



11497 - Observations of Mars and 2007 WD5

Cycle: 16, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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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	(1) 2007WD5	WFPC2	3	18-Jan-2008 10:27:15.0	yes
02	(2) MARS	NIC1	1	18-Jan-2008 10:27:27.0	yes
03	(2) MARS	NIC1	1	18-Jan-2008 10:27:43.0	yes
04	(2) MARS	WFPC2	1	18-Jan-2008 10:27:49.0	yes
05	(2) MARS	WFPC2	1	18-Jan-2008 10:27:52.0	yes

7 Total Orbits Used

ABSTRACT

We are proposing to observe 2007 WD5 prior to its possible impact with Mars. In the event that an impact does occur, we will also observe the asteroid as it approaches Mars, the impact itself, and the aftermath of the impact. HST has unique capabilities to observe this potentially very unusual event.

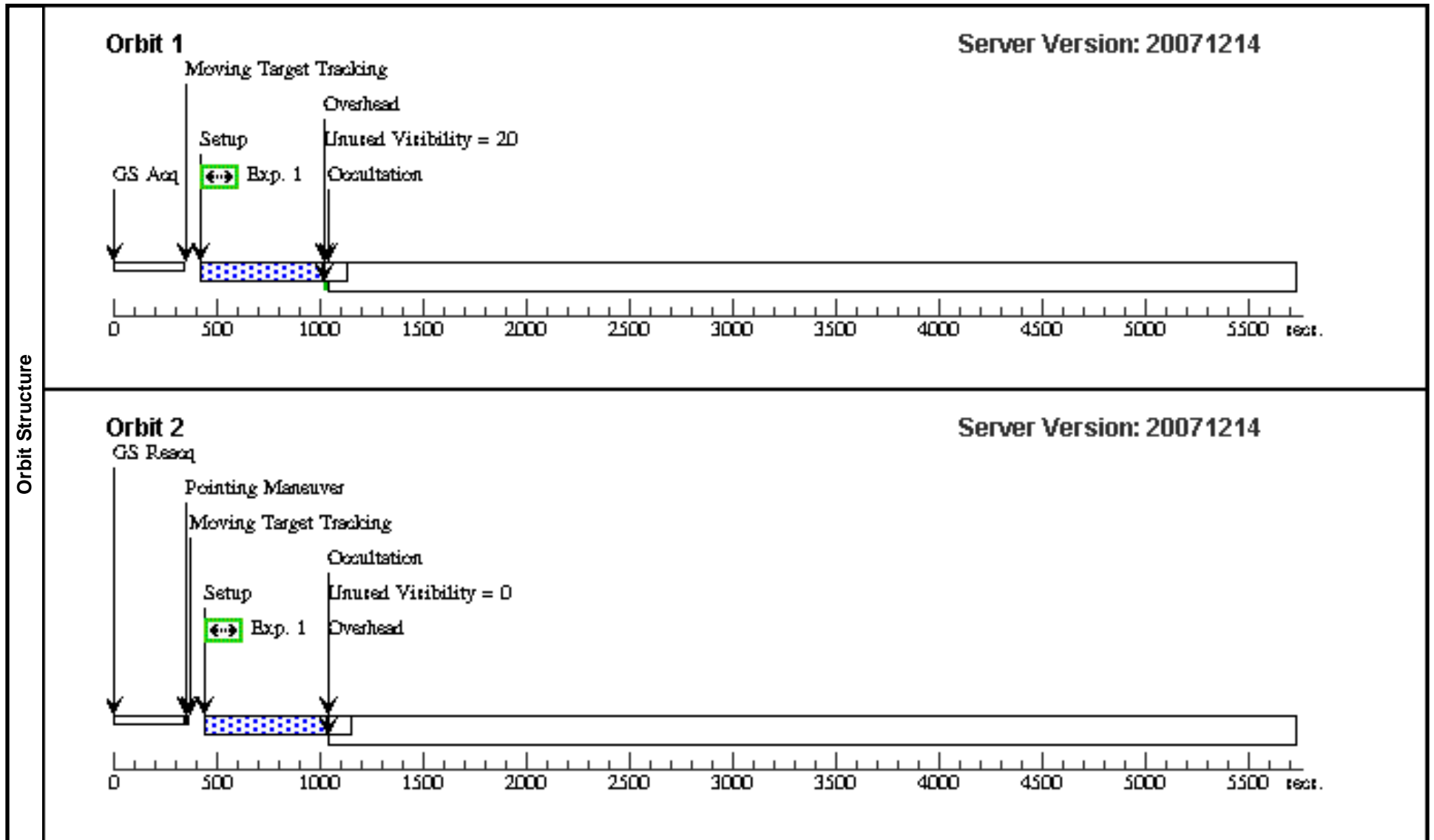
OBSERVING DESCRIPTION

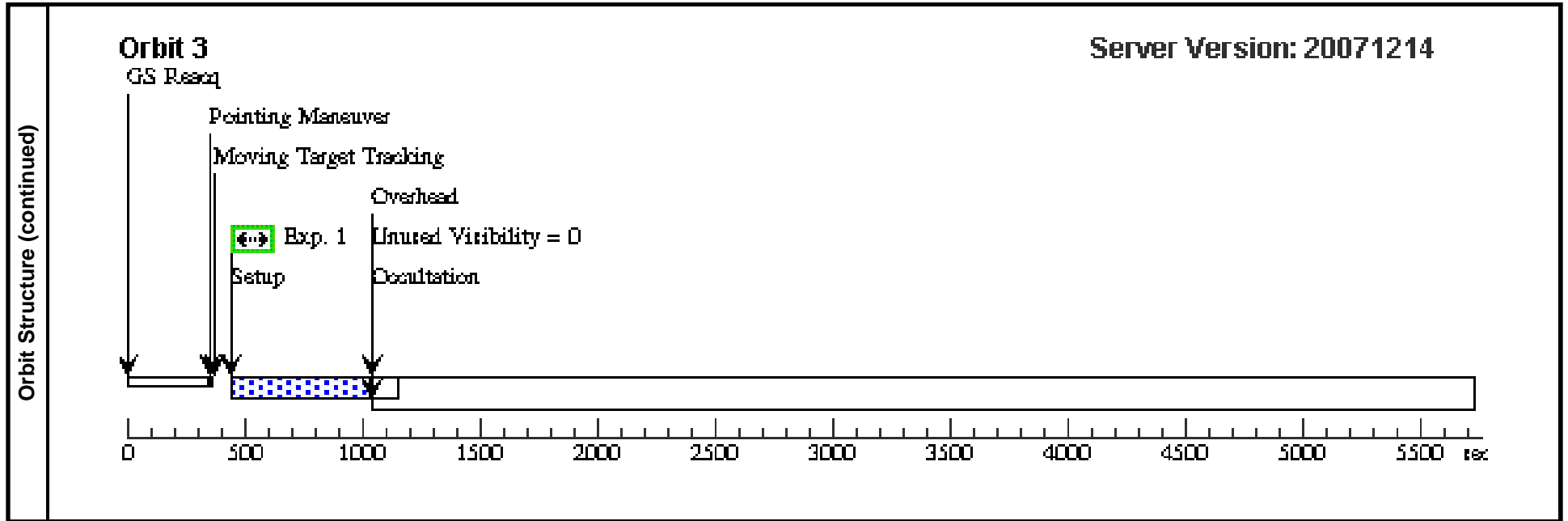
This DD proposal is set up to observe the asteroid 2007 WD5 shortly before its close approach to Mars in late January 2007. The first visit, to be scheduled as early in January as windows allow (~Jan 27) will be used to characterize the asteroid by obtaining direct imaging using WFPC2. In the event there is a high probability of a collision, visits on January 30 will be activated. These are intended to detect the impact flash and any observable after effects of the collision.

