14223 - The Planck Dusty Gravitationally Enhanced subMillimeter Sources (GEMS)

Cycle: 23, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
11	(1) PLCK-G045.1+61.1	WFC3/IR	2	21-Jul-2015 22:09:34.0	yes
12	(2) PLCK-G080.2+49.8	WFC3/IR	2	21-Jul-2015 22:09:38.0	yes
13	(3) PLCK-G092.5+42.9P	WFC3/IR	2	21-Jul-2015 22:09:42.0	yes
14	(4) PLCK-G145.2+50.9	WFC3/IR	2	21-Jul-2015 22:09:46.0	yes
15	(5) PLCK-G165.7+67.0	WFC3/IR	2	21-Jul-2015 22:09:50.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
16	(6) PLCK-G244.8+54.9	WFC3/IR	2	21-Jul-2015 22:09:53.0	yes

12 Total Orbits Used

ABSTRACT

The brightest, strongly lensed high-redshift galaxies are veritable gems to study intense star formation in the early Universe. How do the high and irregular "clumpy" stellar and gas mass surface densities, strong radiation fields, and high turbulence regulate the rapid growth of these galaxies? We will use HST/WFC3 to investigate the stellar component of 6 of the brightest high-redshift sub-millimeter galaxies on the sky, which were recently discovered with the Planck all-sky survey. All are giant arcs or partial Einstein rings with angular sizes up to 17" in shallow CFHT K-band or Spitzer/IRAC imaging. FIR luminosities are 10^13-14 L_sun, with dust SEDs strongly dominated by intense star formation near the maximum possible rates ("maximal starbursts"). All have spectroscopic redshifts z=2.2-3.6 and magnification factors >/=20. We already have multiwavelength data sets to characterize their gas and dust column densities and kinematics, and propose here to acquire deep, high-resolution rest-frame optical imaging to study the stellar populations and morphologies. With WFC3 imaging in F110W & F160W we will:

(1) constrain the stellar morphologies, ages, and mass-to-light ratios

(2) Identify clumps and measure their properties to test several clump formation scenarios

(3) Enhance our on-going lens modeling through the most accurate positions, morphologies and colors

Only the brightest of the arc clumps are visible from the ground in the NIR. To register the flux along the full extent of the arcs, and importantly to probe individual star forming regions of the size of 30 Dor at z~2-3 in the brightest high-z sub-mm galaxies requires HST.

OBSERVING DESCRIPTION

We will image the six strongly-lensed submillimeter bright galaxies in the target list for one orbit each in F110W and F160W.

Visit

Proposal 14223, Agate arc (11) Wed Jul 22 02:09:56 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PLCK-G045.1+61.1	RA: 15 02 36.0400 (225.6501667d) Dec: +29 20 51.00 (29.34750d) Equinox: J2000		V=(?) 22.6 H(AB)	Reference Frame: ICRS

