



12801 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mission

Cycle: 19, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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|--|--|------------------------------|
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VISITS

| <i>Visit</i> | <i>Targets used in Visit</i> | <i>Configurations used in Visit</i> | <i>Orbits Used</i> | <i>Last Orbit Planner Run</i> | <i>OP Current with Visit?</i> |
|--------------|-------------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 31 | (31) PLUTO-CHARON-1ST-QUADRANT-PLUS | WFC3/UVIS | 3 | 19-Jun-2012 22:31:17.0 | yes |
| 32 | (34) PLUTO-CHARON-4TH-QUADRANT-PLUS | WFC3/UVIS | 3 | 19-Jun-2012 22:31:42.0 | yes |
| 33 | (22) PLUTO-CHARON-2ND-QUADRANT | WFC3/UVIS | 3 | 19-Jun-2012 22:32:05.0 | yes |
| 41 | (32) PLUTO-CHARON-2ND-QUADRANT-PLUS | WFC3/UVIS | 3 | 19-Jun-2012 22:32:27.0 | yes |

Proposal 12801 (STScI Edit Number: 34, Created: Tuesday, June 19, 2012 9:38:04 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> |
|--------------|-------------------------------------|-------------------------------------|--------------------|-------------------------------|-------------------------------|
| 42 | (21) PLUTO-CHARON-1ST-QUADRANT | WFC3/UVIS | 3 | 19-Jun-2012 22:32:51.0 | yes |
| 43 | (33) PLUTO-CHARON-3RD-QUADRANT-PLUS | WFC3/UVIS | 3 | 19-Jun-2012 22:33:11.0 | yes |
| 61 | (24) PLUTO-CHARON-4TH-QUADRANT | WFC3/UVIS | 3 | 19-Jun-2012 22:33:31.0 | yes |
| 62 | (23) PLUTO-CHARON-3RD-QUADRANT | WFC3/UVIS | 3 | 19-Jun-2012 22:33:52.0 | yes |
| 63 | (21) PLUTO-CHARON-1ST-QUADRANT | WFC3/UVIS | 3 | 19-Jun-2012 22:34:12.0 | yes |
| 70 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:34:30.0 | yes |
| 71 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:34:44.0 | yes |
| 72 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:34:57.0 | yes |
| 73 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:35:11.0 | yes |
| 74 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:35:24.0 | yes |
| 75 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:35:38.0 | yes |
| 76 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:35:51.0 | yes |
| 77 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:36:06.0 | yes |
| 78 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:36:19.0 | yes |
| 79 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:36:32.0 | yes |
| 80 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:36:45.0 | yes |
| 81 | (1) PLUTO | WFC3/UVIS | 1 | 19-Jun-2012 22:36:58.0 | yes |
| 82 | (35) PLUTO-COPY | WFC3/UVIS | 1 | 19-Jun-2012 22:37:11.0 | yes |
| 83 | (35) PLUTO-COPY | WFC3/UVIS | 1 | 19-Jun-2012 22:37:23.0 | yes |
| 84 | (35) PLUTO-COPY | WFC3/UVIS | 1 | 19-Jun-2012 22:37:36.0 | yes |
| 85 | (35) PLUTO-COPY | WFC3/UVIS | 1 | 19-Jun-2012 22:37:53.0 | yes |

43 Total Orbits Used

ABSTRACT

Our team's discovery last summer of a faint ($V \sim 26.1$) new satellite (provisionally called "P4") around Pluto demonstrated that the Pluto system is even richer with orbiting material than previously suspected. Moreover, P4's location near yet another Charon mean motion resonance (MMR), as Nix and Hydra also are, suggests that still more Charon MMRs could be populated with small, as yet undetected, satellites. Further still, there is now some evidence from HST for a debris ring inside Charon's orbit. While these are exciting developments scientifically, they have, more importantly, exposed a potentially catastrophic threat to NASA's New Horizons (NH) spacecraft as it passes through the Pluto system in July 2015 - i.e., debris ejected from Pluto's small satellites may be creating hazards to flight. We propose a Director's Discretionary Time (DDT) program comprised of 34 orbits of Hubble observations for our time-critical need in 2012 to investigate potential hazards to NASA's New Horizons spacecraft as it flies through the Pluto system in July 2015, and to certify potential new trajectory options for the NH mission if it must "bail out" to a safe haven. The results from this Hubble DDT program will be unique and will have profound implications for the New Horizons mission, a top scientific priority of the last NASA Planetary Decadal Survey.

OBSERVING DESCRIPTION

All images will be taken with the WFC3 camera using the F350LP filter for maximum sensitivity. For solar-type objects, the throughput of the F350LP filter is $\sim 1.6x$ larger than for the F606W filter, which was used during the Jun-Jul 2011 observations. All images are taken with the UVIS2-C512-SUB aperture (512 x 512 array) to minimize overhead.

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Our program has two principal measurement objectives: (1) search for faint satellites ($V \leq 24.5$) and debris ($I/F \leq 3 \times 10^{-7}$) within Charon's orbit (i.e., within $\sim 0.9''$ of Pluto), and (2) search for even fainter satellites ($V \leq 28$) and debris ($I/F \leq 1 \times 10^{-7}$) in Charon's instability strip (where we hope the SHBOT aim point will be) and between Hydra's orbit and the edge of the CCD sub-array (which extends to $\sim 3 \times$ Hydra's orbit; the SHBOT aim point would have to be in this region if the Charon instability strip is deemed to be unsafe).

These two different objectives require two different observing strategies. We must take many (32 total per orbit, 16 at each of two dither locations) relatively short exposures (30s) to search for satellites within Charon's orbit, going deep but preventing saturation in the region of interest. To achieve maximum sensitivity for the deep search outside Charon's orbit, we use individual exposure times of 175s with enough different images (12 total per orbit, 6 at each of two dither locations) to provide excellent rejection of cosmic rays and star trails, while still yielding long total exposure times (the total exposure time per orbit is 2.2x the value achieved for the orbits using 30s exposures).

Objective #1 (search for satellites and debris within Charon's orbit):

4 pairs of visits with 2 orbits per visit = $4 \times 2 \times 2 = 16$ orbits

Each orbit consists of the following exposures:

1 x 3s exposure to get an unsaturated image of Pluto

16 x 30s exposures at one location on the CCD

16 x 30s exposures at a dithered location on the CCD

We request two orbits per visit because comparing the positions of objects in two consecutive orbits is a powerful technique for determining that the object is in orbit around Pluto. The number of visits is dictated by the requirement to detect any satellite that could be on a stable orbit inside Charon's orbit. Among the latter, objects in the 1:2 MMR with Charon appear to be the most promising candidates (representative orbits are shown by the blue dotted curves in figure 3), and we have designed an observing strategy to detect those, if they exist. For the first three pairs of visits (i.e., for the first six visits), each visit should be separated from the preceding visit by ~ 1.6 days, which is half the orbital period of the 1:2 MMR satellites. If an object in the 1:2 MMR is detected during the first visit, it will probably be too close to Pluto to be seen 1.6 days later (i.e., in the second visit of the first pair), but should be observable 3.2 days later (i.e., in the first visit of the second pair). Similarly, an object in the 1:2 MMR that is not seen in the first visit, should be observable 1.6 days later, and then again 3.2 days after that first detection (i.e., 4.8 days after the first visit). By adding a third

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pair of visits, we expect to cover virtually the entire orbital phase space for the 1:2 MMR satellites. However, we also want to cover potential satellites in stable, non-resonant orbits, and which might be missed if we only use a regular observing cadence synchronized to the 1:2 MMR objects. Our simulations suggest we need two additional visits (i.e., bringing the grand total to eight visits), with a different time separation than the others, to provide ~90% phase space coverage of potential satellites orbiting between Pluto and Charon. In addition to the cadence, other parameters we will want to optimize in phase2 (when possible) include the Pluto-Charon separation (minimized to reduce the number of unusable pixels in the area of interest) and Hubble's roll angle (to keep Charon at a fixed CCD location for two consecutive orbits and perhaps to put Pluto and Charon in the same CCD column). Note that these observations will also provide a deep search for debris within Charon's orbit, although the sensitivity will not be as high as for the observations described below.

Objective #2 (search for satellites and debris from Charon's orbit out to ~10" from Pluto):

3 pairs of visits with 3 orbits per visit = $3 \times 2 \times 3 = 18$ orbits

Each orbit consists of the following exposures:

1 x 3s exposure to get an unsaturated image of Pluto

6 x 175s exposures at one location on the CCD

6 x 175s exposures at a dithered location on the CCD

We will follow the same technique employed during the June-July 2011 observations to optimize the search for rings. That is, Hubble's roll angle and the time between the visits in each pair will be adjusted so that Pluto and Charon have the same relative locations on the CCD for each visit, while the ring orientation on the CCD changes by 90 degrees between the two visits. Thus, subtracting the combined image (i.e., the combination of all images in three consecutive orbits) from one visit from the combined image from its paired visit will yield a unique "crossed ellipses" signature (one positive and one negative), if a ring is present. Repeating this process for a total of three different times (i.e., taking three pairs of visits) will allow us to observe at three different orientations of the Pluto system, thus convincingly confirming or refuting the tentative detection of a ring inside Charon's orbit (Fig. 2). Comparing the images from three consecutive orbits provides a powerful tool for detecting real objects in orbit around Pluto. (For satellites outside Hydra's distance, blinking the images between the first and third orbits is necessary to detect plutocentric motion.) By combining the images from all three orbits within a visit, by using a wider filter, and by obtaining three pairs of visits, we estimate that the I/F limit reached by our proposed program will be ~3x lower than achieved during our June 2011 observations.

Our Total Request is, therefore, 34 orbits.

Most of the data collected by our program will be in the background noise limited regime. Scattered and diffracted light from Pluto and Charon dwarf all other background sources. P4 ($V \sim 26$) should be detectable in most, if not all, of the individual 175s images (it was detected in 37 of the 48 images taken during cycle 17 [GO-11556] using F350LP with 180s exposure times), which is a nice feature to have. Using 30s exposures allows us to probe the dynamically stable region inside Charon's orbit, to within $\sim 0.4''$ of the center of Pluto.

The intensity of the scattered light level is well determined from our previous Hubble observations, and we have used these numbers in the WFC3 ETC to calculate the sensitivity of our planned observations. The zodiacal light in the ETC is scaled by a factor of 11 to simulate the scattered light level at Nix's distance from Pluto. A scaling factor of 170 is used to simulate the scattered light level at $\sim 0.4''$ from Pluto, which defines the inner edge of the orbital stability zone within Charon's orbit. Despite these high background light levels, the ETC shows $\text{SNR}=9.2$ for $V=26.7$ for a single orbit of observations at Nix's distance from Pluto (using a 3 pixel radius aperture; WFC3 ETC ID 231401) when using the 175s exposures. We find $\text{SNR}=3.2$ is achieved for $V=26.0$ in a single orbit of observations at $\sim 0.4''$ from Pluto (WFC3 ETC ID 233059) when using the 30s exposures.

These ETC results are generally consistent with our image-based simulations, in which we injected synthetic objects in the Hubble data obtained in September 2011 (Figs. 7-8). For regions outside of Charon's orbit that are clear of image artifacts and star trail residuals, we can detect down to $V \sim 27.5$ in a single orbit of observations using 12 x 175s exposures. By co-adding data from two orbits, the sensitivity limit can be pushed down to $V \sim 28.1$. For satellites outside of Hydra's orbit, we can reach $V \sim 28.3$ by co-adding data from three consecutive orbits. In the region inside Charon's orbit, systematic effects associated with the telescope's "focus breathing" and optical imperfections limit our sensitivity compared to the ETC predictions, which are based on counting statistics. We find that satellites having $V \sim 24.5$, perhaps even as low as $V \sim 25$, should be detectable inside Charon's orbit.

ADDITIONAL COMMENTS

We request a total of 34 orbits near the time of the next Pluto opposition period in late-June 2012. We have identified a 2-week window that is optimal for our program (2012 Jun 18 through Jul 01, inclusive; indicated by the green curve in Fig. 9), but some of our observations can be scheduled outside this window, if necessary. Our program requires specific roll angles and observing cadences to optimize the search for satellites and debris, and we are already working with STScI's premier moving target Program Coordinator (Tony Roman) on the scheduling of these observations. Tony expertly handled the scheduling of Showalter's observing program last summer (GO-12436), which required roll angle and timing

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constraints. The types of observations we're requesting during the 2012 Pluto opposition are similar to those successfully performed in June 2011. Our initial analysis (including in consultation with Tony) indicates that our program can be scheduled in a way that meets the objectives of our DD program.

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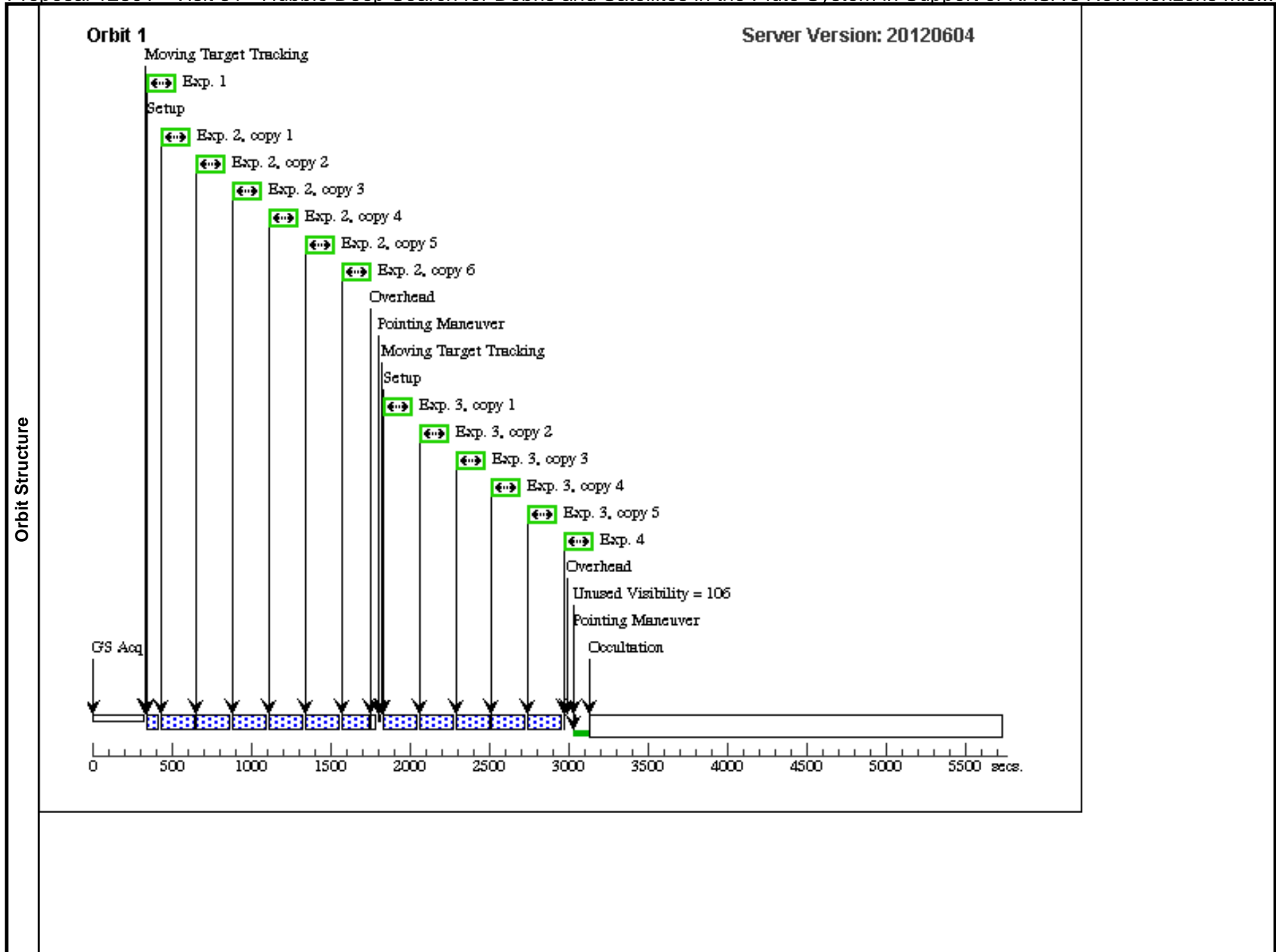
| | | | | | | | |
|--|---|--|-------------|----------------|----------------|-----------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 31, scheduled Wed Jun 20 02:38:05 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 188D TO 196 D; BETWEEN 27-JUN-2012:18 AND 27-JUN-2012:19</p> <p><i>Comments: Pluto with its prograde rotation pole oriented downward, parallel to the UVIS Y-axis; Charon on the diagonal at lower right (1st orbital quadrant). To be scheduled along with Visit 32 or 33.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (31) | | PLUTO-CHARON- 1ST-QUADRANT- PLUS | STD=PLUTO | | | OLG OF CHARON BETWEEN 15 50 | EARTH |
| <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | | |

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| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|---|---------------------------------------|---|--------------------------------------|---------------|--------------|---------------------------|--------------------------------------|--|-------|
| | 1 | F350LP, 1 x 3 s | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0. 084 | Sequence 1-4 Non-Int in Visit 31 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 31 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with d ither | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | Sequence 1-4 Non-Int in Visit 31 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 31 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0. 461 | Sequence 5-7 Non-Int in Visit 31 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 31 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with d ither | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0. 671 | Sequence 5-7 Non-Int in Visit 31 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0 .294 | Sequence 8-10 Non-Int in Visit 31 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 31 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

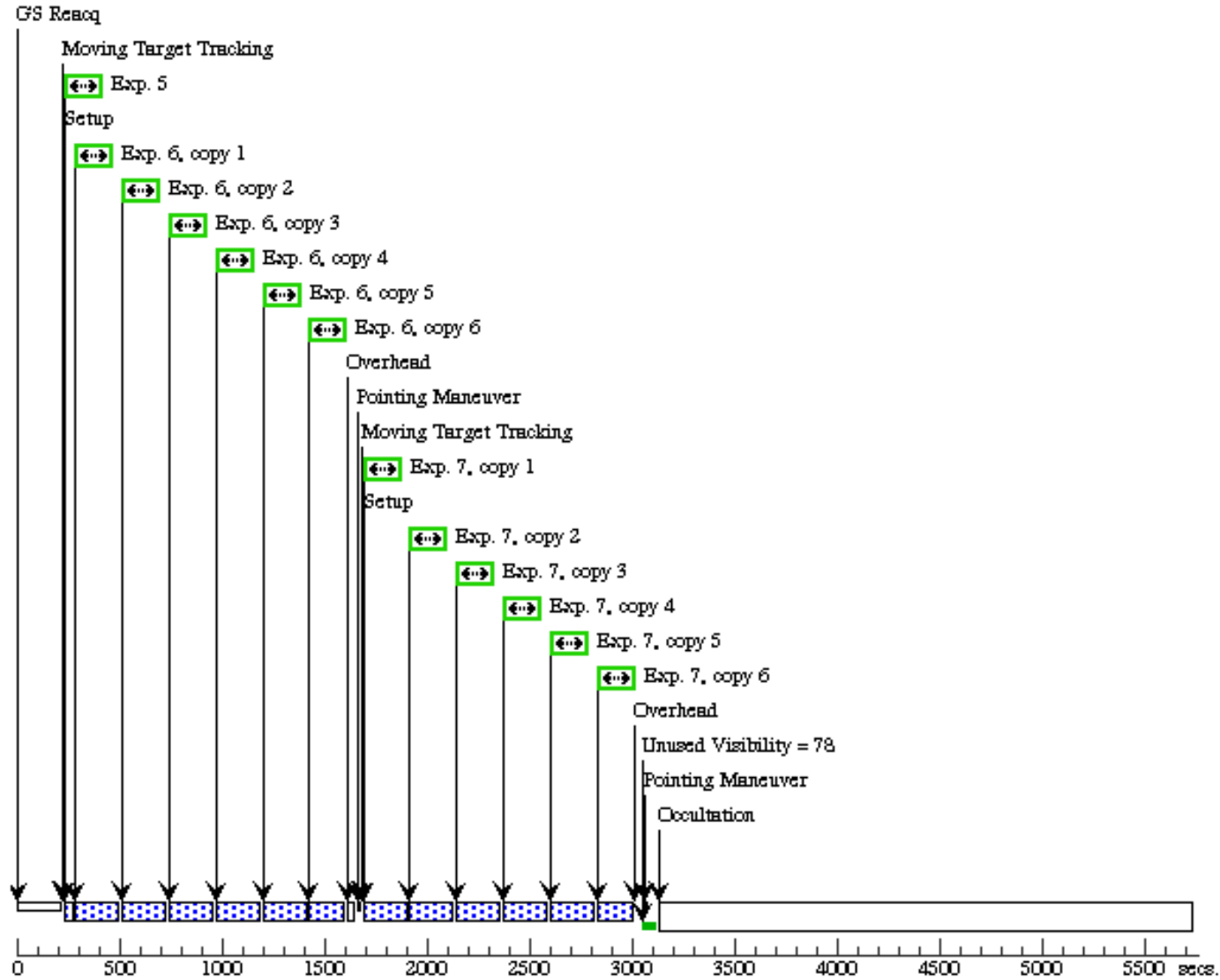
Proposal 12801 - Visit 31 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

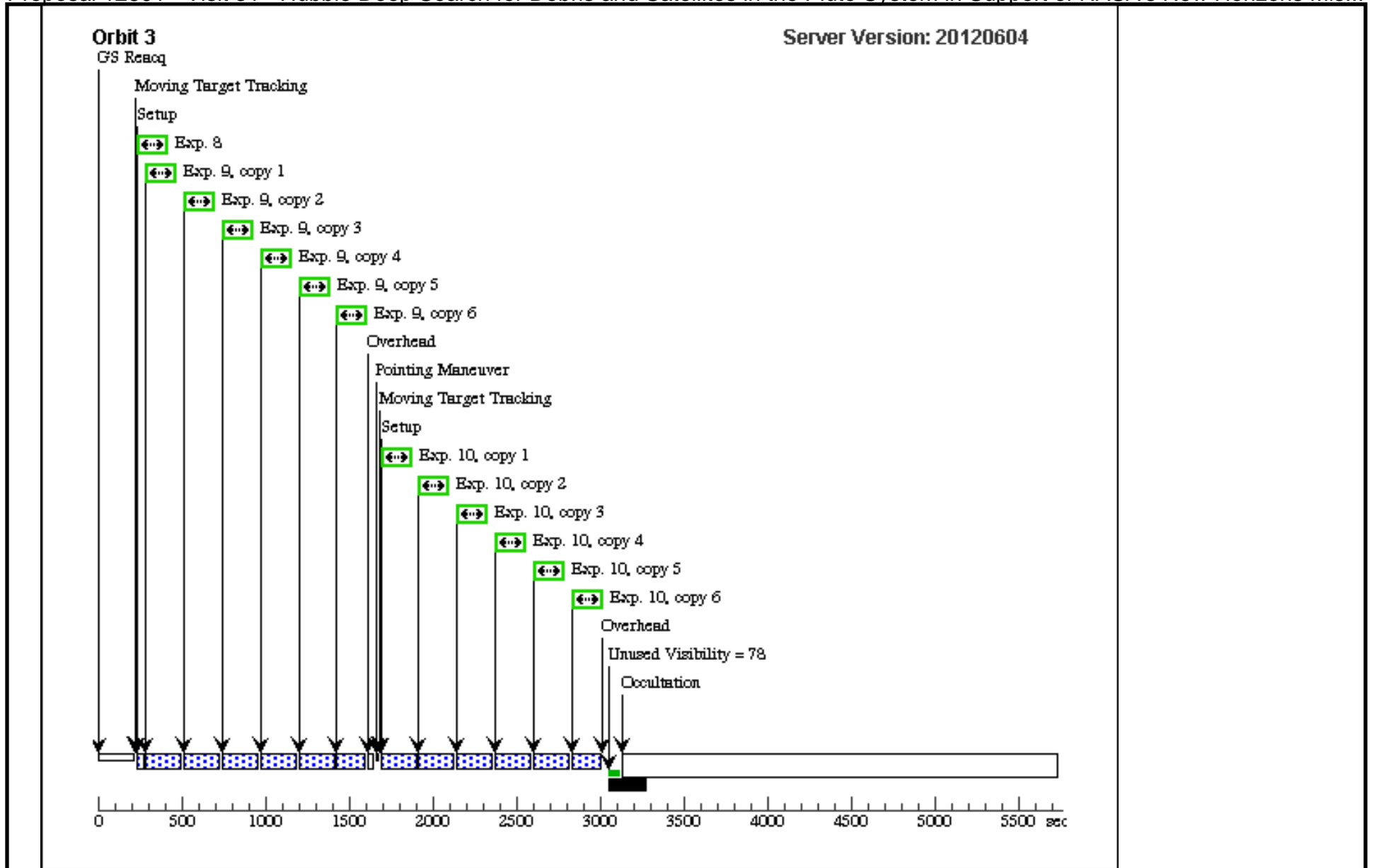
| | | | | | | | | | |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (31) PLUTO-CHAR ON-1ST-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 31 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 32 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:10 GMT 2012

