15685 - HST Confirmation of a Candidate Earth Analogue from the Kepler Primary Mission

Cycle: 26, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Andrew Vanderburg (PI) (Contact)	**University of Texas at Austin**	**avanderburg@utexas.edu**
Dr. Laura Kreidberg (CoI)	Harvard University	laura.kreidberg@cfa.harvard.edu
Chris Shallue (CoI)	Google AI	chris.shallue@gmail.com
David W Latham (CoI)	Smithsonian Institution Astrophysical Observatory	dlatham@cfa.harvard.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) 2MASS-J19432996+5059289	WFC3/IR	21	16-Apr-2019 11:03:44.0	yes

21 Total Orbits Used

ABSTRACT

We request 21 orbits of HST observations to confirm the transit of a candidate Earth analog exoplanet recently detected in the Kepler data set. The candidate Earth-sized (R_p = 1.1 +/- 0.1 R_e) planet orbits its Sun-like (0.97 R_sun) host star in a 365.4 day period, and if confirmed, would be the first true Earth analog around a Sun-like star known. Though our vetting finds no indication that the candidate signal is a false positive, we cannot completely rule out an instrumental origin for the signal without independent confirmation from HST. These HST observations are urgently needed to inform the 2020 Decadal Survey of occurrence rate of Earth analogs around Sun-like stars, a crucial design input for the proposed LUVOIR and HabEX flagship missions.

OBSERVING DESCRIPTION

We will observe our target for 21 consecutive HST orbits using the WFC3 instrument. We will begin the observations with a direct image with the F130N filter and then obtain time series spectroscopy with the G141 grism using the NSAMP = 6, SPARS25 readout pattern. We wil alternate forward and reverse scanning on the detector with a scan rate of 0.02 arcsec/sec.

The observations must be centered on the time of transit.

Visit

Proposal 15685, Visit 01, implementation

Tue Apr 16 15:03:58 GMT 2019

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; Period 365.45562 D AND ZERO-PHASE HJD2458607.983846

Diagnostics

(Visit 01) Warning (Orbit Planner): LONG SU LIKELY TO INTERSECT THE SAA

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	2MASS-J19432996+5059289	RA: 19 43 29.9686 (295.8748692d) Dec: +50 59 29.06 (50.99141d) Equinox: J2000	Proper Motion RA: 1.59931293082521E-5 sec of time/yr Proper Motion Dec: 0.008168 arcsec/yr Epoch of Position: 2015.5	V=12.4+/-0.2	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[EXTRA-SOLAR PLANETARY SYSTEM, G III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	F126N	SAMP-SEQ=SPARS10; NSAMP=3	PHASE 0.99795353 5464 TO 0.99812454 9213; GSPAIR N2HR000778F1N2HR028709F2	Sequence 1-2 Non-Int in Visit 01	14.970789 Secs (14.971 Secs) *[==>]*	*[1]*
2		(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 1-2 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	*[1]*
3		(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 3-4 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	*[2]*
4		(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 3-4 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	*[2]*

	5	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 5-6 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[3]***
	6	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 5-6 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[3]***
	7	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 7-8 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[4]***
	8	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 7-8 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[4]***

	9	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 9-10 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[5]***
	10	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 9-10 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[5]***
	11	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip; NEW OBSET	Sequence 11-12 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[6]***
	12	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 11-12 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[6]***

	13	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 13-14 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[7]***
	14	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 13-14 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[7]***
	15	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 15-16 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[8]***
	16	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 15-16 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[8]***

	17	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 17-18 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[9]***
	18	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 17-18 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[9]***
	19	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 19-20 Non-Int in Visit 01	112.00801 Secs X 6 (1344.096 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]*	***[10]***
	20	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 19-20 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[10]***

21	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.024,90.0 Degrees,Round trip	Sequence 21-22 Non-Int in Visit 01	112.00801 Secs X 6 (1344.096 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]*	***[11]***
22	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.024,90.0 Degrees,Forward	Sequence 21-22 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[11]***
23	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.024,90.0 Degrees,Round trip; NEW OBSET FULL ACQ; GSPAIR N2HR000778F1N2HR028709F2	Sequence 23-24 Non-Int in Visit 01	112.00801 Secs X 6 (1344.096 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]*	***[12]***
24	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.024,90.0 Degrees,Forward	Sequence 23-24 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[12]***

	25	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 25-26 Non-Int in Visit 01	112.00801 Secs X 7 (1568.112 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]*	***[13]***
	26	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 25-26 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[13]***
	27	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 27-28 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[14]***
	28	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 27-28 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[14]***

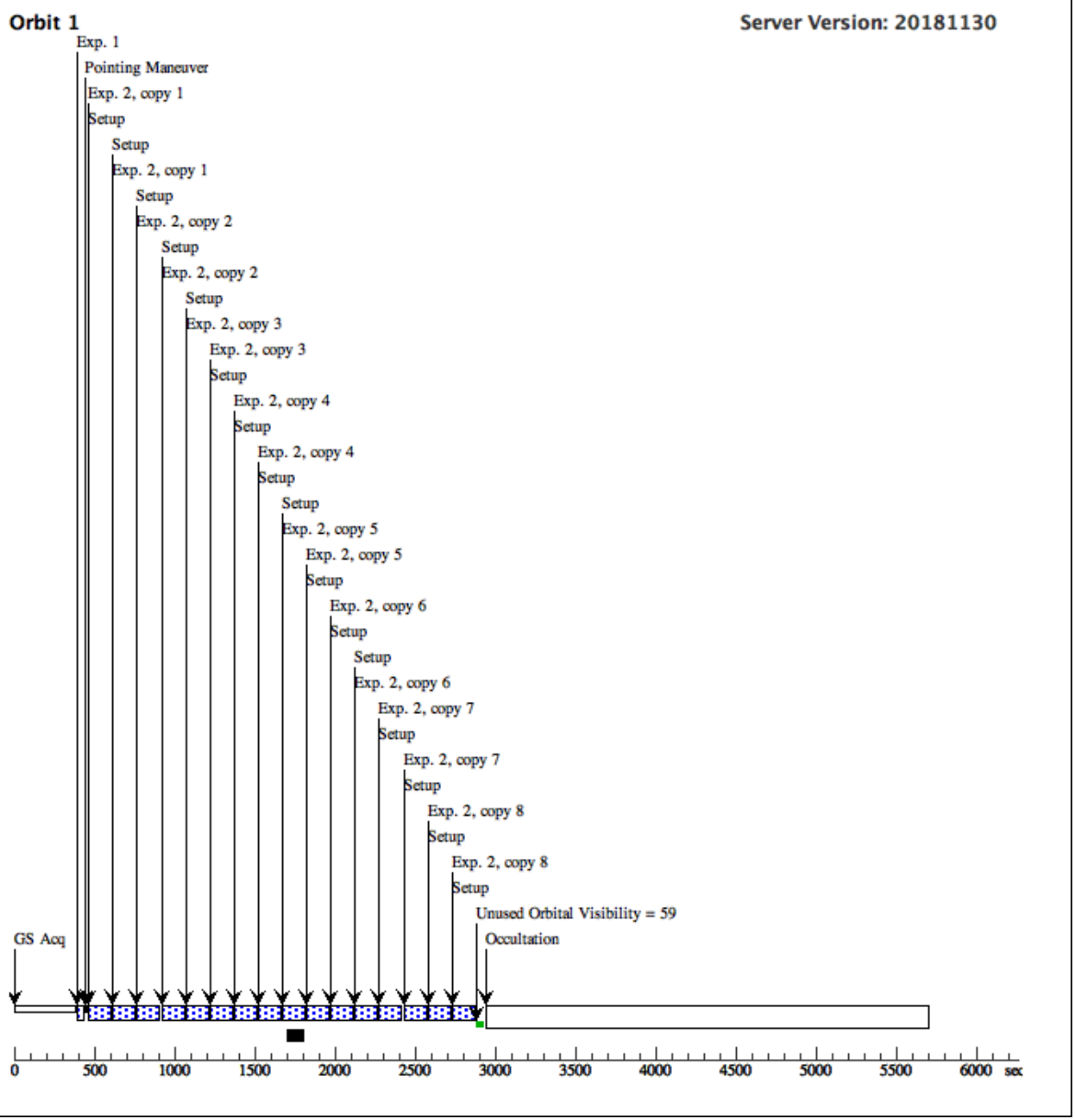
	29	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 29-30 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[15]***
	30	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 29-30 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[15]***
	31	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 31-32 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[16]***
	32	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 31-32 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[16]***

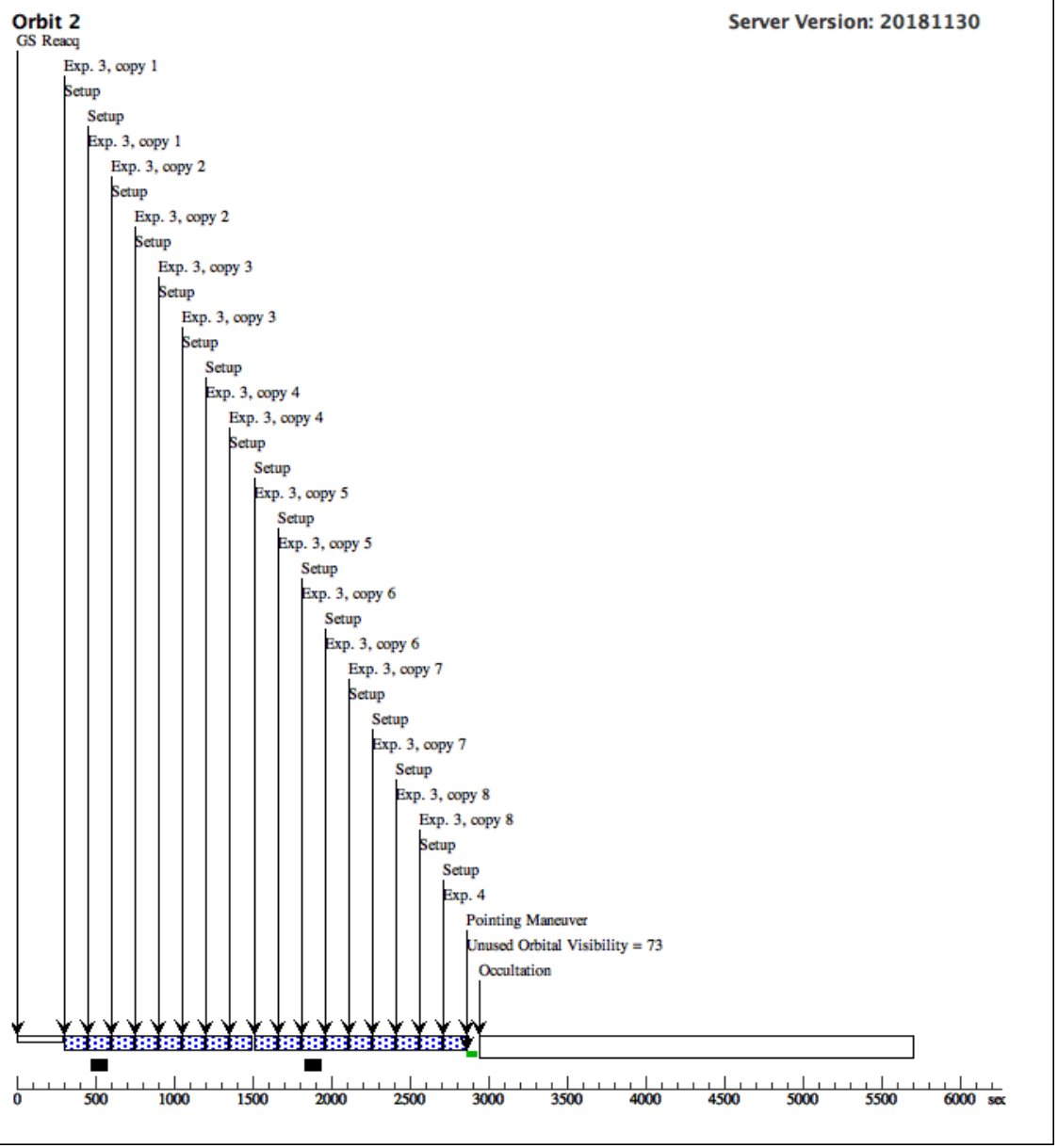
33	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 33-34 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[17]***
34	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 33-34 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[17]***
35	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip; NEW OBSET	Sequence 35-36 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[18]***
36	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 35-36 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[18]***

