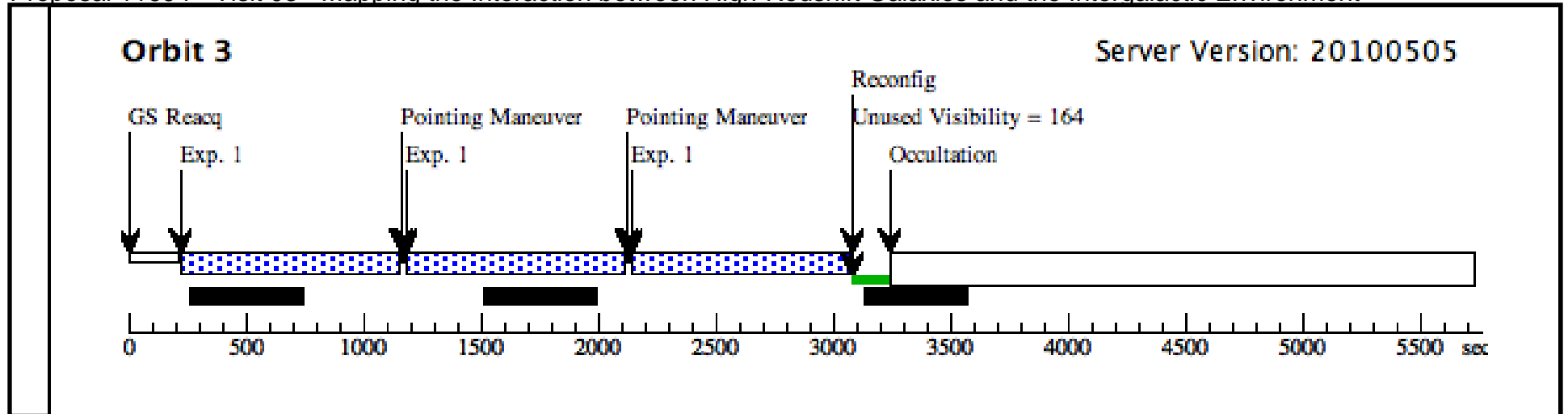


Proposal 11694 - Visit 02 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:36 GMT 2010

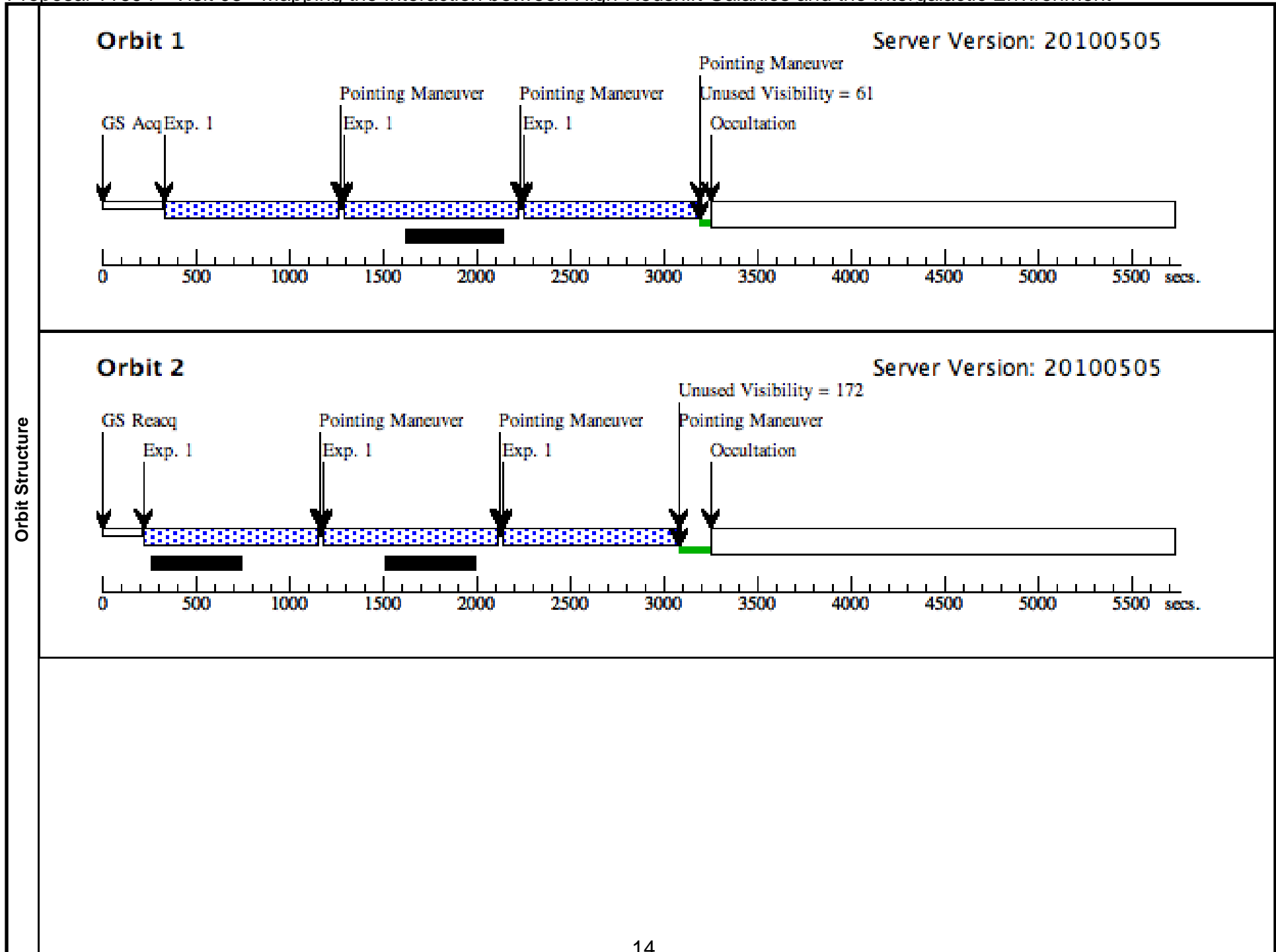
| Visit | Proposal 11694, Visit 03, failed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|--|---------------------|---|---------------------------|---------------|-----------------------------------|-----------------------|---|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (3) | Q0449-FIELD | RA: 04 52 14.8000 (73.0616667d) Dec: -16 40 23.50 (-16.67319d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (3) Q0449-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] | |
| | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] | |

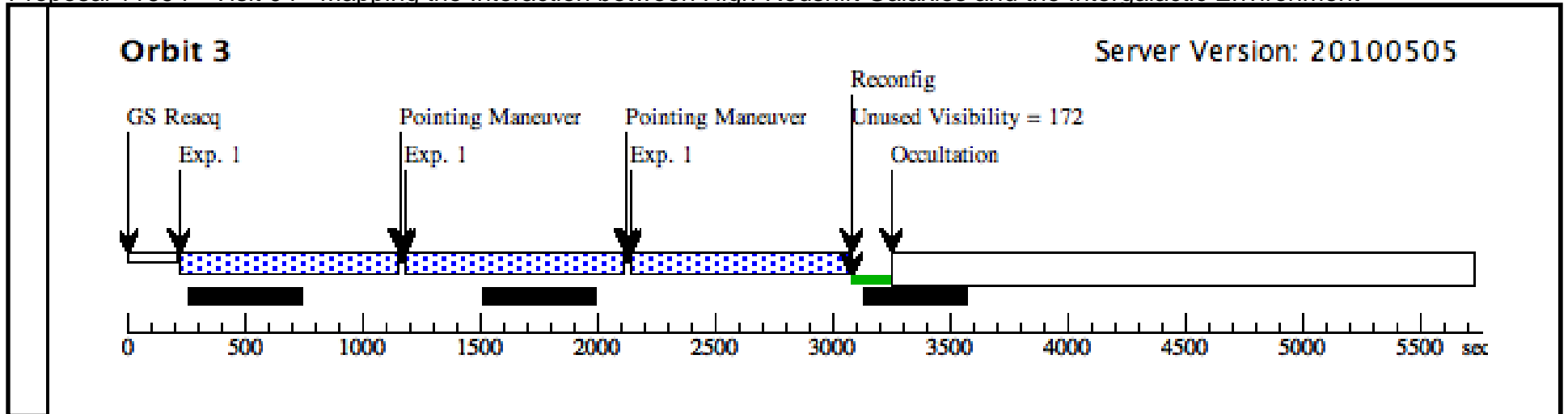




Proposal 11694 - Visit 03 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

| | | | | | | | | | | |
|----------------------|---|---|---|---------------------------------|-----------------------------------|--------------------------|-----------------------|-------------------------|---|--------------|
| Visit | Proposal 11694, Visit 04, completed Tue Sep 14 18:28:36 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| (1) | | Pattern Type=SPIRAL Purpose=DITHER Number Of Points=9 Point Spacing=0.408 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=5.665 Angle Between Sides= Center Pattern=true | | | | | (1) | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (4) | Q1009-FIELD | RA: 10 11 55.7000 (152.9820833d) Dec: +29 41 45.50 (29.69597d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (4) Q1009-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] |
| | | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] |