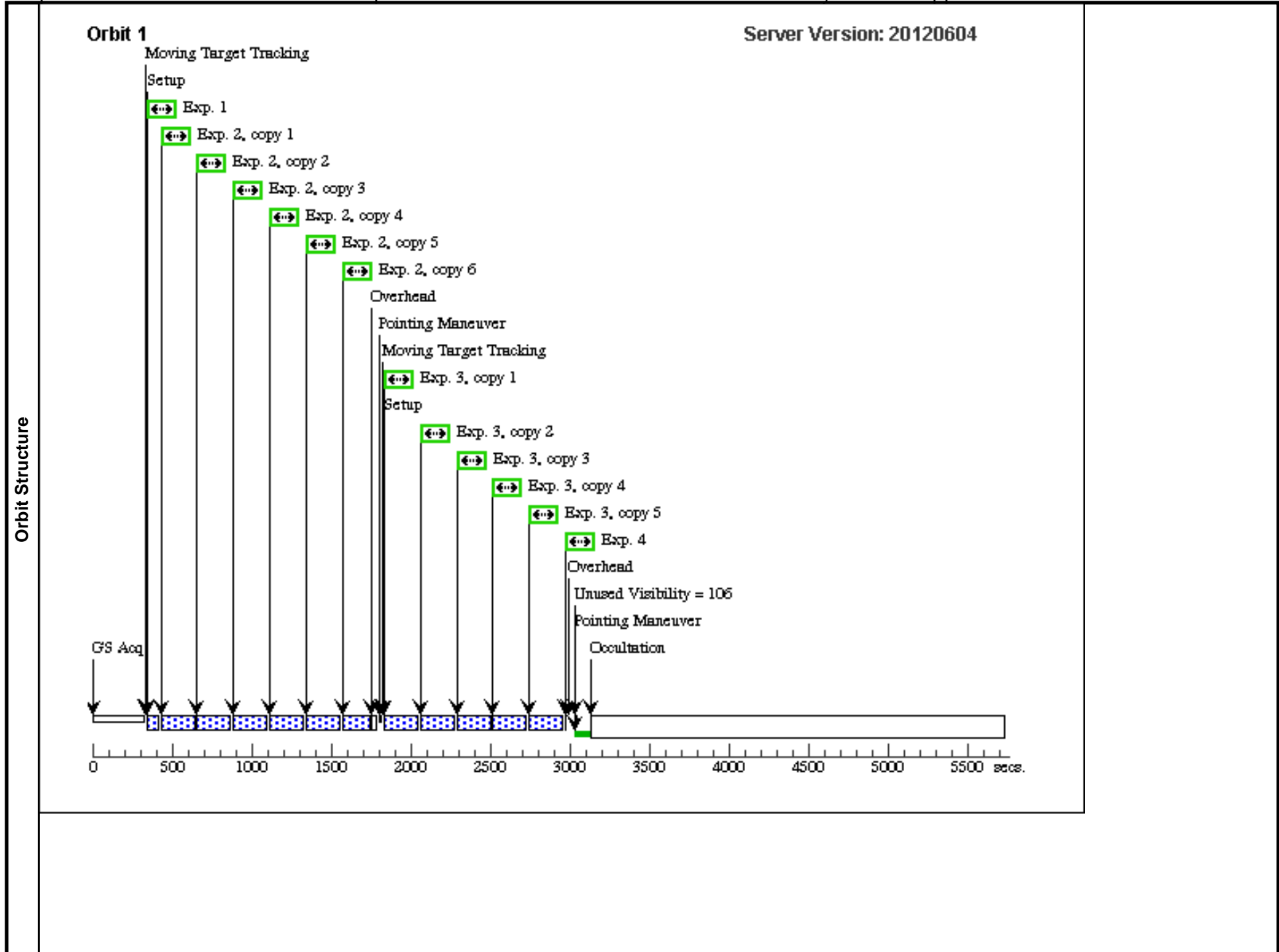
| | | | | | | | |
|--------------|---|--|-------------|----------------|----------------|----------------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 32, scheduling</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 98D TO 106 D; BETWEEN 09-JUL-2012:07:45:00 AND 09-JUL-2012:08:45:00; ON HOLD</p> <p><i>Comments: Pluto with its prograde rotation pole pointed rightward, perpendicular to the UVIS Y-axis; Charon on the diagonal at lower right (4th orbital quadrant). To be scheduled along with Visit 31. Either Visit 32 or 33 must be scheduled, but not both. To match the position of Charon most accurately, the optimal timing of Visit 32 would be either 0.8 or 1.8 Charon orbits (5.15 days or 11.53 days) later than Visit 31.</i></p> <p><i>On Hold Comments: Execute either Visit 32 or Visit 33, but not both.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (34) | PLUTO-CHARON- 4TH-QUADRANT- PLUS | STD=PLUTO | | | OLG OF CHARON BETWEEN 308 340 | EARTH |
| | <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | |

Proposal 12801 - Visit 32 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|--------------------------------|---------------------------------------|-----------------------------------|--------------|---------------|-----------------------|-----------------------------------|--|-----|
| Exposures | 1 | F350LP, 1 x 3 s | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0.084 | Sequence 1-4 Non-Int in Visit 32 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 32 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with dither | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0.294 | Sequence 1-4 Non-Int in Visit 32 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 32 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0.461 | Sequence 5-7 Non-Int in Visit 32 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 32 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with dither | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0.671 | Sequence 5-7 Non-Int in Visit 32 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0.294 | Sequence 8-10 Non-Int in Visit 32 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 32 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

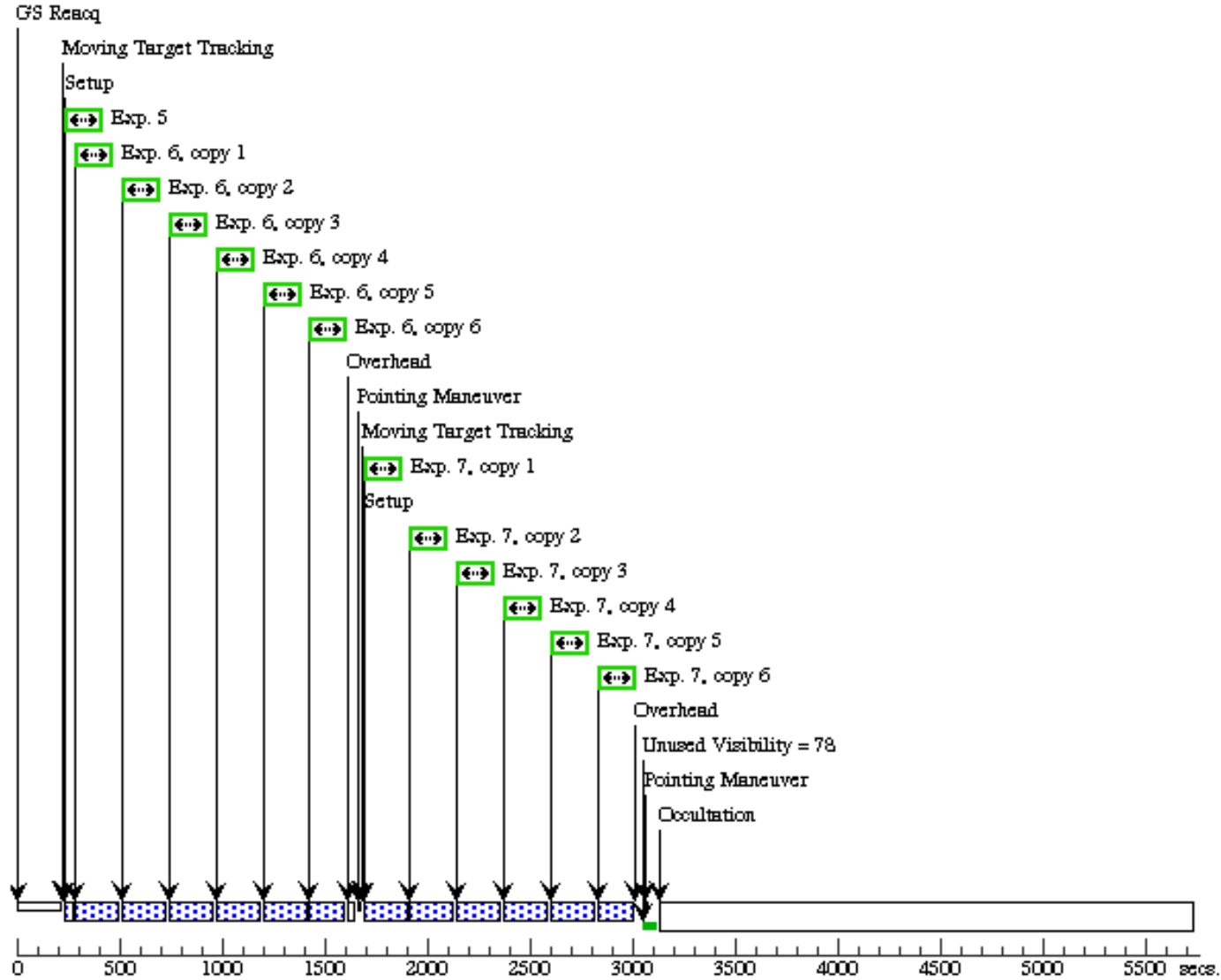
Proposal 12801 - Visit 32 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

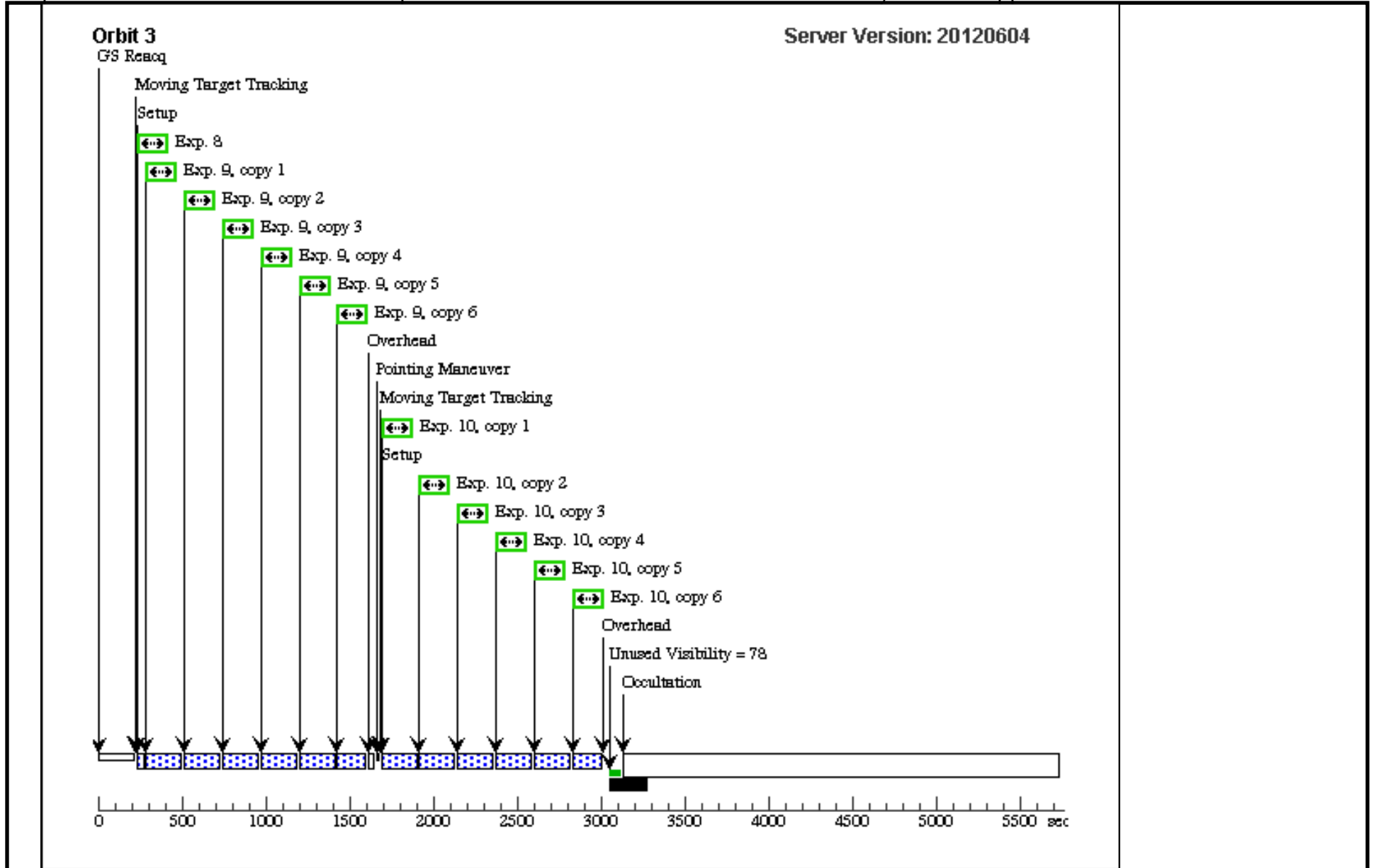
| | | | | | | | | | |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (34) PLUTO-CHAR ON-4TH-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 32 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 33 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:14 GMT 2012

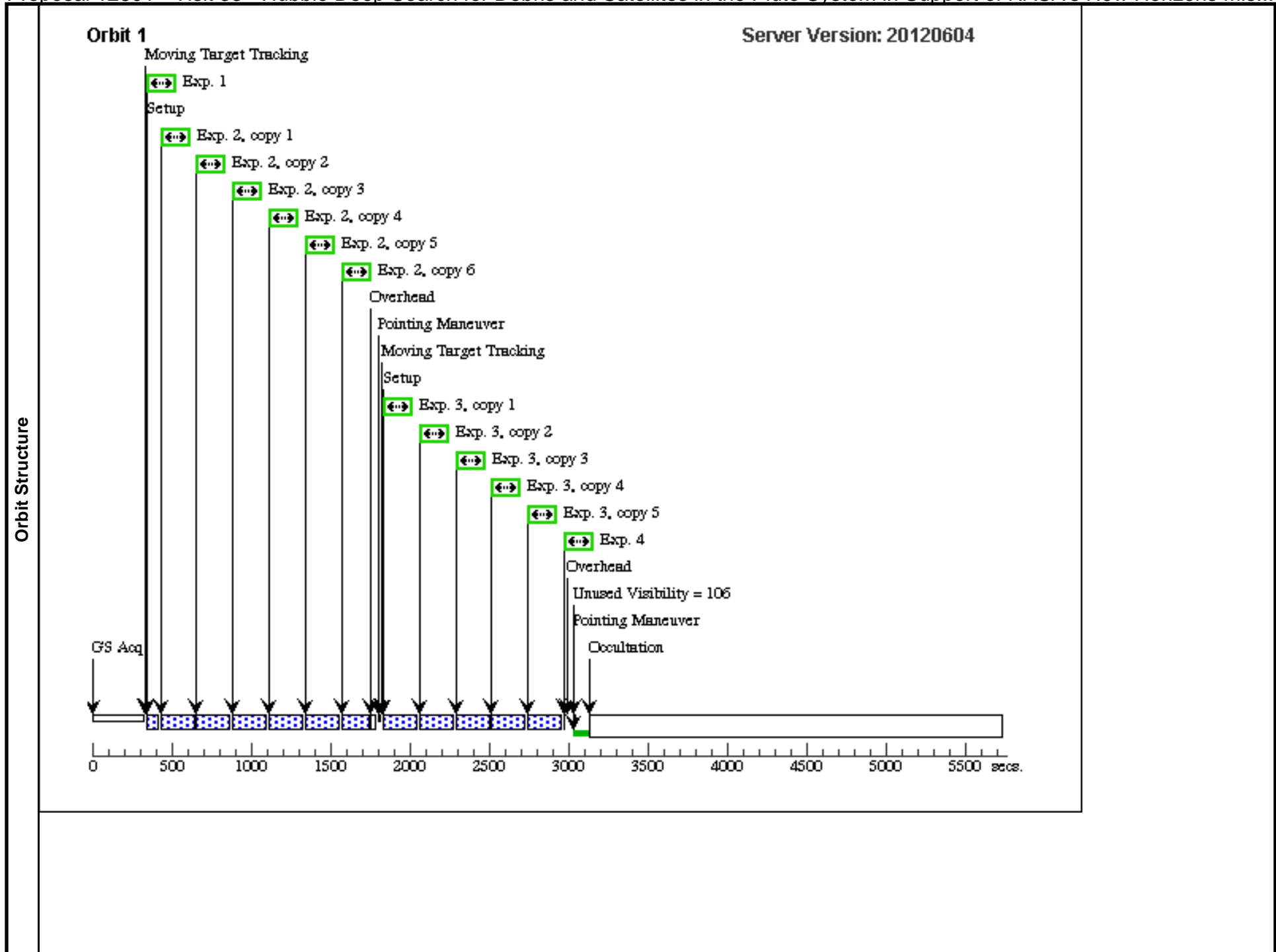
| | | | | | | | |
|--------------|--|-------------------------------|-------------|----------------|----------------|----------------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 33, withdrawn</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 278D TO 286 D; BETWEEN 06-JUN-2012:00:00:00 AND 26-JUN-2012:00:00:00; ON HOLD</p> <p><i>Comments: Pluto with its prograde rotation pole oriented leftward, perpendicular to the UVIS Y-axis; Charon on the diagonal at lower right (2nd orbital quadrant). To be scheduled along with Visit 31. Either Visit 32 or 33 must be scheduled, but not both. To match the position of Charon most accurately, the optimal timing of Visit 33 would be either 0.7 or 1.7 Charon orbits (4.43 or 10.82 days) earlier than Visit 31.</i></p> <p><i>On Hold Comments: Execute either Visit 32 or Visit 33, but not both.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (22) | PLUTO-CHARON- 2ND-QUADRANT | STD=PLUTO | | | OLG OF CHARON BETWEEN 130 160 | EARTH |
| | <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | |

Proposal 12801 - Visit 33 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|--------------------------------|----------------------------------|-----------------------------------|--------------|---------------|-----------------------|-----------------------------------|--|-----|
| Exposures | 1 | F350LP, 1 x 3 s | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0.084 | Sequence 1-4 Non-Int in Visit 33 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 33 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with dither | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.42,0.294 | Sequence 1-4 Non-Int in Visit 33 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 33 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0.461 | Sequence 5-7 Non-Int in Visit 33 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 33 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with dither | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0.671 | Sequence 5-7 Non-Int in Visit 33 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0.294 | Sequence 8-10 Non-Int in Visit 33 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 33 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

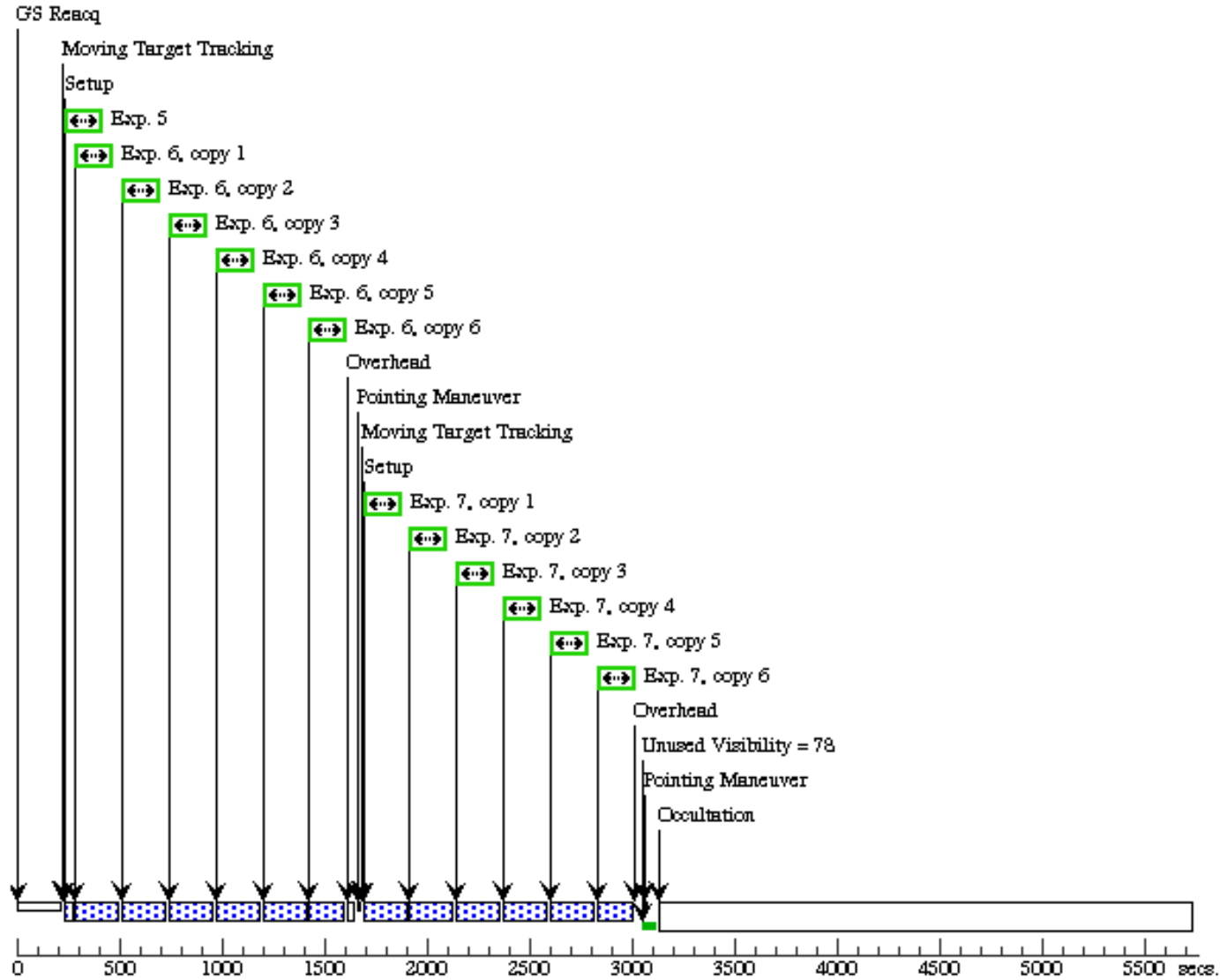
Proposal 12801 - Visit 33 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

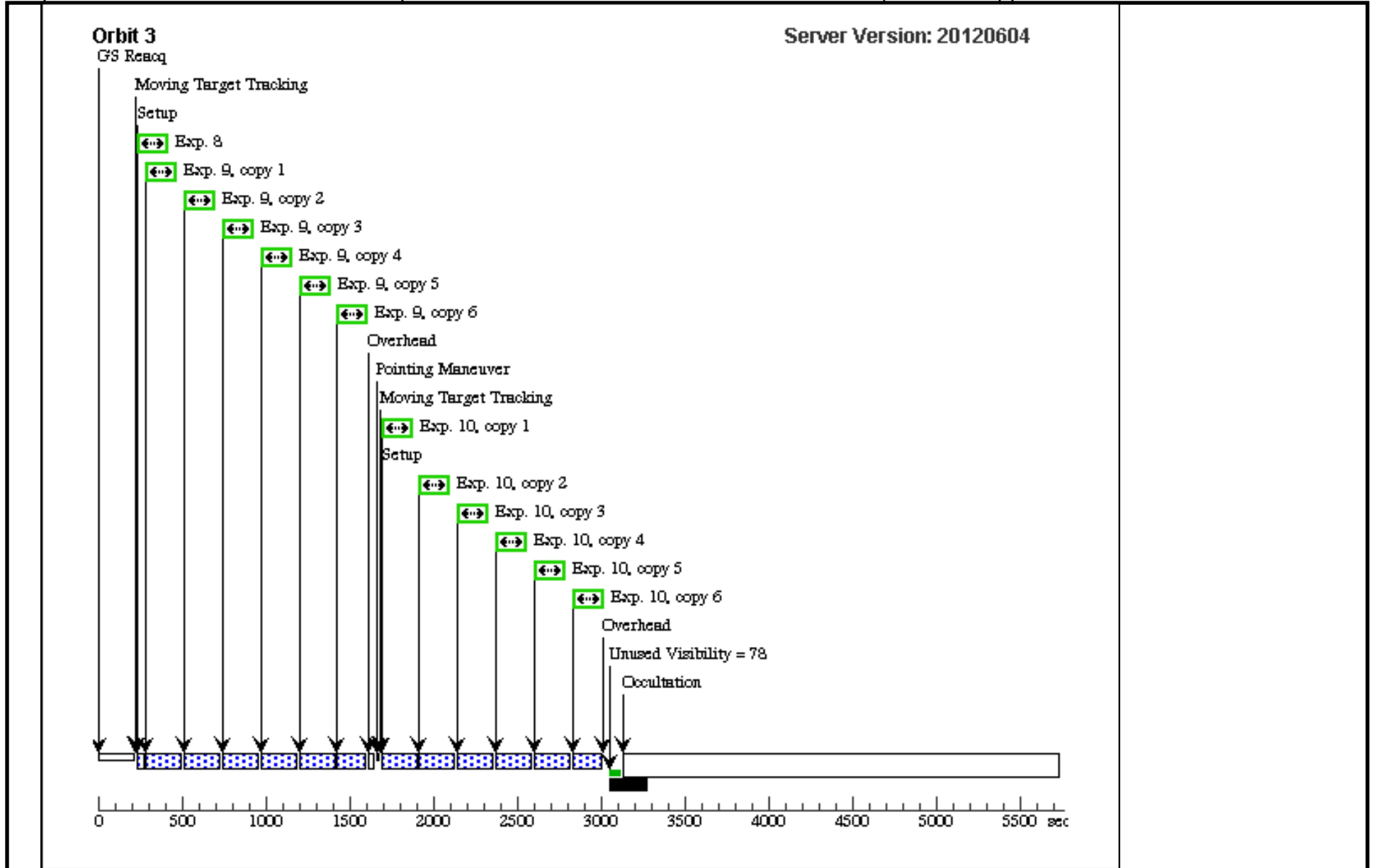
| | | | | | | | | | |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (22) PLUTO-CHAR ON-2ND-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 33 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 41 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:18 GMT 2012

