



11419 - UVIS Detector Functional Test

Cycle: 17, Proposal Category: SM4/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
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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	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:18:45.0	yes
02	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:18:49.0	yes
03	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:18:51.0	yes
04	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:18:53.0	yes
05	BIAS TUNGSTEN	WFC3/UVIS	2	02-May-2008 21:18:57.0	yes
06	BIAS TUNGSTEN	WFC3/UVIS	2	02-May-2008 21:19:03.0	yes
09	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:19:06.0	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>
10	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:19:08.0	yes
11	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:19:10.0	yes
12	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:19:12.0	yes
13	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:19:13.0	yes
14	BIAS DARK	WFC3/UVIS	1	02-May-2008 21:19:15.0	yes

14 Total Orbits Used

ABSTRACT

This program measures the baseline performance and operability of CCDs using internal observations: bias frames, darks, and internal (WFC3 calsystem) flatfields. The images will be used to evaluate readnoise, dark current, and gain. Both chips and all four amplifiers/quadrants will be checked; while most data will be taken in default readout mode (unbinned, four-amp gain 1.5 setting), a small number of biases and darks will also be taken in full-frame binned modes and a set of subarrays. A set of internal flatfields will be acquired to provide an absolute gain measurement at the nominal setting (1.5 e-/DN) as well as a relative check at the off-nominal settings.

ID: WFC3-06

OBSERVING DESCRIPTION

This program measures the baseline performance and operability of CCDs using internal observations: bias frames, darks, and internal (WFC3 calsystem) flatfields. The images will be used to evaluate readnoise, dark current, and gain. Both chips and all four amplifiers/quadrants will be checked; while most data will be taken in default readout mode (unbinned, four-amp gain 1.5 setting), a small number of biases and darks will also be

taken in full-frame binned modes and a set of subarrays. A set of internal flatfields will be acquired to provide an absolute gain measurement at the nominal setting (1.5 e-/DN) as well as a relative check at the off-nominal settings.

The majority of data from this proposal are intended as a baseline only; other proposals will obtain additional internals (e.g., WF18, WF33) for monitoring purposes. An efficiently packed orbit begins with 2 short exposures followed by one longer exposure, which hides the readout of the first two images within the exposure time of the third. This proposal executes four such orbits for biases and darks in full-frame unbinned mode (to check repeatability) as well as two orbits each for full-frame 2x2 and 3x3 binned modes, and two orbits of subarrays. The absolute gain check requires a minimum of six pairs of flatfields in the same filter taken at a full range of exposure levels, low to high; the relative gain is assessed with a single pair of well-exposed flatfields at each of the three off-nominal gain settings. Flatfield performance at different wavelengths will be checked in other programs (e.g., WF19, WF39).

ANALYSES & EXPECTED RESULTS: Readnoise will be measured from the overscan regions of individual bias frames as well as from science pixel areas within difference images of pairs of biases. Biases will be used in conjunction with biases from other programs (e.g., WF33) to generate a superbias and confirm the locations of permanent defects such as blocked columns or dead pixels. Dark current levels, average rates as well as hot pixel levels, will be determined from the dark frames. Darks will be used in conjunction with darks from other programs (e.g., WF33) to generate a superdark, monitor hot pixel behavior, and maintain hot pixel lists. An absolute gain measurement of the default gain setting will be performed on the set of flatfield pairs; a relative gain calibration for the off-nominal gain settings for each quadrant will be derived by comparing signal levels within flat field images at the four different gain settings.

ADDITIONAL COMMENTS

This proposal should be run after successful completion of WF04, CCD activation, and WF09, SOFA and Tungsten lamp test. Intflats in this proposal would ideally follow one of the orbits containing bias/dark frames.

