



12353 - UVIS and IR Geometric Distortion Corrections

Cycle: 18, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:03.0	yes
02	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:11.0	yes
03	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:14.0	yes
04	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:15.0	yes
05	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:17.0	yes
06	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:18.0	yes
07	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:20.0	yes
08	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:21.0	yes
09	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:23.0	yes
10	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:24.0	yes
11	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:26.0	yes
12	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:27.0	yes
13	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:28.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
14	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:30.0	yes
15	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:34.0	yes
16	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:41.0	yes
17	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:44.0	yes
18	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:45.0	yes
19	(1) OMEGACEN	WFC3/UVIS	1	21-Jun-2011 21:01:46.0	yes
20	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:48.0	yes
21	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:49.0	yes
22	(1) OMEGACEN	WFC3/IR	1	21-Jun-2011 21:01:50.0	yes

22 Total Orbits Used

ABSTRACT

The standard astrometric catalog in the field of globular cluster Omega Cen has been used to examine the geometric distortion of WFC3 UVIS and IR as function of wavelength in Cycle 17. All observations from Cycle 17 have been reduced and provide the multi-wavelength geometric distortion in UVIS and IR detector. The newly derived geometric distortion coefficients in 10 UVIS and 5 IR filters are implemented in IDCTAB format to be used in HST pipe-line to correct for ~7% distortion in WFC3 images down to 1%.

This proposal will observed Omega Cen through three uncalibrated UVIS filters (F475W, F390M and F350LP) and three uncalibrated IR filters (F105W, F140W and F153M) in order to derive the coefficients of the geometric distortion to be used in IDCTAB. The UVIS F606W filter and F160W IR filter will be used to monitor the stability of UVIS and IR geometric distortion and the effect of the scale change due to the thermal breathing.

OBSERVING DESCRIPTION

The observation of Omega Cen through three uncalibrated UVIS and IR filters will be observed with the same pointing and orientation in the first epoch around December 2010, during the second epoch around July 2011, the observation with the same filters in UVIS and IR will be taken with the same pointing and orientation. The different orientations from two epochs will be used for a better constrain of geometric distortion in these three uncalibrated UVIS and IR filters. The UVIS F606W and IR F160W filter as a standard filter will be observed through the cycle in different roll-

Proposal 12353 (STScI Edit Number: 14, Created: Tuesday, June 21, 2011 8:01:54 PM EST) - Overview

angle of the OTA in three epochs with 3 months apart. The set of 13 exposures in F606W and F160W filters are sampled in the allowed full range of roll-angles at the ecliptic latitude of Omega Cen, and ranged approximately from 120 to 360 degree. Six UVIS exposures in each of the two orbits will be observed in the following sequence of off-nominal (~360 degree) roll-angles: Orbit #3 +5,0,-5 degree; Orbits #4 -10,-15,-20 degree. Six IR exposures in each of the two orbits will be observed in the following sequence of off-nominal (~360 degree) roll-angles: Orbit #5 +5,0,-5 degree; Orbit #6 -10,-15,-20 degree. The next three UVIS exposures in one orbit will be observed in the following sequence of off-nominal (~120 degree) roll-angles - +10,+20,+30 degree. The same for other three IR exposures in one orbit - +10,+20,+30 degree. In order to improve the schedule, a small range of roll is allowed at each specific roll angle. The order of the exposures in each orbit is specified by a SEQUENTIAL Special Requirement and the order of the orbits is specified by AFTER Special Requirements. To maintain accurate pointing control, 2-guide star acquisitions are used. If suitable guide stars can be found, the same pair of guide stars are used for all 22 exposures.

REAL TIME JUSTIFICATION

Not applicable

CALIBRATION JUSTIFICATION

The geometric distortion of WFC3 in 10 UVIS and 5 IR filters were calibrated using the standard astrometric catalog of Omega Cen (Anderson & van der Martel, 2010). Here we proposed to calibrate another 3 UVIS filters (F475W, F390M and F350LP) and three IR filters (F105W, F140W and F153M), which were not calibrated at Cycle 17. Also, the larger part of this proposal is to monitor the geometric distortion of UVIS and IR detector. The skew parameter (the non-perpendicularity of coordinate axes), which is the major parameter in the geometric distortion model, as it is in the ACS case, is changing with time in the level of 40" over 5 years on board of HST. The results from WFC3/UVIS supplemental calibration program 12094 from Cycle 17 have been reduced and have show that skew in UVIS geometric distortion model during one year of WFC3 on board is stable and in the range of +/-3" which give the oftest at +/-0.05 pixels at the far edges of UVIS frames (Kozhurina-Platais et.al 2010 in "HST Calibration Workshop"). Thus, the goal of this calibration proposal is to continue the monitor the UVIS and IR skew as function of time.

ADDITIONAL COMMENTS

The 9 exposures in UVIS with steps of roll-angles +/-10 degree of off-nominal roll-angles required 3 orbits, the same 9 exposures in IR with the steps of roll-angles +/-10 degree of nominal roll-angles, also required 3 orbits. However, APT requires each Visit to begin at the start of an orbit and therefore calculates that this proposal requires 18 orbits, which APT indicates is mostly unused. Accordingly, APT generates a Warning that the Visits will not fit within

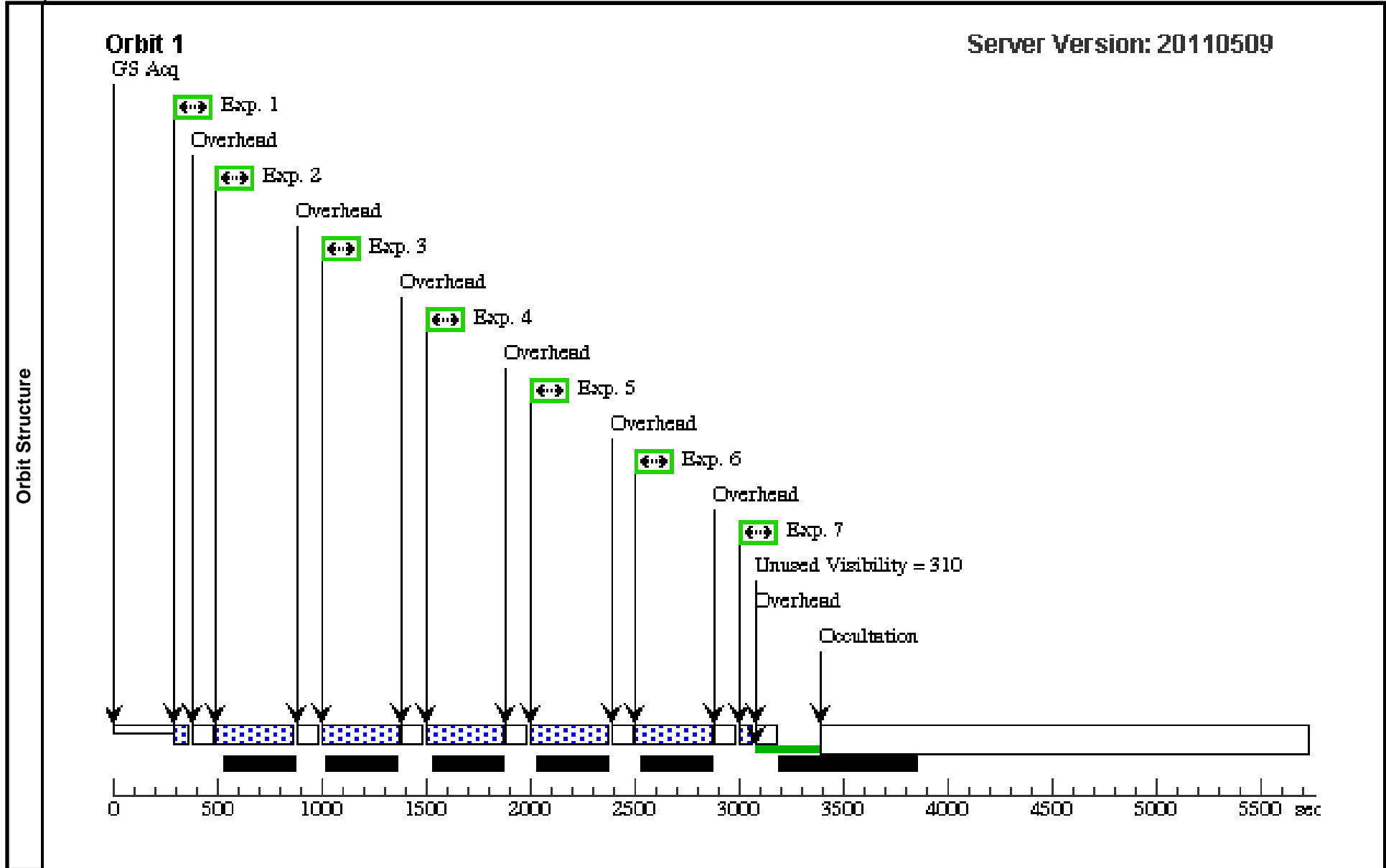
Proposal 12353 (STScI Edit Number: 14, Created: Tuesday, June 21, 2011 8:01:54 PM EST) - Overview

