



17674 - WFC3 UVIS CTE Monitor (Star Cluster)

Cycle: 32, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Benjamin Kuhn (PI) (Contact)	Space Telescope Science Institute
Dr. Sylvia M. Baggett (CoI) (Contact)	Space Telescope Science Institute
Dr. Jay Anderson (CoI) (Contact)	Space Telescope Science Institute

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	2	04-Feb-2025 15:03:01.0	yes
02	(2) NGC-104	WFC3/UVIS	2	04-Feb-2025 15:03:03.0	yes
03	(1) OMEGACEN	WFC3/UVIS	2	04-Feb-2025 15:03:04.0	yes
04	(1) OMEGACEN	WFC3/UVIS	2	04-Feb-2025 15:03:05.0	yes

8 Total Orbits Used

ABSTRACT

This program is a recurring UVIS calibration monitor that will observe two stellar clusters (Omega Centauri, and 47 Tuc) to measure the flux loss of point sources as a function of detector row number due to degrading Charge Transfer Efficiency (CTE). Because CTE fluctuates with characteristics such as source flux and background level, this program is designed to take short and long exposures, at various commanded post-flash levels with the F502N filter. We will

compare the results from these new observations with previous external CTE calibration programs and update the aperture photometry-based CTE model. Furthermore, ACS has an external CTE calibration program that observes NGC 104 at various post-flash levels that can also be used for direct comparison. Lastly, these data will be used to help monitor/improve the empirical pixel-based CTE correction (FLC/DRC).

OBSERVING DESCRIPTION

Using clusters to measure the UVIS CTE relies on image pairs that have a ~2000 pixel (~ 1 chip height) dither. Each field is first observed in UVIS2, and then dithered in the y-direction by an 81.6-arcsecond step (UVIS pixel scale ~ 0.04 arcsec/pixel), and then an identical exposure of the same field is taken in UVIS1. This allows a source that is near an amplifier in one chip (exposure) to be further from an amplifier in the other chip (exposure) enabling an absolute measure of the CTE. With varying field density, post flash, and exposure length, we build and maintain a CTE model based on many parameters.

In the past, the external CTE monitor has observed globular cluster NGC 104 (47 Tuc), and open cluster NGC 6791. The sparseness of NGC 6791 compared to 47 Tuc was used to test the effects of self-shielding on CTE-induced flux losses. However, the CTE trending between the two targets has not shown a significant difference. Therefore, starting cycle 28 we have swapped out NGC 6791 for Omega Centauri. Switching to Omega Centauri provides significantly more stars, particularly at the faint end, which improves the CTE measurements.

Each cluster will have long and short exposures taken. NGC 104 short exposures will have 12 e-/pixel post-flash (~12 e- total background) and Omega Centauri will have 0 and 11 e-/pixel post-flash (~1 and 12 e- total background).

The long exposure Omega Centauri images will be taken with a 10, 15, 23, 44, 75 and, 98 e-/pixel post-flash (20, 25, 34, 56, 92, and 117 e- total background). NGC 104 long exposures will use post-flash levels: 0, 18, 24, 33, and 55 e-/pixel. (1, 20, 25, 34, and 56 e- total background). All observations use the F502N.

Because of the ~2000 pixel dither, any warnings about the target being outside of the aperture can be ignored. Any warnings regarding post-flash may also be ignored since we're trying to simulate background levels with low/high commanded post-flashes.

----- Scheduling -----

The scheduling for this program has evolved over the years, but we continue to set unique BETWEENs for each of the four visits (which started in cycle 30 PID 17009). In the past, before Cycle 30, we had observed two targets roughly twice a year. The motivation was to test whether or not the stellar density affected the CTE measurement due to shielding. Now that we have seen that shielding does not have a measurable effect on the CTE measurement (WFC3 ISR 2021-09), we observe Omega Cen and NGC 104 at four unique epochs throughout the cycle with at least ~2 months in between each visit. We elect to observe Omega Cen three times and NGC 104 only once. The motivation for this is the same as described above for replacing NGC 6791. Omega Cen has a much more favorable stellar density that provides ~1000's of stars per flux bin rather than ~100's. The increase in the number of sources (especially at the faint and bright ends) greatly reduced the uncertainty in the measurement.

In this Cycle 32 proposal we will observe:

Omega Cen - Visit01 ~ March 2025

NGC 104 - Visit02 ~ May 2025

Omega Cen - Visit03 ~ July 2025

Omega Cen - Visit04 ~ Dec 2025 - Jan 2026

----- Calibration Justification -----

These data will be used to determine the evolution of CTE with epoch, position on the detector, and flash-level (i.e. background). Varying the background levels via post-flash will allow us to monitor the effects of post-flash to mitigate CTE. Results will be compared to Cycles 17-31 CTE measurements for WFC3/UVIS CCDs.

