



14201 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Cycle: 23, Proposal Category: GO

(UV Initiative)

(Availability Mode: SUPPORTED)

INVESTIGATORS

| <i>Name</i> | <i>Institution</i> | <i>E-Mail</i> |
|---|---|----------------------------------|
| Dr. Sangeeta Malhotra (PI) (Contact) | Arizona State University | sangeeta.malhotra@asu.edu |
| Dr. James Rhoads (CoI) | Arizona State University | james.rhoads@asu.edu |
| Dr. Claus Leitherer (CoI) | Space Telescope Science Institute | leitherer@stsci.edu |
| Dr. Aida H. Wofford (CoI) (ESA Member) | CNRS, Institut d'Astrophysique de Paris | wofford@iap.fr |
| Huan Yang (CoI) | Arizona State University | hyang119@asu.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) GP0339-0725 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:11:56.0 | yes |
| 02 | (2) GP2237+1336 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:11:58.0 | yes |
| 03 | (3) GP0749+3337 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:00.0 | yes |
| 04 | (4) GP1122+6154 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:02.0 | yes |
| 05 | (5) GP0747+2336 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:03.0 | yes |

Proposal 14201 (STScI Edit Number: 0, Created: Thursday, September 10, 2015 8:12:27 PM EST) - Overview

| <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> |
|--------------|------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 06 | (6) GP1018+4106 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:05.0 | yes |
| 07 | (7) GP1514+3852 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:06.0 | yes |
| 08 | (8) GP1543+3446 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:08.0 | yes |
| 09 | (9) GP0917+3152 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:09.0 | yes |
| 10 | (10) GP1440+4619 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:11.0 | yes |
| 11 | (11) GP1454+4528 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:12.0 | yes |
| 12 | (12) GP1559+0841 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:14.0 | yes |
| 13 | (13) GP1339+1516 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:15.0 | yes |
| 14 | (14) GP0751+1638 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:16.0 | yes |
| 15 | (15) GP0822+2241 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:18.0 | yes |
| 16 | (16) GP1205+2620 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:19.0 | yes |
| 17 | (17) GP1009+2916 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:21.0 | yes |
| 18 | (18) GP1032+2717 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:22.0 | yes |
| 19 | (19) GP0927+1740 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:24.0 | 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> |
|--------------|------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 20 | (20) GP0805+0925 | COS/FUV COS/NUV | 1 | 10-Sep-2015 21:12:25.0 | yes |

20 Total Orbits Used

ABSTRACT

What makes a star-forming galaxy a Lyman-alpha (LyA) emitter? The answer to this question is essential to understand a large fraction of high-redshift galaxies and reionization. This answer is best found for low- z galaxies, where there is abundant multiwavelength data but UV spectroscopy of LyA line is needed with HST. Green Pea galaxies are the best low-redshift analogs of high redshift LyA galaxies, because they (1) have high specific star-formation rates, (2) have metallicities that are unusually low for their stellar masses, and (3) are spatially compact. (4) Archival COS spectra show LyA emission from all observed Green Peas; and high EW LyA from 7 out of 9 GPs. We propose to systematically study the dependence of LyA escape fraction on (A) metallicity (B) dust column (C) porosity of neutral gas and (D) outflow velocities to determine the dominant factor(s) in making LyA escape possible. The nine GPs available in the archives are the ones with lowest metallicities and dust extinctions. We propose COS spectroscopy for 20 Green Peas to span the full range of their metallicities, dust columns, and H-alpha equivalent widths. With COS spectra we will measure Ly α flux and compare it to H-alpha to determine Ly α escape fraction. We will compare velocity profiles of LyA and H-alpha to determine the outflow velocities, and constrain absorbing columns of neutral gas. By measuring optical depth in SiII and CII we will estimate the covering fraction of neutral gas. NUV images taken for acquisition will provide the morphologies of the star-forming regions. Finally, we will compare the Ly α Luminosity and EWs to high redshift samples.

OBSERVING DESCRIPTION

Observing Green Peas.

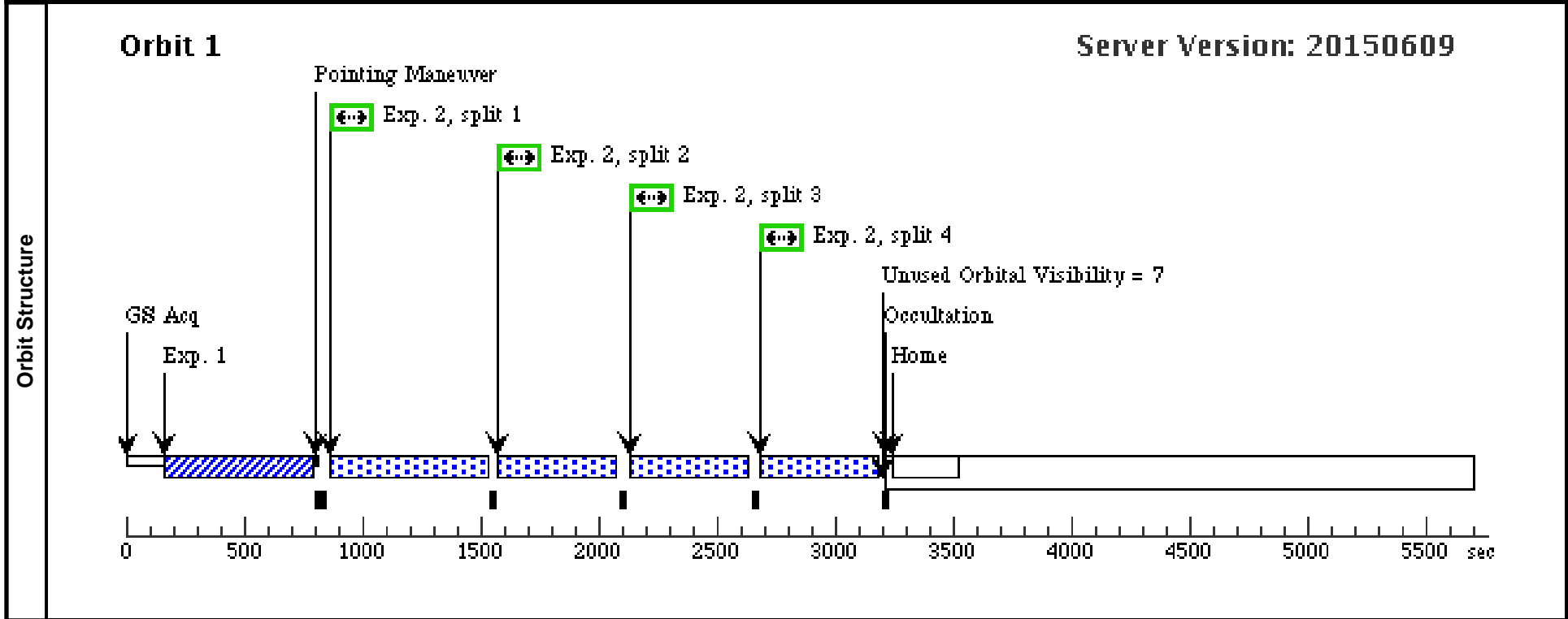
Proposal 14201 - Visit 01 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:27 GMT 2015

| | | | | | |
|--------------|---|--|--|--|--|
| Visit | Proposal 14201, Visit 01, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|-----------------|---------------------------------|--------------------------|---|-----------------------|
| | (1) | GP0339-0725 | RA: 03 39 47.7960 (54.9491500d) | Redshift: 0.260712 | V=19.23+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP09 | Dec: -07 25 41.23 (-7.42812d) | | GALEX FUV AB Mag = 20.04 +/- 0.12 ; NUV AB Mag = 19.69 +/- 0.08 | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720545) | (1) GP0339-0725 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720729) | (1) GP0339-0725 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



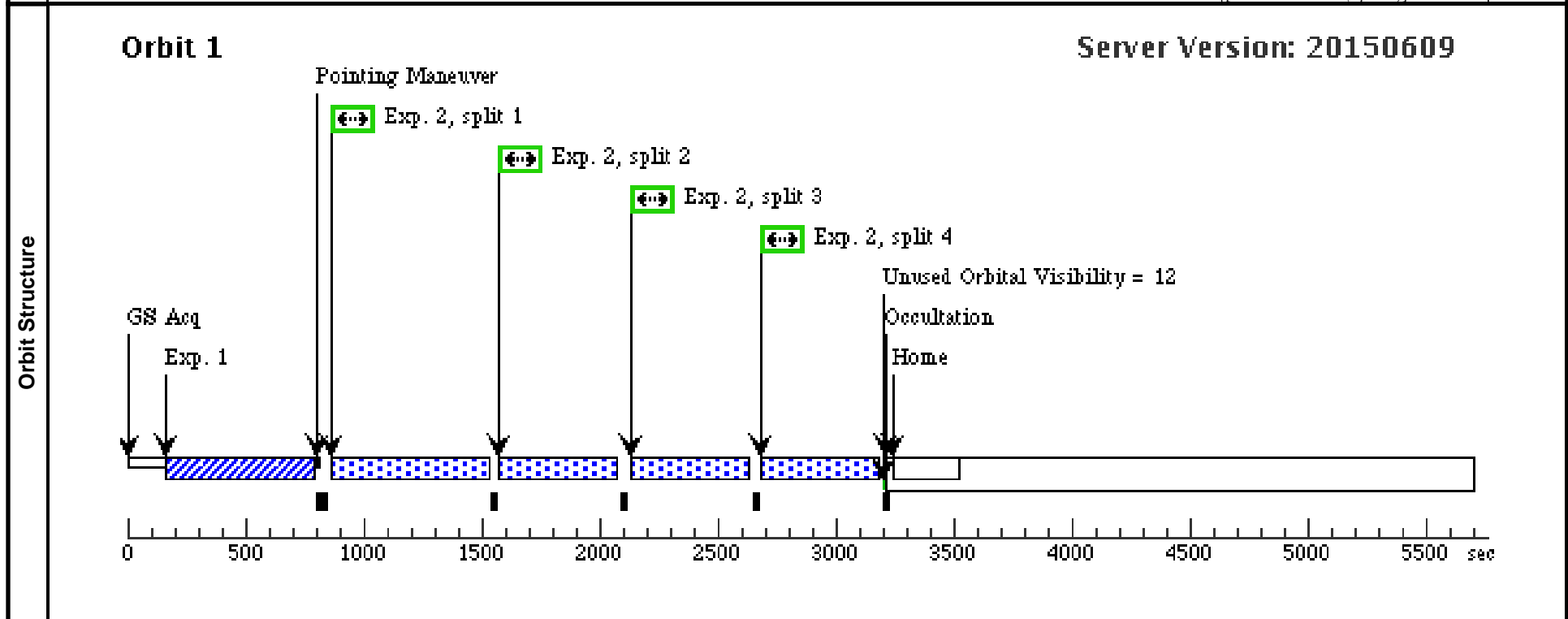
Proposal 14201 - Visit 02 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:27 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 02, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|-----------------------|-----------------|----------------------------------|--------------------------|---|-----------------------|
| | (2) | GP2237+1336 | RA: 22 37 35.0592 (339.3960800d) | Redshift: 0.293501 | V=19.66+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP18 | Dec: +13 36 47.02 (13.61306d) | | | |
| | | | Equinox: J2000 | | GALEX FUV AB Mag = 20.15 +/- 0.01 ; NUV AB Mag = 19.88 +/- 0.01 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720546) | (2) GP2237+1336 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720734) | (2) GP2237+1336 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



