



# 17292 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART

## Impact

Cycle: 30, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

### INVESTIGATORS

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Dr. Eugene G. Fahnestock (CoI)	Jet Propulsion Laboratory
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Dr. Ludmilla Kolokolova (CoI)	University of Maryland
Dr. Matthew M Knight (CoI)	United States Naval Academy
Dr. Yun Zhang (CoI)	University of Michigan
Dr. Masatoshi Hirabayashi (CoI)	Auburn University
Dr. Bin Yang (CoI) (Contact)	Planetary 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	(1) DIDYMOS	WFC3/UVIS	1	13-Feb-2024 10:01:15.0	yes
02	(1) DIDYMOS	WFC3/UVIS	1	13-Feb-2024 10:01:16.0	yes
03	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:17.0	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>
04	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:18.0	yes
05	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:19.0	yes
15	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:19.0	yes
06	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:20.0	yes
07	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:21.0	yes
08	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:21.0	yes
09	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:22.0	yes
17	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:22.0	yes
16	(2) DIDYMOS-UPDATE	WFC3/UVIS	1	13-Feb-2024 10:01:23.0	yes

12 Total Orbits Used

## **ABSTRACT**

NASA's DART (Double Asteroid Redirection Test) spacecraft successfully impacted Dimorphos on September 26, 2022 and created an active asteroid that potentially provides invaluable context for interpreting observations of natural active asteroids. Studying Dimorphos's ejecta and tail evolution carries profound implications for the impact disruption process of asteroids, one of the major processes in asteroid evolution. The HST observations (GO-16674) immediately following the impact revealed spectacular details of the ejecta evolution from excavation to the development of a long dust tail that has remained visible from the ground since ~3 hours after impact. It is the first time that the detailed formational process of an asteroid tail has ever been observed. As the continuation of the highly successful HST program to observe the DART ejecta (GO-16674), we request 9 orbits of HST DD time to monitor the long-term evolution of the remarkable tail of Dimorphos with the HST/WFC3 at a cadence of approximately 3 weeks from late January to early July 2023. The new observations will provide essential information about the mm and larger particles and the dynamics of slow ejecta dust in the Didymos binary system under the influence of solar radiation pressure. Large particles are critical to constrain the total ejecta mass to estimate the momentum transfer in the DART impact independent of the orbital period change of the binary system. Long-term monitoring will essentially connect the Dimorphos's tail with those of natural active asteroids. HST's high resolution, high sensitivity, and stable optical performance are crucial for our proposed observations.

**OBSERVING DESCRIPTION**

Observe the Didymos system for 1 orbit every 3 weeks starting the week of 2023-Jan-16, if possible, and extending until a total of 9 orbits of observations are completed.

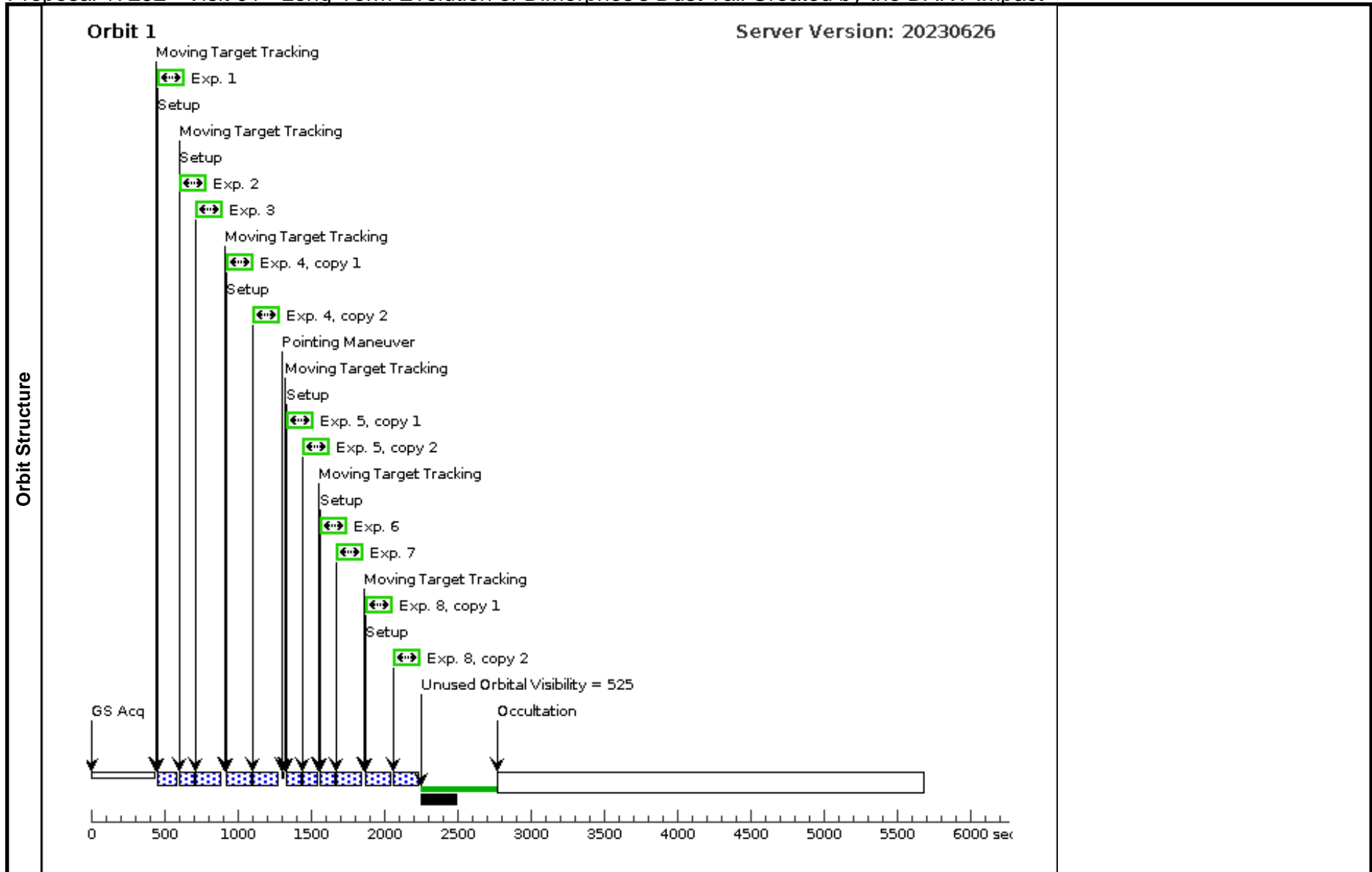
Each orbit will consist of a series of pairs of WFC3/UVIS2 exposures, using exp times of 10s and 100s, using the typical WFC3/UVIS box dither.

Each observation will be made using the WFC3 UVIS2-C1K1C-SUB aperture with the target centered in that aperture.