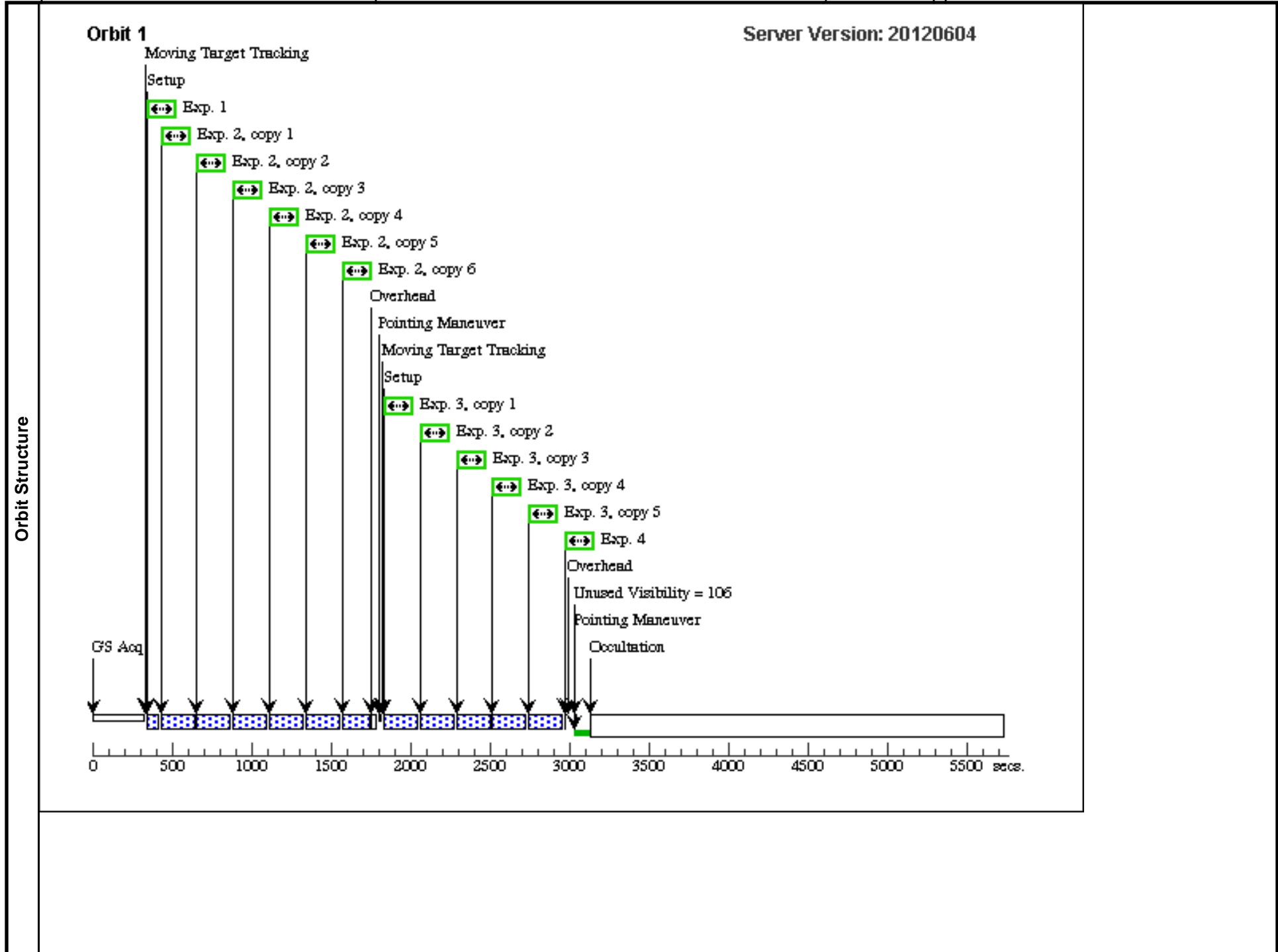
| | | | | | | | |
|--|---|--|-------------|----------------|----------------|----------------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 41, scheduled</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 188D TO 196 D; BETWEEN 29-JUN-2012:14:45 AND 29-JUN-2012:15:45</p> <p><i>Comments: Pluto with its prograde rotation pole oriented downward, parallel to the UVIS Y-axis; Charon on the diagonal at upper right (2nd orbital quadrant). To be scheduled along with Visit 42 or 43.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (32) | | PLUTO-CHARON- 2ND-QUADRANT- PLUS | STD=PLUTO | | | OLG OF CHARON BETWEEN 120 160 | EARTH |
| <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | | |

Proposal 12801 - Visit 41 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|---|---------------------------------------|---|--------------------------------------|---------------|--------------|----------------------------|--------------------------------------|--|-------|
| | 1 | F350LP, 1 x 3 s | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0. 084 | Sequence 1-4 Non-Int in Visit 41 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 41 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with d ither | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | Sequence 1-4 Non-Int in Visit 41 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 41 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0. 461 | Sequence 5-7 Non-Int in Visit 41 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 41 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with d ither | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0. 671 | Sequence 5-7 Non-Int in Visit 41 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0. .294 | Sequence 8-10 Non-Int in Visit 41 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 41 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

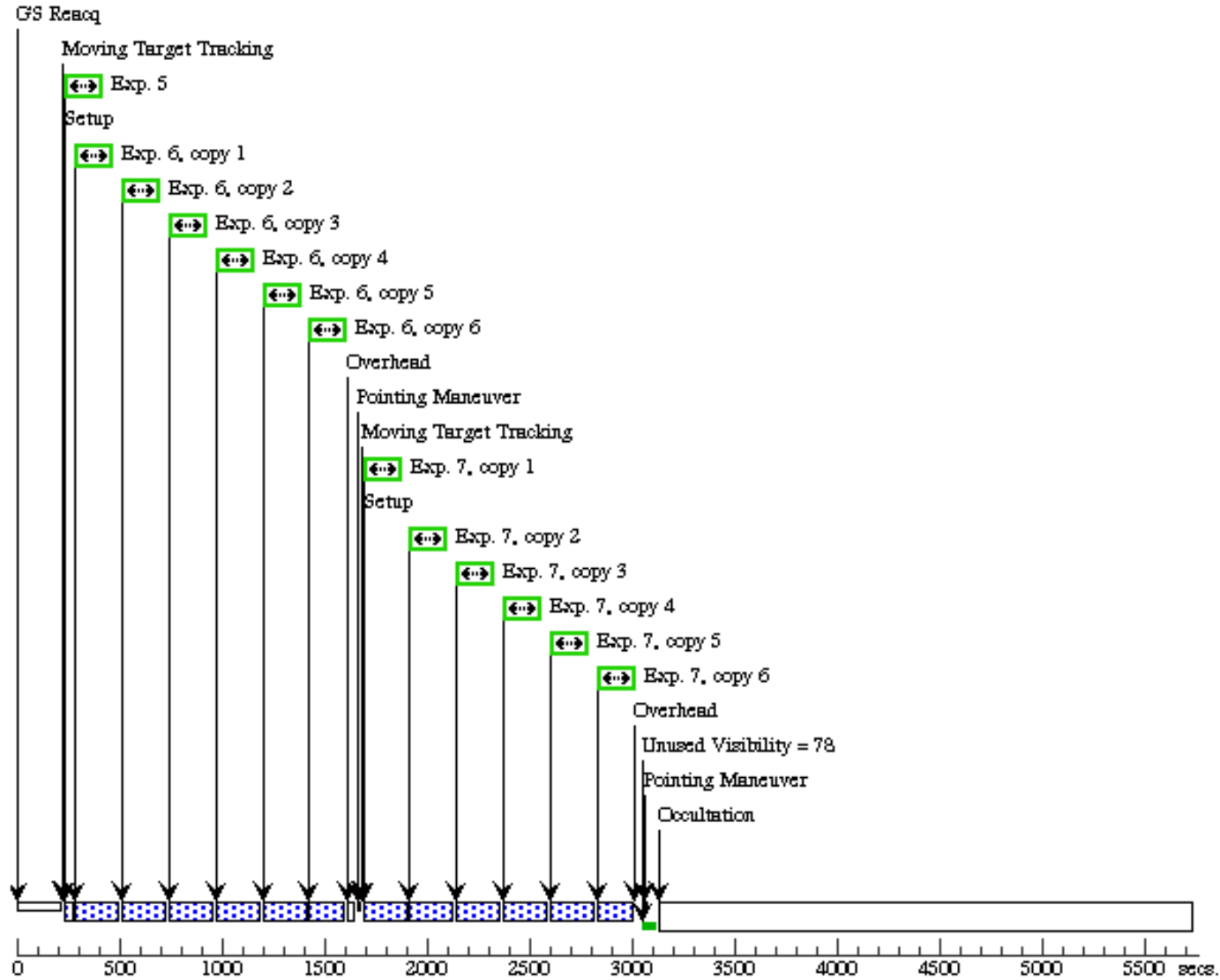
Proposal 12801 - Visit 41 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

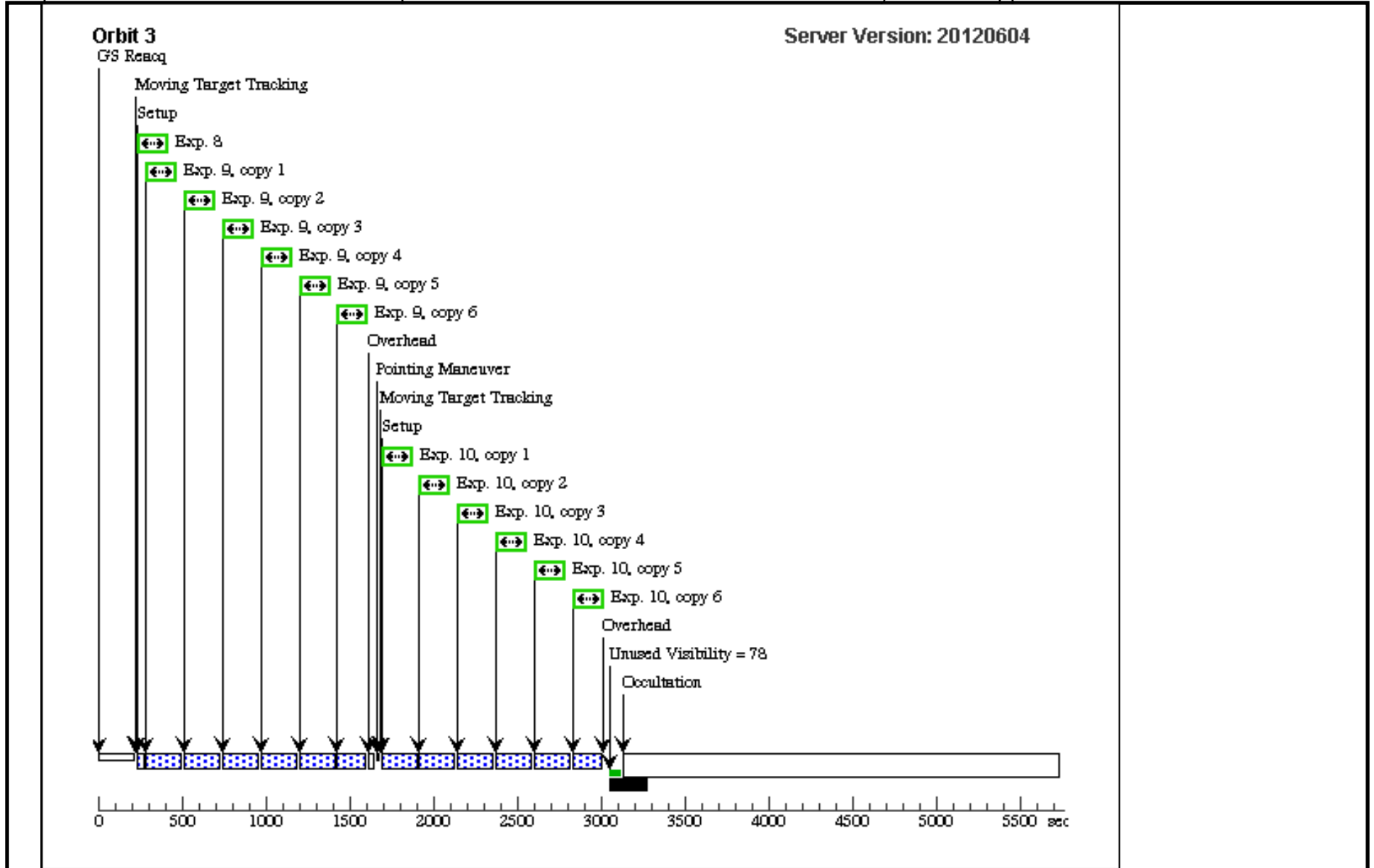
| | | | | | | | | | |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (32) PLUTO-CHAR ON-2ND-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 41 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 42 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:21 GMT 2012

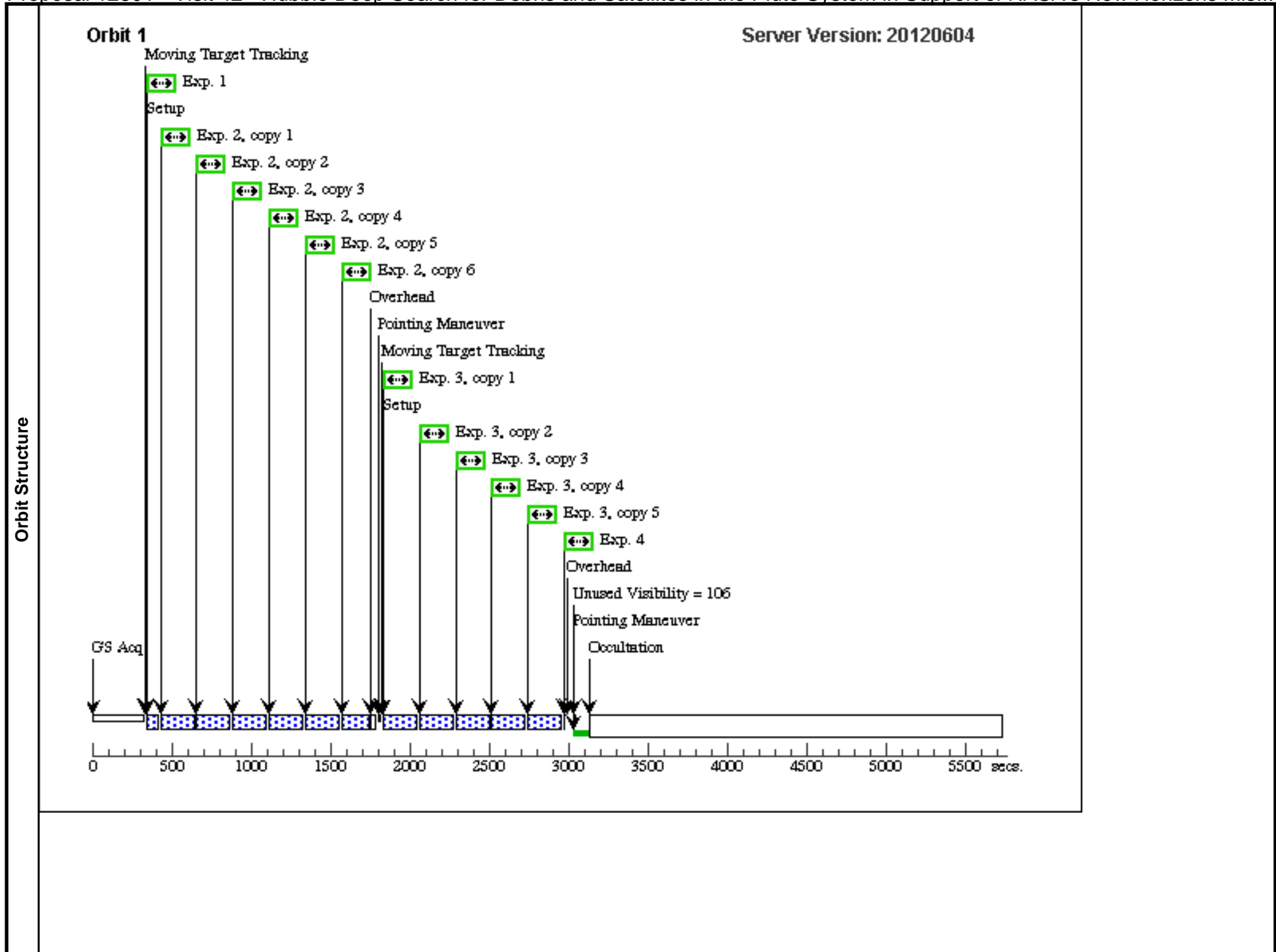
| | | | | | | | |
|--|--|-------------------------------|-------------|----------------|----------------|-----------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 42, withdrawn</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 98D TO 106 D; BETWEEN 28-JUN-2012:00:00:00 AND 20-JUL-2012:00:00:00; ON HOLD</p> <p><i>Comments: Pluto with its prograde rotation pole pointed rightward, perpendicular to the UVIS Y-axis; Charon on the diagonal at upper right (1st orbital quadrant). To be scheduled along with Visit 41. Either Visit 42 or 43 must be scheduled, but not both. To match the position of Charon most accurately, the optimal timing of Visit 42 would be either 0.7 or 1.7 Charon orbits (4.43 or 10.82 days) later than Visit 41.</i></p> <p><i>On Hold Comments: Execute either Visit42 or Visit 43, but not both.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (21) | | PLUTO-CHARON- 1ST-QUADRANT | STD=PLUTO | | | OLG OF CHARON BETWEEN 20 50 | EARTH |
| <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | | |

Proposal 12801 - Visit 42 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|---|---------------------------------------|--|--------------------------------------|---------------|--------------|---------------------------|--------------------------------------|--|-------|
| | 1 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0. 084 | Sequence 1-4 Non-Int in Visit 42 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 42 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with d ither | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | Sequence 1-4 Non-Int in Visit 42 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 42 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0. 461 | Sequence 5-7 Non-Int in Visit 42 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 42 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with d ither | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0. 671 | Sequence 5-7 Non-Int in Visit 42 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0 .294 | Sequence 8-10 Non-Int in Visit 42 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 42 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

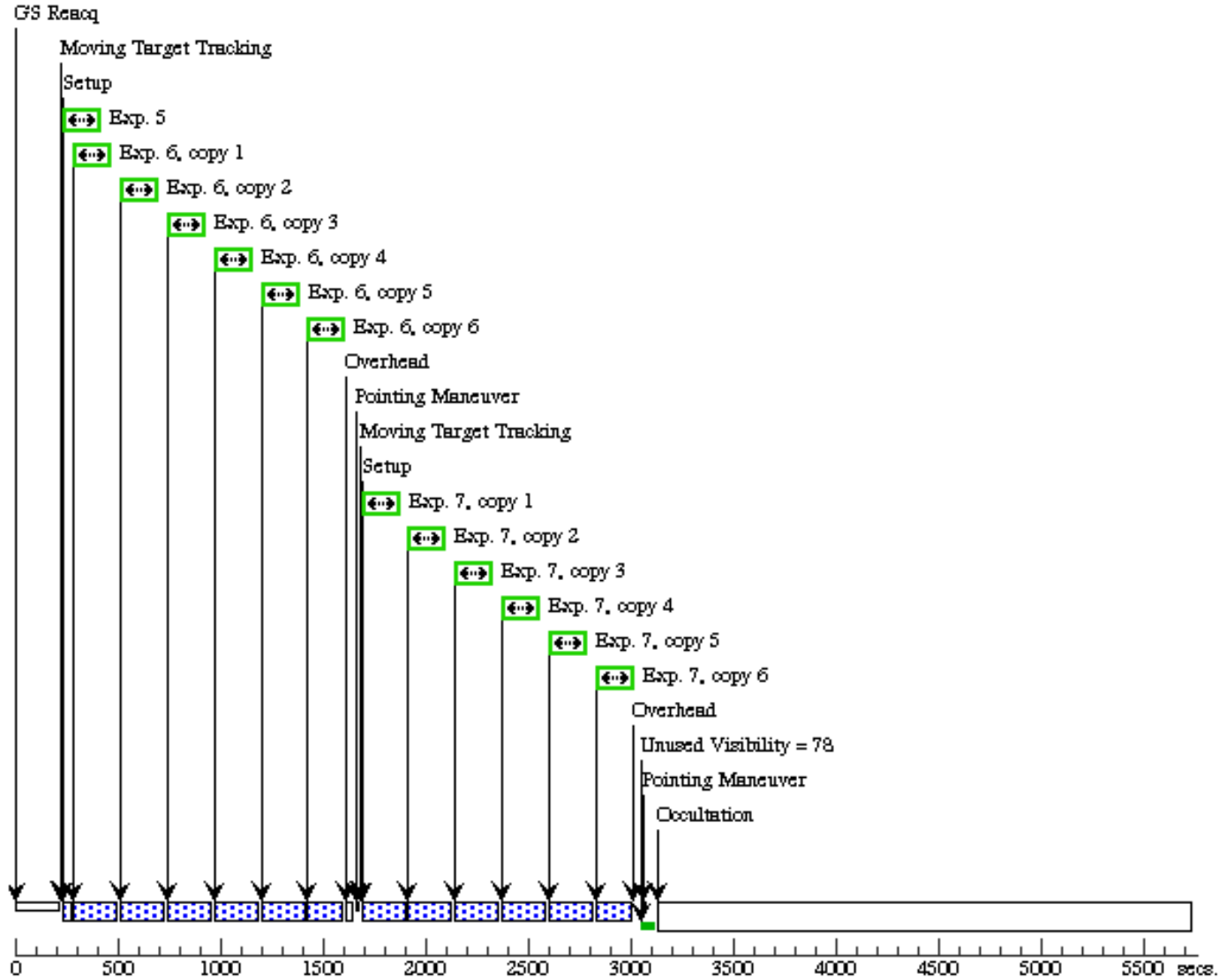
Proposal 12801 - Visit 42 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