The analysis of the data will be used to continue calibrating a model of CTE-induced losses in both FLT and DRZ UVIS images, with a precision of better than 1% for stellar photometry and less than 5% for astrometric effects from CTE-induced source centroid shifts. Additionally, all exposures taken in this program will also be used to test and improve the pixel-based UVIS CTE correction algorithm developed by J. Anderson.

Proposal 17674 - Visit 01 - OMEGACEN (12 exposures) (01) - WFC3 UVIS CTE Monitor (Star Cluster)

Tue Feb 04 20:03:06 GMT 2025

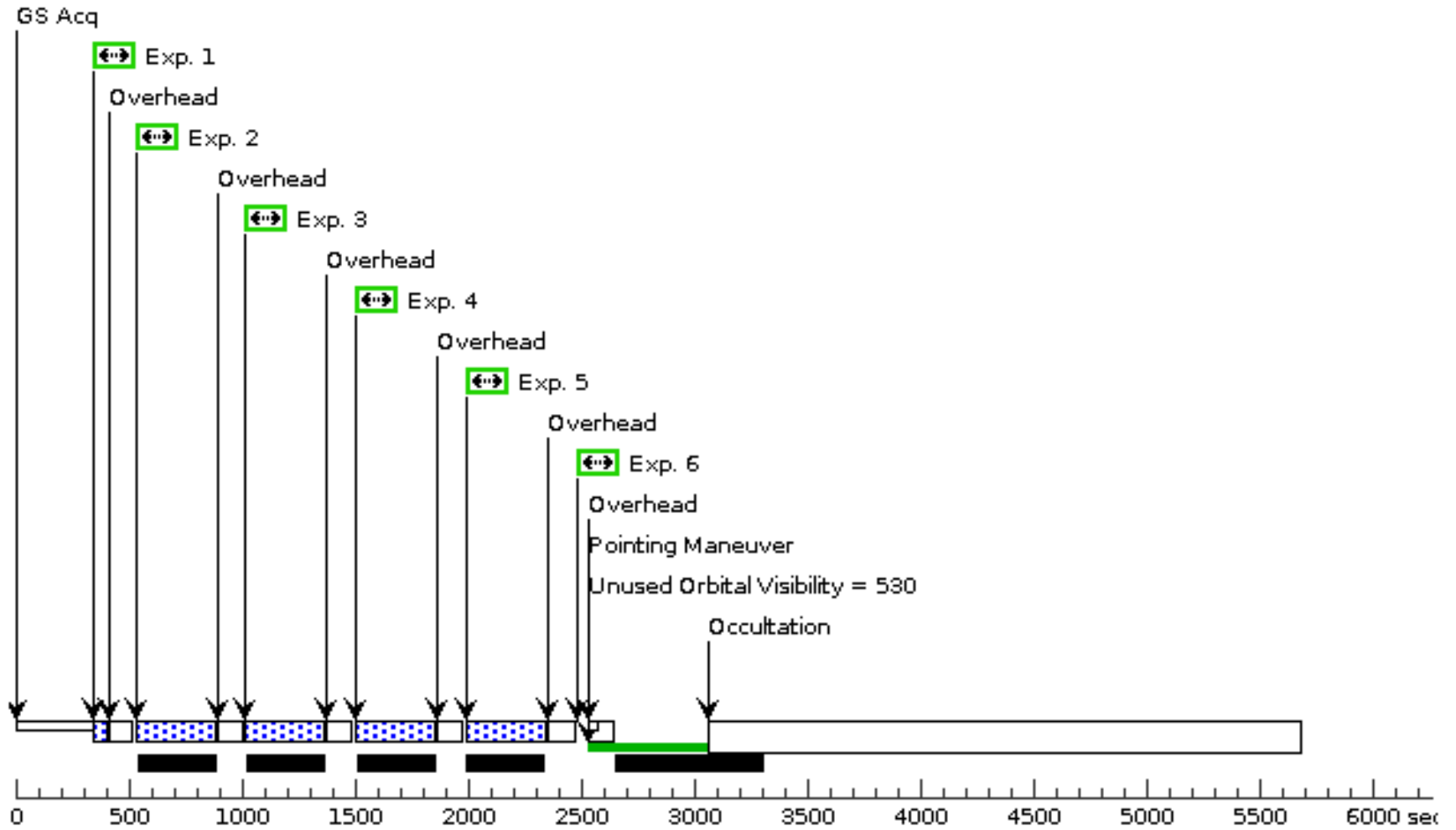
Visit	<p>Proposal 17674, Visit 01 - OMEGACEN (12 exposures) (01), scheduling</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; BETWEEN 11-MAR-2025:00:00:00 AND 25-MAR-2025:00:00:00</p> <p><i>Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.</i></p>																	
	Diagnostics	<p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 01 - OMEGACEN (12 exposures) (01)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Exposure 1 - 30s BKG 1 (01.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 2 - 348s BKG 20 (01.