the required 10 orbits and 9 Warnings that the SEQUENTIAL sets cannot fit within one orbit. However, based upon known overheads for the moderate roll-slews used and overheads for full guide star acquisitions, these indicated VISITS (3,4,5,6,7,8,17,18,19 with UVIS and 9,10,11,12,13,14, 20,21,22 with IR) should be be schedule in 6 orbits. The exposures with UVIS are: Orbit #3, Visits 3,4,5 off-nominal roll 0, +/-5 degree; Orbit #4, Visits 6,7,8 off-nominal roll -5,-10,-15 degree; Orbit #8, Visits 17, 18, 19 off-nominal roll +10, +20,+29 degree. The exposure with IR are: Orbit #5, Visits 9,10,11 off-nominal 0,+/-5 degree; Orbit #6 Visits 12,13,14 off nominal roll -5,-10,-15 degree; Orbit #9, Visits 20,21,22 off-nominal roll +10,+20,+29 degree.

Proposal 12353 - Visit 01 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:55 GMT 2011

Visit	Proposal 12353, Visit 01, completed Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 01-DEC-2010:14:20:39 AND 30-DEC-2010:14:20:39									
	(Visit 01) Warning (Orbit Planner): INVALID GS ACQ SCENARIO SPECIAL REQUIREMENT									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS				
Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]
	2	F390M	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	3	F350LP	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F350LP	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	4	F475W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	5	F390M	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	6	F350LP	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F350LP	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	7	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]

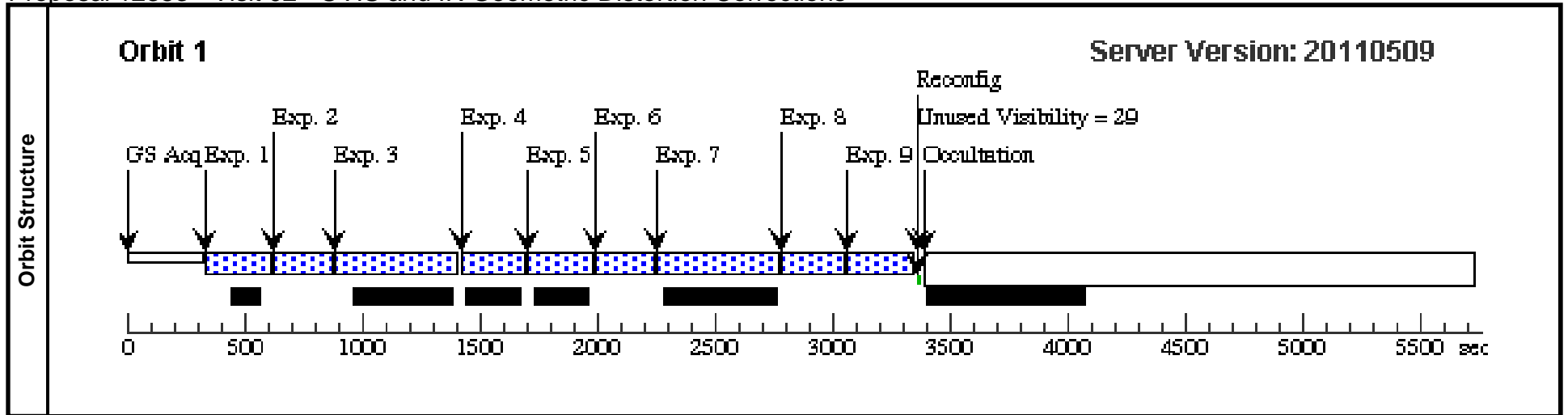


Proposal 12353 - Visit 02 - UVIS and IR Geometric Distortion Corrections

Visit	Proposal 12353, Visit 02, completed Wed Jun 22 01:01:56 GMT 2011 Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; BETWEEN 01-DEC-2010:14:47:58 AND 30-DEC-2010:14:47:58																	
	Diagnostics	(Visit 02) Warning (Orbit Planner): INVALID GS ACQ SCENARIO SPECIAL REQUIREMENT																
Fixed Targets	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th data-bbox="136 389 241 414">#</th> <th data-bbox="241 389 472 414">Name</th> <th data-bbox="472 389 892 414">Target Coordinates</th> <th data-bbox="892 389 1312 414">Targ. Coord. Corrections</th> <th data-bbox="1312 389 1606 414">Fluxes</th> <th data-bbox="1606 389 2005 414">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td data-bbox="136 414 241 527">(1)</td> <td data-bbox="241 414 472 527">OMEGACEN</td> <td data-bbox="472 414 892 527"> RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000 </td> <td data-bbox="892 414 1312 527"></td> <td data-bbox="1312 414 1606 527">V=16.8</td> <td data-bbox="1606 414 2005 527">Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS	Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion				
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous												
(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS													

Proposal 12353 - Visit 02 - UVIS and IR Geometric Distortion Corrections

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	2	F105W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS 25; NSAMP=10	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	3	F140W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F140W	SAMP-SEQ=SPARS 50; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	4	F153M	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	5	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	6	F105W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS 25; NSAMP=10	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	7	F140W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F140W	SAMP-SEQ=SPARS 50; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	8	F153M	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	9	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



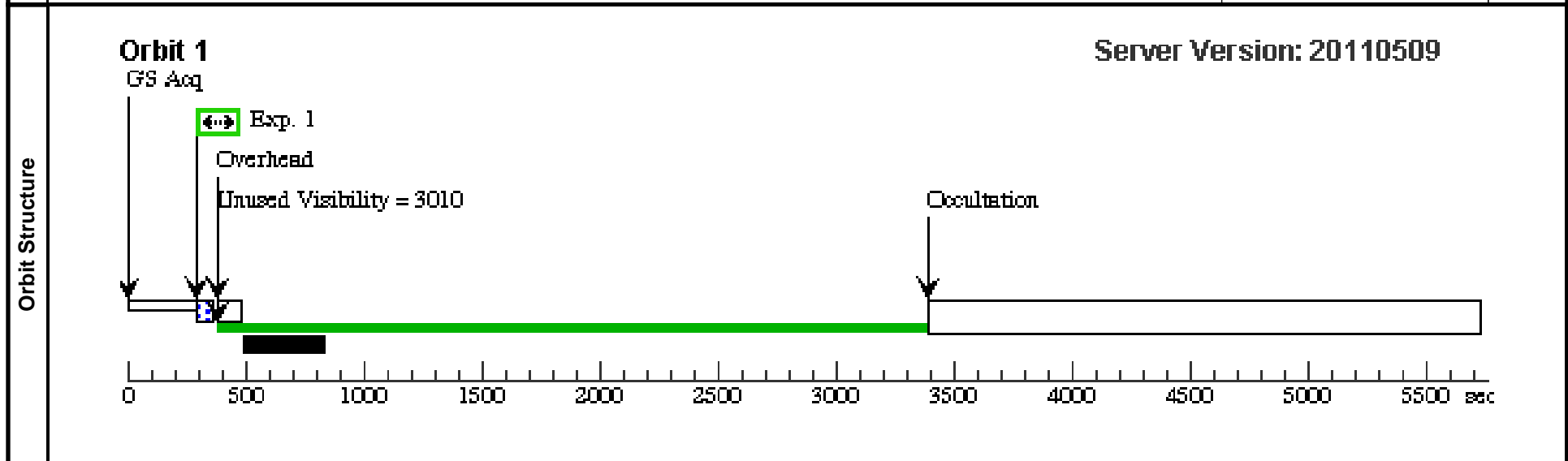
Proposal 12353 - Visit 03 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:57 GMT 2011