Comments: Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
2		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
3		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
4		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
5		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
6		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG -.203,0.303	Sequence 1-8 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
7		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG -0.203,0.303	Sequence 1-8 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
8		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
9		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
10		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
11		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
12		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
13		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
14		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Agate arc (11)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
15		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
								[==>]	***[2]***
16		(1) PLCK-G045.1+61.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Agate arc (11)	302.938471 Secs (302.938 Secs)	
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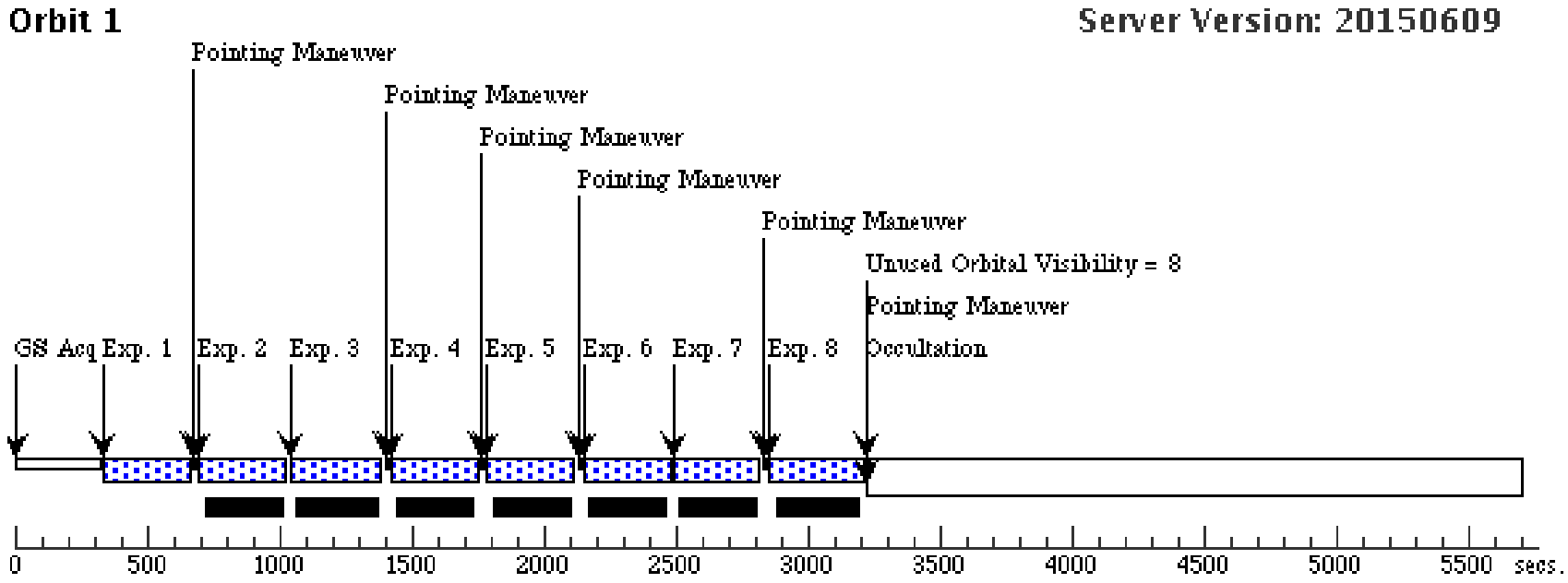
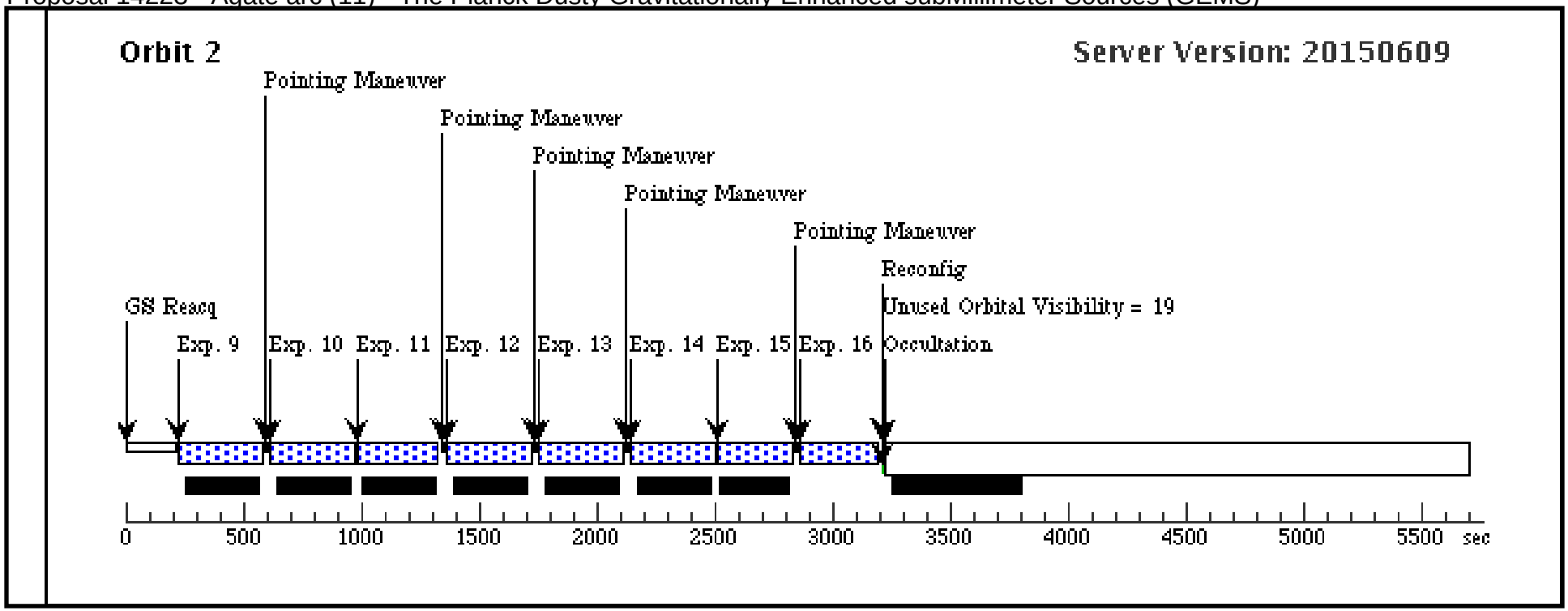
Orbit Structure

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Exp. 11
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Exp. 14
Exp. 15
Exp. 16
Occultation
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1500
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3500
4000
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5500
sec

Visit

Proposal 14223, Turquoise arc (12) Wed Jul 22 02:09:56 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Fixed Targets