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 3 - 348s BKG 25 (01.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 5 - 348s BKG 56 (01.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 6 - 30s BKG 12 (01.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 7 - 30s BKG 1 (01.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 8 - 348s BKG 20 (01.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 9 - 348s BKG 25 (01.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 11 - 348s BKG 56 (01.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 12 - 30s BKG 12 (01.012)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p>																
Fixed Targets		<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>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> <p><i>Comments: Category=STELLAR CLUSTER Description=[GLOBULAR CLUSTER]</i></p>					#	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
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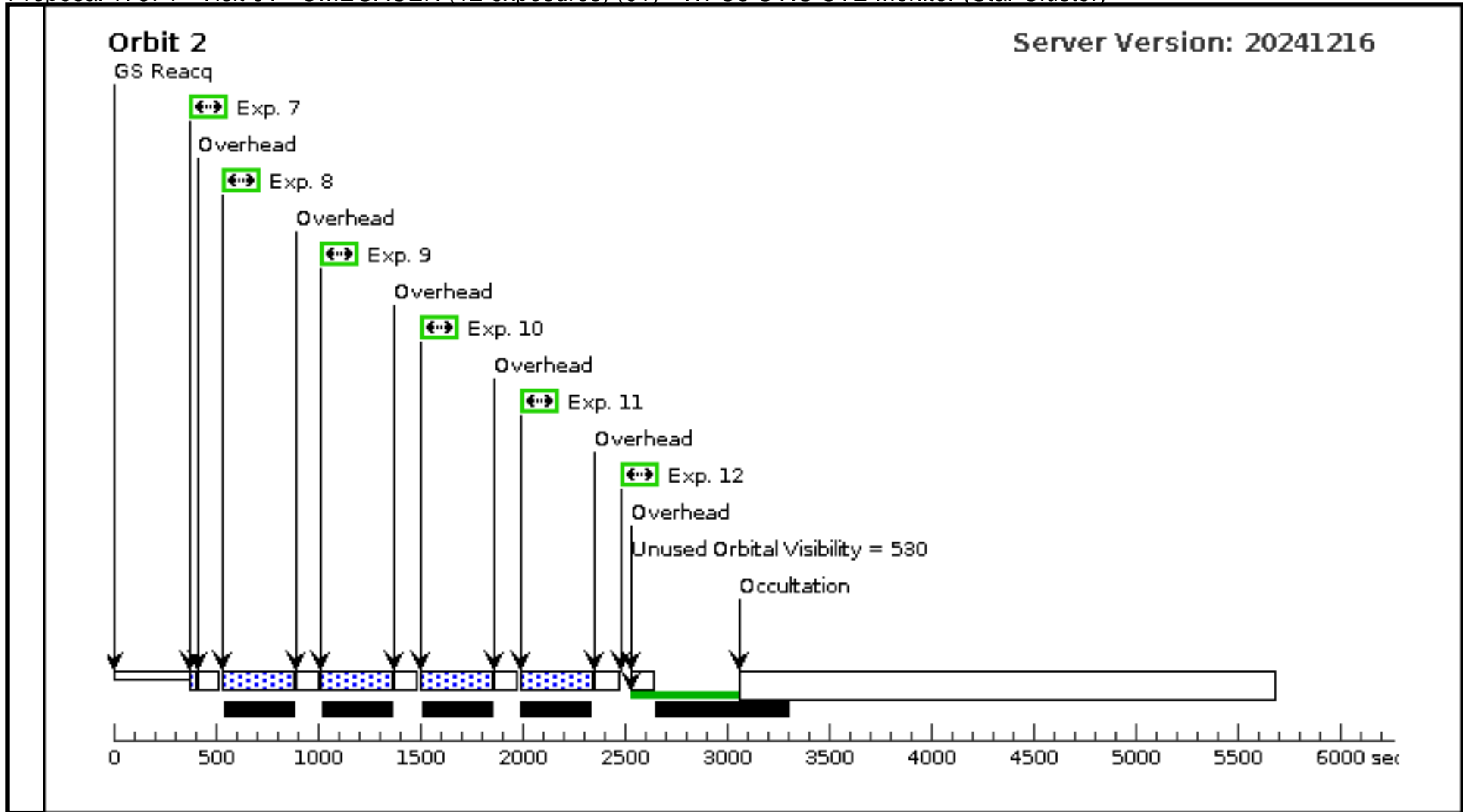
Proposal 17674 - Visit 01 - OMEGACEN (12 exposures) (01) - WFC3 UVIS CTE Monitor (Star Cluster)