Proposal 11497 - Visit 01 - Observations of Mars and 2007 WD5

Fri Jan 18 15:27:55 GMT 2008

Visit	Proposal 11497, Visit 01, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: GYRO MODE 2G; SCHED 100%; BETWEEN 26-JAN-2008:00:00:00 AND 27-JAN-2008:23:59:59; VISIBILITY INTERVAL 17.4 M										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(1)		Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.3535 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45.0 Angle Between Sides= Center Pattern=false					(1)			
Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center				
	(1)	2007WD5	TYPE=ASTEROID,A=2.5435673,E=0 .6028986,I=2.37274,O=67.48406,W=3 12.72081,M=2.03815,EQUINOX=J20 00,EPOCH=27-OCT-2007:00:00:00				EARTH				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	(1) 2007WD5	WFPC2, IMAGE, PC1	F606W	CLOCKS=YES			Pattern 1-1 (1)	500.0 Secs		
									[=>(Pattern 1)]		[1]
									[=>(Pattern 2)]		[2]
								[=>(Pattern 3)]		[3]	





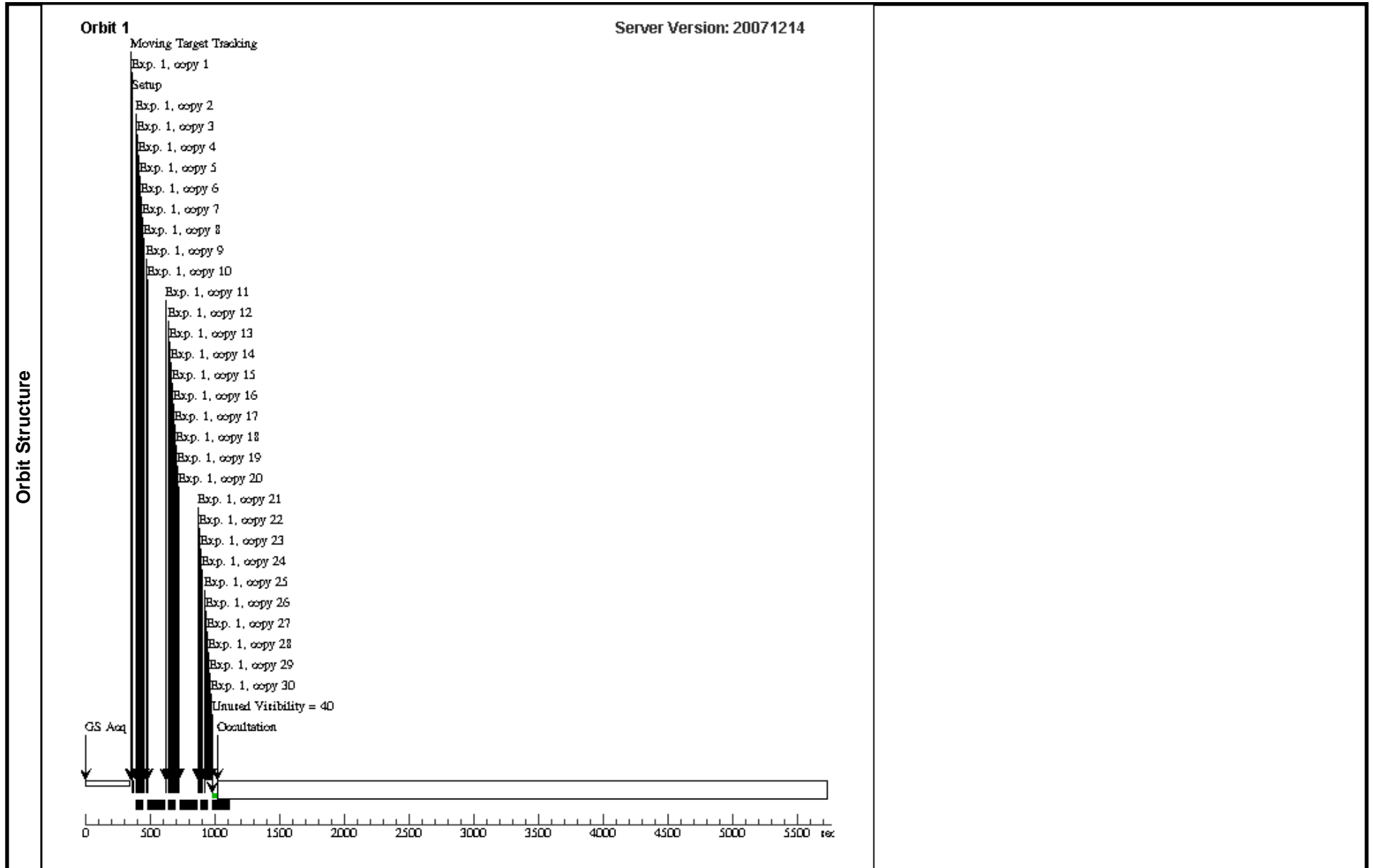
Proposal 11497 - Visit 02 - Observations of Mars and 2007 WD5

