



13418 - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Cycle: 21, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Prof. Daniel Apai (PI) (Contact)	University of Arizona	apai@arizona.edu
Dr. Glenn Schneider (CoI)	University of Arizona	gschneider@as.arizona.edu
Dr. Markus Kasper (CoI) (ESA Member)	European Southern Observatory - Germany	mkasper@eso.org
Dr. Adam Showman (CoI)	University of Arizona	showman@lpl.arizona.edu
Dr. Mark S. Marley (CoI)	NASA Ames Research Center	mmarley@mail.arc.nasa.gov

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) 2M1207A (3) 2M1207B	WFC3/IR	1	24-Mar-2014 22:14:48.0	yes
02	(1) 2M1207A (3) 2M1207B	WFC3/IR	1	24-Mar-2014 22:15:26.0	yes
03	(3) 2M1207B	WFC3/IR	1	24-Mar-2014 22:15:50.0	yes
04	(3) 2M1207B	WFC3/IR	1	24-Mar-2014 22:16:15.0	yes
05	(3) 2M1207B	WFC3/IR	1	24-Mar-2014 22:16:36.0	yes
06	(3) 2M1207B	WFC3/IR	1	24-Mar-2014 22:16:58.0	yes
07	(2) ABPIC-B	WFC3/IR	1	24-Mar-2014 22:17:20.0	yes
08	(2) ABPIC-B	WFC3/IR	1	24-Mar-2014 22:17:50.0	yes
09	(2) ABPIC-B	WFC3/IR	1	24-Mar-2014 22:18:16.0	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>
10	(2) ABPIC-B	WFC3/IR	1	24-Mar-2014 22:18:42.0	yes
11	(2) ABPIC-B	WFC3/IR	1	24-Mar-2014 22:19:08.0	yes
12	(2) ABPIC-B	WFC3/IR	1	24-Mar-2014 22:19:36.0	yes

12 Total Orbits Used

ABSTRACT

Directly imaged exoplanets offer unique insights into weakly-irradiated planetary atmospheres and into the architecture of outer planetary systems. They also raise two pivotal questions: 1) How do their atmospheres compare to brown dwarfs? and 2) How did these large-separation massive planets form? Atmospheric modeling of directly imaged planets is complicated by the presence of condensate clouds; many successful models assume patchy cloud cover, a combination of two different atmospheres (e.g. cloudy and cloud-free). Heterogeneous cloud covers are common in brown dwarfs and lead to rotational photometric variability. In addition, different planet formation models proposed for large-separation exoplanets lead to different typical rotation rates.

We pioneered HST and Spitzer rotational mapping of brown dwarfs and in a series of studies showed that this technique provides very important and unique constraints on the composition and structure of brown dwarf atmospheres and their cloud layers.

We propose here to apply high-contrast, high-precision photometry to two prototypical directly imaged exoplanets (or planetary mass companions) and search for photometric variations. The observations will: 1) verify the prediction of patchy cloud cover and allow quantitative comparisons to cloud properties observed in brown dwarfs; and, 2) provide the first direct measurements of the rotation periods of wide-separation exoplanets, an important constraint on their formation mechanism. Furthermore, the proposed observations will demonstrate a new observing technique on two low-risk targets, opening a new window on directly imaged exoplanets.

OBSERVING DESCRIPTION

The observations aim to search for periodic photometric variations in two directly imaged exoplanets/planetary-mass companions. We expect such variations due to the rotation of the targets and their heterogeneous photospheres.

Each target will be observed in six consecutive orbits.

To allow high-contrast imaging we will use roll subtraction and obtain our data at the two different roll angles.

The 1st, 3rd, and 5th orbits will be in Roll Angle A;

Orbits 2, 4, 6 will be in Roll Angle B.

Roll Angle B = Roll Angle A + [25-33 degrees]

The lightcurves will be obtained in F160W and F125W, alternating these filters during the observations.

In each orbit we will obtain images at four dithering positions (square); in each positions images with both filters will be taken.

In Orbits 1 and 2 we will also obtain additional non-saturated images of the primaries (stars) in both systems; these very short images will be used to improve PSF subtraction and also allow the precise calibration of the pixels on which the companion's brightness is also measured. This is required to correct for the different sensitivities of the pixels in the four dithering positions.

Proposal 13418 - 2M1207 (01) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

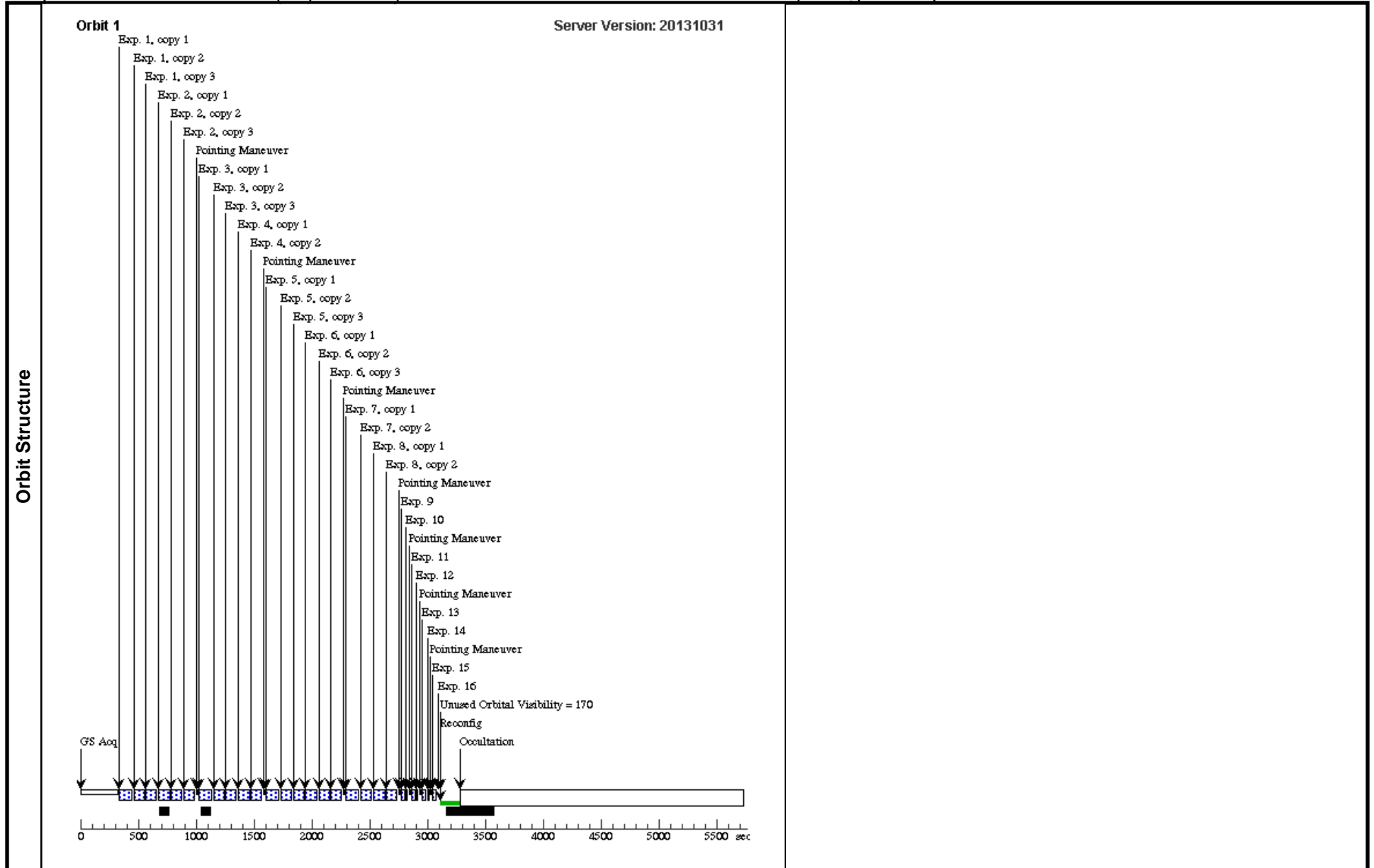
Visit	Proposal 13418, 2M1207 (01), scheduling Tue Mar 25 02:19:54 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; ORIENT 9.55D TO 80.45 D; ORIENT 99.55D TO 170.45 D; ORIENT 189.55D TO 260.45 D; ORIENT 279.55D TO 350.45 D					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(1)		2M1207A	RA: 12 07 33.4670 (181.8894458d) Dec: -39 32 54.00 (-39.54833d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS
(3)		2M1207B	RA: 12 07 33.6280 (181.8901167d) Dec: -39 32 53.55 (-39.54821d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS