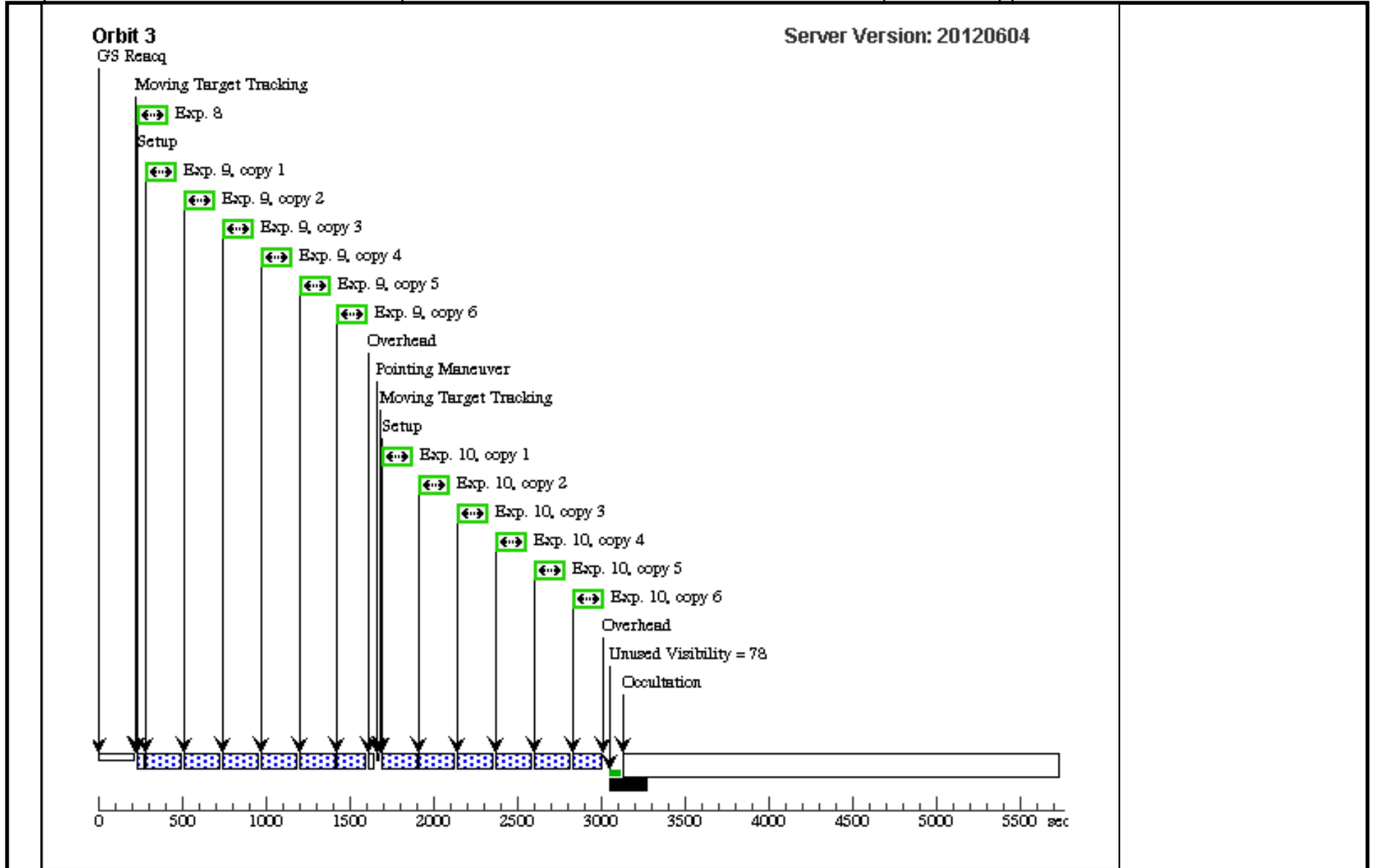
| | | | | | | | | | |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 42 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 43 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:25 GMT 2012

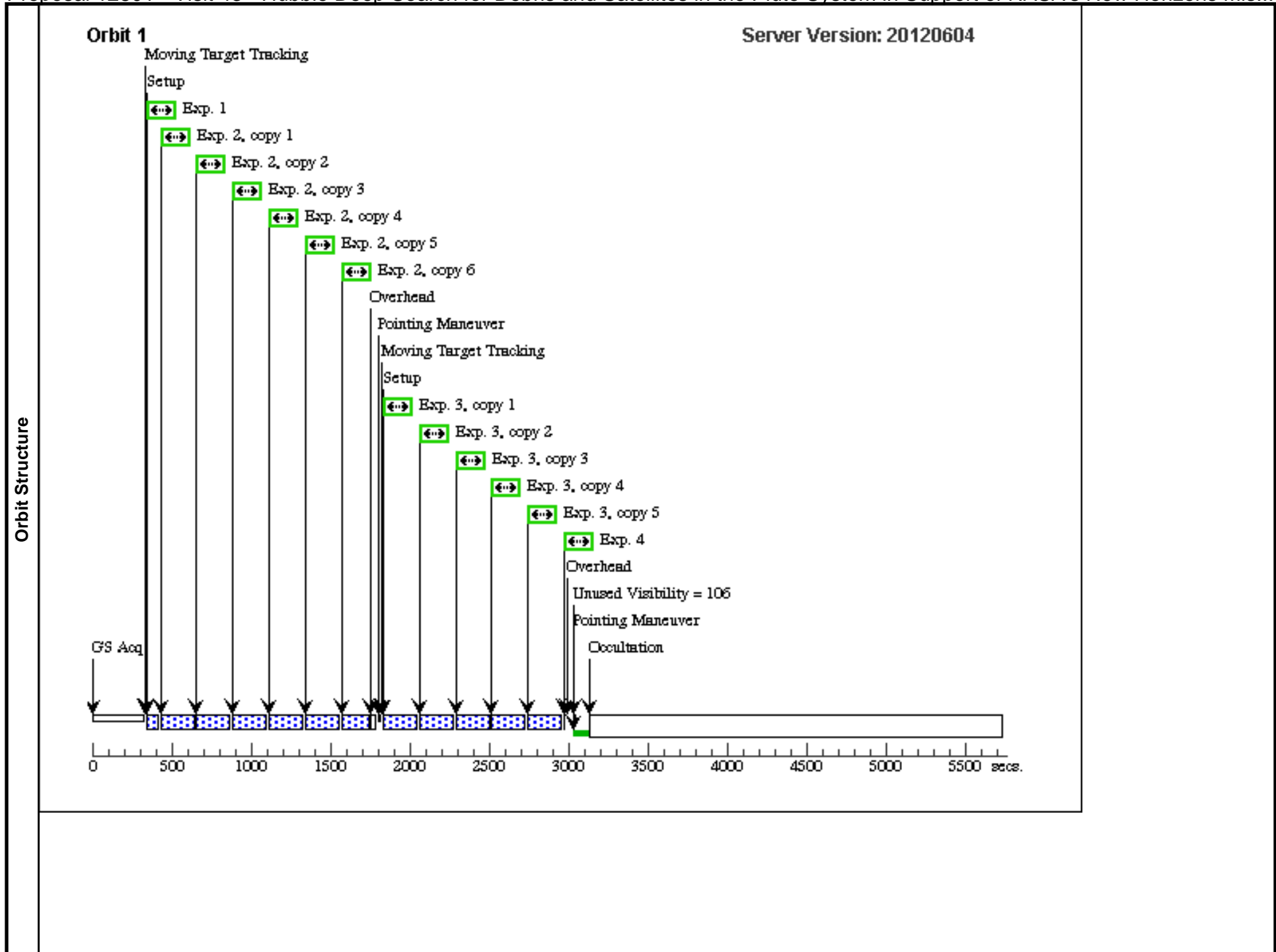
| | | | | | | | |
|--|--|--|-------------|----------------|----------------|----------------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 43, completed</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 278D TO 286 D; BETWEEN 11-JUN-2012:19:00:00 AND 11-JUN-2012:20:00:00; ON HOLD</p> <p><i>Comments: Pluto with its prograde rotation pole oriented leftward, perpendicular to the UVIS Y-axis; Charon on the diagonal at upper right (3rd orbital quadrant). To be scheduled along with Visit 41. Either Visit 42 or 43 must be scheduled, but not both. To match the position of Charon most accurately, the optimal timing of Visit 43 would be either 0.8 or 1.8 Charon orbits (5.15 days or 11.53 days) earlier than Visit 41.</i></p> <p><i>On Hold Comments: Execute either Visit42 or Visit 43, but not both.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (33) | | PLUTO-CHARON- 3RD-QUADRANT- PLUS | STD=PLUTO | | | OLG OF CHARON BETWEEN 196 230 | EARTH |
| <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | | |

Proposal 12801 - Visit 43 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|---|---------------------------------------|---|--------------------------------------|---------------|--------------|---------------------------|--------------------------------------|--|-------|
| | 1 | F350LP, 1 x 3 s | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0. 084 | Sequence 1-4 Non-Int in Visit 43 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 43 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with d ither | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.42,0.2 94 | Sequence 1-4 Non-Int in Visit 43 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 43 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0. 461 | Sequence 5-7 Non-Int in Visit 43 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 43 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with d ither | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0. 671 | Sequence 5-7 Non-Int in Visit 43 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0 .294 | Sequence 8-10 Non-Int in Visit 43 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 43 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

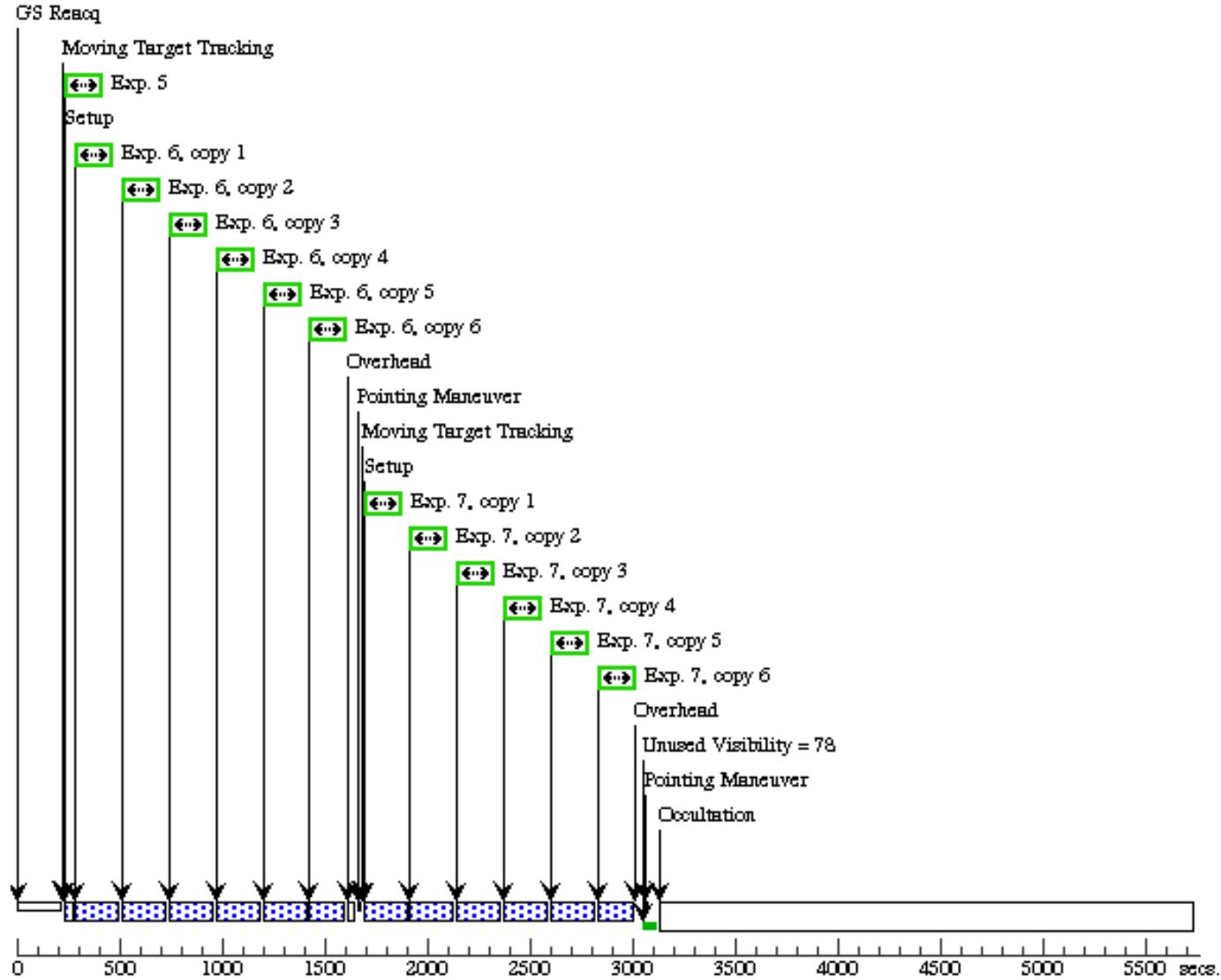
Proposal 12801 - Visit 43 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

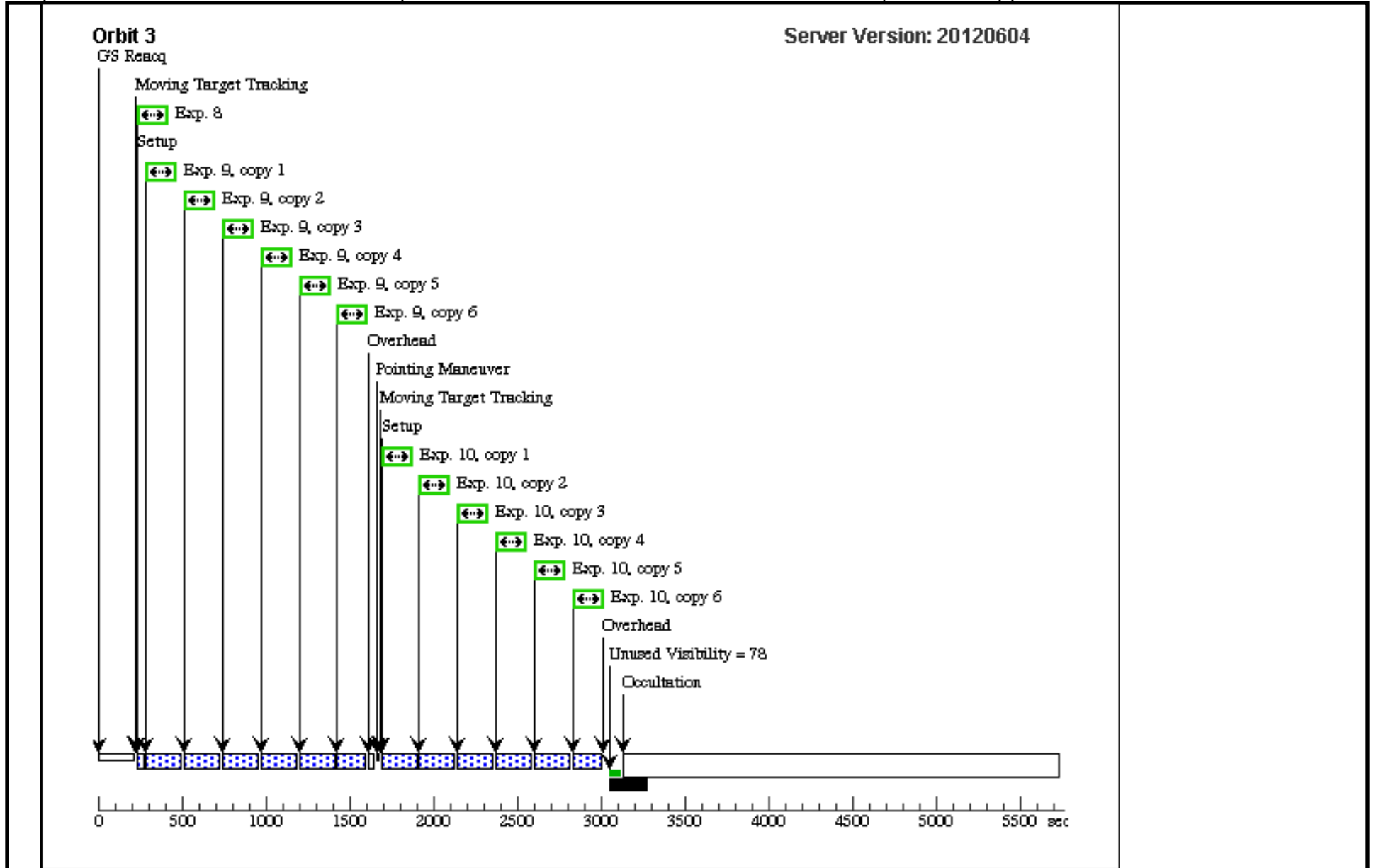
| | | | | | | | | | |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (33) PLUTO-CHAR ON-3RD-QUADRA NT-PLUS | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 43 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|---|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 61 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:28 GMT 2012

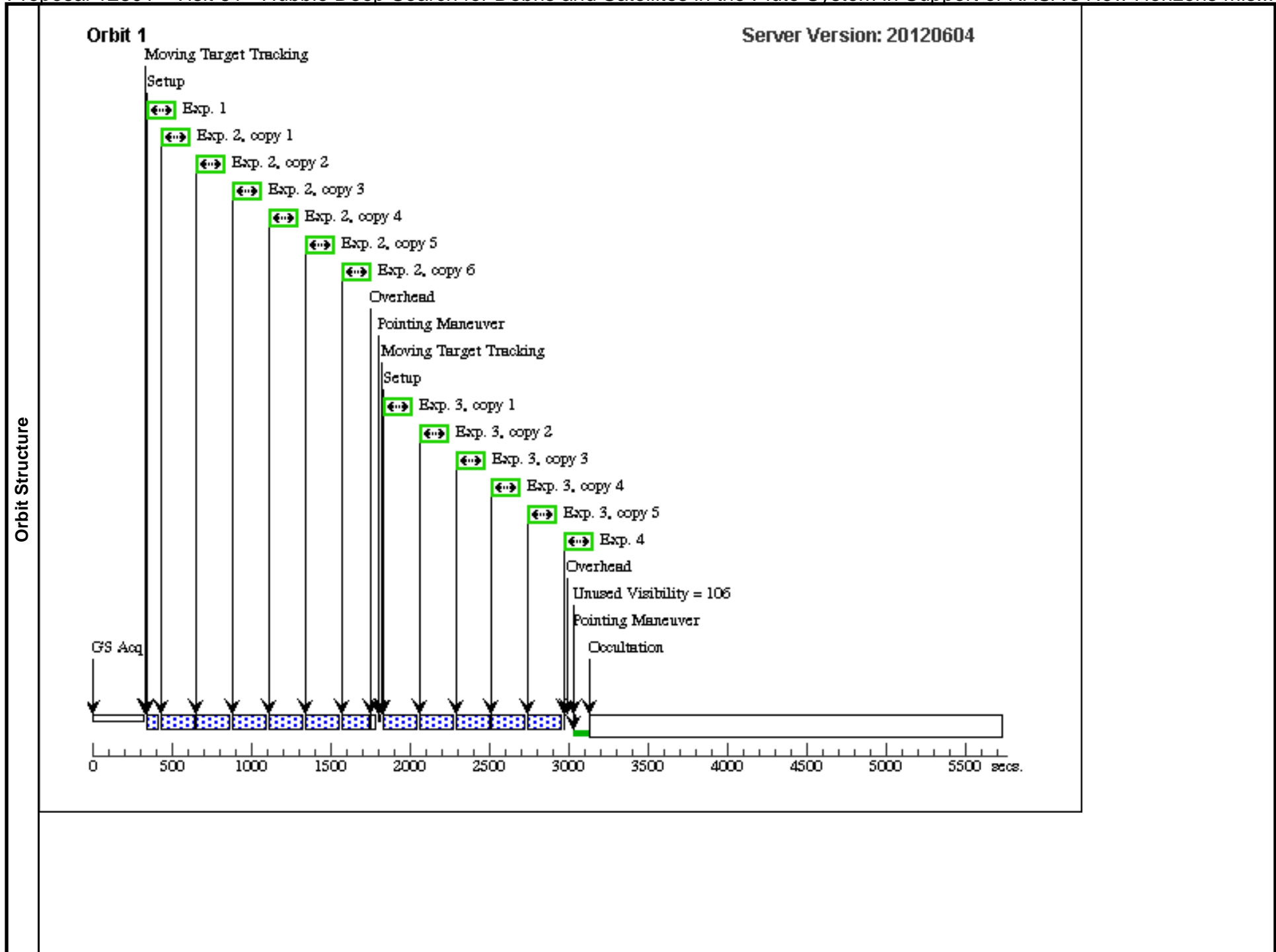
| | | | | | | | |
|--|--|-------------------------------|-------------|----------------|----------------|----------------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 61, scheduled</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 188D TO 196 D; BETWEEN 26-JUN-2012:11:30 AND 26-JUN-2012:12:30</p> <p><i>Comments: Pluto with its prograde rotation pole oriented downward, parallel to the UVIS Y-axis; Charon on the diagonal at lower left (4th orbital quadrant). To be scheduled along with Visit 62 or 63.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (24) | | PLUTO-CHARON- 4TH-QUADRANT | STD=PLUTO | | | OLG OF CHARON BETWEEN 305 340 | EARTH |
| <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | | |

Proposal 12801 - Visit 61 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|---|---------------------------------------|--|--------------------------------------|---------------|--------------|----------------------------|--------------------------------------|--|-------|
| | 1 | F350LP, 1 x 3 s | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0. 084 | Sequence 1-4 Non-Int in Visit 61 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 61 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with d ither | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | Sequence 1-4 Non-Int in Visit 61 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 61 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0. 461 | Sequence 5-7 Non-Int in Visit 61 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 61 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with d ither | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0. 671 | Sequence 5-7 Non-Int in Visit 61 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0. .294 | Sequence 8-10 Non-Int in Visit 61 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 61 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

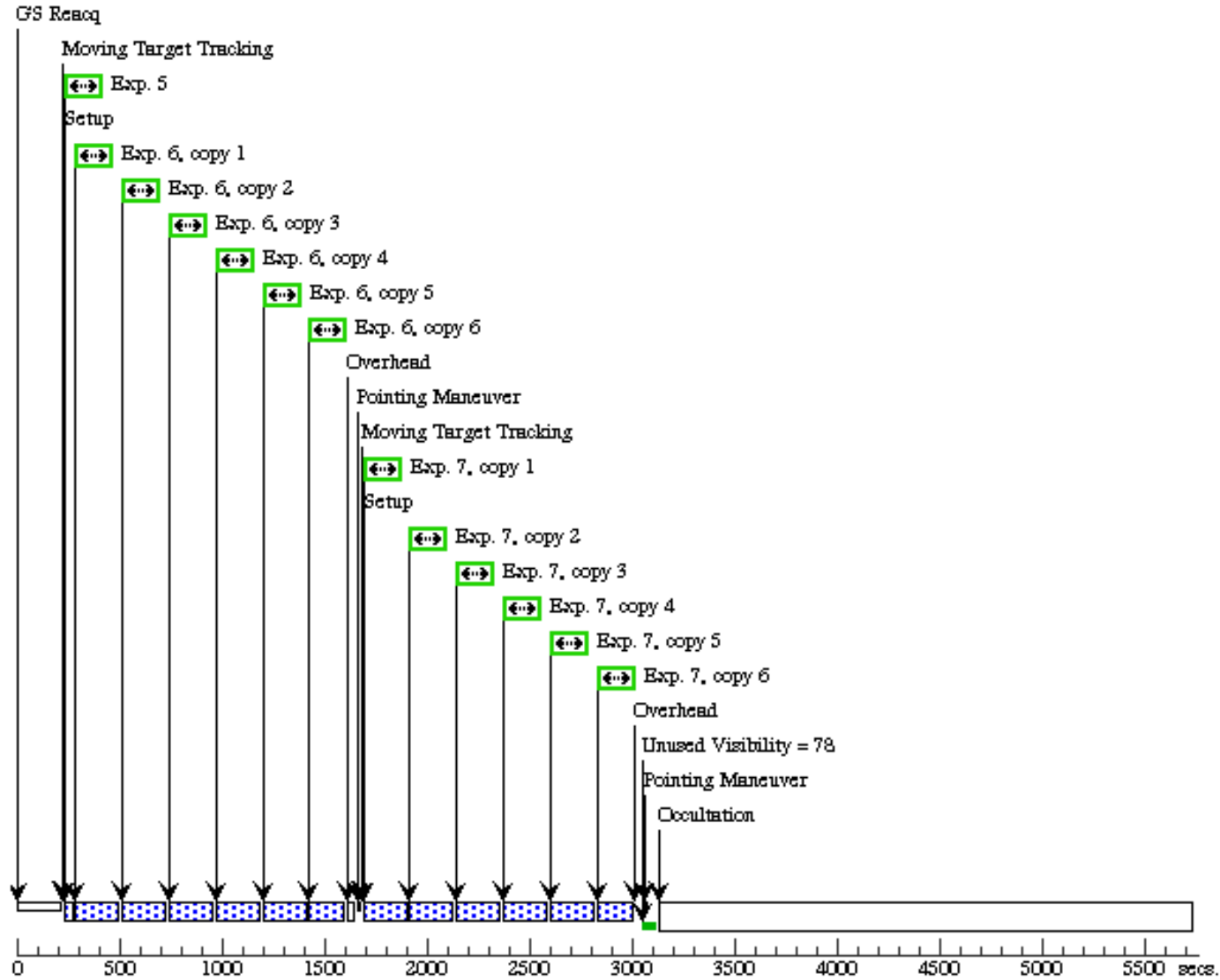
Proposal 12801 - Visit 61 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

