



## 13168 - UVIS CCD Gain Stability

Cycle: 20, Proposal Category: CAL/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	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:16:49.0	yes
02	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:16:54.0	yes
03	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:16:59.0	yes
04	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:17:04.0	yes
05	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:17:08.0	yes
06	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:17:12.0	yes
07	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:17:15.0	yes
08	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:17:19.0	yes
09	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:17:24.0	yes
10	TUNGSTEN	WFC3/UVIS	1	04-Oct-2012 22:17:29.0	yes

10 Total Orbits Used

**ABSTRACT**

The absolute gain will be measured for each quadrant of the WFC3 UVIS detector and compared to previous cycles to monitor gain stability.

**OBSERVING DESCRIPTION**

The absolute gain will be measured for each quadrant of the nominal detector readout configuration (ABCD, gain=1.5 e-/DN, bin=NONE) by taking 8 full frame pairs of internal flat fields. The flat fields will be illuminated with the UVIS tungsten default lamp through F645N with a range of integration times to obtain exposure levels of ~500 to 50,000 e-. This program will consist of 2 epochs, separated by 6 months, where each epoch has 5 internal orbits for a total of 10 internal orbits.

To allow the gain variability to be checked across the FOV, and provide good statistics, we make use of full frames (instead of subarrays) to match the observing mode of the majority of GO science. This is a continuation of programs 12346 and 12690, previous measurements have been stable.

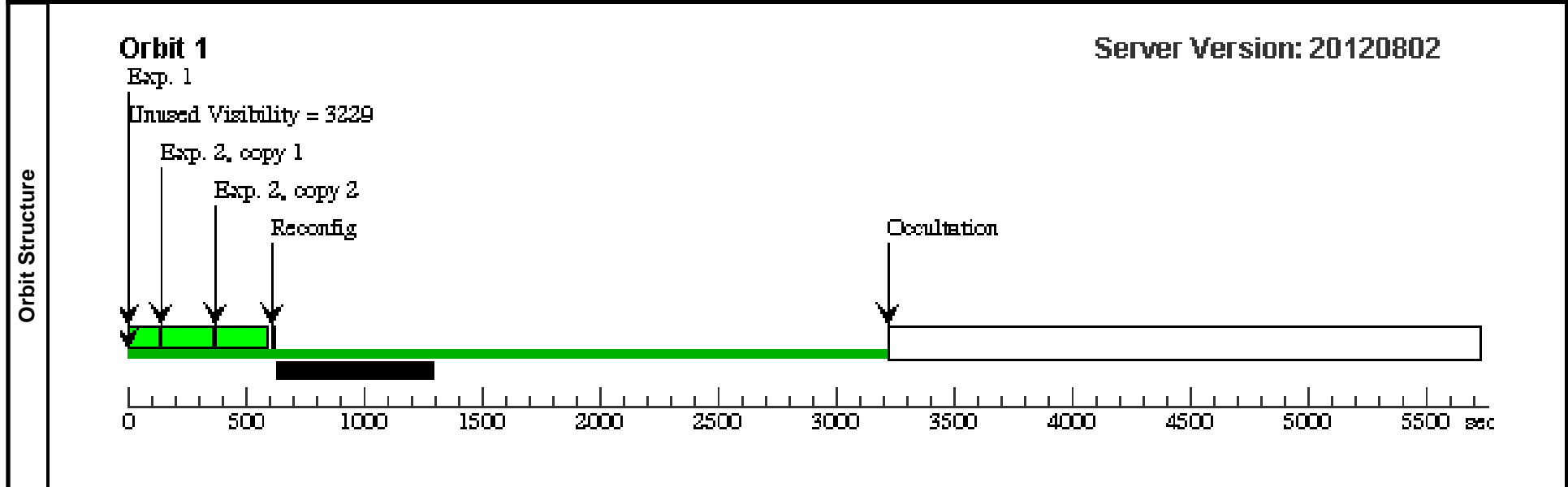
Proposal 13168 - Visit 01 - UVIS CCD Gain Stability