Visit	Proposal 12353, Visit 03, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; BETWEEN 20-MAR-2011:14:20:39 AND 30-APR-2011:14:20:39; SEQ 03,04,05,06,07,08 WITHIN 2.2 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



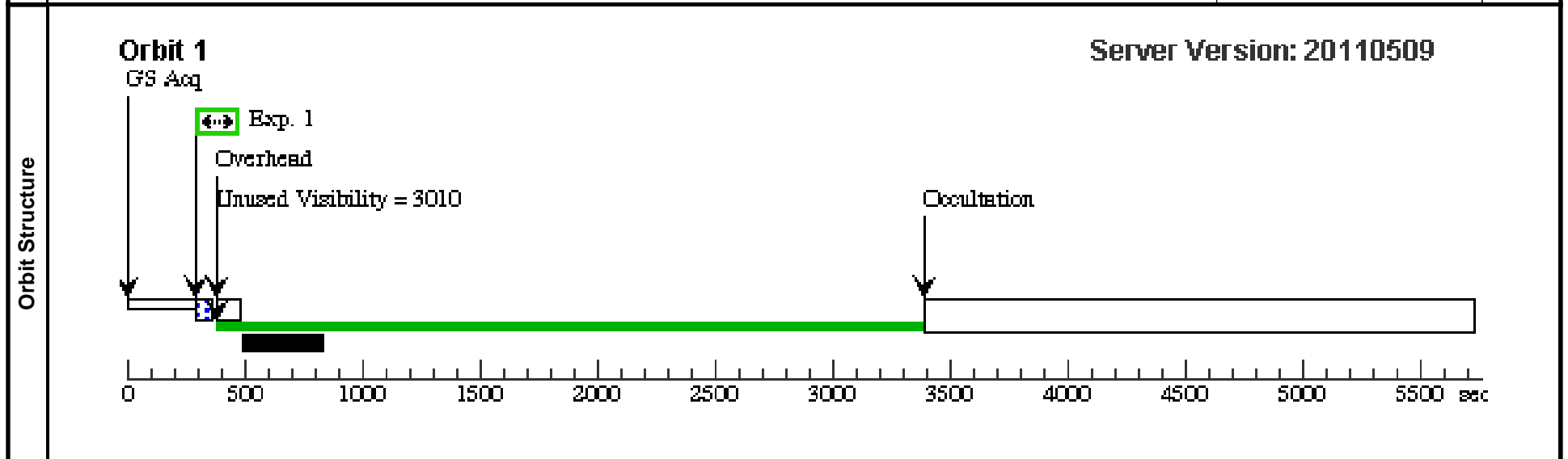
Proposal 12353 - Visit 04 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:57 GMT 2011

Visit	Proposal 12353, Visit 04, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT +10D TO +10D FROM 03				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



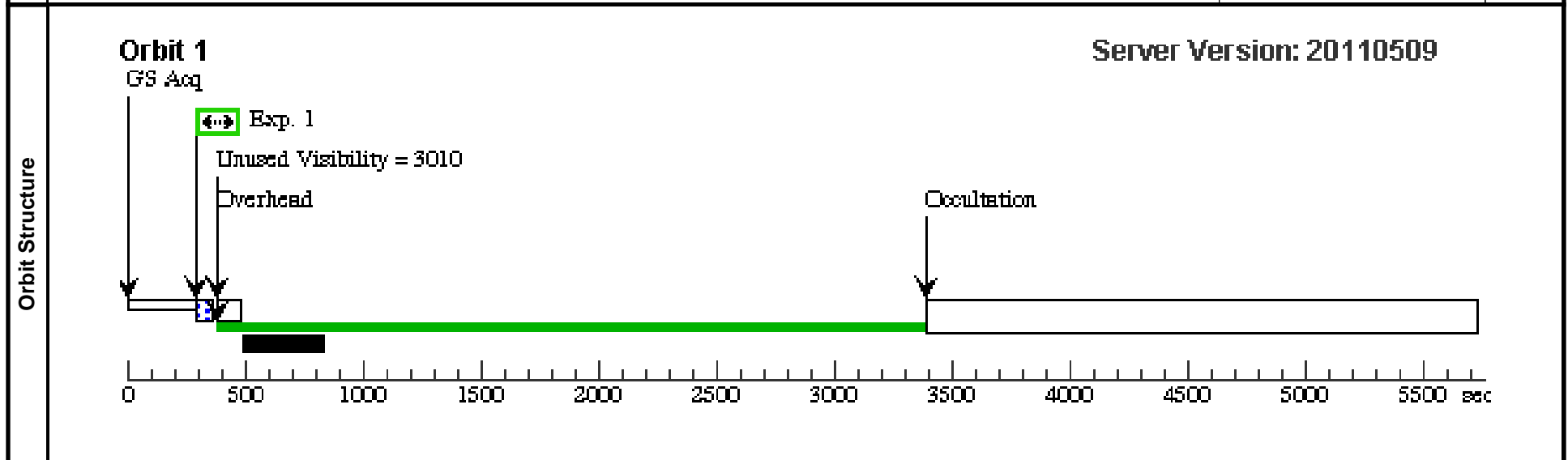
Proposal 12353 - Visit 05 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:57 GMT 2011

Visit	Proposal 12353, Visit 05, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT +5D TO +5D FROM 04				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



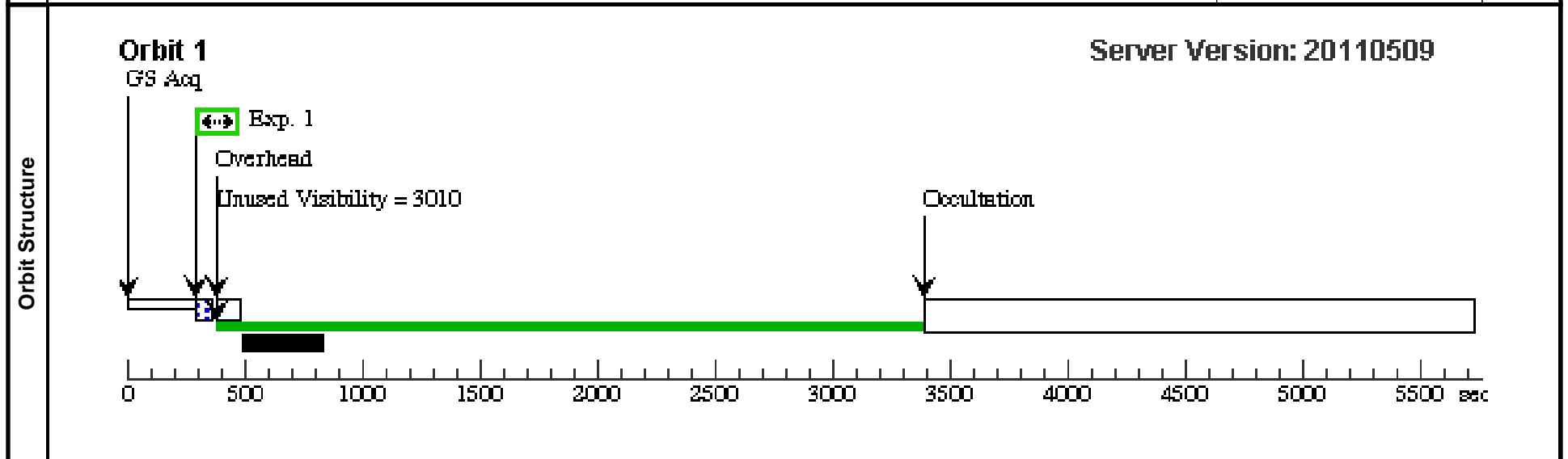
Proposal 12353 - Visit 06 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:58 GMT 2011