References:

WF18 (UVIS Hot Pixel Anneal, 11431)

WF33 (WFC3 UVIS dark current, readnoise, and CTE, 11446)

WF19 (UVIS Internal Flats, 11433)

WF39 (UVIS Flat Field Uniformity, 11452)

WF04 (UVIS CCD Activation, 11455)

WF09 (UVIS SOFA test, 11422)

Visit	Proposal 11419, Visit 01, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			0 Secs X 2	
									[==>(Copy 1)]	[1]
									[==>(Copy 2)]	
2	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			1800 Secs		
								[==>]	[1]	
3	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			300 Secs		
								[==>]	[1]	

Orbit 1

Exp. 1, copy 1

Unused Visibility = 3028

Exp. 1, copy 2

Exp. 2

Exp. 3

Occultation

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec

Server Version: 20071214

Visit	Proposal 11419, Visit 02, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			1800 Secs [==>]	[1]
	3	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			300 Secs [==>]	[1]

Orbit 1
Exp. 1, copy 1
Unused Visibility = 3028
Exp. 1, copy 2
Exp. 2
Exp. 3
Occultation

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec

Server Version: 20071214

Visit	Proposal 11419, Visit 03, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			1800 Secs [==>]	[1]
	3	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			300 Secs [==>]	[1]

Orbit 1
Unused Visibility = 3028

The diagram shows a timeline for Orbit 1 with a total duration of 5500 seconds. Key events are marked with arrows: 'Exp. 1, copy 1' at ~100s, 'Exp. 1, copy 2' at ~200s, 'Exp. 2' at ~300s, 'Exp. 3' at ~2200s, and 'Occultation' at ~3000s. Exposure durations are shown as green bars, and occultation periods as black bars. The x-axis is labeled 'sec' and ranges from 0 to 5500.

Server Version: 20071214

Visit	Proposal 11419, Visit 04, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			1800 Secs [==>]	[1]
	3	darks	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			300 Secs [==>]	[1]

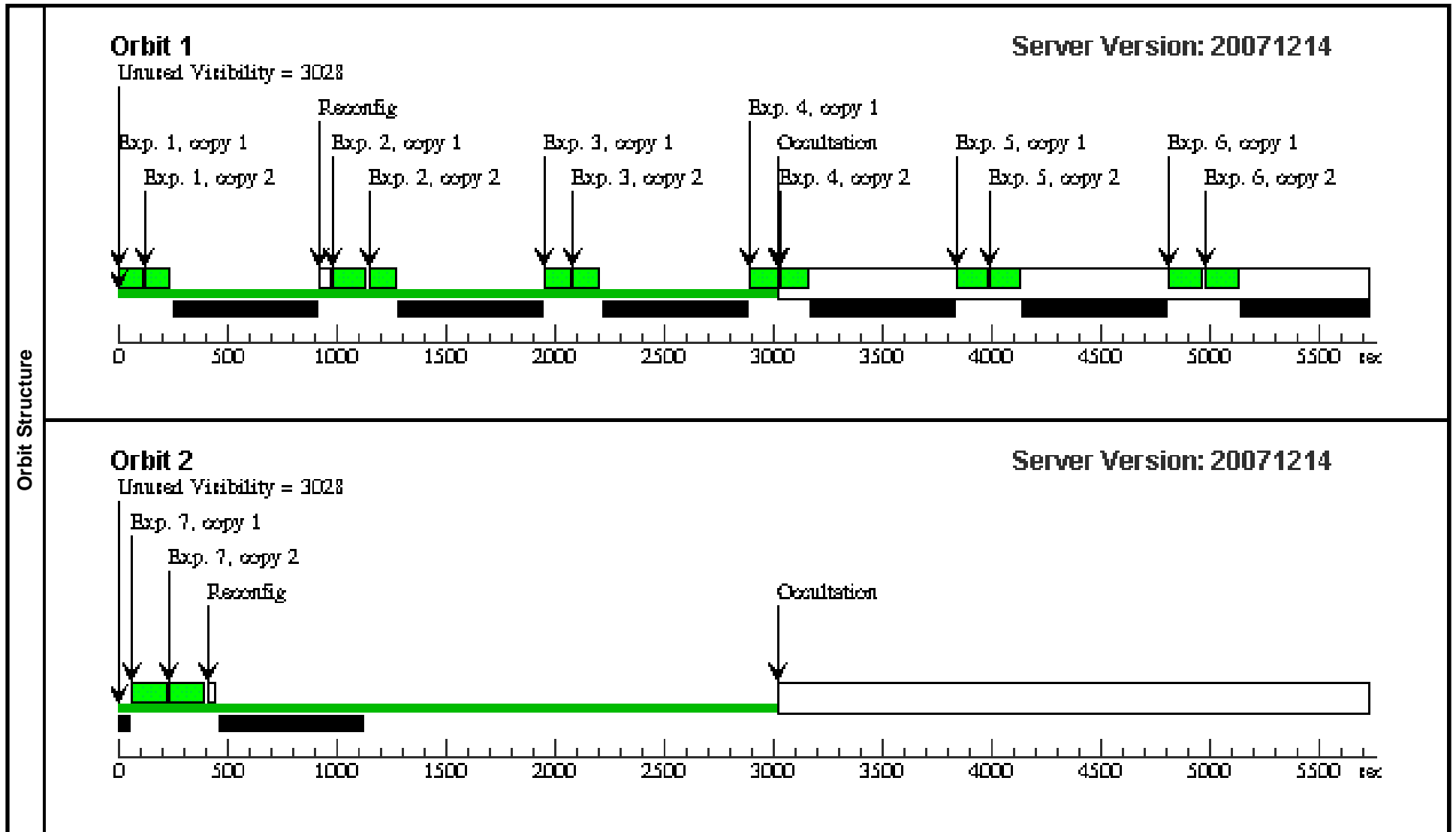
Orbit 1 **Server Version: 20071214**
 Unused Visibility = 3028

