



## 11431 - UVIS Hot Pixel Anneal

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	2	18-Apr-2008 21:01:06.0	yes
02	NONE	WFC3	1	18-Apr-2008 21:01:09.0	yes
03	BIAS DARK	WFC3/UVIS	2	18-Apr-2008 21:01:14.0	yes
04	BIAS DARK	WFC3/UVIS	2	18-Apr-2008 21:01:19.0	yes
05	NONE	WFC3	1	18-Apr-2008 21:01:21.0	yes
06	BIAS DARK	WFC3/UVIS	2	18-Apr-2008 21:01:25.0	yes

10 Total Orbits Used

### ABSTRACT

The intent of this proposal is to demonstrate the ability to perform UVIS anneals; the first anneal should be executed within 30 days of the initial cooldown of the WFC3 UVIS detector, followed by a second one 30 days after that. During an anneal procedure, the thermo-electric coolers are turned off and the heaters are turned on, bringing the CCDs up to ~20C and repairing a majority of the hot pixels. Internal exposures are taken before and after each anneal, to allow an assessment of the procedure's effectiveness.

This proposal corresponds to activity WFC3-18.

### **OBSERVING DESCRIPTION**

Full-frame, unbinned bias and dark frames (5 of each) are obtained immediately prior to and following each anneal; the data provide a means of monitoring changes due to the detector warmup. Two anneals are done, the first within 30 days of cooldown followed by a second one 30 days after that; subsequent anneal procedures will be performed via the Cycle 17 anneal program.

### **CALIBRATION JUSTIFICATION**

The acquired bias and dark frames will be compared to baseline images, hot pixel changes will be monitored, and the effectiveness of each anneal procedure will be evaluated. Data will also be combined with that from other proposals to generate superbias and superdark reference files for the calibration pipeline.