Proposal 17292 - Visit 01 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

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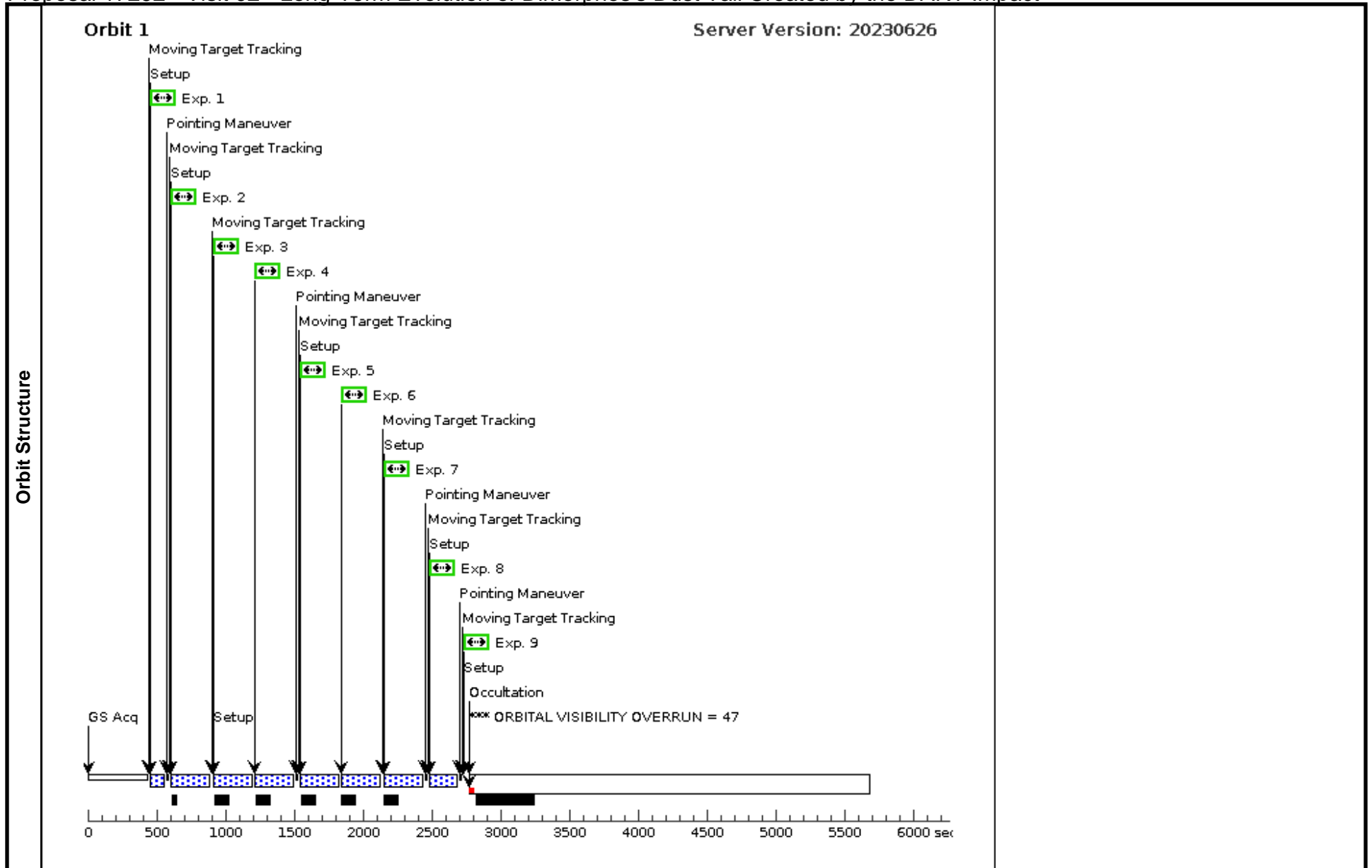
<b>Visit</b>	<b>Proposal 17292, Visit 01, completed</b> <b>Diagnostic Status: Informational</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 16-JAN-2023:00:00:00 AND 23-JAN-2023:00:00:00									
	(Visit 01) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(1)	DIDYMOS	TYPE=ASTEROID.A=1.64309124934 2108.E=0.3835237757664423,I=3.413 80667080487 .O=72.9955220559403,W=319.557447 3815775.M=6.411907609321696,EQU INOX=J2000,EPOCH=04-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. .A1=0.,A2=-1.053918254001E- 14,A3=0. .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Asteroid Didymos (65803) Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=18		Sequence 1-8 Non-Int in Visit 01	10 Secs (10 Secs) [==>]	[1]
	2	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=18	NEW ALIGNMENT	Sequence 1-8 Non-Int in Visit 01	10 Secs (10 Secs) [==>]	[1]
	3	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=10		Sequence 1-8 Non-Int in Visit 01	90 Secs (90 Secs) [==>]	[1]
	4	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=10	NEW ALIGNMENT	Sequence 1-8 Non-Int in Visit 01	90 Secs X 2 (180 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	5	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=18	POS TARG 0.099,0. 106; NEW ALIGNMENT	Sequence 1-8 Non-Int in Visit 01	10 Secs X 2 (20 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	6	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=18	POS TARG 0.099,0. 106; NEW ALIGNMENT	Sequence 1-8 Non-Int in Visit 01	10 Secs (10 Secs) [==>]	[1]
	7	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=10	POS TARG 0.099,0. 106	Sequence 1-8 Non-Int in Visit 01	90 Secs (90 Secs) [==>]	[1]
	8	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F350LP	FLASH=10	POS TARG 0.099,0. 106; NEW ALIGNMENT	Sequence 1-8 Non-Int in Visit 01	90 Secs X 2 (180 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]



