



11931 - IR Signal Non-Linearity Calibration

Cycle: 17, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Mr. Bryan Hilbert (PI)	Space Telescope Science Institute	hilbert@stsci.edu
Dr. Peter McCullough (CoI)	Space Telescope Science Institute	
Mr. Michael Dulude (CoI)	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	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:00.0	yes
02	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:03.0	yes
03	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:05.0	yes
04	(3) 47TUC	WFC3/IR	2	29-Oct-2010 21:02:14.0	yes
05	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:19.0	yes
06	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:20.0	yes
07	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:22.0	yes
08	(3) 47TUC	WFC3/IR	2	29-Oct-2010 21:02:32.0	yes
09	(3) 47TUC	WFC3/IR	2	29-Oct-2010 21:02:42.0	yes
10	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:46.0	yes
11	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:48.0	yes
12	TUNGSTEN	WFC3/IR	1	29-Oct-2010 21:02:49.0	yes

15 Total Orbits Used

ABSTRACT

These observations will be used to quantify the non-linear signal behavior of the IR channel, as well as to create the IR channel non-linearity calibration reference file. The non-linearity behavior of each pixel in the detector will be investigated through the use of flat fields, while the photometric behavior of point sources will be studied using observations of 47 Tuc.

OBSERVING DESCRIPTION

Two types of data will be collected for this proposal. First we will collect flat field data through the F098M filter, using the internal tungsten calibration lamp. These observations will allow for a pixel-by-pixel examination of the non-linearity of the IR channel across the detector. These observations will be made with a 15-read, SPARS25 sample sequence, in order to allow all pixels in the IR channel to become saturated.

We will also make observations of 47 Tuc, for the purposes of studying the point source non-linearity behavior of the detector. For these observations, we collect ramps in pairs, with four pairs per orbit. Each pair is composed of one low- and one high-signal ramp. Comparison of aperture photometry between the low and high signal ramps will provide a measure of the point source non-linearity behavior. Observation times for these ramps are optimized for stars in the magnitude range $V = 17 - 22$. In the low-signal ramps, stars with $V = 17$ should just reach full well, while those at $V = 22$ will have a SNR of ~ 30 . In the high-signal ramps, $V = 20$ stars should be saturated, and $V = 22$ stars will have a SNR of approximately 130. At these signal levels 47 Tuc should provide many sources for the analysis of the non-linearity, from the low end at $V = 22$, to the bright end, where some sources will have signals well over full-well. This observing strategy is modeled after the non-linearity test performed on ACS, and detailed in ACS ISR 2004-01 by R. Gilliland.

CALIBRATION JUSTIFICATION

Accurate photometry of WFC3-IR images depends on a reliable non-linearity calibration. The data collected for this proposal will provide the information necessary to produce a non-linearity calibration file which will be used as an update to the file produced from ground testing data.

ADDITIONAL COMMENTS

In addition to providing a non-linearity calibration file for use in CALWF3, the results from these observations will be detailed in an ISR. These observations address the CEI Specifications 4.8.7 and 4.8.8, concerning full well level and non-linearity behavior of the detector. Based on previous ground test results (detailed in WFC3 ISR 2008-39), we hope to calculate correction coefficients capable of correcting measured signals to better than

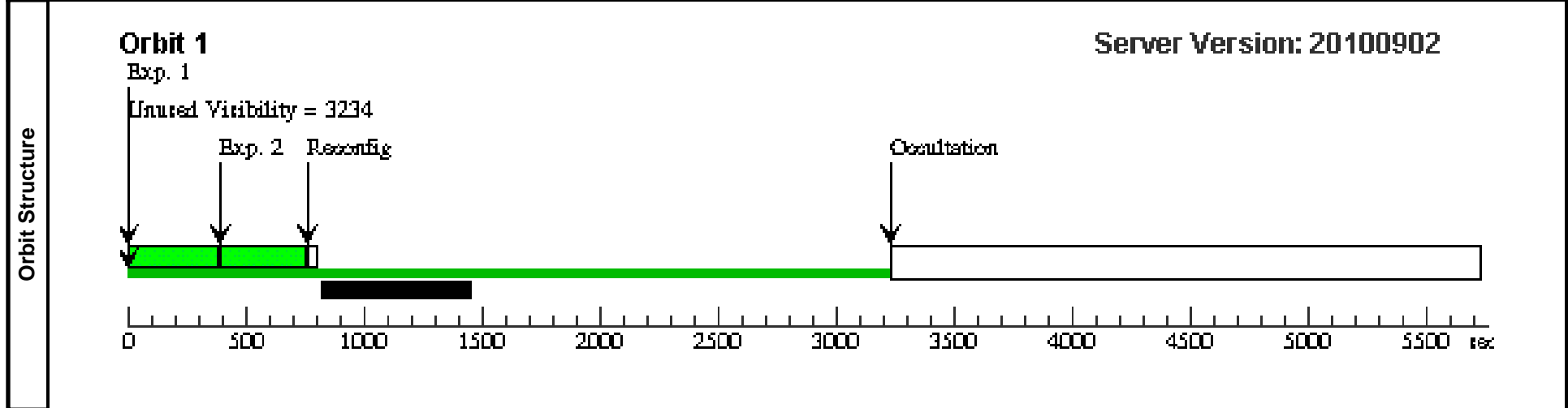
several percent non-linearity.