Visit	Proposal 12353, Visit 06, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT -5D TO -5D FROM 03				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



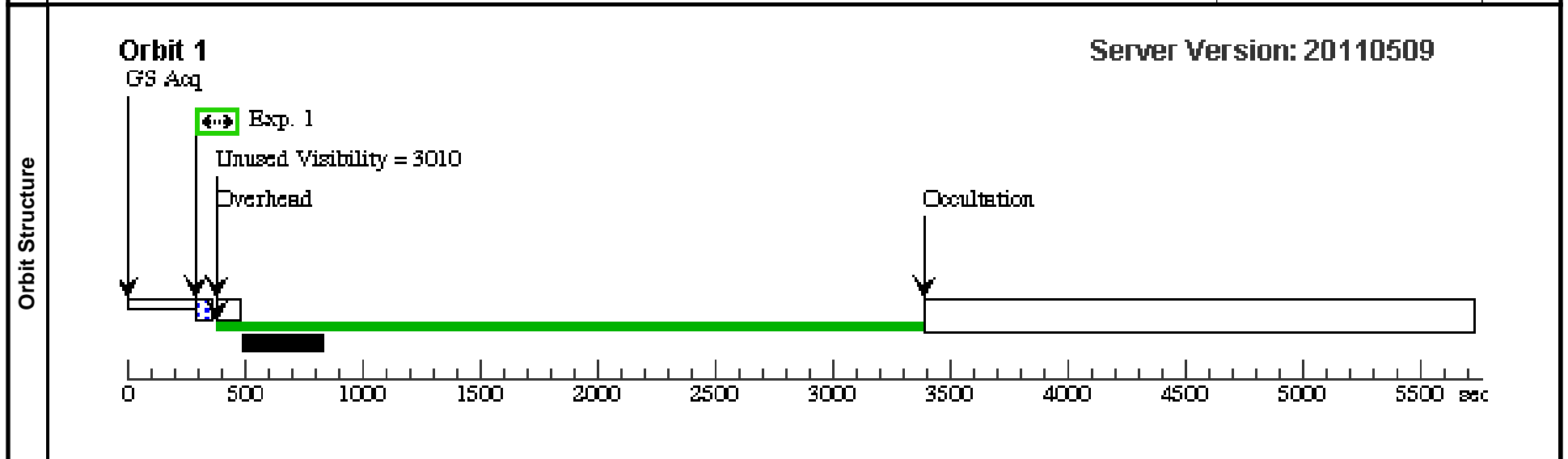
Proposal 12353 - Visit 07 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:58 GMT 2011

Visit	Proposal 12353, Visit 07, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT -10D TO -10D FROM 03				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



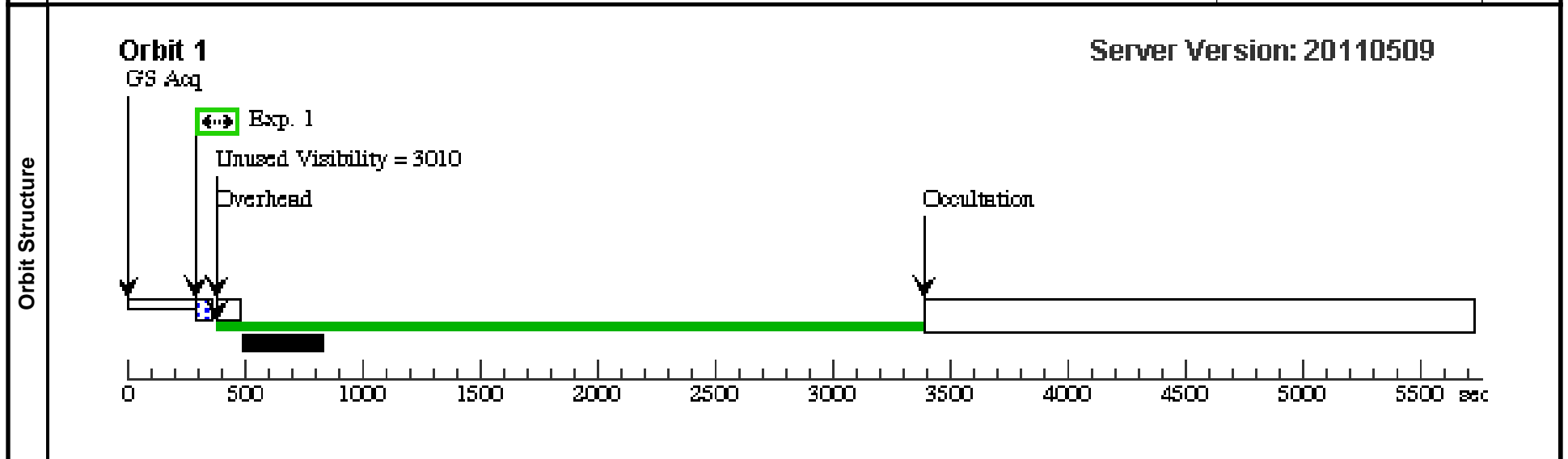
Proposal 12353 - Visit 08 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:58 GMT 2011

Visit	Proposal 12353, Visit 08, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT -15D TO -15D FROM 03				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



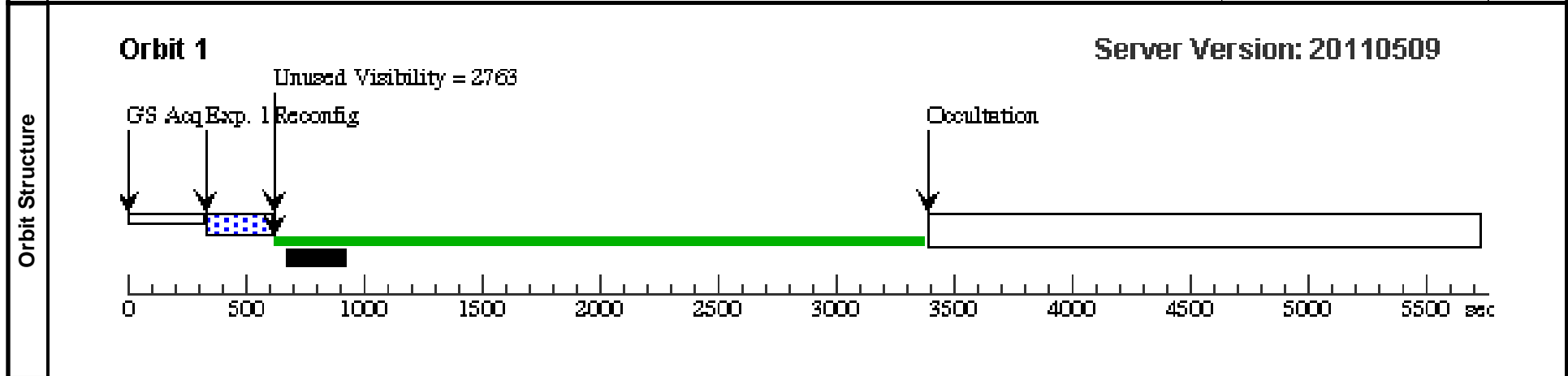
Proposal 12353 - Visit 09 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:59 GMT 2011