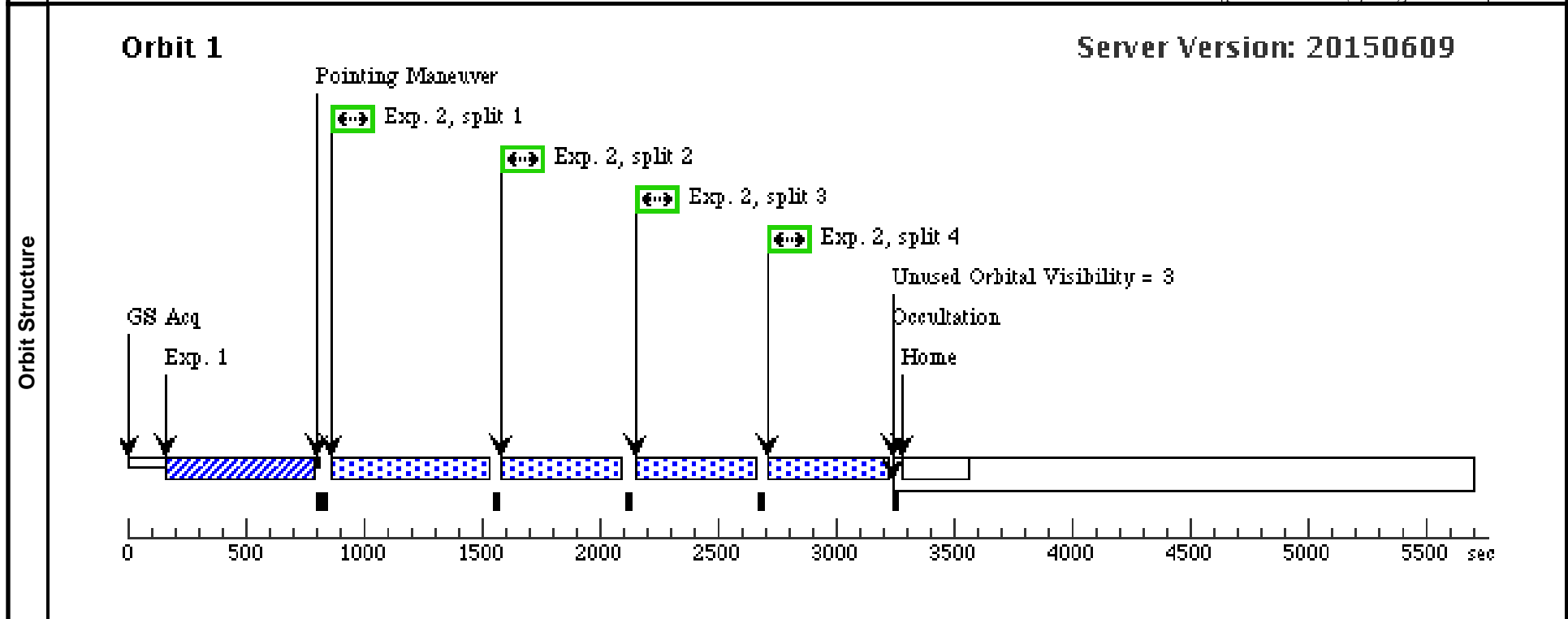
Proposal 14201 - Visit 03 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:27 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 03, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|-----------------|----------------------------------|--------------------------|----------------|-----------------------|
| | (3) | GP0749+3337 | RA: 07 49 36.7704 (117.4032100d) | Redshift: 0.273183 | V=19.03+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP20 | Dec: +33 37 16.36 (33.62121d) | | | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720547) | (3) GP0749+3337 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720733) | (3) GP0749+3337 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1836 Secs) | |
| | | | | | | | | | [==>459.0 Secs (Split 1)] [==>459.0 Secs (Split 2)] [==>459.0 Secs (Split 3)] [==>459.0 Secs (Split 4)] | [1] |



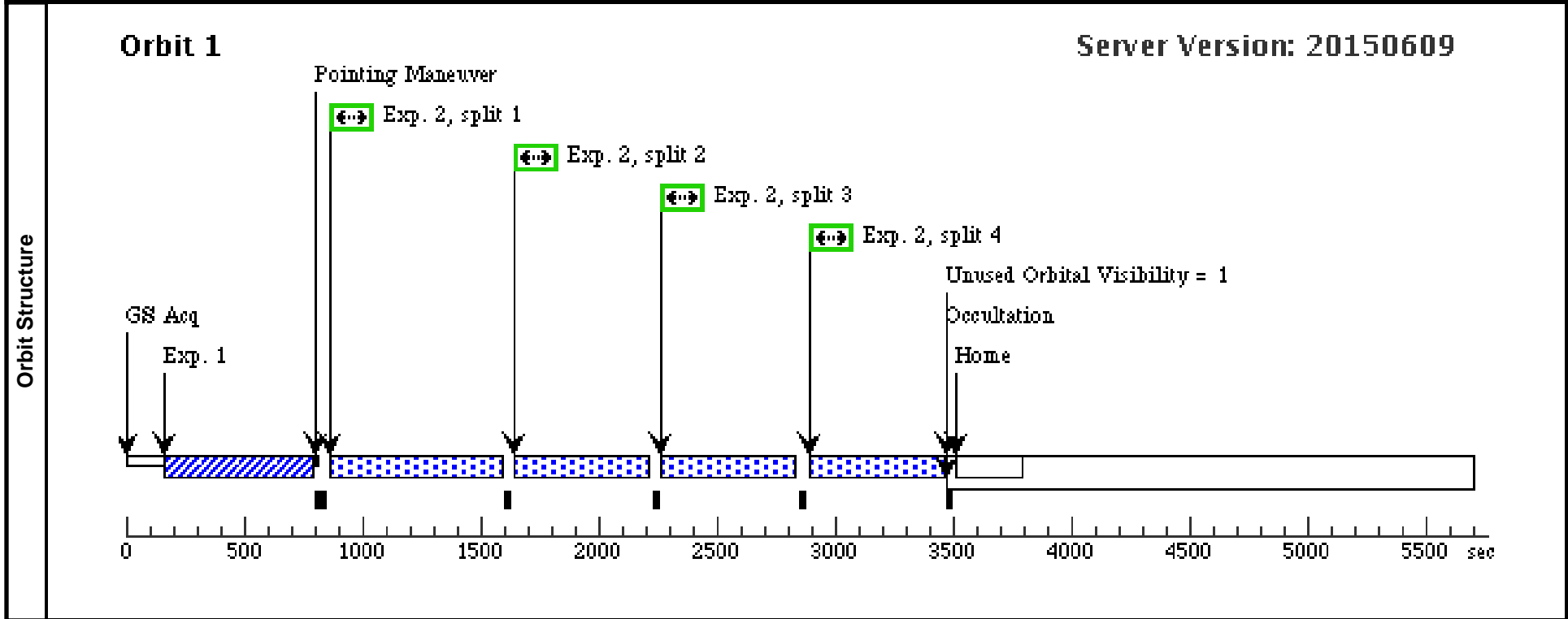
Proposal 14201 - Visit 04 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|---|--|--|--|--|
| Visit | Proposal 14201, Visit 04, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|-----------------|----------------------------------|--------------------------|----------------|-----------------------|
| | (4) | GP1122+6154 | RA: 11 22 19.7328 (170.5822200d) | Redshift: 0.20456 | V=20.53+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP22 | Dec: +61 54 45.47 (61.91263d) | | | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720548) | (4) GP1122+6154 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720717) | (4) GP1122+6154 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (2072 Secs) | |
| | | | | | | | | | [==>518.0 Secs (Split 1)] [==>518.0 Secs (Split 2)] [==>518.0 Secs (Split 3)] [==>518.0 Secs (Split 4)] | [1] |