Proposal 17292 - Visit 02 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

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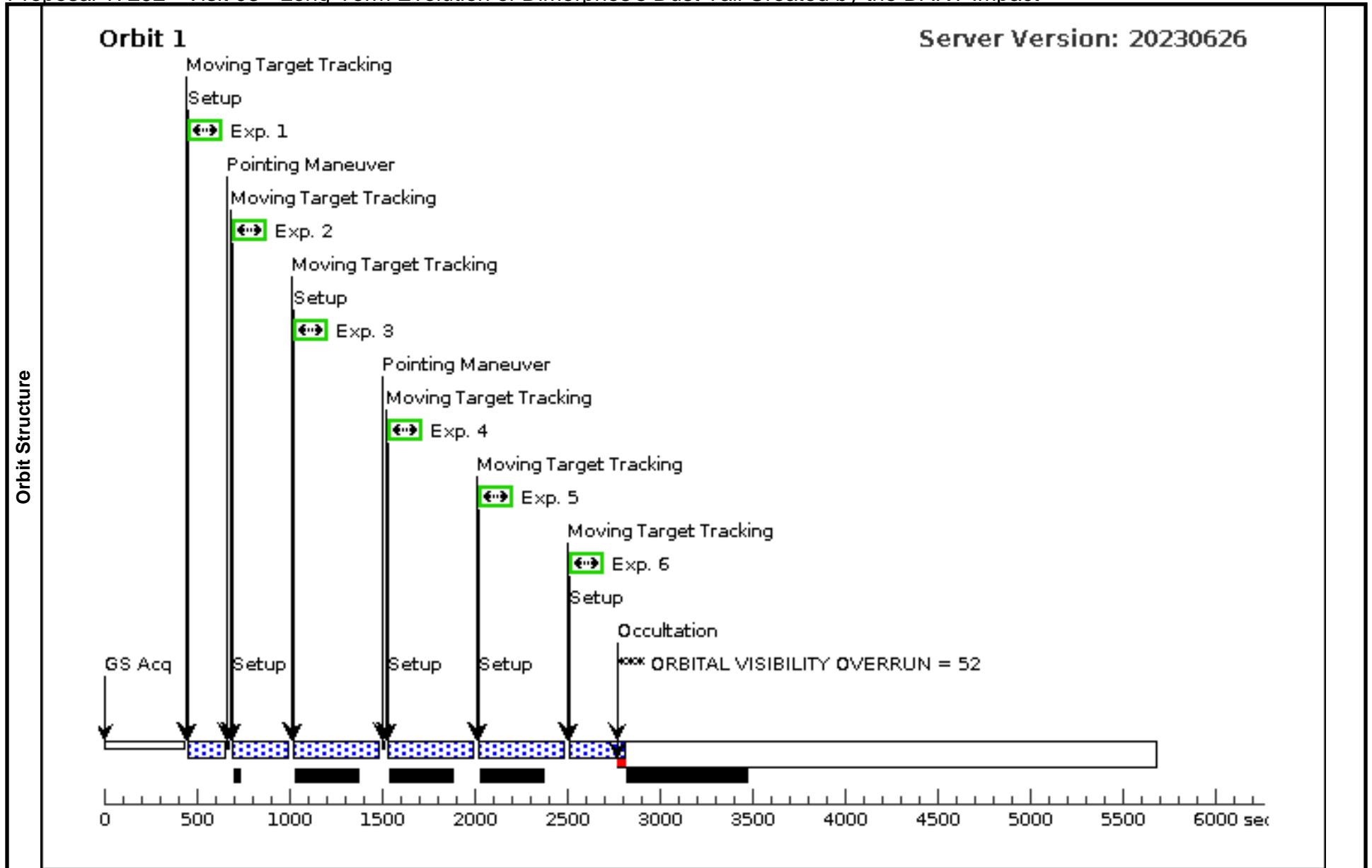
<b>Visit</b>	<b>Proposal 17292, Visit 02, failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 06-FEB-2023:00:00:00 AND 13-FEB-2023:00:00:00 <i>Comments: Originally had timing requirement of AFTER 1 BY 18 to 24 Days.</i>									
	(Visit 02) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 02) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnostics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(1)	DIDYMOS	TYPE=ASTEROID,A=1.64309124934 2108,E=0.3835237757664423,I=3.413 80667080487 .O=72.9955220559403,W=319.557447 3815775,M=6.411907609321696,EQU INOX=J2000,EPOCH=04-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. .A1=0.,A2=-1.053918254001E- 14,A3=0. .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<i>Comments: Description=Asteroid Didymos (65803)</i> <i>Extended=NO</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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F350LP	FLASH=14		Sequence 1-9 Non-Int in Visit 02	30 Secs (30 Secs) [==>]	[1]
	2	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP	FLASH=8	POS TARG 20,0	Sequence 1-9 Non-Int in Visit 02	109 Secs (109 Secs) [==>]	[1]
	3	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP	FLASH=8	POS TARG 20,0; NEW ALIGNMENT	Sequence 1-9 Non-Int in Visit 02	109 Secs (109 Secs) [==>]	[1]
	4	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP	FLASH=8	POS TARG 20,0	Sequence 1-9 Non-Int in Visit 02	109 Secs (109 Secs) [==>]	[1]
	5	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP	FLASH=8	POS TARG 21,-1; NEW ALIGNMENT	Sequence 1-9 Non-Int in Visit 02	109 Secs (109 Secs) [==>]	[1]
	6	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP	FLASH=8	POS TARG 21,-1	Sequence 1-9 Non-Int in Visit 02	109 Secs (109 Secs) [==>]	[1]
	7	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F350LP	FLASH=8	POS TARG 21,-1; NEW ALIGNMENT	Sequence 1-9 Non-Int in Visit 02	109 Secs (109 Secs) [==>]	[1]
	8	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP	FLASH=10	POS TARG 30,0; NEW ALIGNMENT	Sequence 1-9 Non-Int in Visit 02	80 Secs (80 Secs) [==>]	[1]
	9	(1) DIDYMOS	(1) DIDYMOS	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F350LP	FLASH=14	POS TARG 1,1	Sequence 1-9 Non-Int in Visit 02	30 Secs (30 Secs) [==>]	[1]



Proposal 17292 - Visit 03 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

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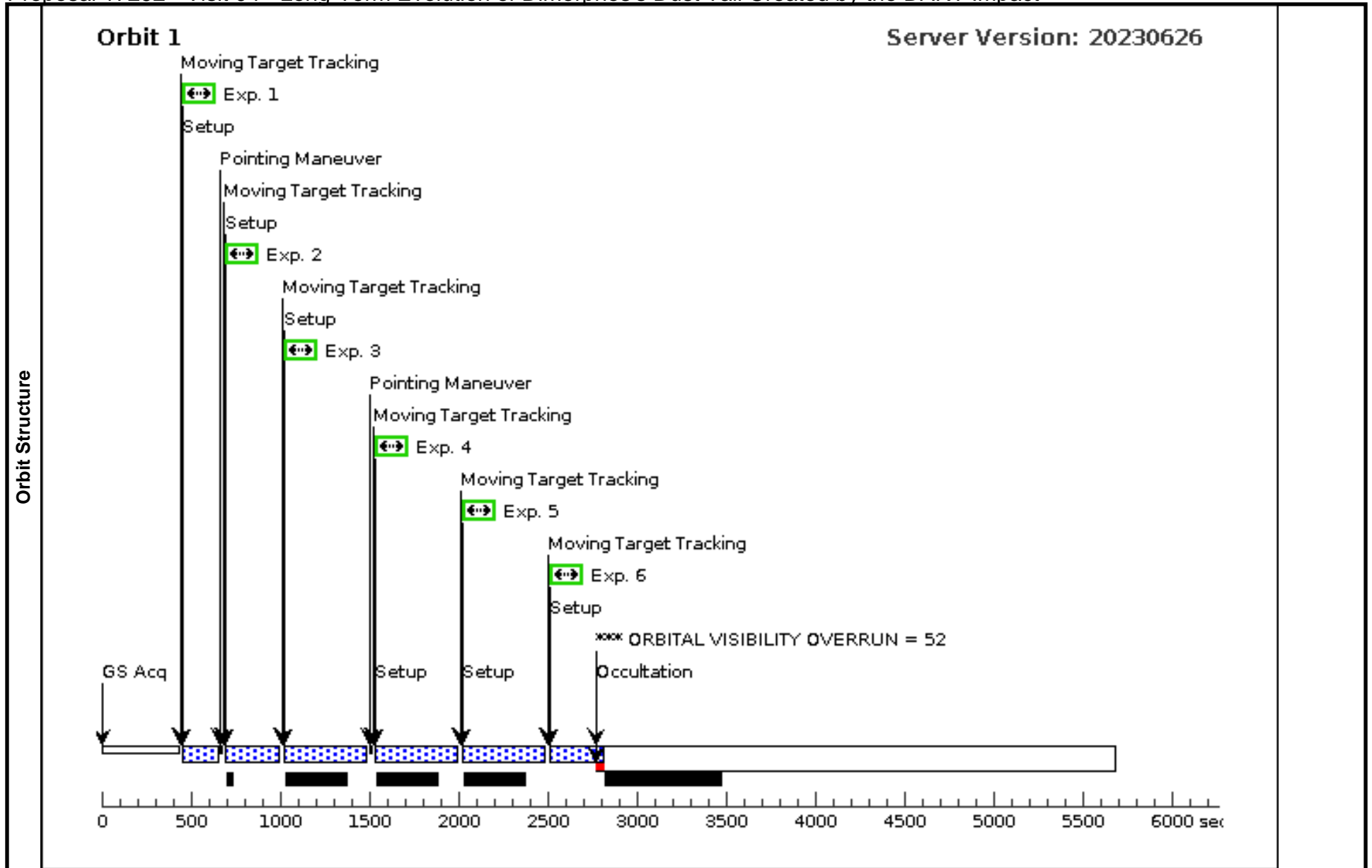
<b>Visit</b>	<b>Proposal 17292, Visit 03, failed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 27-FEB-2023:00:00:00 AND 06-MAR-2023:00:00:00									
	(Visit 03) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 03) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Didymos updated elements Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F350LP	FLASH=7		Sequence 1-6 Non-Int in Visit 03	120 Secs (120 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP	FLASH=3	POS TARG -40,0	Sequence 1-6 Non-Int in Visit 03	175 Secs (175 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 03	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 03	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 03	348 Secs (348 Secs) [==>]	[1]
	6		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP	FLASH=3	POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 03	175 Secs (175 Secs) [==>]	[1]