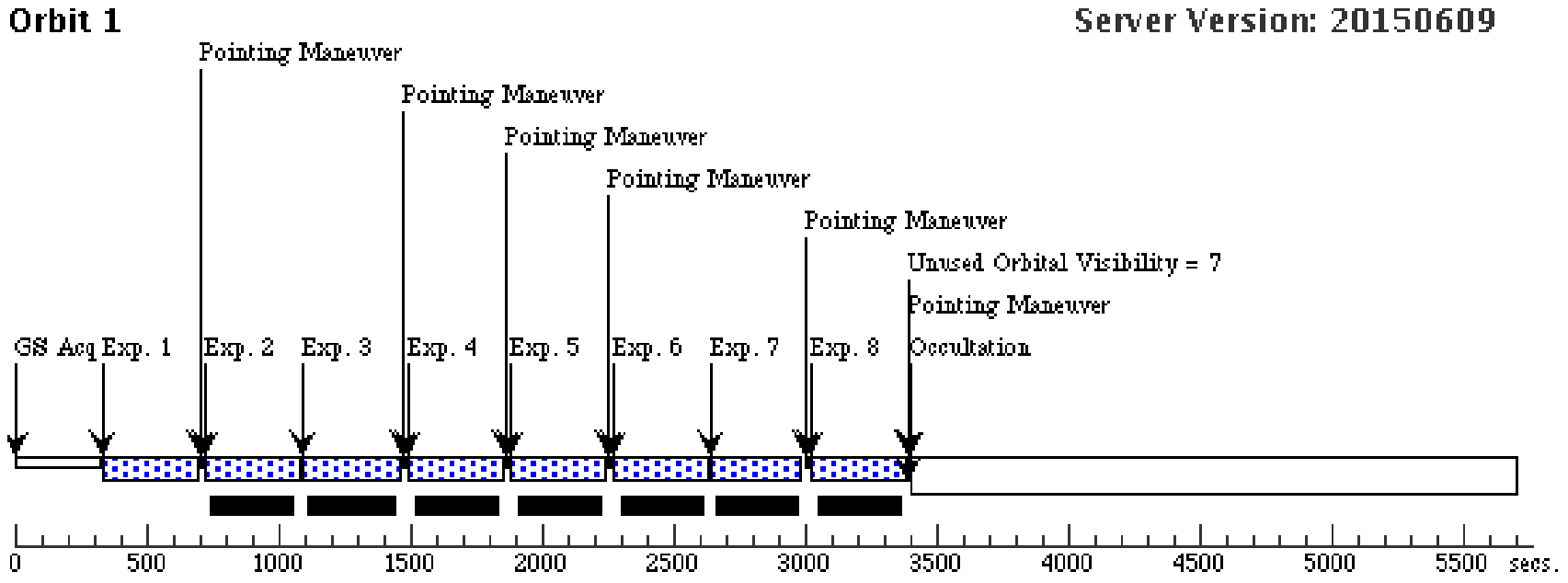
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	PLCK-G080.2+49.8	RA: 15 44 32.4000 (236.1350000d) Dec: +50 23 46.00 (50.39611d) Equinox: J2000		V=(?) 22.5 (H AB)	Reference Frame: ICRS

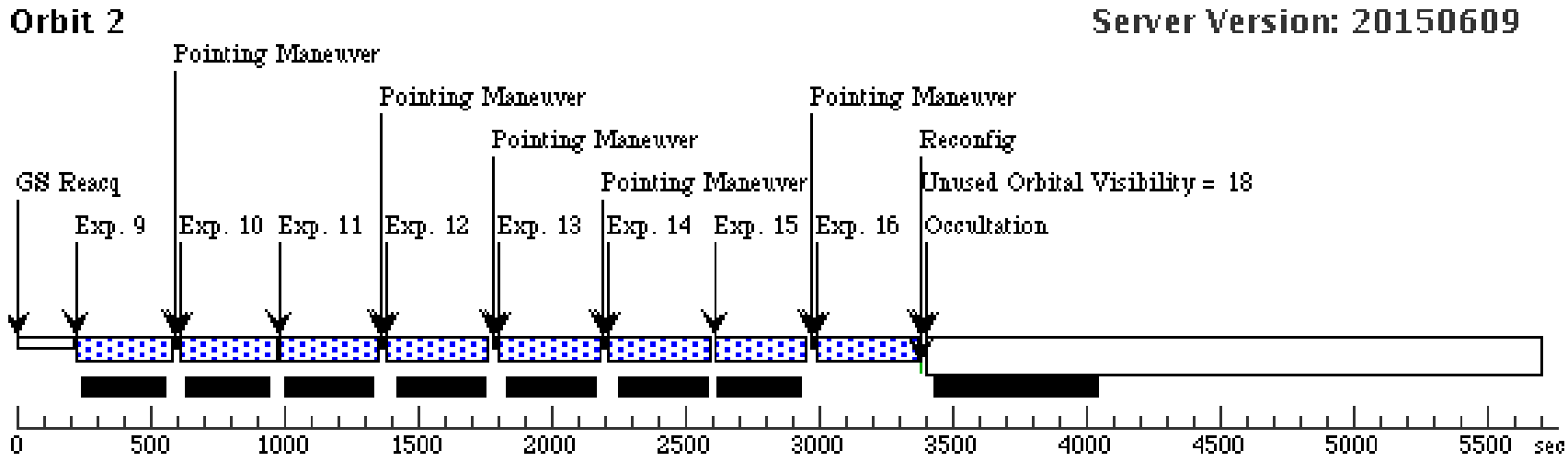
Comments: Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
2		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
3		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Turquoise arc (12)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
4		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
5		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
6		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG -.203,0.303	Sequence 1-8 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
7		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG -0.203,0.303	Sequence 1-8 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
8		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
9		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
10		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
11		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Turquoise arc (12)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
12		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Turquoise arc (12)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
13		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Turquoise arc (12)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
14		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Turquoise arc (12)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
15		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Turquoise arc (12)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
16		(2) PLCK-G080.2+49.8	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Turquoise arc (12)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***