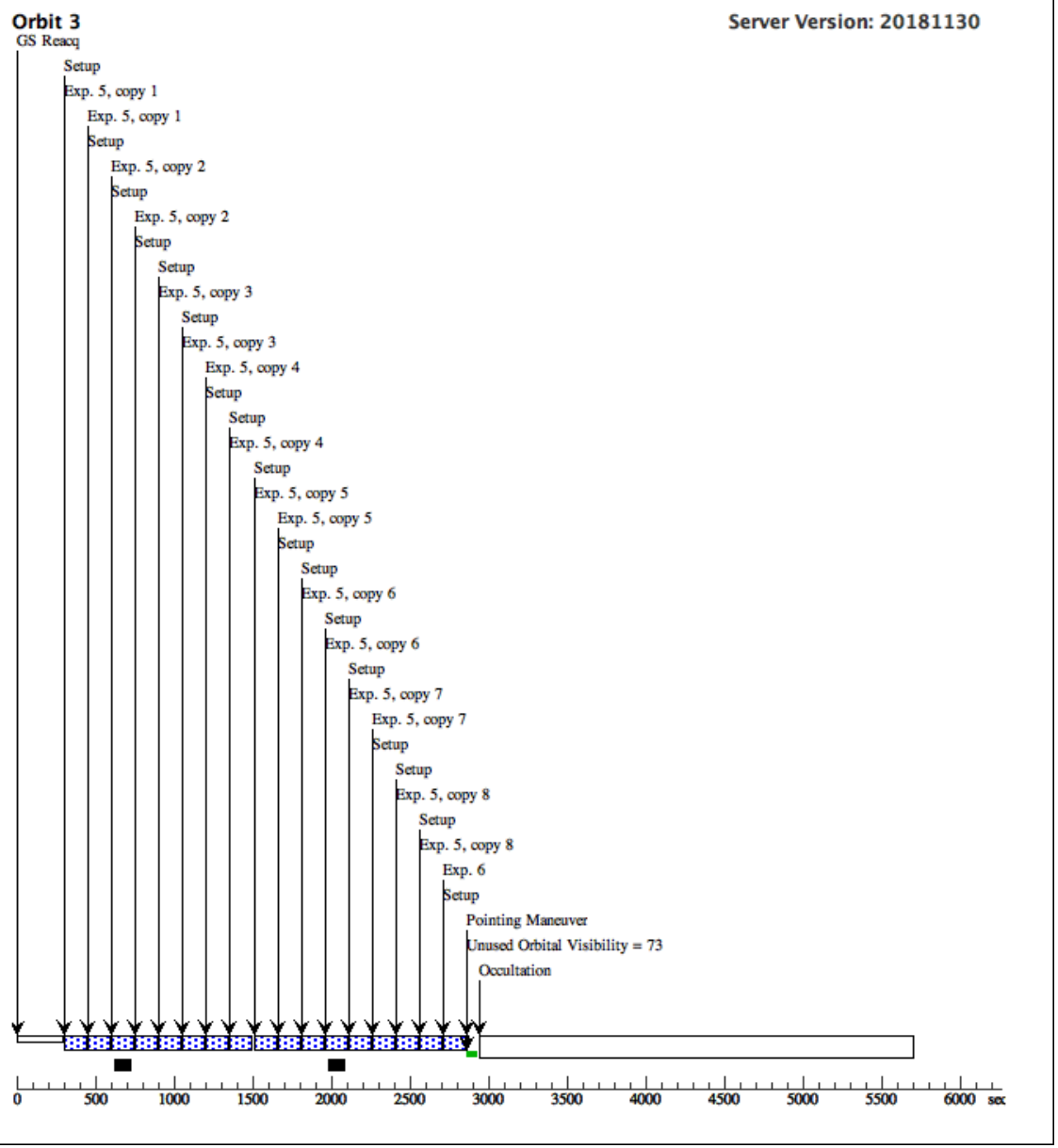
37	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 37-38 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[19]***
38	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 37-38 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[19]***
39	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 39-40 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[20]***
40	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 39-40 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[20]***

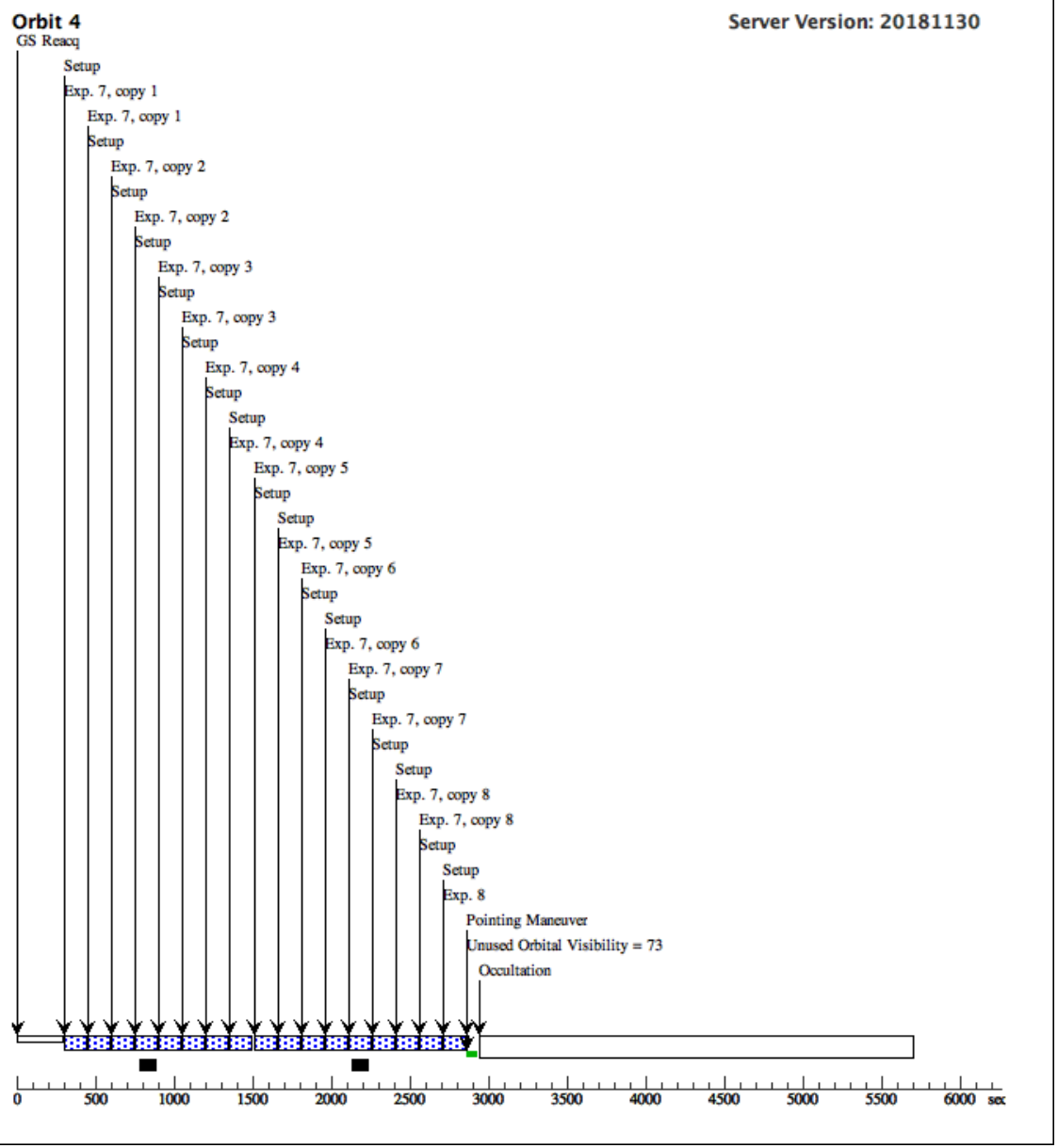
	41	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Round trip	Sequence 41-42 Non-Int in Visit 01	112.00801 Secs X 8 (1792.128 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]*	***[21]***
	42	(1) 2MASS-J19432996+5059289	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=SPARS25; NSAMP=6	SPATIAL SCAN 0.0 24,90.0 Degrees,Forward	Sequence 41-42 Non-Int in Visit 01	112.00801 Secs (112.008 Secs) *[==>]*	***[21]***