Proposal 17292 - Visit 04 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

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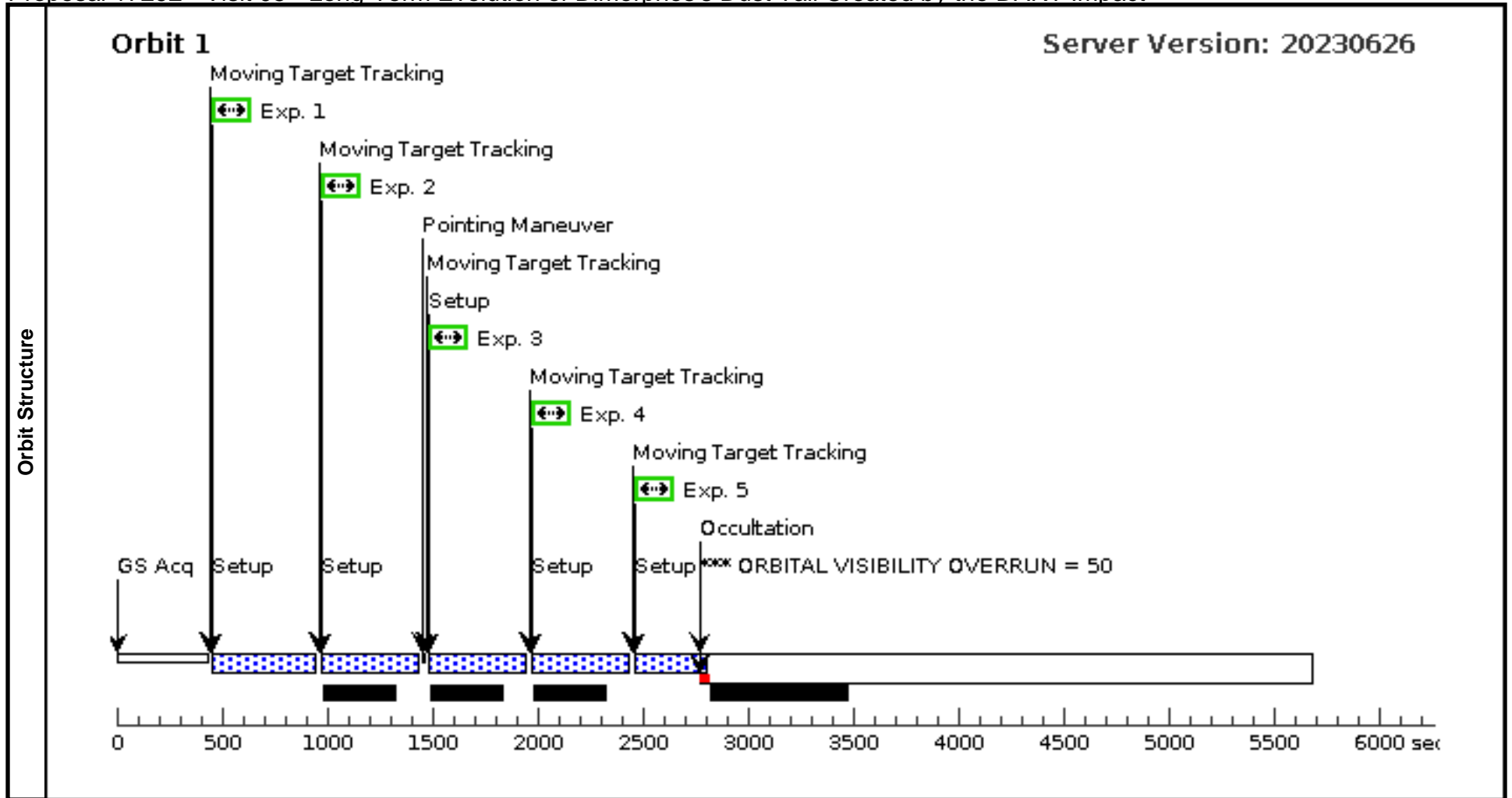
<b>Visit</b>	<b>Proposal 17292, Visit 04, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 20-MAR-2023:00:00:00 AND 27-MAR-2023:00:00:00									
	(Visit 04) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 04) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Didymos updated elements Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F350LP	FLASH=7		Sequence 1-6 Non-Int in Visit 04	120 Secs (120 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP	FLASH=3	POS TARG -40,0	Sequence 1-6 Non-Int in Visit 04	175 Secs (175 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 04	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 04	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 04	348 Secs (348 Secs) [==>]	[1]
	6		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP	FLASH=3	POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-6 Non-Int in Visit 04	175 Secs (175 Secs) [==>]	[1]