Proposal 11931 - Visit 01IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:53 GMT 2010

Visit	Proposal 11931, Visit 01, completed								
	Diagnostic Status: No Diagnostics								
	Scientific Instruments: WFC3/IR								
	Special Requirements: (none)								

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

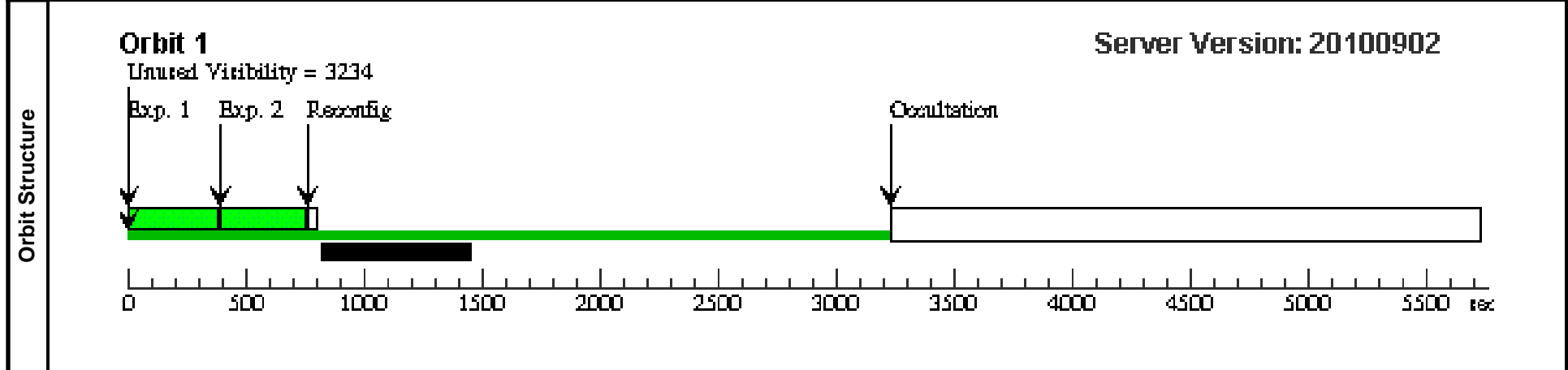


Proposal 11931 - Visit 02IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:53 GMT 2010

Visit	Proposal 11931, Visit 02, completed								
	Diagnostic Status: No Diagnostics								
	Scientific Instruments: WFC3/IR								
	Special Requirements: AFTER 01 BY 0 D TO 1 D								

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

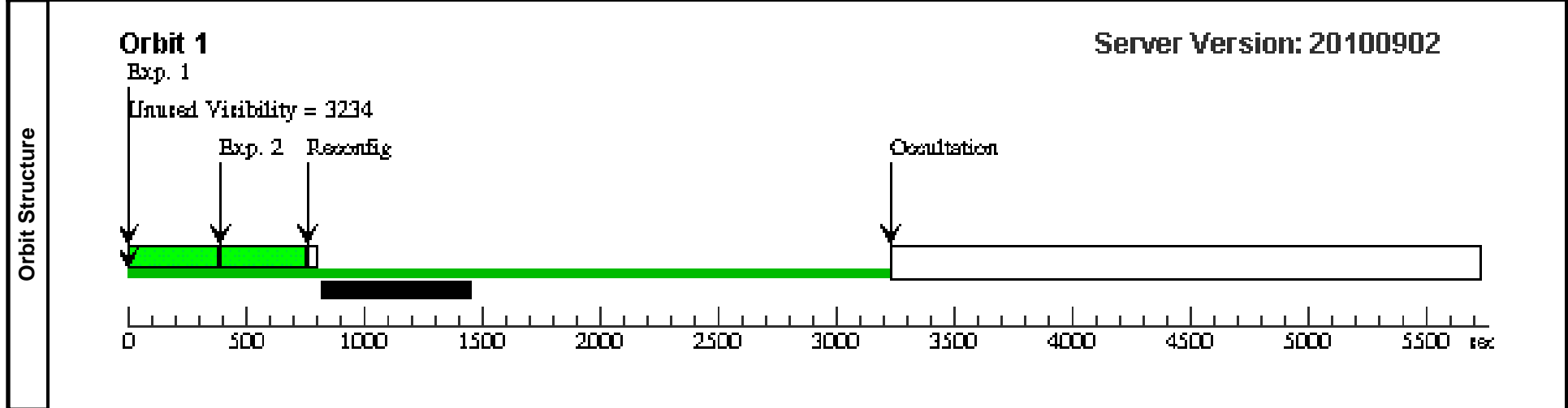


Proposal 11931 - Visit 03IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:53 GMT 2010