Fri Jan 18 15:27:56 GMT 2008

Visit	Proposal 11497, Visit 02, implementation Diagnostic Status: No Diagnostics Scientific Instruments: NIC1 Special Requirements: GYRO MODE 2G; BETWEEN 30-JAN-2008:10:20:00 AND 30-JAN-2008:11:50:00; ON HOLD ; VISIBILITY INTERVAL 17.1 M <i>On Hold Comments: On hold pending orbit updates for 2007 WD5.</i>						
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window
	(2)	MARS	STD=MARS				EARTH

Proposal 11497 - Visit 02 - Observations of Mars and 2007 WD5

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(2) MARS	NIC1, MULTIACCUM, NIC1-FIX	F113N	SAMP-SEQ=SCAM RR; NSAMP=10			[==>(Copy 1)]	[1]
								[==>(Copy 2)]	
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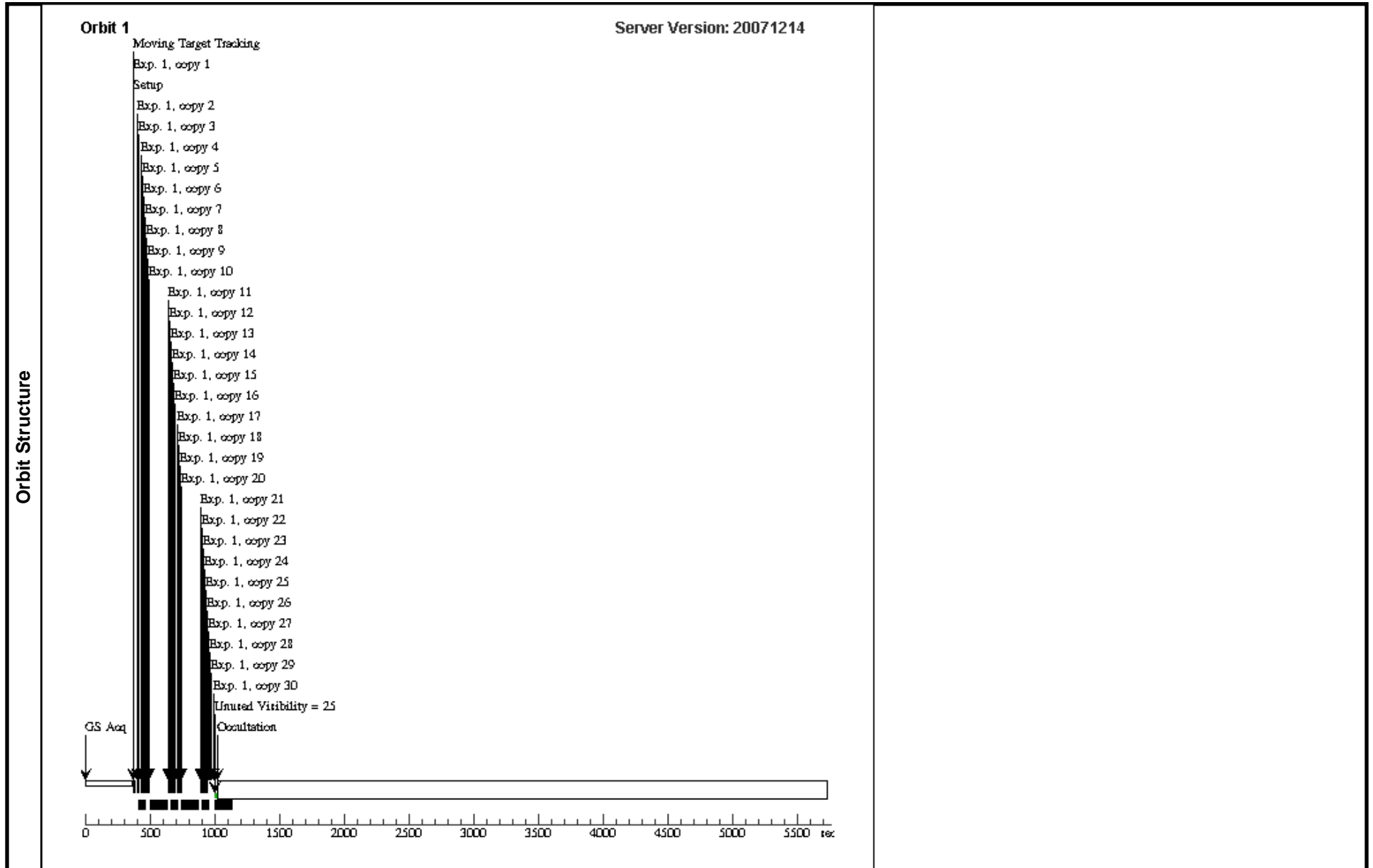
Proposal 11497 - Visit 03 - Observations of Mars and 2007 WD5