Proposal 17292 - Visit 05 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

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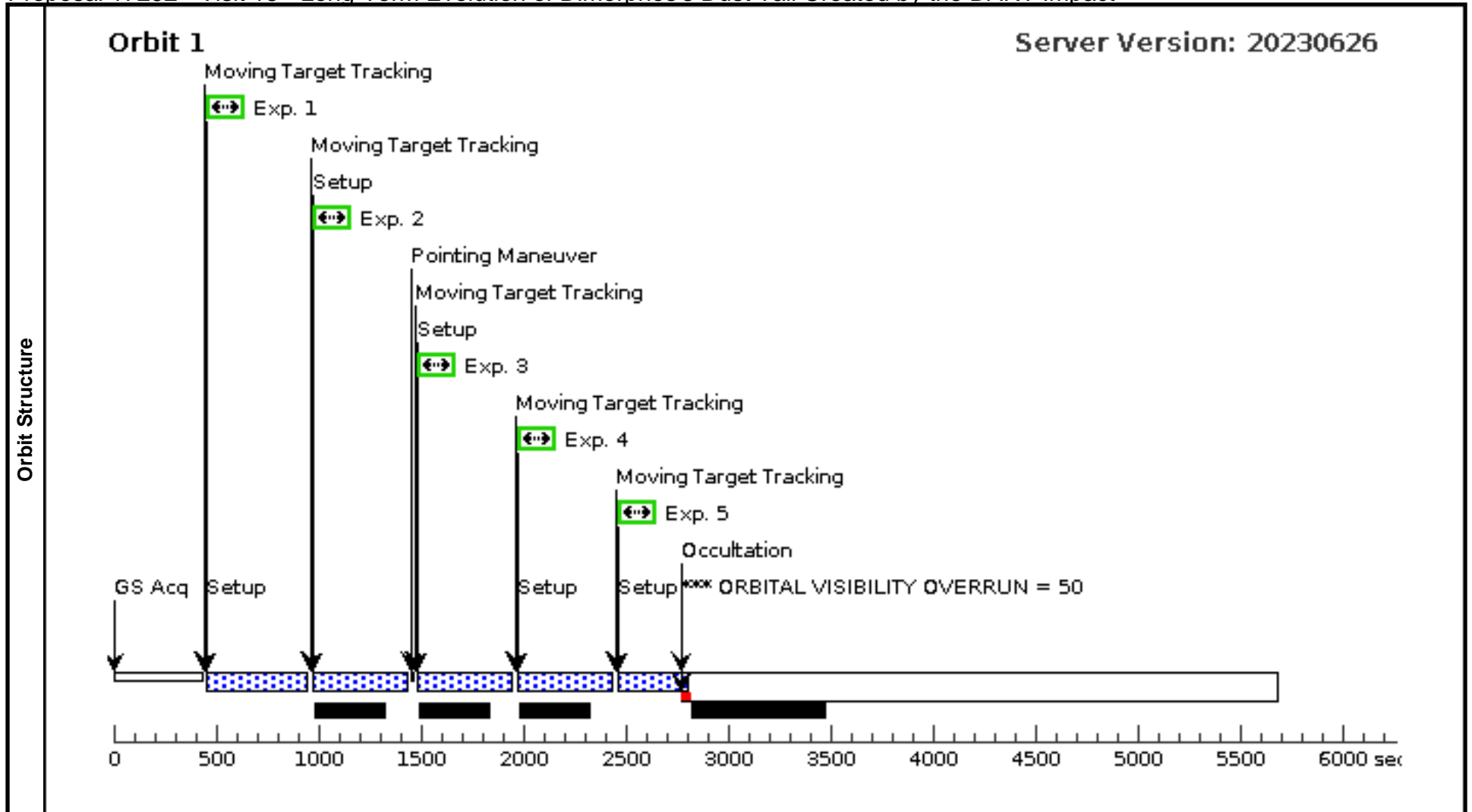
<b>Visit</b>	<b>Proposal 17292, Visit 05, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 10-APR-2023:00:00:00 AND 17-APR-2023:00:00:00									
	(Visit 05) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 05) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Didymos updated elements Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 05	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 05	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 05	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 05	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 05	230 Secs (230 Secs) [==>]	[1]



Proposal 17292 - Visit 15 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

Tue Feb 13 15:01:24 GMT 2024

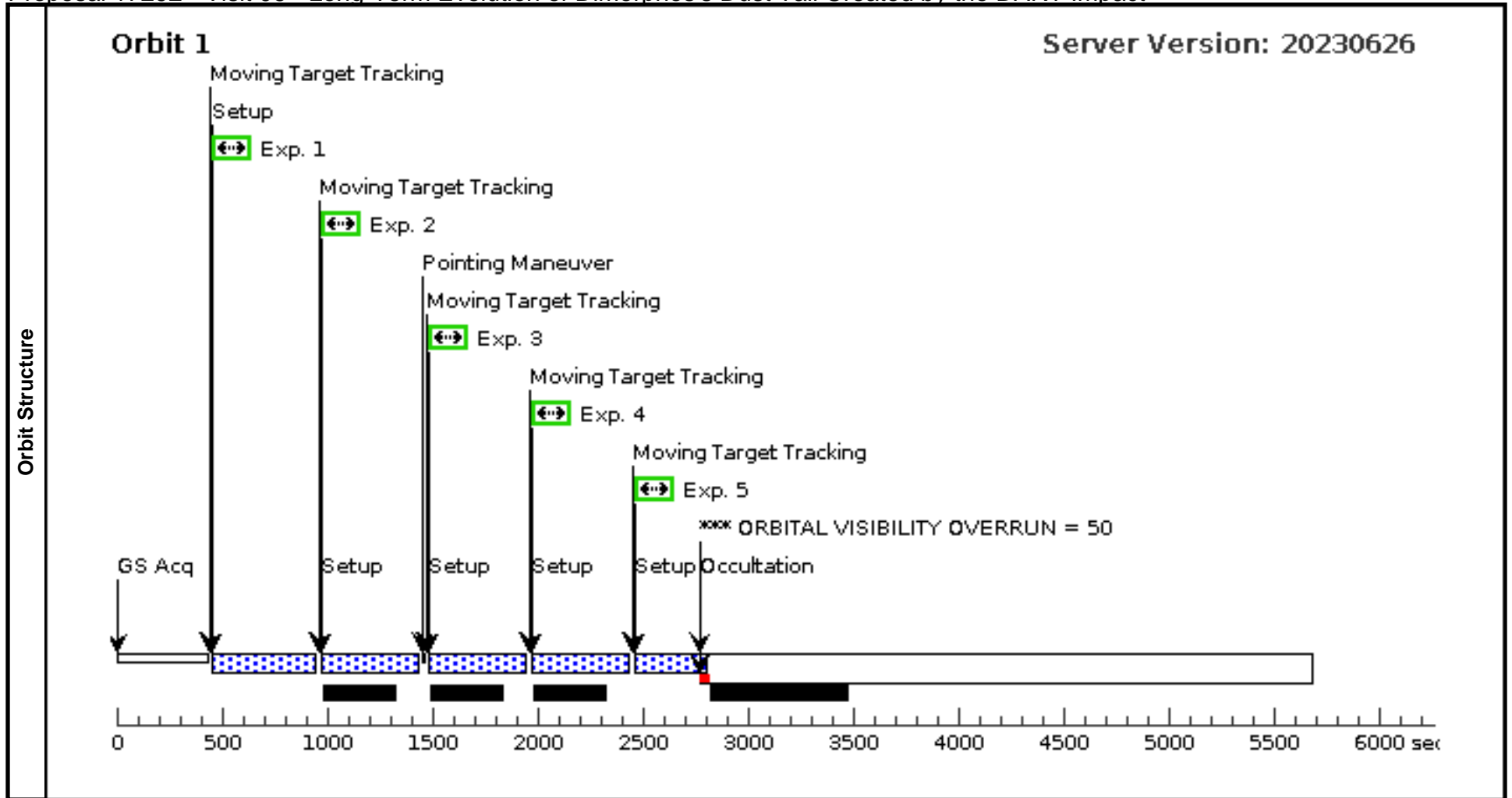
<b>Visit</b>	<p><b>Proposal 17292, Visit 15, completed</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: PCS MODE FINE; AFTER 05 BY 0.05 D TO 1 D; BETWEEN 10-APR-2023:00:00:00 AND 17-APR-2023:00:00:00</p> <p><i>Comments: HOPR 92444 to replace visit 2. To be scheduled with visit 05 to boost the SNR due to the faintness of the tail.</i></p> <p><i>This visit should be executed close to visit 05, but any time within 1 day will be acceptable.</i></p>									
	<p>(Visit 15) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN</p> <p>(Visit 15) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381.E=0.3834558030859849,I=3.414 094955971987 .O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. .A1=0.,A2=-1.061003558789E- 14,A3=0. .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.				EARTH			
<p><i>Comments: Description=Didymos updated elements</i></p> <p><i>Extended=NO</i></p>										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 15	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 15	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 15	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 15	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 15	230 Secs (230 Secs) [==>]	[1]