Orbit Structure





Visit

Proposal 14223, Garnet arc (13) Wed Jul 22 02:09:57 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Fixed Targets

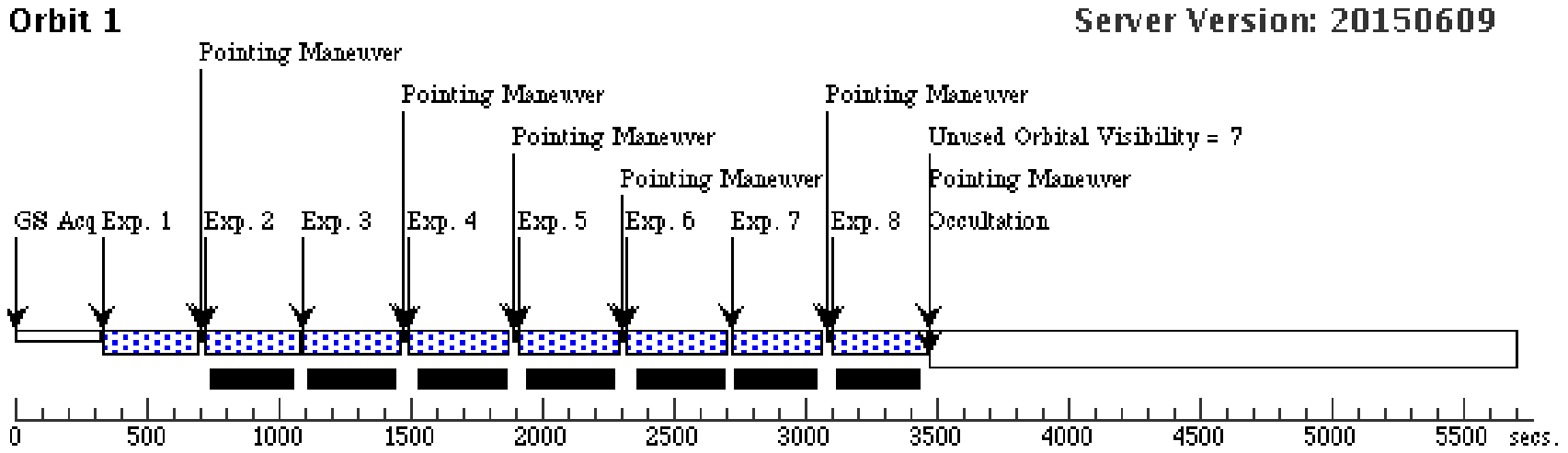
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	PLCK-G092.5+42.9P	RA: 16 09 17.7600 (242.3240000d) Dec: +60 45 21.00 (60.75583d) Equinox: J2000		V=(?) 22.8 (H AB)	Reference Frame: ICRS

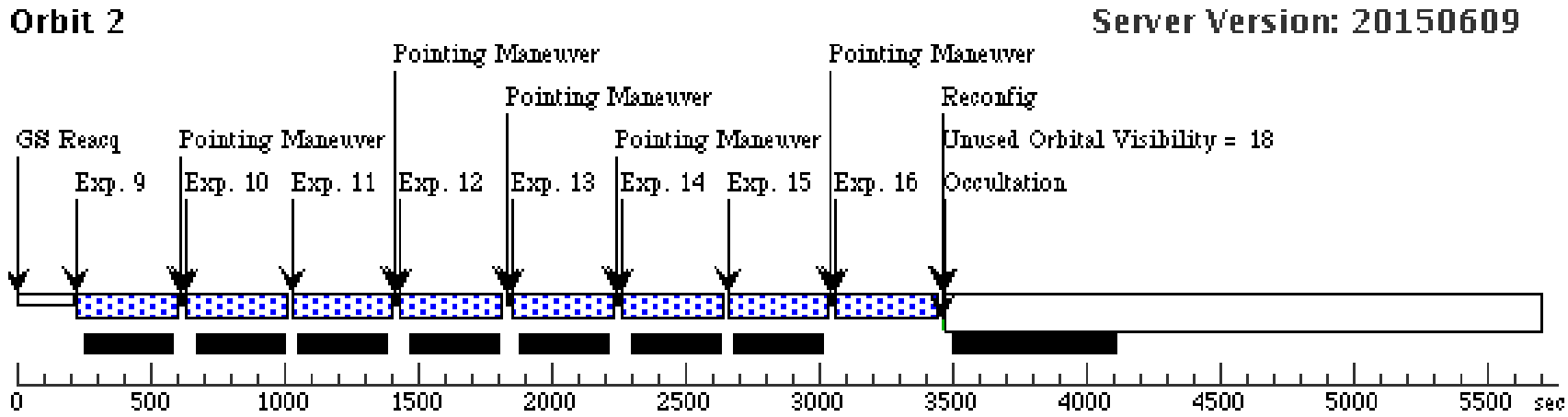
Comments: Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Garnet arc (13)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
2		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Garnet arc (13)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
3		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
4		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
5		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
6		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG -.203,0.303	Sequence 1-8 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
7		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG -0.203,0.303	Sequence 1-8 Non-Int in Garnet arc (13)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
8		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Garnet arc (13)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
9		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
10		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
11		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
12		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
13		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
14		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
15		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
16		(3) PLCK-G092.5+42.9P	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Garnet arc (13)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***