Visit	Proposal 11931, Visit 03, completed									
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: WFC3/IR									
	Special Requirements: AFTER 01 BY 0 D TO 1 D									

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

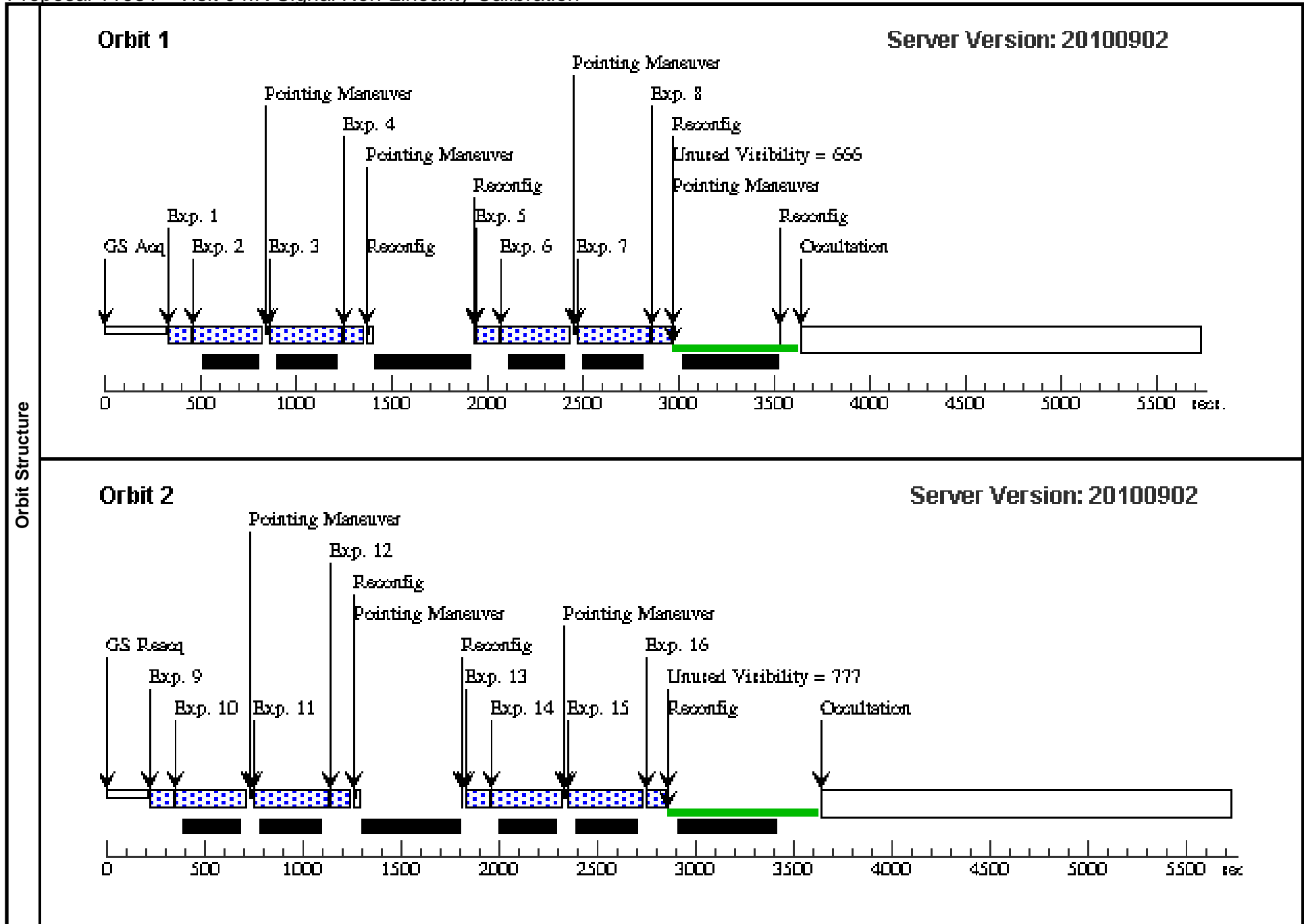


Proposal 11931 - Visit 04IR Signal Non-Linearity Calibration

Visit	Proposal 11931, Visit 04, completed Sat Oct 30 01:02:54 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: AFTER 01 BY 0 D TO 3 D																														
	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>(3)</td> <td>47TUC</td> <td>RA: 00 22 27.8446 (5.6160192d)</td> <td>Proper Motion RA: null</td> <td>V=22+/-</td> <td>Reference Frame: ICRS</td> </tr> <tr> <td></td> <td>Alt Name1: NGC104</td> <td>Dec: -72 04 4.75 (-72.06799d)</td> <td>Proper Motion Dec: null</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Equinox: J2000</td> <td>Epoch of Position:</td> <td></td> <td></td> </tr> <tr> <td colspan="6"> <i>Comments: RA 00 22 39.4075 and Dec -72 04 1.70 from ACS L-flat proposal 10048. this is towards the edge of the cluster, rather than in the center</i> </td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	47TUC	RA: 00 22 27.8446 (5.6160192d)	Proper Motion RA: null	V=22+/-	Reference Frame: ICRS		Alt Name1: NGC104	Dec: -72 04 4.75 (-72.06799d)	Proper Motion Dec: null					Equinox: J2000	Epoch of Position:			<i>Comments: RA 00 22 39.4075 and Dec -72 04 1.70 from ACS L-flat proposal 10048. this is towards the edge of the cluster, rather than in the center</i>				
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Proposal 11931 - Visit 04IR Signal Non-Linearity Calibration