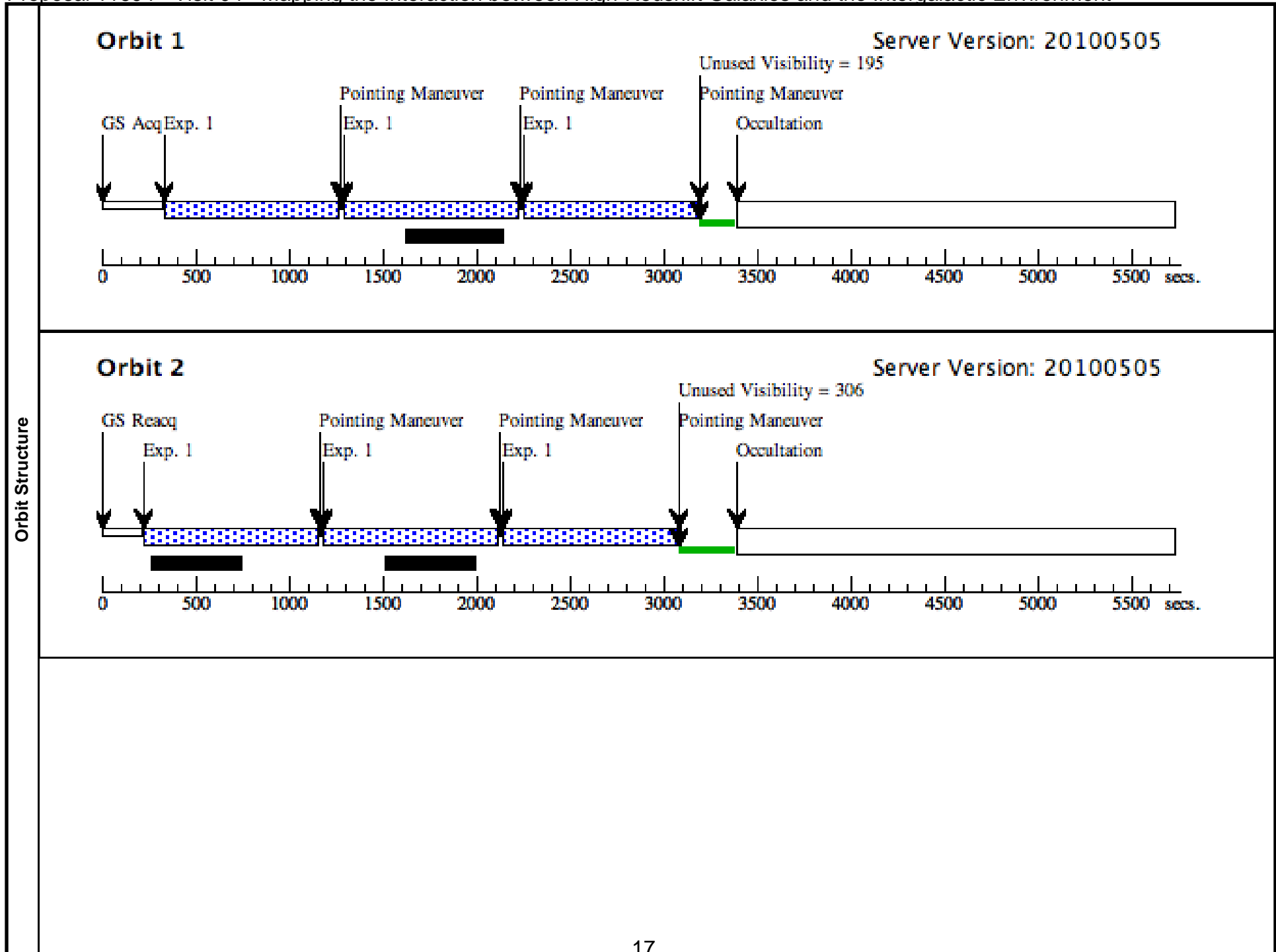


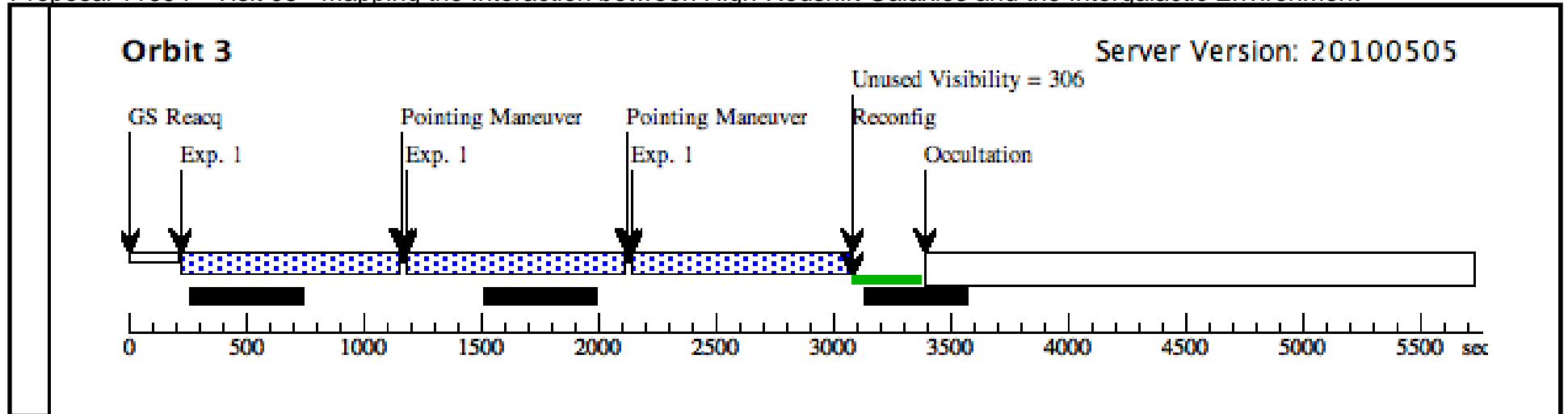


Proposal 11694 - Visit 04 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:37 GMT 2010

| Visit | Proposal 11694, Visit 05, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|---|---------------------|---|---------------------------|---------------|-----------------------------------|-----------------------|-------------------------|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (5) | Q1217-FIELD | RA: 12 19 30.8000 (184.8783333d) Dec: +49 40 52.10 (49.68114d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (5) Q1217-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] |
| | | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] |
| | | | | | | | | | | |

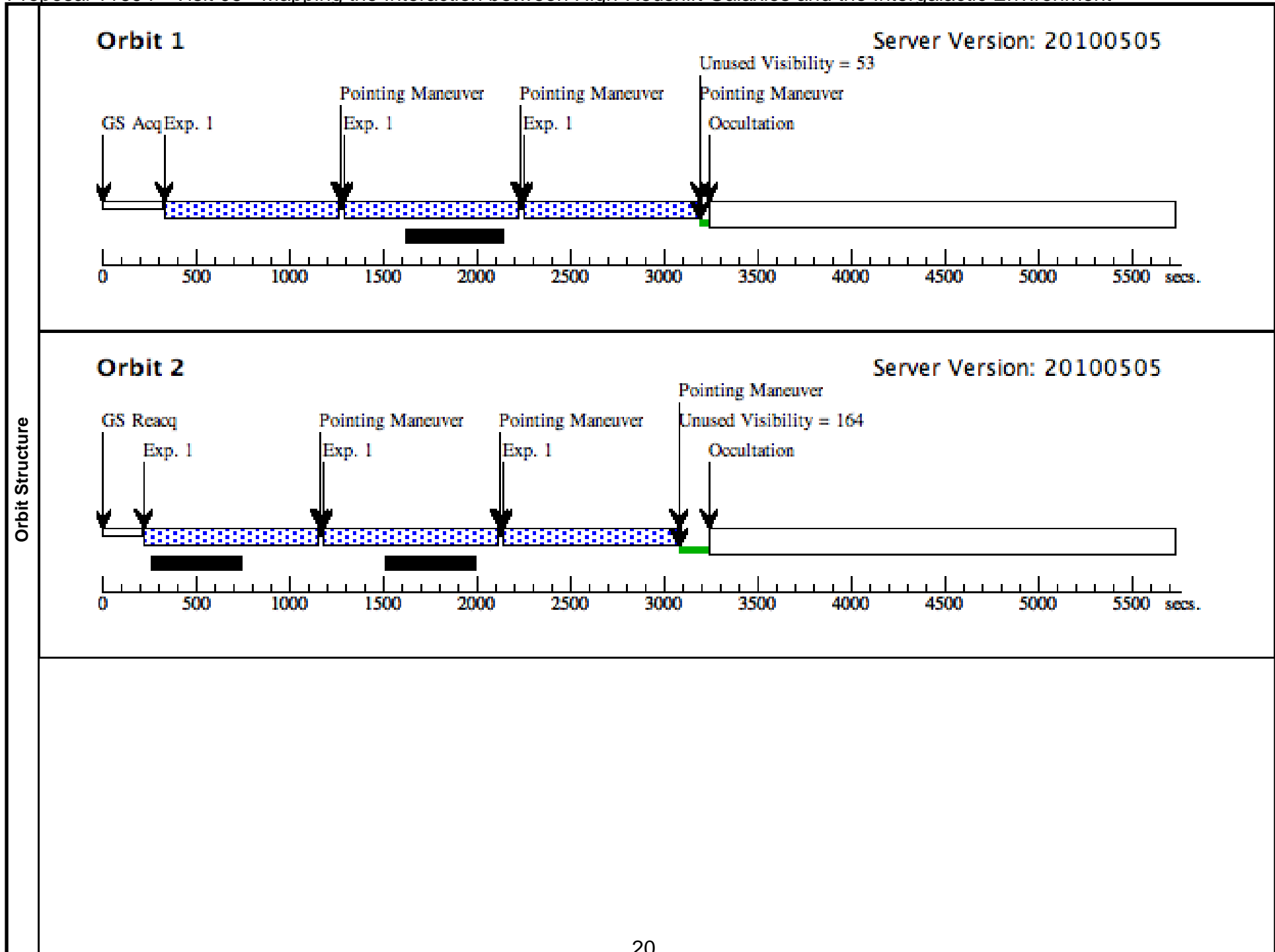


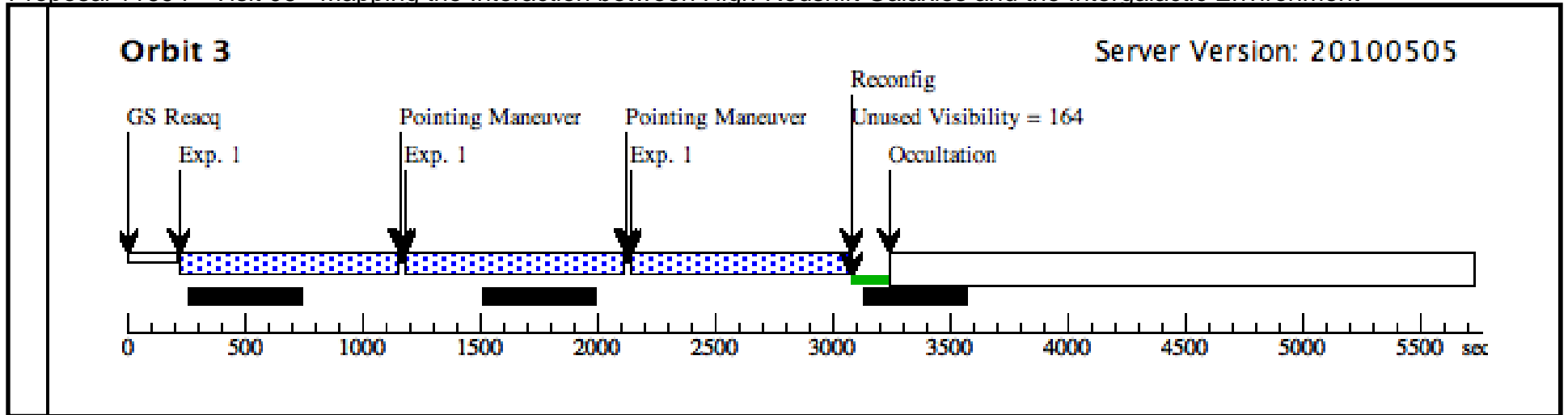


Proposal 11694 - Visit 05 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:37 GMT 2010

| Visit | Proposal 11694, Visit 06, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|---|---------------------|--|---------------------------|---------------|-----------------------------------|-----------------------|---|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (6) | Q1549-FIELD | RA: 15 51 52.5000 (237.9687500d) Dec: +19 11 4.10 (19.18447d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (6) Q1549-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] | |
| | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] | |