Proposal 13418 - 2M1207 (01) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	1	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 3 (265.307 Secs)	
									[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	2	2	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 3 (265.307 Secs)	
									[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	3	3	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 3 (265.307 Secs)	
									[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	4	4	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 2 (176.871 Secs)	
									[==>(Copy 1)] [==>(Copy 2)]	[1]
	5		(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 3 (265.307 Secs)	
									[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	6		(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 3 (265.307 Secs)	
									[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
7		(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 2 (176.871 Secs)		
								[==>(Copy 1)] [==>(Copy 2)]	[1]	
8		(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-16 Non-Int in 2M1207 (01)	88.435659 Secs X 2 (176.871 Secs)		
								[==>(Copy 1)] [==>(Copy 2)]	[1]	
9		(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10		Sequence 1-16 Non-Int in 2M1207 (01)	2.77815 Secs (2.778 Secs)		
								[==>]	[1]	
10		(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10		Sequence 1-16 Non-Int in 2M1207 (01)	2.77815 Secs (2.778 Secs)		
								[==>]	[1]	
11		(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (01)	2.77815 Secs (2.778 Secs)		
								[==>]	[1]	
12		(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (01)	2.77815 Secs (2.778 Secs)		
								[==>]	[1]	
13		(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 0,1.375	Sequence 1-16 Non-Int in 2M1207 (01)	2.77815 Secs (2.778 Secs)		
								[==>]	[1]	

Proposal 13418 - 2M1207 (01) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

14	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 0,1.375 375	Sequence 1-16 Non-I nt in 2M1207 (01)	2.77815 Secs (2.778 Secs)	
							[==>]	[1]
15	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,1. 375	Sequence 1-16 Non-I nt in 2M1207 (01)	2.77815 Secs (2.778 Secs)	
							[==>]	[1]
16	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,1. 375	Sequence 1-16 Non-I nt in 2M1207 (01)	2.77815 Secs (2.778 Secs)	
							[==>]	[1]



Proposal 13418 - 2M1207 (02) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

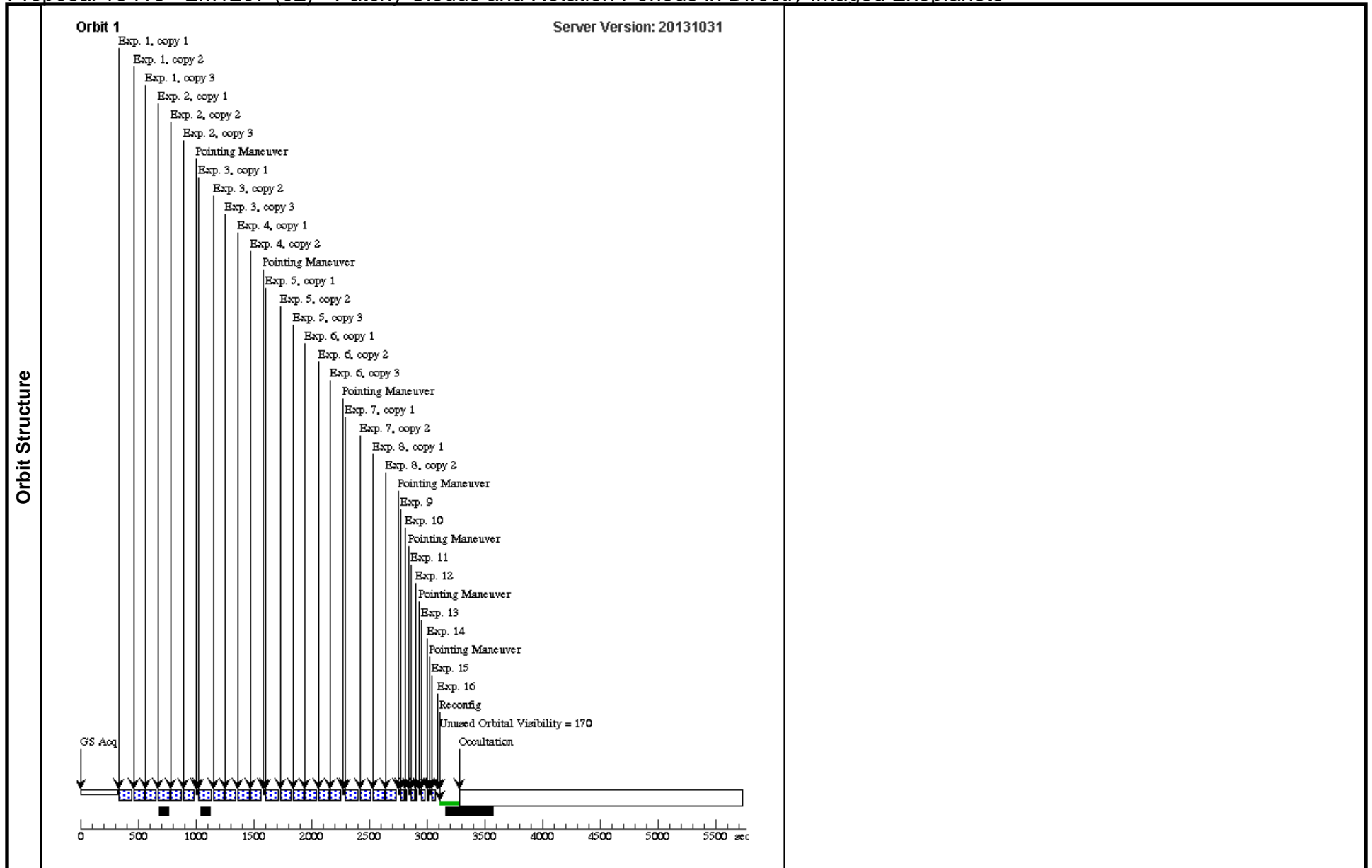
Visit	Proposal 13418, 2M1207 (02), scheduling Tue Mar 25 02:19:58 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; ORIENT +25D TO +33D FROM 01; AFTER 01 BY 0.5 Orbits TO 1.5 Orbits					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(1)		2M1207A	RA: 12 07 33.4670 (181.8894458d) Dec: -39 32 54.00 (-39.54833d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS
(3)		2M1207B	RA: 12 07 33.6280 (181.8901167d) Dec: -39 32 53.55 (-39.54821d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS

Proposal 13418 - 2M1207 (02) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	2	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	3	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	4	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 2 (176.871 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	5	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	6	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	7	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 2 (176.871 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	8	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-16 Non-Int in 2M1207 (02)	88.435659 Secs X 2 (176.871 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	9	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10		Sequence 1-16 Non-Int in 2M1207 (02)	2.77815 Secs (2.778 Secs) [==>]	[1]
	10	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10		Sequence 1-16 Non-Int in 2M1207 (02)	2.77815 Secs (2.778 Secs) [==>]	[1]
	11	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (02)	2.77815 Secs (2.778 Secs) [==>]	[1]
	12	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,0	Sequence 1-16 Non-Int in 2M1207 (02)	2.77815 Secs (2.778 Secs) [==>]	[1]
	13	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 0,1.375	Sequence 1-16 Non-Int in 2M1207 (02)	2.77815 Secs (2.778 Secs) [==>]	[1]

Proposal 13418 - 2M1207 (02) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

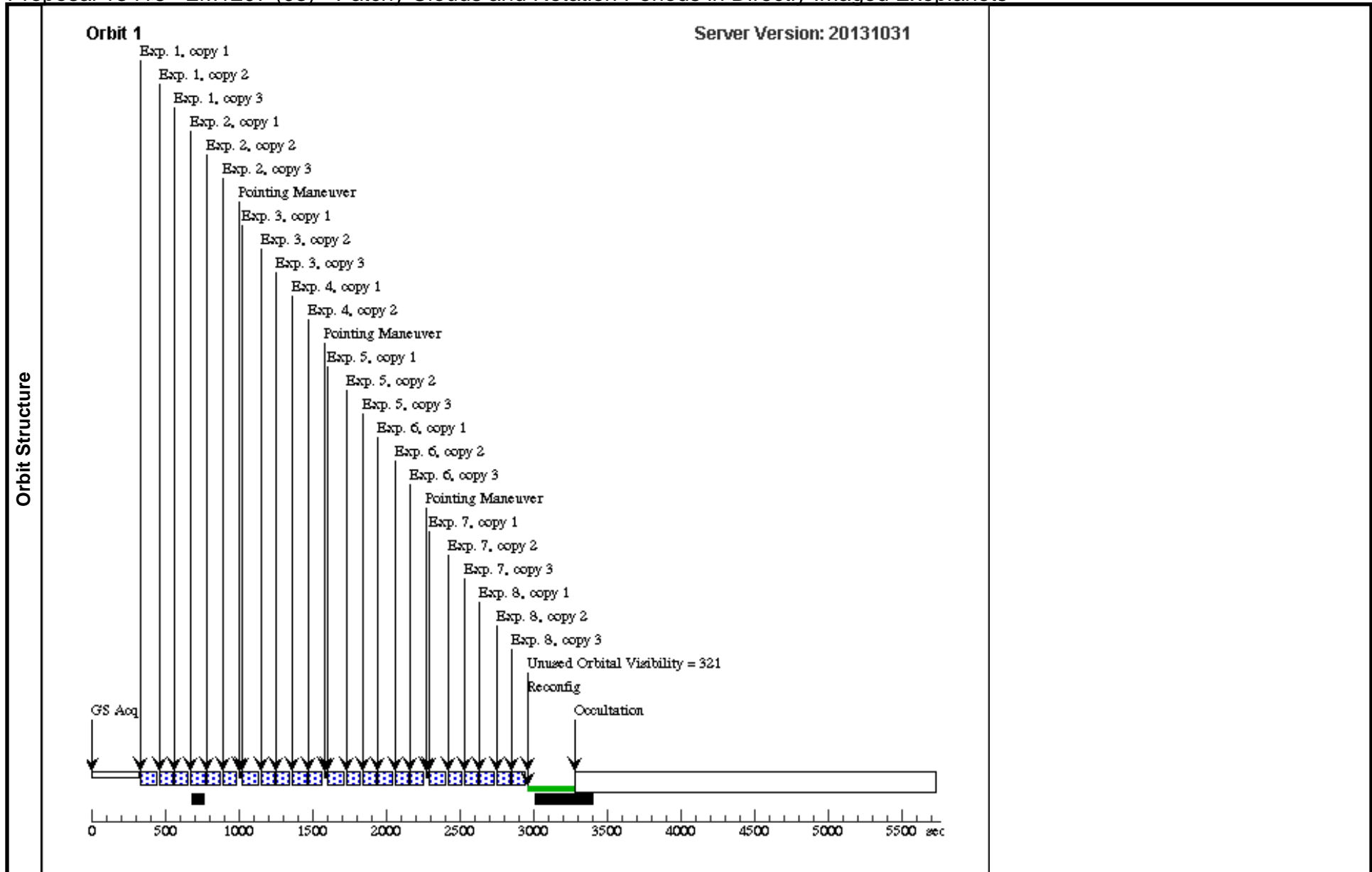
14	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 0,1.375	Sequence 1-16 Non-Int nt in 2M1207 (02)	2.77815 Secs (2.778 Secs)	
							[==>]	[1]
15	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,1.375	Sequence 1-16 Non-Int nt in 2M1207 (02)	2.77815 Secs (2.778 Secs)	
							[==>]	[1]
16	(1) 2M1207A	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=RAPID ; NSAMP=10	POS TARG 1.375,1.375	Sequence 1-16 Non-Int nt in 2M1207 (02)	2.77815 Secs (2.778 Secs)	
							[==>]	[1]



Proposal 13418 - 2M1207 (03) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Tue Mar 25 02:20:00 GMT 2014