Fri Oct 05 02:17:35 GMT 2012

<b>Visit</b>	<b>Proposal 13168, Visit 01</b>									
	<b>Diagnostic Status: No Diagnostics</b>									
	Scientific Instruments: WFC3/UVIS									
	Special Requirements: BETWEEN 01-DEC-2012:00:00:00 AND 31-JAN-2013:00:00:00									

*Comments: Epoch 1, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N				Sequence 1-2 Non-Int in Visit 01	60 Secs [==>]
2	Flat8	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5			Sequence 1-2 Non-Int in Visit 01	105.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]

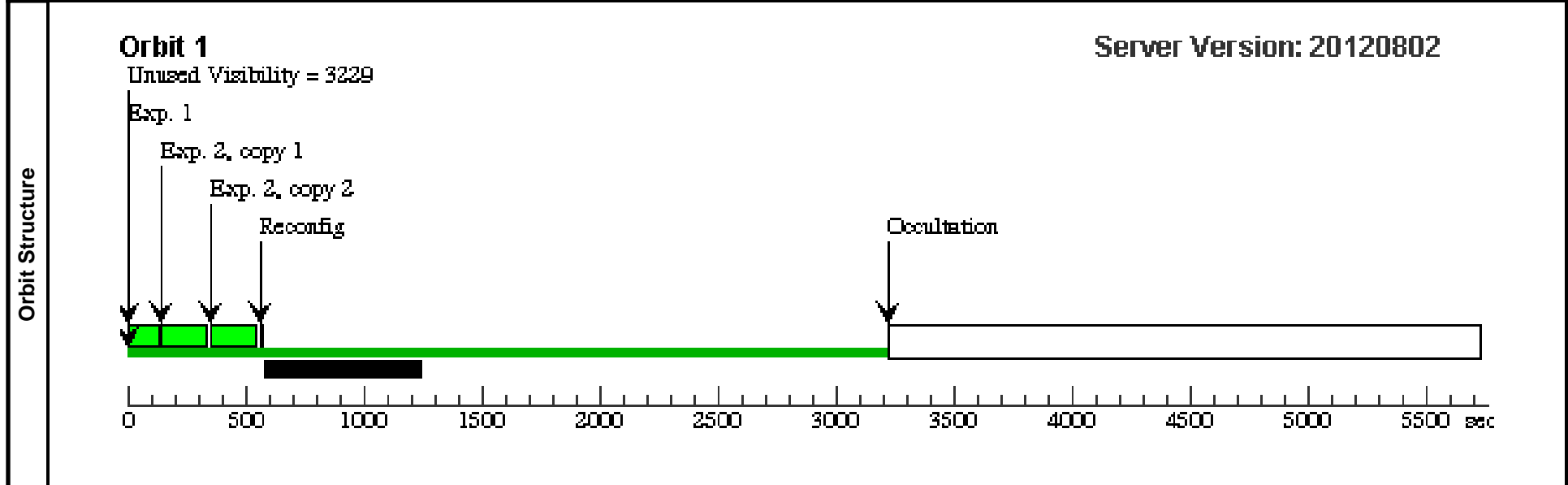


Proposal 13168 - Visit 02 - UVIS CCD Gain Stability

Fri Oct 05 02:17:37 GMT 2012

<b>Visit</b>	<b>Proposal 13168, Visit 02</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-DEC-2012:00:00:00 AND 31-JAN-2013:00:00:00 Comments: Epoch 1, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE									