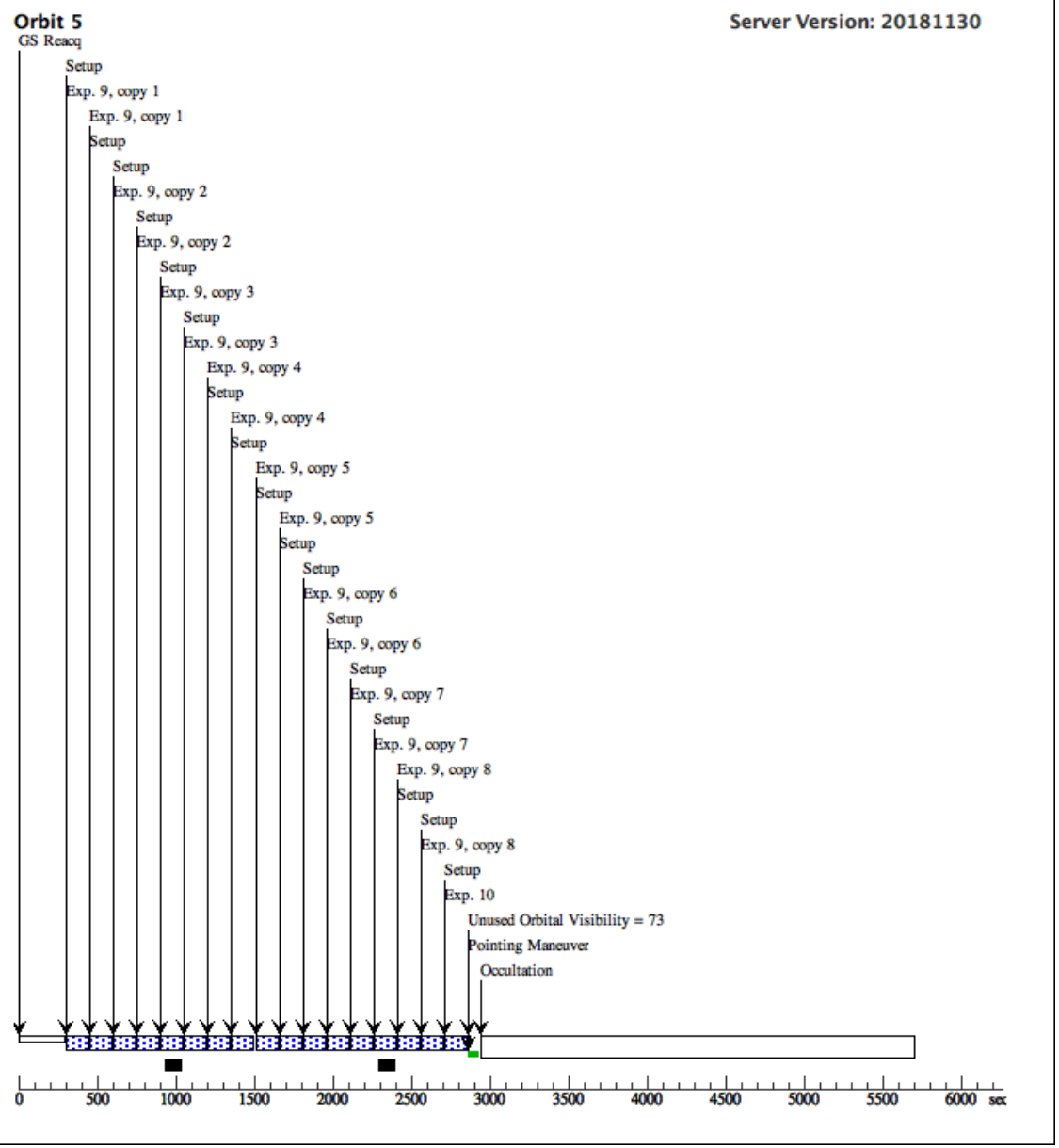
Orbit Structure

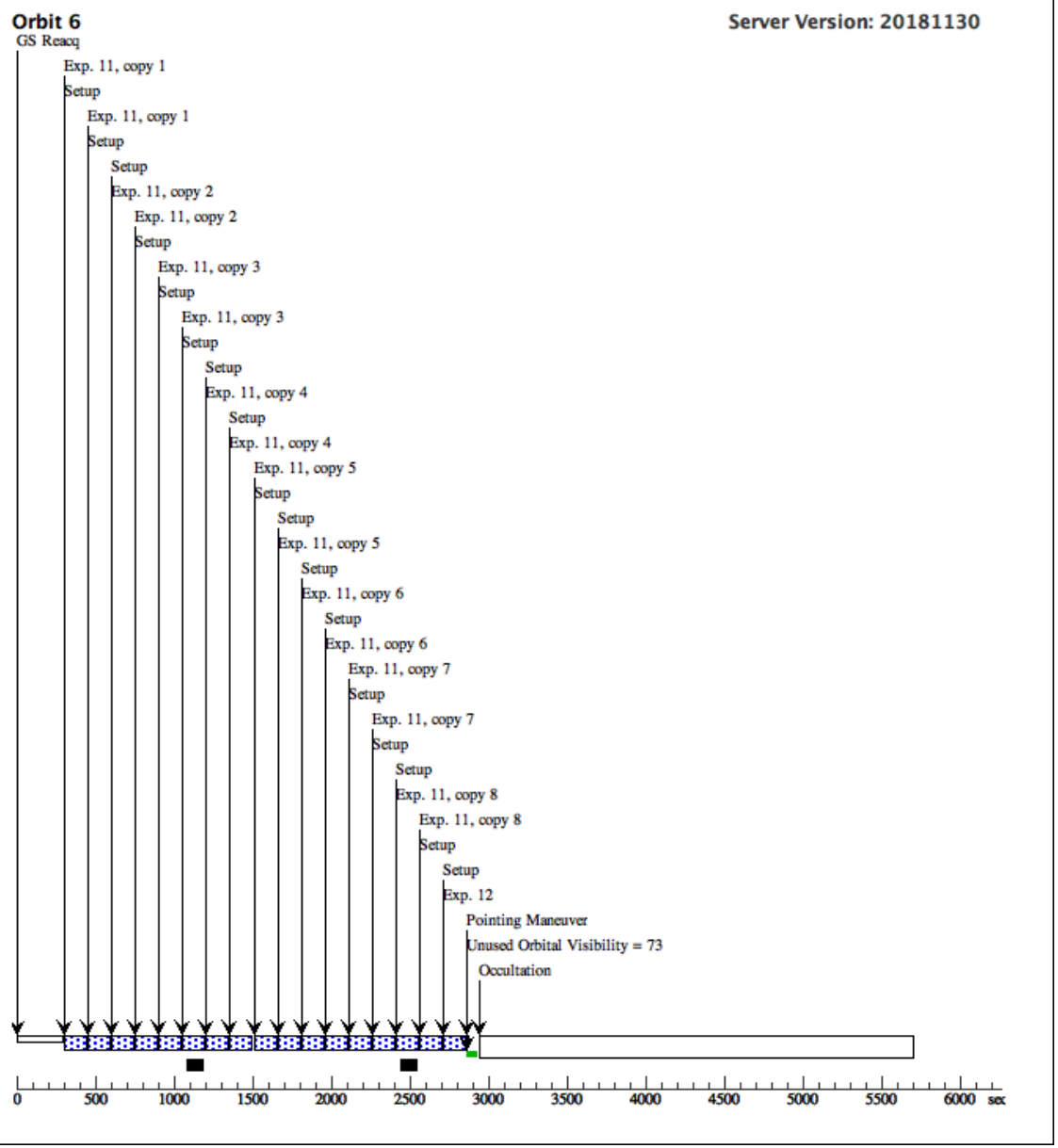


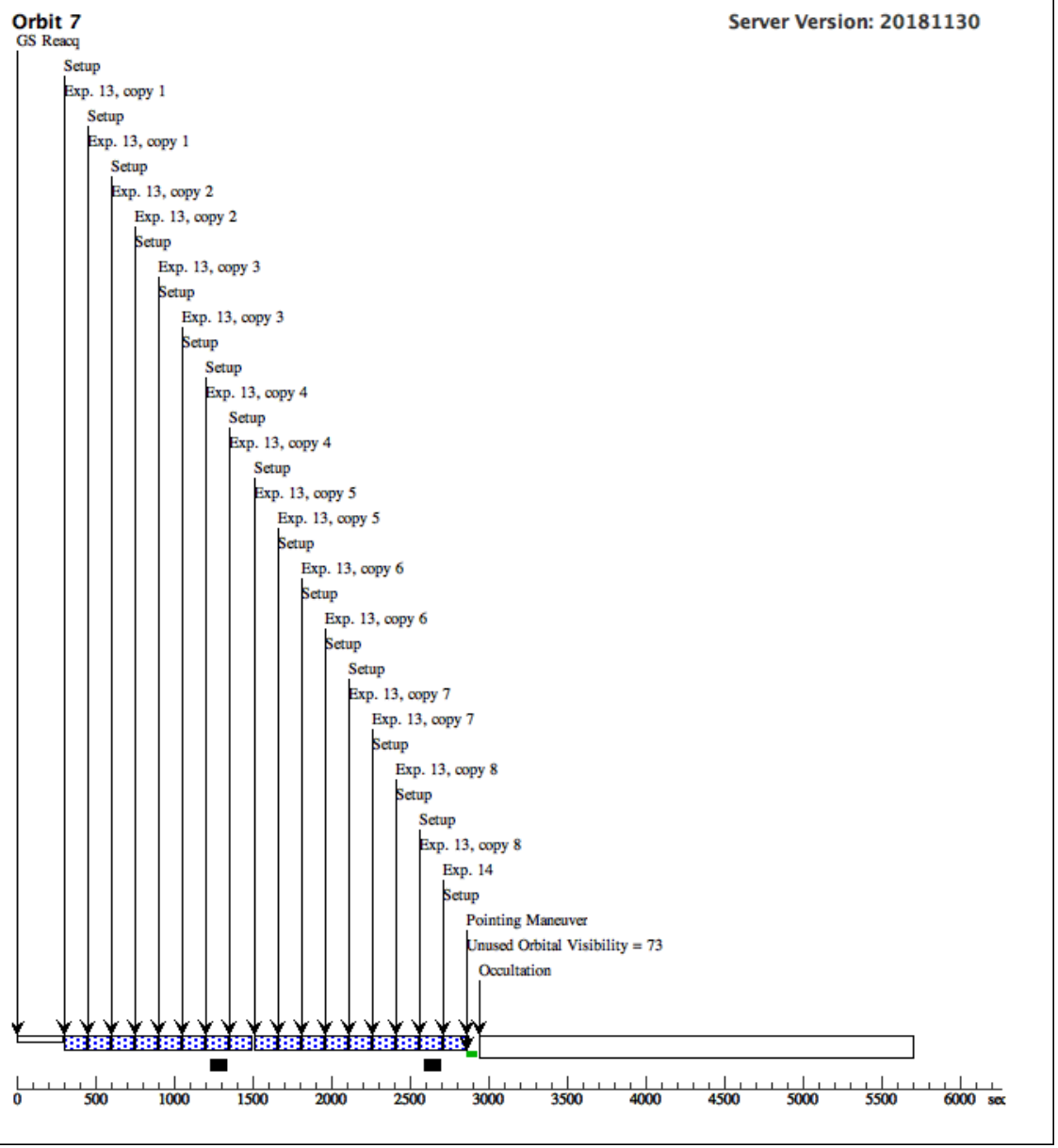

Orbit 2
Server Version: 20181130
GS Reacq
Exp. 3, copy 1
Setup
Setup
Exp. 3, copy 1
Exp. 3, copy 2
Setup
Exp. 3, copy 2
Setup
Exp. 3, copy 3
Setup
Exp. 3, copy 3
Setup
Setup
Exp. 3, copy 4
Exp. 3, copy 4
Setup
Setup
Exp. 3, copy 5
Setup
Exp. 3, copy 5
Setup
Exp. 3, copy 6
Setup
Exp. 3, copy 6
Exp. 3, copy 7
Setup
Setup
Exp. 3, copy 7
Setup
Exp. 3, copy 8
Exp. 3, copy 8
Setup
Setup
Exp. 4
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

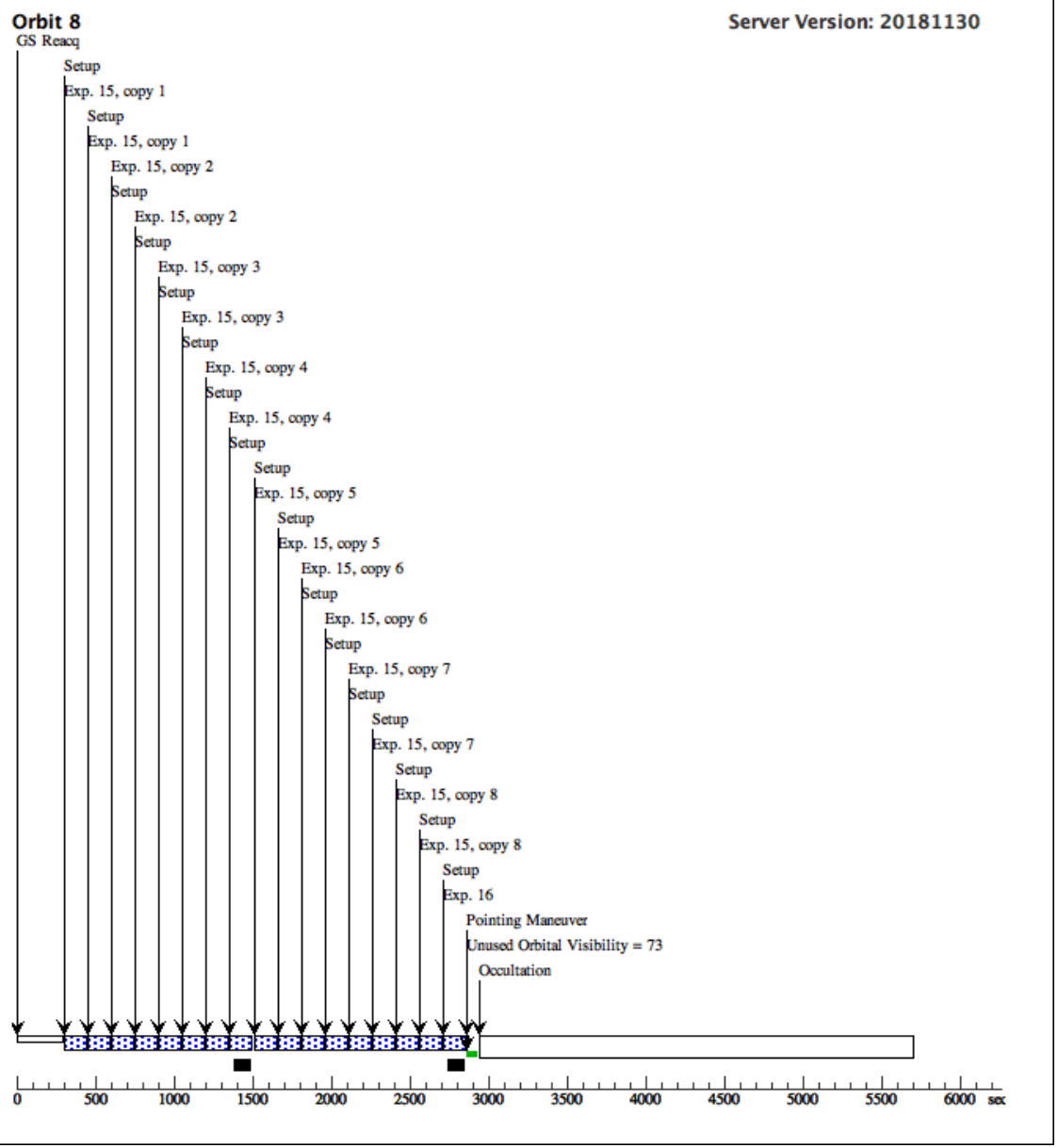

Orbit 3
Server Version: 20181130
GS Reacq
Setup
Exp. 5, copy 1
Exp. 5, copy 1
Setup
Exp. 5, copy 2
Setup
Exp. 5, copy 2
Setup
Setup
Exp. 5, copy 3
Setup
Exp. 5, copy 3
Exp. 5, copy 4
Setup
Setup
Exp. 5, copy 4
Setup
Exp. 5, copy 5
Exp. 5, copy 5
Setup
Setup
Exp. 5, copy 6
Setup
Exp. 5, copy 6
Setup
Exp. 5, copy 7
Exp. 5, copy 7
Setup
Setup
Exp. 5, copy 8
Setup
Exp. 5, copy 8
Exp. 6
Setup
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