The diagram shows a timeline for Orbit 1 with a total duration of 5500 seconds. The x-axis is labeled 'sec' and ranges from 0 to 5500 with major ticks every 500 seconds. A green bar represents the total exposure time, starting at 0 and ending at approximately 2600 seconds. Below this bar, three specific exposure events are marked with arrows: 'Exp. 1, copy 1' at ~100s, 'Exp. 1, copy 2' at ~200s, and 'Exp. 2' at ~300s. 'Exp. 3' is marked at ~2200s. A black bar representing an occultation event starts at ~2600s and ends at ~3200s. The text 'Occultation' is placed above the occultation bar. The timeline continues to 5500 seconds with no further activity.

Proposal 11419 - Visit 05 - UVIS Detector Functional Test

Sat May 03 01:19:19 GMT 2008

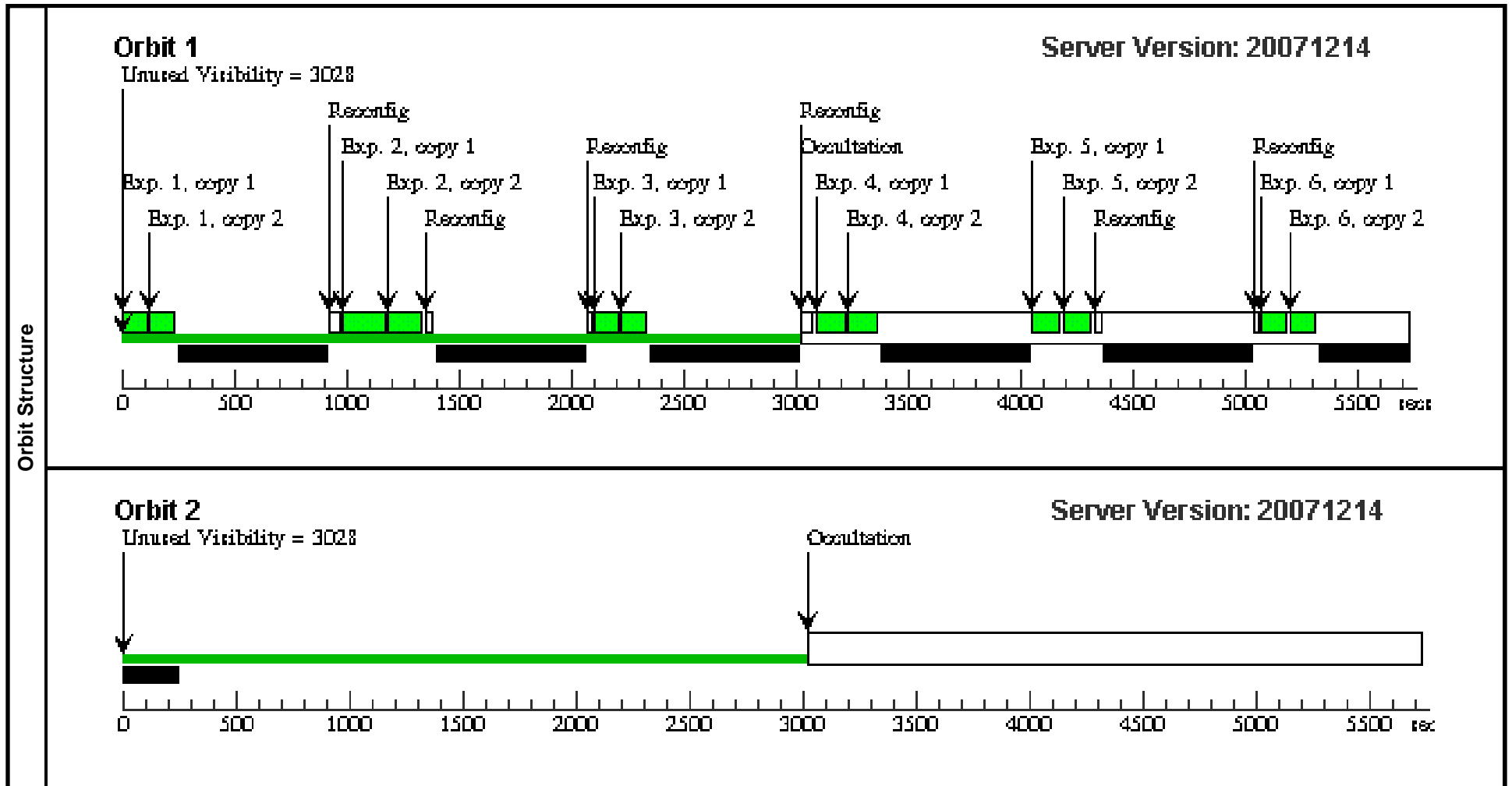
Visit	Proposal 11419, Visit 05, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	short flat 1.5	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=1.5			1.5 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	3	med flat 6.8	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=1.5			6.8 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	4	long flat 13. 7	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=1.5			13.7 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	5	long flat 22. 7	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=1.5			22.7 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	6	long flat 34. 1	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=1.5			34.1 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	7	long flat 47. 3	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=1.5			47.3 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[2]



Proposal 11419 - Visit 06 - UVIS Detector Functional Test

Sat May 03 01:19:20 GMT 2008

Visit	Proposal 11419, Visit 06, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	bias gain=1	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=1.0			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	flat gain=1	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=1.0			40 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	3	bias gain=2	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=2.0			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	4	flat gain=2	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=2.0			20 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	5	flat gain=4	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M	GAIN=4.0			10 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	6	bias gain=4	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	GAIN=4.0			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



Visit	Proposal 11419, Visit 09, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	bias-bin2x2	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=2; GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	short dark dark bin 2x2	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=2; GAIN=1.5			300 Secs [==>]	[1]
	3	long dark bin 2x2	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=2; GAIN=1.5			1200 Secs [==>]	[1]

Orbit 1 **Server Version: 20071214**

Unused Visibility = 3028

Exp. 1, copy 1
Exp. 1, copy 2
Exp. 2
Exp. 3
Occultation

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec

Visit	Proposal 11419, Visit 10, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	bias-bin2x2	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=2; GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	short dark dark bin 2x2	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=2; GAIN=1.5			300 Secs [==>]	[1]
	3	long dark bin 2x2	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=2; GAIN=1.5			1200 Secs [==>]	[1]