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Exposure 1 - 30s BKG 1	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	GS ACQ SCENARI O BASE103		30 Secs (30 Secs)	[1]
	2	Exposure 2 - 348s BKG 2 0	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=10			348 Secs (348 Secs)	[1]
	3	Exposure 3 - 348s BKG 2 5	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=15			348 Secs (348 Secs)	[1]
	4	Exposure 4 - 348s BKG 3 4	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=23			348 Secs (348 Secs)	[1]
	5	Exposure 5 - 348s BKG 5 6	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=17.24			348 Secs (348 Secs)	[1]
	6	Exposure 6 - 30s BKG 12	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=11			30 Secs (30 Secs)	[1]
	7	Exposure 7 - 30s BKG 1	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0,81.6		30 Secs (30 Secs)	[2]
	8	Exposure 8 - 348s BKG 2 0	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=10	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	9	Exposure 9 - 348s BKG 2 5	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=15	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	10	Exposure 10 - 348s BKG 34	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=23	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	11	Exposure 11 - 348s BKG 56	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=17.24	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
12	Exposure 12 - 30s BKG 1 2	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=11	POS TARG 0,81.6		30 Secs (30 Secs)	[2]	

Orbit Structure

Orbit 1





Proposal 17674 - Visit 02 - NGC 104 (12 exposures) (02) - WFC3 UVIS CTE Monitor (Star Cluster)

Tue Feb 04 20:03:06 GMT 2025

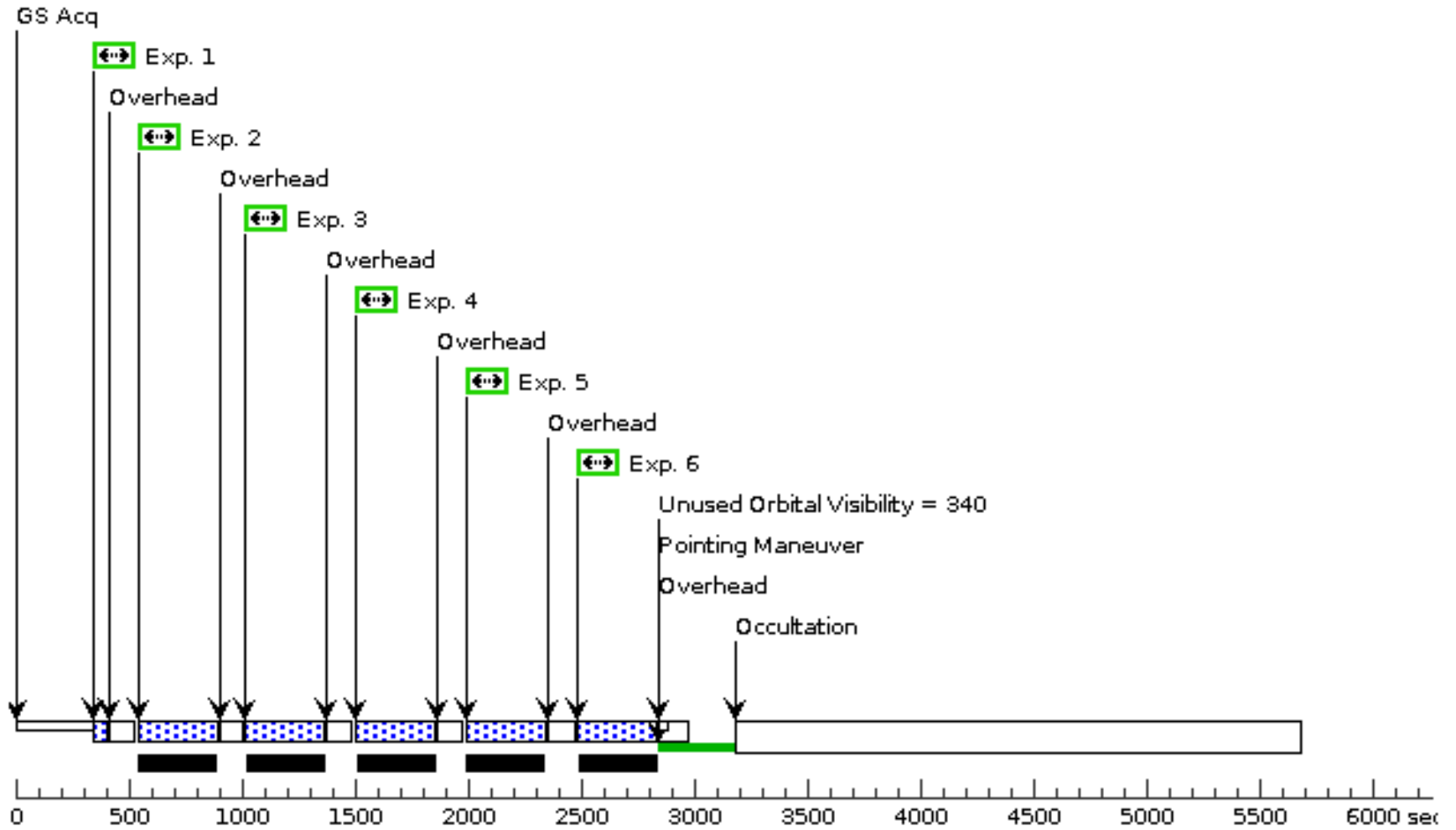
Visit	<p>Proposal 17674, Visit 02 - NGC 104 (12 exposures) (02), implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; BETWEEN 01-MAY-2025:00:00:00 AND 01-JUN-2025:00:00:00</p> <p><i>Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.</i></p>						
	Diagnostics	<p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 02 - NGC 104 (12 exposures) (02)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Exposure 1 - 30s BKG 12 (02.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 2 - 348s BKG 1 (02.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 4 - 348s BKG 25 (02.004)) Warning (Form): FLASH level may be too high for this exposure or a long subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 5 - 348s BKG 34 (02.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 6 - 348s BKG 56 (02.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 7 - 348s BKG 1 (02.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 9 - 348s BKG 25 (02.009)) Warning (Form): FLASH level may be too high for this exposure or a long subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 10 - 348s BKG 34 (02.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 11 - 348s BKG 56 (02.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 12 - 30s BKG 12 (02.012)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p>					
Fixed Targets		#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
		(2)	NGC-104 Alt Name1: 47-TUC	RA: 00 22 38.2500 (5.6593750d) Dec: -72 03 54.00 (-72.06500d) Equinox: J2000	Proper Motion RA: 0.0015731412087106966 sec of time/yr Proper Motion Dec: -0.001250000013897079 arcsec/yr Epoch of Position: 2015.5	V=4.91	Reference Frame: ICRS
<p><i>Comments:</i> Category=STELLAR CLUSTER Description=[GLOBULAR CLUSTER]</p>							