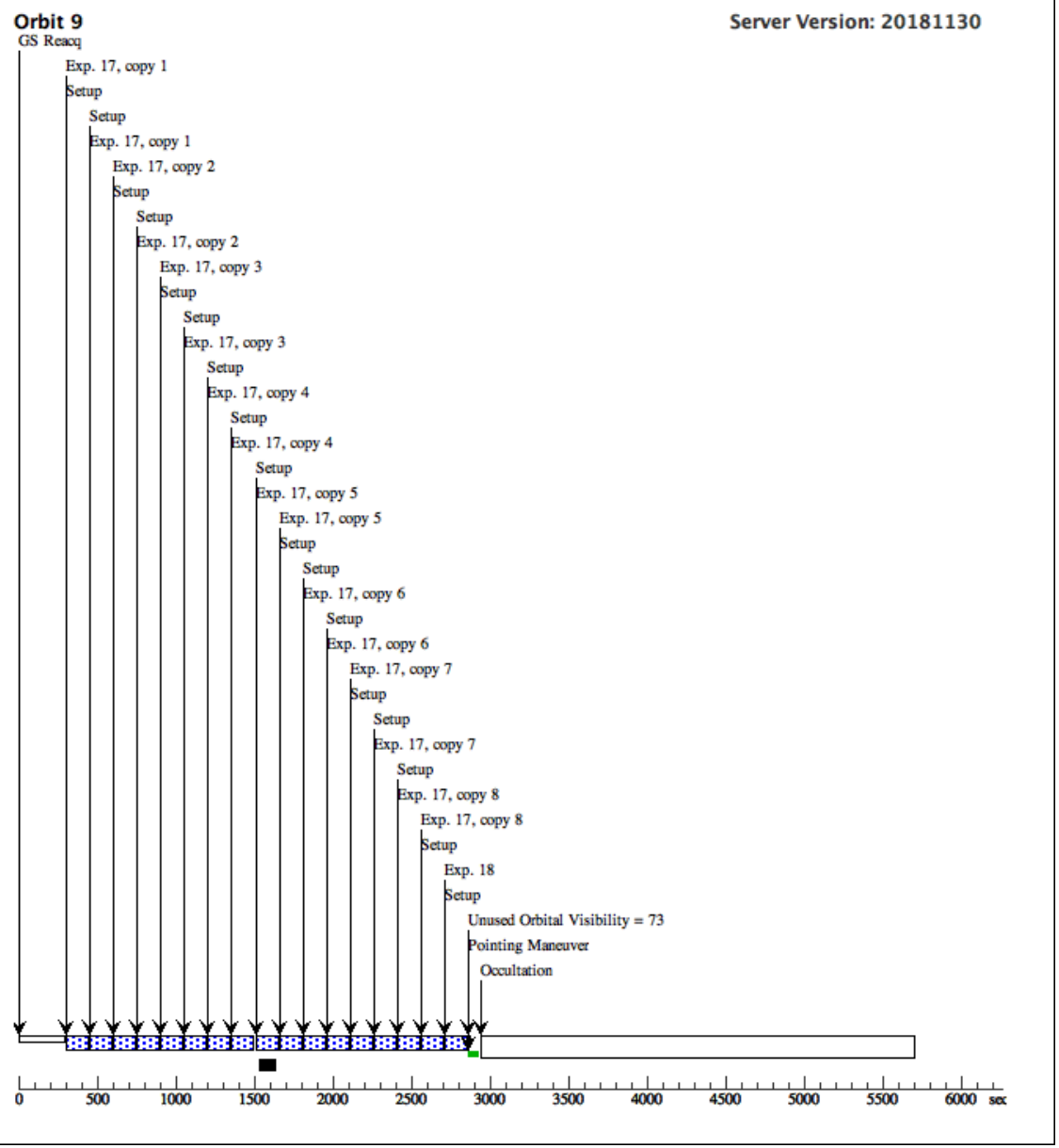

Orbit 4
Server Version: 20181130
GS Reacq
Setup
Exp. 7, copy 1
Exp. 7, copy 1
Setup
Exp. 7, copy 2
Setup
Exp. 7, copy 2
Setup
Exp. 7, copy 3
Setup
Exp. 7, copy 3
Setup
Exp. 7, copy 4
Setup
Setup
Exp. 7, copy 4
Exp. 7, copy 5
Setup
Setup
Exp. 7, copy 5
Exp. 7, copy 6
Setup
Setup
Exp. 7, copy 6
Exp. 7, copy 7
Setup
Exp. 7, copy 7
Setup
Setup
Exp. 7, copy 8
Exp. 7, copy 8
Setup
Setup
Exp. 8
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

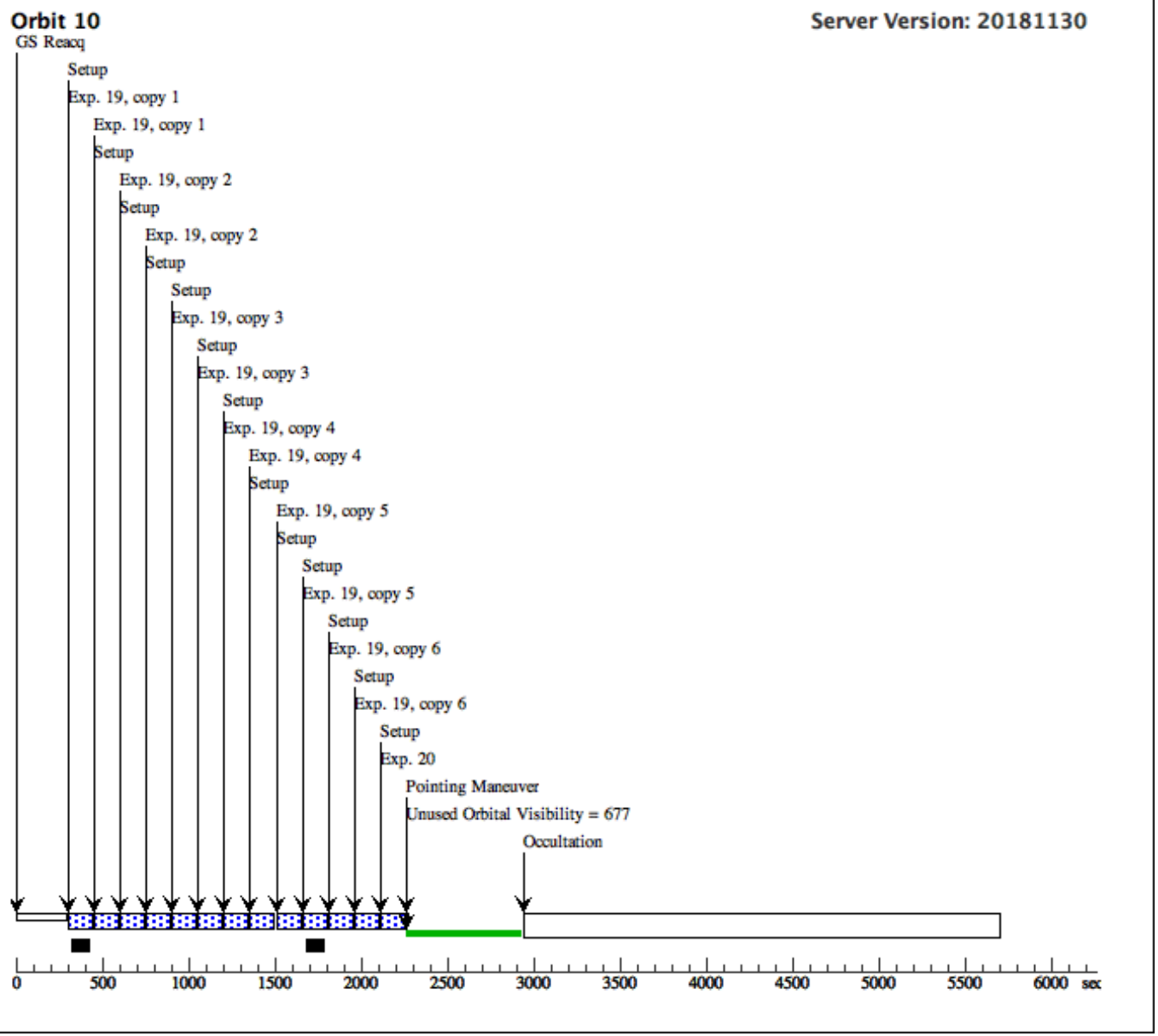

Orbit 5
Server Version: 20181130
GS Reacq
Setup
Exp. 9, copy 1
Exp. 9, copy 1
Setup
Setup
Exp. 9, copy 2
Setup
Exp. 9, copy 2
Setup
Exp. 9, copy 3
Setup
Exp. 9, copy 3
Exp. 9, copy 4
Setup
Exp. 9, copy 4
Setup
Exp. 9, copy 5
Setup
Exp. 9, copy 5
Setup
Setup
Exp. 9, copy 6
Setup
Exp. 9, copy 6
Setup
Exp. 9, copy 7
Setup
Exp. 9, copy 7
Exp. 9, copy 8
Setup
Setup
Exp. 9, copy 8
Setup
Exp. 10
Unused Orbital Visibility = 73
Pointing Maneuver
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

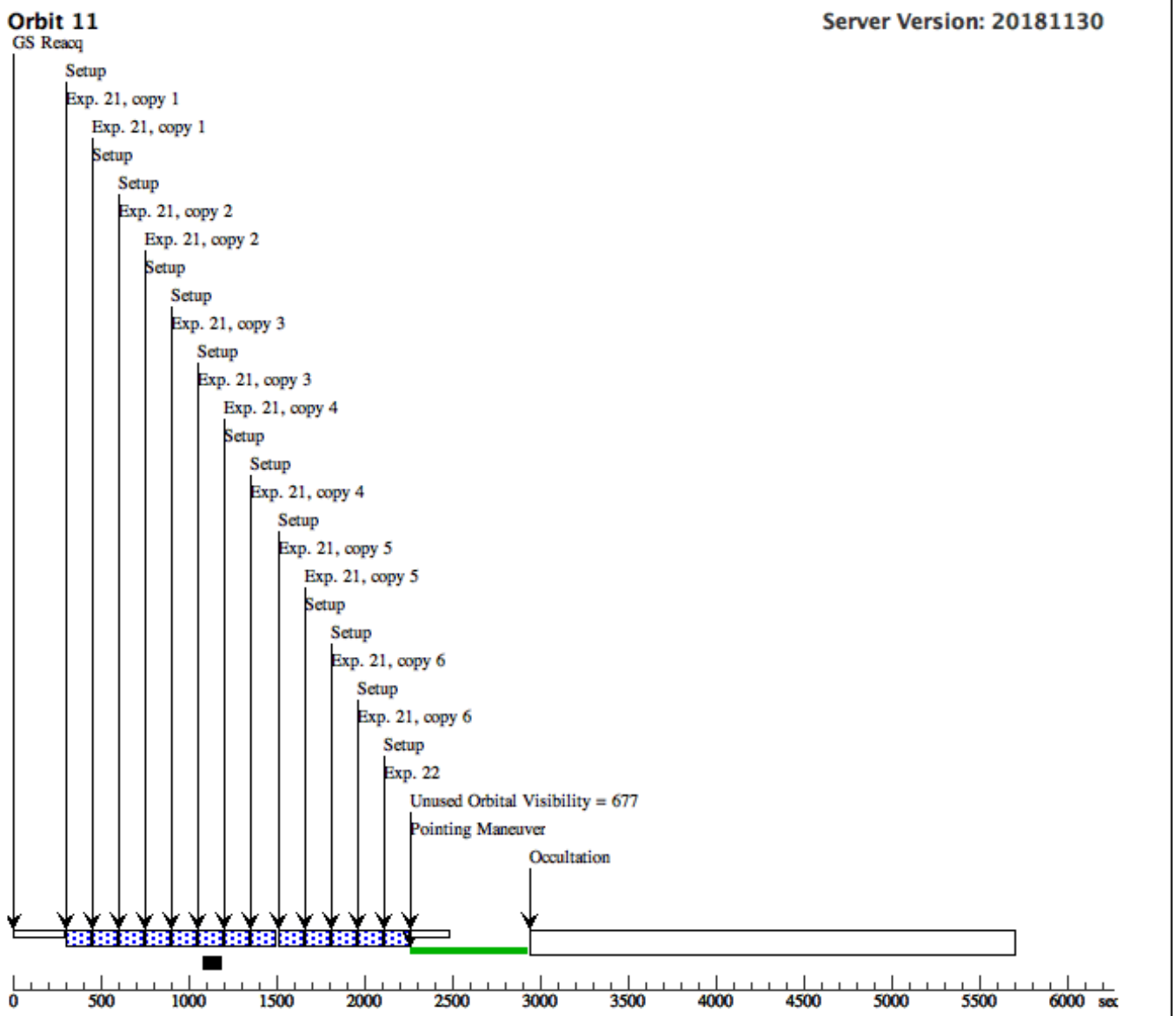

Orbit 6
Server Version: 20181130
GS Reacq
Exp. 11, copy 1
Setup
Exp. 11, copy 1
Setup
Setup
Exp. 11, copy 2
Exp. 11, copy 2
Setup
Exp. 11, copy 3
Setup
Exp. 11, copy 3
Setup
Setup
Exp. 11, copy 4
Setup
Exp. 11, copy 4
Exp. 11, copy 5
Setup
Setup
Exp. 11, copy 5
Setup
Exp. 11, copy 6
Setup
Exp. 11, copy 6
Exp. 11, copy 7
Setup
Exp. 11, copy 7
Setup
Setup
Exp. 11, copy 8
Exp. 11, copy 8
Setup
Setup
Exp. 12
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