Orbit Structure





Visit

Proposal 14223, Malachite arc (14) Wed Jul 22 02:09:57 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Fixed Targets

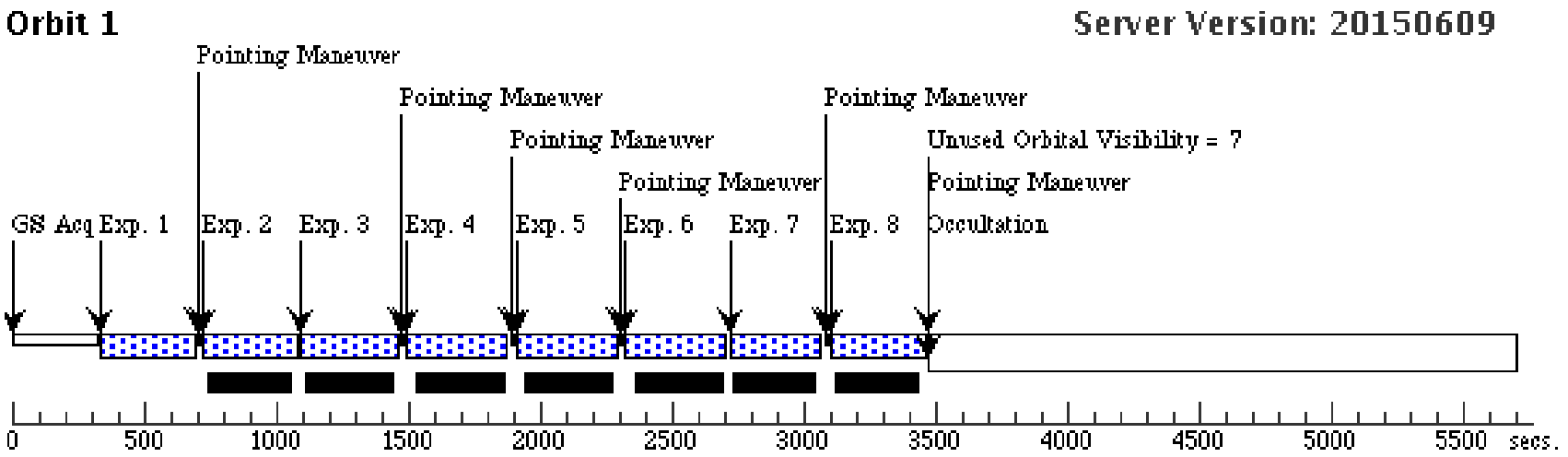
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	PLCK-G145.2+50.9	RA: 10 53 22.5600 (163.3440000d) Dec: +60 51 49.00 (60.86361d) Equinox: J2000		V=(?) 22.6 (H AB)	Reference Frame: ICRS

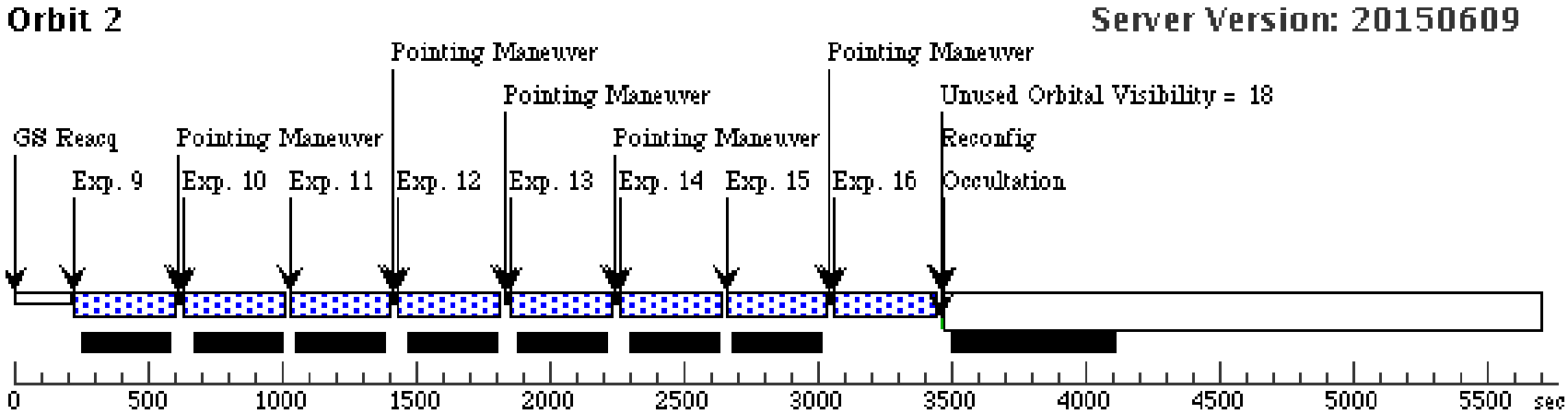
Comments: Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Malachite arc (14)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
2		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Malachite arc (14)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
3		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
4		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
5		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
6		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG -.203,0.303	Sequence 1-8 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[1]***
7		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG -0.203,0.303	Sequence 1-8 Non-Int in Malachite arc (14)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
8		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Malachite arc (14)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
9		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
10		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
11		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
12		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
13		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
14		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
15		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
16		(4) PLCK-G145.2+50.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Malachite arc (14)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***