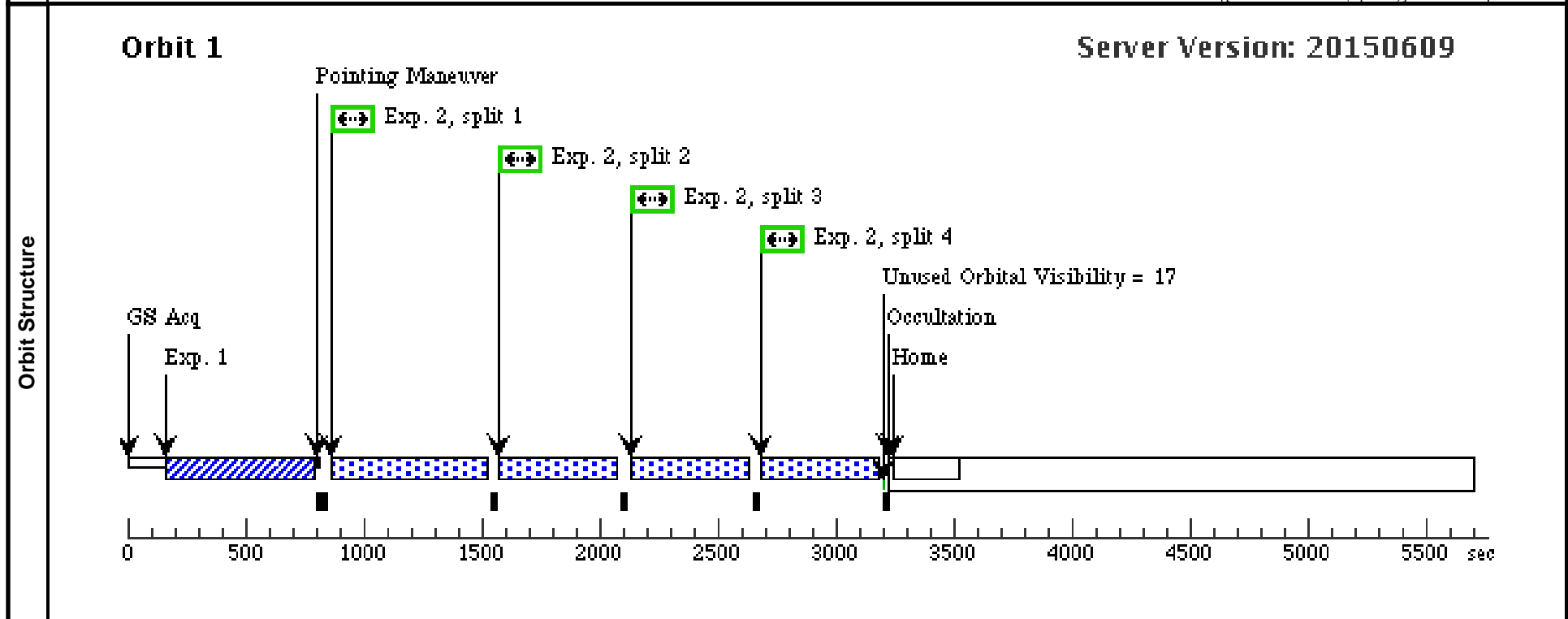
Proposal 14201 - Visit 05 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 05, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---------------|------------------------------|-----------------|----------------------------------|--------------------------|----------------------------|-----------------------|
| | (5) | GP0747+2336 | RA: 07 47 58.0056 (116.9916900d) | Redshift: 0.155242 | V=20.38+/-0.02 | Reference Frame: ICRS |
| | | Alt Name1: GP29 | Dec: +23 36 32.80 (23.60911d) | | SDSS u-band AB Mag = 20.77 | |
| | | | Equinox: J2000 | | | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|-----------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720604) | (5) GP0747+2336 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720682) | (5) GP0747+2336 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



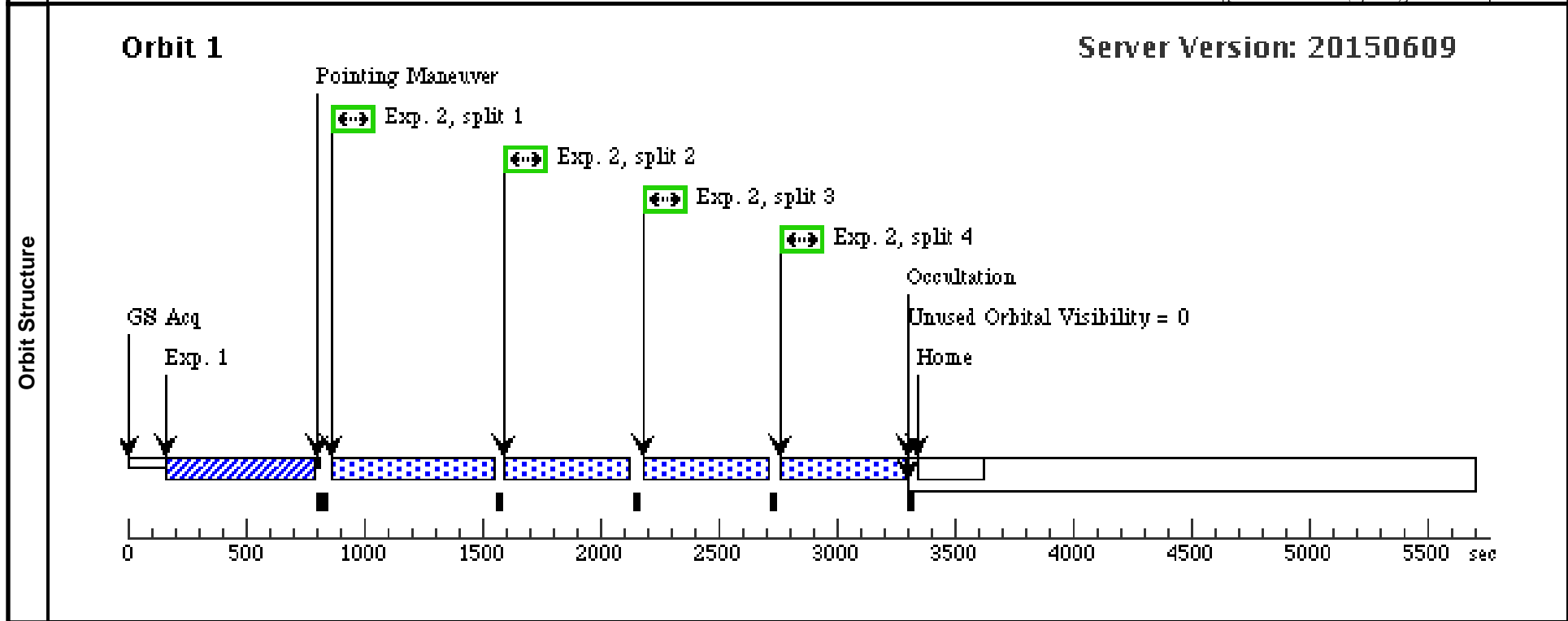
Proposal 14201 - Visit 06 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 06, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---------------|-----------------------|-----------------|---------------------------------|--------------------------|--|-----------------------|
| | (6) | GP1018+4106 | RA: 10 18 3.2424 (154.5135100d) | Redshift: 0.237052 | V=20.48+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP36 | Dec: +41 06 21.10 (41.10586d) | | GALEX FUV AB Mag = 21.07 +/- 0.31 ; NUV AB Mag = 20.8 5 +/- 0.11 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|-----------|---|-----------------|-----------------|-------------------------|-----------------|----------------------------------|----------------------------|--------|--|-------|
| | 1 | (720549) | (6) GP1018+4106 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720724) | (6) GP1018+4106 | COS/FUV, TIME-TAG, PSA | G160M 1600 A | FP-POS=ALL; BUFFER-TIME=5000; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1908 Secs) | |
| | | | | | | | | | [==>477.0 Secs (Split 1)] [==>477.0 Secs (Split 2)] [==>477.0 Secs (Split 3)] [==>477.0 Secs (Split 4)] | [1] |



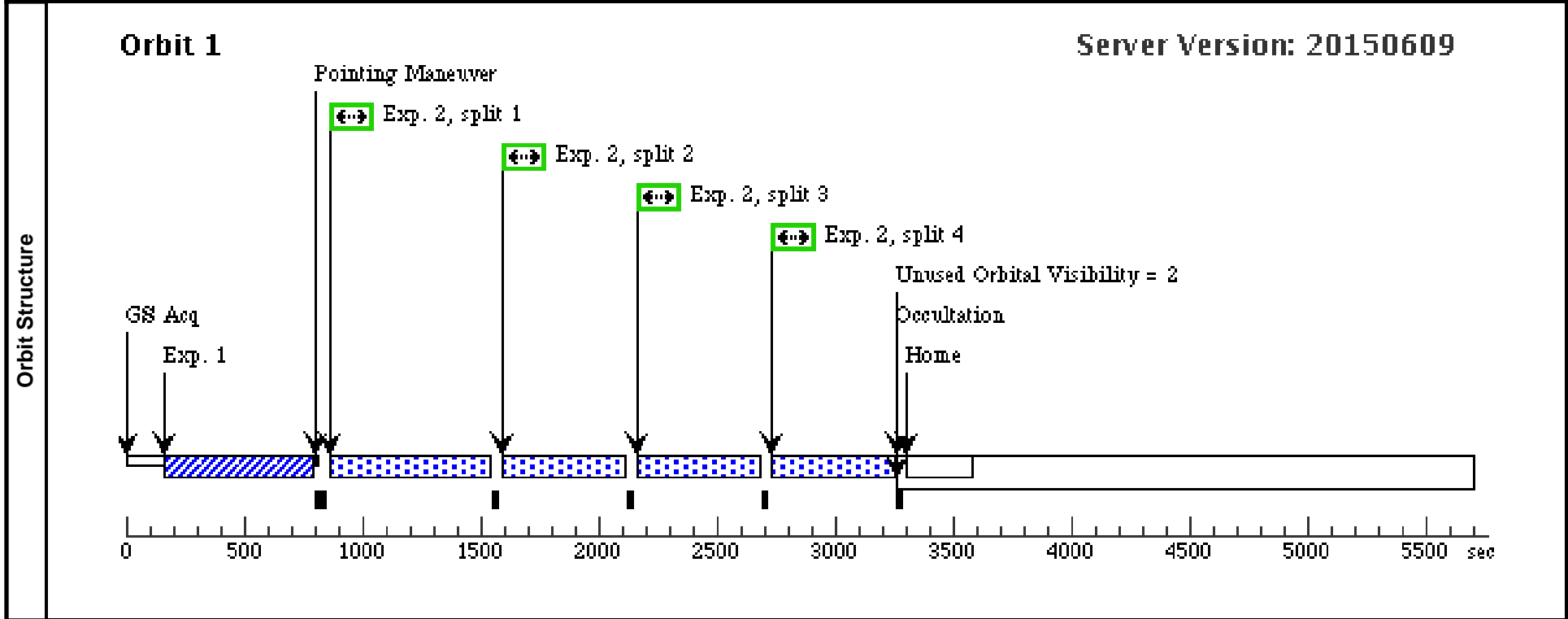
Proposal 14201 - Visit 07 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|---|--|--|--|--|
| Visit | Proposal 14201, Visit 07, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|-----------------|---------------------------------|--------------------------|--|-----------------------|
| | (7) | GP1514+3852 | RA: 15 14 8.6352 (228.5359800d) | Redshift: 0.332617 | V=20.46+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP38 | Dec: +38 52 7.36 (38.86871d) | | GALEX FUV AB Mag = 20.69 +/- 0.21 ; NUV AB Mag = 20.3 9 +/- 0.13 | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720550) | (7) GP1514+3852 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720759) | (7) GP1514+3852 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1860 Secs) | |
| | | | | | | | | | [==>465.0 Secs (Split 1)] [==>465.0 Secs (Split 2)] [==>465.0 Secs (Split 3)] [==>465.0 Secs (Split 4)] | [1] |