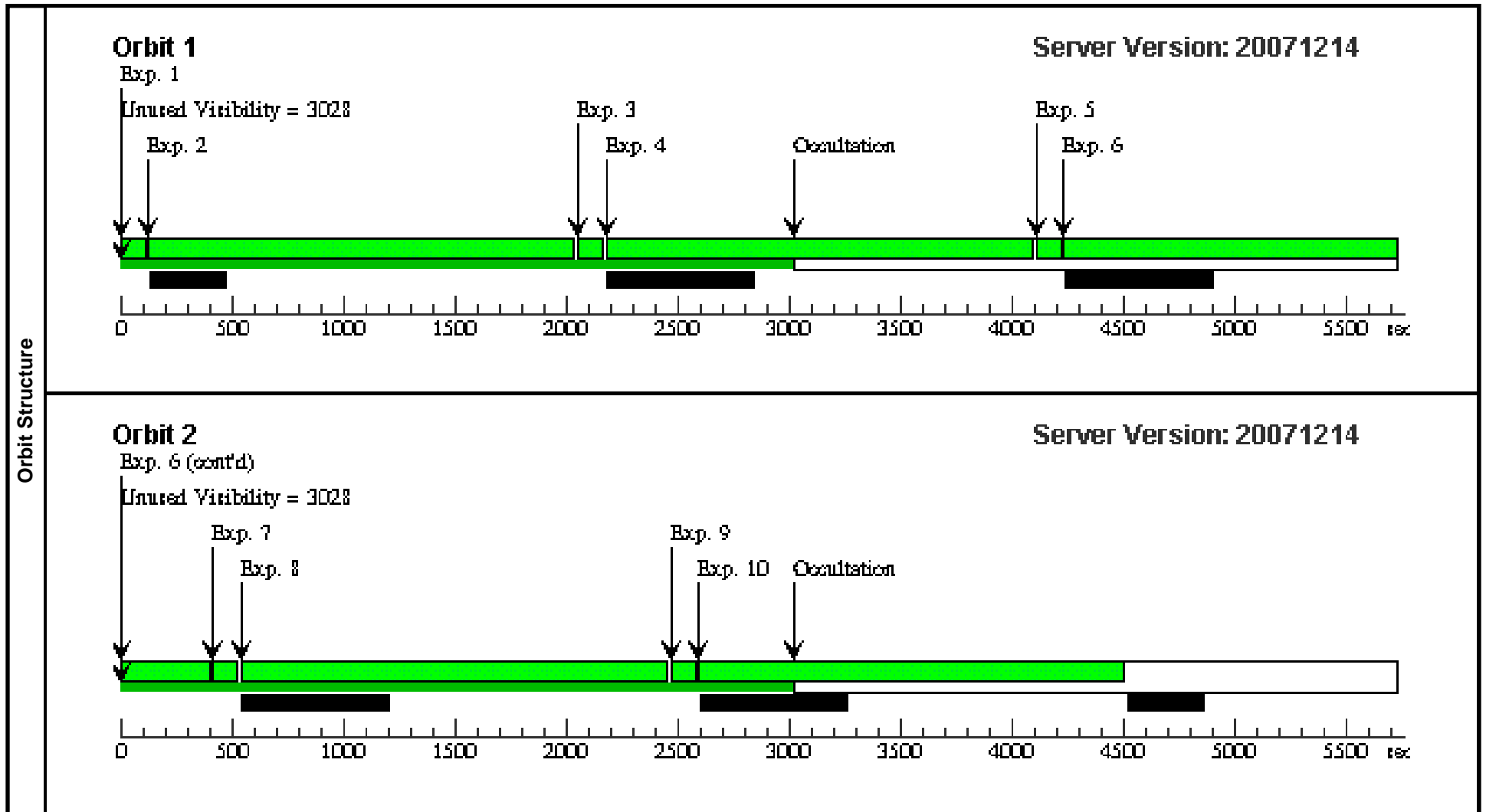
### **ADDITIONAL COMMENTS**

This is SMOV WFC3-18; it can not be run until after successful completion of WF06 (proposal 11419), the CCD functional test, and WF16 (proposal 11429), UVIS TEC performance. The links allow for a little flexibility but we would strongly prefer to have the visits within each set of these SMOV anneals scheduled back-to-back.

Proposal 11431 - Visit 01 - UVIS Hot Pixel Anneal

Sat Apr 19 01:01:29 GMT 2008

Visit	Proposal 11431, Visit 01, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none) <i>Comments: Please schedule no later than 30 days after initial cooldown of the WFC3 detectors. Strongly prefer to have visit 01, 02 &amp; 03 scheduled back-to-back.</i>									
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				0. Secs [==>]	[1]
	2	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[1]
	3	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[1]
	4	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[1]
	5	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[1]
	6	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[1]
	7	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[2]
	8	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[2]
	9	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[2]
10	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[2]	