Proposal 17674 - Visit 02 - NGC 104 (12 exposures) (02) - WFC3 UVIS CTE Monitor (Star Cluster)

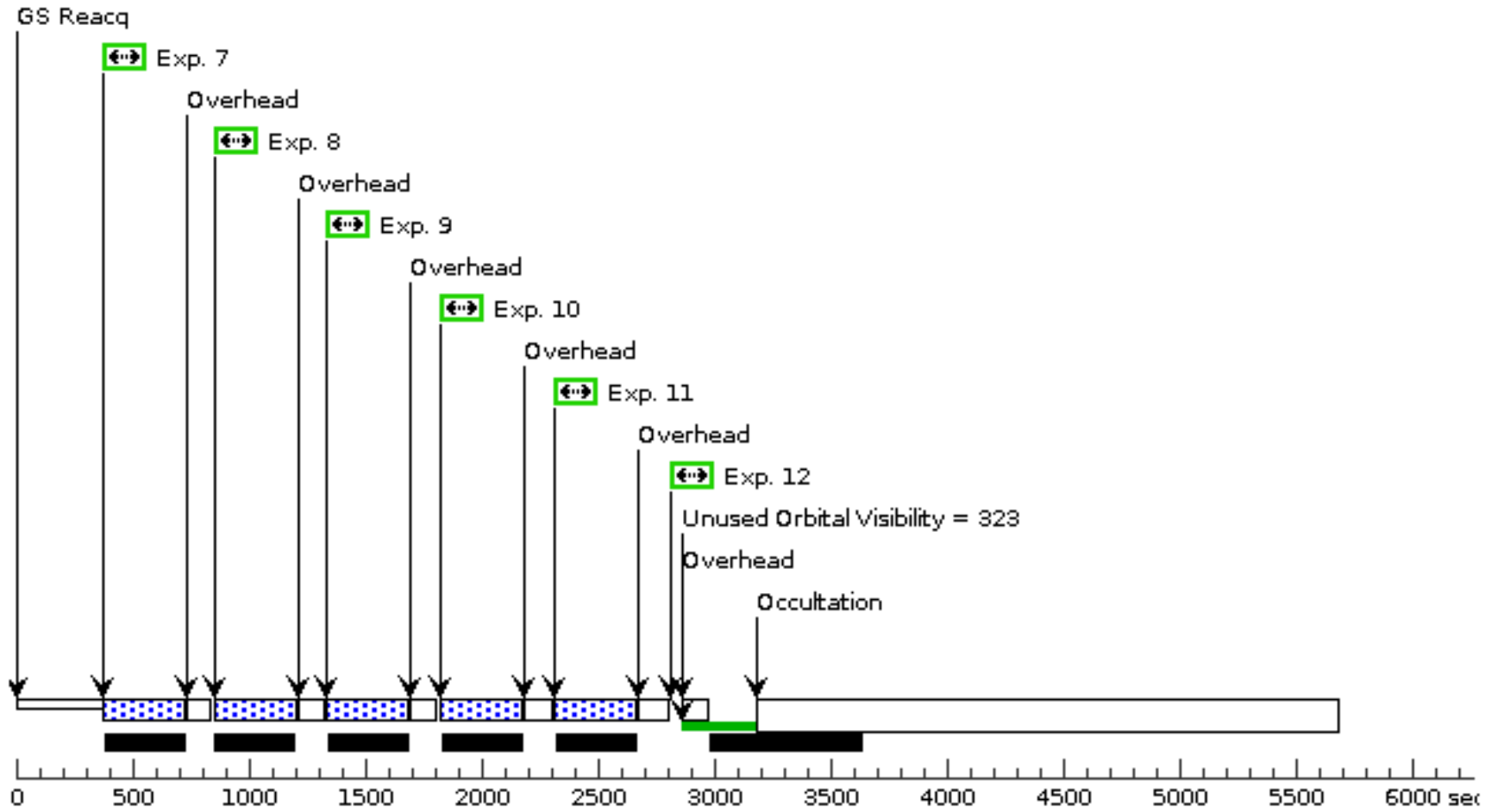
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Exposure 1 - 30s BKG 12	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=12.	GS ACQ SCENARI O BASE103		30 Secs (30 Secs)	[1]
	2	Exposure 2- 348s BKG 1	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0,0		348 Secs (348 Secs)	[1]
	3	Exposure 3 - 348s BKG 2 0	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=18	POS TARG 0,0		348 Secs (348 Secs)	[1]
	4	Exposure 4 - 348s BKG 2 5	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=24	POS TARG 0,0		348 Secs (348 Secs)	[1]
	5	Exposure 5 - 348s BKG 3 4	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=13.	POS TARG 0,0		348 Secs (348 Secs)	[1]
	6	Exposure 6 - 348s BKG 5 6	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=21.5	POS TARG 0,0		348 Secs (348 Secs)	[1]
	7	Exposure 7 - 348s BKG 1	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	8	Exposure 8 - 348s BKG 2 0	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=18	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	9	Exposure 9 - 348s BKG 2 5	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=24	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	10	Exposure 10 - 348s BKG 34	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=13.	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	11	Exposure 11 - 348s BKG 56	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=21.5	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
12	Exposure 12 - 30s BKG 1 2	(2) NGC-104	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=12.	POS TARG 0,81.6		30 Secs (30 Secs)	[2]	