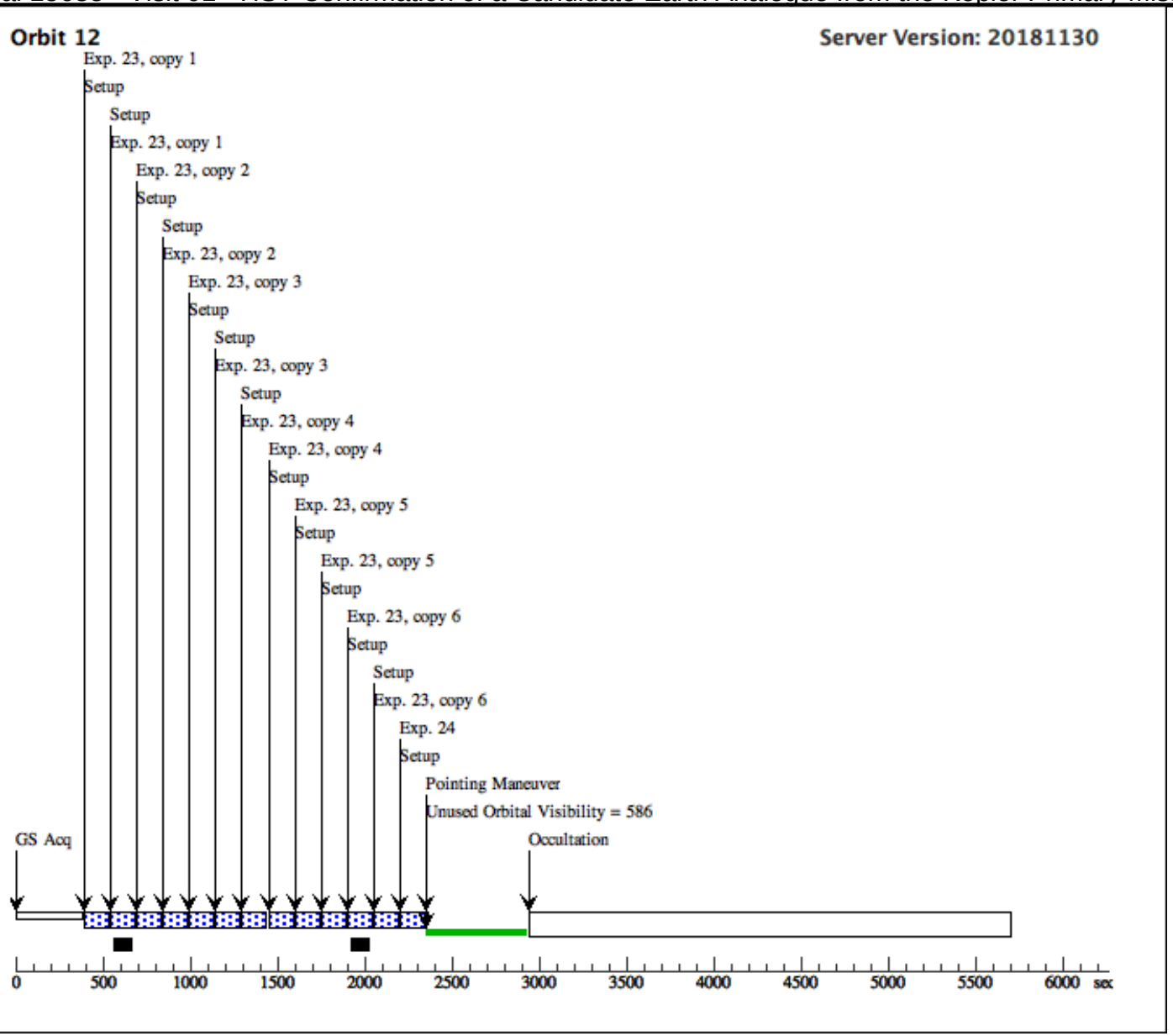

Orbit 7
Server Version: 20181130
GS Reacq
Setup
Exp. 13, copy 1
Setup
Exp. 13, copy 1
Setup
Exp. 13, copy 2
Exp. 13, copy 2
Setup
Exp. 13, copy 3
Setup
Exp. 13, copy 3
Setup
Setup
Exp. 13, copy 4
Setup
Exp. 13, copy 4
Setup
Exp. 13, copy 5
Exp. 13, copy 5
Setup
Exp. 13, copy 6
Setup
Exp. 13, copy 6
Setup
Setup
Exp. 13, copy 7
Exp. 13, copy 7
Setup
Exp. 13, copy 8
Setup
Setup
Exp. 13, copy 8
Exp. 14
Setup
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

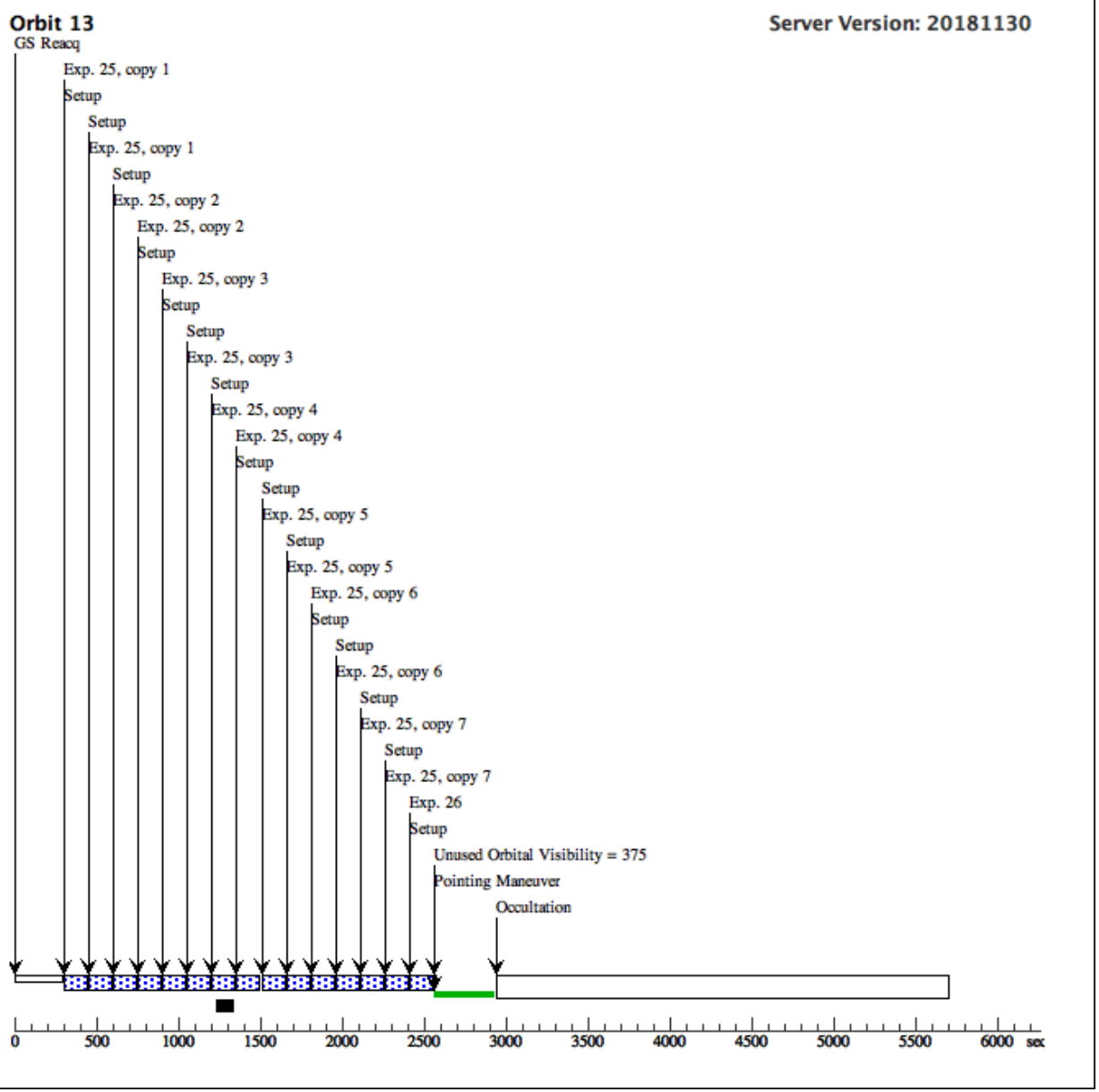

Orbit 8
Server Version: 20181130
GS Reacq
Setup
Exp. 15, copy 1
Setup
Exp. 15, copy 1
Exp. 15, copy 2
Setup
Exp. 15, copy 2
Setup
Exp. 15, copy 3
Setup
Exp. 15, copy 3
Setup
Exp. 15, copy 4
Setup
Exp. 15, copy 4
Setup
Setup
Exp. 15, copy 5
Setup
Exp. 15, copy 5
Exp. 15, copy 6
Setup
Exp. 15, copy 6
Setup
Exp. 15, copy 7
Setup
Setup
Exp. 15, copy 7
Setup
Exp. 15, copy 8
Setup
Exp. 15, copy 8
Setup
Exp. 16
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