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10			[==>]	[1]	
	2	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15			[==>]	[1]	
	<i>Comments: Designed to just saturate V=20 stars.</i>										
	3	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0.572,0		[==>]	[1]	
	4	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 3		[==>]	[1]	
	5	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	POS TARG 0.572,0. 365		[==>]	[1]	
	6	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		[==>]	[1]	
	7	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0,0.365		[==>]	[1]	
	8	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 7		[==>]	[1]	
	9	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10			[==>]	[2]	
	10	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15			[==>]	[2]	
	11	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0.572,0		[==>]	[2]	
	12	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 3		[==>]	[2]	
	13	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	POS TARG 0.572,0. 365		[==>]	[2]	
	14	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		[==>]	[2]	
15	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0,0.365		[==>]	[2]		
16	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 7		[==>]	[2]		

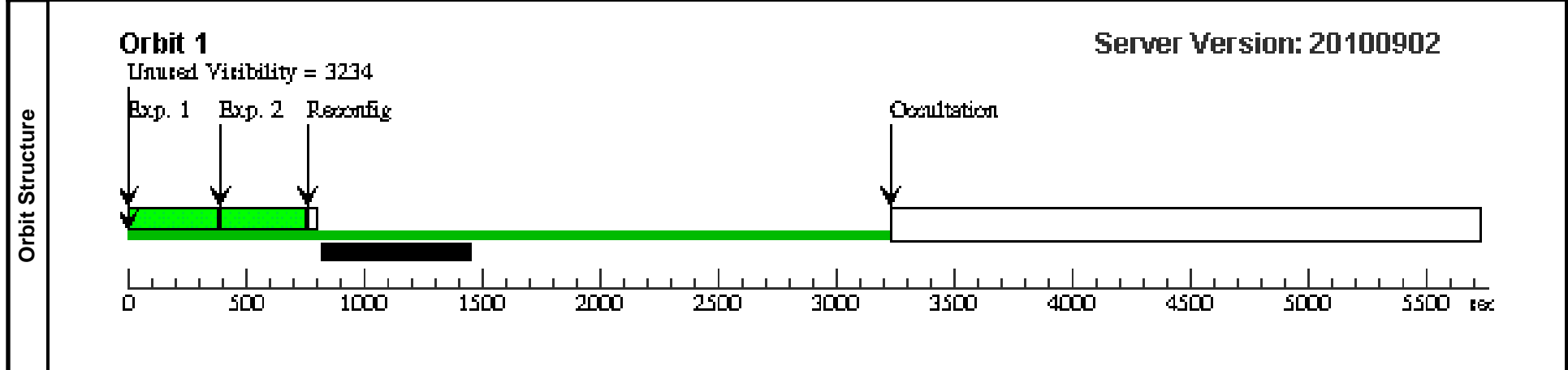


Proposal 11931 - Visit 05IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:55 GMT 2010

Visit	Proposal 11931, Visit 05, completed								
	Diagnostic Status: No Diagnostics								
	Scientific Instruments: WFC3/IR								
	Special Requirements: AFTER 04 BY 120 D TO 150 D								