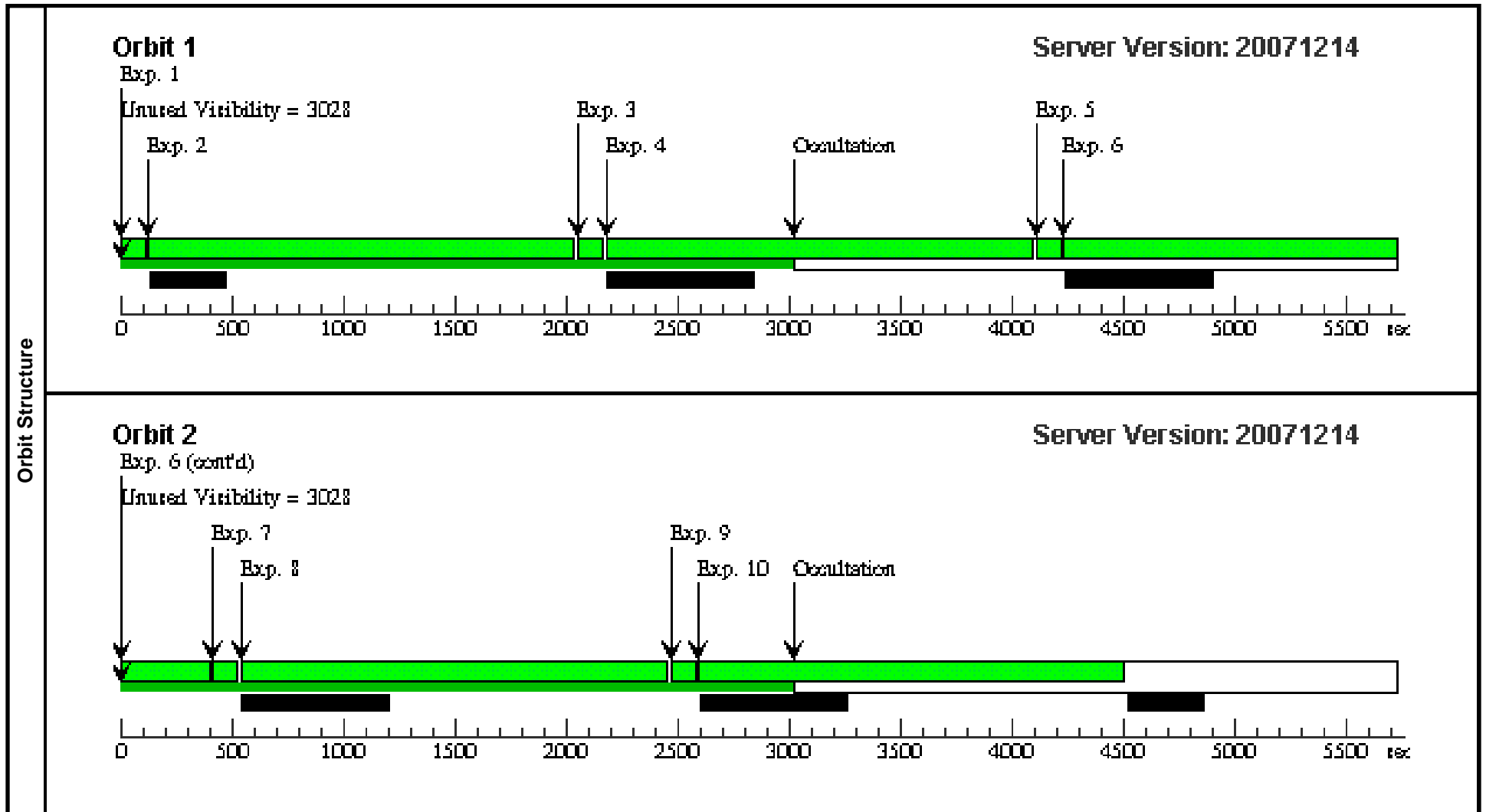


<b>Visit</b>	<b>Proposal 11431, Visit 02, implementation</b> Diagnostic Status: No Diagnostics Scientific Instruments: WFC3 Special Requirements: AFTER 01 BY 0 H TO 24 H Comments: Anneal procedure 1. Using minimum default value + 1sec. Strongly prefer to have visit 01, 02 & 03 scheduled back-to-back.										
	<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	
1		Anneal	NONE	WFC3, ANNEAL						1. Secs [==>]	[1]
<b>Orbit Structure</b>	<p><b>Orbit 1</b> <span style="float: right;"><b>Server Version: 20071214</b></span></p> <p>Exp. 1</p> <p>Unused Visibility = 3028</p> <p style="text-align: center;">Occultation</p> <p style="text-align: right;">5500 sec</p>										
	<p>0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000</p>										

Proposal 11431 - Visit 03 - UVIS Hot Pixel Anneal

Sat Apr 19 01:01:30 GMT 2008

Visit	Proposal 11431, Visit 03, implementation									
	Diagnostic Status: No Diagnostics									
Exposures	Scientific Instruments: WFC3/UVIS									
	Special Requirements: AFTER 02 BY 0 H TO 10 H									
<i>Comments: Strongly prefer to have visit 01, 02 &amp; 03 scheduled back-to-back.</i>										
#	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				0. Secs	[==>]	[1]
2	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[1]
3	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[1]
4	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[1]
5	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[1]
6	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[1]
7	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[2]
8	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[2]
9	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[2]
10	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[2]