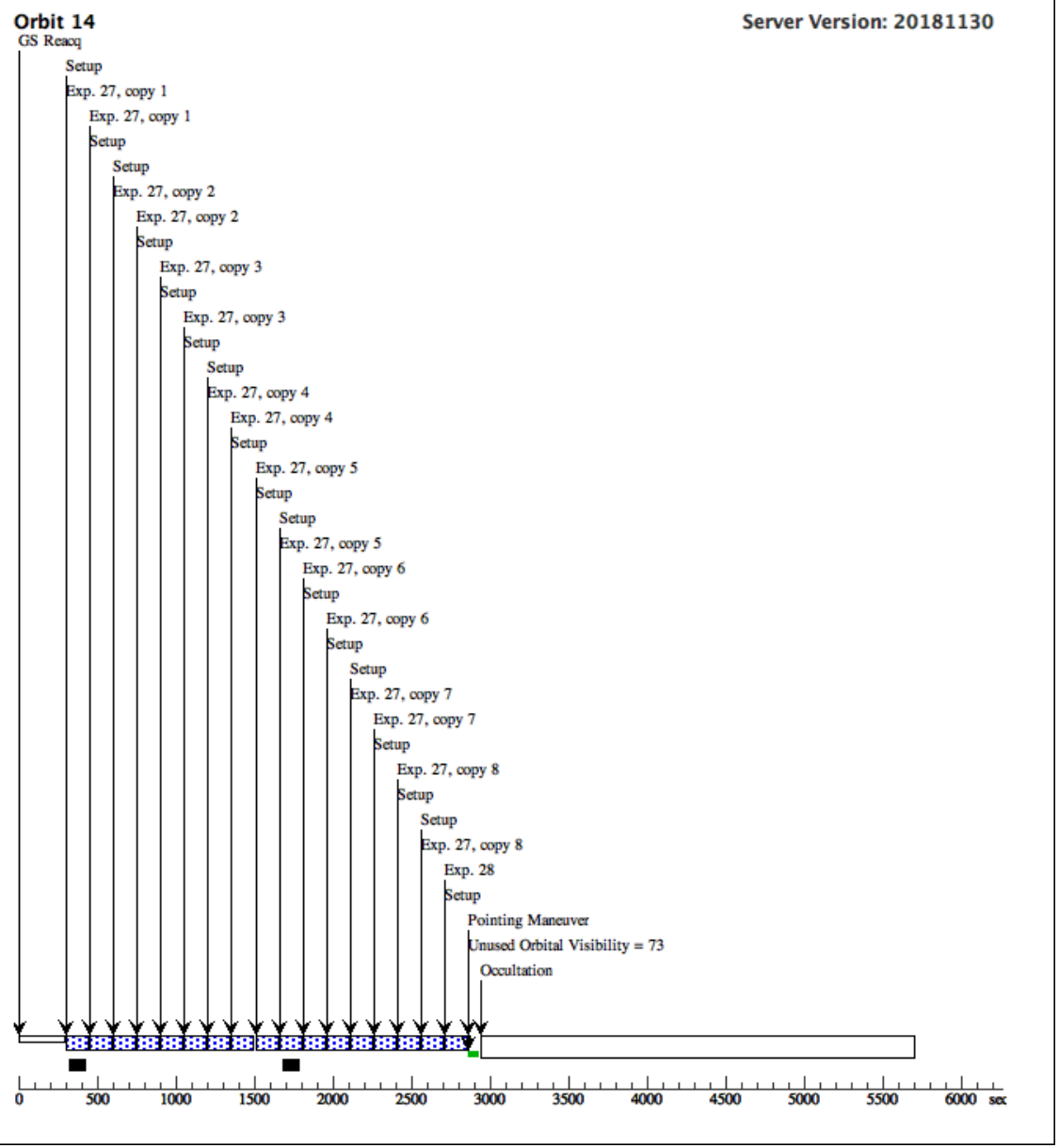

Orbit 9
Server Version: 20181130
GS Reacq
Exp. 17, copy 1
Setup
Setup
Exp. 17, copy 1
Exp. 17, copy 2
Setup
Setup
Exp. 17, copy 2
Exp. 17, copy 3
Setup
Setup
Exp. 17, copy 3
Setup
Exp. 17, copy 4
Setup
Exp. 17, copy 4
Setup
Exp. 17, copy 5
Exp. 17, copy 5
Setup
Setup
Exp. 17, copy 6
Setup
Exp. 17, copy 6
Exp. 17, copy 7
Setup
Setup
Exp. 17, copy 7
Setup
Exp. 17, copy 8
Exp. 17, copy 8
Setup
Exp. 18
Setup
Unused Orbital Visibility = 73
Pointing Maneuver
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

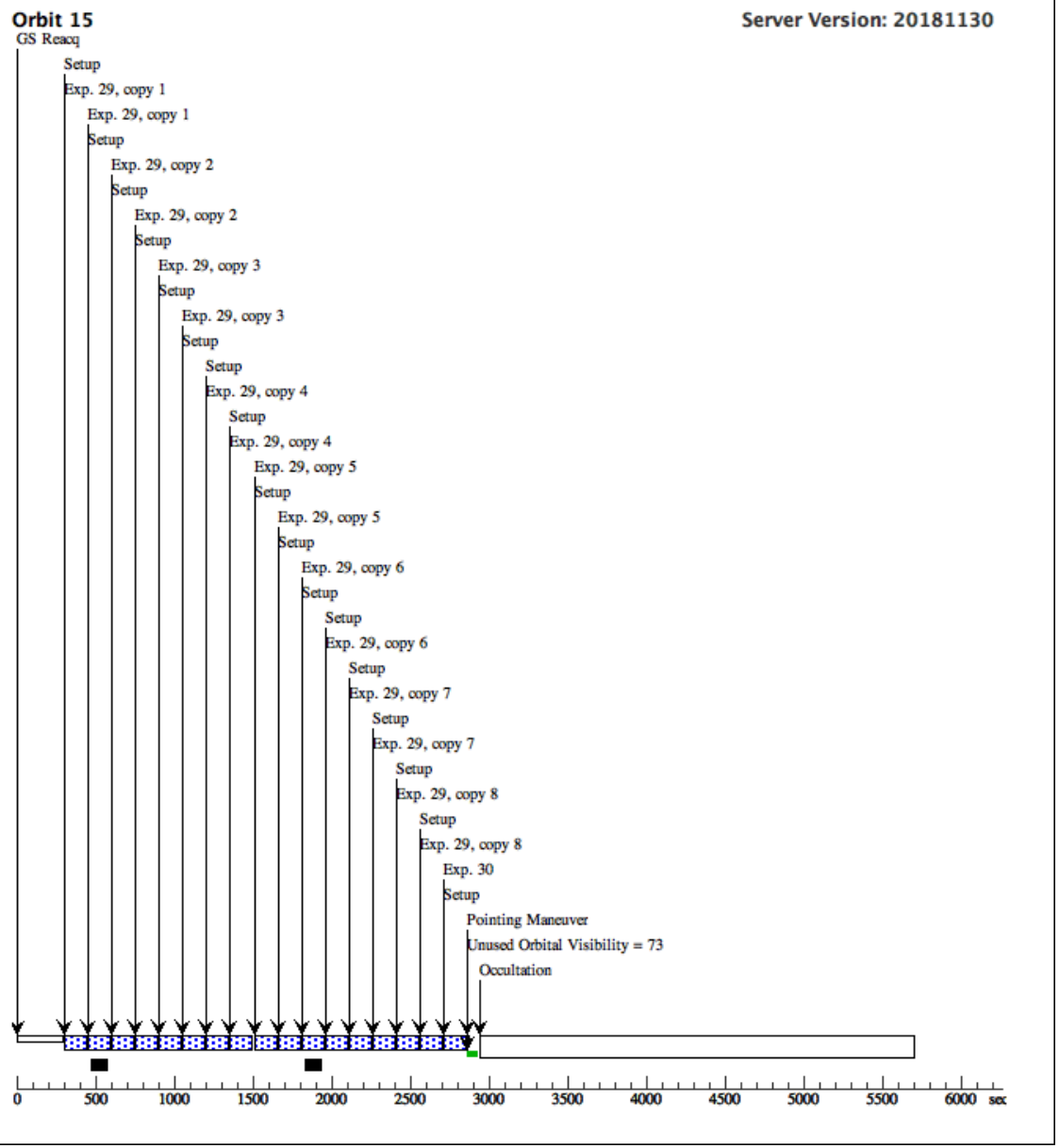

Orbit 10
Server Version: 20181130
GS Reacq
Setup
Exp. 19, copy 1
Exp. 19, copy 1
Setup
Exp. 19, copy 2
Setup
Exp. 19, copy 2
Setup
Setup
Exp. 19, copy 3
Setup
Exp. 19, copy 3
Setup
Exp. 19, copy 4
Exp. 19, copy 4
Setup
Exp. 19, copy 5
Setup
Setup
Exp. 19, copy 5
Setup
Exp. 19, copy 6
Setup
Exp. 19, copy 6
Setup
Exp. 20
Pointing Maneuver
Unused Orbital Visibility = 677
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

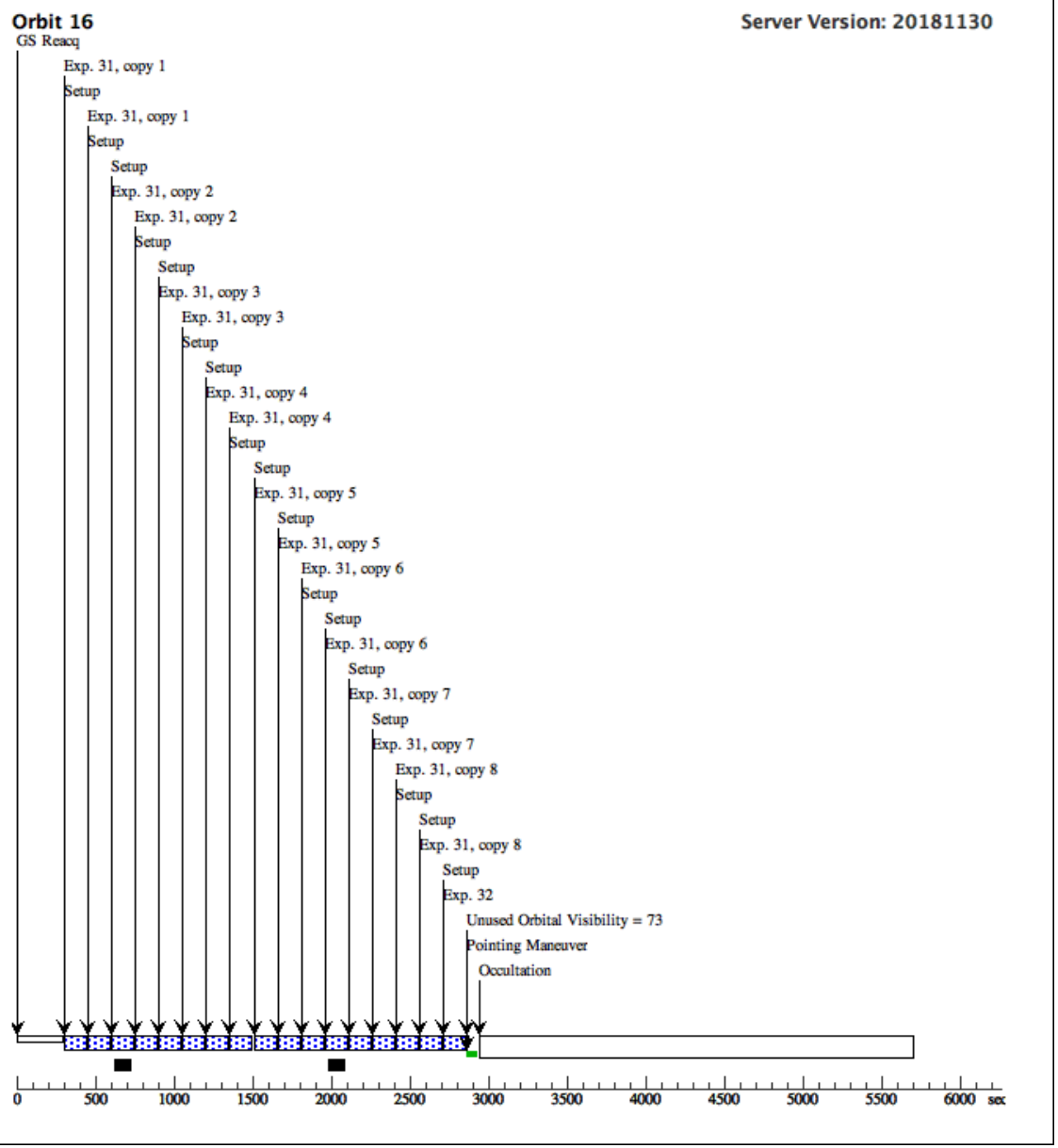

Orbit 11
Server Version: 20181130
GS Reacq
Setup
Exp. 21, copy 1
Exp. 21, copy 1
Setup
Setup
Exp. 21, copy 2
Exp. 21, copy 2
Setup
Setup
Exp. 21, copy 3
Setup
Exp. 21, copy 3
Exp. 21, copy 4
Setup
Setup
Exp. 21, copy 4
Setup
Exp. 21, copy 5
Exp. 21, copy 5
Setup
Setup
Exp. 21, copy 6
Setup
Exp. 21, copy 6
Setup
Exp. 22
Unused Orbital Visibility = 677
Pointing Maneuver
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