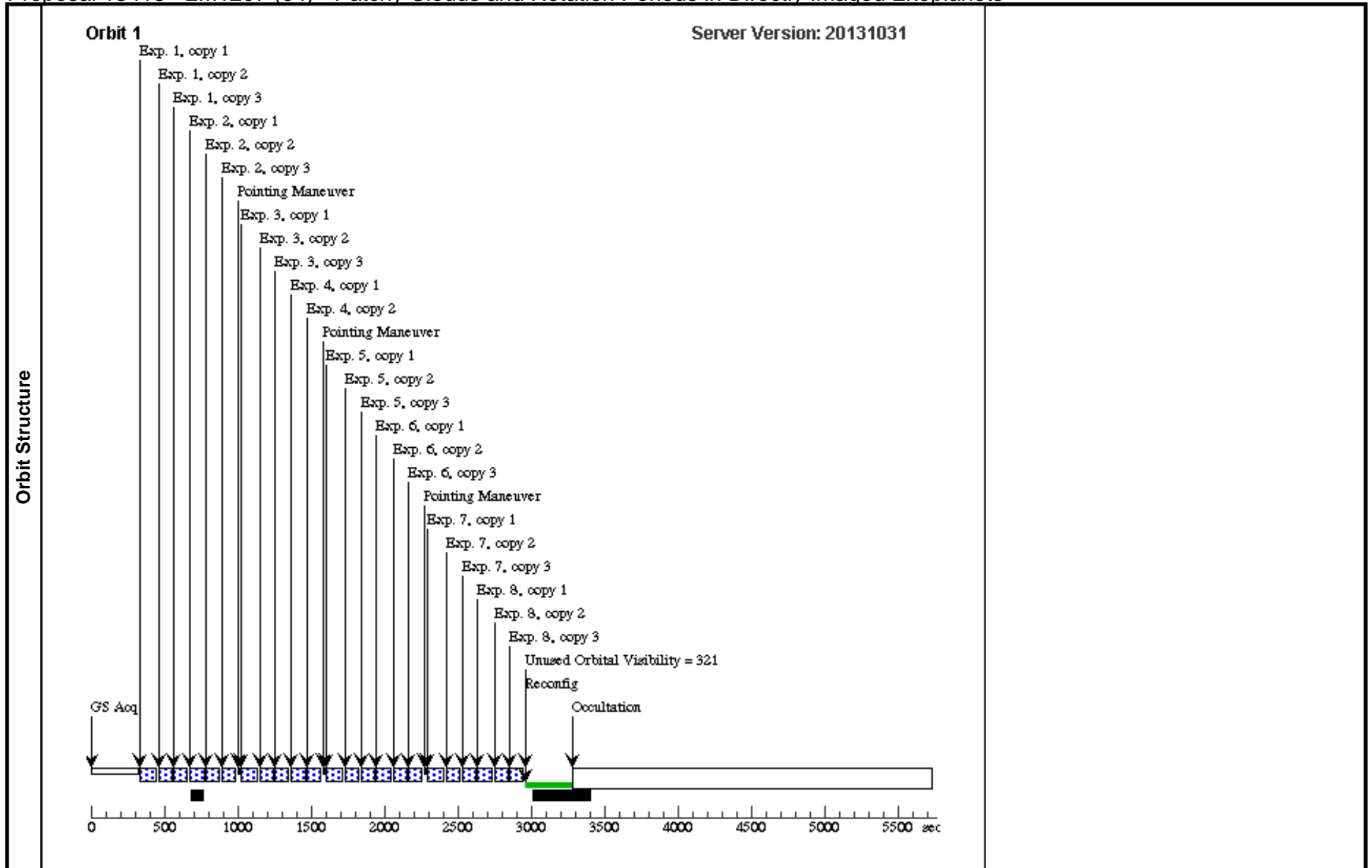
Visit	Proposal 13418, 2M1207 (03), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 01; AFTER 02 BY 0.5 Orbits TO 1.5 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(3)	2M1207B	RA: 12 07 33.6280 (181.8901167d) Dec: -39 32 53.55 (-39.54821d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	1	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	2	2	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	3	3	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	4	4	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 2 (176.871 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	5	5	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	6	6	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	7	7	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	8	8	(3) 2M1207B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (03)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]



Proposal 13418 - 2M1207 (04) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Tue Mar 25 02:20:01 GMT 2014

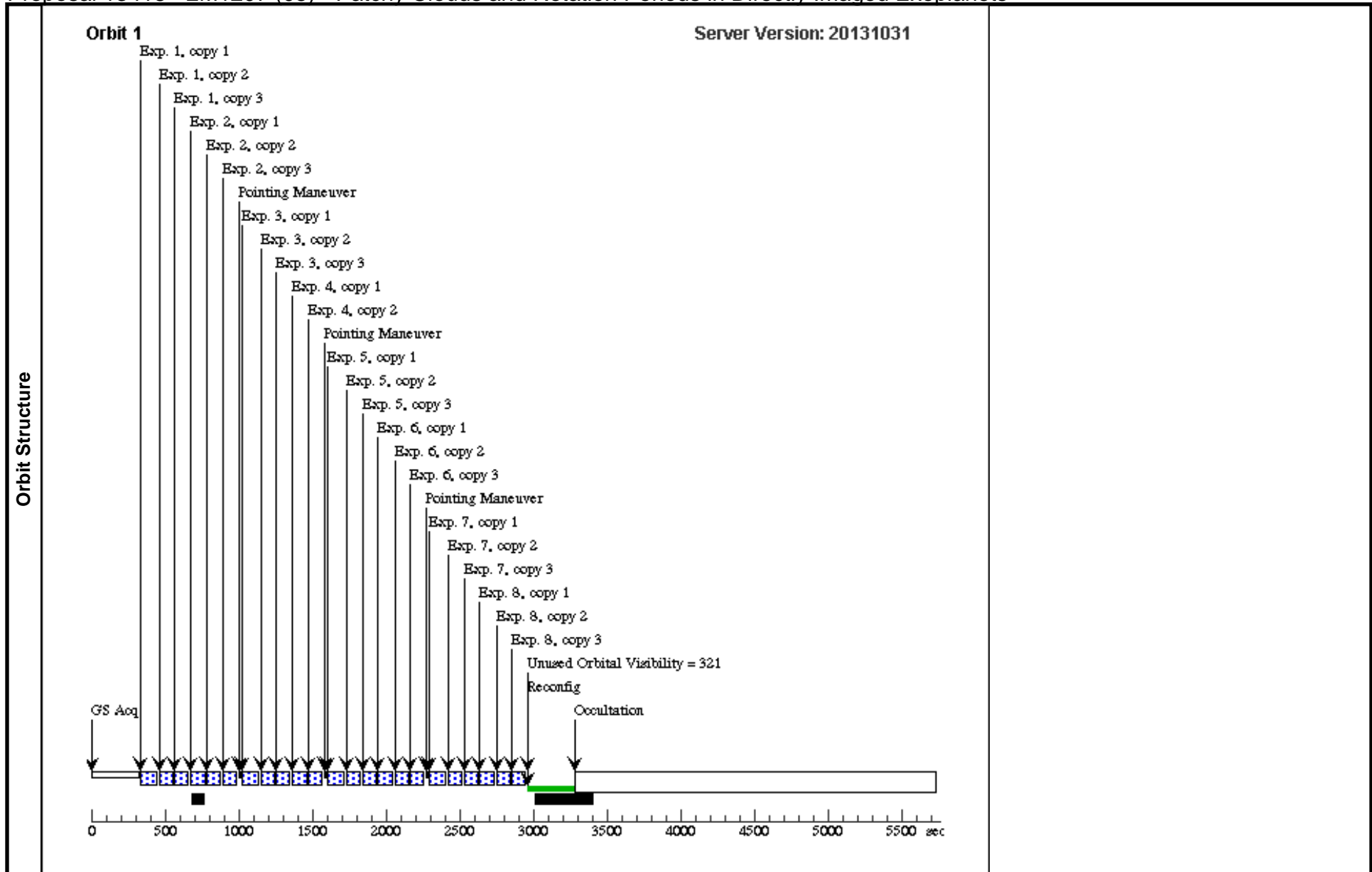
Visit	Proposal 13418, 2M1207 (04), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 02; AFTER 03 BY 0.5 Orbits TO 1.5 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(3)	2M1207B	RA: 12 07 33.6280 (181.8901167d) Dec: -39 32 53.55 (-39.54821d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	2	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	3	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	4	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 2 (176.871 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	5	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	6	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	7	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	8	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (04)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]



Proposal 13418 - 2M1207 (05) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Tue Mar 25 02:20:02 GMT 2014