Proposal 17292 - Visit 06 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

Tue Feb 13 15:01:24 GMT 2024

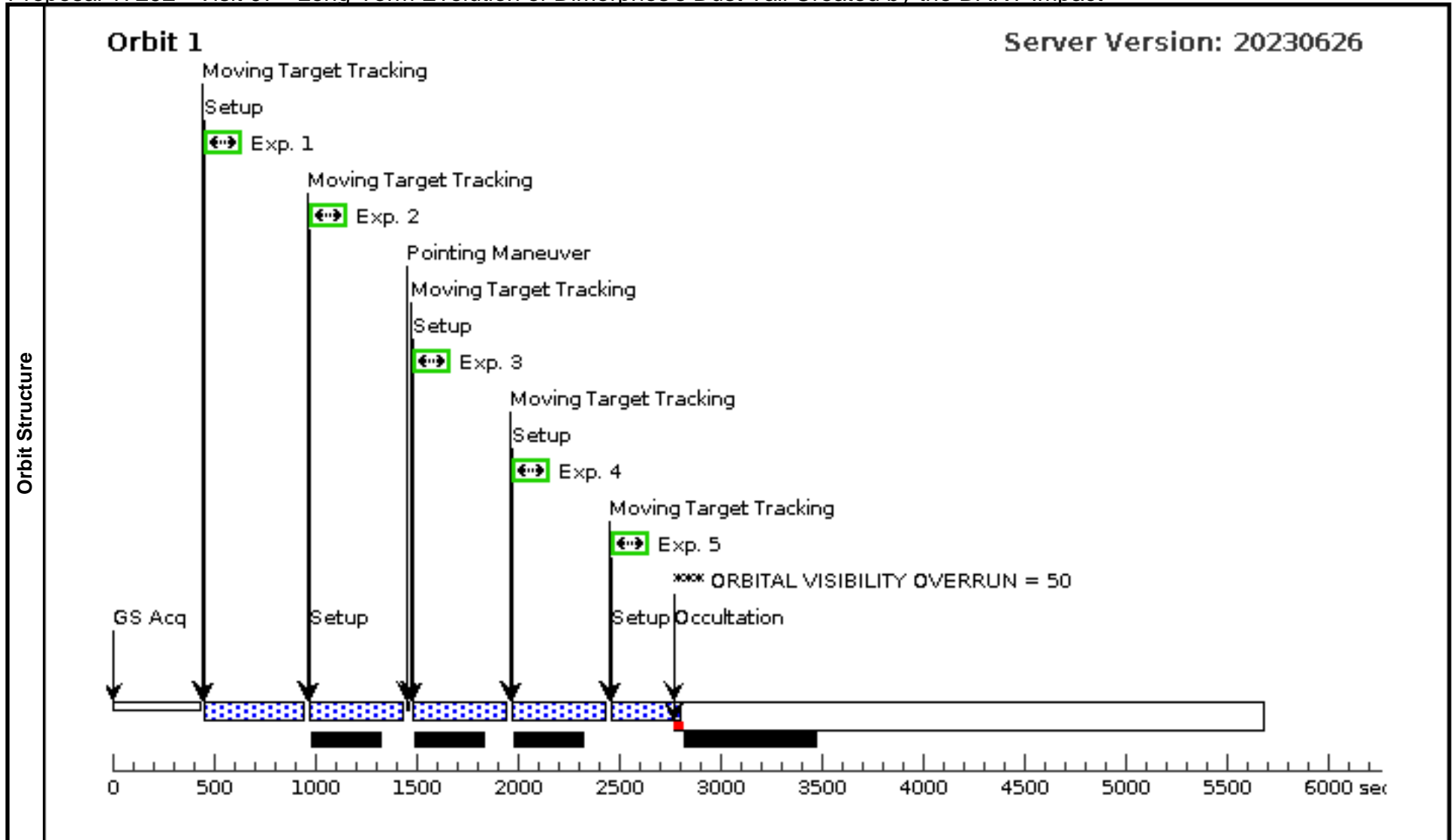
<b>Visit</b>	<b>Proposal 17292, Visit 06, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 28-APR-2023:00:00:00 AND 17-MAY-2023:00:00:00									
	(Visit 06) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 06) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Didymos updated elements Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 06	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 06	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 06	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 06	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 06	230 Secs (230 Secs) [==>]	[1]