Fri Jan 18 15:27:57 GMT 2008

Visit	<p>Proposal 11497, Visit 03, implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: NIC1</p> <p>Special Requirements: GYRO MODE 1G; BETWEEN 30-JAN-2008:10:20:00 AND 30-JAN-2008:11:50:00; ON HOLD ; VISIBILITY INTERVAL 17.1 M</p> <p><i>On Hold Comments: On hold pending orbit updates for 2007 WD5.</i></p> <p><i>This is the 1-gyro version of Visit 2</i></p>																				
	<p>(Visit 03) Warning (Form): Gyro Mode overrides default value of 2G.</p>																				
Diagnostics																					
Solar System Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Level 1</th> <th>Level 2</th> <th>Level 3</th> <th>Window</th> <th>Ephem Center</th> </tr> </thead> <tbody> <tr> <td>(2)</td> <td>MARS</td> <td>STD=MARS</td> <td></td> <td></td> <td></td> <td>EARTH</td> </tr> </tbody> </table>	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center	(2)	MARS	STD=MARS				EARTH						
	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center														
(2)	MARS	STD=MARS				EARTH															

Proposal 11497 - Visit 03 - Observations of Mars and 2007 WD5

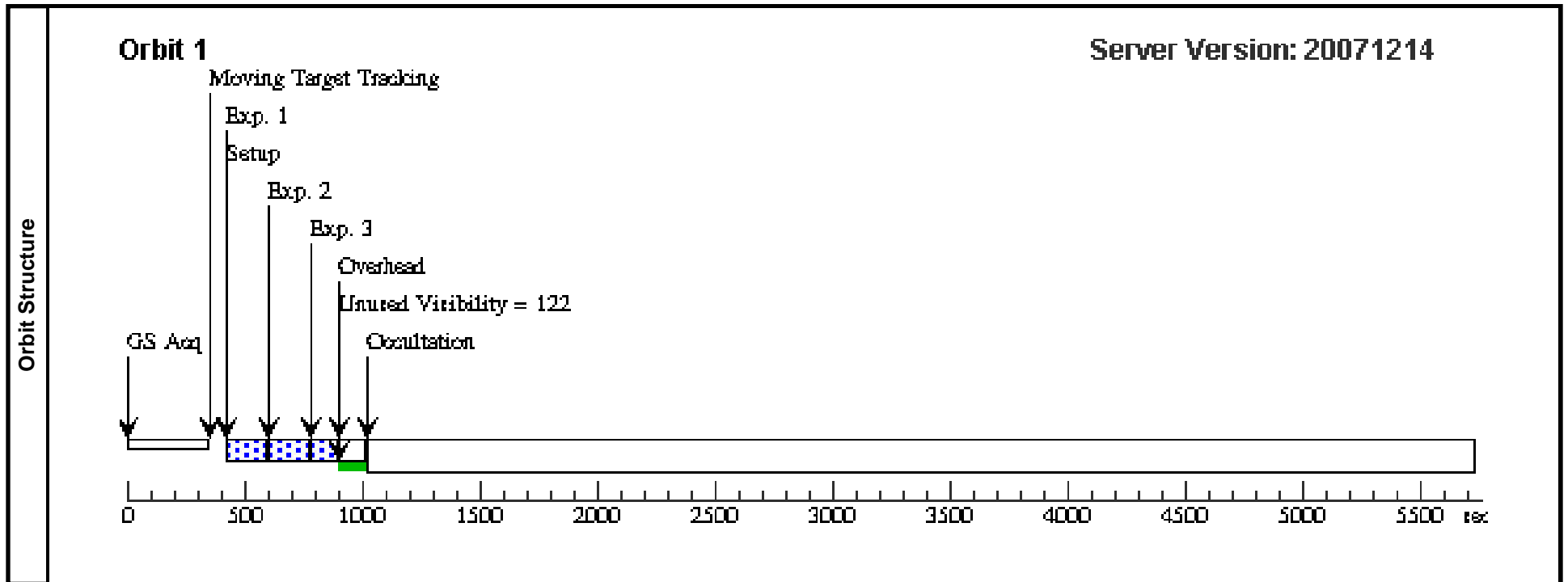
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(2) MARS	NIC1, MULTIACCUM, NIC1-FIX	F113N	SAMP-SEQ=SCAM	RR;		[==>(Copy 1)]	[1]
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								[==>(Copy 30)]	



Proposal 11497 - Visit 04 - Observations of Mars and 2007 WD5