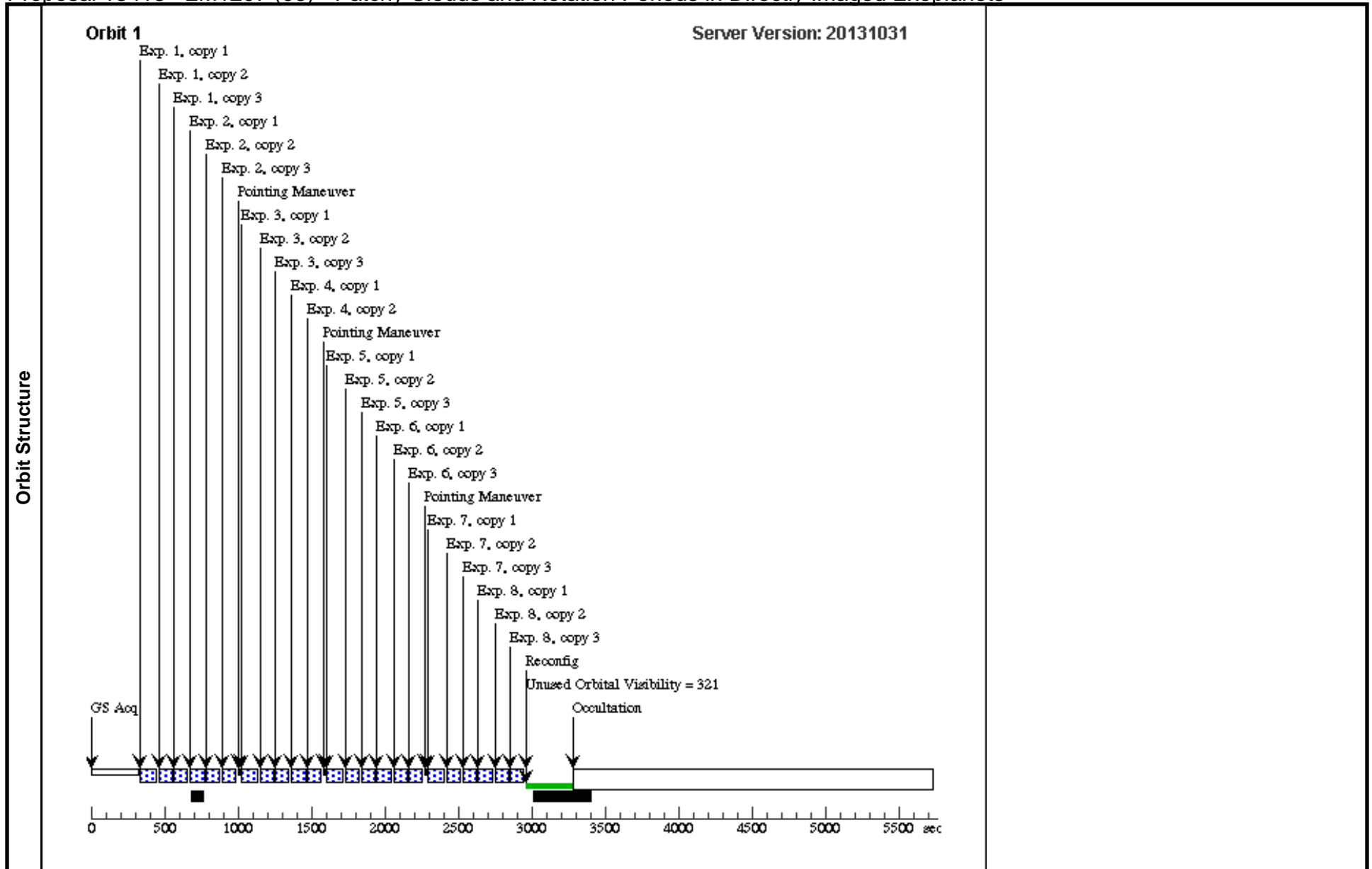
Visit	Proposal 13418, 2M1207 (05), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 01; AFTER 04 BY 0.5 Orbits TO 1.5 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(3)	2M1207B	RA: 12 07 33.6280 (181.8901167d) Dec: -39 32 53.55 (-39.54821d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	2	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	3	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	4	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 2 (176.871 Secs) [==>(Copy 1)] [==>(Copy 2)]	[1]
	5	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	6	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	7	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]
	8	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (05)	88.435659 Secs X 3 (265.307 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)]	[1]



Proposal 13418 - 2M1207 (06) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Tue Mar 25 02:20:03 GMT 2014

Visit	Proposal 13418, 2M1207 (06), scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 02; AFTER 05 BY 0.5 Orbits TO 1.5 Orbits									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
	(3)	2M1207B	RA: 12 07 33.6280 (181.8901167d) Dec: -39 32 53.55 (-39.54821d) Equinox: J2000		V=20.15 J=12	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 3 (265.307 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)]	[1]
	2	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13		Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 3 (265.307 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)]	[1]
	3	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 3 (265.307 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)]	[1]
	4	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,0	Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 2 (176.871 Secs) [=>(Copy 1)] [=>(Copy 2)]	[1]
	5	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 3 (265.307 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)]	[1]
	6	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 0,1.375	Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 3 (265.307 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)]	[1]
	7	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 3 (265.307 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)]	[1]
	8	(3) 2M1207B		WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=13	POS TARG 1.375,1.375	Sequence 1-8 Non-Int in 2M1207 (06)	88.435659 Secs X 3 (265.307 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)]	[1]



Proposal 13418 - AB Pic (07) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

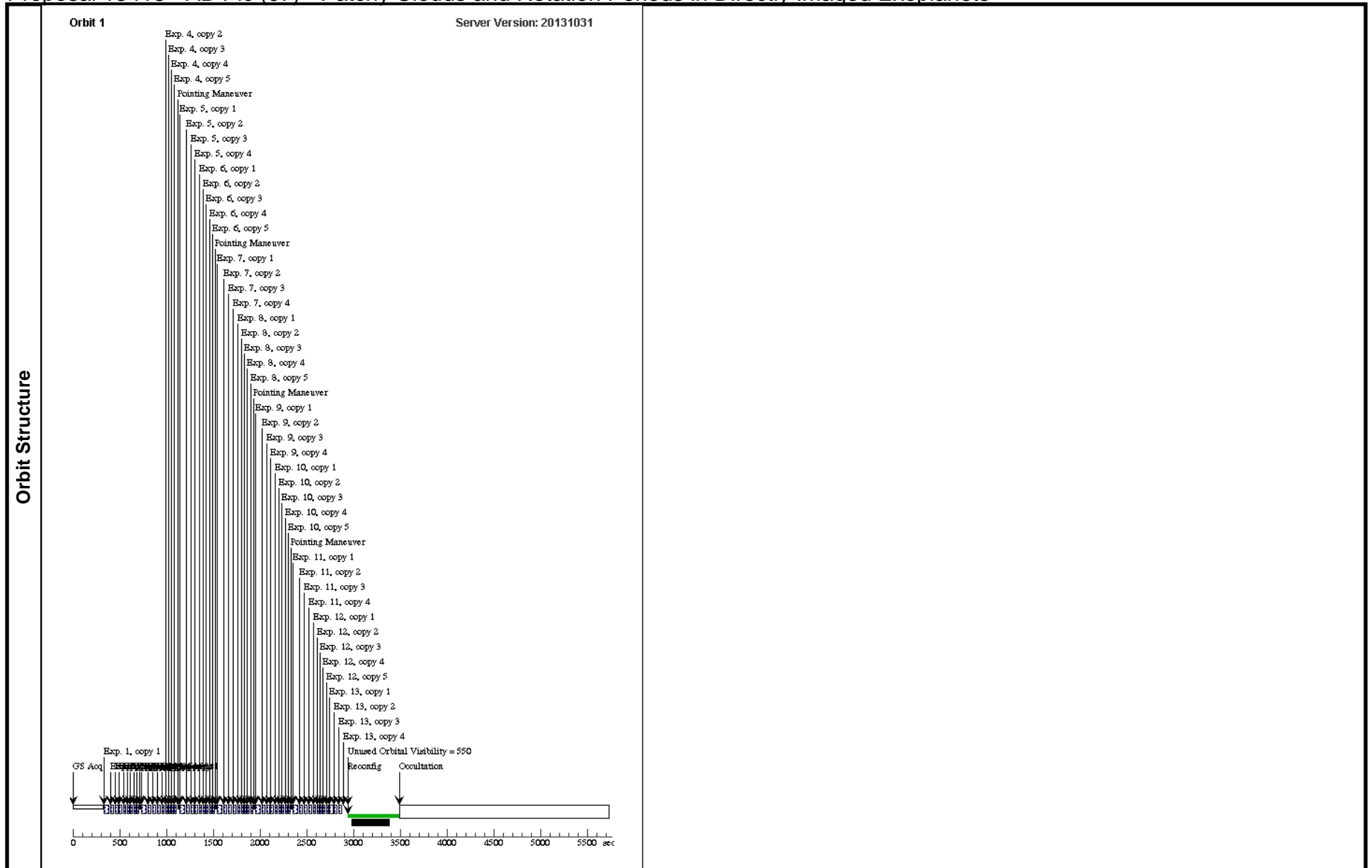
Visit	Proposal 13418, AB Pic (07), completed Tue Mar 25 02:20:05 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; ORIENT 9.55D TO 80.45 D; ORIENT 99.55D TO 170.45 D; ORIENT 189.55D TO 260.45 D; ORIENT 279.55D TO 350.45 D					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(2)		ABPIC-B	RA: 06 19 12.9746 (94.8040608d) Dec: -58 03 10.17 (-58.05282d) Equinox: J2000		V=9.2+/-0.1 J=7.6 H=7.0	Reference Frame: ICRS