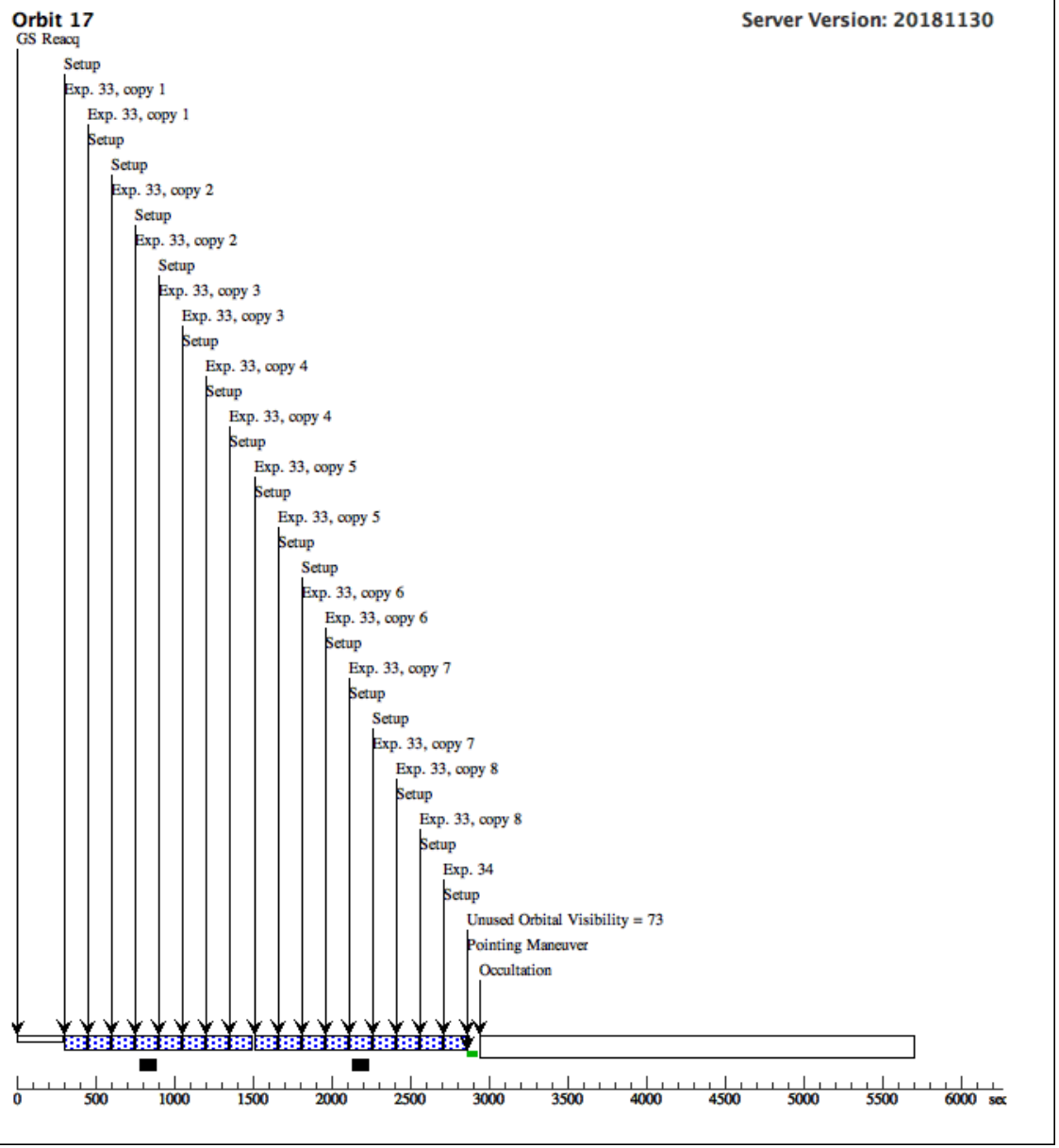

Orbit 12
Server Version: 20181130
Exp. 23, copy 1
Setup
Setup
Exp. 23, copy 1
Exp. 23, copy 2
Setup
Setup
Exp. 23, copy 2
Exp. 23, copy 3
Setup
Setup
Exp. 23, copy 3
Setup
Exp. 23, copy 4
Exp. 23, copy 4
Setup
Exp. 23, copy 5
Setup
Exp. 23, copy 5
Setup
Exp. 23, copy 6
Setup
Setup
Exp. 23, copy 6
Exp. 24
Setup
Pointing Maneuver
Unused Orbital Visibility = 586
GS Acq
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

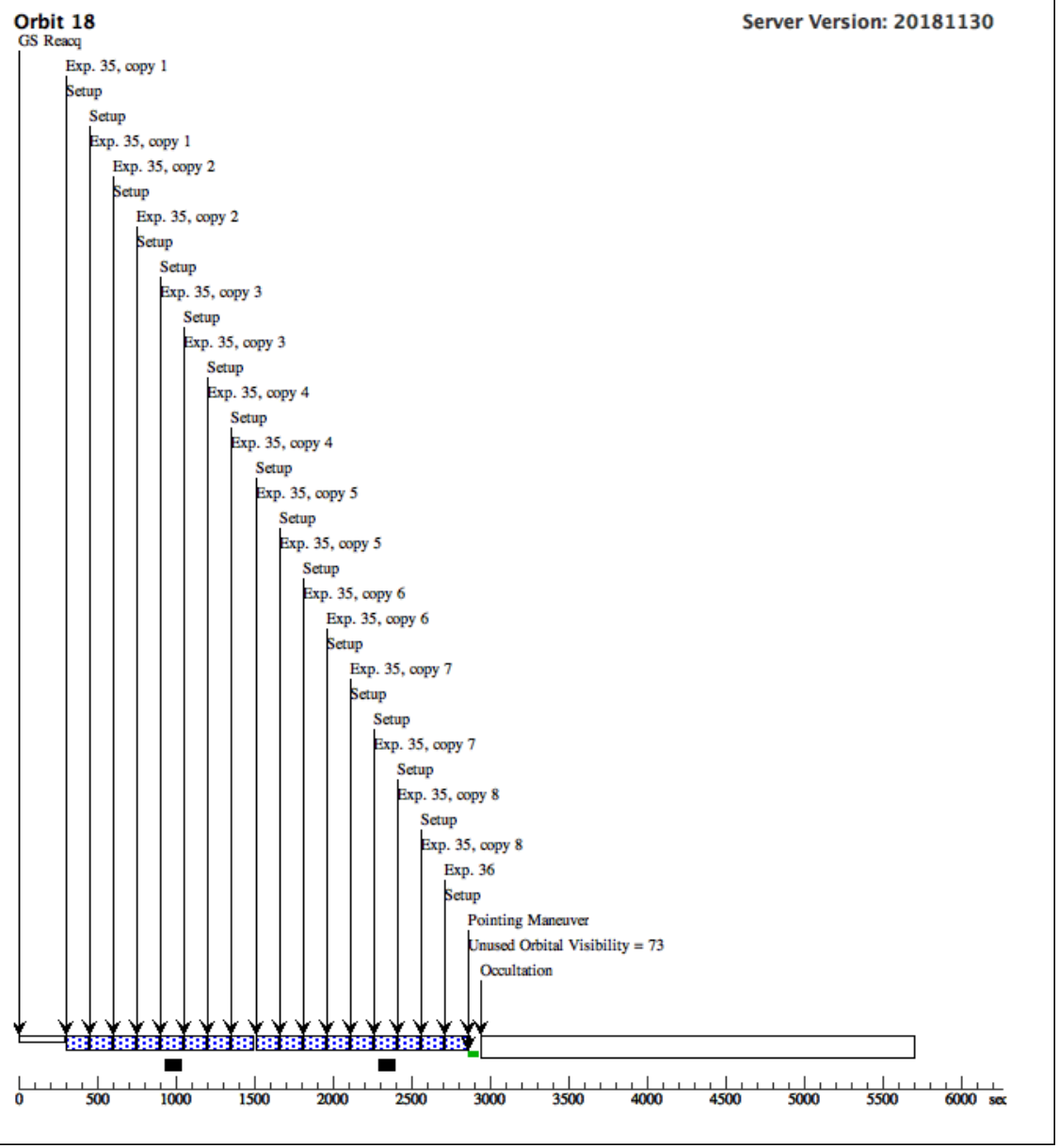

Orbit 13
Server Version: 20181130
GS Reacq
Exp. 25, copy 1
Setup
Setup
Exp. 25, copy 1
Setup
Exp. 25, copy 2
Exp. 25, copy 2
Setup
Exp. 25, copy 3
Setup
Setup
Exp. 25, copy 3
Setup
Exp. 25, copy 4
Exp. 25, copy 4
Setup
Setup
Exp. 25, copy 5
Setup
Exp. 25, copy 5
Exp. 25, copy 6
Setup
Setup
Exp. 25, copy 6
Setup
Exp. 25, copy 7
Setup
Exp. 25, copy 7
Exp. 26
Setup
Unused Orbital Visibility = 375
Pointing Maneuver
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

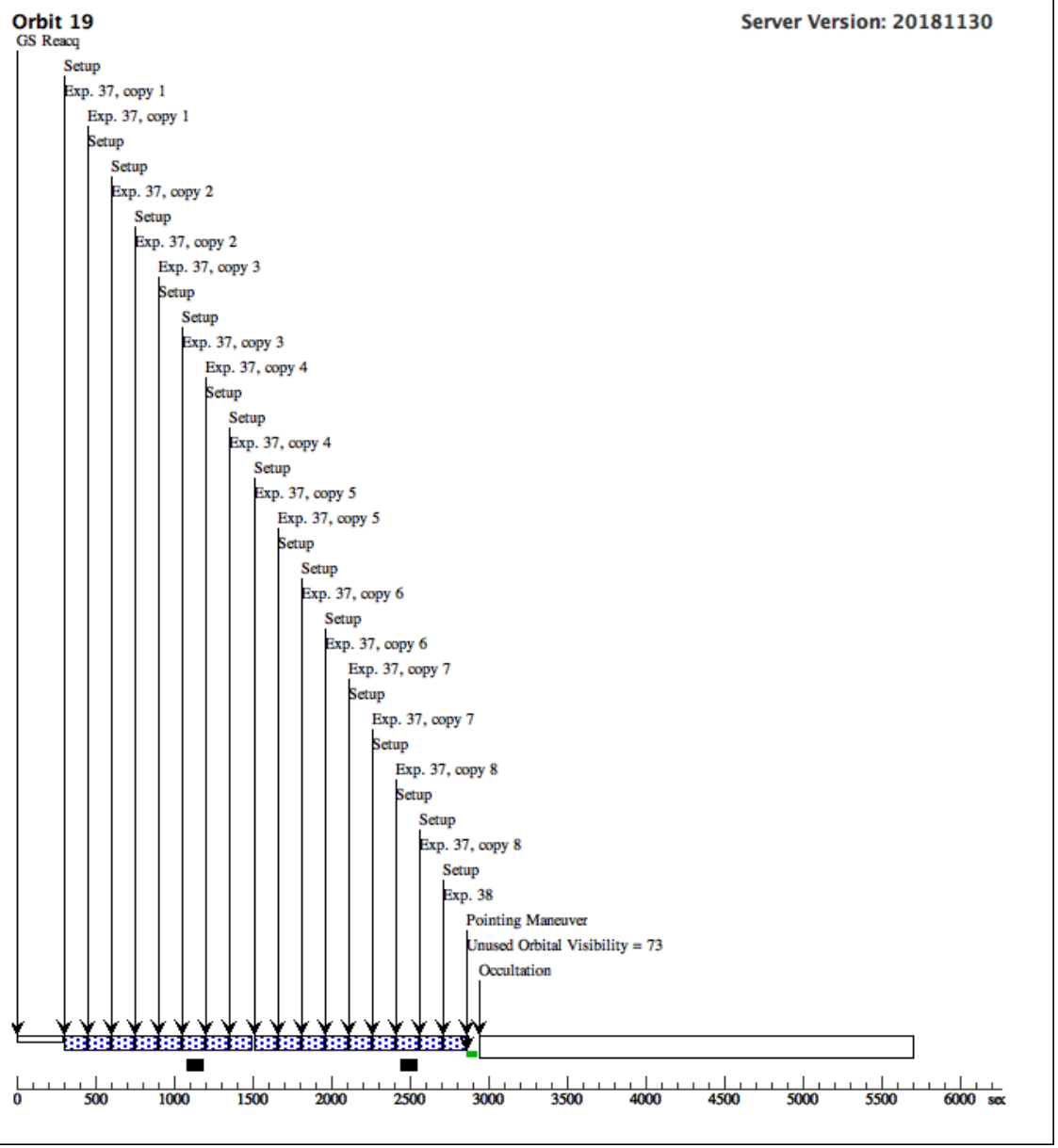

Orbit 14
Server Version: 20181130
GS Reacq
Setup
Exp. 27, copy 1
Exp. 27, copy 1
Setup
Setup
Exp. 27, copy 2
Exp. 27, copy 2
Setup
Exp. 27, copy 3
Setup
Exp. 27, copy 3
Setup
Setup
Exp. 27, copy 4
Exp. 27, copy 4
Setup
Exp. 27, copy 5
Setup
Setup
Exp. 27, copy 5
Exp. 27, copy 6
Setup
Exp. 27, copy 6
Setup
Setup
Exp. 27, copy 7
Exp. 27, copy 7
Setup
Exp. 27, copy 8
Setup
Setup
Exp. 27, copy 8
Exp. 28
Setup
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