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

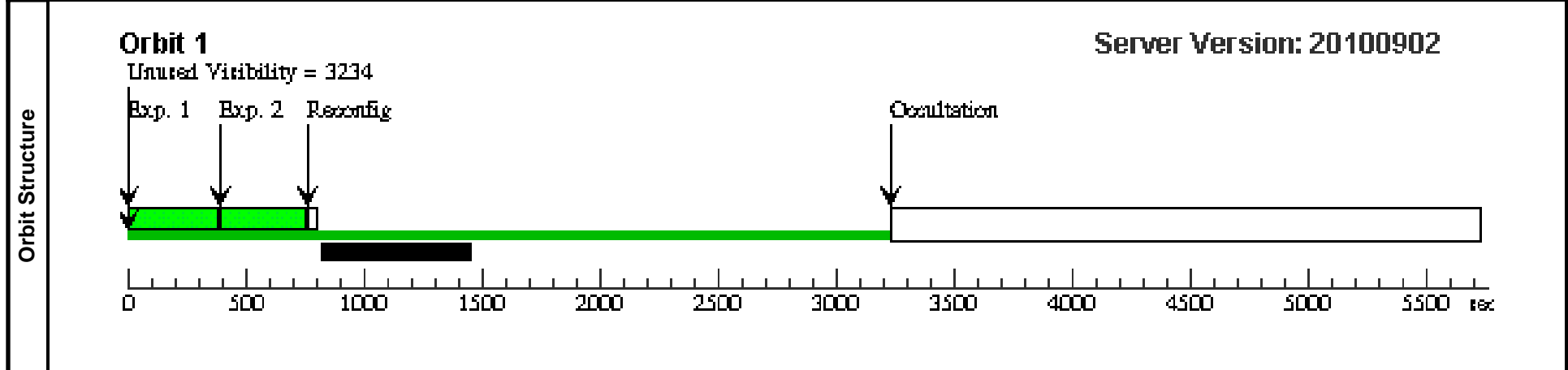


Proposal 11931 - Visit 06IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:55 GMT 2010

Visit	Proposal 11931, Visit 06, completed								
	Diagnostic Status: No Diagnostics								
	Scientific Instruments: WFC3/IR								
	Special Requirements: AFTER 05 BY 0 D TO 1 D								

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

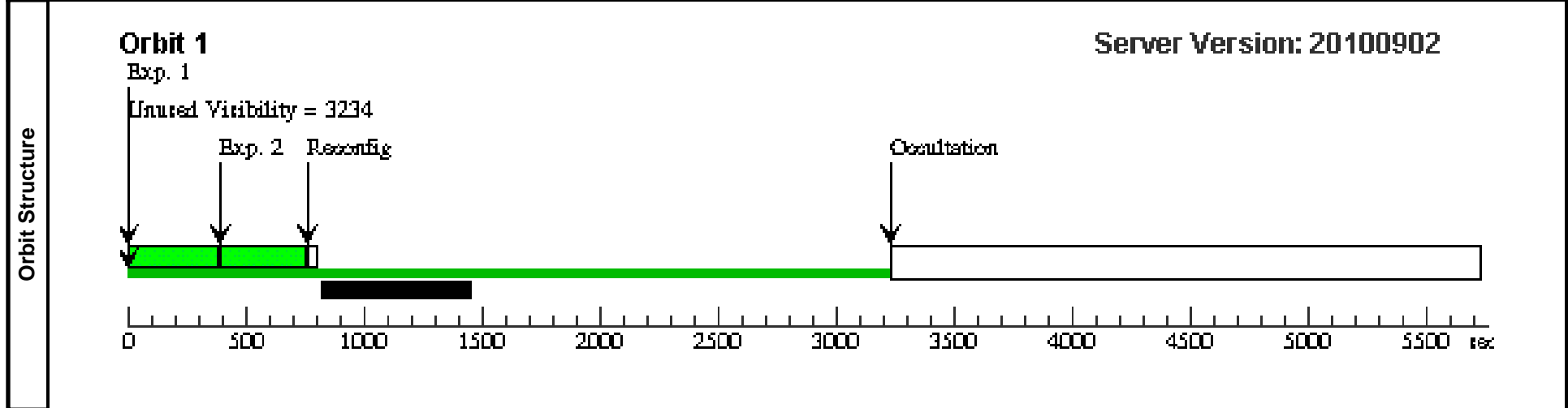


Proposal 11931 - Visit 07IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:55 GMT 2010

Visit	Proposal 11931, Visit 07, completed								
	Diagnostic Status: No Diagnostics								
	Scientific Instruments: WFC3/IR								
	Special Requirements: AFTER 05 BY 0 D TO 1 D								