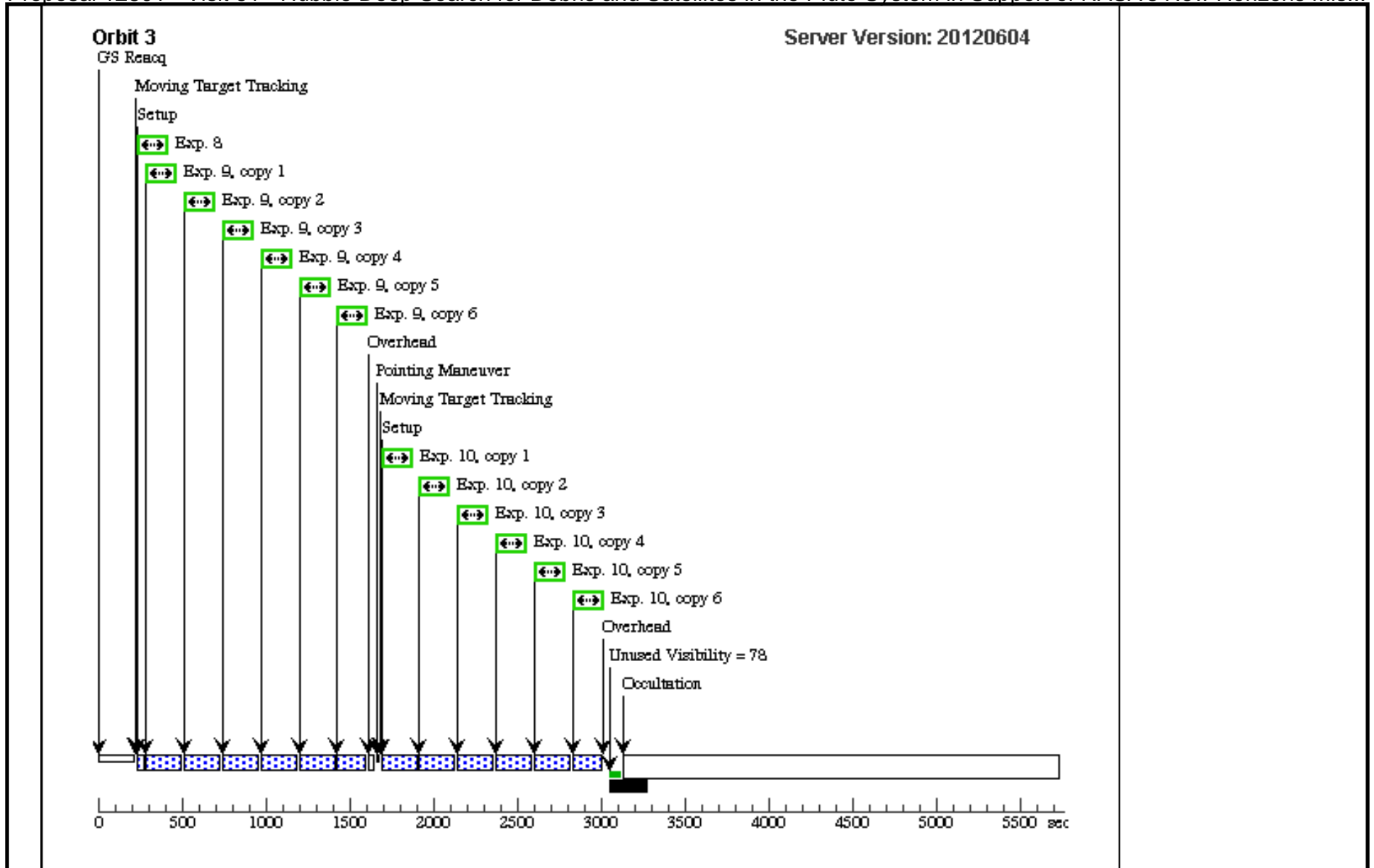
| | | | | | | | | | |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (24) PLUTO-CHAR ON-4TH-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 61 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 62 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:32 GMT 2012

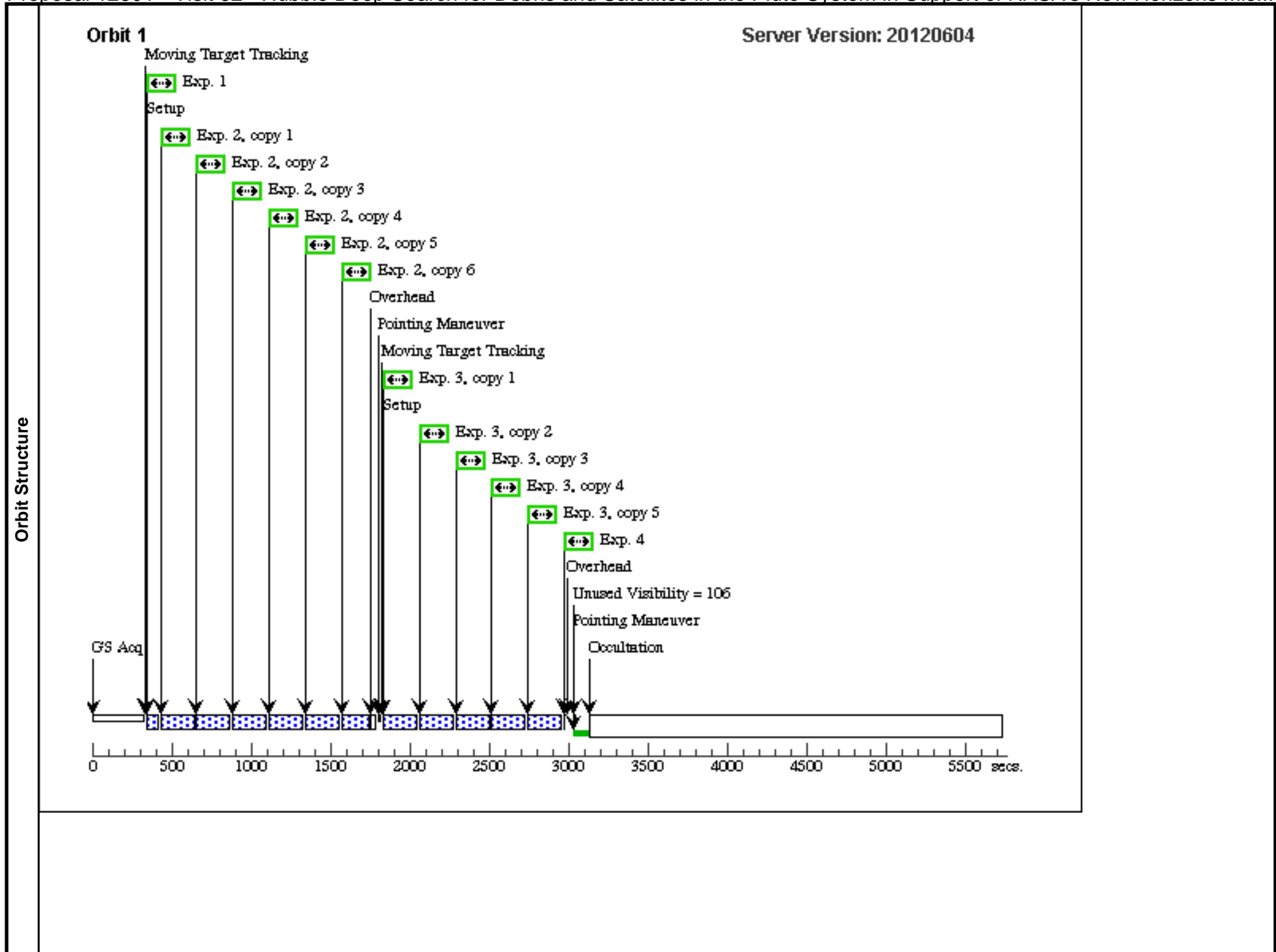
| | | | | | | | |
|--|---|-------------------------------|-------------|----------------|----------------|----------------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 62, scheduling</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 98D TO 106 D; BETWEEN 07-JUL-2012:09:30:00 AND 07-JUL-2012:10:30:00; ON HOLD</p> <p><i>Comments: Pluto with its prograde rotation pole pointed rightward, perpendicular to the UVIS Y-axis; Charon on the diagonal at lower left (3rd orbital quadrant). To be scheduled along with Visit 61. Either Visit 62 or 63 must be scheduled, but not both. To match the position of Charon most accurately, the optimal timing of Visit 62 would be either 0.7 or 1.7 Charon orbits (4.43 or 10.82 days) later than Visit 61.</i></p> <p><i>On Hold Comments: Execute either Visit 62 or Visit 63, but not both.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (23) | | PLUTO-CHARON- 3RD-QUADRANT | STD=PLUTO | | | OLG OF CHARON BETWEEN 199 230 | EARTH |
| <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | | |

Proposal 12801 - Visit 62 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|---|---------------------------------------|--|--------------------------------------|---------------|--------------|---------------------------|--------------------------------------|--|-------|
| | 1 | F350LP, 1 x 3 s | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0. 084 | Sequence 1-4 Non-Int in Visit 62 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 62 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with d ither | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | Sequence 1-4 Non-Int in Visit 62 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 62 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0. 461 | Sequence 5-7 Non-Int in Visit 62 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 62 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with d ither | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0. 671 | Sequence 5-7 Non-Int in Visit 62 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0 .294 | Sequence 8-10 Non-Int in Visit 62 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 62 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

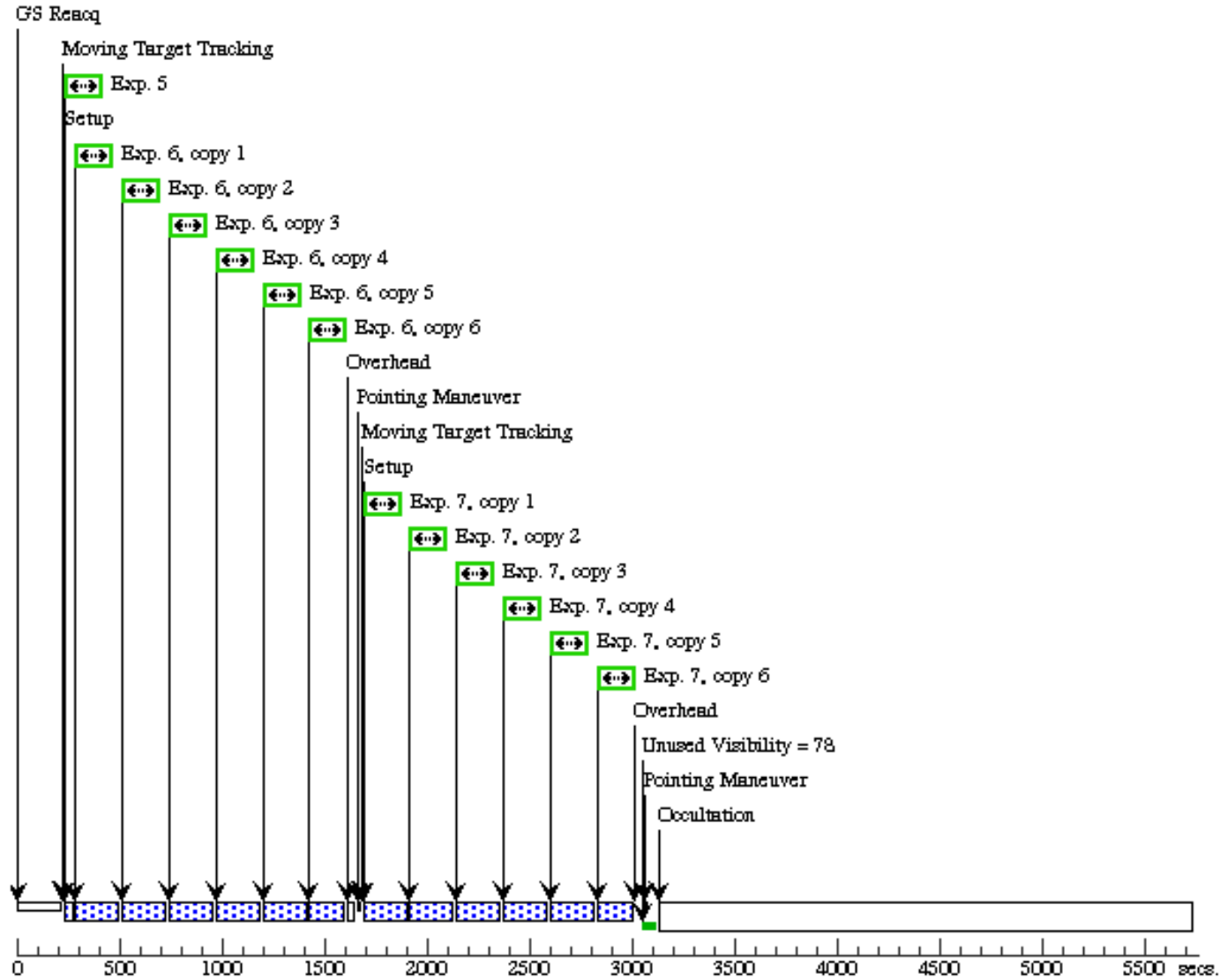
Proposal 12801 - Visit 62 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

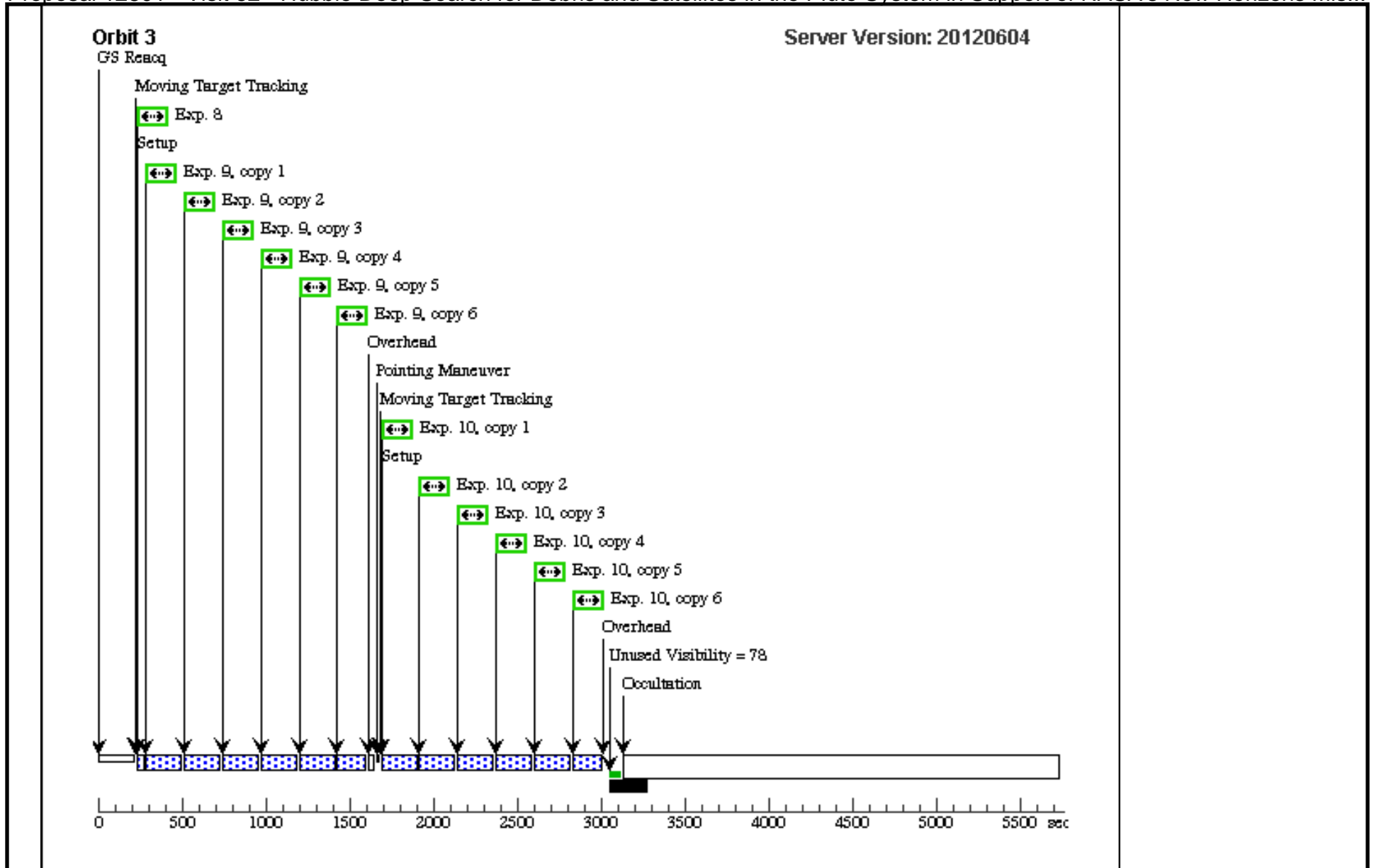
| | | | | | | | | | |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (23) PLUTO-CHAR ON-3RD-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 62 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604





Proposal 12801 - Visit 63 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

Wed Jun 20 02:38:36 GMT 2012

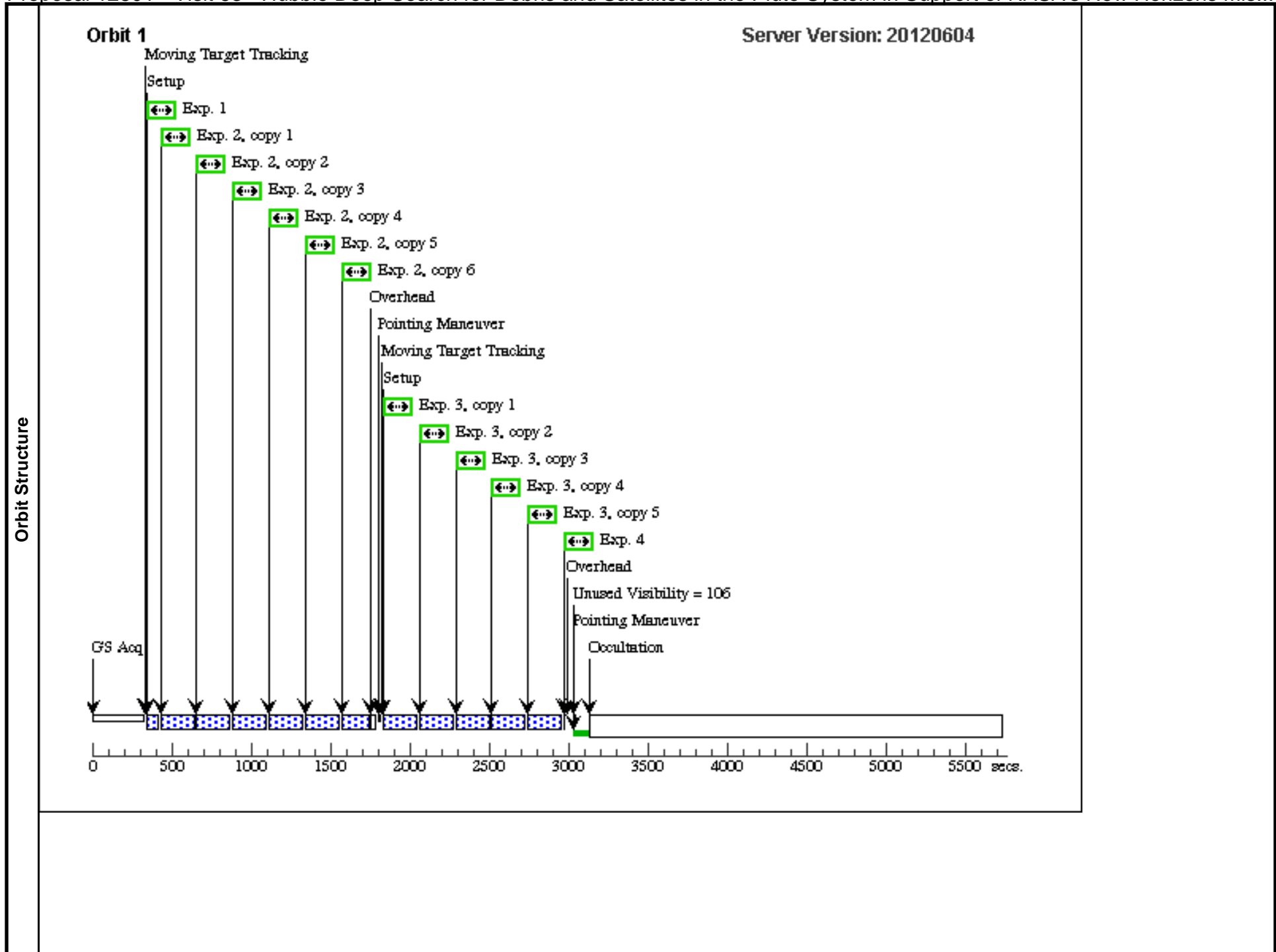
| | | | | | | | |
|--|--|-------------------------------|-------------|----------------|----------------|-----------------------------|---------------|
| Visit | <p>Proposal 12801, Visit 63, withdrawn</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; ORIENT 278D TO 286 D; BETWEEN 06-JUN-2012:00:00:00 AND 26-JUN-2012:00:00:00; ON HOLD</p> <p><i>Comments: Pluto with its prograde rotation pole oriented leftward, perpendicular to the UVIS Y-axis; Charon on the diagonal at lower left (1st orbital quadrant). To be scheduled along with Visit 61. Either Visit 62 or 63 must be scheduled, but not both. To match the position of Charon most accurately, the optimal timing of Visit 63 would be either 0.8 or 1.8 Charon orbits (5.15 days or 11.53 days) earlier than Visit 61.</i></p> <p><i>On Hold Comments: Execute either Visit 62 or Visit 63, but not both.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (21) | | PLUTO-CHARON- 1ST-QUADRANT | STD=PLUTO | | | OLG OF CHARON BETWEEN 20 50 | EARTH |
| <p><i>Comments: Because the sub-Earth latitude of Pluto is ~ 44 degrees, the OLG of Charon needs to be 35, 145, 215 or 325 to place it along a diagonal from Pluto, assuming Pluto is oriented with its pole parallel or perpendicular to the UVIS Y-axis.</i></p> | | | | | | | |

Proposal 12801 - Visit 63 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

| Exposures | # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|---|---------------------------------------|--|--------------------------------------|---------------|--------------|---------------------------|--------------------------------------|--|-------|
| | 1 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.262,0. 084 | Sequence 1-4 Non-Int in Visit 63 | 3 Secs [==>] | [1] |
| | 2 | F350LP, 6 x 174 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | Sequence 1-4 Non-Int in Visit 63 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [1] |
| | 3 | F350LP, 5 x 174 s, with d ither | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.42,0.2 94 | Sequence 1-4 Non-Int in Visit 63 | 174 Secs X 5 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] | [1] |
| | 4 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 3 | Sequence 1-4 Non-Int in Visit 63 | 3 Secs [==>] | [1] |
| | 5 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 0.947,0. 461 | Sequence 5-7 Non-Int in Visit 63 | 3 Secs [==>] | [2] |
| | 6 | F350LP, 6 x 174 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 5 | Sequence 5-7 Non-Int in Visit 63 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 7 | F350LP, 6 x 174 s, with d ither | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.105,0. 671 | Sequence 5-7 Non-Int in Visit 63 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [2] |
| | 8 | F350LP, 1 x 3 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.578,-0 .294 | Sequence 8-10 Non-Int in Visit 63 | 3 Secs [==>] | [3] |
| | 9 | F350LP, 6 x 174 s | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 8 | Sequence 8-10 Non-Int in Visit 63 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |

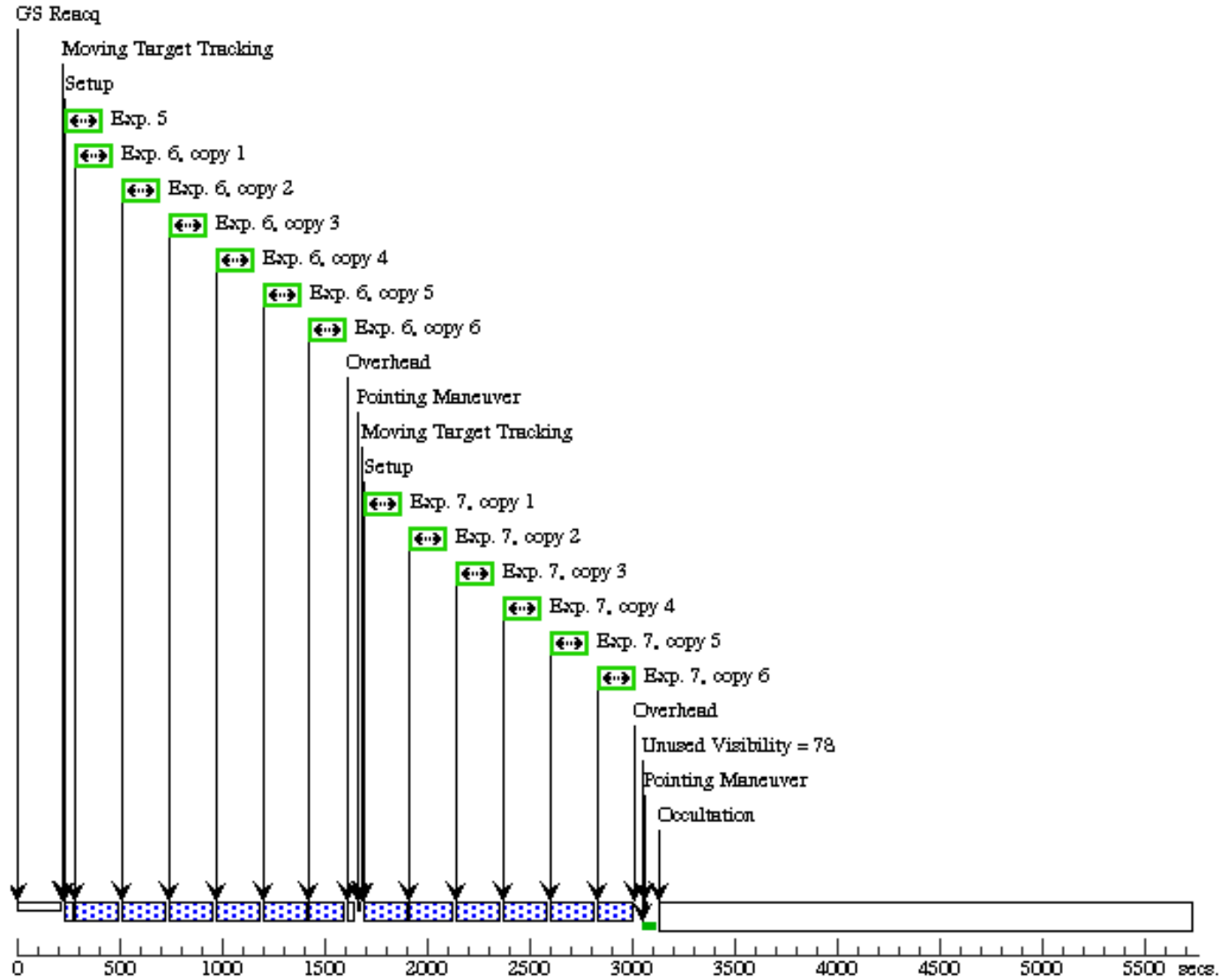
Proposal 12801 - Visit 63 - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's New Horizons Mis...