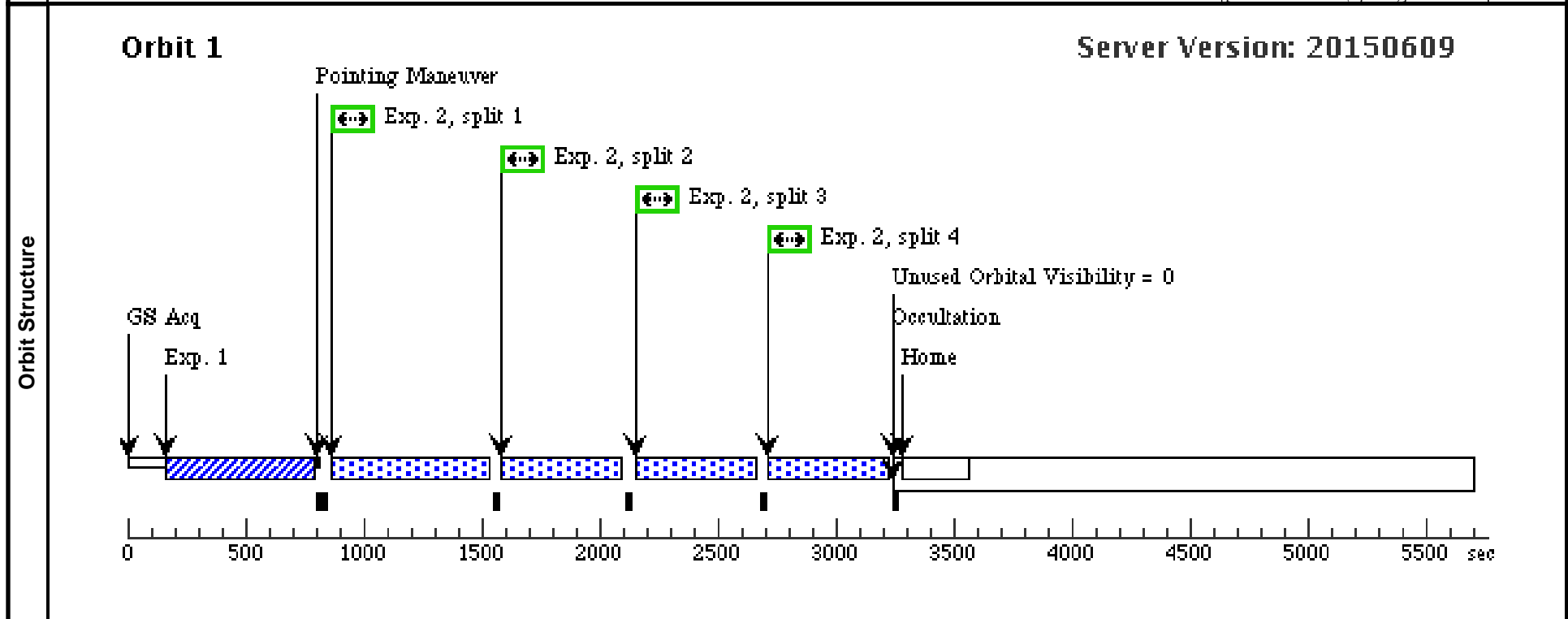
Proposal 14201 - Visit 08 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 08, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---------------|------------------------------|-----------------|---------------------------------|--------------------------|----------------|-----------------------|
| | (8) | GP1543+3446 | RA: 15 43 1.2264 (235.7551100d) | Redshift: 0.187325 | V=20.81+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP39 | Dec: +34 46 1.49 (34.76708d) | | | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|-----------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720551) | (8) GP1543+3446 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720702) | (8) GP1543+3446 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1840 Secs) | |
| | | | | | | | | | [==>460.0 Secs (Split 1)] [==>460.0 Secs (Split 2)] [==>460.0 Secs (Split 3)] [==>460.0 Secs (Split 4)] | [1] |



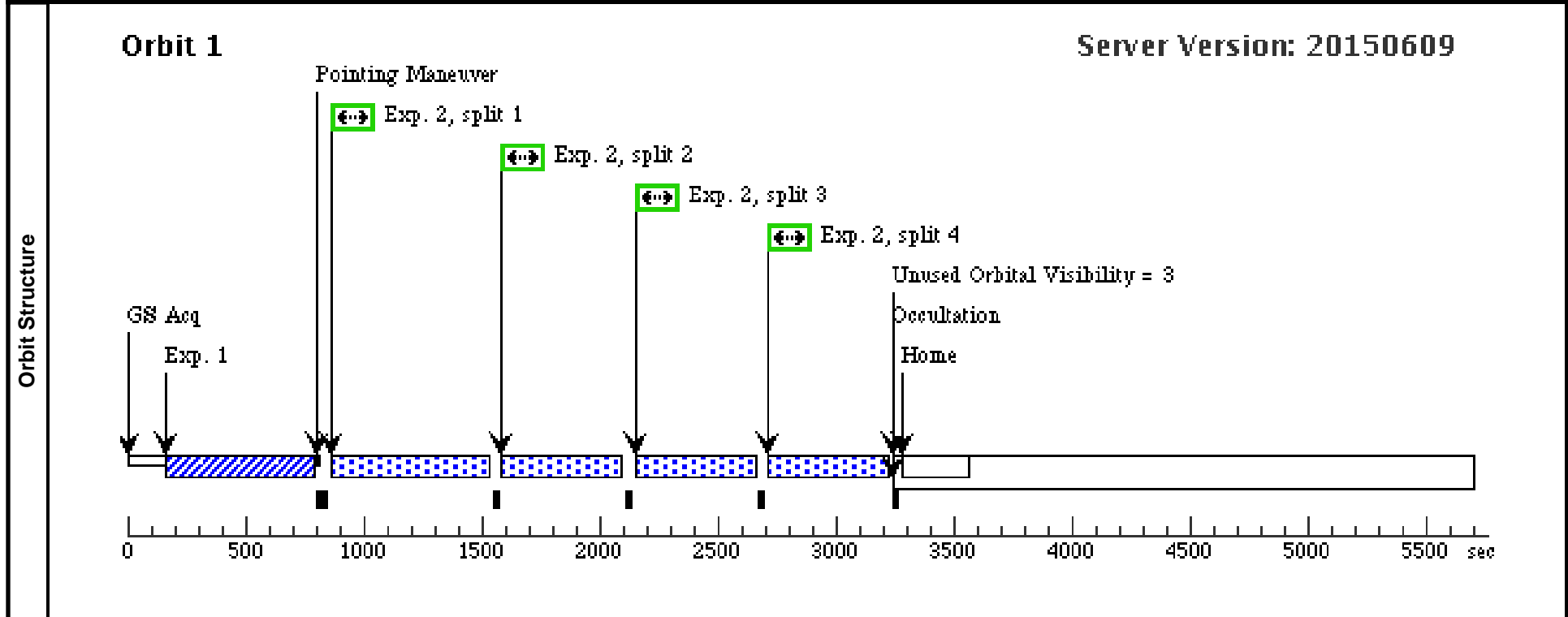
Proposal 14201 - Visit 09 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 09, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---------------|-----------------------|-----------------|---------------------------------|--------------------------|--|-----------------------|
| | (9) | GP0917+3152 | RA: 09 17 2.5248 (139.2605200d) | Redshift: 0.300364 | V=19.72+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP42 | Dec: +31 52 20.57 (31.87238d) | | GALEX FUV AB Mag = 20.13 +/- 0.22 ; NUV AB Mag = 19.7 8 +/- 0.10 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|-----------|---|-----------------|-----------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720553) | (9) GP0917+3152 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720735) | (9) GP0917+3152 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1836 Secs) | |
| | | | | | | | | | [==>459.0 Secs (Split 1)] [==>459.0 Secs (Split 2)] [==>459.0 Secs (Split 3)] [==>459.0 Secs (Split 4)] | [1] |