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

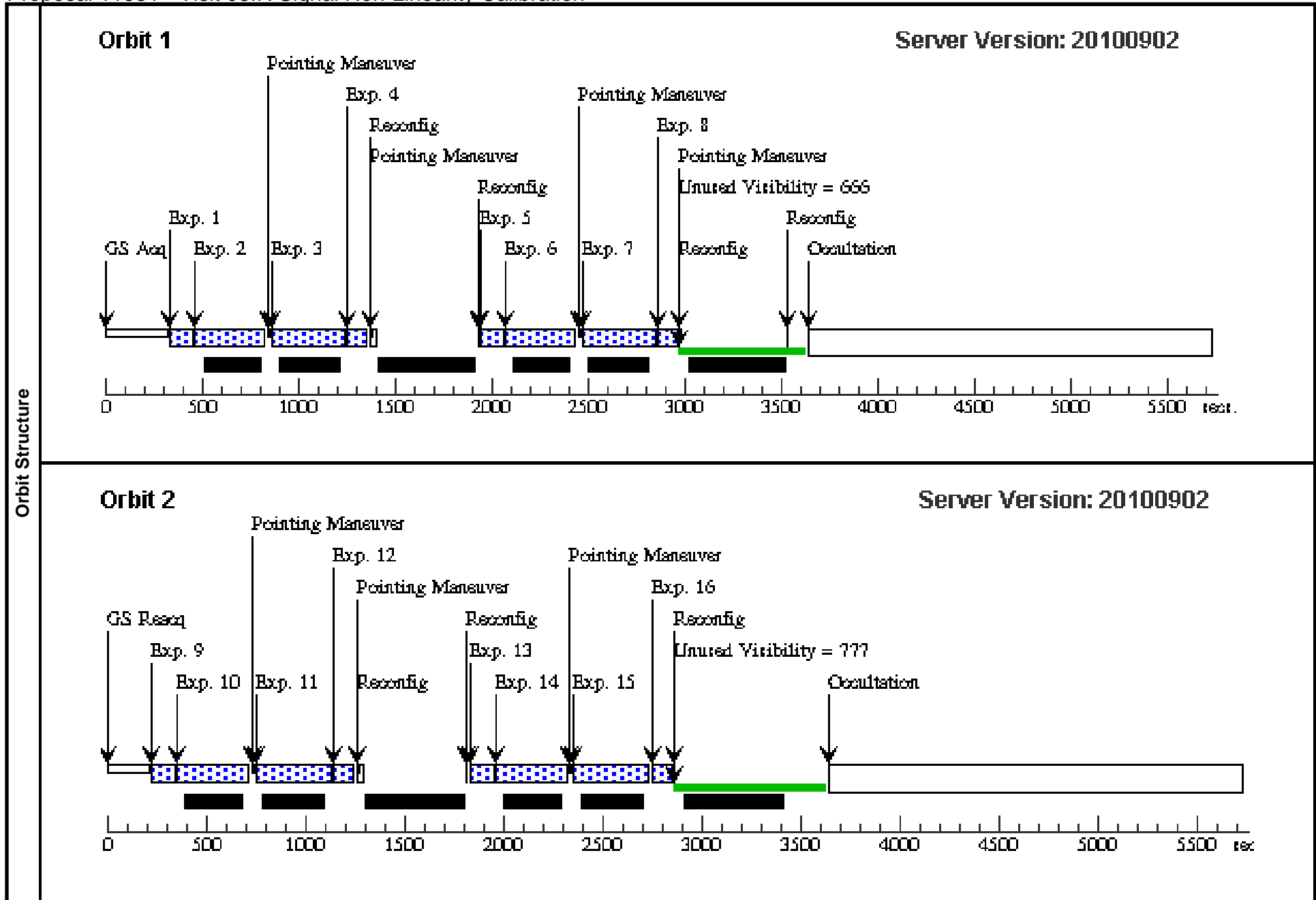


Proposal 11931 - Visit 08IR Signal Non-Linearity Calibration

Visit	Proposal 11931, Visit 08, completed Sat Oct 30 01:02:55 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: AFTER 05 BY 0 D TO 3 D																														
	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>(3)</td> <td>47TUC</td> <td>RA: 00 22 27.8446 (5.6160192d)</td> <td>Proper Motion RA: null</td> <td>V=22+/-</td> <td>Reference Frame: ICRS</td> </tr> <tr> <td></td> <td>Alt Name1: NGC104</td> <td>Dec: -72 04 4.75 (-72.06799d)</td> <td>Proper Motion Dec: null</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>Equinox: J2000</td> <td>Epoch of Position:</td> <td></td> <td></td> </tr> <tr> <td colspan="6"> <i>Comments: RA 00 22 39.4075 and Dec -72 04 1.70 from ACS L-flat proposal 10048. this is towards the edge of the cluster, rather than in the center</i> </td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	47TUC	RA: 00 22 27.8446 (5.6160192d)	Proper Motion RA: null	V=22+/-	Reference Frame: ICRS		Alt Name1: NGC104	Dec: -72 04 4.75 (-72.06799d)	Proper Motion Dec: null					Equinox: J2000	Epoch of Position:			<i>Comments: RA 00 22 39.4075 and Dec -72 04 1.70 from ACS L-flat proposal 10048. this is towards the edge of the cluster, rather than in the center</i>				
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Proposal 11931 - Visit 08IR Signal Non-Linearity Calibration