Proposal 17292 - Visit 07 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

Tue Feb 13 15:01:24 GMT 2024

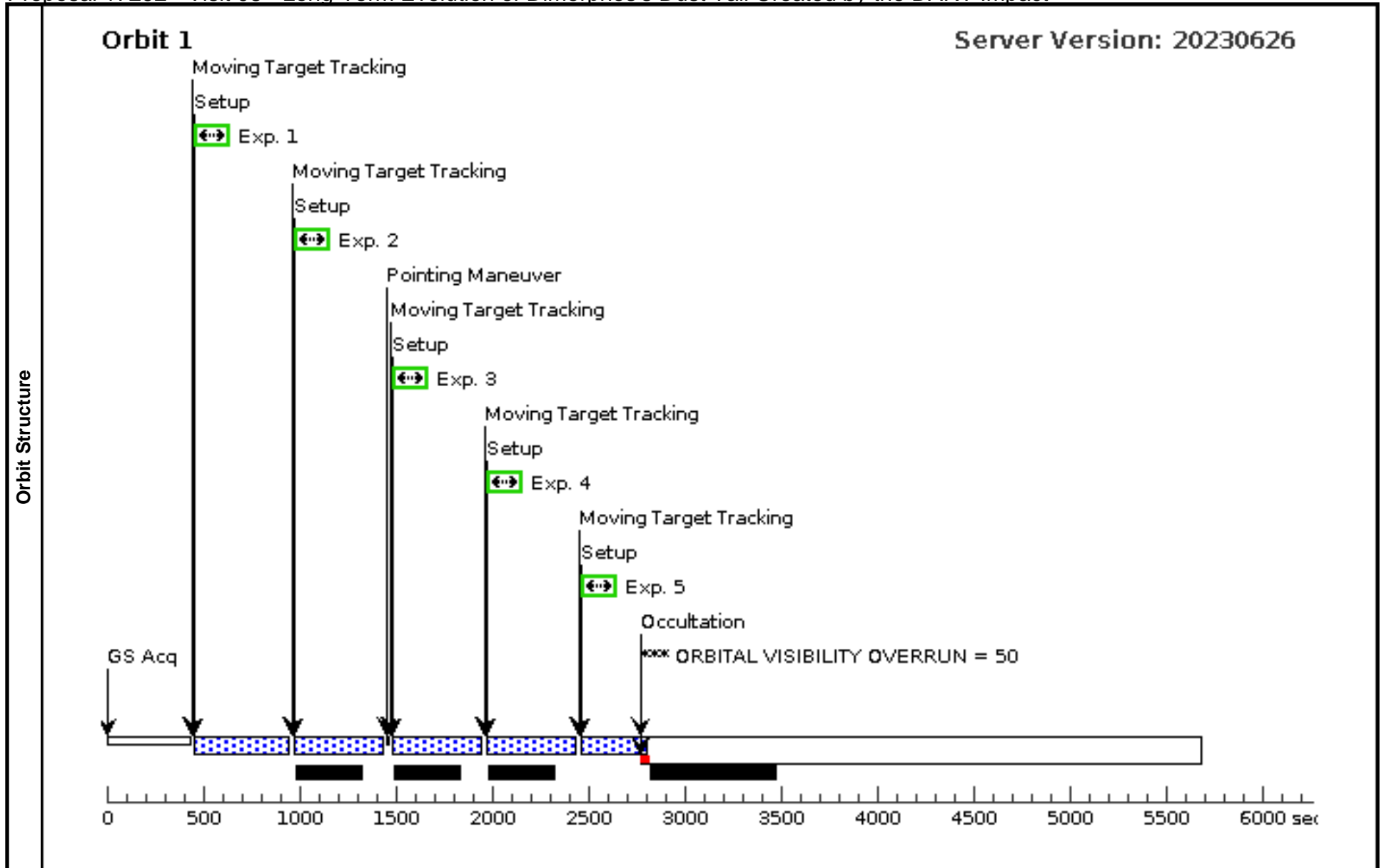
<b>Visit</b>	<b>Proposal 17292, Visit 07, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 01-JUN-2023:00:00:00 AND 08-JUN-2023:00:00:00									
	(Visit 07) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 07) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Didymos updated elements Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 07	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 07	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 07	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 07	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 07	230 Secs (230 Secs) [==>]	[1]



Proposal 17292 - Visit 08 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

Tue Feb 13 15:01:24 GMT 2024

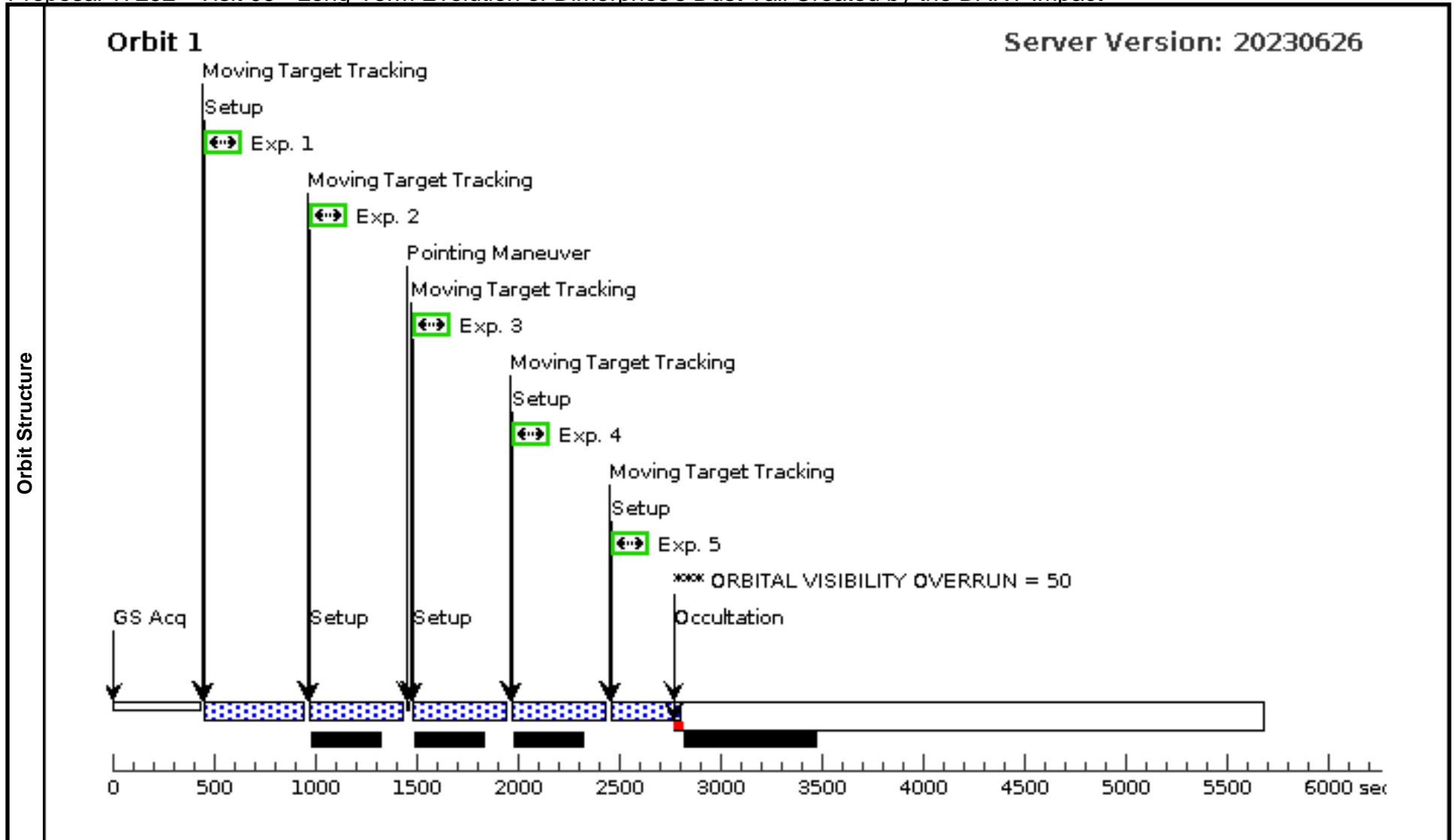
<b>Visit</b>	<b>Proposal 17292, Visit 08, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 01-JUN-2023:00:00:00 AND 08-JUN-2023:00:00:00									
	(Visit 08) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 08) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Didymos updated elements Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 08	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 08	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 08	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 08	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 08	230 Secs (230 Secs) [==>]	[1]