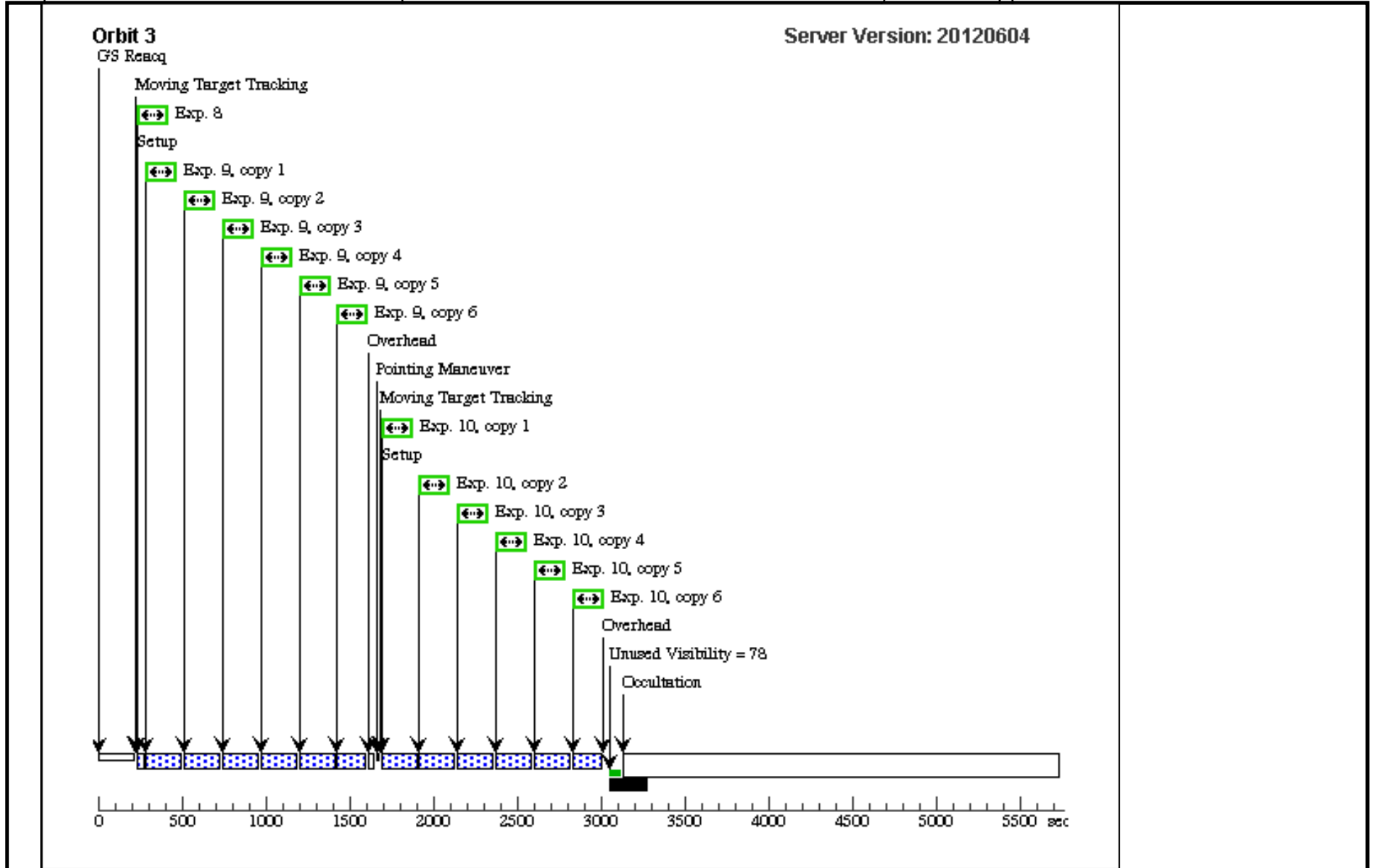
| | | | | | | | | | |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|
| 10 | F350LP, 6 x 174 s, with d ither | (21) PLUTO-CHAR ON-1ST-QUADRA NT | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.736,-0 .084 | Sequence 8-10 Non-I nt in Visit 63 | 174 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] | [3] |
|----|---------------------------------------|--|--------------------------------------|--------|-------------|---------------------------|---------------------------------------|--|-----|



Orbit 2

Server Version: 20120604



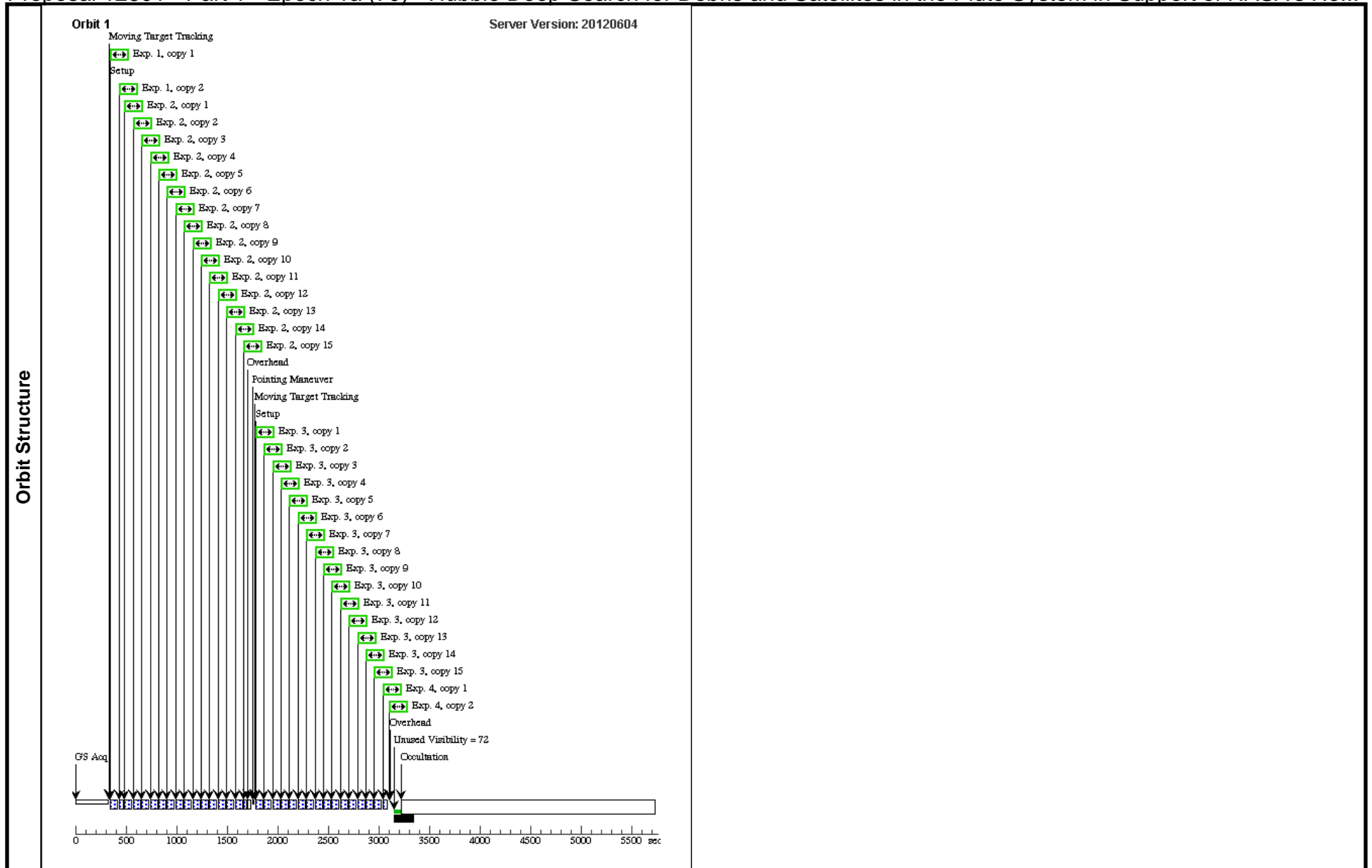


Proposal 12801 - Part 1 - Epoch 1a (70) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 1 - Epoch 1a (70), completed Wed Jun 20 02:38:39 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 246D TO 246 D; BETWEEN 09-JUN-2012:03 AND 09-JUN-2012:04</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>If there is any choice in when to schedule, this should be scheduled as close to the middle of the window as possible.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 1 - Epoch 1a (70) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 15 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
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| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | [==>(Copy 15)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 15 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | [==>(Copy 15)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |

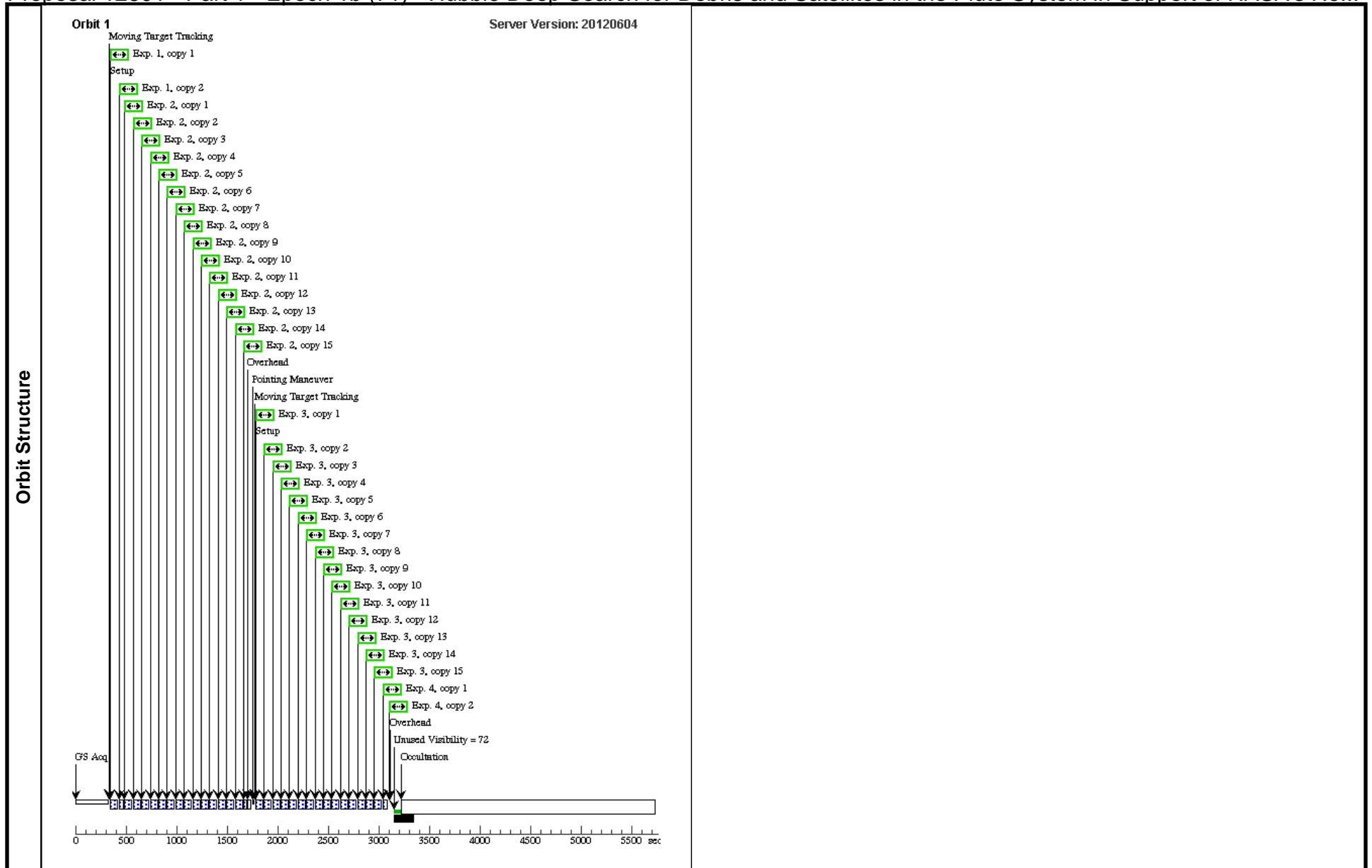


Proposal 12801 - Part 1 - Epoch 1b (71) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| Visit | <p>Proposal 12801, Part 1 - Epoch 1b (71), completed Wed Jun 20 02:38:41 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 4.5D TO 4.5D FROM 70; AFTER 70 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|-----------|---------|---------|--------|--------------|--|---|------|---------|---------|---------|--------|--------------|-----|-------|-----------|--|--|--|
| | <table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>PLUTO</td> <td>STD=PLUTO</td> <td></td> <td></td> <td></td> <td>EARTH</td> </tr> </tbody> </table> | | | | | | | # | Name | Level 1 | Level 2 | Level 3 | Window | Ephem Center | (1) | PLUTO | STD=PLUTO | | | |
| # | Name | Level 1 | Level 2 | Level 3 | Window | Ephem Center | | | | | | | | | | | | | | |
| (1) | PLUTO | STD=PLUTO | | | | EARTH | | | | | | | | | | | | | | |
| Solar System Targets | | | | | | | | | | | | | | | | | | | | |

Proposal 12801 - Part 1 - Epoch 1b (71) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|---------------|--------|--------------------------|----------------|-----|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | POS TARG 1.223,0. 081 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | SAME POS AS 1 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | POS TARG 1.420,0. 294 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |

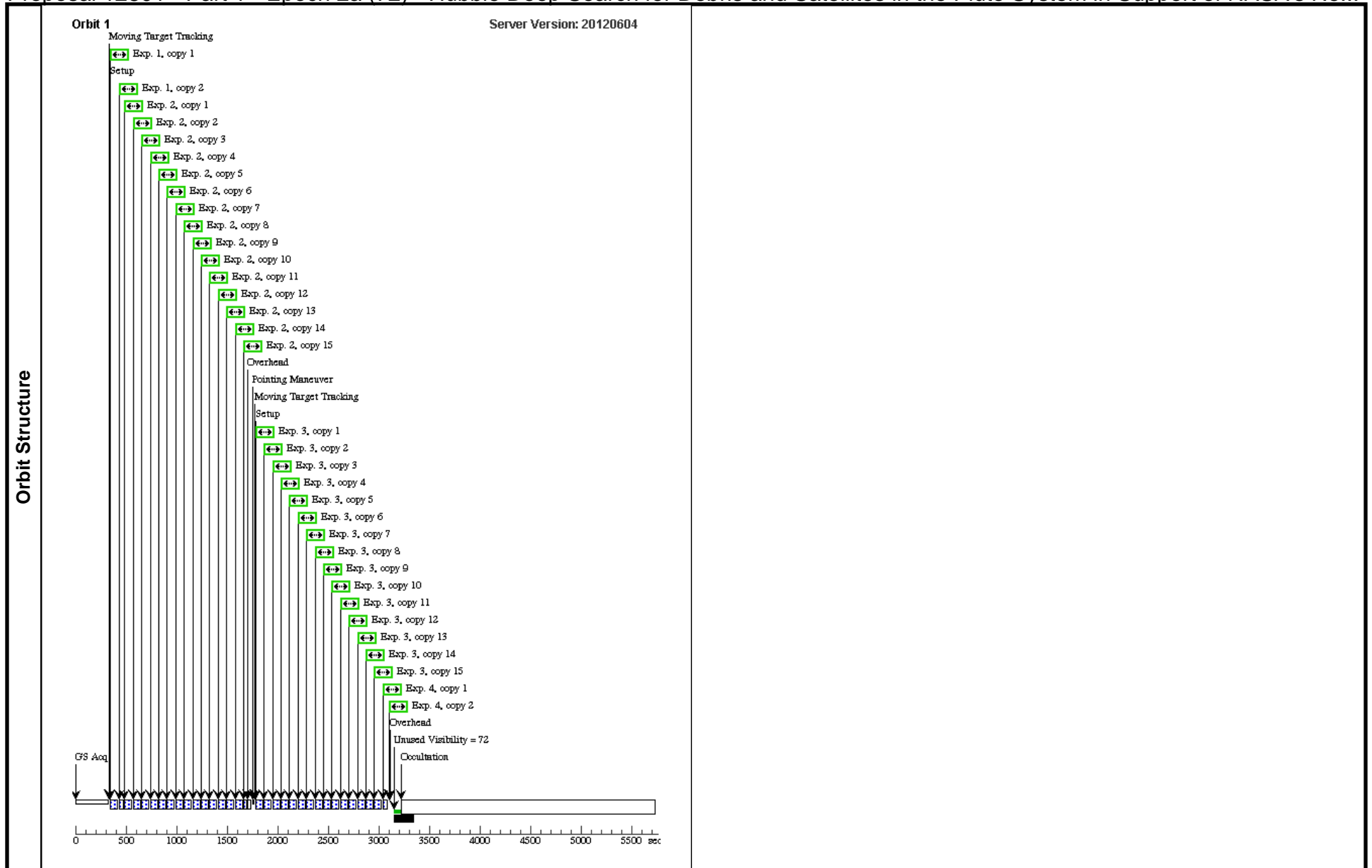


Proposal 12801 - Part 1 - Epoch 2a (72) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 1 - Epoch 2a (72), completed Wed Jun 20 02:38:42 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 242.2D TO 242.2 D; BETWEEN 12-JUN-2012:04:30 AND 12-JUN-2012:05:30</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>If there is any choice in when to schedule, this should be scheduled as close to the middle of the window as possible.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 1 - Epoch 2a (72) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|---------------|--------|--------------------------|----------------|-----|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | POS TARG 1.223,0. 081 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | SAME POS AS 1 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | POS TARG 1.420,0. 294 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
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| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |

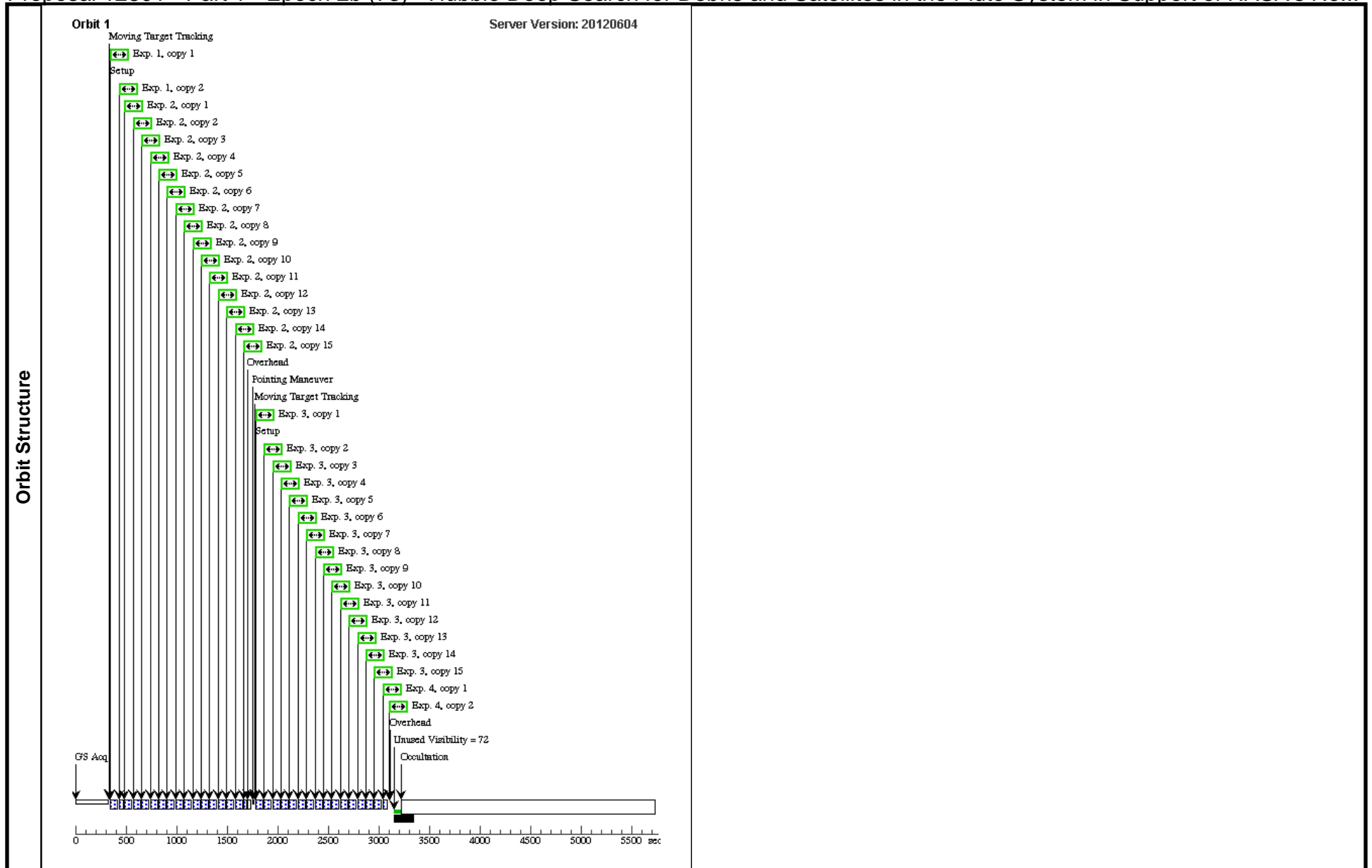


Proposal 12801 - Part 1 - Epoch 2b (73) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 1 - Epoch 2b (73), completed Wed Jun 20 02:38:43 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 4.7D TO 4.7D FROM 72; AFTER 72 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 1 - Epoch 2b (73) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|---------------|--------|--------------------------|----------------|-----|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | POS TARG 1.223,0. 081 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | SAME POS AS 1 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | POS TARG 1.420,0. 294 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | [==>(Copy 3)] | |
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| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |



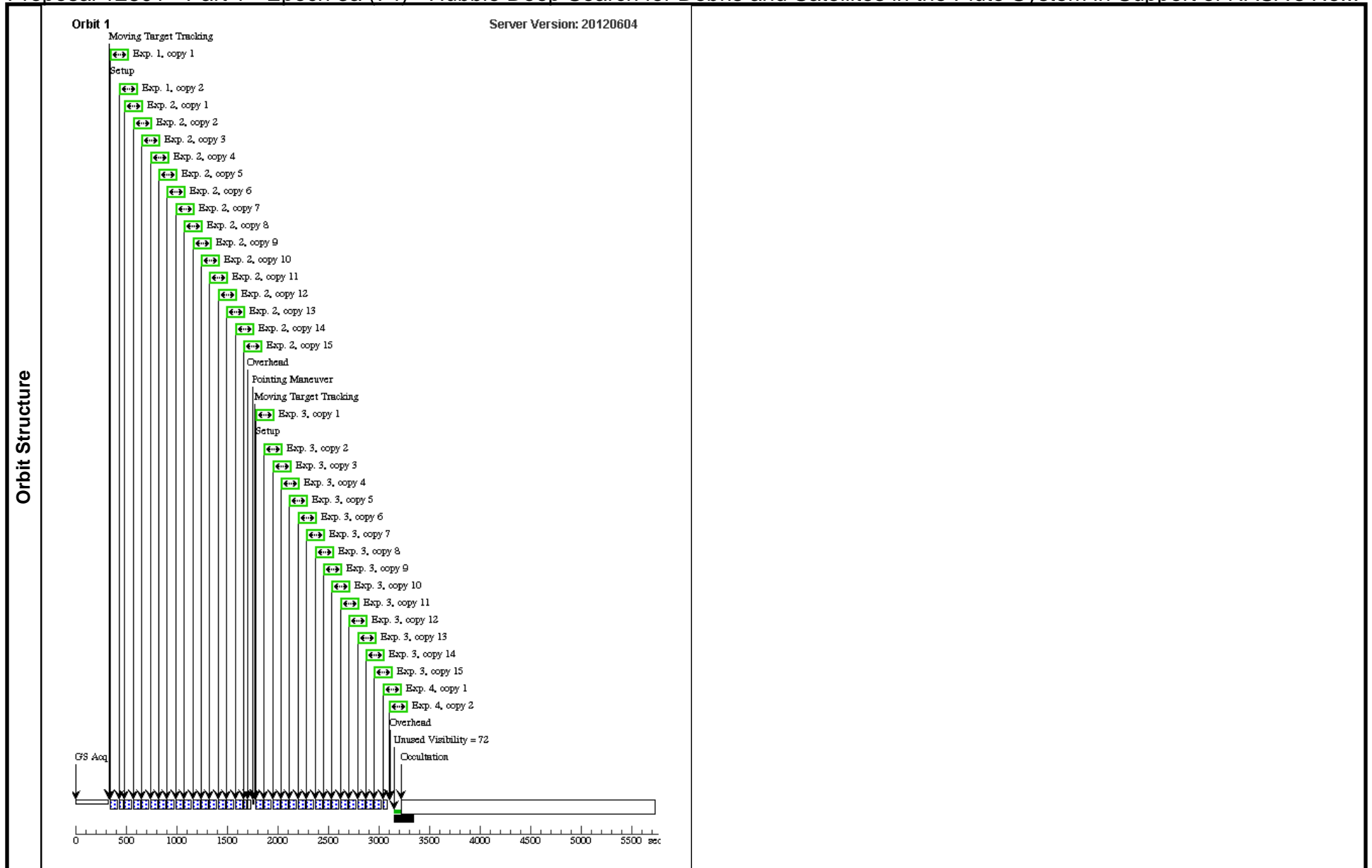
Proposal 12801 - Part 1 - Epoch 3a (74) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

Wed Jun 20 02:38:45 GMT 2012

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 1 - Epoch 3a (74), completed</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 246.3D TO 246.3 D; BETWEEN 15-JUN-2012:15:30 AND 15-JUN-2012:16:30</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>If there is any choice in when to schedule, this should be scheduled as close to the middle of the window as possible.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 1 - Epoch 3a (74) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|---------------|--------|--------------------------|----------------|-----|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | POS TARG 1.223,0. 081 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | SAME POS AS 1 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
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| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | POS TARG 1.420,0. 294 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | [==>(Copy 3)] | |
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| | | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |

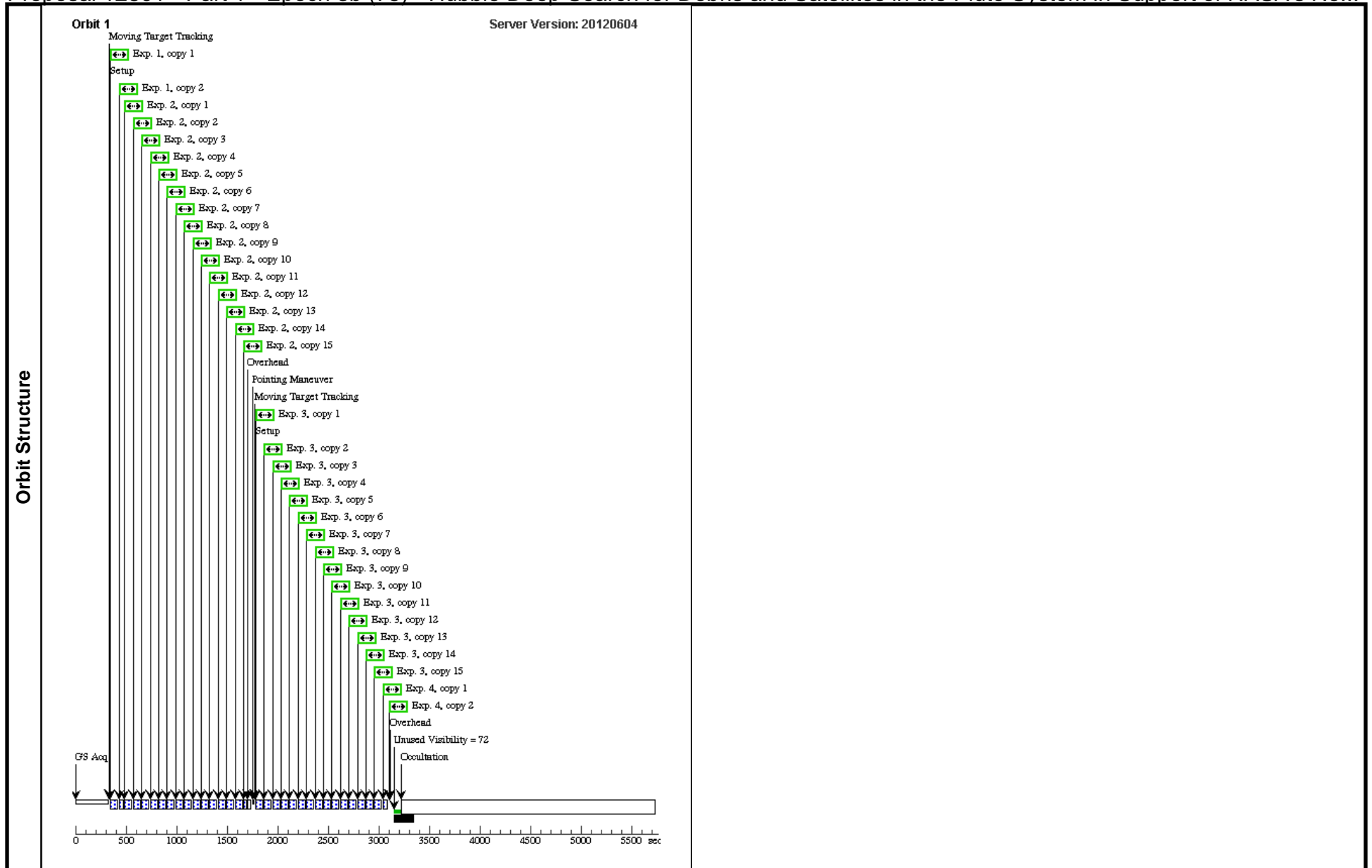


Proposal 12801 - Part 1 - Epoch 3b (75) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 1 - Epoch 3b (75), completed Wed Jun 20 02:38:46 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 4.8D TO 4.8D FROM 74; AFTER 74 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 1 - Epoch 3b (75) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|---------------|--------|--------------------------|----------------|-----|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | POS TARG 1.223,0. 081 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | SAME POS AS 1 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
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| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | POS TARG 1.420,0. 294 | 30 Secs X 15 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | | [==>(Copy 4)] | |
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| | | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | | | | | | | | | [==>(Copy 15)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |

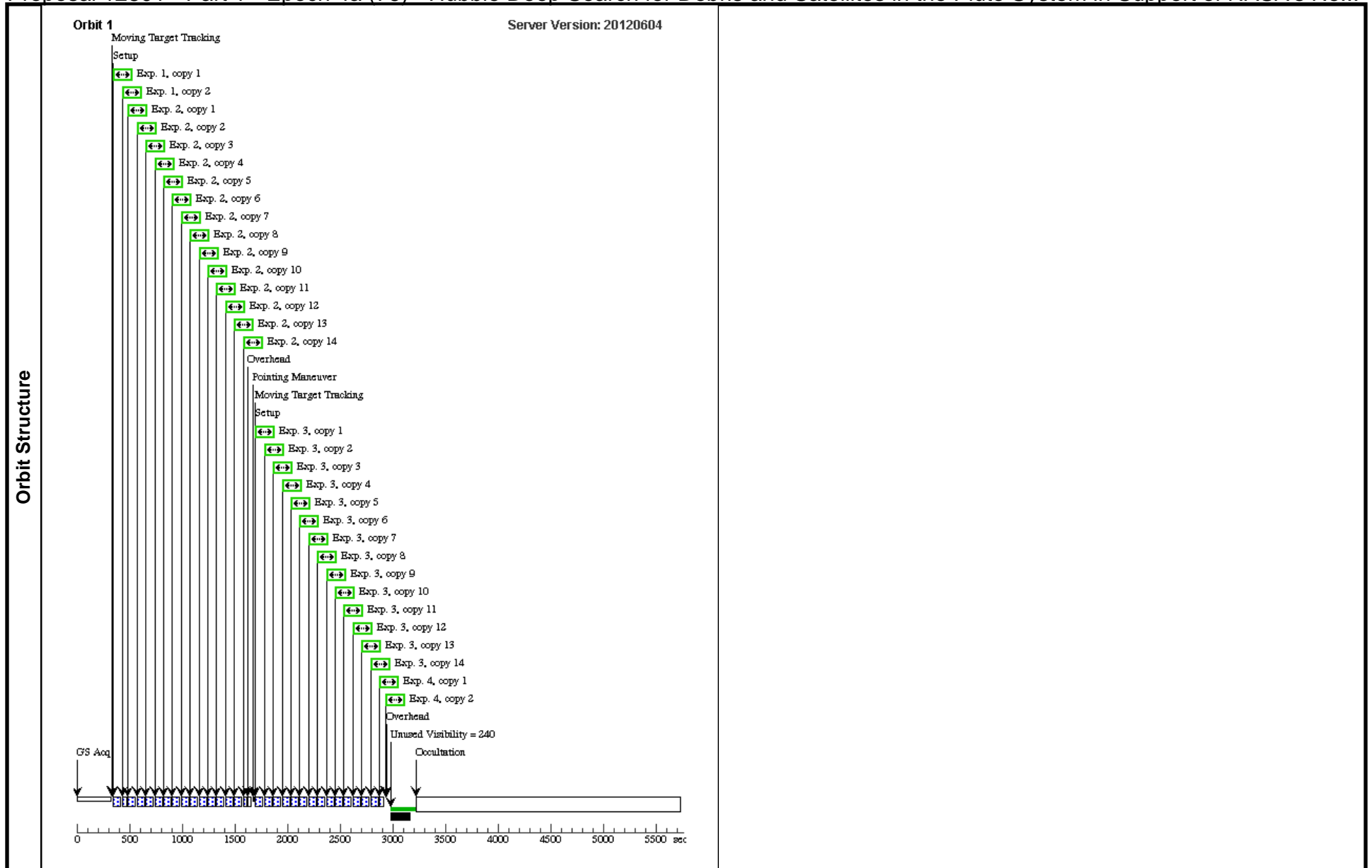


Proposal 12801 - Part 1 - Epoch 4a (76) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 1 - Epoch 4a (76), scheduled Wed Jun 20 02:38:47 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 243.5D TO 243.5 D; BETWEEN 18-JUN-2012:12 AND 18-JUN-2012:13</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>If there is any choice in when to schedule, this should be scheduled as close to the middle of the window as possible.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 1 - Epoch 4a (76) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
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| | | | | | | | | [==>(Copy 6)] | |
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| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | [==>(Copy 6)] | |
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| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |



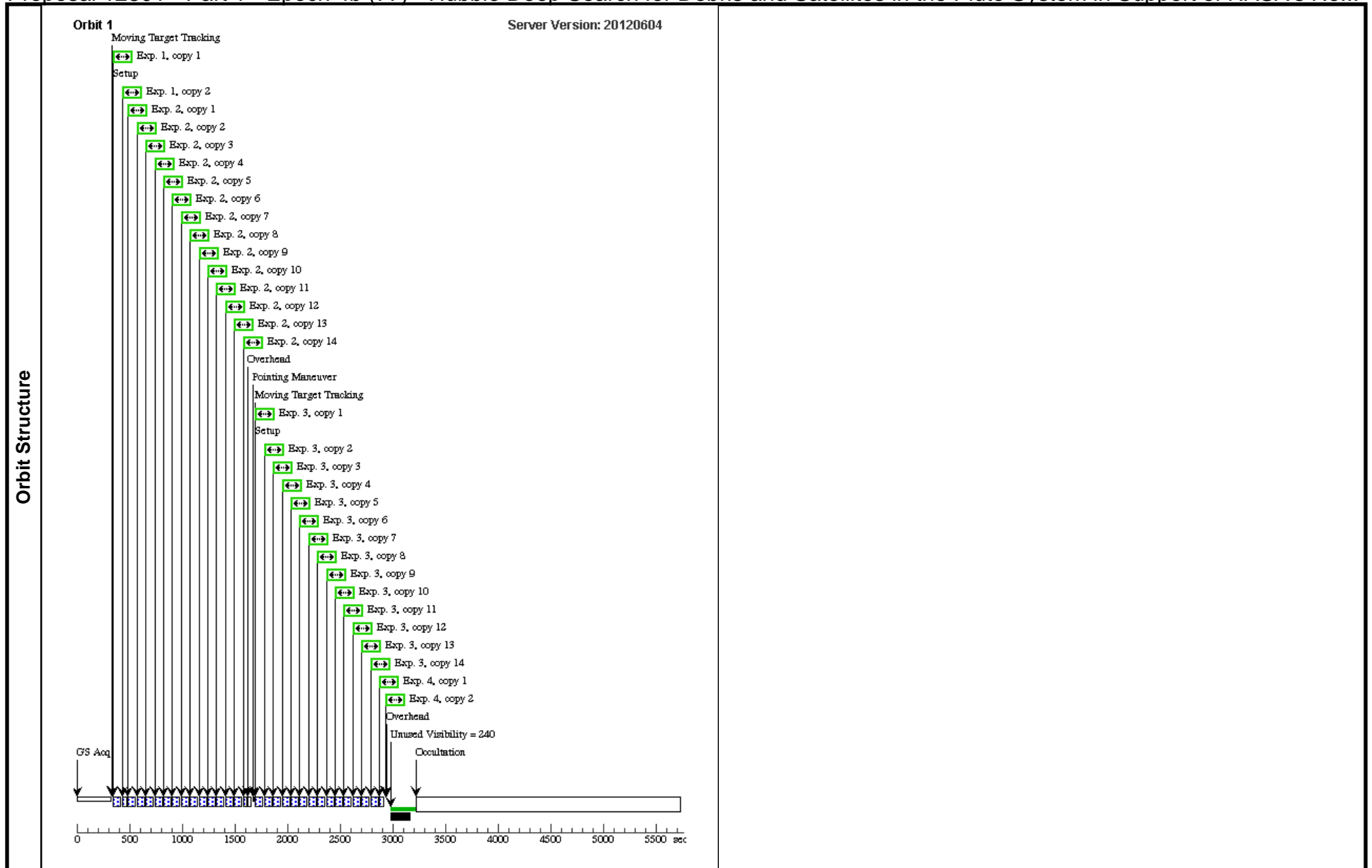
Proposal 12801 - Part 1 - Epoch 4b (77) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

Wed Jun 20 02:38:49 GMT 2012

| Visit | <p>Proposal 12801, Part 1 - Epoch 4b (77), scheduled</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 5.0D TO 5.0D FROM 76; AFTER 76 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 1 observations cover one half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|-----------|---------|---------|--------|--------------|--|---|------|---------|---------|---------|--------|--------------|-----|-------|-----------|--|--|--|
| | <table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>PLUTO</td> <td>STD=PLUTO</td> <td></td> <td></td> <td></td> <td>EARTH</td> </tr> </tbody> </table> | | | | | | | # | Name | Level 1 | Level 2 | Level 3 | Window | Ephem Center | (1) | PLUTO | STD=PLUTO | | | |
| # | Name | Level 1 | Level 2 | Level 3 | Window | Ephem Center | | | | | | | | | | | | | | |
| (1) | PLUTO | STD=PLUTO | | | | EARTH | | | | | | | | | | | | | | |
| Solar System Targets | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | |

Proposal 12801 - Part 1 - Epoch 4b (77) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
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| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
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| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |

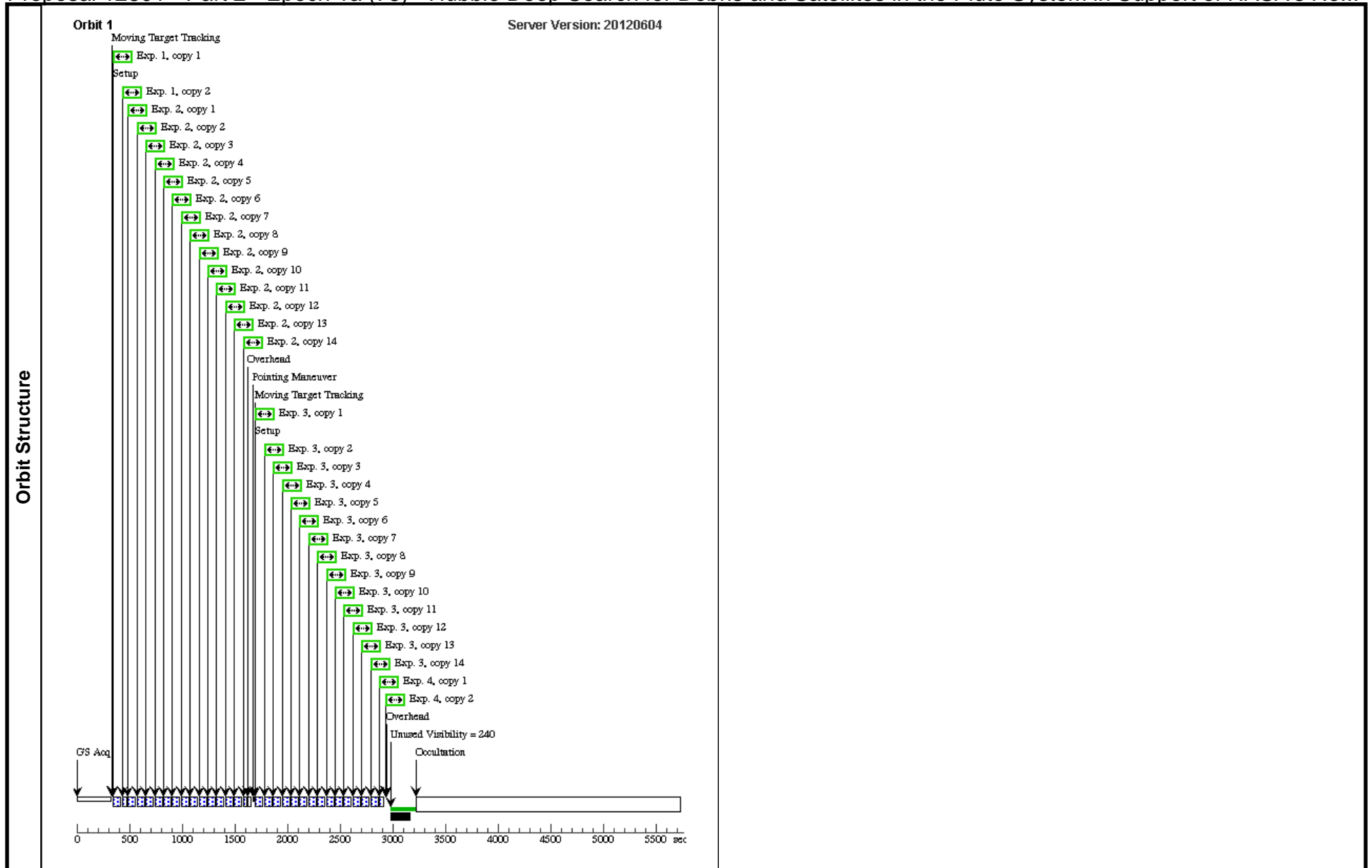


Proposal 12801 - Part 2 - Epoch 1a (78) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 2 - Epoch 1a (78), scheduled Wed Jun 20 02:38:50 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 202.4D TO 202.4 D; BETWEEN 27-JUN-2012:11:30 AND 27-JUN-2012:12:30</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>This visit is not at the ideal time but its window is a compromise between the geometry desired and the roll angle needed. There is an extra +30 roll off the optimum for this program to compensate for this issue. If there is any choice in when to schedule, this should be scheduled as early in the window as possible.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 2 - Epoch 1a (78) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

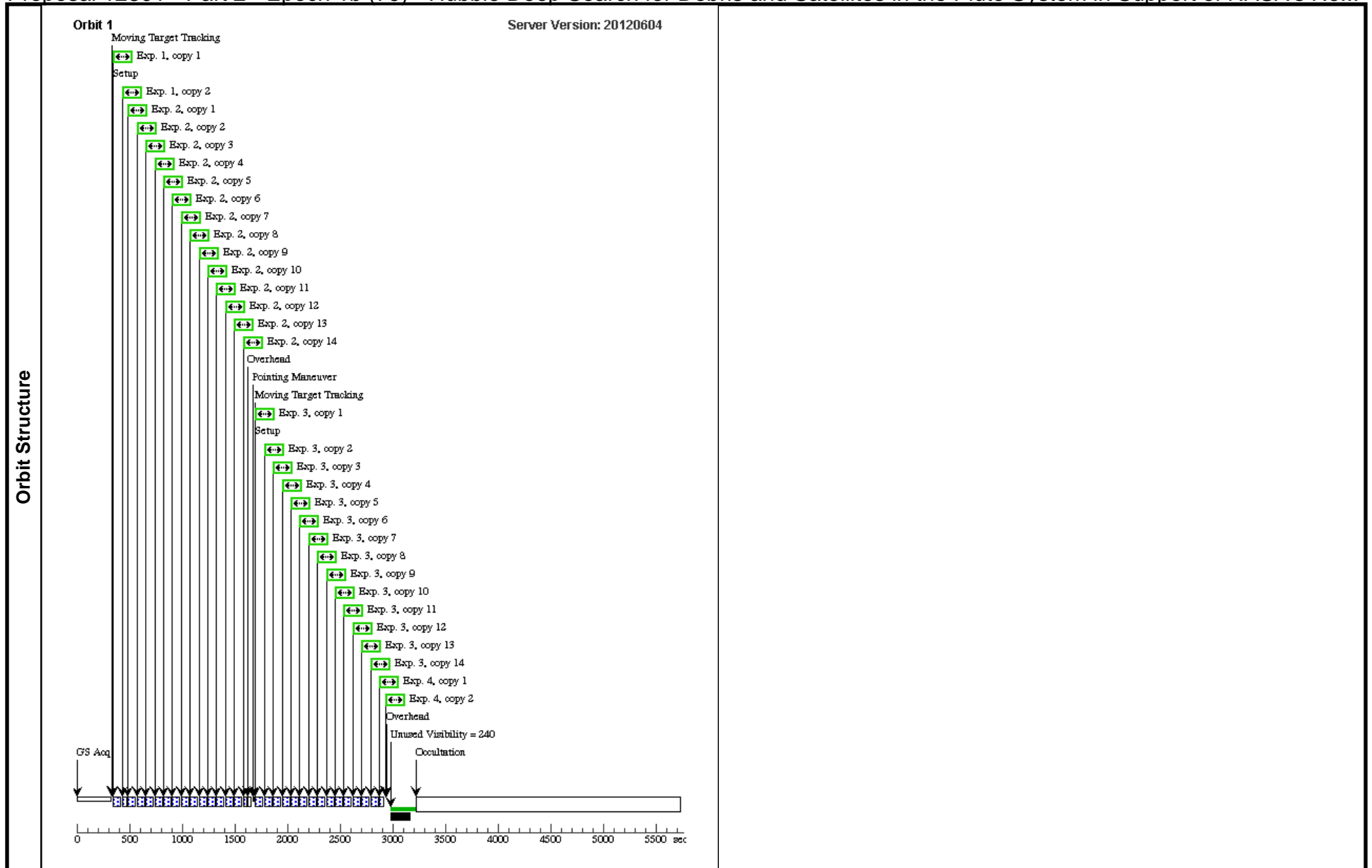
| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
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| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |



| | | | | | | | |
|--------------|--|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 2 - Epoch 1b (79), scheduled</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 3.9D TO 3.9D FROM 78; AFTER 78 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (1) | | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 2 - Epoch 1b (79) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
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| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |



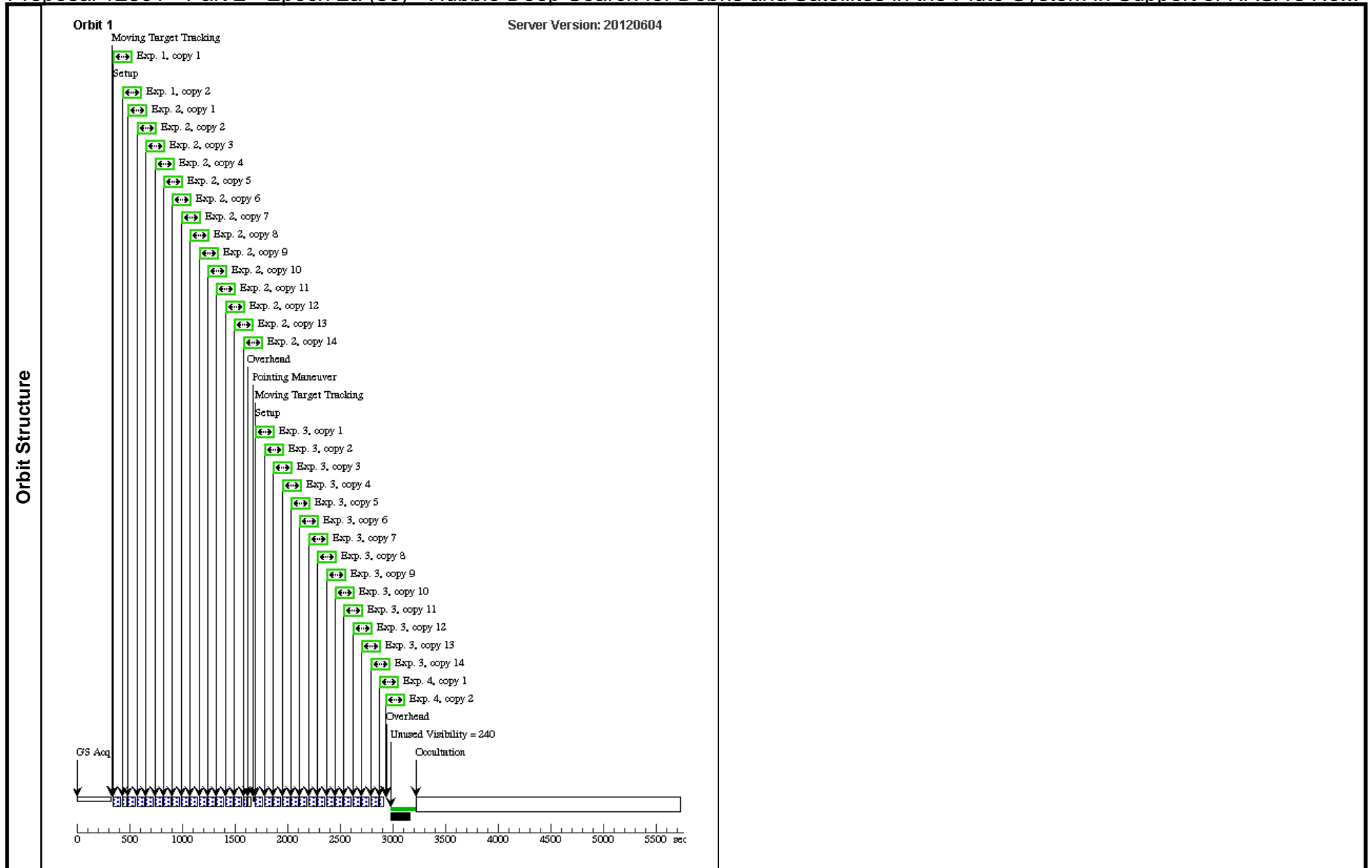
Proposal 12801 - Part 2 - Epoch 2a (80) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

Wed Jun 20 02:38:53 GMT 2012

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 2 - Epoch 2a (80), scheduled</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 178.7D TO 178.7 D; BETWEEN 30-JUN-2012:11:30 AND 30-JUN-2012:12:30</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>If there is any choice in when to schedule, this should be scheduled as close to the middle of the window as possible.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> <p><i>The gap in the BETWEEN window is to avoid a Pluto stellar occultation event.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (1) | | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 2 - Epoch 2a (80) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--|--------------------------|---|-------|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | POS TARG 1.223,0. 081; GS ACQ SCENARI O BASE1B3 | | 3 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] | [1] |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] | [1] |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 [==>(Copy 1)] [==>(Copy 2)] | [1] |

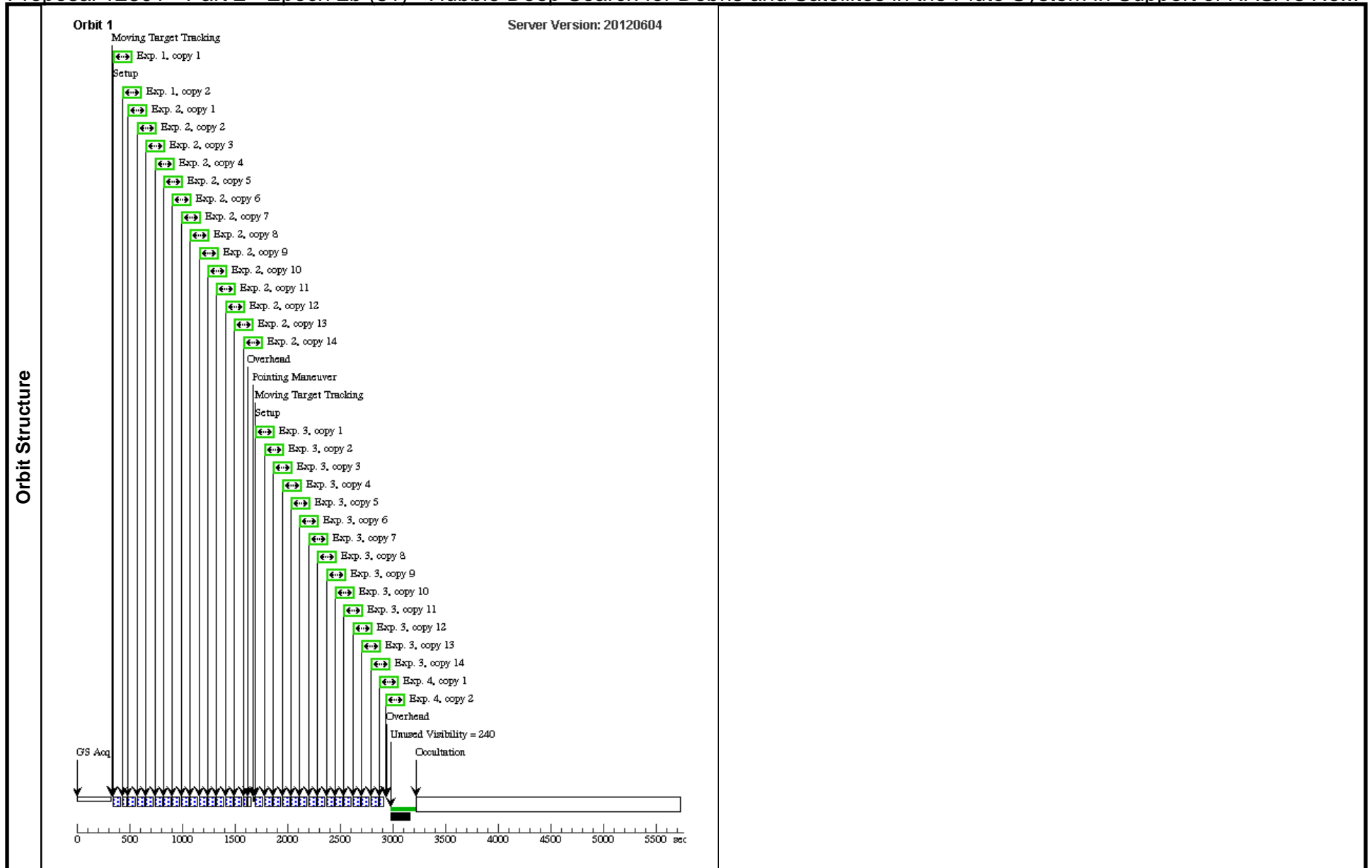


Proposal 12801 - Part 2 - Epoch 2b (81) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| | | | | | | | |
|--------------|---|----------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 2 - Epoch 2b (81), scheduled Wed Jun 20 02:38:54 GMT 2012</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 181.5D TO 181.5 D; AFTER 80 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| | (1) | PLUTO | STD=PLUTO | | | | EARTH |

Proposal 12801 - Part 2 - Epoch 2b (81) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

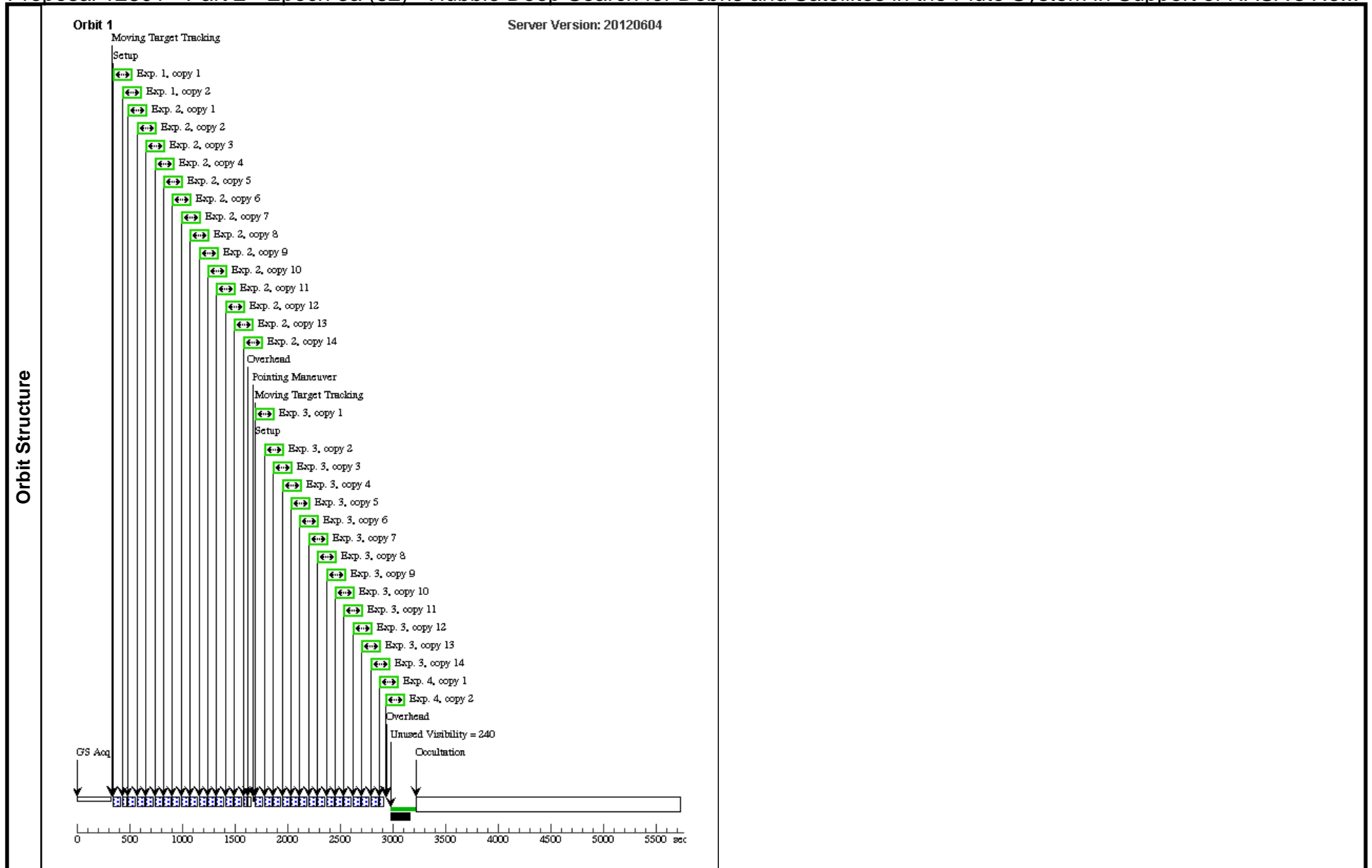
| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--|--------------------------|---|-------|
| Exposures | 1 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081; GS ACQ SCENARI O BASE1B3 | | [==>(Copy 1)] [==>(Copy 2)] | [1] |
| | 2 | Set A long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] | [1] |
| | 3 | Set B long | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] | [1] |
| | 4 | Short nav | (1) PLUTO | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] [==>(Copy 2)] | [1] |



| Visit | <p>Proposal 12801, Part 2 - Epoch 3a (82), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 114.3D TO 114.3 D; BETWEEN 02-JUL-2012:11:30 AND 02-JUL-2012:12:30</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>If there is any choice in when to schedule, this should be scheduled in the second half of the window.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | | | | | | | | | | | | | | |
|--------------|---|-----------|---------|---------|--------|--------------|--|---|------|---------|---------|---------|--------|--------------|------|------------|-----------|--|--|--|
| | <p>Solar System Targets</p> <table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(35)</td> <td>PLUTO-COPY</td> <td>STD=PLUTO</td> <td></td> <td></td> <td></td> <td>EARTH</td> </tr> </tbody> </table> <p><i>Comments: Copy of target 1. Used in visits 82 - 85 which needed to be reprocessed due to leap second.</i></p> | | | | | | | # | Name | Level 1 | Level 2 | Level 3 | Window | Ephem Center | (35) | PLUTO-COPY | STD=PLUTO | | | |
| # | Name | Level 1 | Level 2 | Level 3 | Window | Ephem Center | | | | | | | | | | | | | | |
| (35) | PLUTO-COPY | STD=PLUTO | | | | EARTH | | | | | | | | | | | | | | |

Proposal 12801 - Part 2 - Epoch 3a (82) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

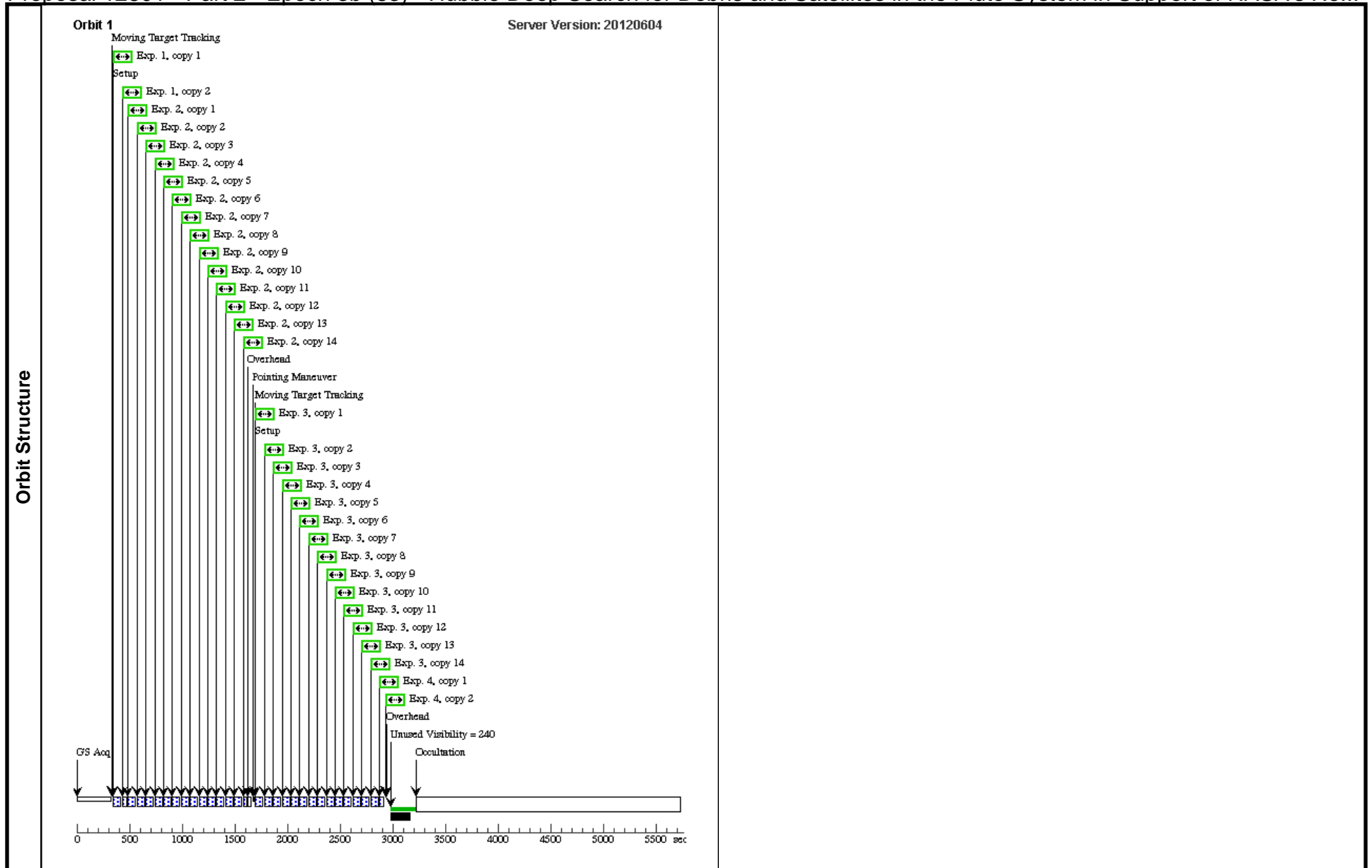
| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit | |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|---------------|--------|--------------------------|----------------|-----|
| Exposures | 1 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | POS TARG 1.223,0. 081 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | | |
| | 2 | Set A long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | | [==>(Copy 2)] | |



| | | | | | | | |
|---|---|------------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 2 - Epoch 3b (83), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 2.8D TO 2.8D FROM 82; AFTER 82 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (35) | | PLUTO-COPY | STD=PLUTO | | | | EARTH |
| <p><i>Comments: Copy of target 1. Used in visits 82 - 85 which needed to be reprocessed due to leap second.</i></p> | | | | | | | |

Proposal 12801 - Part 2 - Epoch 3b (83) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

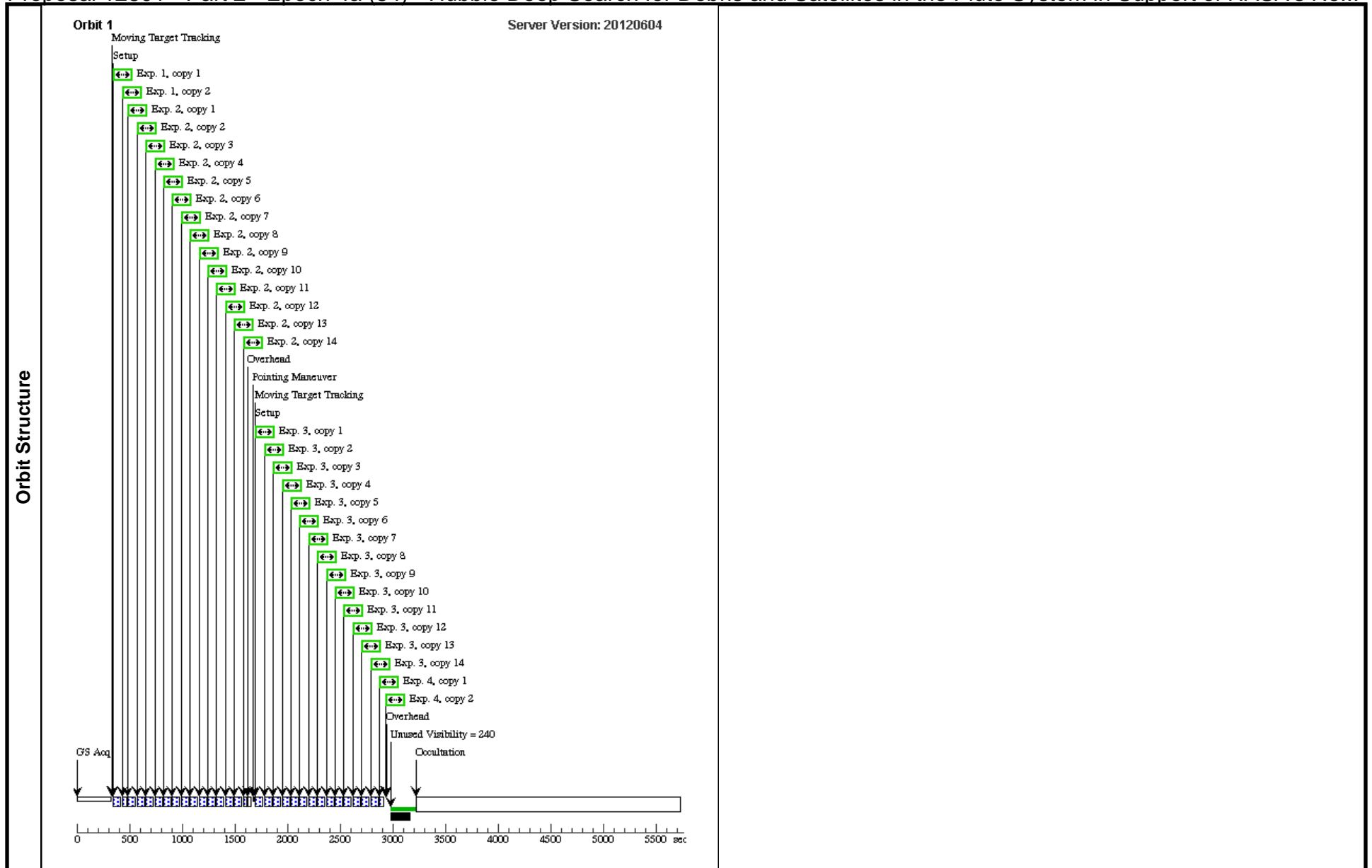
| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |



| | | | | | | | |
|---|---|------------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 2 - Epoch 4a (84), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 109.7D TO 109.7 D; BETWEEN 05-JUL-2012:11 AND 05-JUL-2012:12</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>This visit is not at the ideal time but its window is a compromise between the geometry desired and the roll angle needed. There is an extra -30 roll off the optimum for this program to compensate for this issue. If there is any choice in when to schedule, this should be scheduled as late in the window as possible.</i></p> <p><i>Once the schedule is known, the roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (35) | | PLUTO-COPY | STD=PLUTO | | | | EARTH |
| <p><i>Comments: Copy of target 1. Used in visits 82 - 85 which needed to be reprocessed due to leap second.</i></p> | | | | | | | |

Proposal 12801 - Part 2 - Epoch 4a (84) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |



| | | | | | | | |
|---|---|------------|-------------|----------------|----------------|----------------|---------------|
| Visit | <p>Proposal 12801, Part 2 - Epoch 4b (85), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: ORIENT 2.9D TO 2.9D FROM 84; AFTER 84 BY 0.9 Orbits TO 1.3 Orbits</p> <p><i>Comments: Part 2 observations cover the second half of the notional 1:2 MMR resonance zone. Visits appear in linked pairs where the roll between visits is set to put Charon at the same PA in the two visits. Each visit has a timing constraint and a roll constraint that causes Charon to be either directly above or directly below Pluto on the image. This puts the prime search region to the left or right of the bleeding trails from the saturated Pluto and Charon images. These visits do not cover the second half of the region as well due to the available roll angles.</i></p> <p><i>Once the schedule is known, the relative roll angle may need a small adjustment to refine the placement of all targets and regions on the WFC3 focal plane.</i></p> | | | | | | |
| | Solar System Targets | # | Name | Level 1 | Level 2 | Level 3 | Window |
| (35) | | PLUTO-COPY | STD=PLUTO | | | | EARTH |
| <p><i>Comments: Copy of target 1. Used in visits 82 - 85 which needed to be reprocessed due to leap second.</i></p> | | | | | | | |

Proposal 12801 - Part 2 - Epoch 4b (85) - Hubble Deep Search for Debris and Satellites in the Pluto System in Support of NASA's Ne...

| # | Label | Target | Config,Mode,Aperture | Spectral Els. | Opt. Params. | Special Reqs. | Groups | Exp. Time/[Actual Dur.] | Orbit |
|-----------|-------|------------|----------------------|--------------------------------------|--------------|--------------------------|--------------------------|-------------------------|-------|
| Exposures | 1 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | | 3 Secs X 2 | |
| | | | | | | POS TARG 1.223,0. 081 | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | | |
| | 2 | Set A long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | SAME POS AS 1 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 3 | Set B long | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | CR-SPLIT=NO | POS TARG 1.420,0. 294 | 30 Secs X 14 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |
| | | | | | | | | [==>(Copy 3)] | |
| | | | | | | | | [==>(Copy 4)] | |
| | | | | | | | | [==>(Copy 5)] | |
| | | | | | | | | [==>(Copy 6)] | |
| | | | | | | | | [==>(Copy 7)] | |
| | | | | | | | | [==>(Copy 8)] | |
| | | | | | | | | [==>(Copy 9)] | |
| | | | | | | | | [==>(Copy 10)] | |
| | | | | | | | | [==>(Copy 11)] | |
| | | | | | | | | [==>(Copy 12)] | |
| | | | | | | | | [==>(Copy 13)] | |
| | | | | | | | | [==>(Copy 14)] | |
| | 4 | Short nav | (35) PLUTO-COPY | WFC3/UVIS, ACCUM, UVIS2-C512C-SUB | F350LP | | SAME POS AS 3 | 3 Secs X 2 | |
| | | | | | | | | [==>(Copy 1)] | [1] |
| | | | | | | | | [==>(Copy 2)] | |