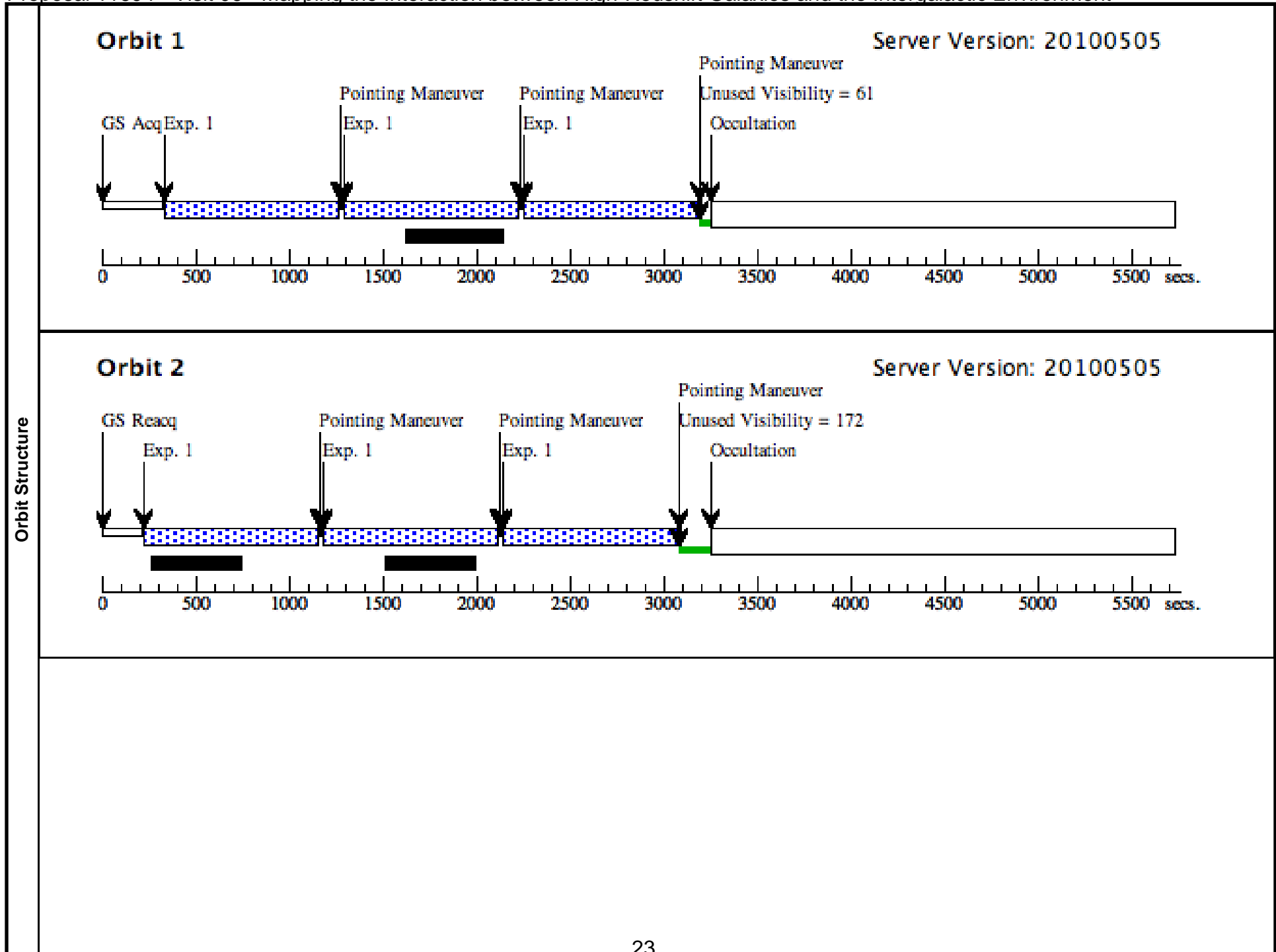


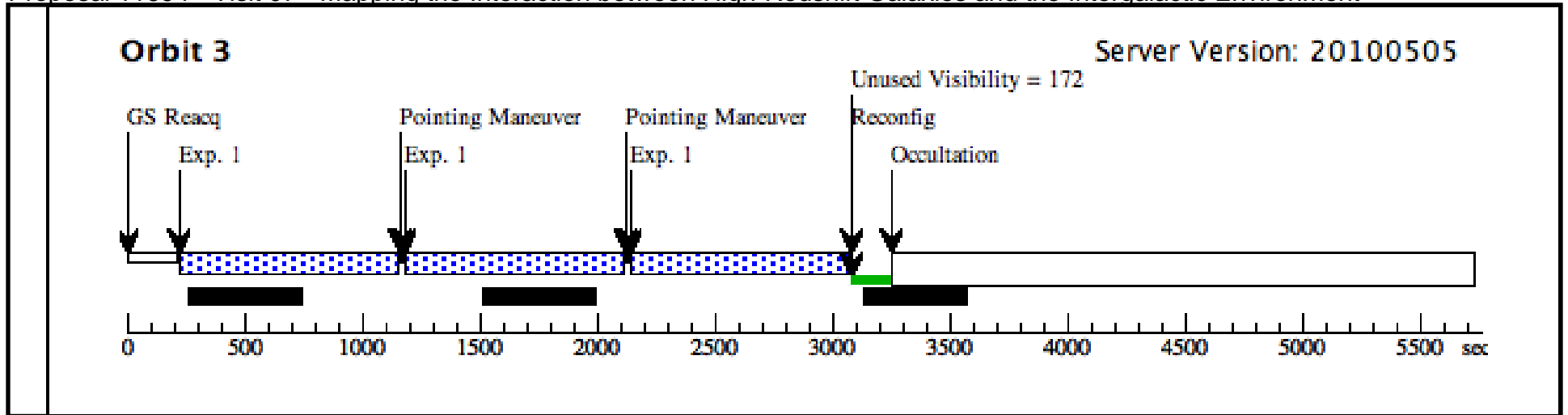


Proposal 11694 - Visit 06 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:37 GMT 2010

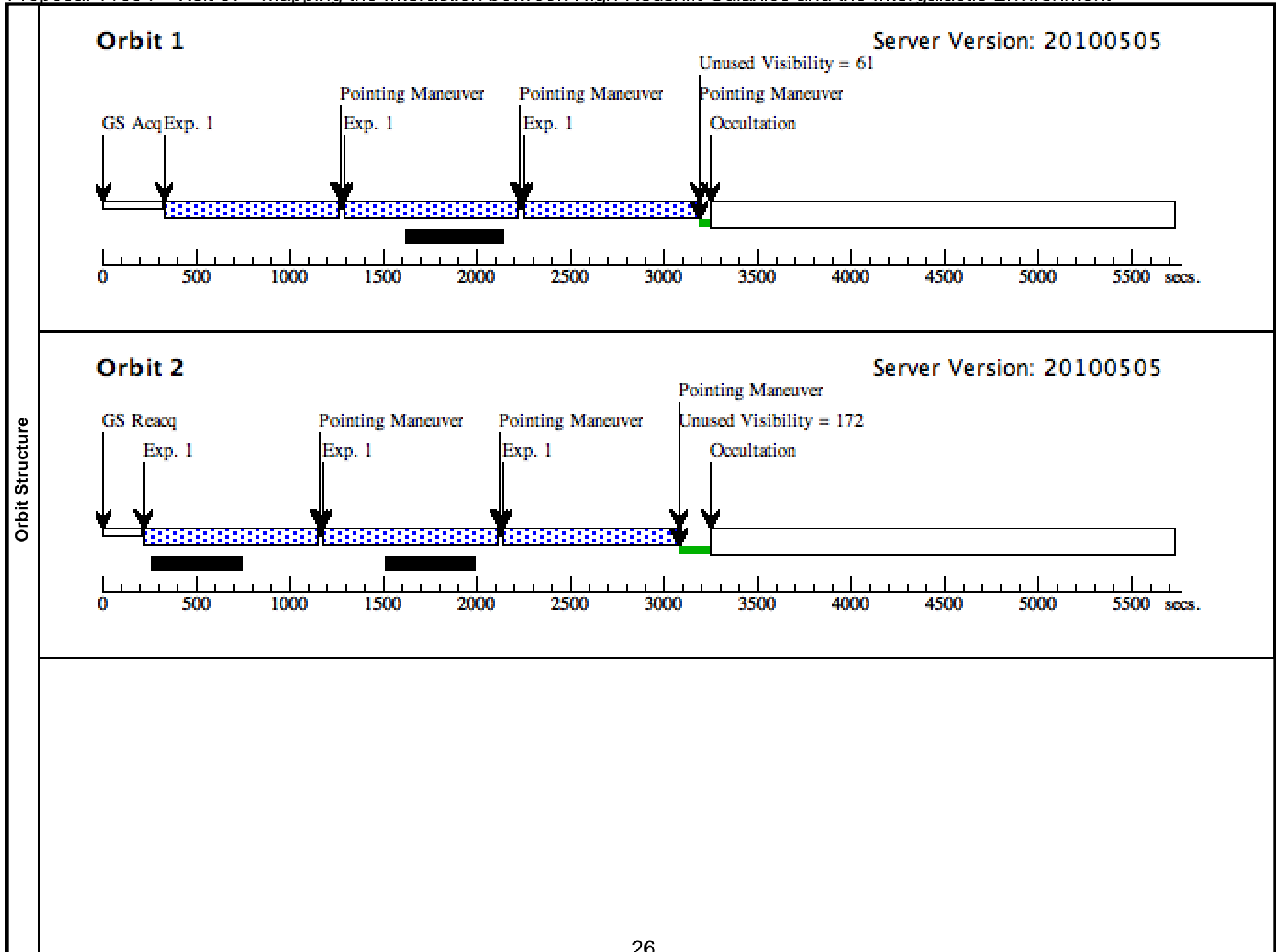
| | | | | | | | | | | |
|----------------------|---|---|---|---------------------------------|-----------------------------------|--------------------------|-----------------------|-------------------------|---|--------------|
| Visit | Proposal 11694, Visit 07, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| (1) | | Pattern Type=SPIRAL Purpose=DITHER Number Of Points=9 Point Spacing=0.408 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=5.665 Angle Between Sides= Center Pattern=true | | | | | (1) | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (7) | Q1623-FIELD1 | RA: 16 25 47.7000 (246.4487500d) Dec: +26 47 2.90 (26.78414d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (7) Q1623-FIELD1 | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] |
| | | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] |