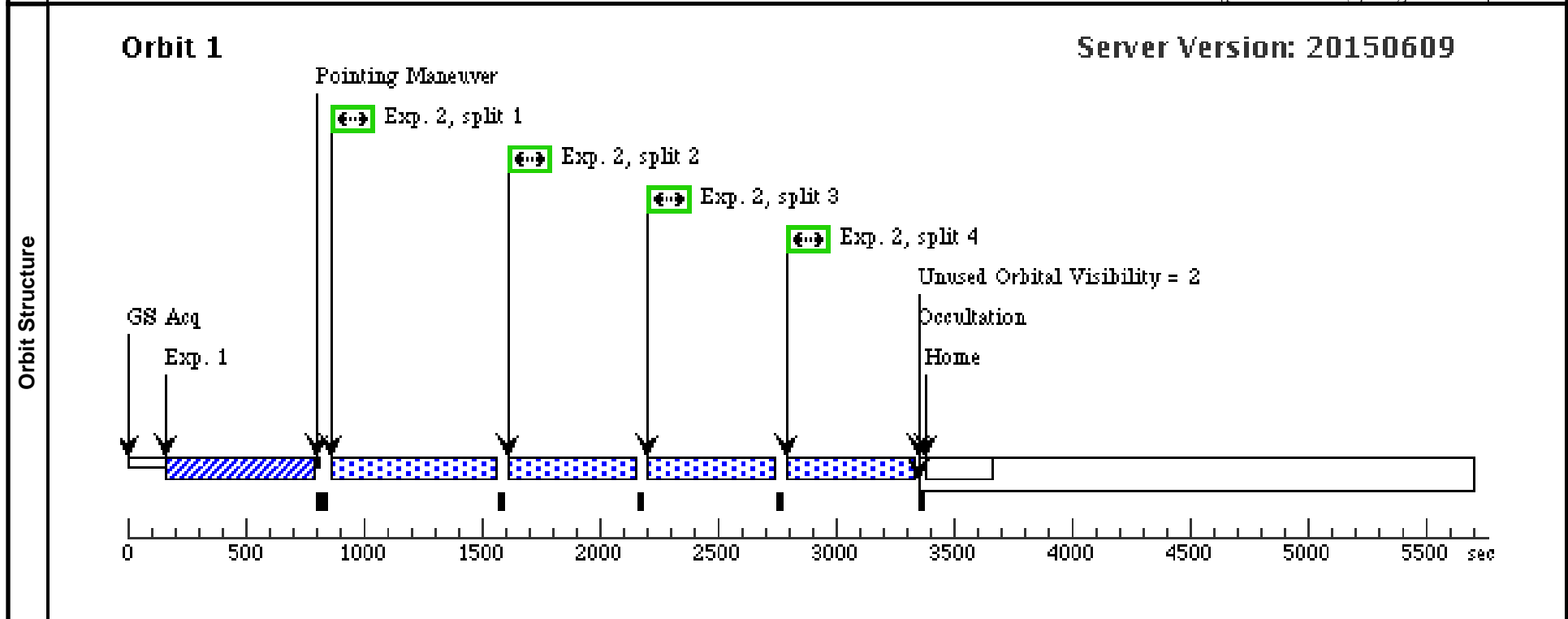
Proposal 14201 - Visit 10 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|---|--|--|--|--|
| Visit | Proposal 14201, Visit 10, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|-----------------|---------------------------------|--------------------------|--|-----------------------|
| | (10) | GP1440+4619 | RA: 14 40 9.9408 (220.0414200d) | Redshift: 0.300758 | V=19.12+/-0.02 | Reference Frame: ICRS |
| | | Alt Name1: GP45 | Dec: +46 19 36.95 (46.32693d) | | GALEX FUV AB Mag = 19.63 +/- 0.12 ; NUV AB Mag = 19.5 6 +/- 0.09 | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720556) | (10) GP1440+4619 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720736) | (10) GP1440+4619 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1944 Secs) | |
| | | | | | | | | | [==>486.0 Secs (Split 1)] [==>486.0 Secs (Split 2)] [==>486.0 Secs (Split 3)] [==>486.0 Secs (Split 4)] | [1] |



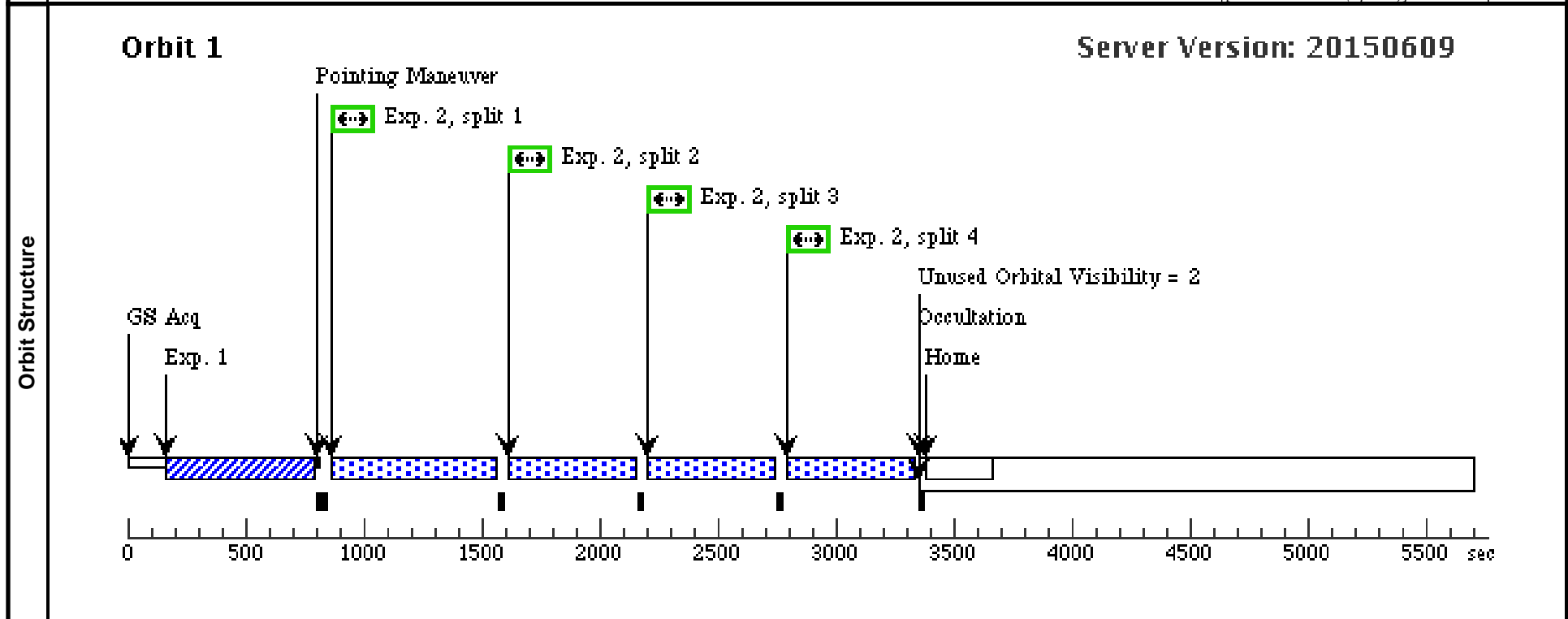
Proposal 14201 - Visit 11 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:28 GMT 2015

| | | | | | |
|--------------|---|--|--|--|--|
| Visit | Proposal 14201, Visit 11, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|-----------------|----------------------------------|--------------------------|--|-----------------------|
| | (11) | GP1454+4528 | RA: 14 54 35.5800 (223.6482500d) | Redshift: 0.268505 | V=20.02+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP46 | Dec: +45 28 56.32 (45.48231d) | | GALEX FUV AB Mag = 20.49 +/- 0.17 ; NUV AB Mag = 20.3 6 +/- 0.12 | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720557) | (11) GP1454+4528 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720732) | (11) GP1454+4528 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1944 Secs) | |
| | | | | | | | | | [==>486.0 Secs (Split 1)] [==>486.0 Secs (Split 2)] [==>486.0 Secs (Split 3)] [==>486.0 Secs (Split 4)] | [1] |



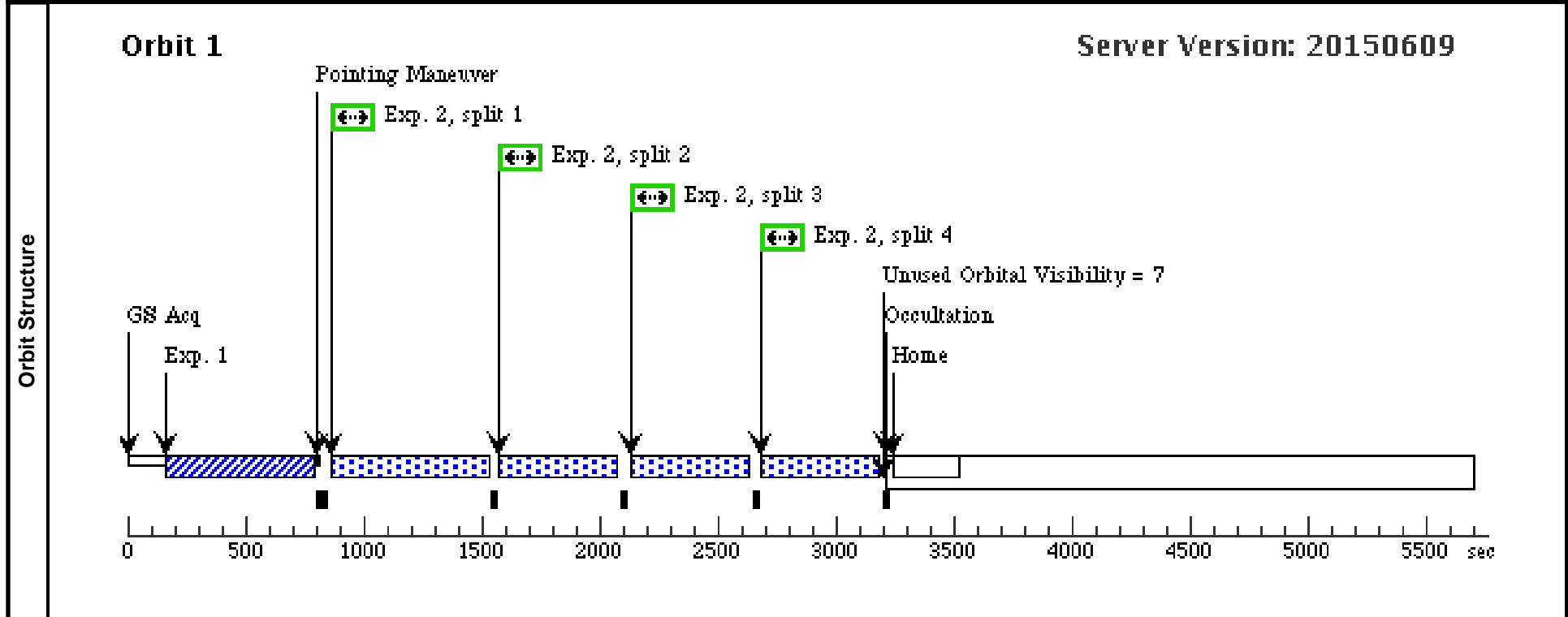
Proposal 14201 - Visit 12 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:29 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 12, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|-----------------------|-----------------|----------------------------------|--------------------------|--|-----------------------|
| | (12) | GP1559+0841 | RA: 15 59 25.9776 (239.8582400d) | Redshift: 0.297036 | V=21.09+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP49 | Dec: +08 41 19.14 (8.68865d) | | GALEX FUV AB Mag = 21.40 +/- 0.10 ; NUV AB Mag = 21.5 3 +/- 0.10 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720558) | (12) GP1559+0841 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (732592) | (12) GP1559+0841 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