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10			[==>]	[1]	
	2	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15			[==>]	[1]	
	<i>Comments: Designed to just saturate V=20 stars.</i>										
	3	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0.572,0		[==>]	[1]	
	4	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 3		[==>]	[1]	
	5	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	POS TARG 0.572,0. 365		[==>]	[1]	
	6	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		[==>]	[1]	
	7	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0,0.365		[==>]	[1]	
	8	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 7		[==>]	[1]	
	9	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10			[==>]	[2]	
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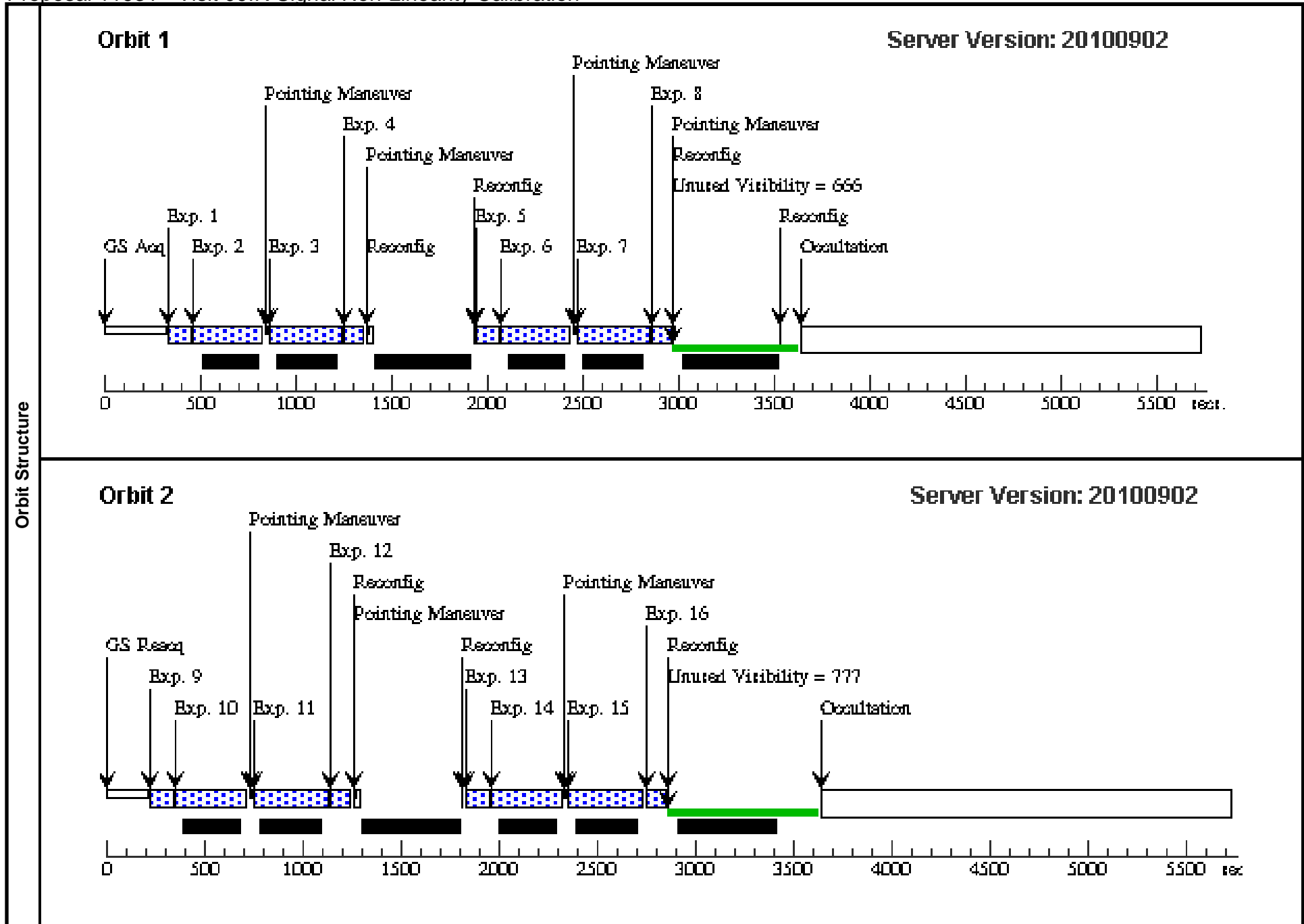


Proposal 11931 - Visit 09IR Signal Non-Linearity Calibration

Visit	Proposal 11931, Visit 09 Sat Oct 30 01:02:56 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: AFTER 08 BY 120 D TO 150 D																														
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Proposal 11931 - Visit 09IR Signal Non-Linearity Calibration