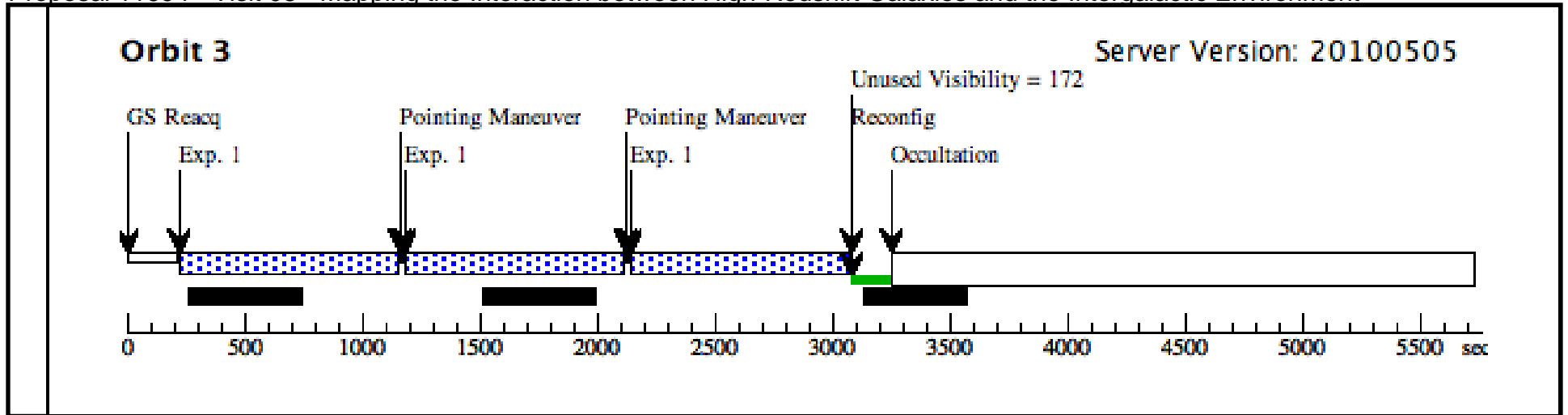




Proposal 11694 - Visit 07 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

| | | | | | | | | | | |
|----------------------|---|---|---|---------------------------------|-----------------------------------|--------------------------|-----------------------|-------------------------|---|--------------|
| Visit | Proposal 11694, Visit 08, completed Tue Sep 14 18:28:37 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| (1) | | Pattern Type=SPIRAL Purpose=DITHER Number Of Points=9 Point Spacing=0.408 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=5.665 Angle Between Sides= Center Pattern=true | | | | | (1) | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (8) | Q1623-FIELD2 | RA: 16 25 57.2000 (246.4883333d) Dec: +26 44 48.50 (26.74681d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (8) Q1623-FIELD2 | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] |
| | | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] |

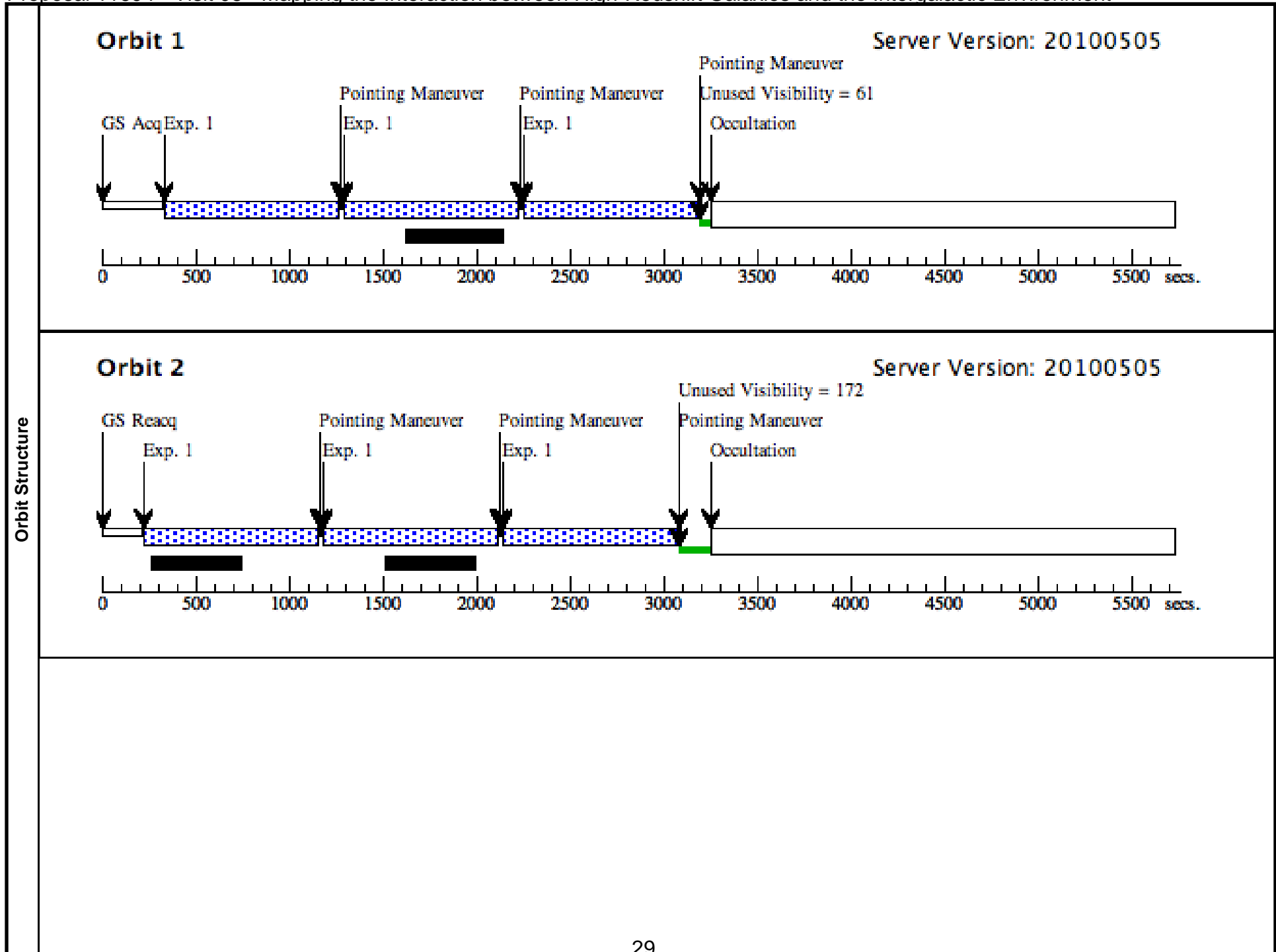


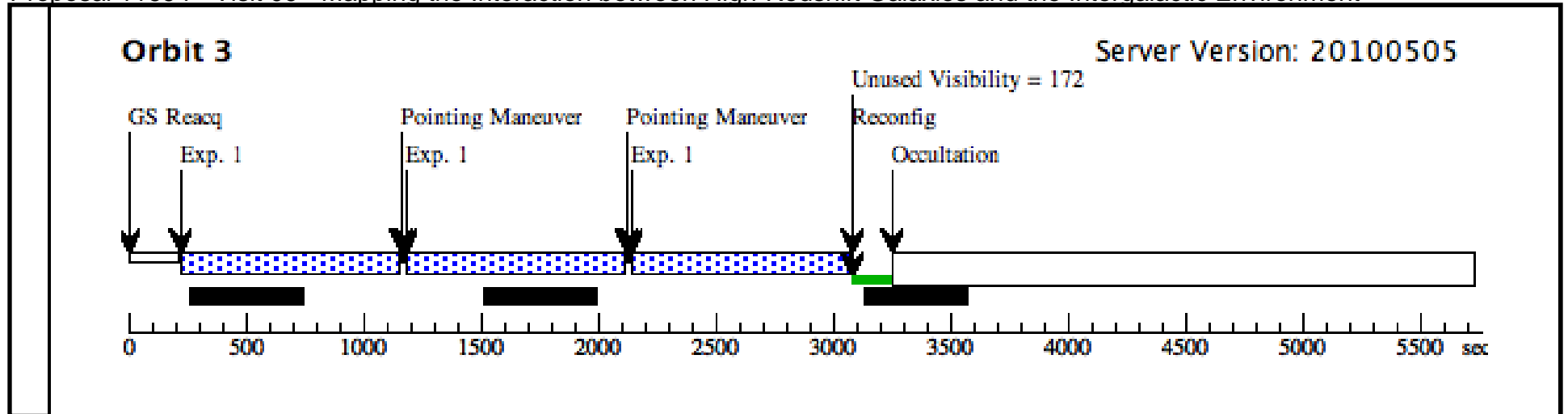


Proposal 11694 - Visit 08 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:37 GMT 2010