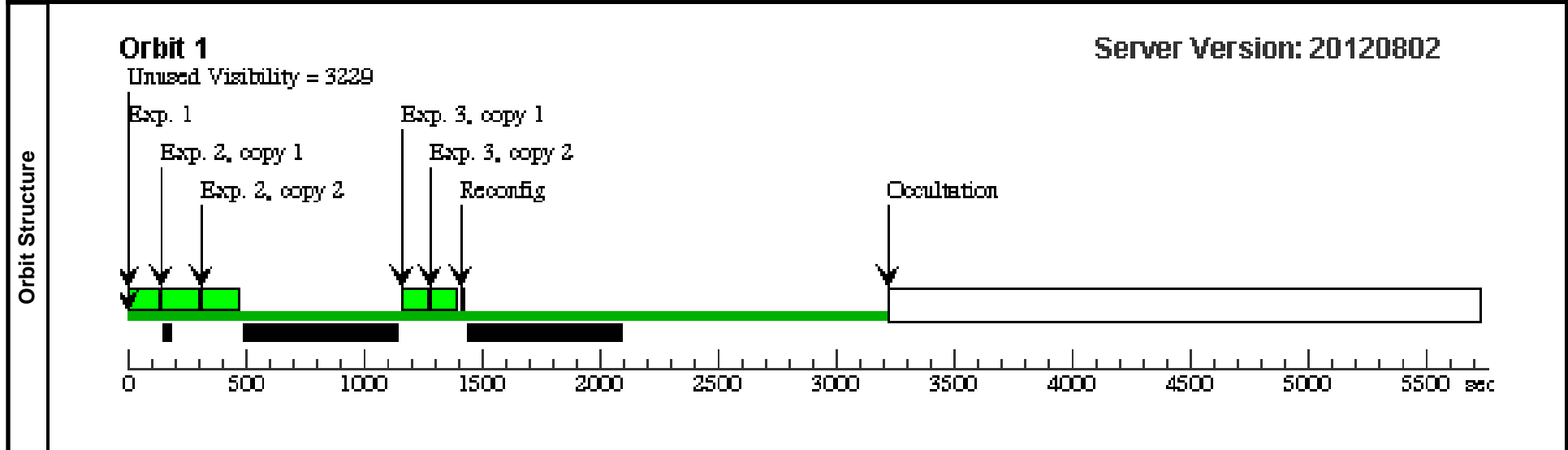
<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
		1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N			Sequence 1-2 Non-Int in Visit 02	60 Secs [==>]
	2	Flat7	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-2 Non-Int in Visit 02	80.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



<b>Visit</b>	Proposal 13168, Visit 03 <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-DEC-2012:00:00:00 AND 31-JAN-2013:00:00:00 <i>Comments: Epoch 1, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE</i>
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<b>Diagnostics</b>	(Visit 03) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU
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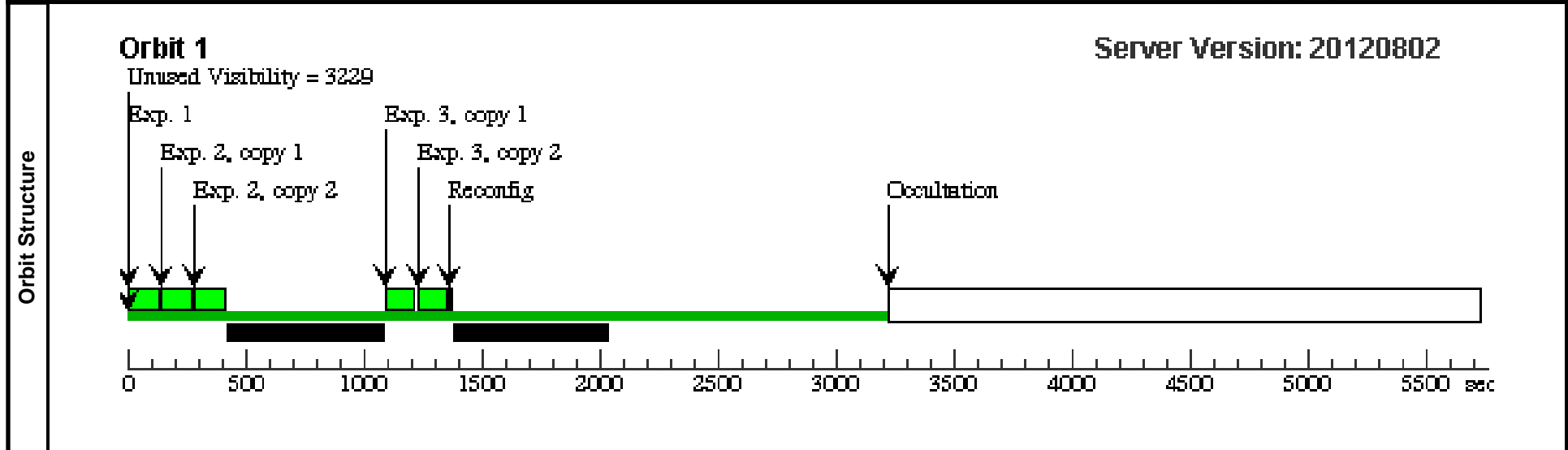
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N			Sequence 1-3 Non-Int in Visit 03	60 Secs [==>]	[1]
2	Flat6	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 03	45.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
3	Flat1	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 03	1.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