Proposal 13418 - AB Pic (07) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	2	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	3	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 1.375,0		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	4	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 1.375,0.		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	5	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 0,1.375		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	6	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 0,1.375		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	7	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 1.375,1. 375		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	8	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 1.375,1. 375		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]

Proposal 13418 - AB Pic (07) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

9	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 0,1.375 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]
10	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS POS TARG 0,1.375 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs)	[1]
11	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 1.375,1. 10; 375 NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]
12	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS POS TARG 1.375,1. 10; 375 NSAMP=3	14.970789 Secs X 5 (74.854 Secs)	[1]
13	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 1.375,1. 10; 375 NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]



Proposal 13418 - AB Pic (08) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Visit	Proposal 13418, AB Pic (08), completed Tue Mar 25 02:20:06 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; ORIENT +25D TO +33D FROM 07; AFTER 07 BY 0.5 Orbits TO 1.5 Orbits					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(2)	ABPIC-B	RA: 06 19 12.9746 (94.8040608d) Dec: -58 03 10.17 (-58.05282d) Equinox: J2000		V=9.2+/-0.1 J=7.6 H=7.0	Reference Frame: ICRS

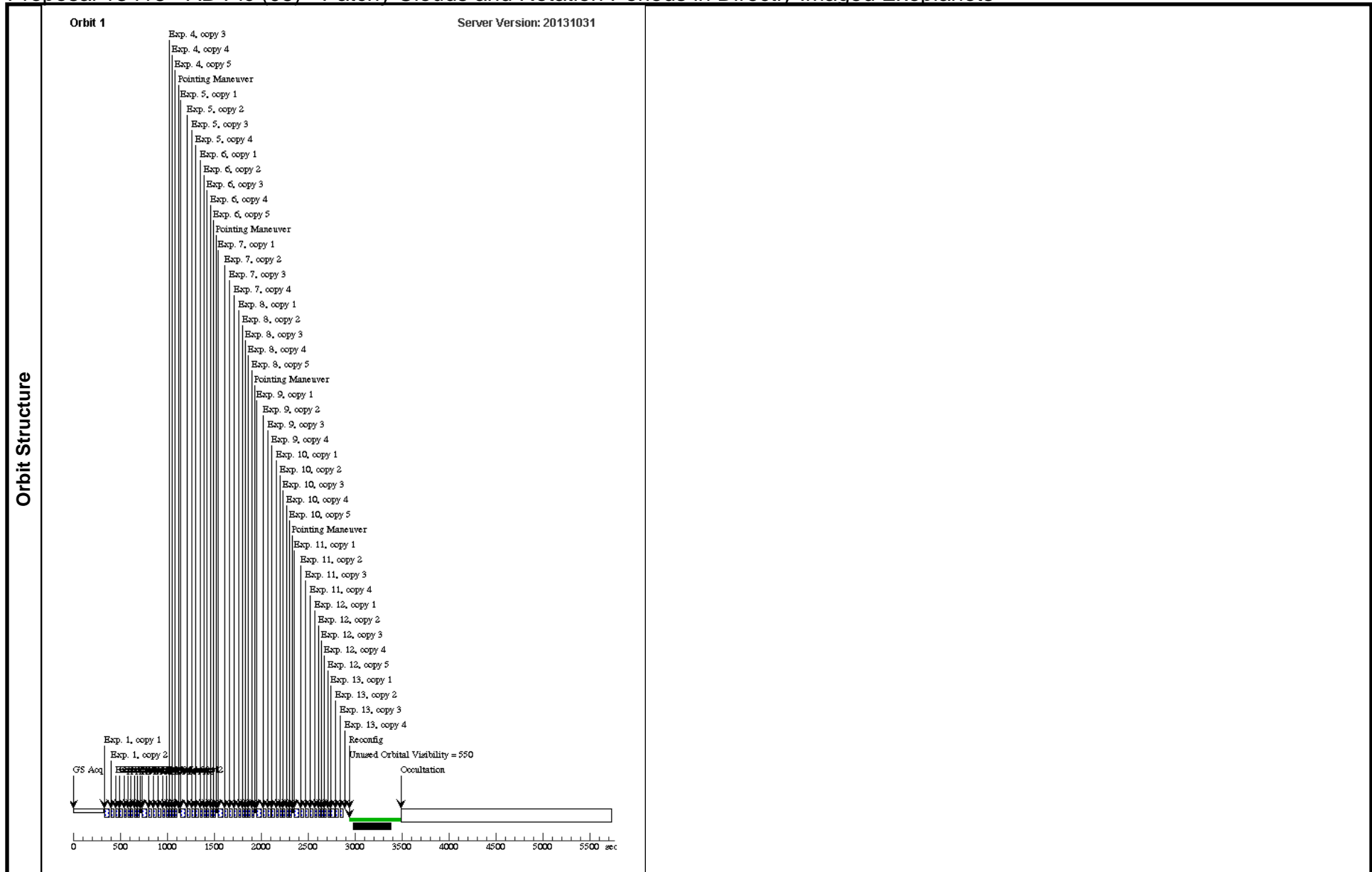
Proposal 13418 - AB Pic (08) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	2	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	3	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 1.375,0		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	4	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 1.375,0.		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	5	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 0,1.375		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	6	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 0,1.375		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	7	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 1.375,1. 375		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	8	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 1.375,1. 375		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]

Proposal 13418 - AB Pic (08) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

9	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 0,1.375 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]
10	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS POS TARG 0,1.375 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs)	[1]
11	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 1.375,1. 10; 375 NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]
12	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS POS TARG 1.375,1. 10; 375 NSAMP=3	14.970789 Secs X 5 (74.854 Secs)	[1]
13	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 1.375,1. 10; 375 NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]

Proposal 13418 - AB Pic (08) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets



Proposal 13418 - AB Pic (09) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