Visit	Proposal 12353, Visit 09, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; BETWEEN 01-APR-2011:20:06:44 AND 30-APR-2011:20:06:44; SEQ 09,10,11,12,13,14 WITHIN 2.2 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



Proposal 12353 - Visit 10 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:59 GMT 2011

Visit	Proposal 12353, Visit 10, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT +9D TO +9D FROM 09; SEQ 09,10,11 WITHIN 1 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



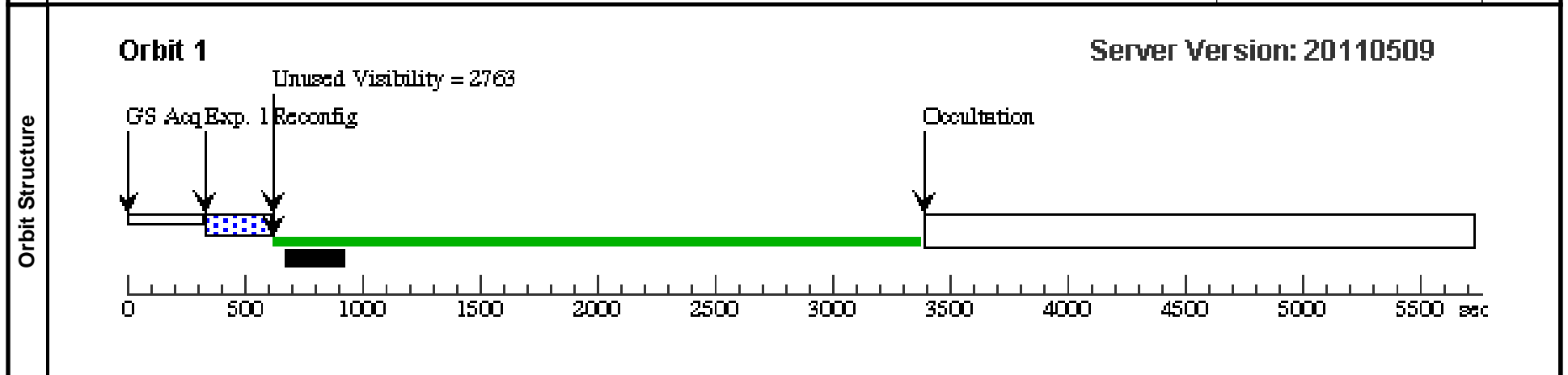
Proposal 12353 - Visit 11 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:59 GMT 2011

Visit	Proposal 12353, Visit 11, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT +5D TO +5D FROM 10; SEQ 09,10,11 WITHIN 1 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



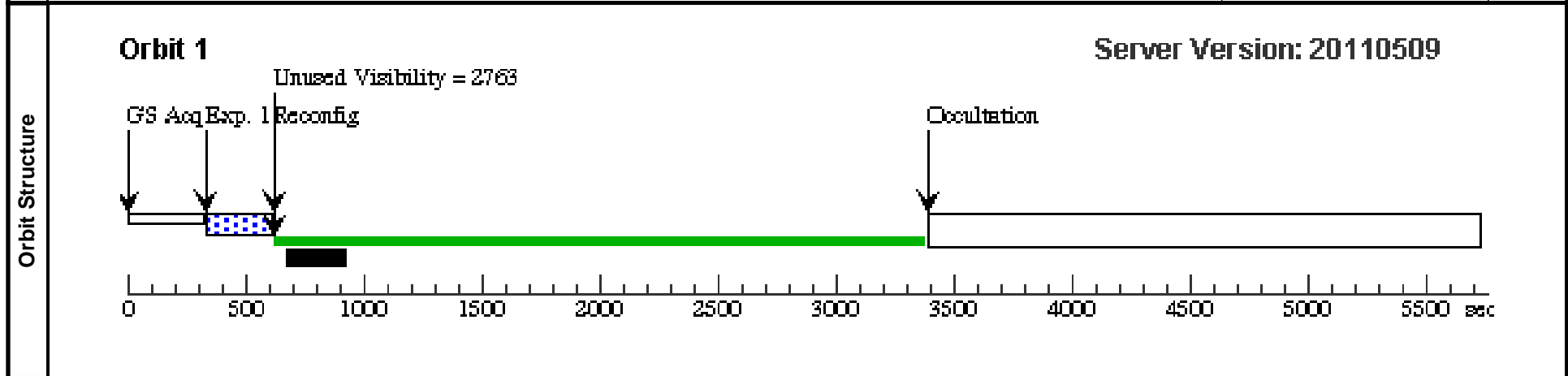
Proposal 12353 - Visit 12 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:59 GMT 2011

Visit	Proposal 12353, Visit 12, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT -4D TO -4D FROM 09				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



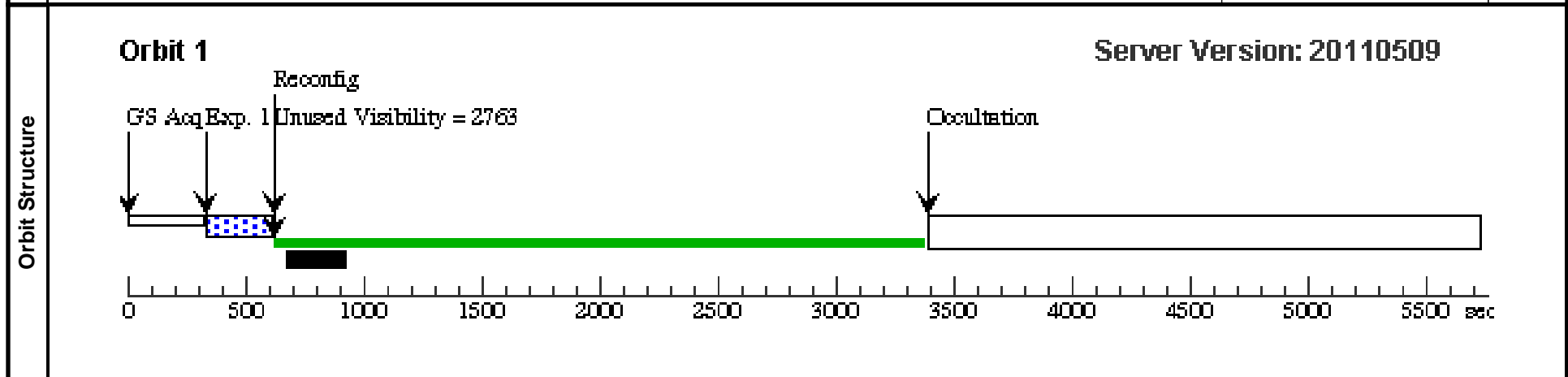
Proposal 12353 - Visit 13 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:59 GMT 2011

Visit	Proposal 12353, Visit 13, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT -10D TO -10D FROM 09; SEQ 12,13,14 WITHIN 1 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