<b>Visit</b>	Proposal 13168, Visit 04 <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-DEC-2012:00:00:00 AND 31-JAN-2013:00:00:00 <i>Comments: Epoch 1, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE</i>
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<b>Diagnostics</b>	(Visit 04) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU
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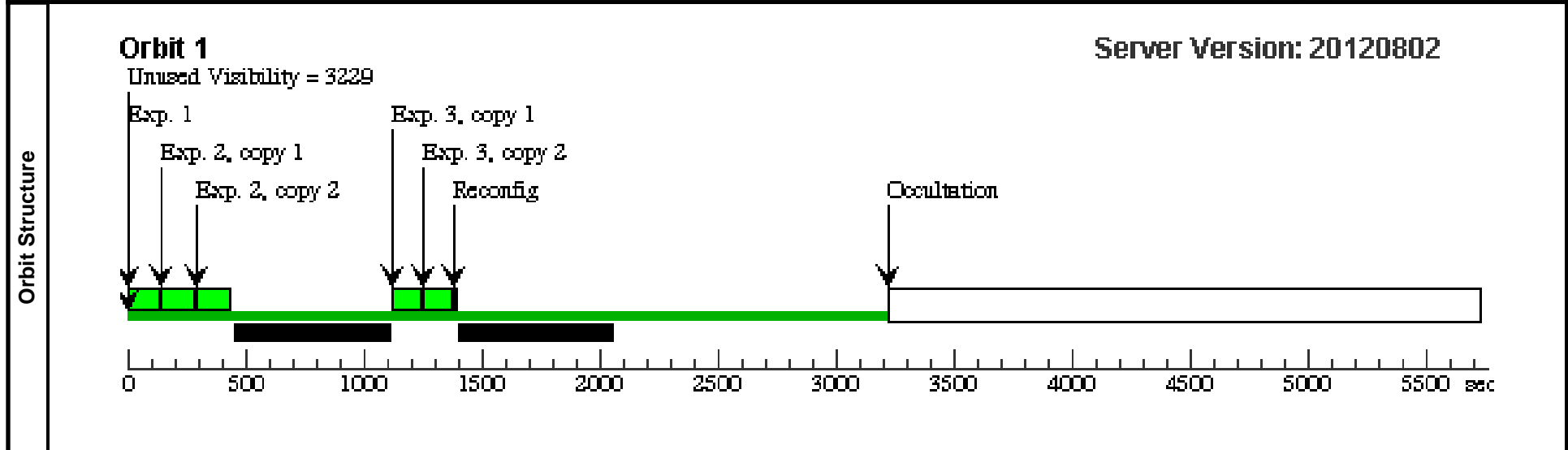
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N			Sequence 1-3 Non-Int in Visit 04	60 Secs [==>]	[1]
2	Flat4	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 04	12.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
3	Flat3	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 04	5.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



<b>Visit</b>	<p><b>Proposal 13168, Visit 05</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: BETWEEN 01-DEC-2012:00:00:00 AND 31-JAN-2013:00:00:00</p> <p><i>Comments: Epoch 1, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE</i></p>
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<b>Diagnostics</b>	(Visit 05) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU
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#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N			Sequence 1-3 Non-Int in Visit 05	60.0 Secs [==>]	[1]
2	Flat5	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 05	25.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
3	Flat2	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 05	2.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