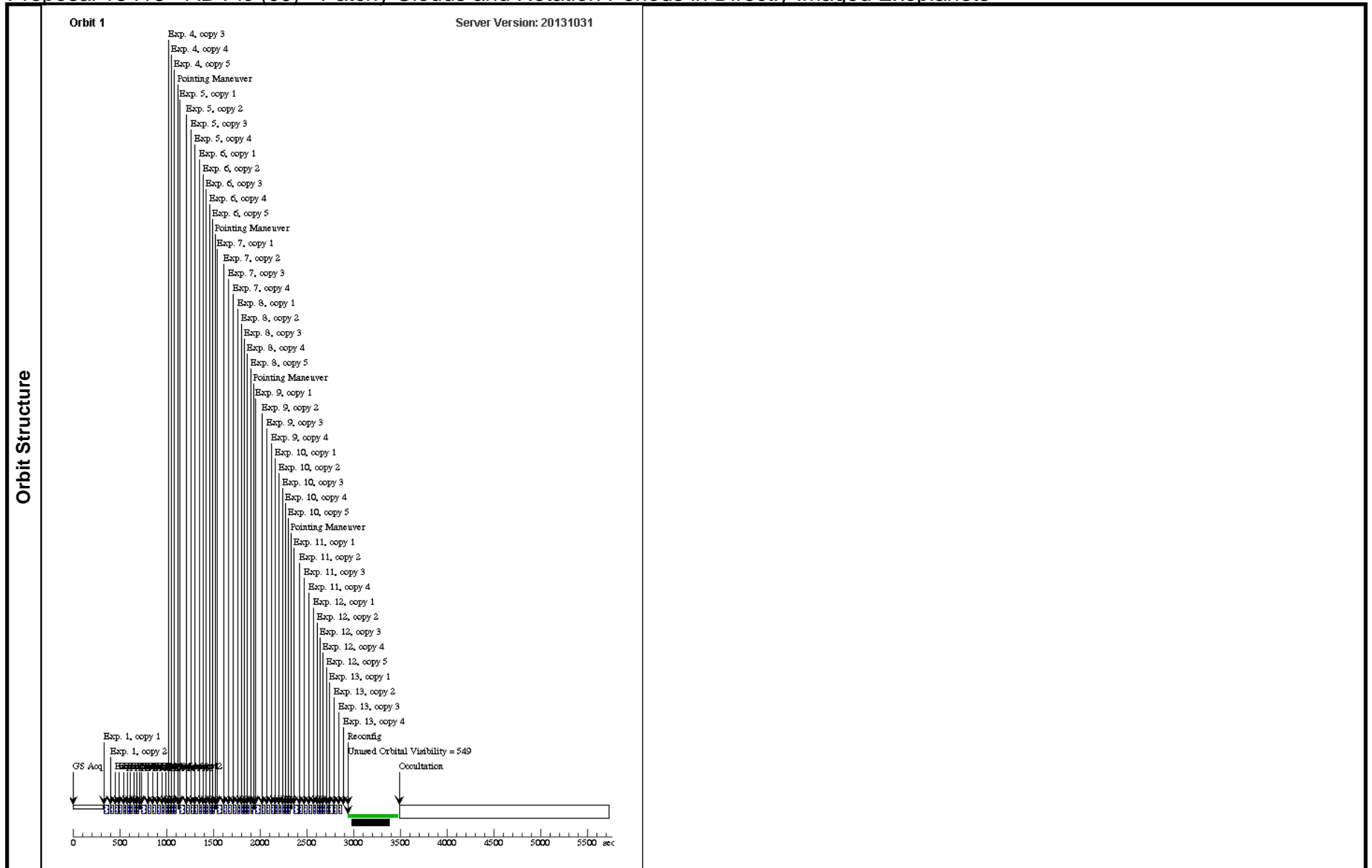
Visit	Proposal 13418, AB Pic (09), completed Tue Mar 25 02:20:08 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 07; AFTER 08 BY 0.5 Orbits TO 1.5 Orbits					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(2)		ABPIC-B	RA: 06 19 12.9746 (94.8040608d) Dec: -58 03 10.17 (-58.05282d) Equinox: J2000		V=9.2+/-0.1 J=7.6 H=7.0	Reference Frame: ICRS

Proposal 13418 - AB Pic (09) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	2	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	3	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 1.375,0		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	4	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 1.375,0.		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	5	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 0,1.375		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	6	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 0,1.375		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	7	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	POS TARG 1.375,1. 375		29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	8	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	POS TARG 1.375,1. 375		14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]

Proposal 13418 - AB Pic (09) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

9	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]
					[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	
10	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs)	[1]
					[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	
11	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 1.375,0 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]
					[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	
12	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS POS TARG 1.375,0. 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs)	[1]
					[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	
13	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS POS TARG 1.375,0 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs)	[1]
					[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	



Proposal 13418 - AB Pic (10) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

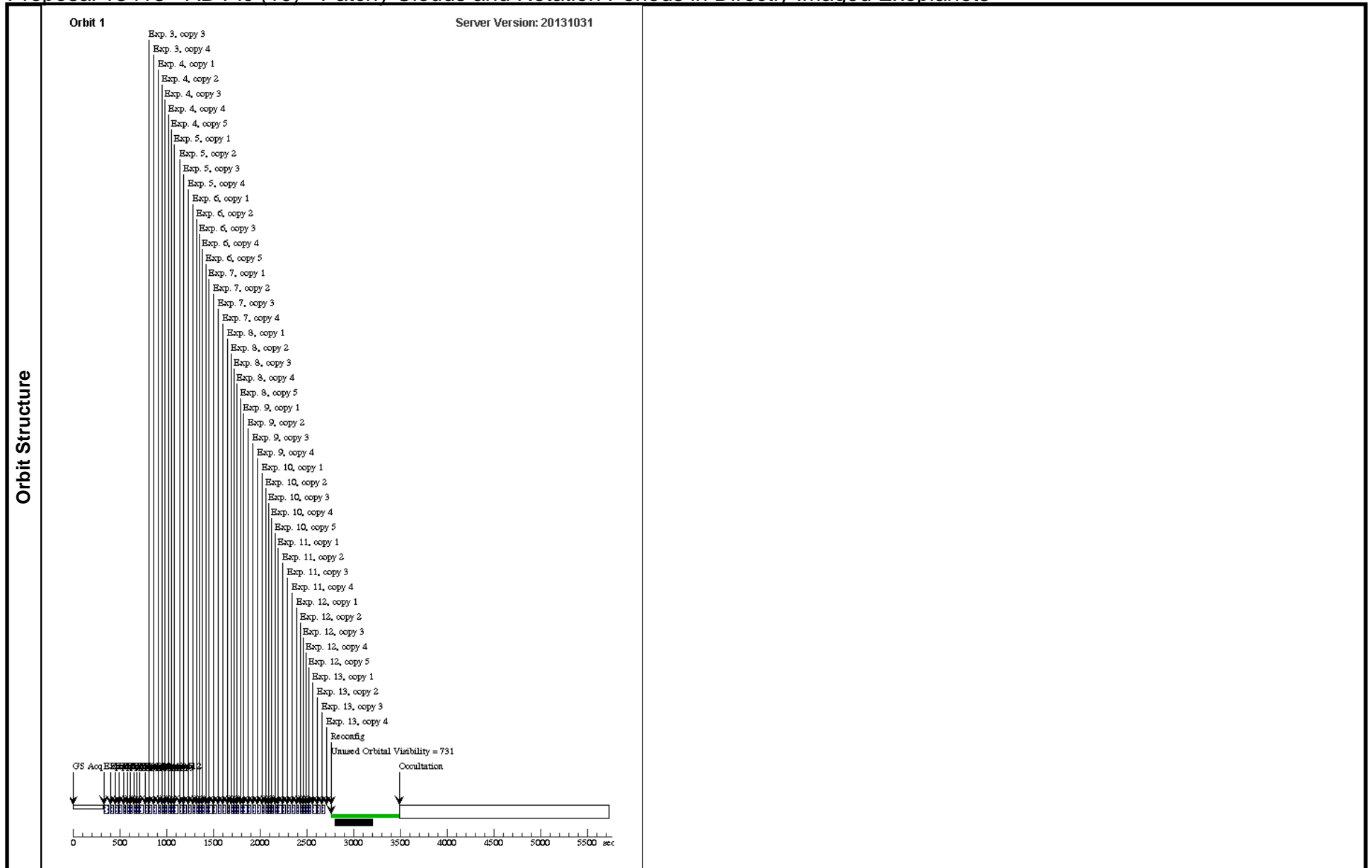
Visit	Proposal 13418, AB Pic (10), completed Tue Mar 25 02:20:10 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 08; AFTER 09 BY 0.5 Orbits TO 1.5 Orbits					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(2)	ABPIC-B	RA: 06 19 12.9746 (94.8040608d) Dec: -58 03 10.17 (-58.05282d) Equinox: J2000		V=9.2+/-0.1 J=7.6 H=7.0	Reference Frame: ICRS