Orbit Structure

Orbit 1



Orbit 2



Proposal 17674 - Visit 03 - OMEGACEN (12 exposures) (03) - WFC3 UVIS CTE Monitor (Star Cluster)

Tue Feb 04 20:03:06 GMT 2025

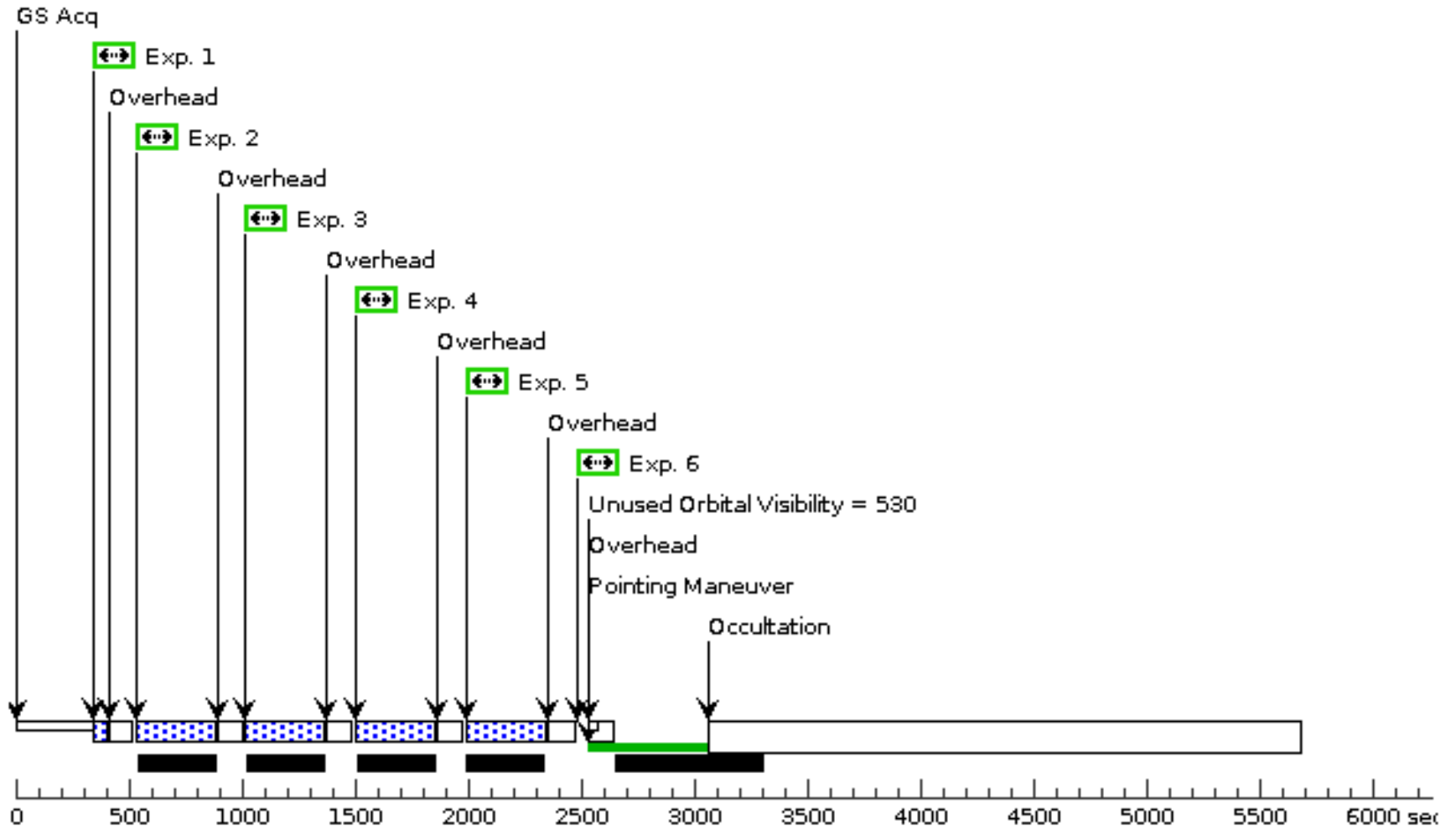
Visit	Proposal 17674, Visit 03 - OMEGACEN (12 exposures) (03), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/UVIS Special Requirements: SCHED 70%; BETWEEN 19-JUL-2025:00:00:00 AND 