Orbit Structure





Visit

Proposal 14223, Peridot arc (15) Wed Jul 22 02:09:57 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Fixed Targets

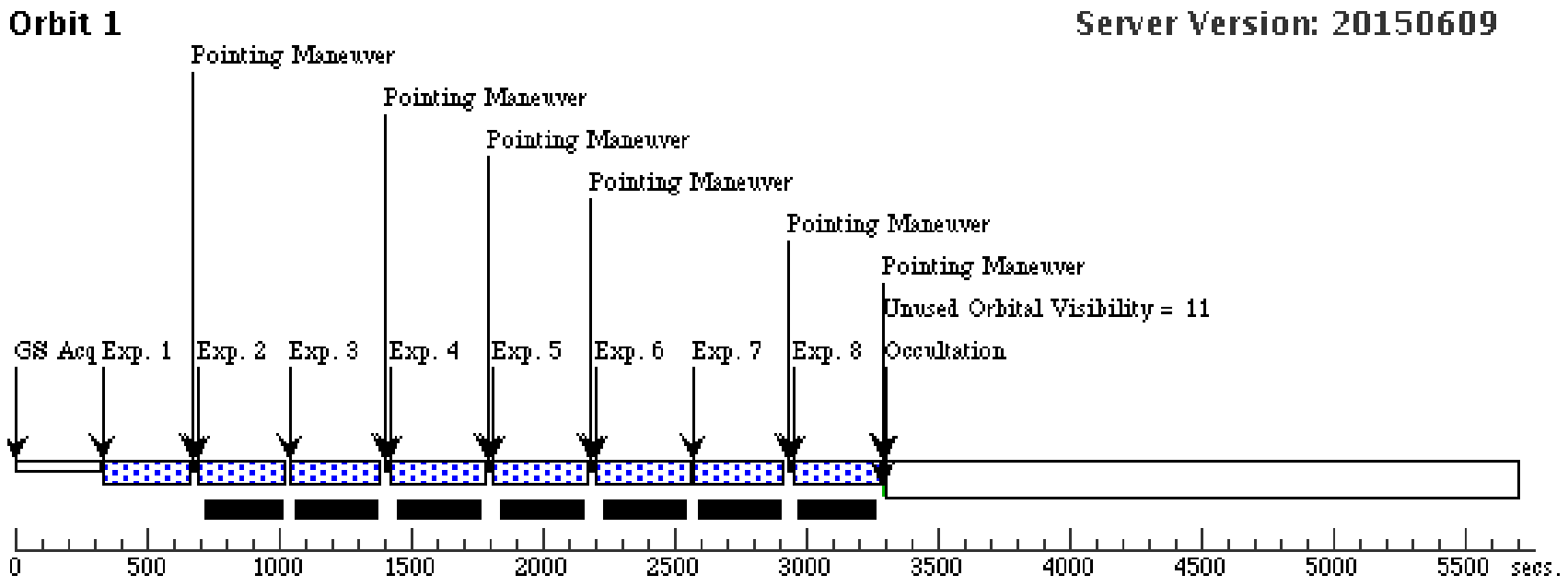
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	PLCK-G165.7+67.0	RA: 11 27 14.6000 (171.8108333d) Dec: +42 28 25.00 (42.47361d) Equinox: J2000		V=(?) 23.1 (H AB)	Reference Frame: ICRS