Orbit Structure

Orbit 1
Unused Visibility = 3028

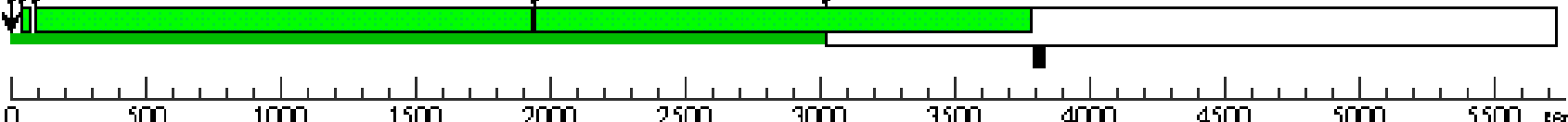
Server Version: 20071214

The figure is a horizontal timeline representing the orbit structure. The x-axis is labeled 'sec' and ranges from 0 to 5500 with major ticks every 500 seconds. A green bar indicates the total exposure duration, starting at 0 and ending at approximately 1800 seconds. Within this green bar, three specific exposure events are marked with arrows and labels: 'Exp. 1, copy 1' at ~100s, 'Exp. 1, copy 2' at ~200s, and 'Exp. 2' at ~500s. A third arrow labeled 'Exp. 3' points to the end of the green bar at ~1800s. A black bar is present between approximately 1800s and 2100s. At 3000s, a vertical arrow labeled 'Occultation' points to the start of a white bar that extends to the end of the timeline at 5500s.

Visit	Proposal 11419, Visit 11, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	bias-bin3x3	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
	2	short dark b in 3x3	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			150 Secs [==>]	[1]
	3	long dark bin 3x3	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			1200 Secs [==>]	[1]
Orbit Structure	<p>Orbit 1 Unused Visibility = 3028</p> <p>Server Version: 20071214</p>									
	<p>Exp. 1, copy 1 Exp. 1, copy 2 Exp. 2 Exp. 3 Occultation</p>									

Visit	Proposal 11419, Visit 12, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)																																								
Exposures	<table border="1"> <thead> <tr> <th>#</th> <th>Label</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>bias-bin3x3</td> <td>BIAS</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>DEF</td> <td>BIN=3; GAIN=1.5</td> <td></td> <td></td> <td>0 Secs X 2 [=>(Copy 1)] [=>(Copy 2)]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td>short dark b in 3x3</td> <td>DARK</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>DEF</td> <td>BIN=3; GAIN=1.5</td> <td></td> <td></td> <td>150 Secs [=>]</td> <td>[1]</td> </tr> <tr> <td>3</td> <td>long dark bin 3x3</td> <td>DARK</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>DEF</td> <td>BIN=3; GAIN=1.5</td> <td></td> <td></td> <td>1200 Secs [=>]</td> <td>[1]</td> </tr> </tbody> </table>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	bias-bin3x3	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			0 Secs X 2 [=>(Copy 1)] [=>(Copy 2)]	[1]	2	short dark b in 3x3	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			150 Secs [=>]	[1]	3	long dark bin 3x3	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			1200 Secs [=>]	[1]
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																																
1	bias-bin3x3	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			0 Secs X 2 [=>(Copy 1)] [=>(Copy 2)]	[1]																																
2	short dark b in 3x3	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			150 Secs [=>]	[1]																																
3	long dark bin 3x3	DARK	WFC3/UVIS, ACCUM, UVIS	DEF	BIN=3; GAIN=1.5			1200 Secs [=>]	[1]																																
Orbit Structure	<div style="text-align: right;">Server Version: 20071214</div> <p>Orbit 1 Exp. 1, copy 1 Unused Visibility = 3028 Exp. 1, copy 2 Exp. 2 Exp. 3 Occultation</p> <p>The diagram shows a horizontal timeline from 0 to 5500 seconds. A green bar represents the total exposure time, starting at 0 and ending at approximately 1500 seconds. Three vertical arrows labeled 'Exp. 1, copy 1', 'Exp. 1, copy 2', and 'Exp. 2' point to the beginning of the green bar. A third arrow labeled 'Exp. 3' points to a small black bar at approximately 1600 seconds. A fourth arrow labeled 'Occultation' points to a gap in the green bar at approximately 3000 seconds. The x-axis has major ticks every 500 seconds and minor ticks every 100 seconds.</p>																																								