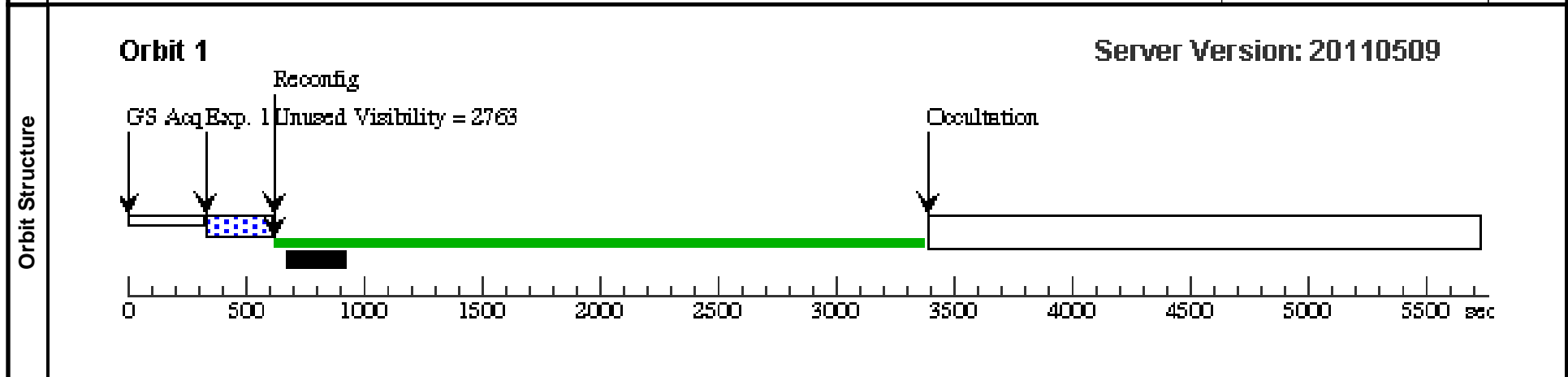
Proposal 12353 - Visit 14 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:01:59 GMT 2011

Visit	Proposal 12353, Visit 14, completed				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT -15D TO -15D FROM 09; SEQ 12,13,14 WITHIN 1 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]

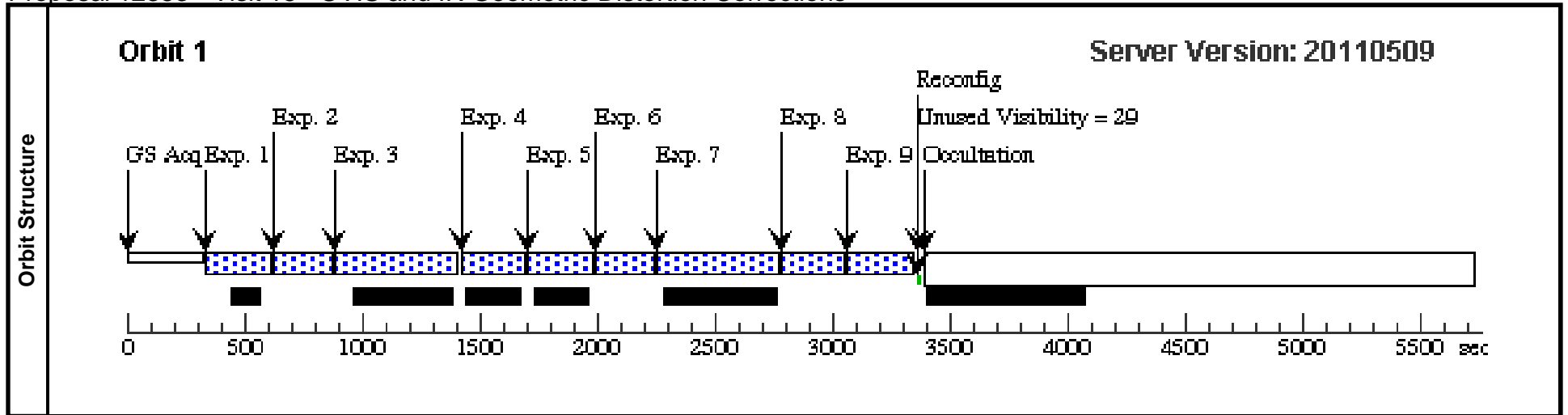


Proposal 12353 - Visit 15 - UVIS and IR Geometric Distortion Corrections

Visit	Proposal 12353, Visit 15, implementation Wed Jun 22 01:02:00 GMT 2011 Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; BETWEEN 15-JUL-2011:14:47:58 AND 30-JUL-2011:14:47:58; SEQ 15,16,17,18,19,20,21,22 WITHIN 4 Orbits																
	Diagnostics	(Visit 15) Warning (Orbit Planner): INVALID GS ACQ SCENARIO SPECIAL REQUIREMENT															
Fixed Targets	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 25%;">Target Coordinates</th> <th style="width: 25%;">Targ. Coord. Corrections</th> <th style="width: 10%;">Fluxes</th> <th style="width: 15%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>OMEGACEN</td> <td>RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000</td> <td></td> <td>V=16.8</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS												
Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion																	

Proposal 12353 - Visit 15 - UVIS and IR Geometric Distortion Corrections

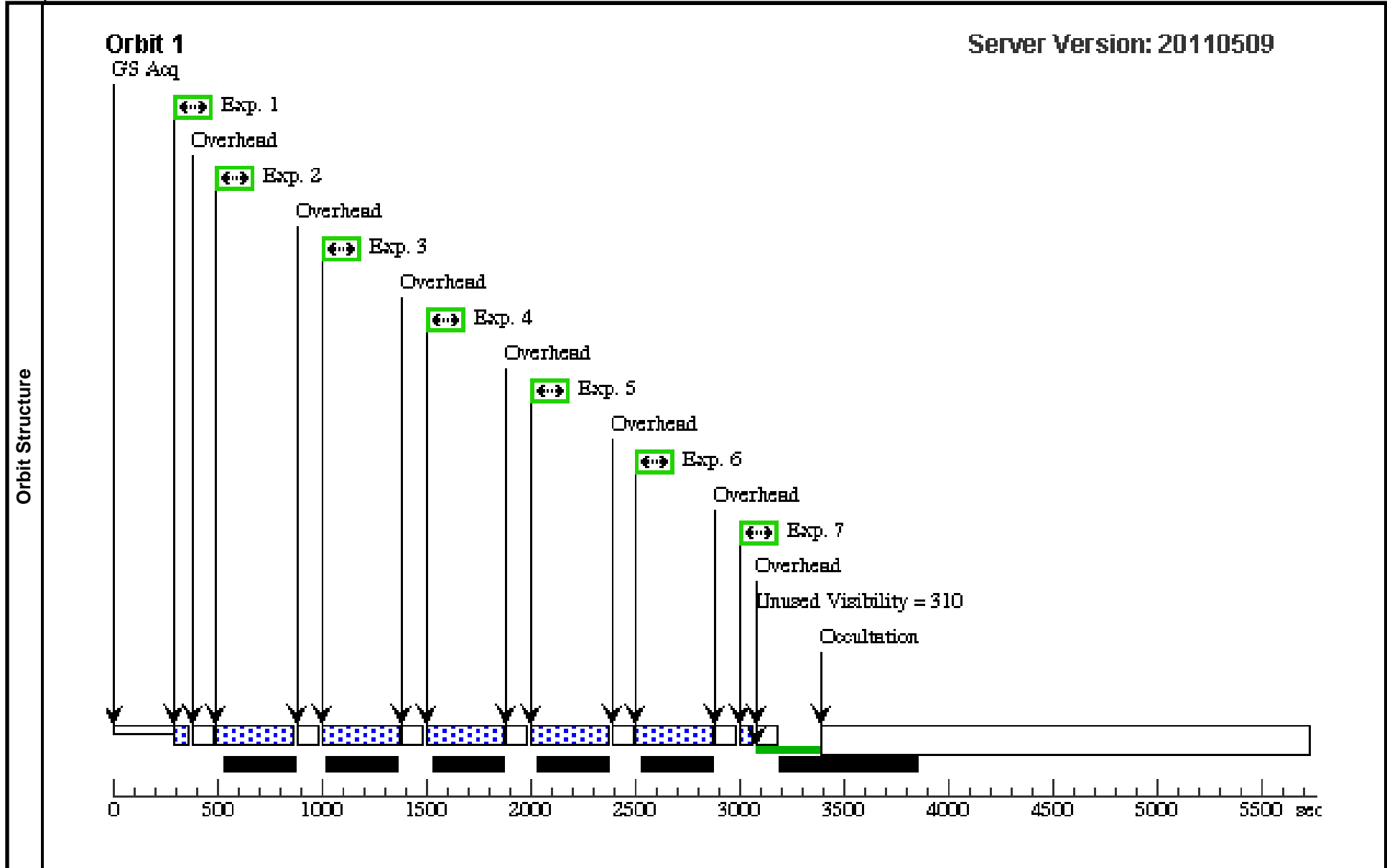
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	2	F105W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS 25; NSAMP=10	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	3	F140W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F140W	SAMP-SEQ=SPARS 50; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	4	F153M	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	5	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	6	F105W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F105W	SAMP-SEQ=SPARS 25; NSAMP=10	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	7	F140W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F140W	SAMP-SEQ=SPARS 50; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	8	F153M	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F153M	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]
	9	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