Fri Jan 18 15:27:58 GMT 2008

Visit	Proposal 11497, Visit 04, implementation Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: GYRO MODE 2G; ON HOLD ; VISIBILITY INTERVAL 17.1 M <i>Comments: Placeholder for WFPC2 observations of Mars before and after impact. This visit may be duplicated for multiple observing windows as available.</i> <i>On Hold Comments: On hold pending orbit updates for 2007 WD5.</i>										
	Solar System Targets	#	Name	Level 1	Level 2	Level 3	Window	Ephem Center			
(2)		MARS	STD=MARS				EARTH				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	(2) MARS		WFPC2, IMAGE, PC1-FIX	F410M				1.2 Secs		
									[==>]		[1]
	2	(2) MARS		WFPC2, IMAGE, PC1-FIX	F502N				1.8 Secs		
									[==>]		[1]
3	(2) MARS		WFPC2, IMAGE, PC1	F673N				0.4 Secs			
								[==>]		[1]	



Proposal 11497 - Visit 05 - Observations of Mars and 2007 WD5

Fri Jan 18 15:27:58 GMT 2008

Visit	Proposal 11497, Visit 05, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: GYRO MODE 1G; ON HOLD ; VISIBILITY INTERVAL 17.1 M <i>Comments: Placeholder for WFPC2 observations of Mars before and after impact. This visit may be duplicated for multiple observing windows as available.</i> <i>On Hold Comments: On hold pending orbit updates for 2007 WD5.</i> <i>This is the 1-gyro version of visit 4.</i>																																																
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