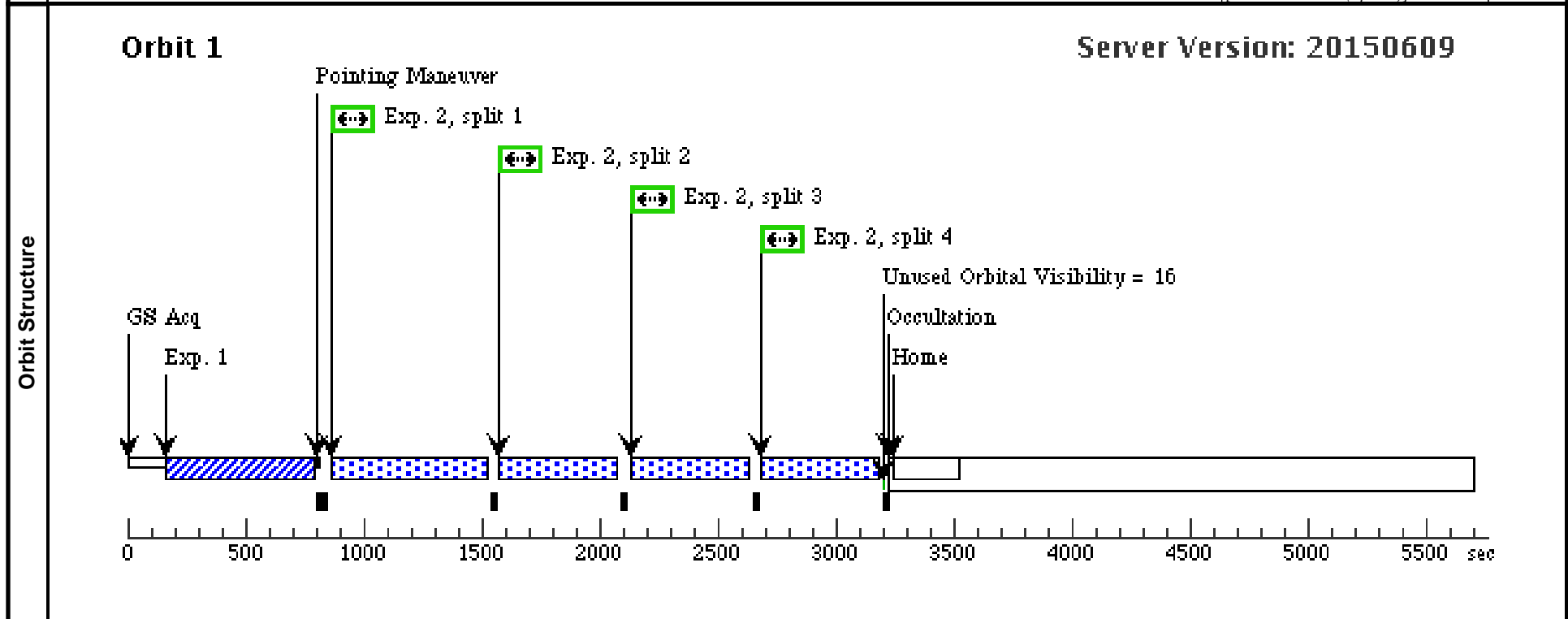
Proposal 14201 - Visit 13 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:29 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 13, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---------------|------------------------------|-----------------|----------------------------------|--------------------------|----------------|-----------------------|
| | (13) | GP1339+1516 | RA: 13 39 28.3032 (204.8679300d) | Redshift: 0.192019 | V=19.75+/-0.02 | Reference Frame: ICRS |
| | | Alt Name1: GP52 | Dec: +15 16 42.13 (15.27837d) | | | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|-----------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720561) | (13) GP1339+1516 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720707) | (13) GP1339+1516 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



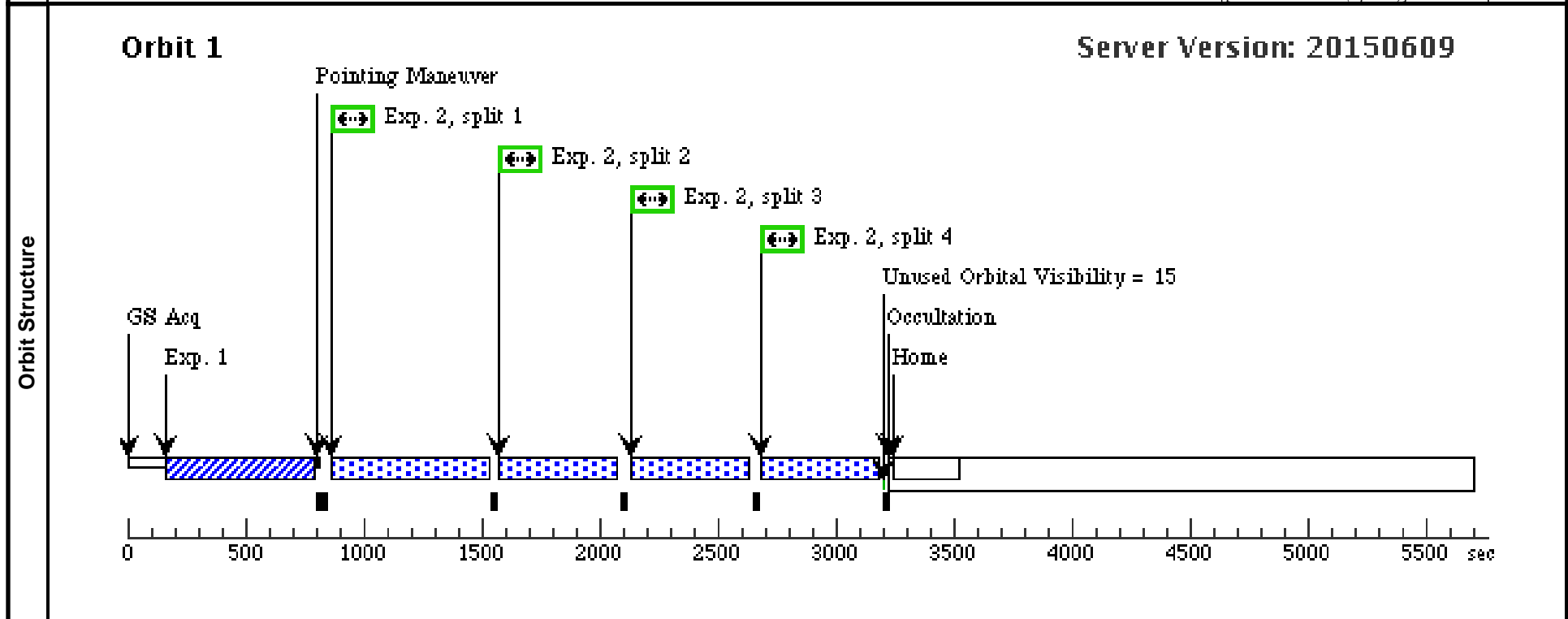
Proposal 14201 - Visit 14 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:29 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 14, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|-----------------------|-----------------|----------------------------------|--------------------------|--|-----------------------|
| | (14) | GP0751+1638 | RA: 07 51 57.7824 (117.9907600d) | Redshift: 0.264713 | V=20.97+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP54 | Dec: +16 38 13.24 (16.63701d) | | | |
| | | | Equinox: J2000 | | GALEX FUV AB Mag = 21.39 +/- 0.11 ; NUV AB Mag = 20.9 5 +/- 0.16 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720564) | (14) GP0751+1638 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720730) | (14) GP0751+1638 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