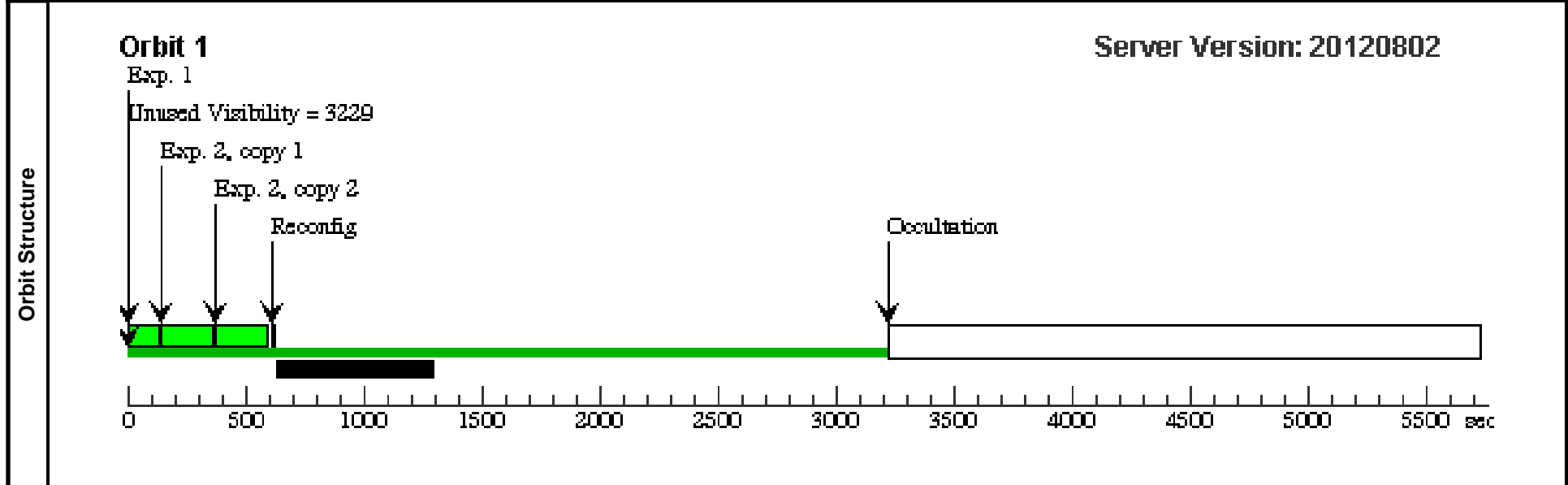
Proposal 13168 - Visit 06 - UVIS CCD Gain Stability

Fri Oct 05 02:17:43 GMT 2012

<b>Visit</b>	<b>Proposal 13168, Visit 06</b>									
	<b>Diagnostic Status: No Diagnostics</b>									
	Scientific Instruments: WFC3/UVIS									
	Special Requirements: BETWEEN 01-JUN-2013:00:00:00 AND 31-JUL-2013:00:00:00									

*Comments: Epoch 2, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE*

<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N				Sequence 1-2 Non-Int in Visit 06	60 Secs [==>]
2	Flat8	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5			Sequence 1-2 Non-Int in Visit 06	105.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]





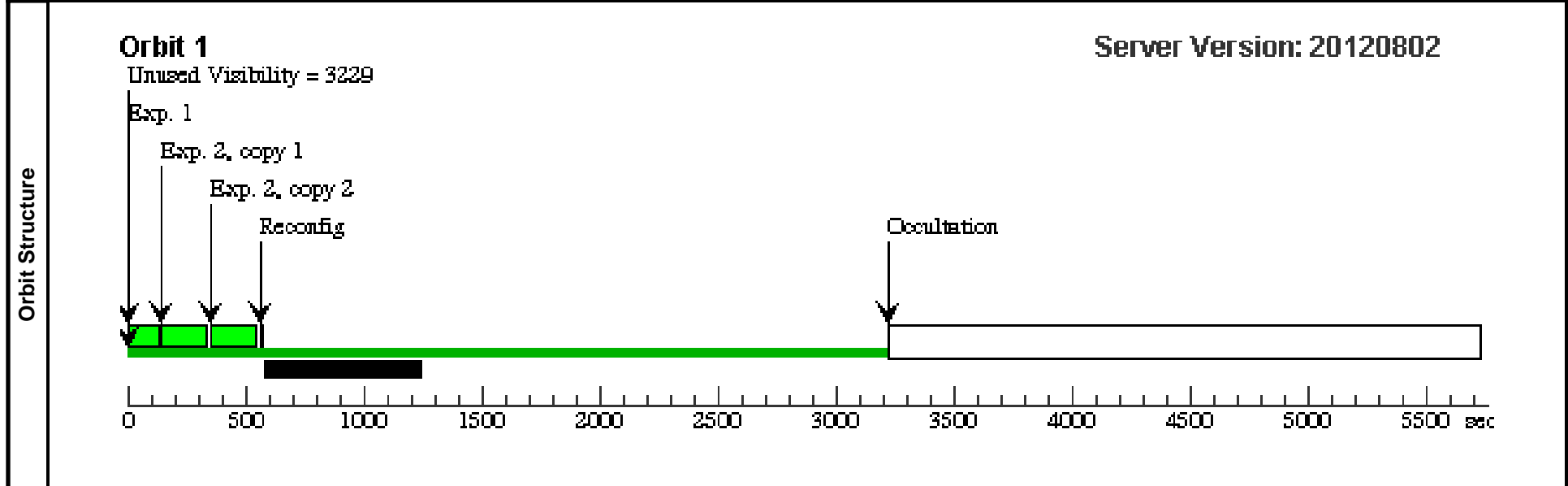
Proposal 13168 - Visit 07 - UVIS CCD Gain Stability