Proposal 17292 - Visit 09 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

Tue Feb 13 15:01:24 GMT 2024

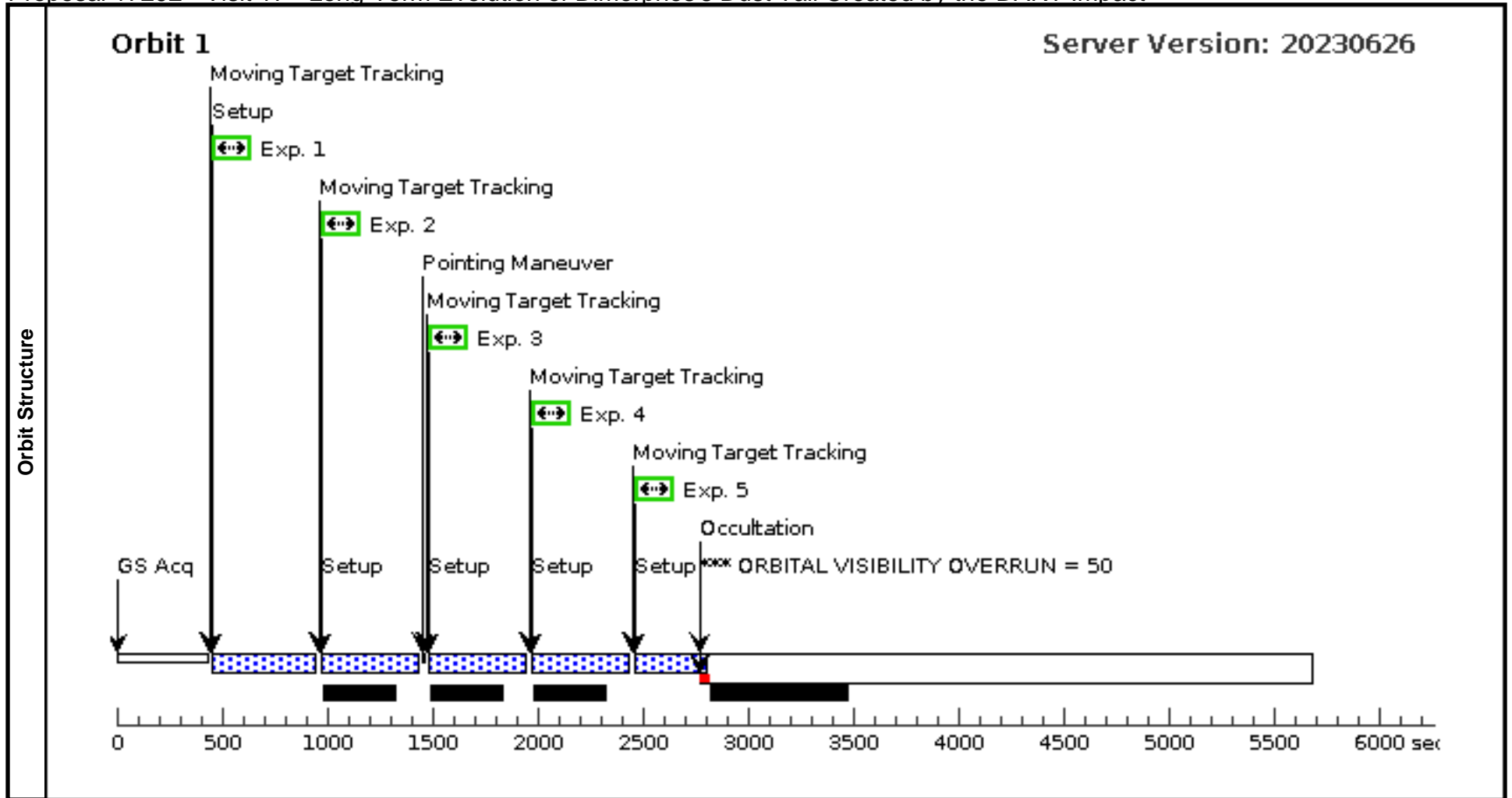
<b>Visit</b>	<b>Proposal 17292, Visit 09, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 01-JUN-2023:00:00:00 AND 08-JUN-2023:00:00:00									
	(Visit 09) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 09) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
Comments: Description=Didymos updated elements Extended=NO										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 09	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 09	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 09	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 09	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 09	230 Secs (230 Secs) [==>]	[1]



Proposal 17292 - Visit 17 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

Tue Feb 13 15:01:24 GMT 2024

<b>Visit</b>	<b>Proposal 17292, Visit 17, completed</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: PCS MODE FINE; BETWEEN 01-JUN-2023:00:00:00 AND 08-JUN-2023:00:00:00 <i>Comments: copy of visit 09 for HOPR on visit 16</i>									
	(Visit 17) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN (Visit 17) Informational (Form): The Visit Planner and Spike may produce different schedulability results.									
<b>Diagnostics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381,E=0.3834558030859849,I=3.414 094955971987 ,O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. ,A1=0.,A2=-1.061003558789E- 14,A3=0. ,ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.					EARTH		
<i>Comments: Description=Didymos updated elements Extended=NO</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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 17	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 17	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 17	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 17	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 17	230 Secs (230 Secs) [==>]	[1]



Proposal 17292 - Visit 16 - Long-Term Evolution of Dimorphos's Dust Tail Created by the DART Impact

Tue Feb 13 15:01:24 GMT 2024

<b>Visit</b>	<p><b>Proposal 17292, Visit 16, failed</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: PCS MODE FINE; BETWEEN 28-APR-2023:00:00:00 AND 17-MAY-2023:00:00:00</p> <p><i>Comments: HOPR 92444 to replace visit 2. To be scheduled with visit 06 to boost the SNR due to the faintness of the tail.</i></p> <p><i>This visit should be executed close to visit 06, but any time within 1 day will be acceptable.</i></p>									
	<p>(Visit 16) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN</p> <p>(Visit 16) Informational (Form): The Visit Planner and Spike may produce different schedulability results.</p>									
<b>Diagnosics</b>										
<b>Solar System Targets</b>	<b>#</b>	<b>Name</b>	<b>Level 1</b>	<b>Level 2</b>	<b>Level 3</b>	<b>Window</b>	<b>Ephem Center</b>			
	(2)	DIDYMOS-UPDATE	TYPE=ASTEROID,A=1.64290998798 9381.E=0.3834558030859849,I=3.414 094955971987 .O=72.99370205487129,W=319.55792 47099636,M=10.62609742217431,EQ UINOX=J2000,EPOCH=13-NOV- 2022:12:00:00,EpochTimeScale=TDB, R0=1. .A1=0.,A2=-1.061003558789E- 14,A3=0. .ALN=1.,NM=2.,NN=0.,NK=0.,AMR AT=0.				EARTH			
<p><i>Comments: Description=Didymos updated elements</i></p> <p><i>Extended=NO</i></p>										
<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 (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0	Sequence 1-5 Non-Int in Visit 16	348 Secs (348 Secs) [==>]	[1]
	2		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -40,0; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 16	348 Secs (348 Secs) [==>]	[1]
	3		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 16	348 Secs (348 Secs) [==>]	[1]
	4		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 16	348 Secs (348 Secs) [==>]	[1]
	5		(2) DIDYMOS-UPD ATE	WFC3/UVIS, ACCUM, UVIS2-FIX	F350LP		POS TARG -41,-2; NEW ALIGNMENT	Sequence 1-5 Non-Int in Visit 16	230 Secs (230 Secs) [==>]	[1]