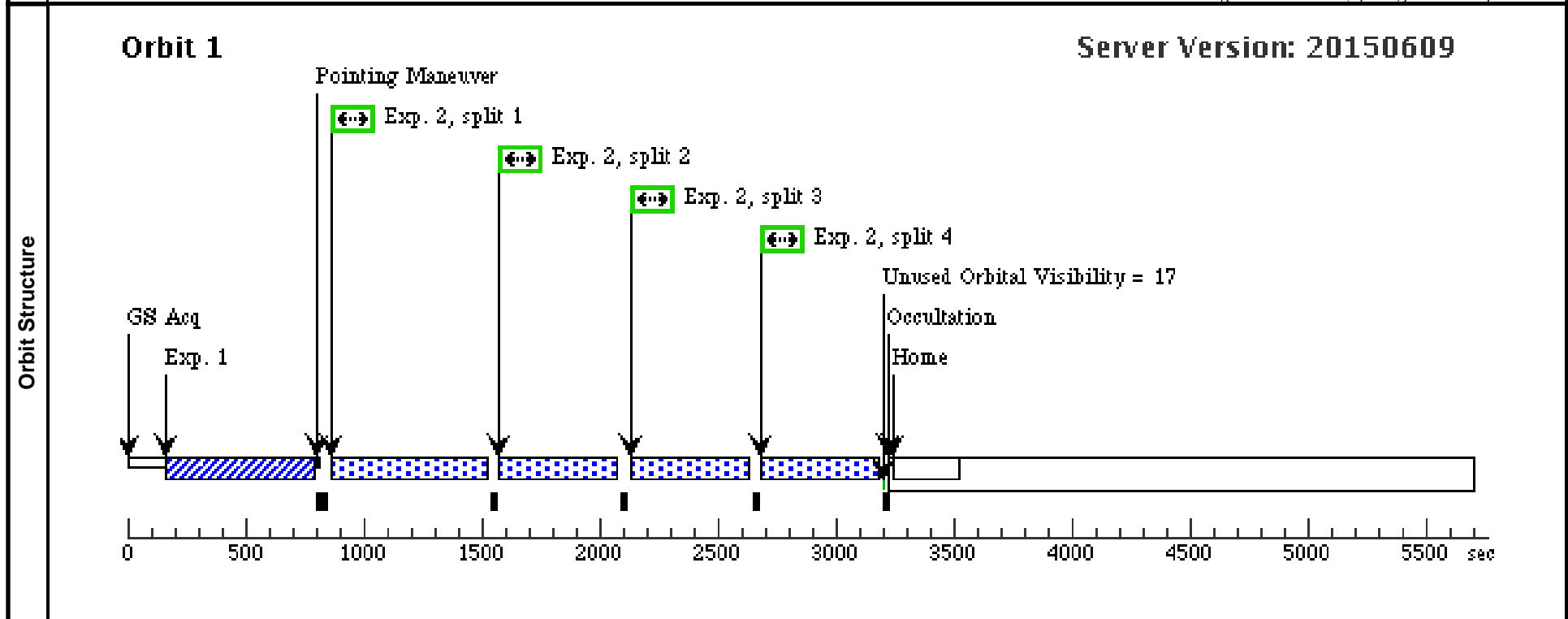
Proposal 14201 - Visit 15 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:29 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 15, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|-----------------------|-----------------|----------------------------------|--------------------------|--|-----------------------|
| | (15) | GP0822+2241 | RA: 08 22 47.6616 (125.6985900d) | Redshift: 0.216187 | V=19.62+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP56 | Dec: +22 41 44.09 (22.69558d) | | GALEX FUV AB Mag = 20.34 +/- 0.06 ; NUV AB Mag = 20.2 1 +/- 0.04 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720565) | (15) GP0822+2241 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720718) | (15) GP0822+2241 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



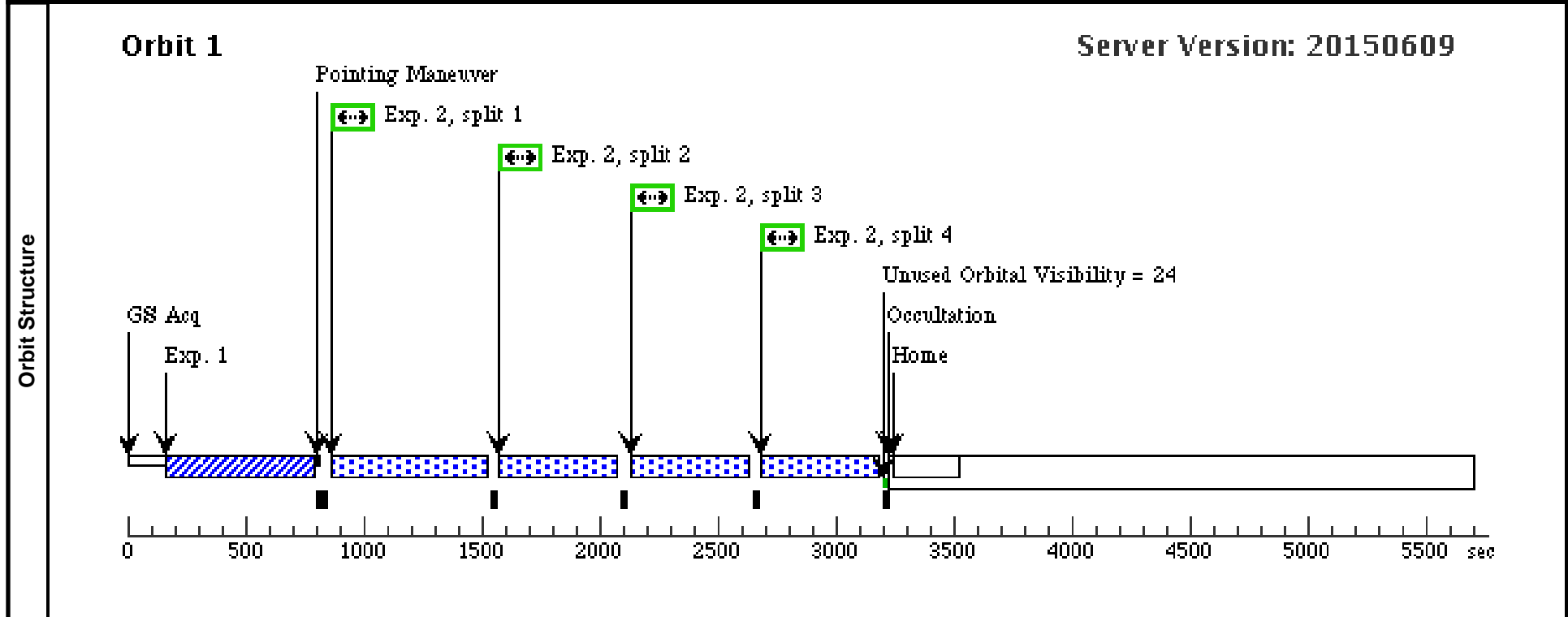
Proposal 14201 - Visit 16 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:29 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 16, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|-----------------------|-----------------|---------------------------------|--------------------------|--|-----------------------|
| | (16) | GP1205+2620 | RA: 12 05 0.6720 (181.2528000d) | Redshift: 0.342607 | V=20.34+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP64 | Dec: +26 20 47.72 (26.34659d) | | GALEX FUV AB Mag = 21.21 +/- 0.39 ; NUV AB Mag = 20.6 9 +/- 0.21 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720568) | (16) GP1205+2620 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720761) | (16) GP1205+2620 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



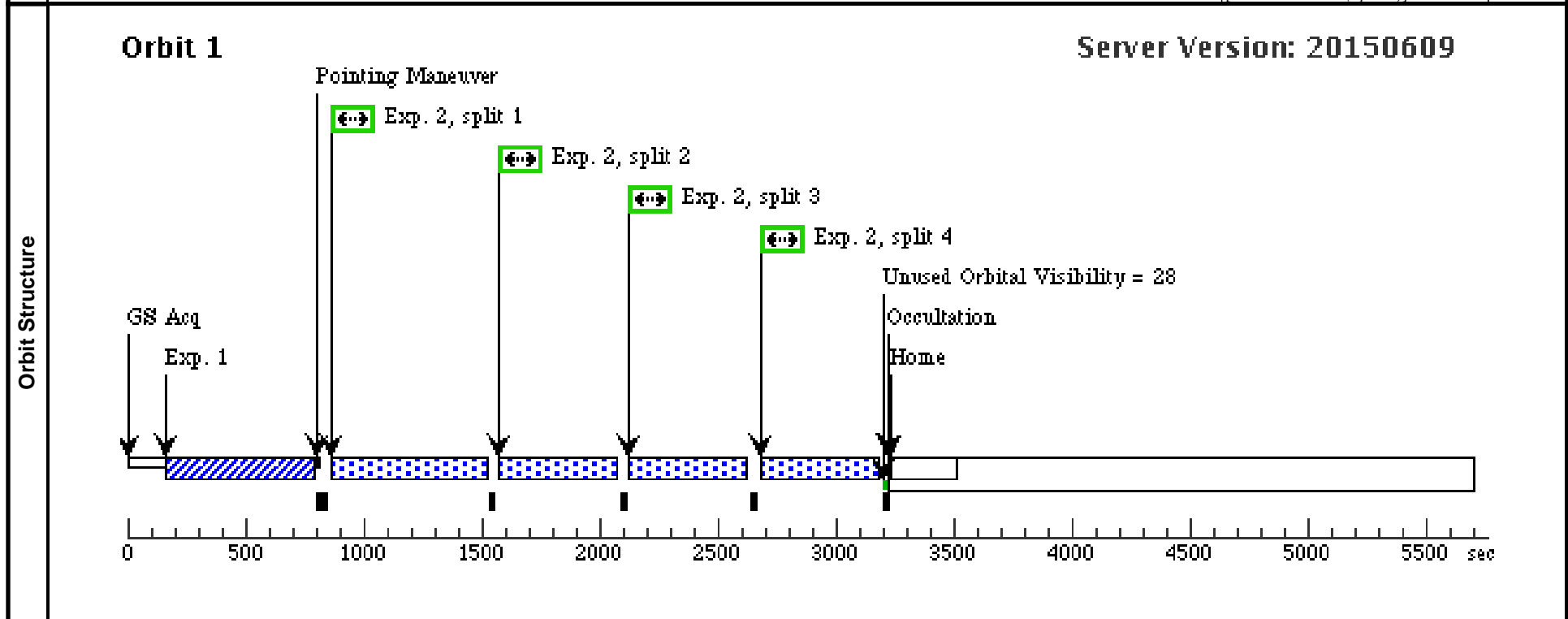
Proposal 14201 - Visit 17 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:29 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 17, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|---------------|-----------------------|-----------------|----------------------------------|--------------------------|----------------|-----------------------|
| | (17) | GP1009+2916 | RA: 10 09 18.9936 (152.3291400d) | Redshift: 0.221918 | V=20.84+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP69 | Dec: +29 16 21.50 (29.27264d) | | | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|-----------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720570) | (17) GP1009+2916 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720721) | (17) GP1009+2916 | COS/FUV, TIME-TAG, PSA | G160M 1589 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