Proposal 13418 - AB Pic (10) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	2	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	3	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	4	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	5	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	6	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	7	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	8	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]

Proposal 13418 - AB Pic (10) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

9	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
10	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
11	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
12	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
13	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]



Proposal 13418 - AB Pic (11) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Visit	Proposal 13418, AB Pic (11), completed Tue Mar 25 02:20:11 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 07; AFTER 10 BY 0.5 Orbits TO 1.5 Orbits					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(2)	ABPIC-B	RA: 06 19 12.9746 (94.8040608d) Dec: -58 03 10.17 (-58.05282d) Equinox: J2000		V=9.2+/-0.1 J=7.6 H=7.0	Reference Frame: ICRS

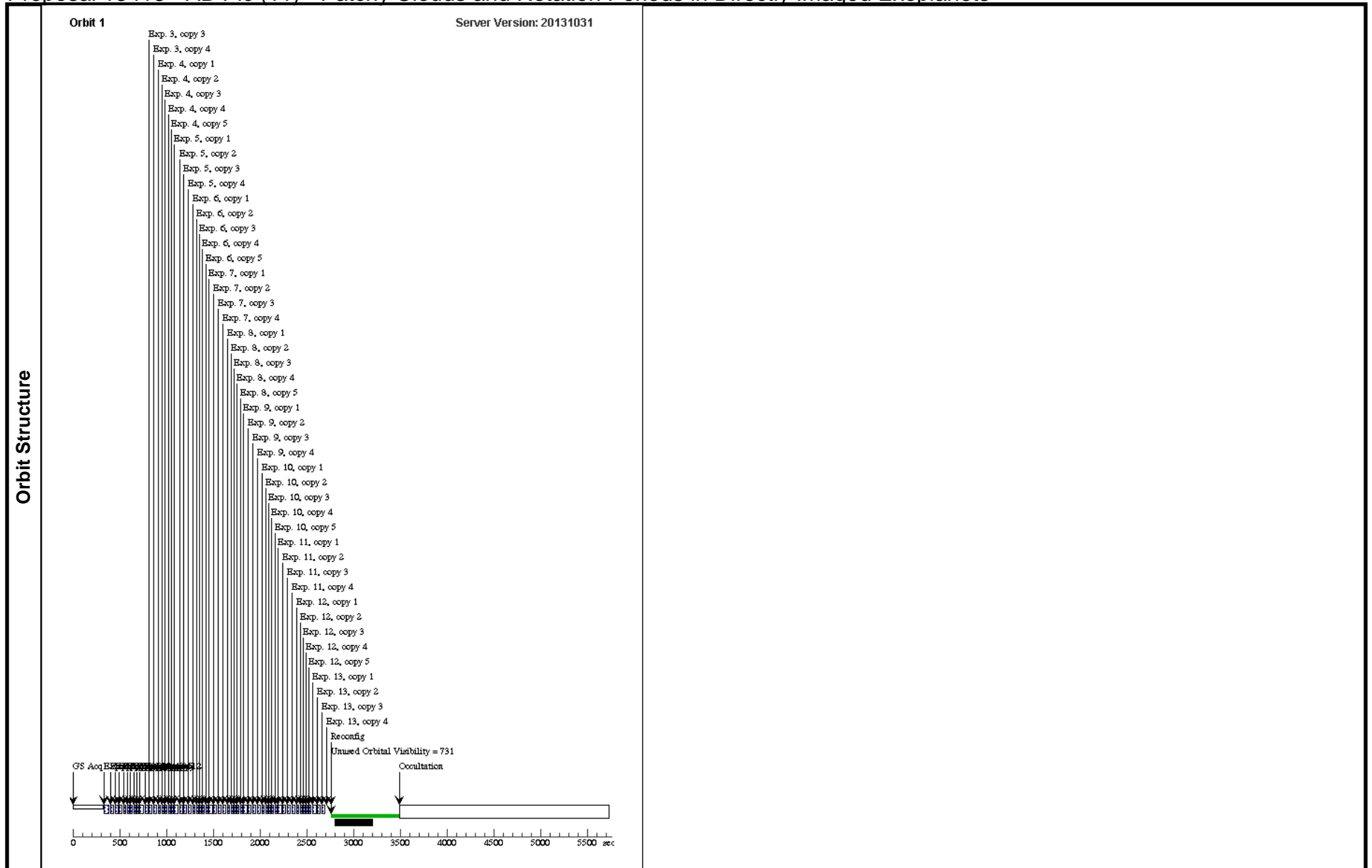
Proposal 13418 - AB Pic (11) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	2	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	3	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	4	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	5	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	6	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
	7	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
	8	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]

Proposal 13418 - AB Pic (11) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

9	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
10	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
11	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]
12	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)]	[1]
13	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[1]

Proposal 13418 - AB Pic (11) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets



Proposal 13418 - AB Pic (12) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

Visit	Proposal 13418, AB Pic (12), completed Tue Mar 25 02:20:13 GMT 2014 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: PCS MODE FINE; GUID TOL 0.05"; GYRO MODE 3GOBAD; SAME ORIENT AS 08; AFTER 11 BY 0.5 Orbits TO 1.5 Orbits					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(2)		ABPIC-B	RA: 06 19 12.9746 (94.8040608d) Dec: -58 03 10.17 (-58.05282d) Equinox: J2000		V=9.2+/-0.1 J=7.6 H=7.0	Reference Frame: ICRS

Proposal 13418 - AB Pic (12) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	2	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	3	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	4	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	5	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	6	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
	7	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5			29.663763 Secs X 4 (118.655 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
	8	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3			14.970789 Secs X 5 (74.854 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]

Proposal 13418 - AB Pic (12) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

9	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
10	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
11	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]
12	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F160W	SAMP-SEQ=SPARS 10; NSAMP=3	14.970789 Secs X 5 (74.854 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)]	[1]
13	(2) ABPIC-B	WFC3/IR, MULTIACCUM, IRSUB256	F125W	SAMP-SEQ=SPARS 10; NSAMP=5	29.663763 Secs X 4 (118.655 Secs) [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)]	[1]

Proposal 13418 - AB Pic (12) - Patchy Clouds and Rotation Periods in Directly Imaged Exoplanets