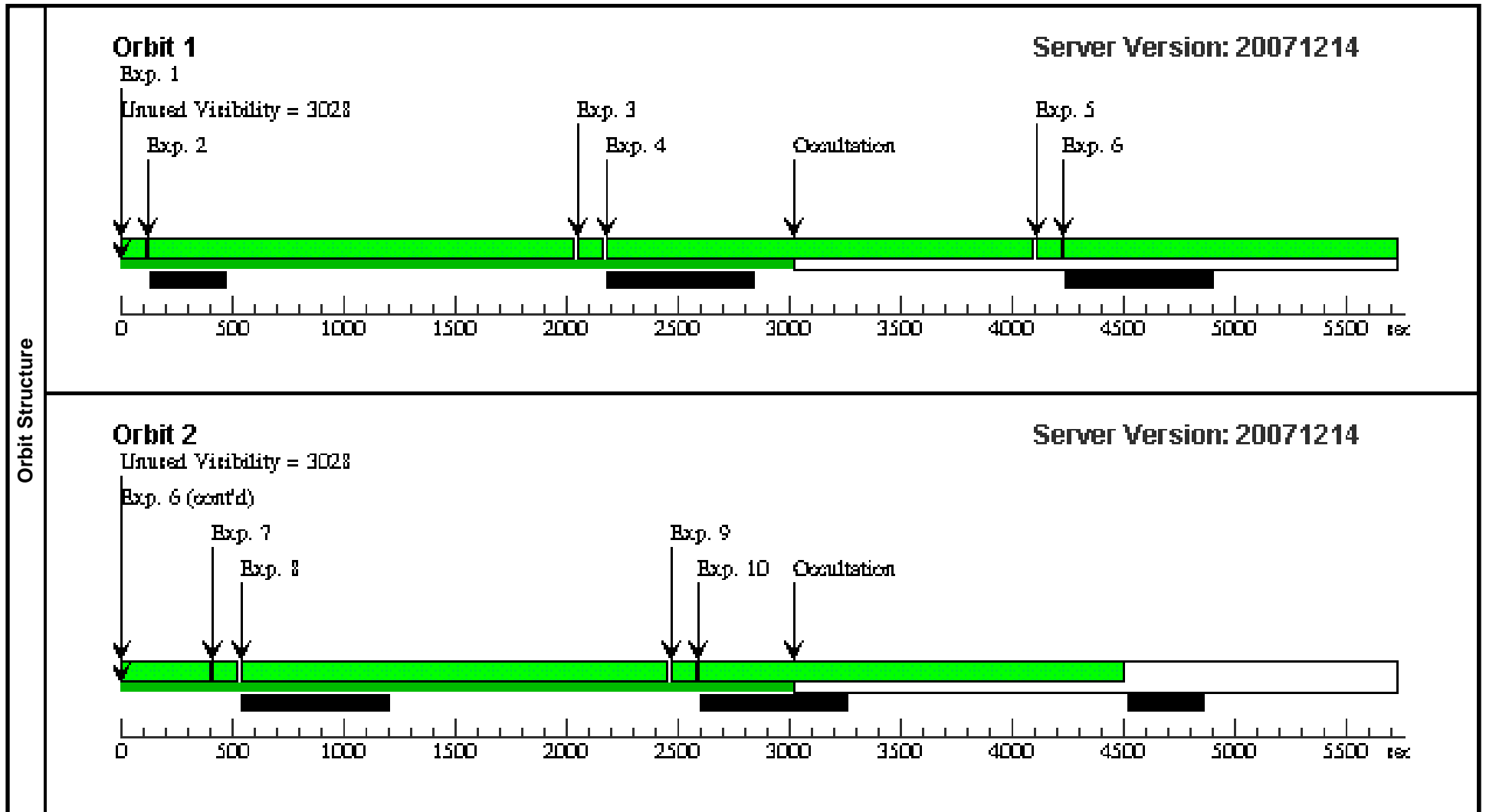


Proposal 11431 - Visit 04 - UVIS Hot Pixel Anneal

Sat Apr 19 01:01:31 GMT 2008

Visit	Proposal 11431, Visit 04, implementation									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: AFTER 01 BY 28 D TO 35 D Comments: Please schedule no later than 30 days after the first anneal procedure. Strongly prefer to have visit 04, 05 & 06 scheduled back-to-back.									
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				0. Secs [==>]	[1]
	2	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[1]
	3	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[1]
	4	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[1]
	5	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[1]
	6	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[1]
	7	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[2]
	8	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[2]
	9	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs [==>]	[2]
10	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs [==>]	[2]	





<b>Visit</b>	<b>Proposal 11431, Visit 05, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3 Special Requirements: AFTER 04 BY 0 H TO 24 H <i>Comments: Anneal procedure 1. Using minimum default value + 1sec. Strongly prefer to have visit 04, 05 &amp; 06 scheduled back-to-back.</i>									
	<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>
1		Anneal	NONE	WFC3, ANNEAL					1. Secs [==>]	[1]
<b>Orbit Structure</b>	<p><b>Orbit 1</b> <span style="float: right;"><b>Server Version: 20071214</b></span></p> <p>Exp. 1</p> <p>Unused Visibility = 3028</p> <p style="text-align: center;">Occultation</p> <p style="text-align: right;">5500 sec</p>									
	<p>0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000</p>									

Proposal 11431 - Visit 06 - UVIS Hot Pixel Anneal

Sat Apr 19 01:01:31 GMT 2008

Visit	Proposal 11431, Visit 06, implementation									
	Diagnostic Status: No Diagnostics									
Exposures	Scientific Instruments: WFC3/UVIS									
	Special Requirements: AFTER 05 BY 0 H TO 10 H									
<i>Comments: Strongly prefer to have visit 04, 05 &amp; 06 scheduled back-to-back.</i>										
#	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				0. Secs	[==>]	[1]
2	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[1]
3	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[1]
4	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[1]
5	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[1]
6	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[1]
7	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[2]
8	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[2]
9	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF				0. Secs	[==>]	[2]
10	Dark	DARK	WFC3/UVIS, ACCUM, UVIS	DEF				1800. Secs	[==>]	[2]