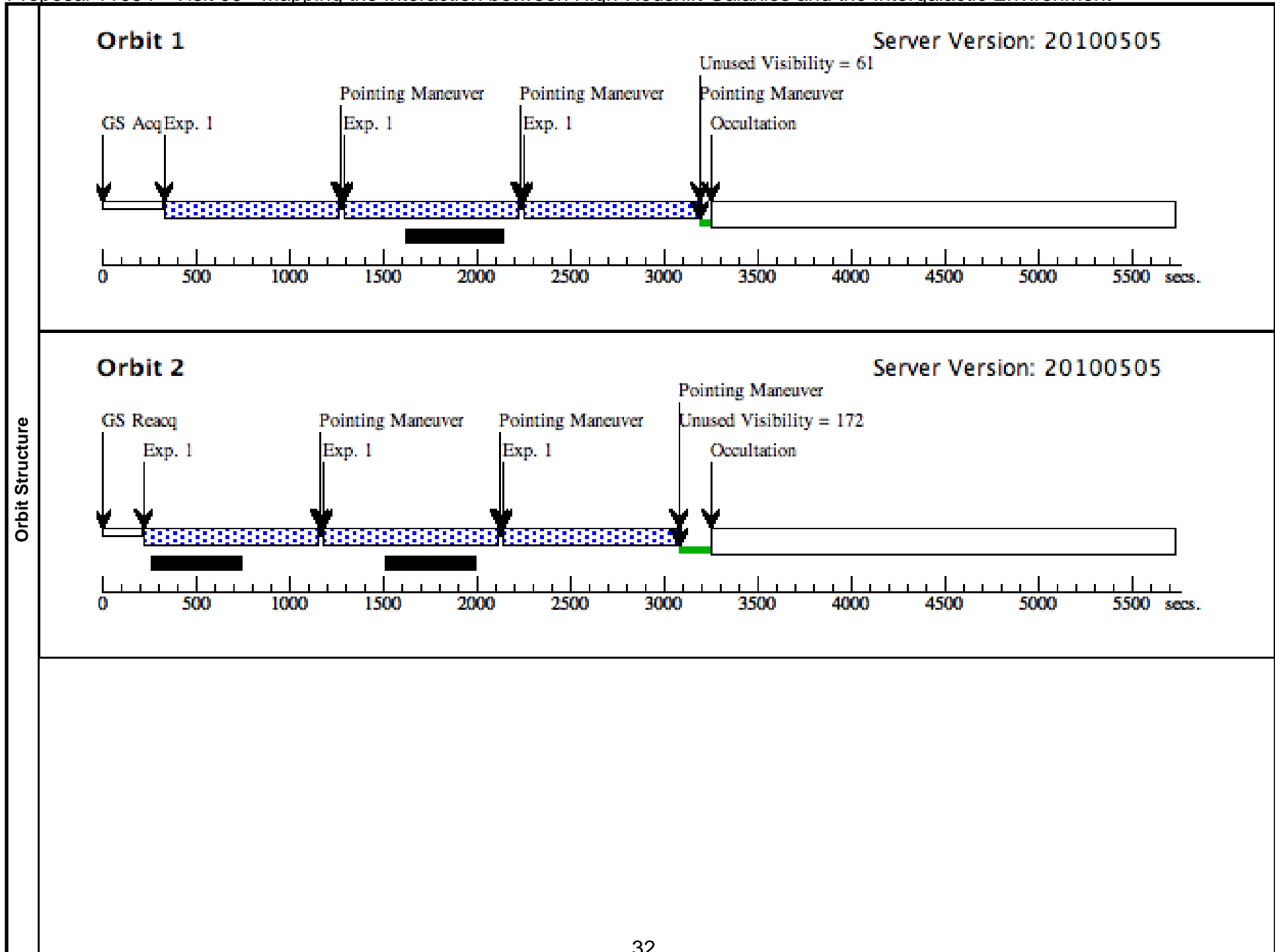
| Visit | Proposal 11694, Visit 09, failed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|--|---------------------|---|---------------------------|---------------|-----------------------------------|-----------------------|---|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (9) | Q1623-FIELD3 | RA: 16 25 48.0000 (246.4500000d) Dec: +26 44 33.60 (26.74267d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (9) Q1623-FIELD3 | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] | |
| | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] | |

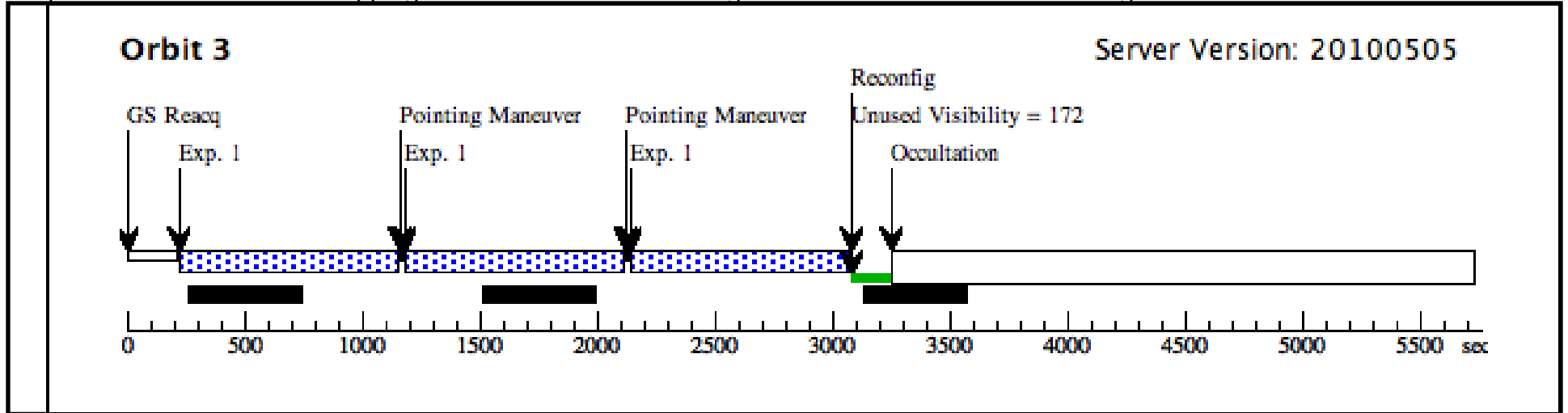




Proposal 11694 - Visit 09 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

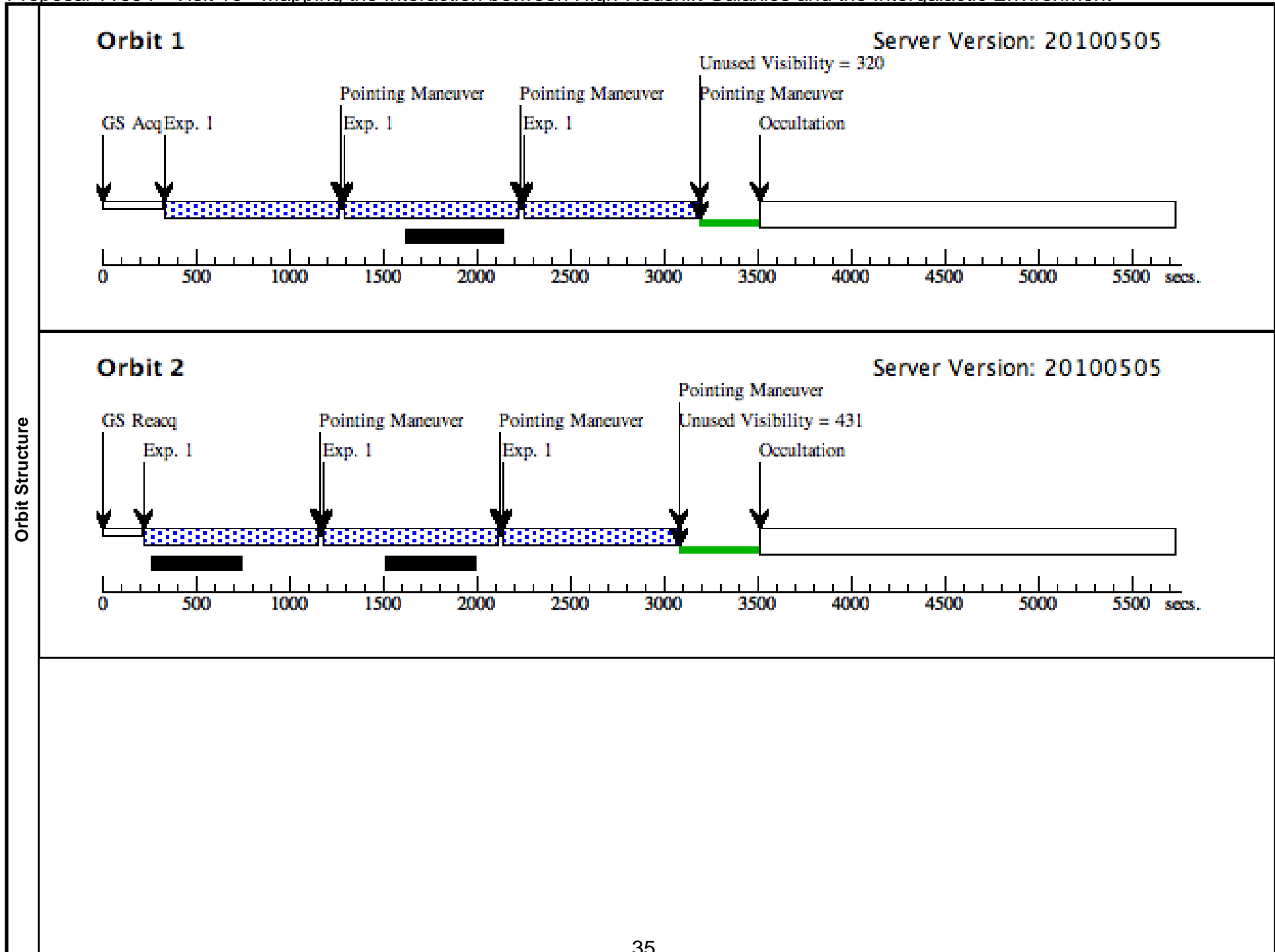
| Visit | | Proposal 11694, Visit 10, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | Tue Sep 14 18:28:37 GMT 2010 | |
|---------------|------|---|---|--------------------------|-------------------|-----------------------------------|---------------|-------------------------|------------------------------|-------|
| Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | | |
| | (1) | Pattern Type=SPIRAL Purpose=DITHER Number Of Points=9 Point Spacing=0.408 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=5.665 Angle Between Sides= Center Pattern=true | | | | | (1) | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | |
| | (10) | Q1623-FIELD4 | RA: 16 25 54.2650 (246.4761042d) Dec: +26 49 44.94 (26.82915d) Equinox: J2000 | | V=20 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (10) Q1623-FIELD4 | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] | [1] |
| | | | | | | | | | [=>(Pattern 2)] | |
| | | | | | | | | | [=>(Pattern 3)] | |
| | | | | | | | | [=>(Pattern 4)] | | |
| | | | | | | | | [=>(Pattern 5)] | [2] | |
| | | | | | | | | [=>(Pattern 6)] | | |
| | | | | | | | | [=>(Pattern 7)] | | |
| | | | | | | | | [=>(Pattern 8)] | | |
| | | | | | | | | [=>(Pattern 9)] | [3] | |