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	1	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10			[==>]	[1]	
	2	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15			[==>]	[1]	
	<i>Comments: Designed to just saturate V=20 stars.</i>										
	3	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0.572,0		[==>]	[1]	
	4	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 3		[==>]	[1]	
	5	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	POS TARG 0.572,0. 365		[==>]	[1]	
	6	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		[==>]	[1]	
	7	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0,0.365		[==>]	[1]	
	8	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 7		[==>]	[1]	
	9	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10			[==>]	[2]	
	10	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15			[==>]	[2]	
	11	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0.572,0		[==>]	[2]	
	12	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 3		[==>]	[2]	
	13	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	POS TARG 0.572,0. 365		[==>]	[2]	
	14	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	SAME POS AS 5		[==>]	[2]	
15	Long	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 25; NSAMP=15	POS TARG 0,0.365		[==>]	[2]		
16	Short	(3) 47TUC	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=SPARS 10; NSAMP=10	SAME POS AS 7		[==>]	[2]		



Proposal 11931 - Visit 10IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:56 GMT 2010

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

Orbit 1
Unused Visibility = 3234

The diagram shows a timeline for Orbit 1. The x-axis is labeled 'sec' and ranges from 0 to 5500 with major ticks every 500 units. A green bar represents the observation period, starting at 0 and ending at approximately 3234 seconds. Within this green bar, two vertical arrows labeled 'Exp. 1' and 'Exp. 2' point to specific time points. A black bar labeled 'Reconfig' is located below the green bar, starting at approximately 800 seconds and ending at approximately 1500 seconds. A white bar labeled 'Occultation' starts at approximately 3234 seconds and extends to the end of the orbit at 5500 seconds.

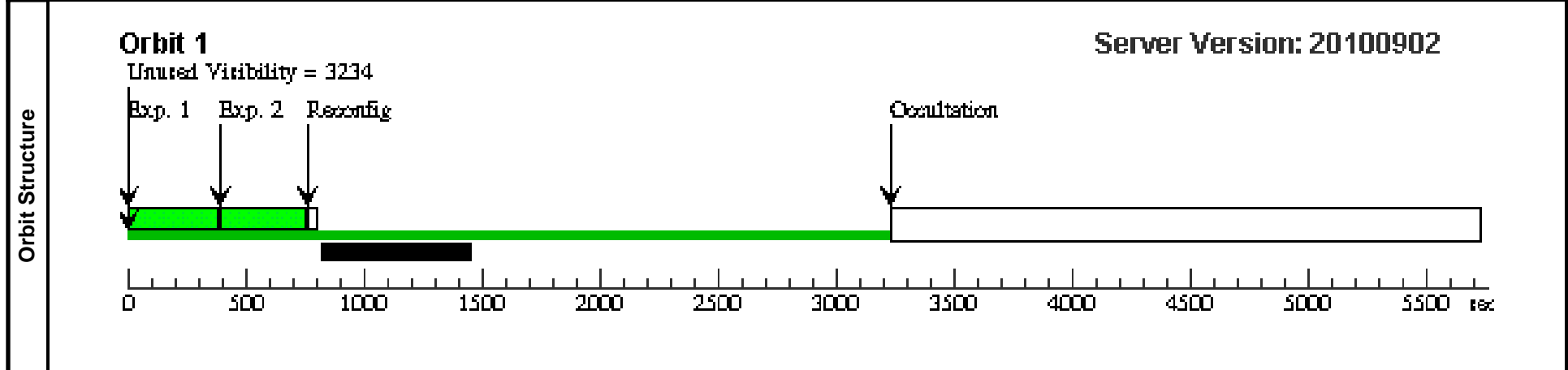
Server Version: 20100902

Proposal 11931 - Visit 11IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:57 GMT 2010

Visit	Proposal 11931, Visit 11, scheduling								
	Diagnostic Status: No Diagnostics								
	Scientific Instruments: WFC3/IR								
	Special Requirements: (none)								

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]



Proposal 11931 - Visit 12IR Signal Non-Linearity Calibration

Sat Oct 30 01:02:57 GMT 2010

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]
2	F098M	TUNGSTEN	WFC3/IR, MULTIACCUM, IR	F098M	SAMP-SEQ=SPARS 25; NSAMP=15				[==>]	[1]

Orbit 1
Unused Visibility = 3234

The diagram shows a horizontal timeline from 0 to 5500 seconds. At the beginning, there are two green blocks labeled 'Exp. 1' and 'Exp. 2'. This is followed by a black block labeled 'Reconfig'. A long white block labeled 'Occultation' starts at approximately 3234 seconds and extends to the end of the timeline. A green bar is present from 0 to 3234 seconds.

Server Version: 20100902