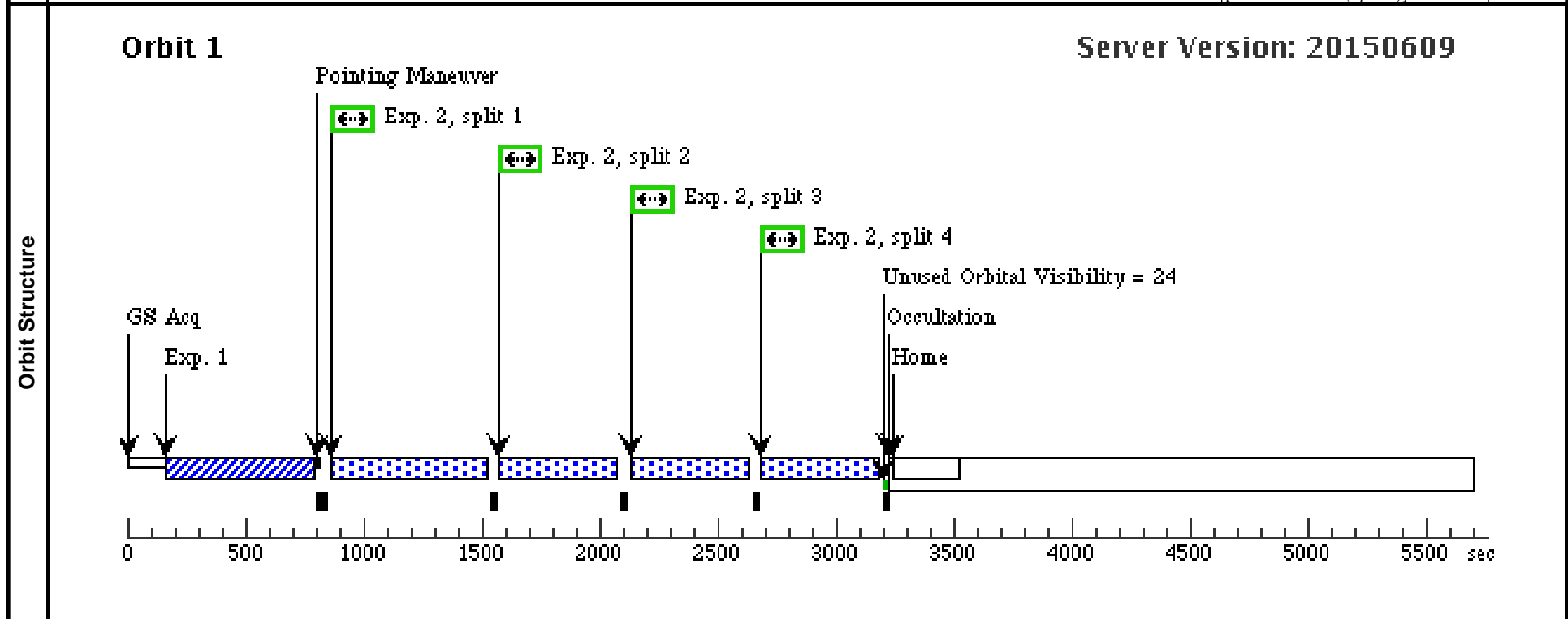
Proposal 14201 - Visit 18 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:30 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 18, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|-----------------------|-----------------|----------------------------------|--------------------------|--|-----------------------|
| | (18) | GP1032+2717 | RA: 10 32 26.9568 (158.1123200d) | Redshift: 0.192461 | V=19.76+/-0.03 | Reference Frame: ICRS |
| | | Alt Name1: GP71 | Dec: +27 17 55.25 (27.29868d) | | GALEX FUV AB Mag = 20.55 +/- 0.06 ; NUV AB Mag = 20.1 6 +/- 0.04 | |
| | Comments: Extended=NO | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720572) | (18) GP1032+2717 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720712) | (18) GP1032+2717 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



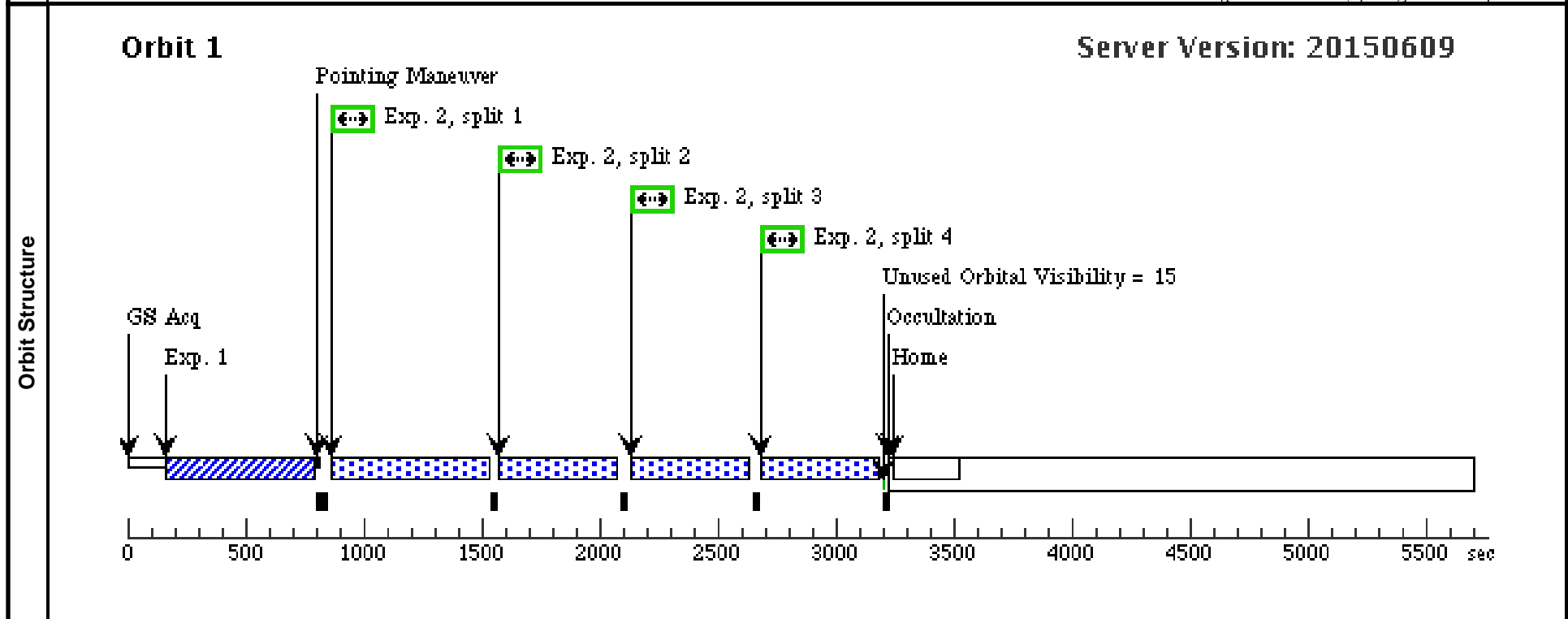
Proposal 14201 - Visit 19 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:30 GMT 2015

| | | | | | |
|--------------|---|--|--|--|--|
| Visit | Proposal 14201, Visit 19, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|--------------------------------|---|--------------------------|---|-----------------------|
| | (19) | GP0927+1740 Alt Name1: GP73 | RA: 09 27 28.6776 (141.8694900d) Dec: +17 40 18.62 (17.67184d) Equinox: J2000 | Redshift: 0.288313 | V=20.4+/-0.04 GALEX FUV AB Mag = 21.14 +/- 0.26 ; NUV AB Mag = 20.7 5 +/- 0.06 | Reference Frame: ICRS |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--|---------------|--------|--|-------|
| | 1 | (720574) | (19) GP0927+1740 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) [==>] | [1] |
| | 2 | (732591) | (19) GP0927+1740 | COS/FUV, TIME-TAG, PSA | G160M 1623 A | FP-POS=ALL; BUFFER-TIME=5000; FLASH=YES; SEGMENT=BOTH | | | 500 Secs (1800 Secs) [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |



Proposal 14201 - Visit 20 - Lyman alpha escape in Green Pea galaxies (give peas a chance)

Fri Sep 11 01:12:30 GMT 2015

| | | | | | |
|--------------|--|--|--|--|--|
| Visit | Proposal 14201, Visit 20, implementation | | | | |
| | Diagnostic Status: No Diagnostics | | | | |
| | Scientific Instruments: COS/NUV, COS/FUV | | | | |
| | Special Requirements: (none) | | | | |

| Fixed Targets | # | Name | Target Coordinates | Targ. Coord. Corrections | Fluxes | Miscellaneous |
|----------------------|------------------------------|-----------------|----------------------------------|--------------------------|----------------------------|-----------------------|
| | (20) | GP0805+0925 | RA: 08 05 18.0432 (121.3251800d) | Redshift: 0.330344 | V=21.11+/-0.04 | Reference Frame: ICRS |
| | | Alt Name1: GP77 | Dec: +09 25 33.53 (9.42598d) | | SDSS u-band AB Mag = 21.54 | |
| | | | Equinox: J2000 | | | |
| | <i>Comments: Extended=NO</i> | | | | | |

| Exposures | # | Label (ETC Run) | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time (Total)/[Actual Dur.] | Orbit |
|------------------|---|-----------------|------------------|-------------------------|-----------------|--------------------------------------|----------------------------|--------|--|-------|
| | 1 | (720624) | (20) GP0805+0925 | COS/NUV, ACQ/IMAGE, PSA | MIRRORA | | | | 200 Secs (200 Secs) | |
| | | | | | | | | | [==>] | [1] |
| | 2 | (720756) | (20) GP0805+0925 | COS/FUV, TIME-TAG, PSA | G160M 1577 A | FP-POS=ALL; BUFFER-TIME=50 00; | FLASH=YES; SEGMENT=BOTH | | 500 Secs (1800 Secs) | |
| | | | | | | | | | [==>450.0 Secs (Split 1)] [==>450.0 Secs (Split 2)] [==>450.0 Secs (Split 3)] [==>450.0 Secs (Split 4)] | [1] |