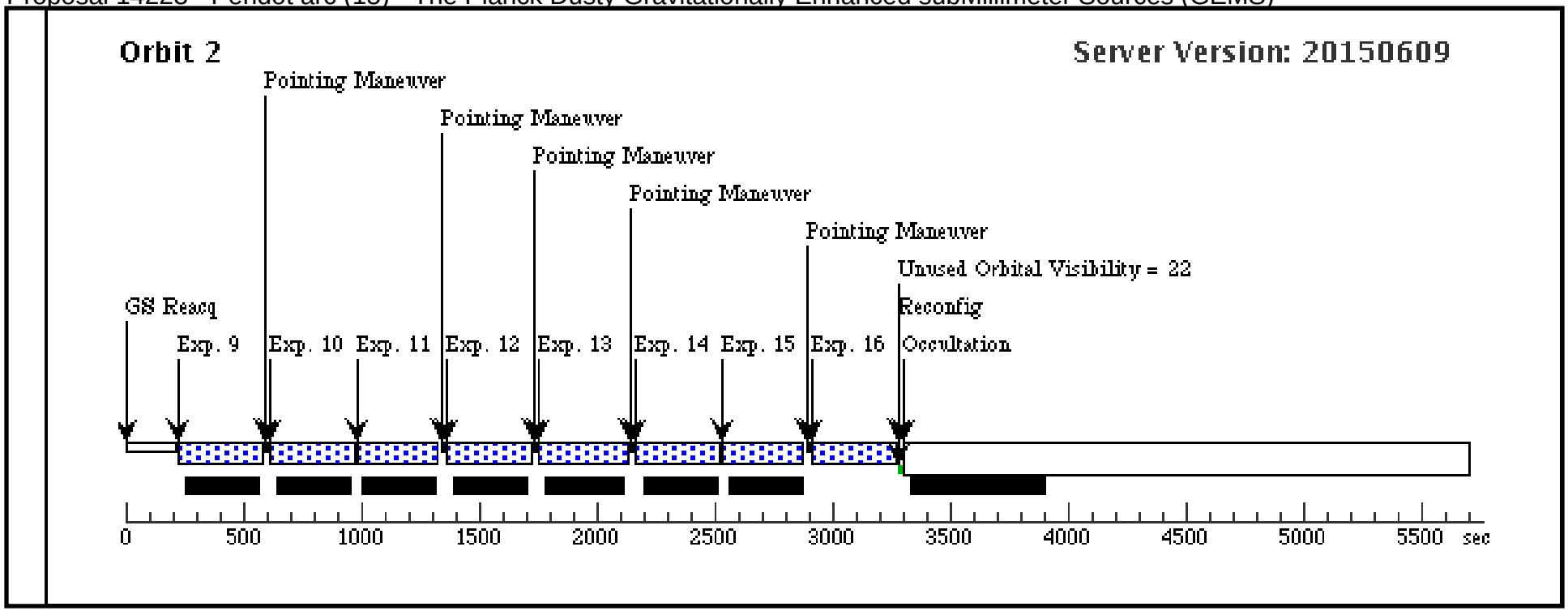
Comments: Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Peridot arc (15)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
2		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Peridot arc (15)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
3		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
4		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
5		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
6		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG -.203,0.303	Sequence 1-8 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
7		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG -0.203,0.303	Sequence 1-8 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[1]***
8		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Peridot arc (15)	302.938471 Secs (302.938 Secs)	
								[==>]	***[1]***
9		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
10		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
11		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
12		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
13		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=15; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Peridot arc (15)	352.939501 Secs (352.94 Secs)	
								[==>]	***[2]***
14		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
15		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***
16		(5) PLCK-G165.7+67.0	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Peridot arc (15)	327.938986 Secs (327.939 Secs)	
								[==>]	***[2]***

Orbit Structure

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GS Reacq
Reconfig
Exp. 9
Exp. 10
Exp. 11
Exp. 12
Exp. 13
Exp. 14
Exp. 15
Exp. 16
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14223, Amethest arc (16) Wed Jul 22 02:09:57 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Fixed Targets

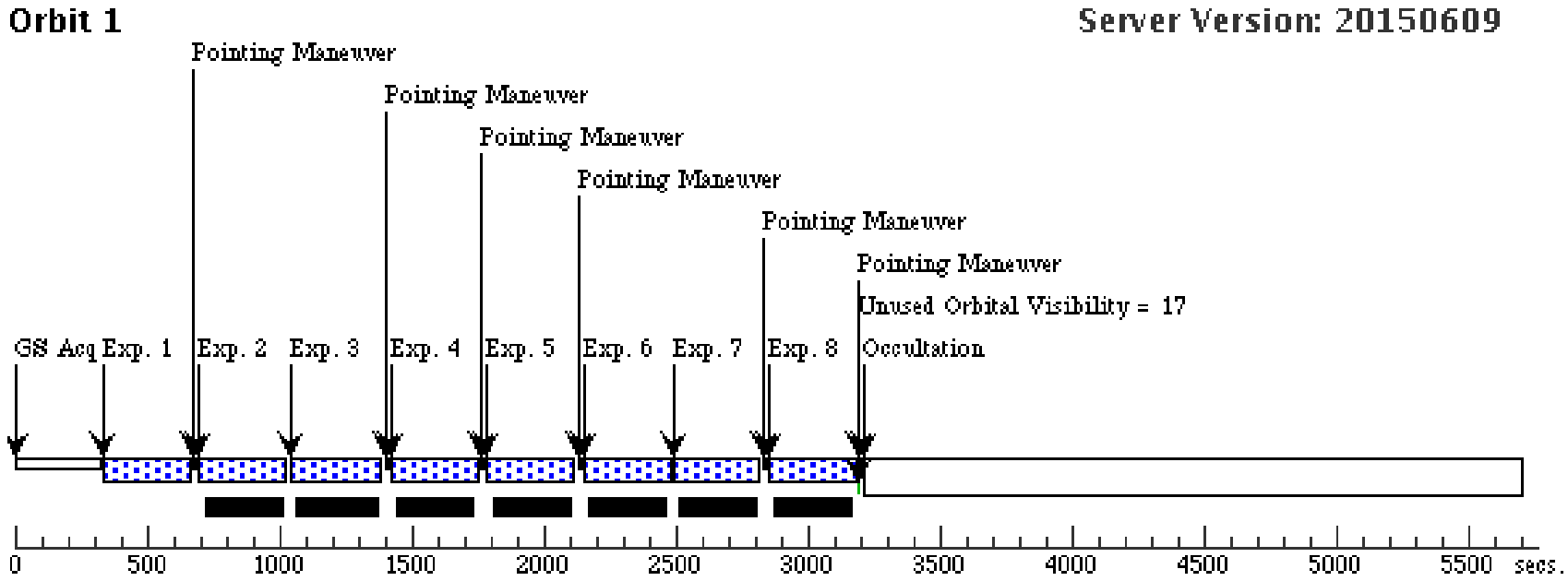
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PLCK-G244.8+54.9	RA: 10 53 53.0400 (163.4710000d) Dec: +05 56 21.00 (5.93917d) Equinox: J2000		V=(?) 25.3 (H AB)	Reference Frame: ICRS