Proposal 12353 - Visit 16 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:02:00 GMT 2011

Visit	Proposal 12353, Visit 16, implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 15-JUL-2011:14:20:39 AND 30-JUL-2011:14:20:39									
	(Visit 16) Warning (Orbit Planner): INVALID GS ACQ SCENARIO SPECIAL REQUIREMENT									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS				
<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]
	2	F390M	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	3	F350LP	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F350LP	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	4	F475W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F475W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	5	F390M	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F390M	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	6	F350LP	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F350LP	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		350. Secs [==>]	[1]
	7	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



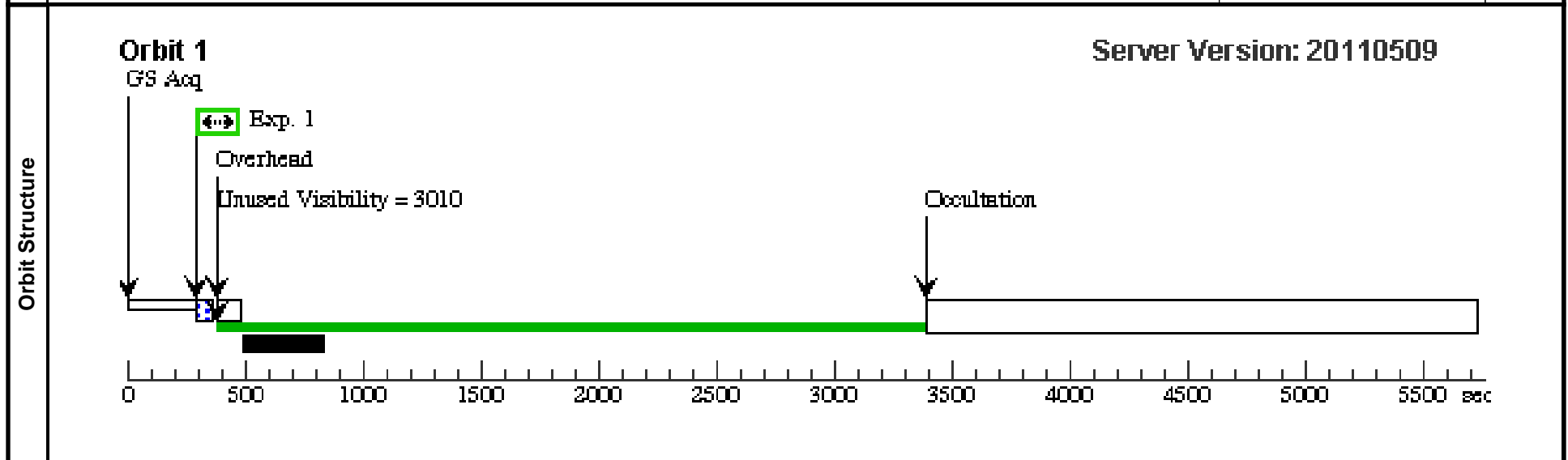
Proposal 12353 - Visit 17 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:02:01 GMT 2011

Visit	Proposal 12353, Visit 17, implementation				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT +10D TO +10D FROM 16; BETWEEN 15-JUL-2011:14:20:39 AND 30-JUL-2011:14:20:39; SEQ 17,18,19 WITHIN 1 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



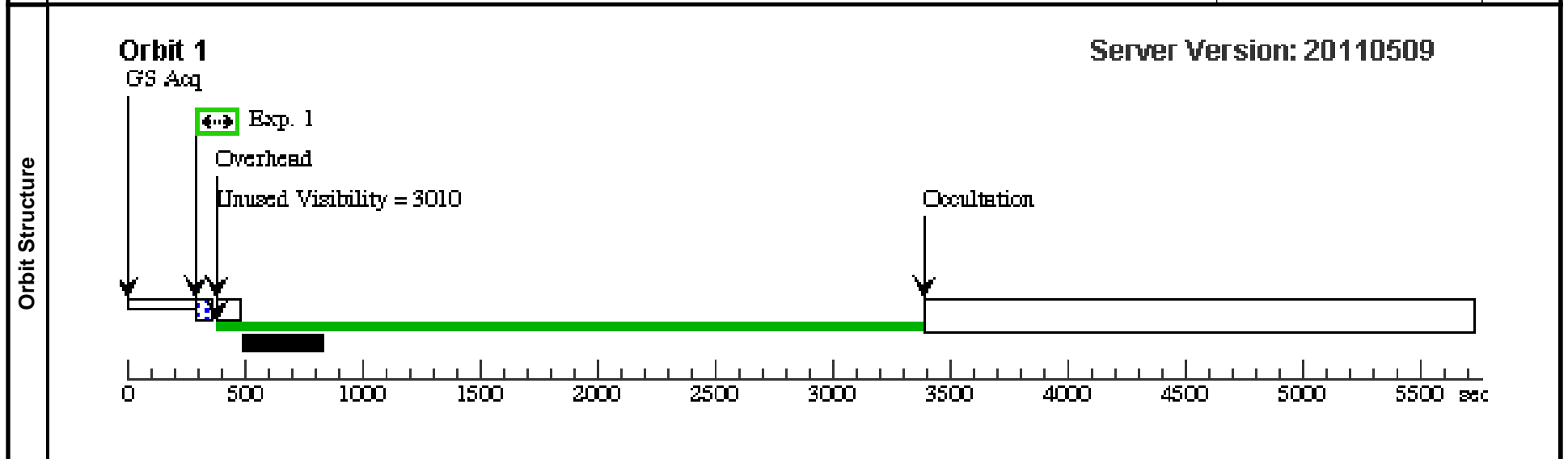
Proposal 12353 - Visit 18 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:02:01 GMT 2011

Visit	Proposal 12353, Visit 18, implementation				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT +19D TO +19D FROM 16; BETWEEN 15-JUL-2011:20:12:50 AND 30-JUL-2011:20:12:50				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