Fri Oct 05 02:17:44 GMT 2012

<b>Visit</b>	<b>Proposal 13168, Visit 07</b>									
	<b>Diagnostic Status: No Diagnostics</b>									
	Scientific Instruments: WFC3/UVIS									
	Special Requirements: BETWEEN 01-JUN-2013:00:00:00 AND 31-JUL-2013:00:00:00									

*Comments: Epoch 2, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE*

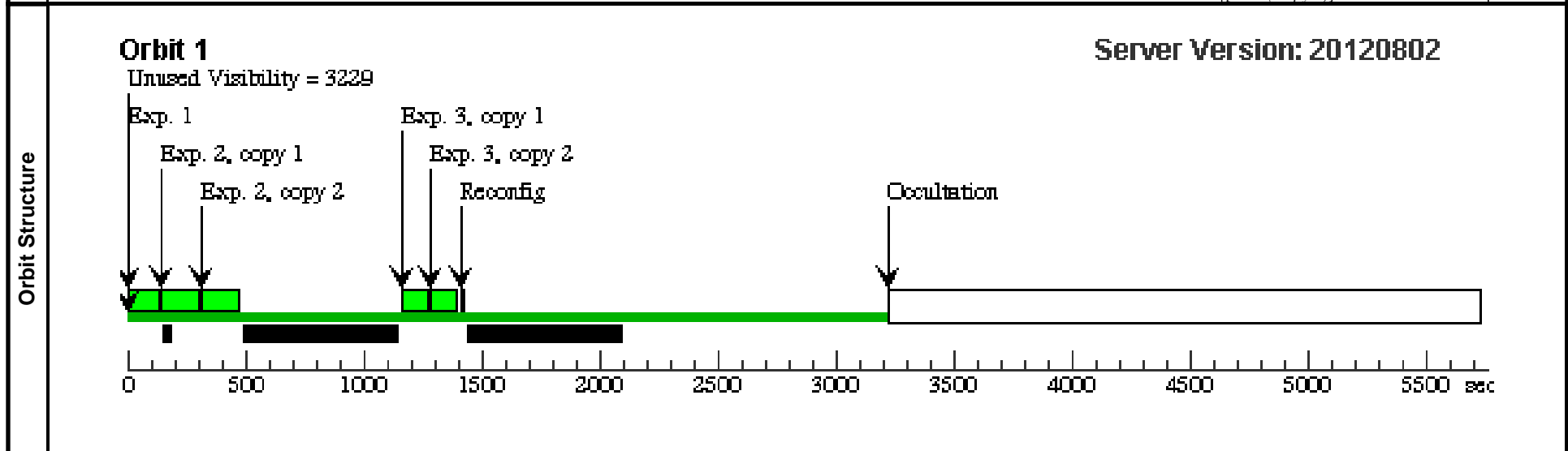
<b>Exposures</b>	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N				Sequence 1-2 Non-Int in Visit 07	60 Secs [==>]
2	Flat7	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5			Sequence 1-2 Non-Int in Visit 07	80.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