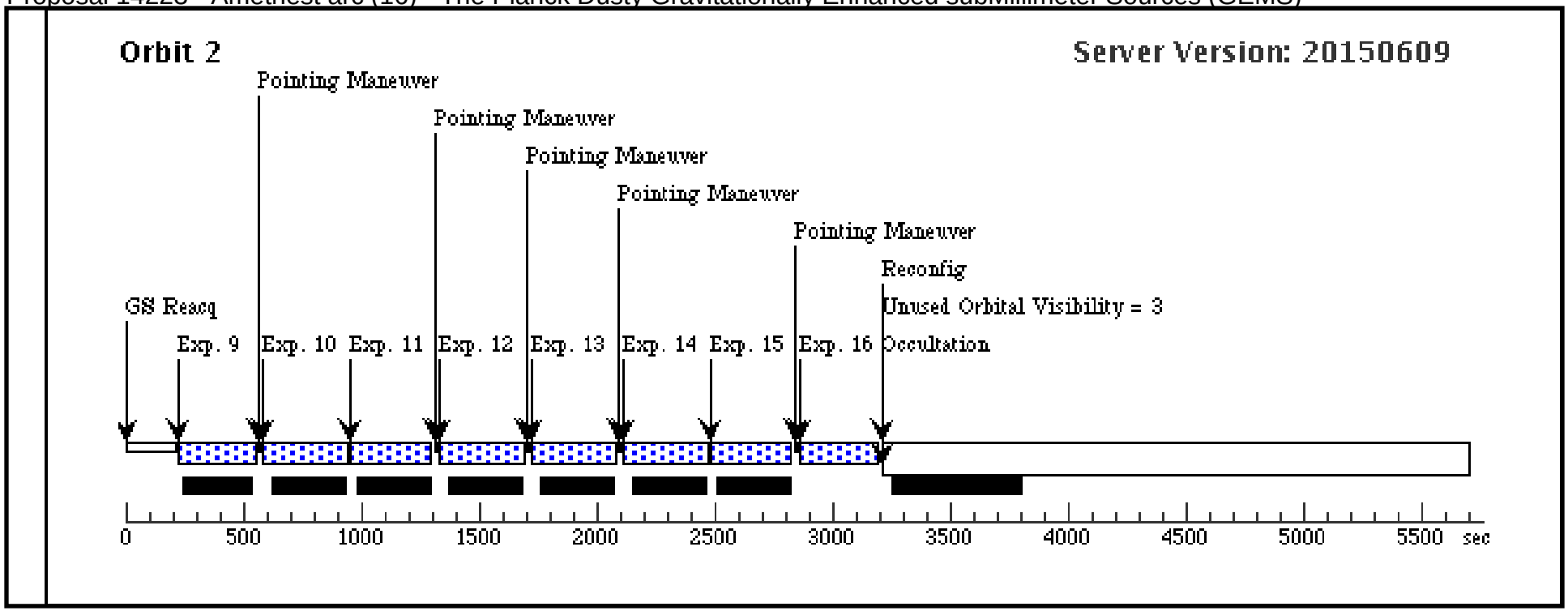
Comments: Extended=YES

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[1]*
2		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[1]*
3		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 0.542,0.182	Sequence 1-8 Non-Int in Amethest arc (16)	327.938986 Secs (327.939 Secs) *[==>]*	*[1]*
4		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[1]*
5		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.0,0.0	Sequence 1-8 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[1]*
6		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG -.203,0.303	Sequence 1-8 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[1]*
7		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG -0.203,0.303	Sequence 1-8 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[1]*
8		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 0.339,0.485	Sequence 1-8 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[1]*
9		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[2]*
10		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Amethest arc (16)	327.938986 Secs (327.939 Secs) *[==>]*	*[2]*
11		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.86,3.46	Sequence 9-16 Non-Int in Amethest arc (16)	327.938986 Secs (327.939 Secs) *[==>]*	*[2]*
12		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Amethest arc (16)	327.938986 Secs (327.939 Secs) *[==>]*	*[2]*
13		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 4.199,3.945	Sequence 9-16 Non-Int in Amethest arc (16)	327.938986 Secs (327.939 Secs) *[==>]*	*[2]*
14		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F110W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Amethest arc (16)	327.938986 Secs (327.939 Secs) *[==>]*	*[2]*
15		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=14; SAMP-SEQ=SPARS25	POS TARG 3.657,3.763	Sequence 9-16 Non-Int in Amethest arc (16)	327.938986 Secs (327.939 Secs) *[==>]*	*[2]*
16		(6) PLCK-G244.8+54.9	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=13; SAMP-SEQ=SPARS25	POS TARG 4.402,3.642	Sequence 9-16 Non-Int in Amethest arc (16)	302.938471 Secs (302.938 Secs) *[==>]*	*[2]*

Orbit Structure

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Reconfig
GS Reacq
Unused Orbital Visibility = 3
Exp. 9
Exp. 10
Exp. 11
Exp. 12
Exp. 13
Exp. 14
Exp. 15
Exp. 16
Occultation
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sec