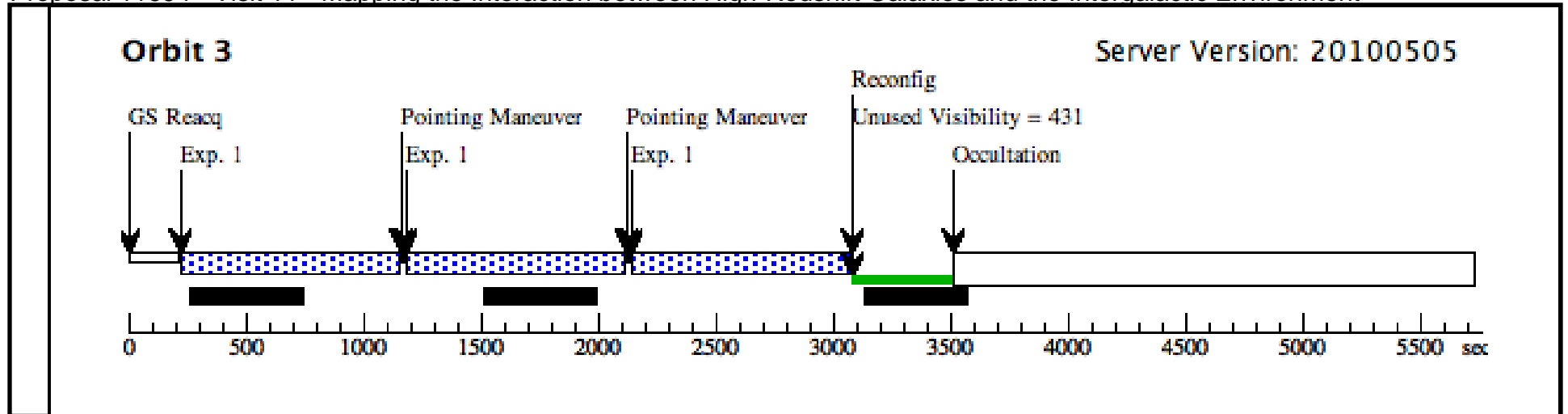




Proposal 11694 - Visit 10 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

| | | | | | | | | | | |
|----------------------|---|---|---|---------------------------------|-----------------------------------|--------------------------|-----------------------|-------------------------|---|--------------|
| Visit | Proposal 11694, Visit 11, completed Tue Sep 14 18:28:38 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| (1) | | Pattern Type=SPIRAL Purpose=DITHER Number Of Points=9 Point Spacing=0.408 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=5.665 Angle Between Sides= Center Pattern=true | | | | | (1) | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (11) | Q1700-FIELD | RA: 17 01 0.4000 (255.2516667d) Dec: +64 12 3.60 (64.20100d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (11) Q1700-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] |
| | | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] |

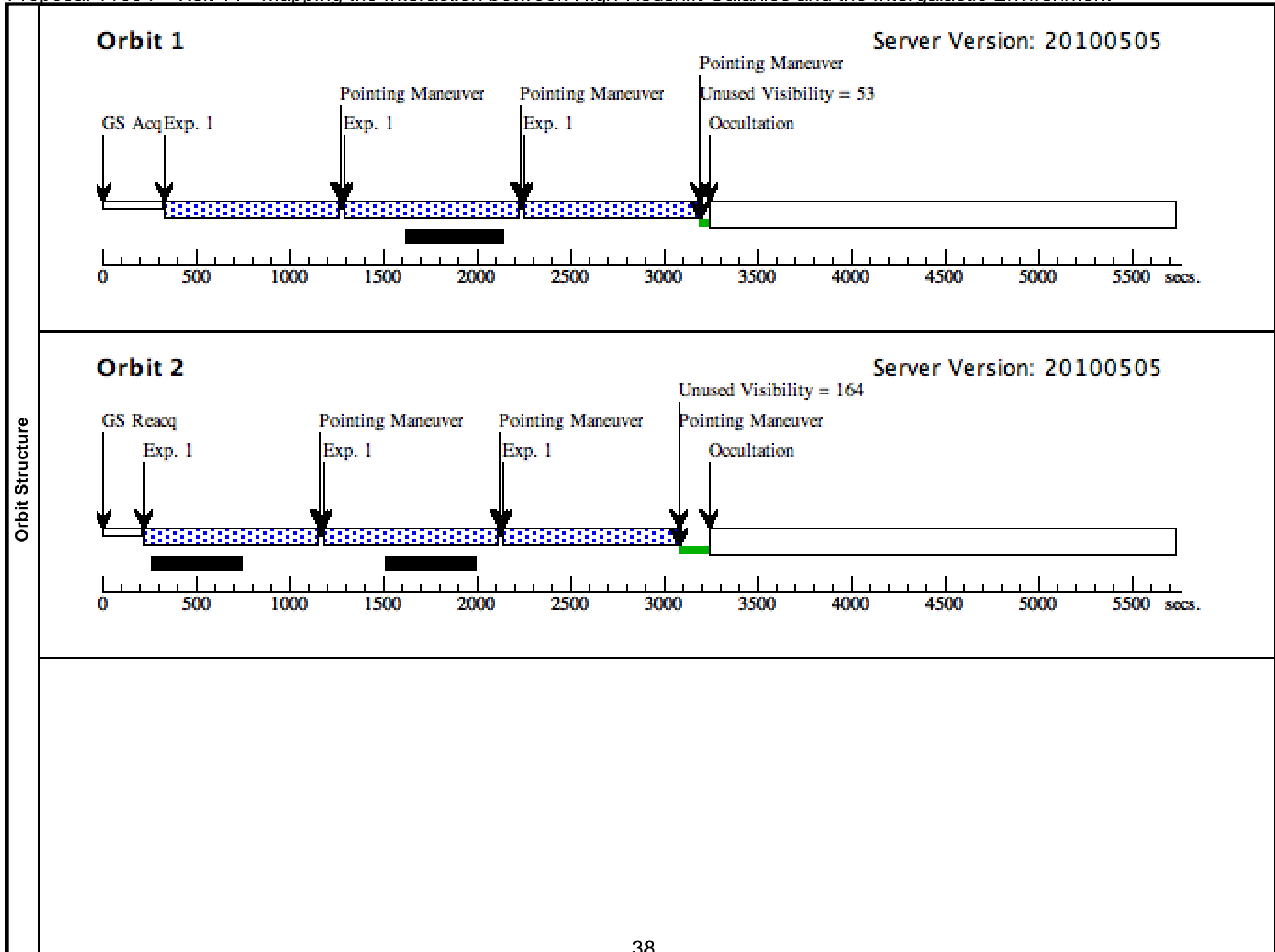


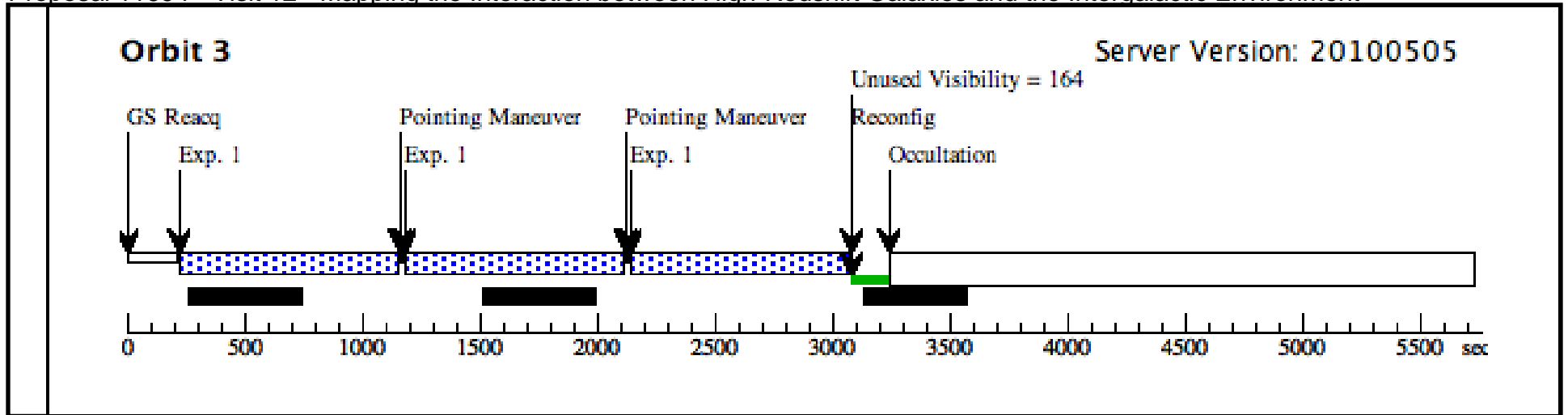


Proposal 11694 - Visit 11 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:38 GMT 2010

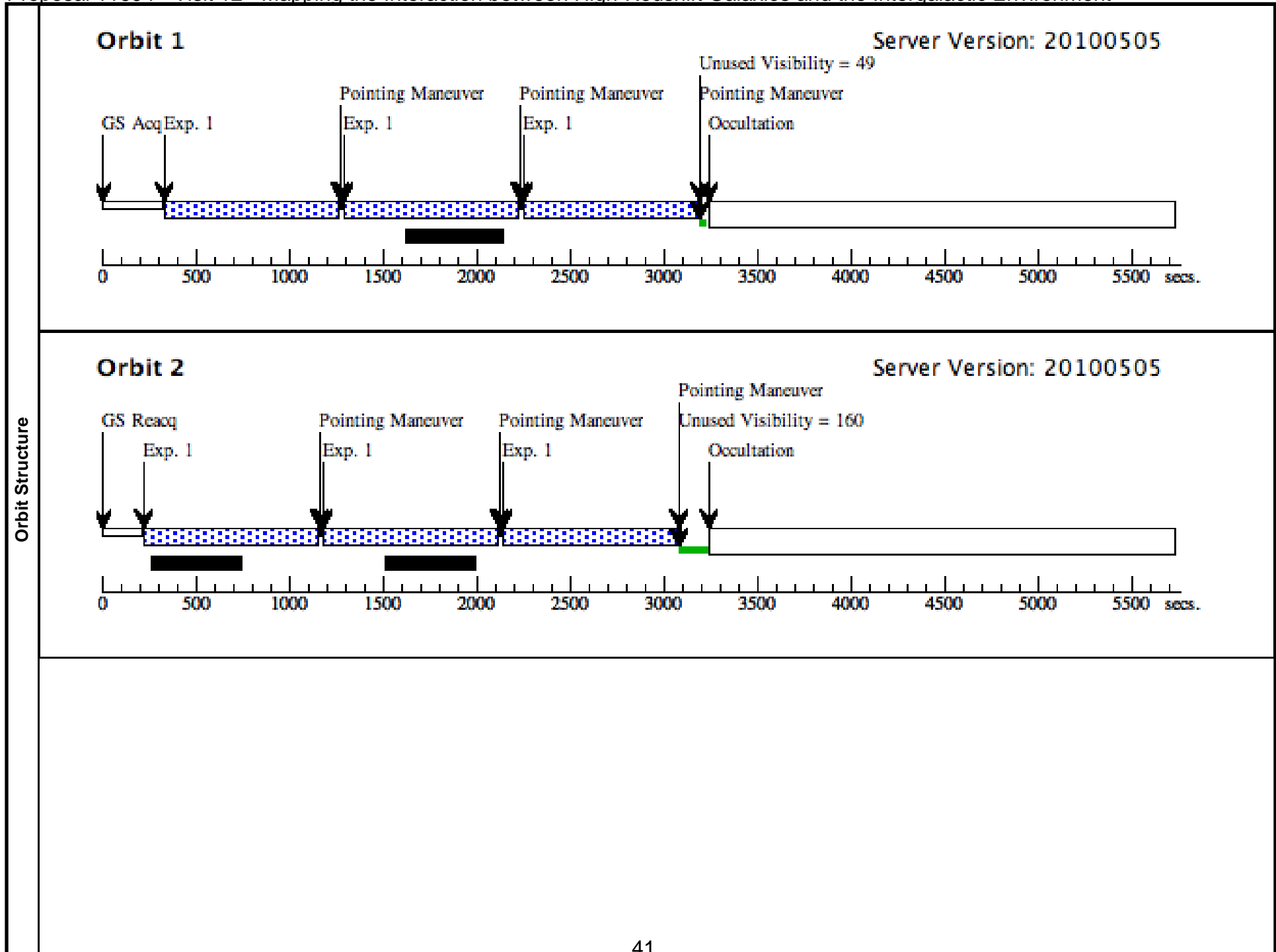
| Visit | Proposal 11694, Visit 12, scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|--|---------------------|---|---------------------------|---------------|-----------------------------------|-----------------------|---|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (12) | Q2206-FIELD | RA: 22 08 52.1000 (332.2170833d) Dec: -19 44 0.90 (-19.73358d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (12) Q2206-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] | |
| | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] | |

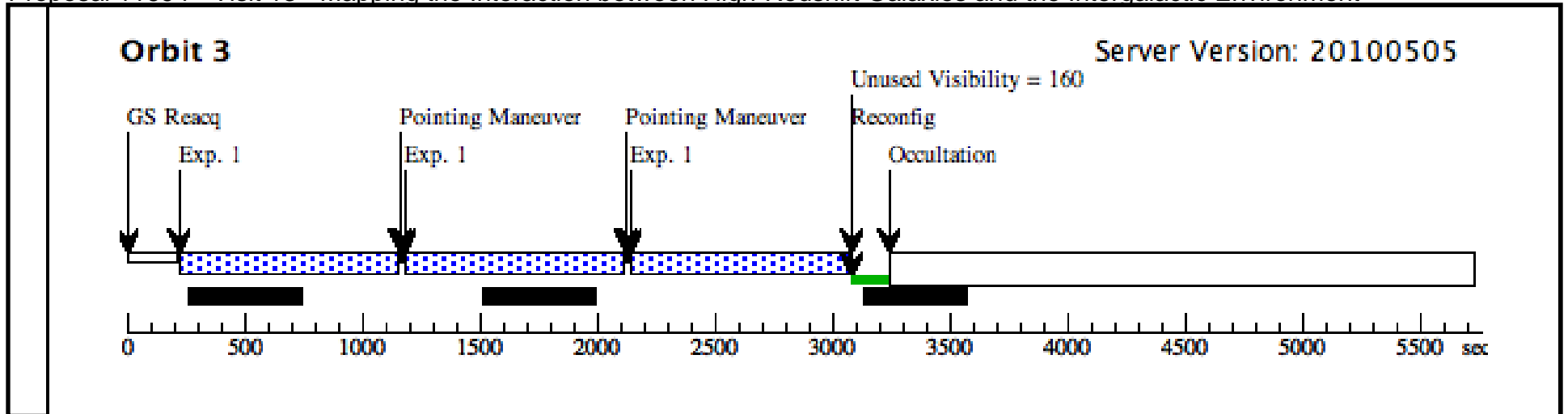




Proposal 11694 - Visit 12 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

| | | | | | | | | | | |
|----------------------|---|---|---|---------------------------------|-----------------------------------|--------------------------|----------------------|-------------------------|---|--------------|
| Visit | Proposal 11694, Visit 13, completed Tue Sep 14 18:28:38 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| (1) | | Pattern Type=SPIRAL Purpose=DITHER Number Of Points=9 Point Spacing=0.408 Line Spacing= | Coordinate Frame=POS-TARG Pattern Orientation=5.665 Angle Between Sides= Center Pattern=true | | | | | (1) | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous | | | | |
| | (13) | Q2343-FIELD1 | RA: 23 46 28.7680 (356.6198667d) Dec: +12 48 41.82 (12.81162d) Equinox: J2000 | | V=20 | Reference Frame: ICRS | | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | (13) Q2343-FIELD1 | WFC3/IR, MULTIACCUM, IR-FIX | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] |
| | | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] |

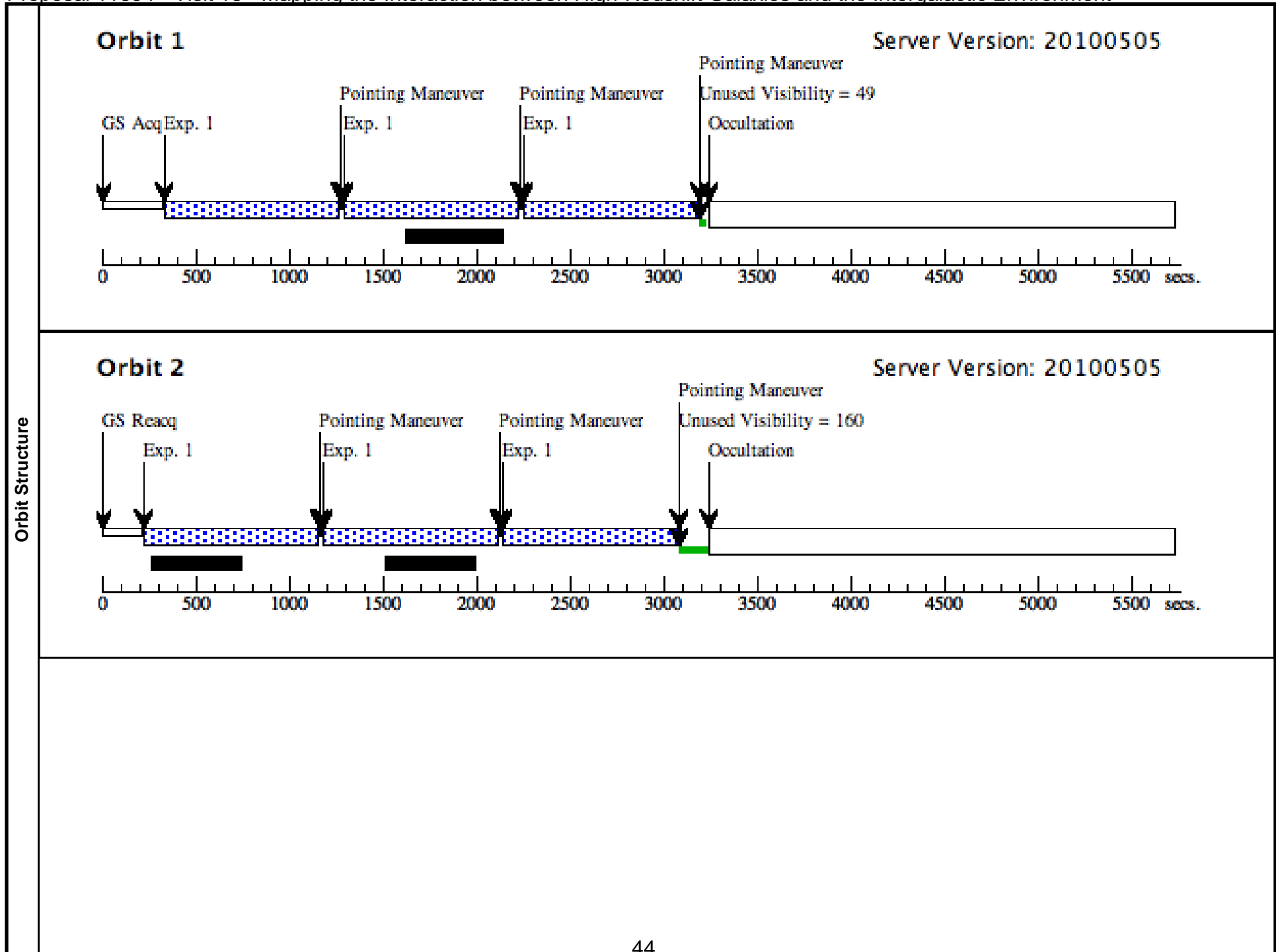


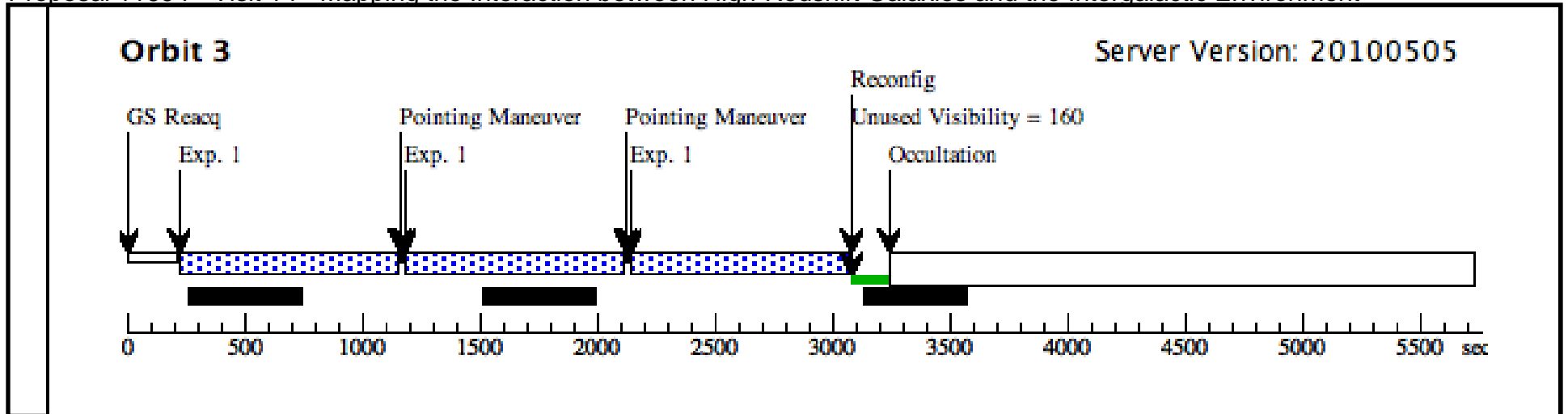


Proposal 11694 - Visit 13 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:38 GMT 2010

| Visit | Proposal 11694, Visit 14, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|---|---------------------|---|-----------------------------|---------------|-----------------------------------|-----------------------|---|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (14) | Q2343-FIELD2 | RA: 23 46 22.4470 (356.5935292d) Dec: +12 48 12.55 (12.80349d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (14) Q2343-FIELD2 | WFC3/IR, MULTIACCUM, IR-FIX | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] | |
| | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] | |

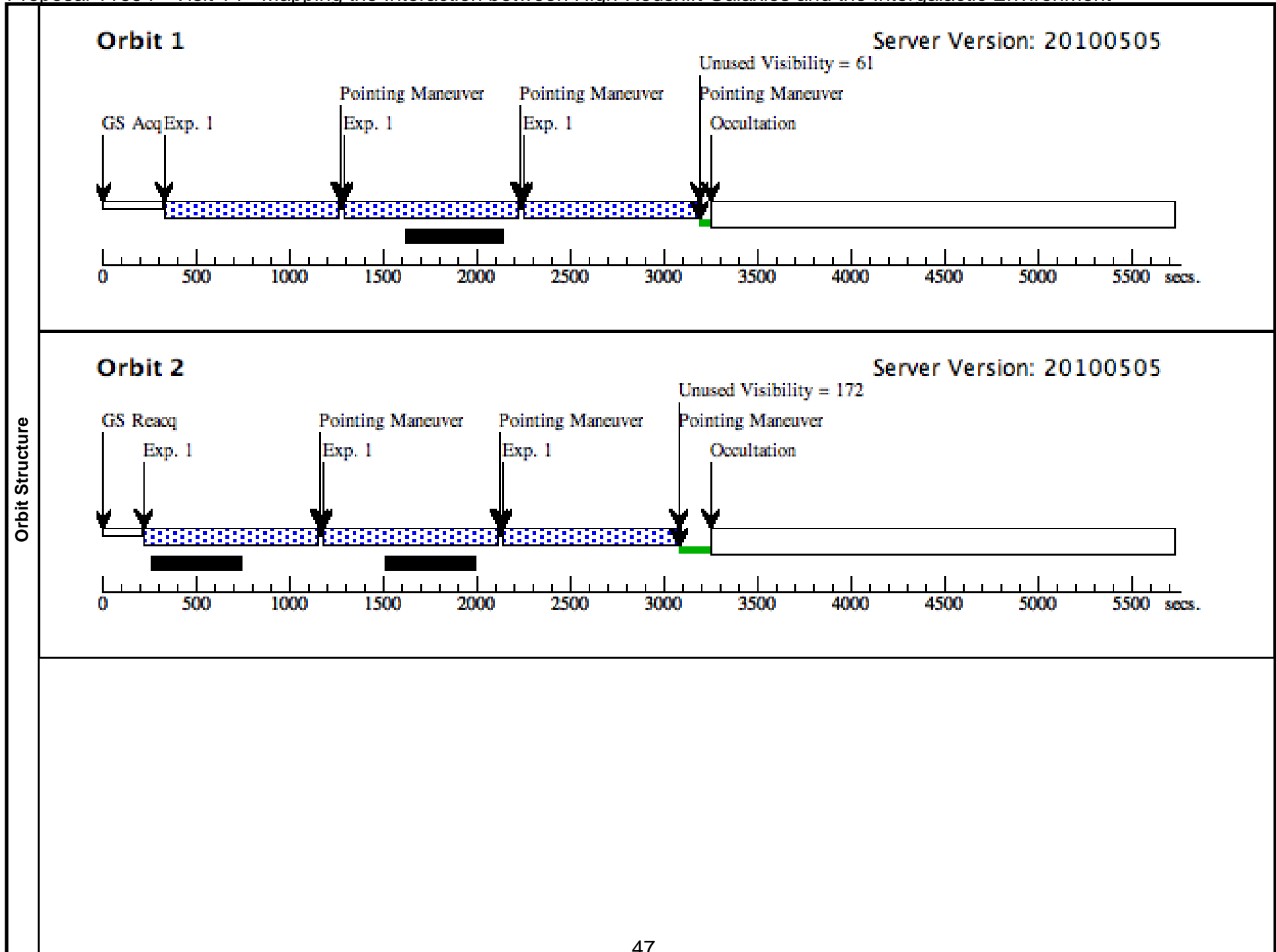


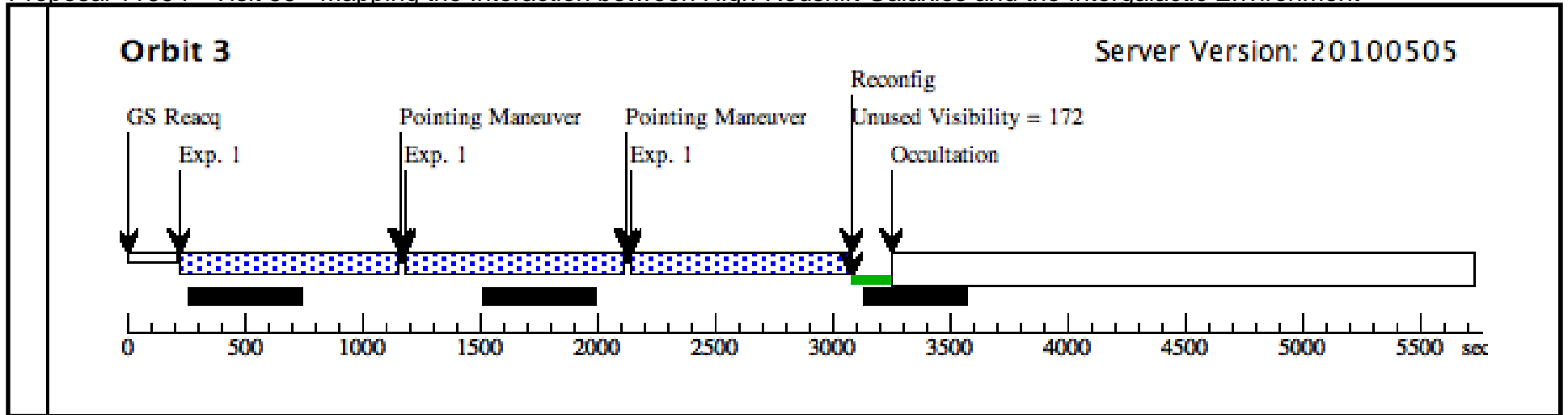


Proposal 11694 - Visit 14 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:38 GMT 2010

| Visit | Proposal 11694, Visit 59, scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|--|---------------------|---|---------------------------|---------------|-----------------------------------|-----------------------|---|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (9) | Q1623-FIELD3 | RA: 16 25 48.0000 (246.4500000d) Dec: +26 44 33.60 (26.74267d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (9) Q1623-FIELD3 | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] | |
| | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] | |





Proposal 11694 - Visit 59 - Mapping the Interaction between High-Redshift Galaxies and the Intergalactic Environment

Tue Sep 14 18:28:38 GMT 2010

| Visit | Proposal 11694, Visit 53 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none) | | | | | | | | | |
|---------------|--|---------------------|---|---------------------------|---------------|-----------------------------------|-----------------------|---|---|-------|
| | Patterns | # | Primary Pattern | | | Secondary Pattern | | | Exposures | |
| | | (1) | Pattern Type=SPIRAL | Coordinate Frame=POS-TARG | | | | | | (1) |
| | | Purpose=DITHER | Pattern Orientation=5.665 | | | | | | | |
| | | Number Of Points=9 | Angle Between Sides= | | | | | | | |
| | | Point Spacing=0.408 | Center Pattern=true | | | | | | | |
| | | Line Spacing= | | | | | | | | |
| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | | Fluxes | Miscellaneous | | | |
| | (3) | Q0449-FIELD | RA: 04 52 14.8000 (73.0616667d) Dec: -16 40 23.50 (-16.67319d) Equinox: J2000 | | | V=20 | Reference Frame: ICRS | | | |
| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
| | 1 | | (3) Q0449-FIELD | WFC3/IR, MULTIACCUM, IR | F160W | NSAMP=15; SAMP-SEQ=STEP1 00 | | Pattern 1, Exps 1-1 (1) | [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] | [1] |
| | | | | | | | | [=>(Pattern 4)] [=>(Pattern 5)] [=>(Pattern 6)] | [2] | |
| | | | | | | | | [=>(Pattern 7)] [=>(Pattern 8)] [=>(Pattern 9)] | [3] | |