<b>Visit</b>	<p><b>Proposal 13168, Visit 08</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: BETWEEN 01-JUN-2013:00:00:00 AND 31-JUL-2013:00:00:00</p> <p><i>Comments: Epoch 2, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE</i></p>
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<b>Diagnostics</b>	(Visit 08) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU
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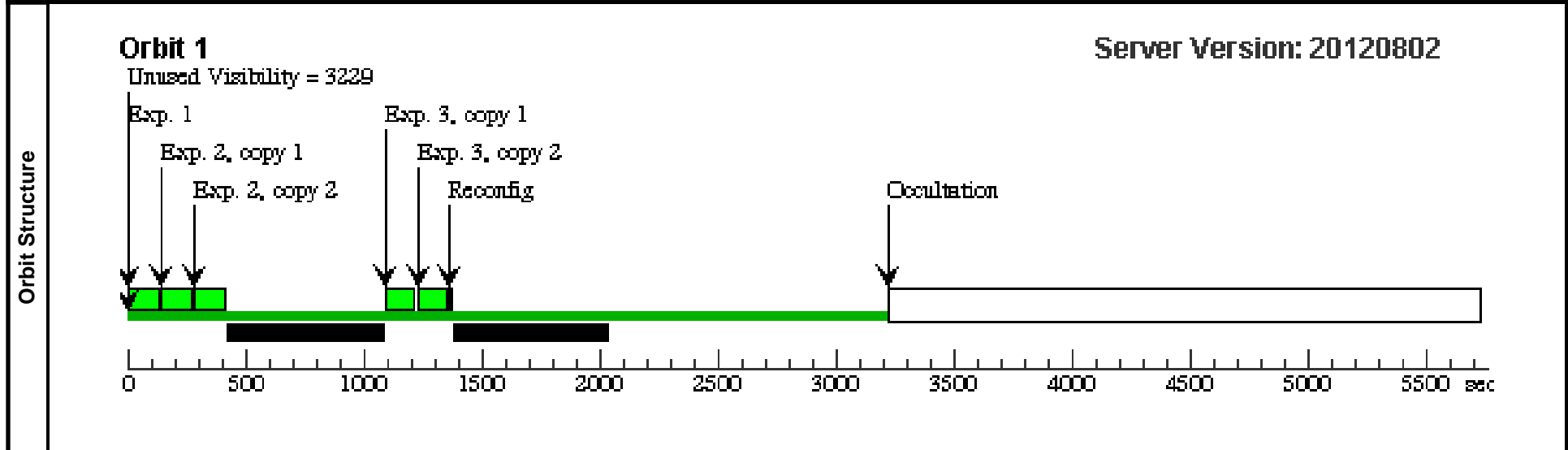
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N			Sequence 1-3 Non-Int in Visit 08	60 Secs [==>]	[1]
2	Flat6	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 08	45.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
3	Flat1	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 08	1.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



<b>Visit</b>	<p><b>Proposal 13168, Visit 09</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: BETWEEN 01-JUN-2013:00:00:00 AND 31-JUL-2013:00:00:00</p> <p><i>Comments: Epoch 2, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE</i></p>
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<b>Diagnostics</b>	(Visit 09) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU
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#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N			Sequence 1-3 Non-Int in Visit 09	60 Secs [==>]	[1]
2	Flat4	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 09	12.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
3	Flat3	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 09	5.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]



<b>Visit</b>	<p><b>Proposal 13168, Visit 10</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: BETWEEN 01-JUN-2013:00:00:00 AND 31-JUL-2013:00:00:00</p> <p><i>Comments: Epoch 2, nominal detector readout configuration: ABCD, gain=1.5 e-/DN, bin=NONE</i></p>
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<b>Diagnostics</b>	(Visit 10) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU
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#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Subarray for lamp warm up	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS1-M512-SUB	F645N			Sequence 1-3 Non-Int in Visit 10	60.0 Secs [==>]	[1]
2	Flat5	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 10	25.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]
3	Flat2	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N	GAIN=1.5		Sequence 1-3 Non-Int in Visit 10	2.0 Secs X 2 [==>(Copy 1)] [==>(Copy 2)]	[1]