01-AUG-2025:00:00:00 <i>Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.</i>																	
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		#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
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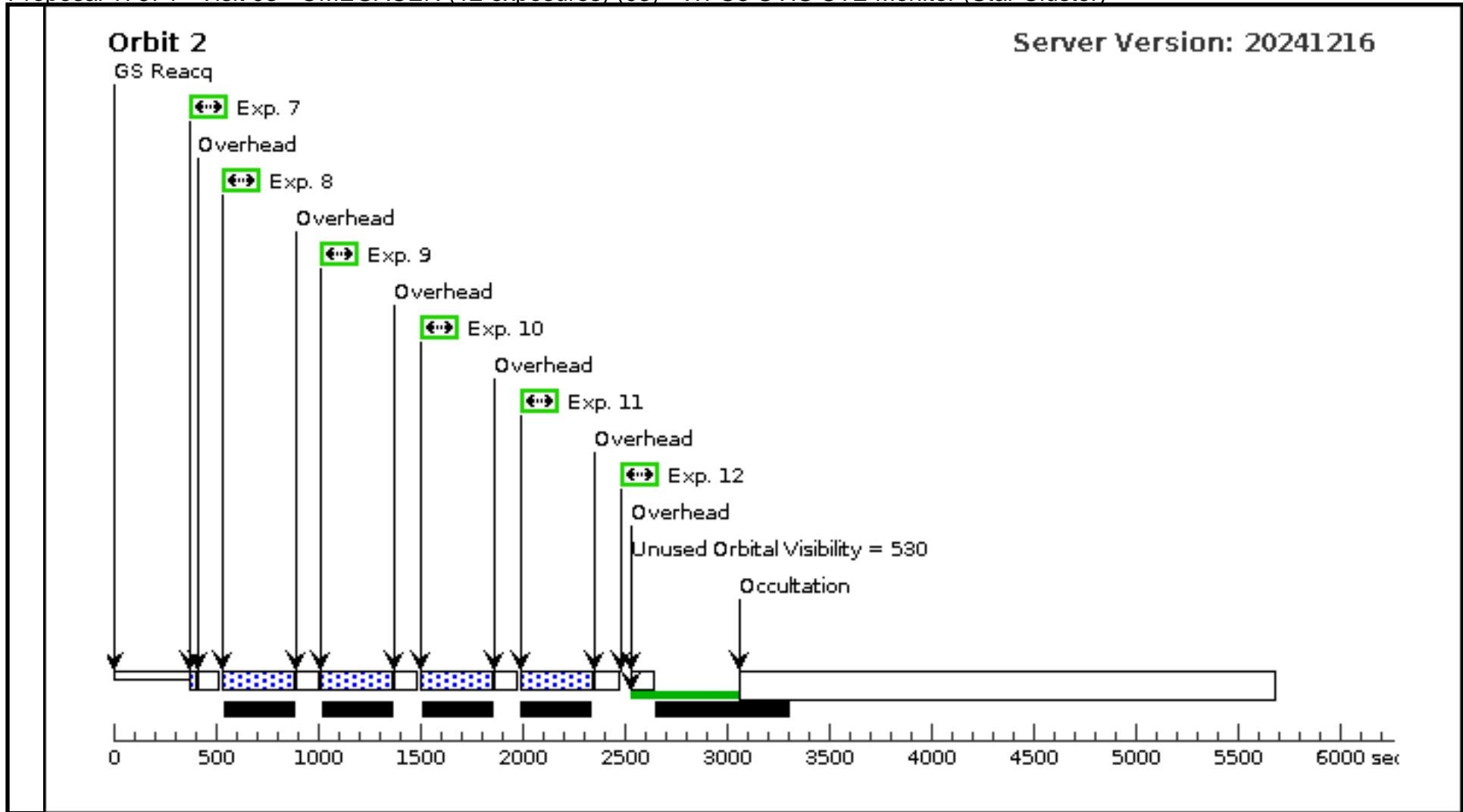
Proposal 17674 - Visit 03 - OMEGACEN (12 exposures) (03) - WFC3 UVIS CTE Monitor (Star Cluster)

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Exposure 1 - 30s BKG 1	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	GS ACQ SCENARI O BASE103		30 Secs (30 Secs)	[1]
	2	Exposure 2 - 348s BKG 2 0	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=10			348 Secs (348 Secs)	[1]
	3	Exposure 3 - 348s BKG 2 5	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=15			348 Secs (348 Secs)	[1]
	4	Exposure 4 - 348s BKG 3 4	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=23			348 Secs (348 Secs)	[1]
	5	Exposure 5 - 348s BKG 5 6	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=17.24			348 Secs (348 Secs)	[1]
	6	Exposure 6 - 30s BKG 12	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=11			30 Secs (30 Secs)	[1]
	7	Exposure 7 - 30s BKG 1	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0,81.6		30 Secs (30 Secs)	[2]
	8	Exposure 8 - 348s BKG 2 0	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=10	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	9	Exposure 9 - 348s BKG 2 5	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=15	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	10	Exposure 10 - 348s BKG 34	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=23	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	11	Exposure 11 - 348s BKG 56	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=17.24	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
12	Exposure 12 - 30s BKG 1 2	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=11	POS TARG 0,81.6		30 Secs (30 Secs)	[2]	

Orbit Structure

Orbit 1





Proposal 17674 - Visit 04 - OMEGACEN (12 exposures) (04) - WFC3 UVIS CTE Monitor (Star Cluster)

Tue Feb 04 20:03:06 GMT 2025

Visit	<p>Proposal 17674, Visit 04 - OMEGACEN (12 exposures) (04), implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SCHED 70%; BETWEEN 24-DEC-2025:00:00:00 AND 21-JAN-2026:00:00:00</p> <p><i>Comments: USE SAME GUIDE STAR THROUGHOUT VISIT. USE SAME ORIENTATION THROUGHOUT VISIT.</i></p>																	
	Diagnostics	<p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Visit 04 - OMEGACEN (12 exposures) (04)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE NO ORIENT</p> <p>(Exposure 1 - 30s BKG 1 (04.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 2 - 348s BKG 20 (04.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 3 - 348s BKG 25 (04.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 5 - 348s BKG 56 (04.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 6 - 30s BKG 12 (04.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 7 - 30s BKG 1 (04.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 8 - 348s BKG 20 (04.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 9 - 348s BKG 25 (04.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 11 - 348s BKG 56 (04.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p> <p>(Exposure 12 - 30s BKG 12 (04.012)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser</p>																
Fixed Targets		<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>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> <p><i>Comments: Category=STELLAR CLUSTER Description=[GLOBULAR CLUSTER]</i></p>					#	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											
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Proposal 17674 - Visit 04 - OMEGACEN (12 exposures) (04) - WFC3 UVIS CTE Monitor (Star Cluster)

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	Exposure 1 - 30s BKG 1	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO			30 Secs (30 Secs)	[1]
	2	Exposure 2 - 348s BKG 2 0	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=10			348 Secs (348 Secs)	[1]
	3	Exposure 3 - 348s BKG 2 5	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=15			348 Secs (348 Secs)	[1]
	4	Exposure 4 - 348s BKG 3 4	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=23			348 Secs (348 Secs)	[1]
	5	Exposure 5 - 348s BKG 5 6	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=17.24			348 Secs (348 Secs)	[1]
	6	Exposure 6 - 30s BKG 12	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=11			30 Secs (30 Secs)	[1]
	7	Exposure 7 - 30s BKG 1	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO	POS TARG 0,81.6		30 Secs (30 Secs)	[2]
	8	Exposure 8 - 348s BKG 2 0	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=10	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	9	Exposure 9 - 348s BKG 2 5	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=15	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	10	Exposure 10 - 348s BKG 34	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=23	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
	11	Exposure 11 - 348s BKG 56	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASHCUR=LOW; FLASHEXP=17.24	POS TARG 0,81.6		348 Secs (348 Secs)	[2]
12	Exposure 12 - 30s BKG 1 2	(1) OMEGACEN	WFC3/UVIS, ACCUM, UVIS	F502N	CR-SPLIT=NO; FLASH=11	POS TARG 0,81.6		30 Secs (30 Secs)	[2]	

Orbit Structure

Orbit 1