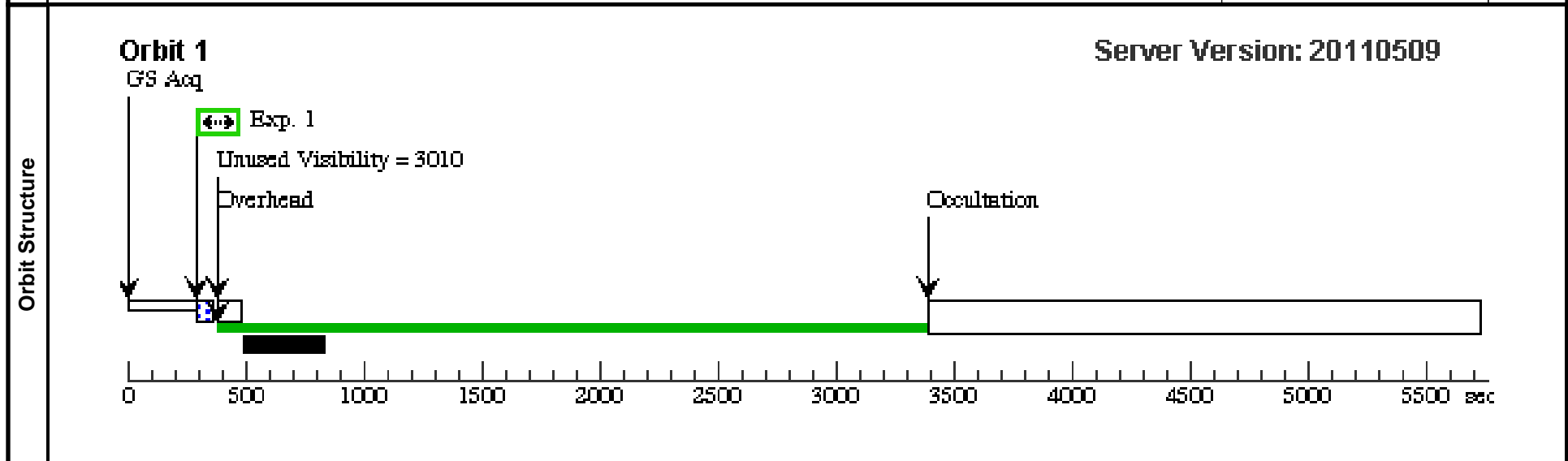
Proposal 12353 - Visit 19 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:02:01 GMT 2011

Visit	Proposal 12353, Visit 19, implementation				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/UVIS				
	Special Requirements: PCS MODE FINE; ORIENT +28D TO +28D FROM 16; BETWEEN 15-JUL-2011:20:13:15 AND 30-JUL-2011:20:13:15				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F606W	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F606W	CR-SPLIT=NO	EXP PCS MODE FINE; GS ACQ SCENARIO BASE1B3		40. Secs [==>]	[1]



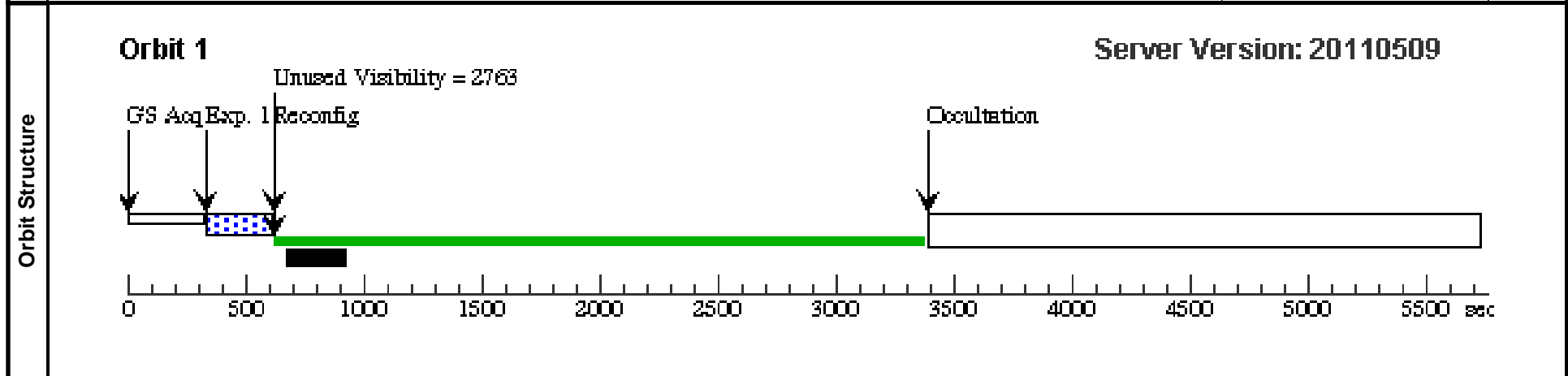
Proposal 12353 - Visit 20 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:02:02 GMT 2011

Visit	Proposal 12353, Visit 20, implementation				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT +10D TO +10D FROM 16; BETWEEN 15-JUL-2011:19:09:20 AND 30-JUL-2011:19:09:20; SEQ 20,21,22 WITHIN 1 Orbits				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



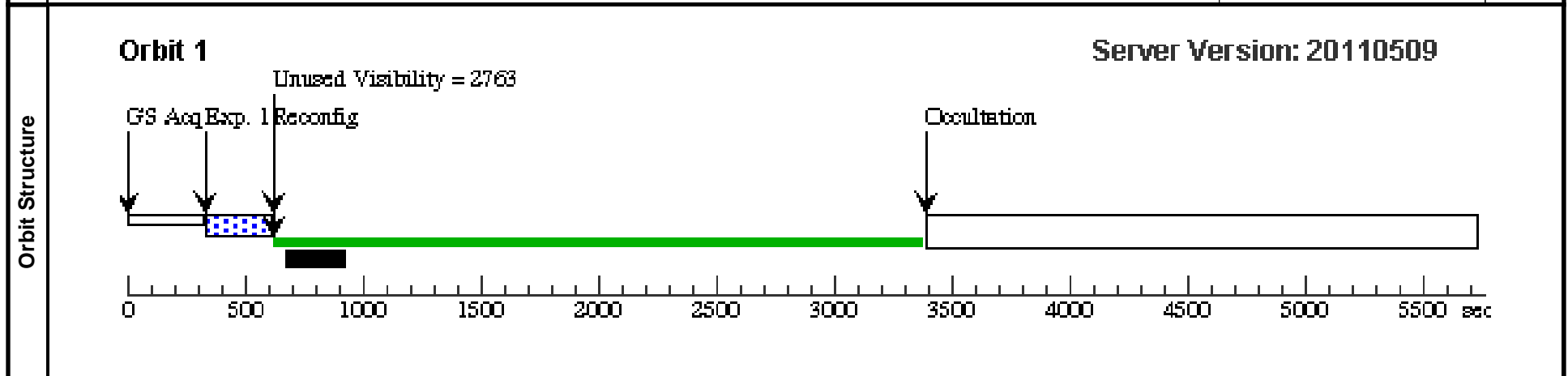
Proposal 12353 - Visit 21 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:02:02 GMT 2011

Visit	Proposal 12353, Visit 21, implementation				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT +19D TO +19D FROM 15; BETWEEN 15-JUL-2011:20:13:46 AND 30-JUL-2011:20:13:46				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]



Proposal 12353 - Visit 22 - UVIS and IR Geometric Distortion Corrections

Wed Jun 22 01:02:02 GMT 2011

Visit	Proposal 12353, Visit 22, implementation				
	Diagnostic Status: No Diagnostics				
	Scientific Instruments: WFC3/IR				
	Special Requirements: PCS MODE FINE; ORIENT +28D TO +28D FROM 15; BETWEEN 15-JUL-2011:20:14:06 AND 30-JUL-2011:20:14:06				

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	OMEGACEN	RA: 13 26 46.2800 (201.6928333d) Dec: -47 28 44.60 (-47.47906d) Equinox: J2000		V=16.8	Reference Frame: ICRS
	<i>Comments: This is the same target (and coordinates) as used in CAL/WFC3 11911, UVIS L-Flats and Geometric Distortion</i>					

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F160W	(1) OMEGACEN	WFC3/IR, MULTIACCUM, IR	F160W	SAMP-SEQ=SPARS 25; NSAMP=11	EXP PCS MODE FI NE; GS ACQ SCENARI O BASE1B3		[==>]	[1]