Visit	Proposal 11419, Visit 13, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)																														
Exposures	<table border="1"> <thead> <tr> <th>#</th> <th>Label</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>bias - UVIS 1-C512A-S UB</td> <td>BIAS</td> <td>WFC3/UVIS, ACCUM, UVIS1-C512A-SUB</td> <td>DEF</td> <td>GAIN=1.5</td> <td></td> <td></td> <td>0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td>long dark - UVIS1-C51 2A-SUB</td> <td>DARK</td> <td>WFC3/UVIS, ACCUM, UVIS1-C512A-SUB</td> <td>DEF</td> <td>GAIN=1.5</td> <td></td> <td></td> <td>1800 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]</td> <td>[1]</td> </tr> </tbody> </table>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	bias - UVIS 1-C512A-S UB	BIAS	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]	2	long dark - UVIS1-C51 2A-SUB	DARK	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	DEF	GAIN=1.5			1800 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																						
1	bias - UVIS 1-C512A-S UB	BIAS	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]																						
2	long dark - UVIS1-C51 2A-SUB	DARK	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	DEF	GAIN=1.5			1800 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]																						
Orbit Structure	<div style="text-align: right;">Server Version: 20071214</div> <p>Orbit 1</p> <p>Exp. 1, copy 1 Unused Visibility = 3028 Exp. 1, copy 2 Exp. 2, copy 1 Exp. 2, copy 2 Occultation</p> <p>0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec</p>																														

Visit	Proposal 11419, Visit 14, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)																														
Exposures	<table border="1"> <thead> <tr> <th>#</th> <th>Label</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>bias -UVIS2 -C512C-SU B</td> <td>BIAS</td> <td>WFC3/UVIS, ACCUM, UVIS2-C512C-SUB</td> <td>DEF</td> <td>GAIN=1.5</td> <td></td> <td></td> <td>0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td>long dark - UVIS2-C51 2C-SUB</td> <td>DARK</td> <td>WFC3/UVIS, ACCUM, UVIS2-C512C-SUB</td> <td>DEF</td> <td>GAIN=1.5</td> <td></td> <td></td> <td>1800 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]</td> <td>[1]</td> </tr> </tbody> </table>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	bias -UVIS2 -C512C-SU B	BIAS	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]	2	long dark - UVIS2-C51 2C-SUB	DARK	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	DEF	GAIN=1.5			1800 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																						
1	bias -UVIS2 -C512C-SU B	BIAS	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	DEF	GAIN=1.5			0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]																						
2	long dark - UVIS2-C51 2C-SUB	DARK	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	DEF	GAIN=1.5			1800 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]																						
Orbit Structure	<div style="text-align: right;">Server Version: 20071214</div> <p>Orbit 1</p> <p>Exp. 1, copy 1 Unused Visibility = 3028</p> <p>Exp. 1, copy 2</p> <p>Exp. 2, copy 1</p> <p>Exp. 2, copy 2</p> <p>Occultation</p>  <p>The diagram shows a horizontal timeline from 0 to 5500 seconds. A green bar represents the total exposure duration, starting at 0 and ending at approximately 3800 seconds. Several vertical arrows point to specific events: 'Exp. 1, copy 1' at ~100s, 'Exp. 1, copy 2' at ~150s, 'Exp. 2, copy 1' at ~200s, 'Exp. 2, copy 2' at ~1950s, and 'Occultation' at ~3000s. A small black square is located at approximately 3800 seconds on the timeline.</p>																														