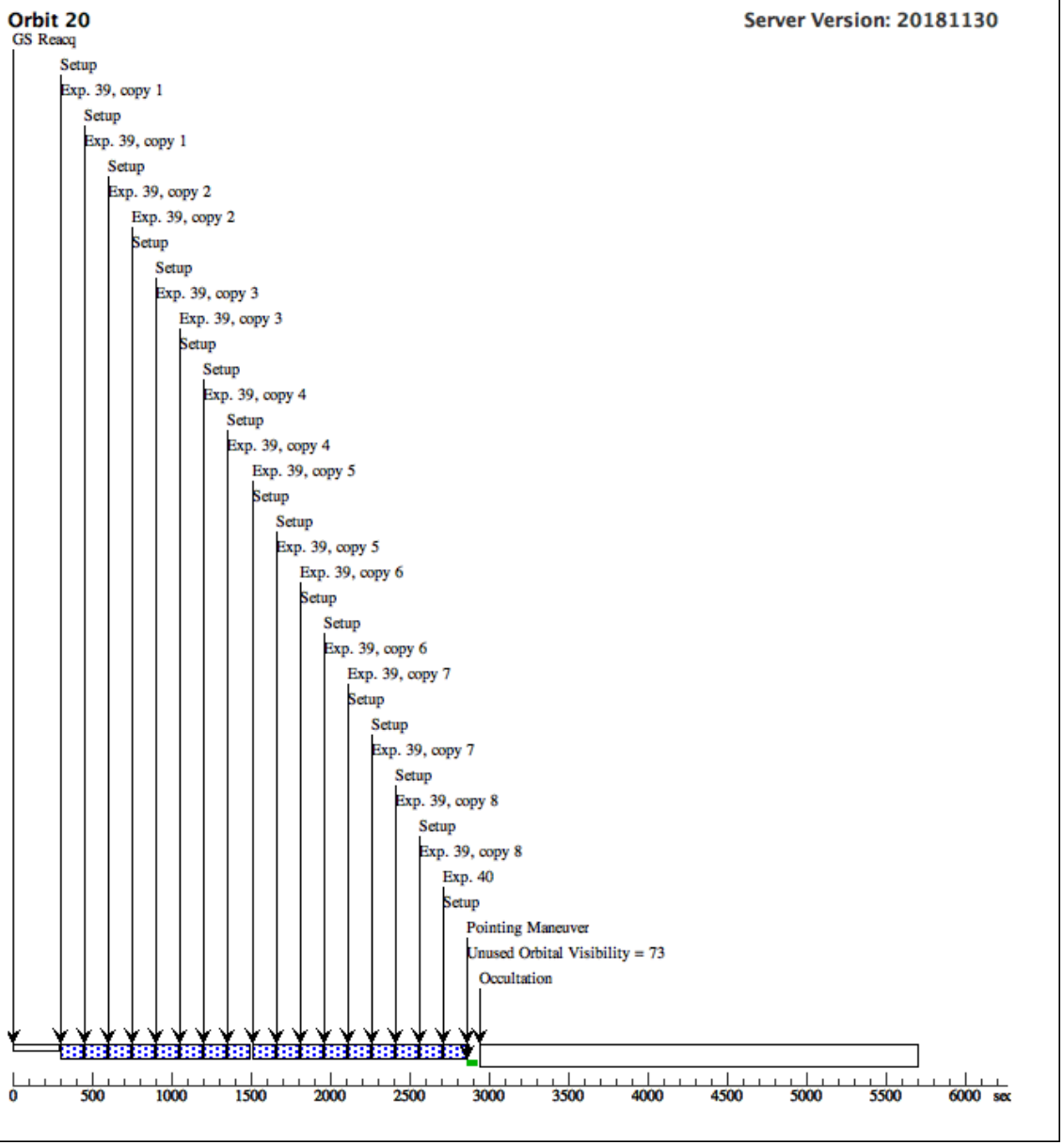

Orbit 15
Server Version: 20181130
GS Reacq
Setup
Exp. 29, copy 1
Exp. 29, copy 1
Setup
Exp. 29, copy 2
Setup
Exp. 29, copy 2
Setup
Exp. 29, copy 3
Setup
Exp. 29, copy 3
Setup
Setup
Exp. 29, copy 4
Setup
Exp. 29, copy 4
Exp. 29, copy 5
Setup
Exp. 29, copy 5
Setup
Exp. 29, copy 6
Setup
Setup
Exp. 29, copy 6
Setup
Exp. 29, copy 7
Setup
Exp. 29, copy 7
Setup
Exp. 29, copy 8
Setup
Exp. 29, copy 8
Exp. 30
Setup
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

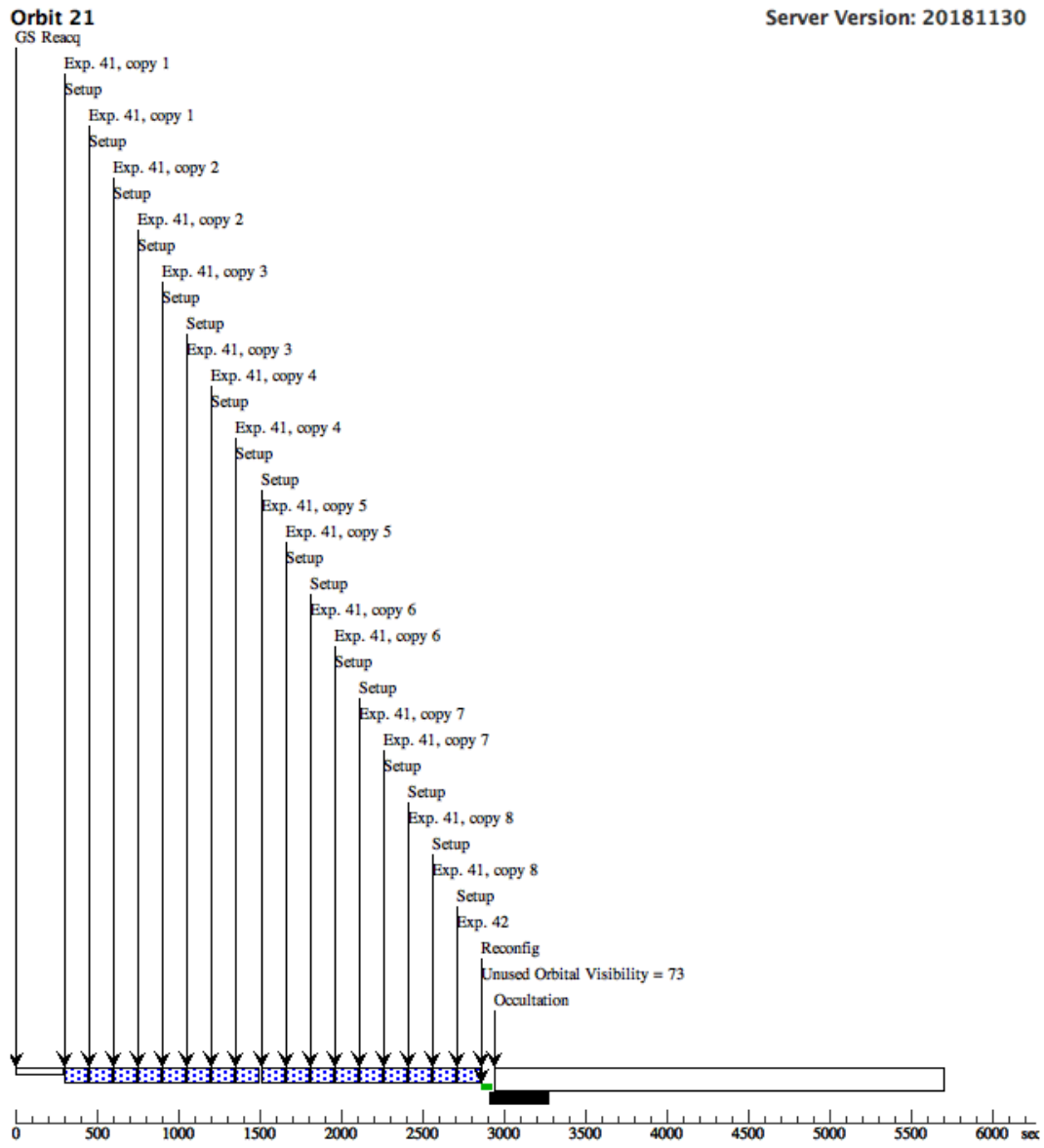

Orbit 16
Server Version: 20181130
GS Reacq
Exp. 31, copy 1
Setup
Exp. 31, copy 1
Setup
Setup
Exp. 31, copy 2
Exp. 31, copy 2
Setup
Setup
Exp. 31, copy 3
Exp. 31, copy 3
Setup
Setup
Exp. 31, copy 4
Exp. 31, copy 4
Setup
Setup
Exp. 31, copy 5
Setup
Exp. 31, copy 5
Exp. 31, copy 6
Setup
Setup
Exp. 31, copy 6
Setup
Exp. 31, copy 7
Setup
Exp. 31, copy 7
Exp. 31, copy 8
Setup
Setup
Exp. 31, copy 8
Setup
Exp. 32
Unused Orbital Visibility = 73
Pointing Maneuver
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 17
Server Version: 20181130
GS Reacq
Setup
Exp. 33, copy 1
Exp. 33, copy 1
Setup
Setup
Exp. 33, copy 2
Setup
Exp. 33, copy 2
Setup
Exp. 33, copy 3
Exp. 33, copy 3
Setup
Exp. 33, copy 4
Setup
Exp. 33, copy 4
Setup
Exp. 33, copy 5
Setup
Exp. 33, copy 5
Setup
Setup
Exp. 33, copy 6
Exp. 33, copy 6
Setup
Exp. 33, copy 7
Setup
Setup
Exp. 33, copy 7
Exp. 33, copy 8
Setup
Exp. 33, copy 8
Setup
Exp. 34
Setup
Unused Orbital Visibility = 73
Pointing Maneuver
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 18
Server Version: 20181130
GS Reacq
Exp. 35, copy 1
Setup
Setup
Exp. 35, copy 1
Exp. 35, copy 2
Setup
Exp. 35, copy 2
Setup
Setup
Exp. 35, copy 3
Setup
Exp. 35, copy 3
Setup
Exp. 35, copy 4
Setup
Exp. 35, copy 4
Setup
Exp. 35, copy 5
Setup
Exp. 35, copy 5
Setup
Exp. 35, copy 6
Exp. 35, copy 6
Setup
Exp. 35, copy 7
Setup
Setup
Exp. 35, copy 7
Setup
Exp. 35, copy 8
Setup
Exp. 35, copy 8
Exp. 36
Setup
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 19
Server Version: 20181130
GS Reacq
Setup
Exp. 37, copy 1
Exp. 37, copy 1
Setup
Setup
Exp. 37, copy 2
Setup
Exp. 37, copy 2
Exp. 37, copy 3
Setup
Setup
Exp. 37, copy 3
Exp. 37, copy 4
Setup
Setup
Exp. 37, copy 4
Setup
Exp. 37, copy 5
Exp. 37, copy 5
Setup
Setup
Exp. 37, copy 6
Setup
Exp. 37, copy 6
Exp. 37, copy 7
Setup
Exp. 37, copy 7
Setup
Exp. 37, copy 8
Setup
Setup
Exp. 37, copy 8
Setup
Exp. 38
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 20
Server Version: 20181130
GS Reacq
Setup
Exp. 39, copy 1
Setup
Exp. 39, copy 1
Setup
Exp. 39, copy 2
Exp. 39, copy 2
Setup
Setup
Exp. 39, copy 3
Exp. 39, copy 3
Setup
Setup
Exp. 39, copy 4
Setup
Exp. 39, copy 4
Exp. 39, copy 5
Setup
Setup
Exp. 39, copy 5
Exp. 39, copy 6
Setup
Setup
Exp. 39, copy 6
Exp. 39, copy 7
Setup
Setup
Exp. 39, copy 7
Setup
Exp. 39, copy 8
Setup
Exp. 39, copy 8
Exp. 40
Setup
Pointing Maneuver
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 21
Server Version: 20181130
GS Reacq
Exp. 41, copy 1
Setup
Exp. 41, copy 1
Setup
Exp. 41, copy 2
Setup
Exp. 41, copy 2
Setup
Exp. 41, copy 3
Setup
Setup
Exp. 41, copy 3
Exp. 41, copy 4
Setup
Exp. 41, copy 4
Setup
Setup
Exp. 41, copy 5
Exp. 41, copy 5
Setup
Setup
Exp. 41, copy 6
Exp. 41, copy 6
Setup
Setup
Exp. 41, copy 7
Exp. 41, copy 7
Setup
Setup
Exp. 41, copy 8
Setup
Exp. 41, copy 8
Setup
Exp. 42
Reconfig
Unused Orbital Visibility = 73
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec