15969 - Exploring the relation between aerosol formation and temperature with the TESS hot-Neptune HD 219666b

Cycle: 27, Proposal Category: GO

(Availability Mode: AVAILABLE)

INVESTIGATORS

Name	*Institution*	*E-Mail*
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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) HD-219666	WFC3/IR	4	30-Jul-2020 15:00:54.0	yes
02	(1) HD-219666	WFC3/IR	4	30-Jul-2020 15:01:20.0	yes
03	(1) HD-219666	WFC3/IR	5	30-Jul-2020 15:02:12.0	yes
04	(1) HD-219666	WFC3/IR	4	30-Jul-2020 15:02:43.0	yes
05	(1) HD-219666	WFC3/IR	4	30-Jul-2020 15:03:02.0	yes
06	(1) HD-219666	WFC3/IR	4	30-Jul-2020 15:03:38.0	yes

25 Total Orbits Used

ABSTRACT

The atmospheres of Neptune-size (2-6 Earth radii) planets are poorly understood mainly due to the degeneracy between composition and high-altitude aerosols. Past studies have tried to resolve this degeneracy and understand the aerosol formation processes using statistical methods. A recently found potential correlation between equilibrium temperature and water absorption amplitude indicates a possible decrease aerosol formation as planets become hotter. However, due to the very limited sample size (~6) with only 2 warm (>850K) planets so far showing any water spectral features, this possible correlation is extremely statistically fragile.

We propose to observe HD 219666b, a hot-Neptune recently discovered by TESS. Its high equilibrium temperature (~1073K) and ideal radius (4.71 Earth radii) make it a prime target to test our current understanding of the relationship between temperature and aerosol formation. While a prominent water spectra features will confirm that hotter planets have clear atmospheres and improve the target selections for future JWST observations, a featureless flat spectrum can also provide new observational insights into aerosols formations.

We plan to observe HD 219666b using HST/WFC3 for a total of 6 visits with 3 in G102 and 3 in G141 grism to obtain a high S/N transmission spectrum. With additional wavelength coverage from G102, we will be able to precisely constrain the metallicity and the cloudtop pressure without degeneracy. In addition, G102 allows for detecting possible helium escape from the upper atmosphere by searching for excess emission from the 10830 angstrom helium triplet lines.

OBSERVING DESCRIPTION

We will observe 6 transits of HD 219666b with G141 and G102 grism.

Visit

Proposal 15969, HD-219666 WFC3/G141 (01), completed Thu Jul 30 19:03:41 GMT 2020

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 30%; Period 6.03607 D AND ZERO-PHASE HJD2458329.1996

Comments: sched 30 with 40 minutes phase windows

Diagnostics

(HD-219666 WFC3/G141 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(HD-219666 WFC3/G141 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-219666	RA: 23 18 14.2240 (349.5592667d) Dec: -56 54 14.35 (-56.90399d) Equinox: J2000	Proper Motion RA: 0.03832635966954526 sec of time/yr Proper Motion Dec: -0.02017699998759781 arcsec/yr Epoch of Position: 2015.5	V=9.81	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[G V-IV]

Exposures

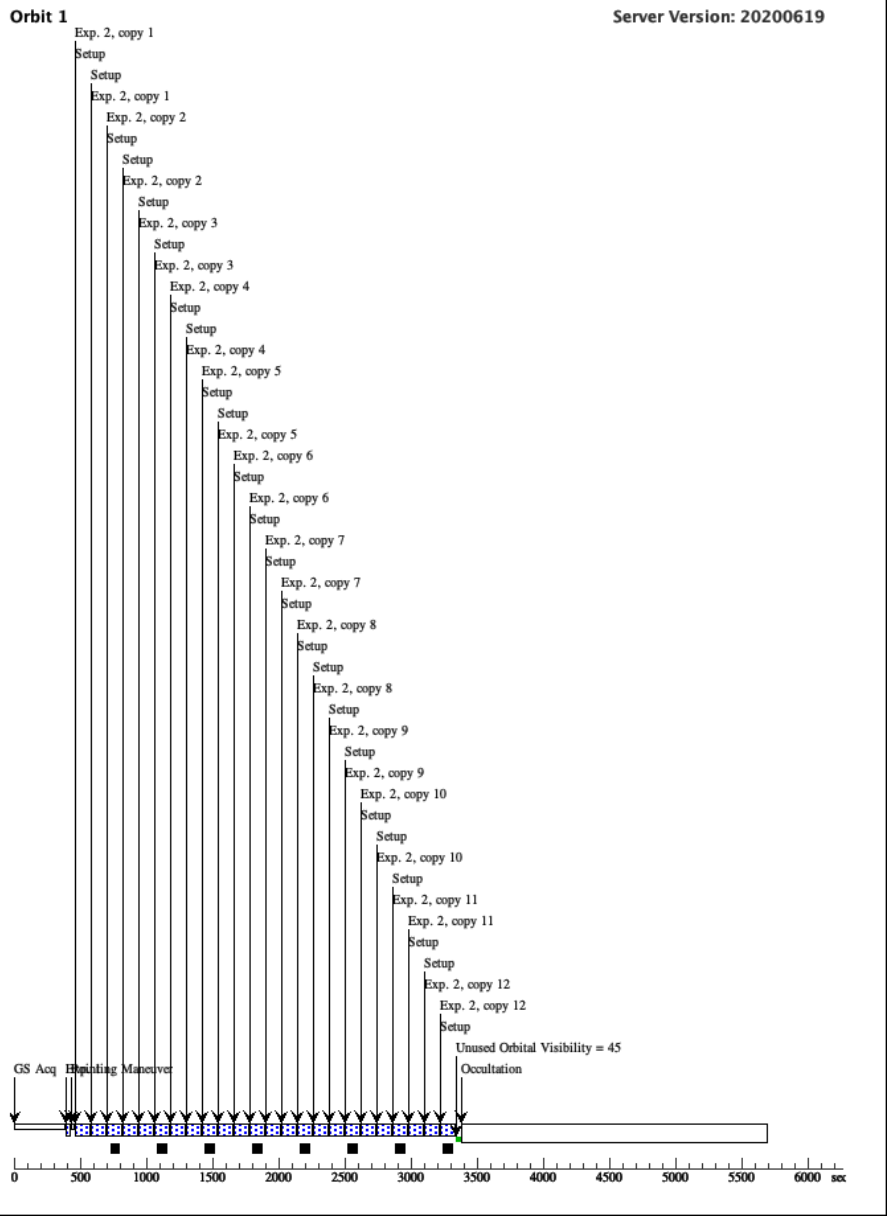
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Stare	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	F126N	NSAMP=2; SAMP-SEQ=RAPID	PHASE 0.9783705176349312 TO 0.9829725351594 14	Sequence 1-2 Non-Int in HD-219666 WFC3/G141 (01)	0.55563 Secs (0.556 Secs) *[==>]*	***[1]***
2	Scan-Forward	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 1-2 Non-Int in HD-219666 WFC3/G141 (01)	81.089172 Secs X 12 (1946.14 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	***[1]***

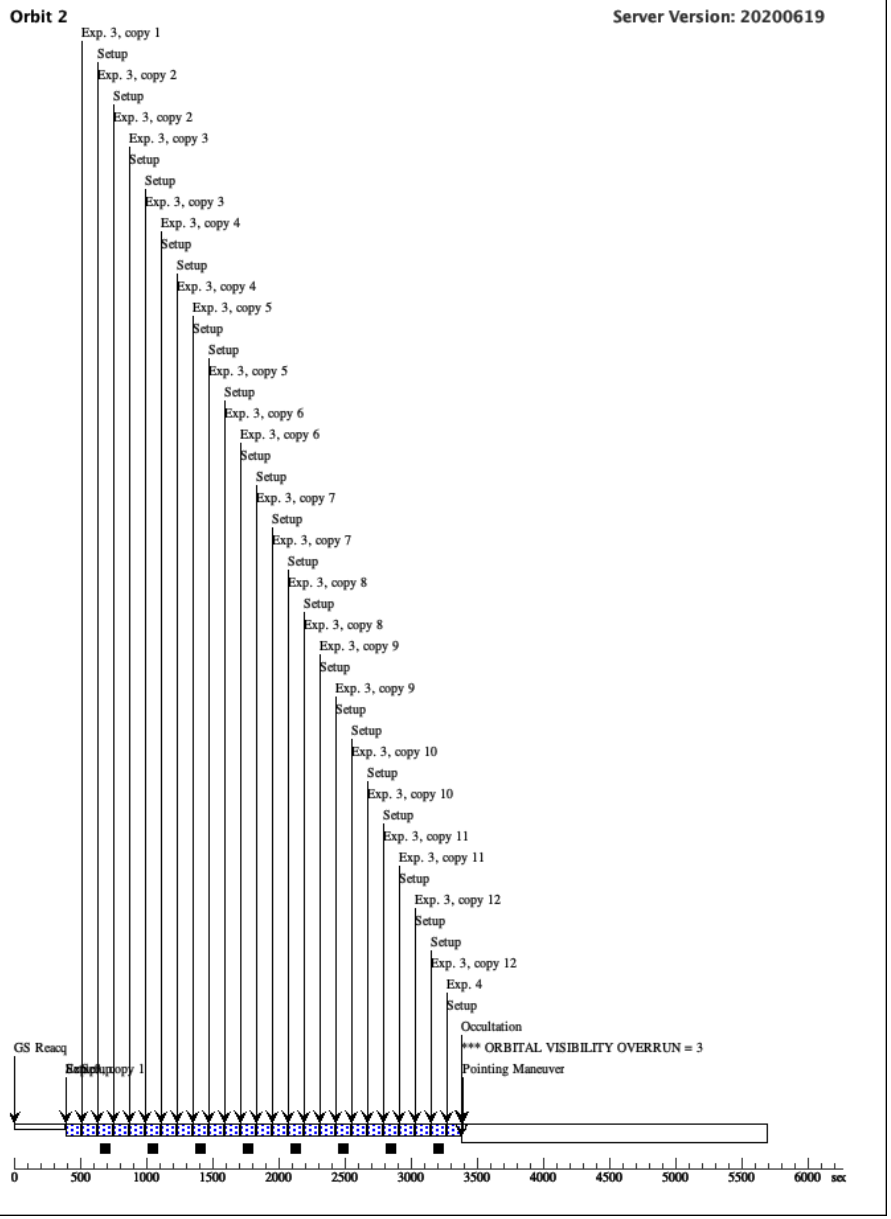
	3	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 3-4 Non-Int in HD-219666 WFC3/G141 (01)	81.089172 Secs X 12 (1946.14 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	***[2]***
	4	Scan-Forward	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Forward	Sequence 3-4 Non-Int in HD-219666 WFC3/G141 (01)	81.089172 Secs (81.089 Secs) *[==>]*	***[2]***

	5	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 5-6 Non-Int in HD-219666 WFC3/G141 (01)	81.089172 Secs X 12 (1946.14 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	***[3]***
	6	Scan-Forward	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Forward	Sequence 5-6 Non-Int in HD-219666 WFC3/G141 (01)	81.089172 Secs (81.089 Secs) *[==>]*	***[3]***

	7	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 7-8 Non-Int in HD-219666 WFC3/G141 (01)	81.089172 Secs X 11 (1783.962 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]*	***[4]***
	8	Scan-Forward	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Forward	Sequence 7-8 Non-Int in HD-219666 WFC3/G141 (01)	81.089172 Secs (81.089 Secs) *[==>]*	***[4]***

Orbit Structure

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Exp. 3, copy 11
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Exp. 3, copy 12
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Exp. 3, copy 12
Exp. 4
Setup
Occultation
*** ORBITAL VISIBILITY OVERRUN = 3
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GS Reacq
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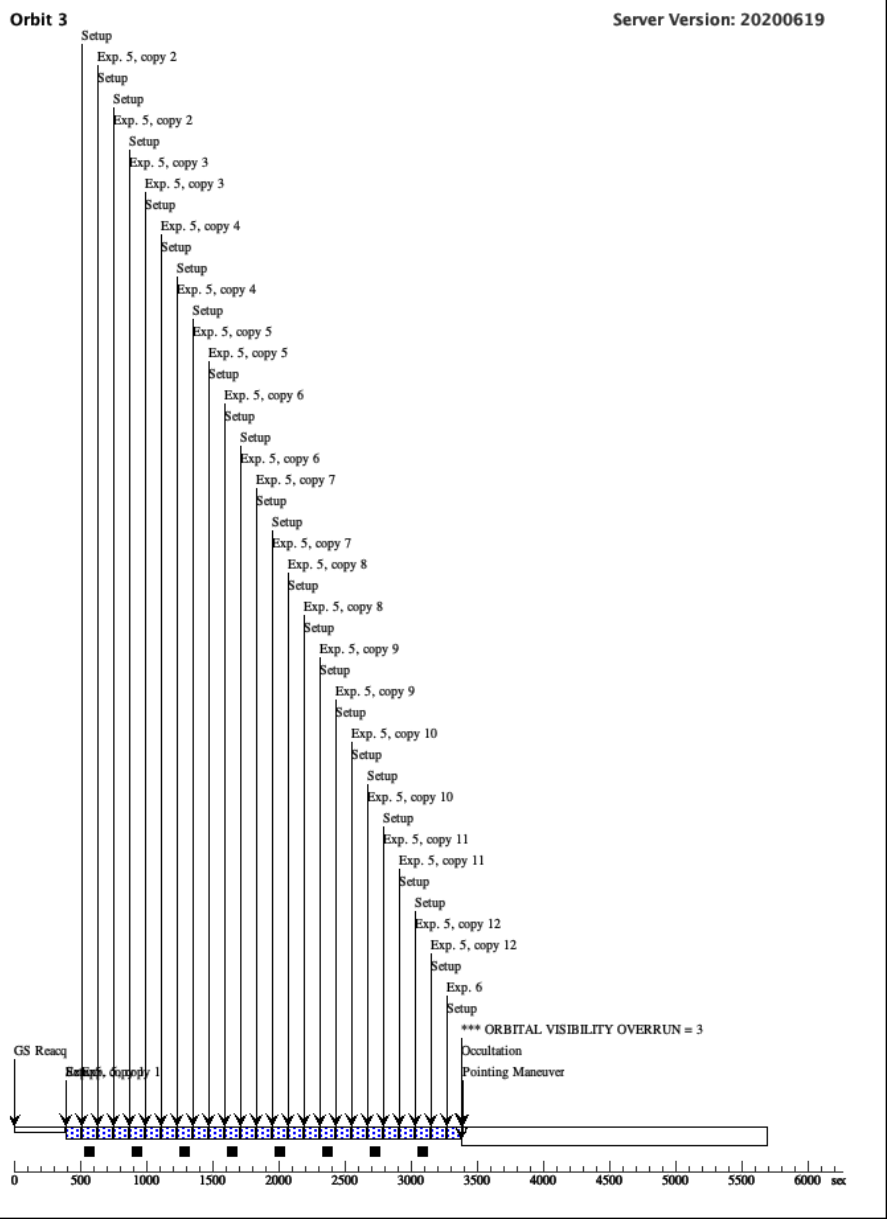
sec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Exp. 5, copy 11
Exp. 5, copy 11
Setup
Setup
Exp. 5, copy 12
Exp. 5, copy 12
Setup
Exp. 6
Setup
*** ORBITAL VISIBILITY OVERRUN = 3
Occultation
Pointing Maneuver
GS Reacq
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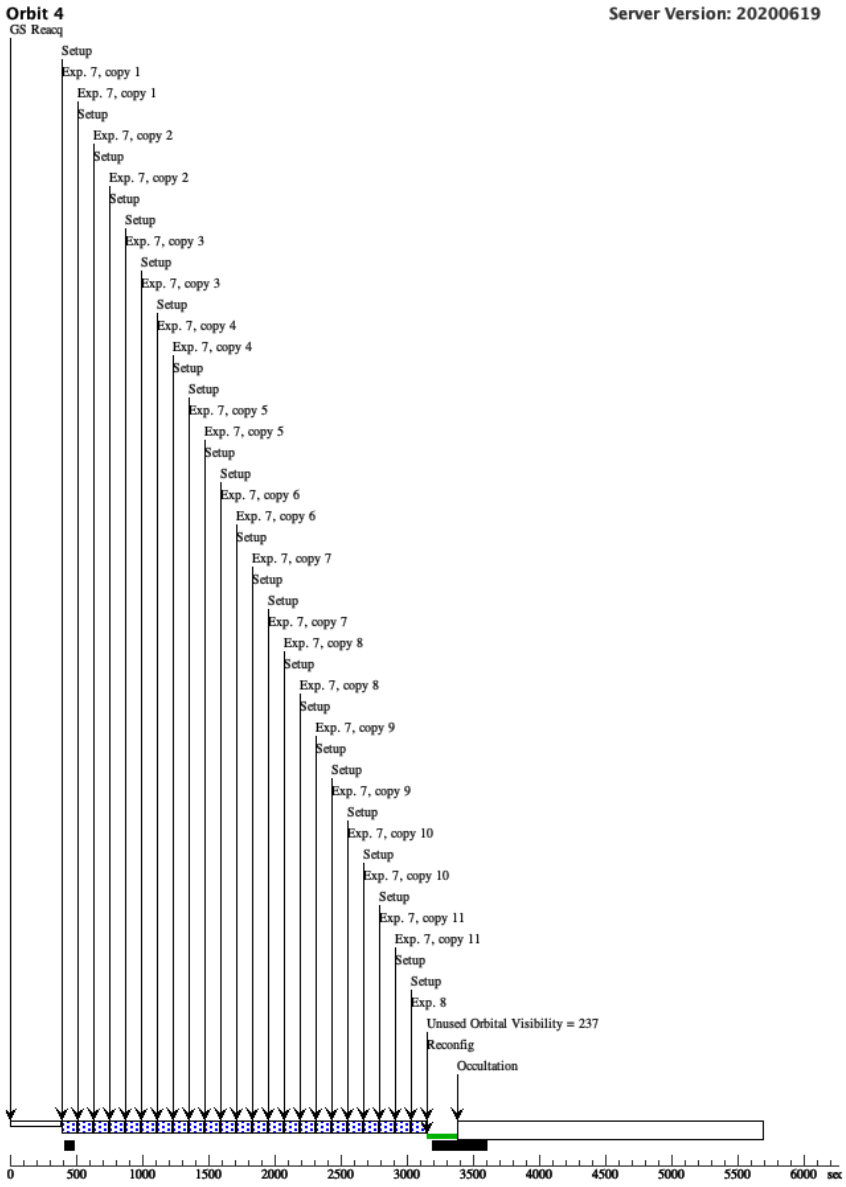
sec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Exp. 7, copy 9
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Exp. 7, copy 10
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Exp. 7, copy 10
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Exp. 7, copy 11
Exp. 7, copy 11
Setup
Setup
Exp. 8
Unused Orbital Visibility = 237
Reconfig
Occultation
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5500
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sec

Visit

Proposal 15969, HD-219666 WFC3/G141 (02), completed Thu Jul 30 19:03:41 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 30%; Period 6.0343926 D AND ZERO-PHASE HJD2458329.2023619385; VISIBILITY INTERVAL 70 M

Comments: sched 30 with 40 minute phase windows

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-219666	RA: 23 18 14.2240 (349.5592667d) Dec: -56 54 14.35 (-56.90399d) Equinox: J2000	Proper Motion RA: 0.03832635966954526 sec of time/yr Proper Motion Dec: -0.02017699998759781 arcsec/yr Epoch of Position: 2015.5	V=9.81	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[G V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Stare	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	F126N	NSAMP=2; SAMP-SEQ=RAPID	PHASE 0.9783705176349312 TO 0.9829725351594 14	Sequence 1-3 Non-Int in HD-219666 WFC3/G141 (02)	0.55563 Secs (0.556 Secs)	
								[==>]	***[1]***
2	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 1-3 Non-Int in HD-219666 WFC3/G141 (02)	81.089172 Secs X 11 (1783.962 Secs)	
								[==>(Copy 1, Forward)]	***[1]***
								[==>(Copy 1, Reverse)]	
								[==>(Copy 2, Forward)]	
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								[==>(Copy 3, Forward)]	
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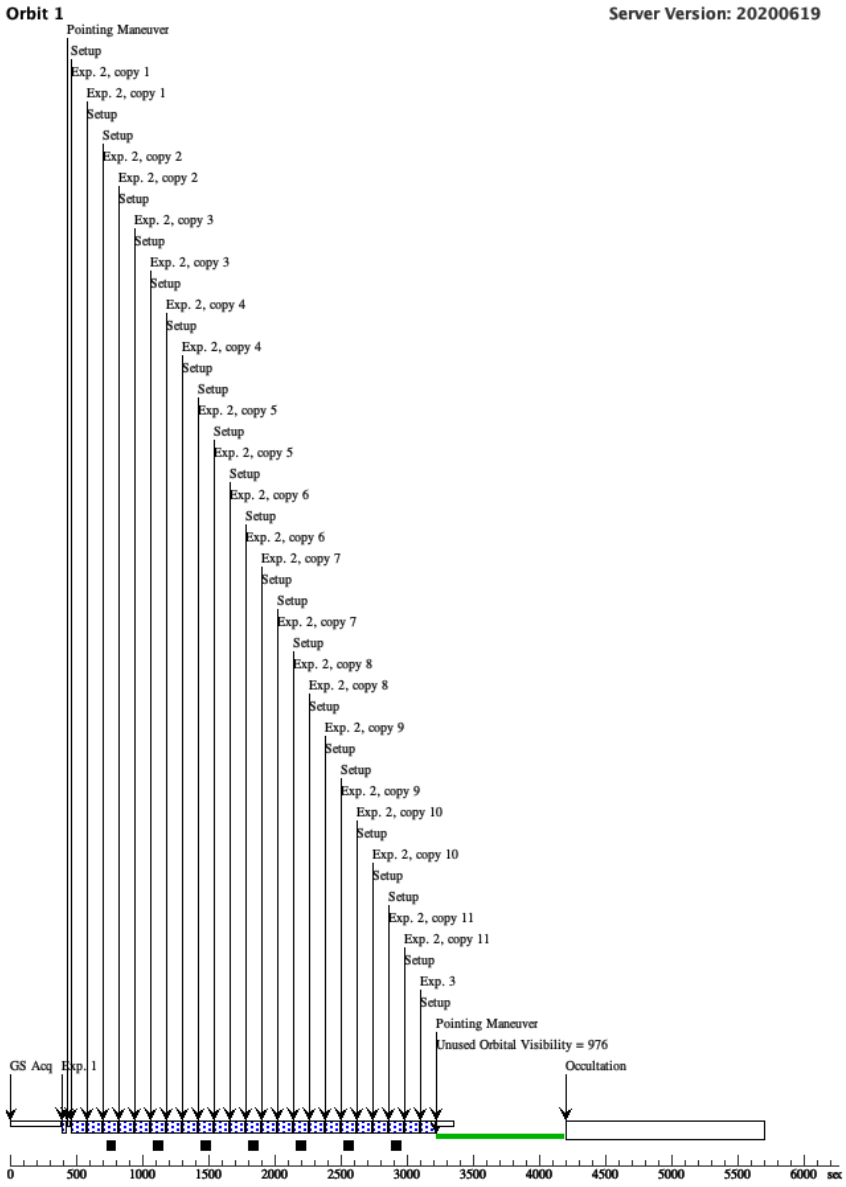
								[==>(Copy 11, Forward)]	
								[==>(Copy 11, Reverse)]	
3	Scan-Forward	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Forward	Sequence 1-3 Non-Int in HD-219666 WFC3/G141 (02)	81.089172 Secs (81.089 Secs)	
								[==>]	***[1]***

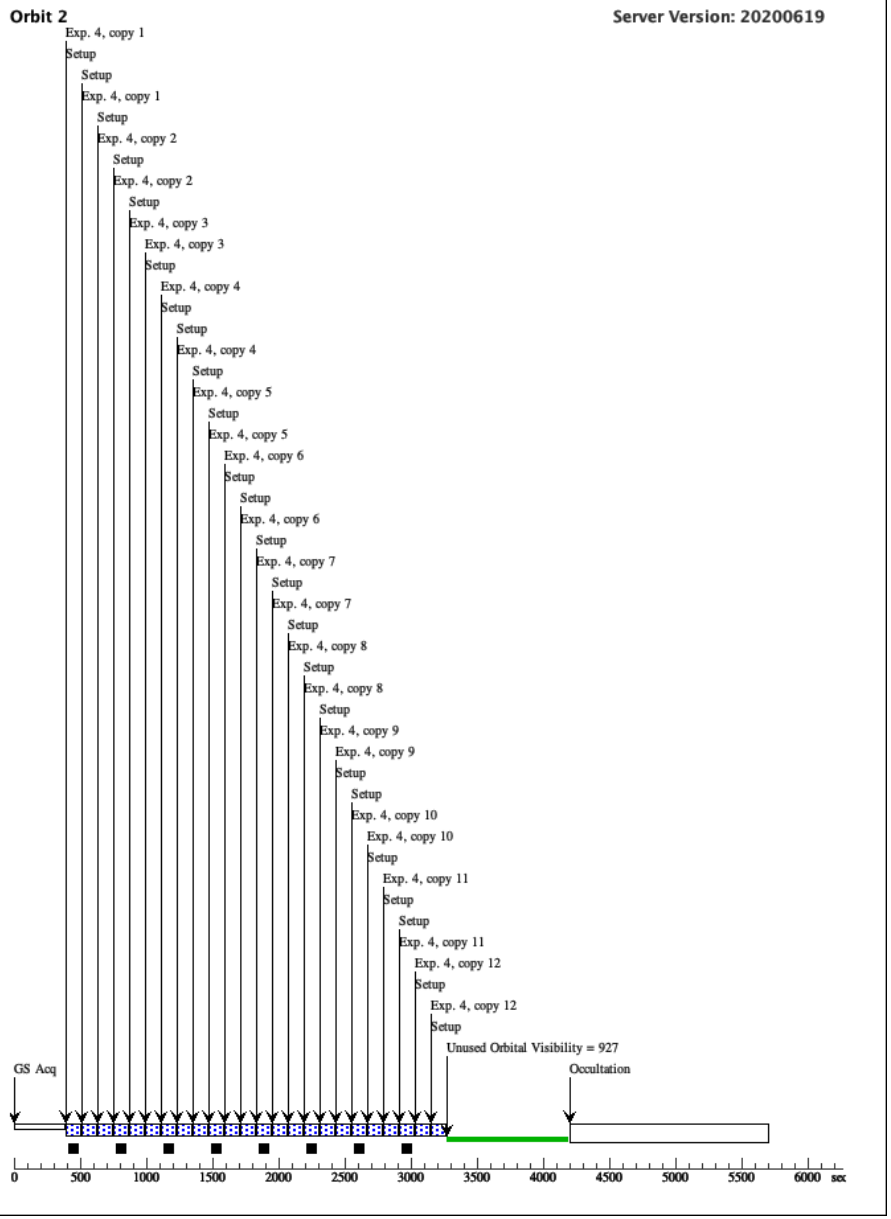
	4	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip; NEW OBSET FULL ACQ	Sequence 4-4 Non-Int in HD-219666 WFC3/G141 (02)	81.089172 Secs X 12 (1946.14 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	***[2]***

	5	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip; NEW OBSET FULL ACQ	Sequence 5-5 Non-Int in HD-219666 WFC3/G141 (02)	81.089172 Secs X 14 (2270.497 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]*	***[3]***

	6	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip; NEW OBSET FULL ACQ	Sequence 6-6 Non-Int in HD-219666 WFC3/G141 (02)	81.089172 Secs X 15 (2432.675 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]*	***[4]***

Orbit Structure

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Exp. 4, copy 11
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Exp. 4, copy 11
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Exp. 4, copy 12
Setup
Unused Orbital Visibility = 927
GS Acq
Occultation
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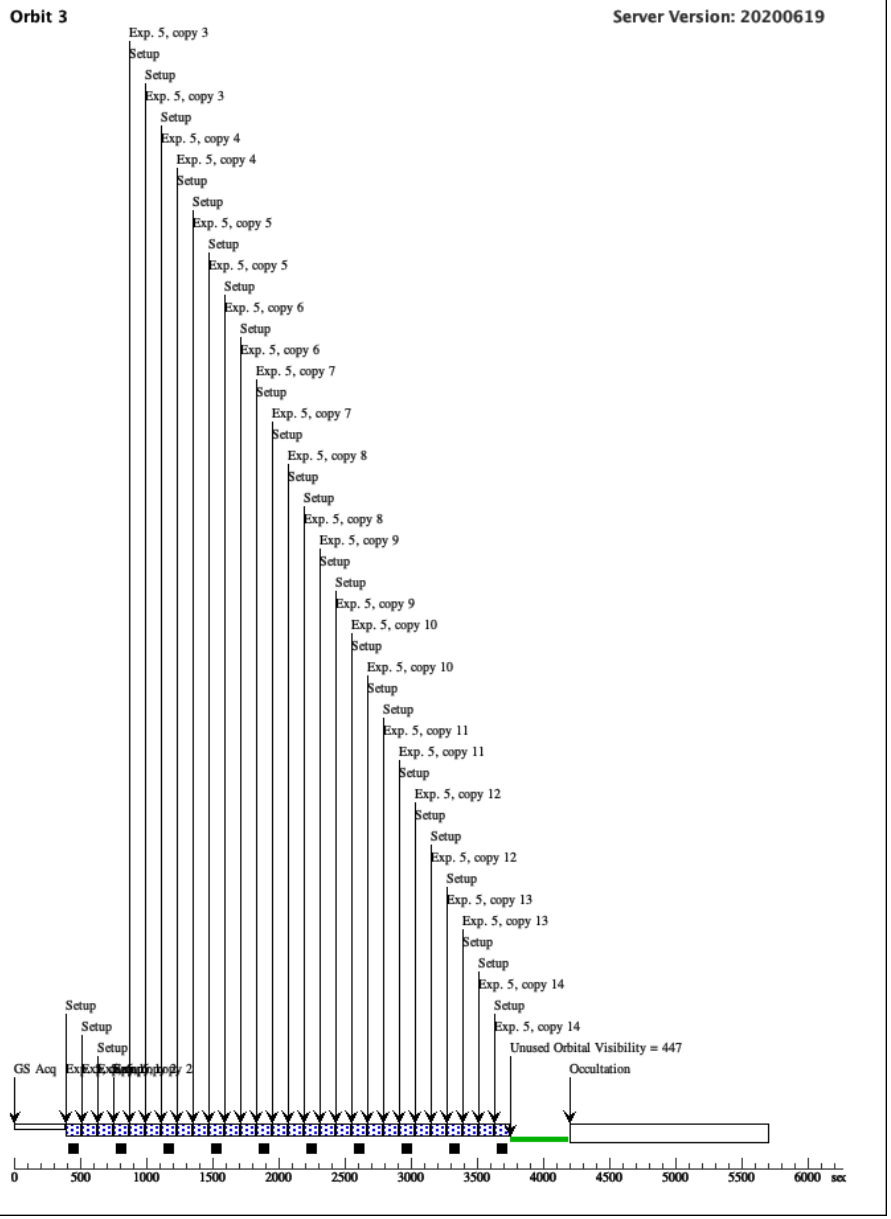
sec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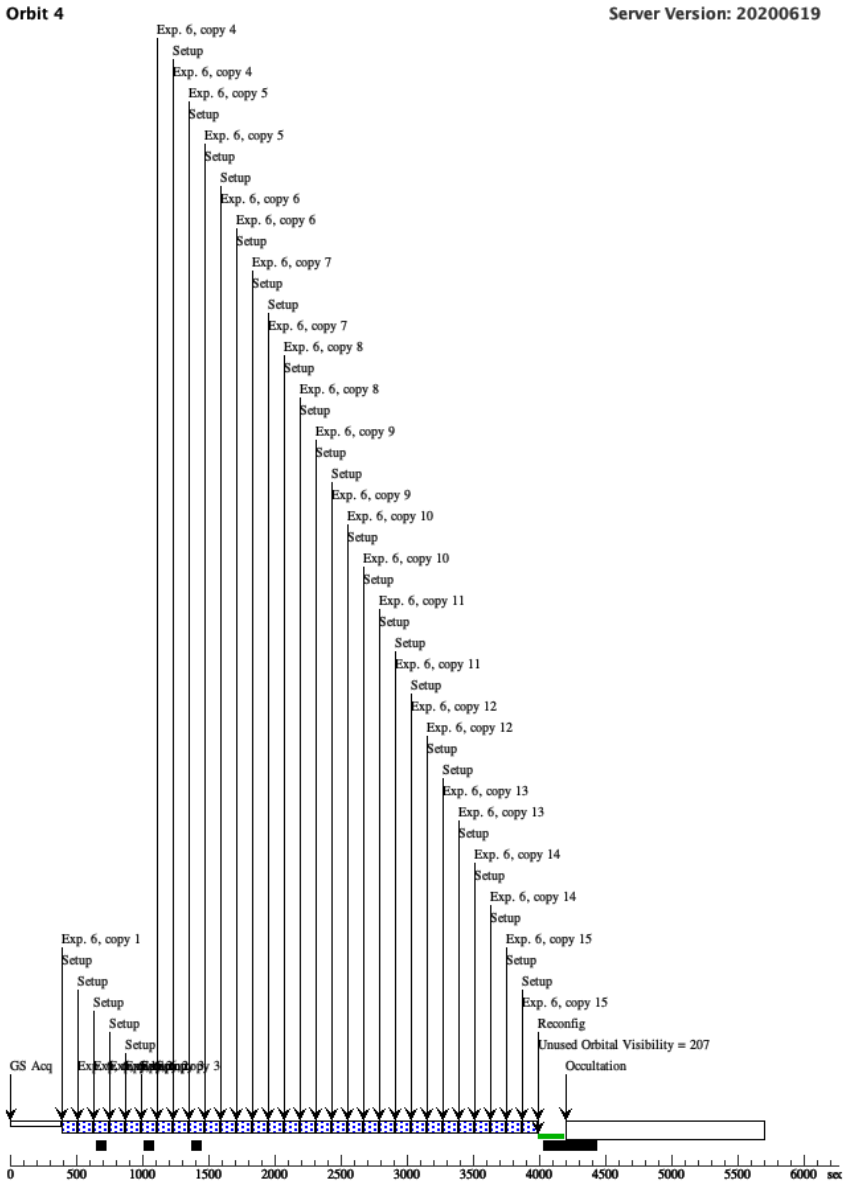
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Exp. 6, copy 15
Reconfig
Unused Orbital Visibility = 207
Occultation
Exp. 6, copy 1
Setup
Setup
Setup
Setup
Setup
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15969, HD-219666 WFC3/G141 (03), completed Thu Jul 30 19:03:42 GMT 2020

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; Period 6.0343926 D AND ZERO-PHASE HJD2458329.2023619385; VISIBILITY INTERVAL 95.2 M

Comments: CVZish with 40 minute phase window start

Diagnostics

(HD-219666 WFC3/G141 (03)) Warning (Orbit Planner): EXPOSURE NOT IN REQUESTED ORBIT

(HD-219666 WFC3/G141 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-219666	RA: 23 18 14.2240 (349.5592667d) Dec: -56 54 14.35 (-56.90399d) Equinox: J2000	Proper Motion RA: 0.03832635966954526 sec of time/yr Proper Motion Dec: -0.02017699998759781 arcsec/yr Epoch of Position: 2015.5	V=9.81	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[G V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Stare	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	F126N	NSAMP=2; SAMP-SEQ=RAPID	PHASE 0.9783705176349312 TO 0.9829725351594 14	Sequence 1-2 Non-Int in HD-219666 WFC3/G141 (03)	0.55563 Secs (0.556 Secs) *[==>]*	***[1]***
2	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 1-2 Non-Int in HD-219666 WFC3/G141 (03)	81.089172 Secs X 18 (2919.21 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]* *[==>(Copy 16, Forward)]* *[==>(Copy 16, Reverse)]* *[==>(Copy 17, Forward)]* *[==>(Copy 17, Reverse)]* *[==>(Copy 18, Forward)]* *[==>(Copy 18, Reverse)]*	***[1]***

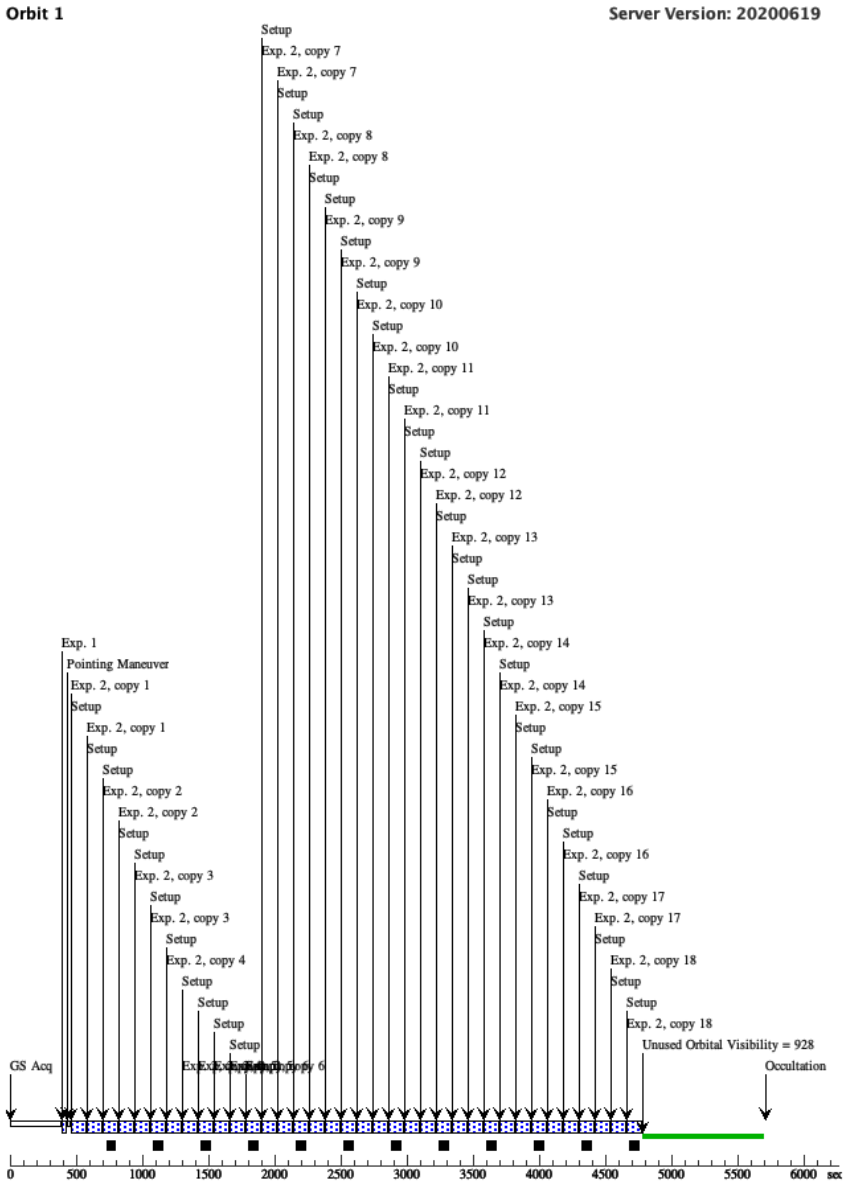
	3	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 3-3 Non-Int in HD-219666 WFC3/G141 (03)	81.089172 Secs X 22 (3567.924 Secs)	

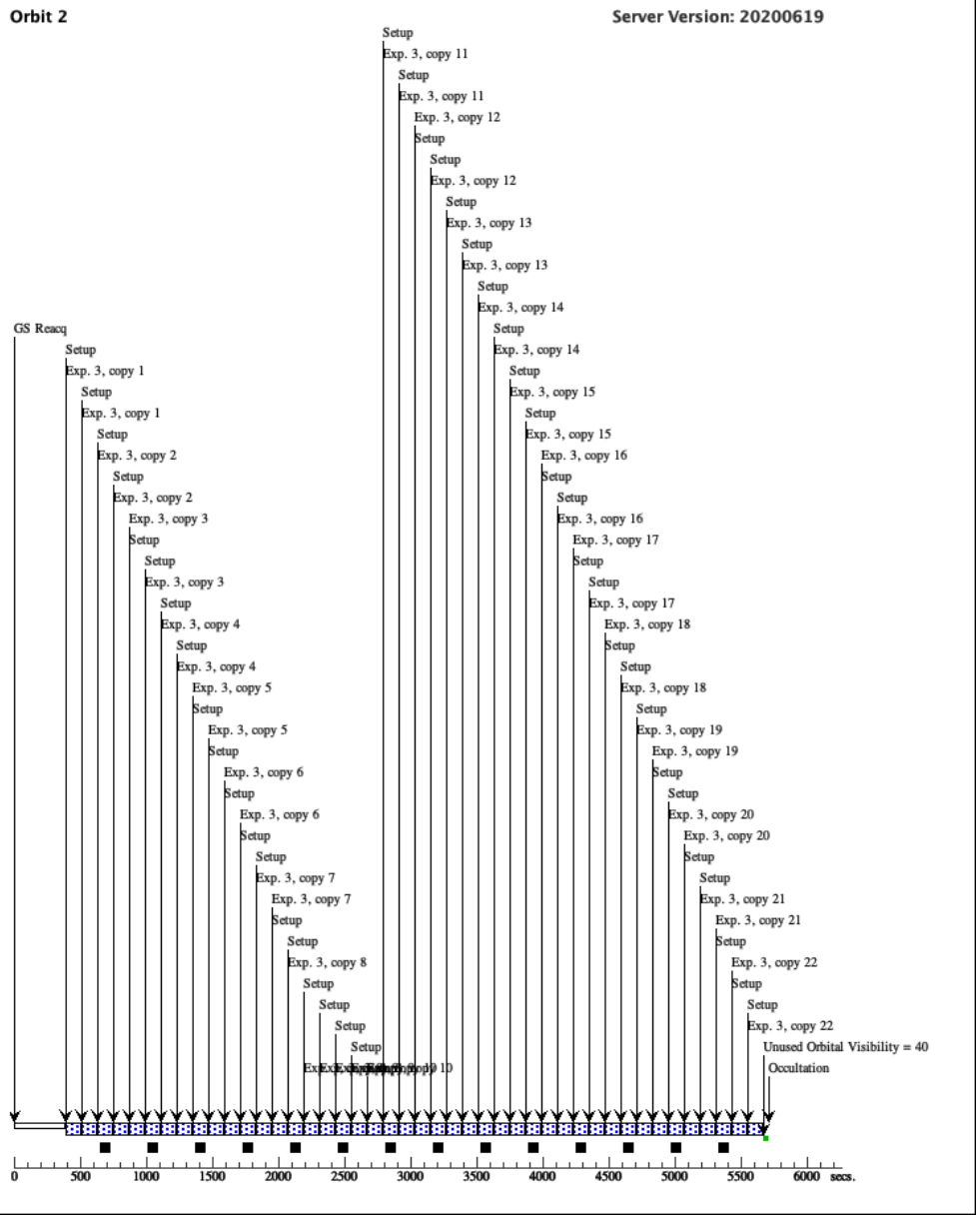
		[==>(Copy 1, Forward)] *[==>(Copy 1, Reverse)]* *[==>(Copy 2, Forward)]* *[==>(Copy 2, Reverse)]* *[==>(Copy 3, Forward)]* *[==>(Copy 3, Reverse)]* *[==>(Copy 4, Forward)]* *[==>(Copy 4, Reverse)]* *[==>(Copy 5, Forward)]* *[==>(Copy 5, Reverse)]* *[==>(Copy 6, Forward)]* *[==>(Copy 6, Reverse)]* *[==>(Copy 7, Forward)]* *[==>(Copy 7, Reverse)]* *[==>(Copy 8, Forward)]* *[==>(Copy 8, Reverse)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]* *[==>(Copy 16, Forward)]* *[==>(Copy 16, Reverse)]* *[==>(Copy 17, Forward)]* *[==>(Copy 17, Reverse)]* *[==>(Copy 18, Forward)]* *[==>(Copy 18, Reverse)]* *[==>(Copy 19, Forward)]* *[==>(Copy 19, Reverse)]* *[==>(Copy 20, Forward)]* *[==>(Copy 20, Reverse)]* *[==>(Copy 21, Forward)]* *[==>(Copy 21, Reverse)]* *[==>(Copy 22, Forward)]* *[==>(Copy 22, Reverse)]*	***[2]***

	4	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 4-4 Non-Int in HD-219666 WFC3/G141 (03)	81.089172 Secs X 22 (3567.924 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]* *[==>(Copy 16, Forward)]* *[==>(Copy 16, Reverse)]* *[==>(Copy 17, Forward)]* *[==>(Copy 17, Reverse)]* *[==>(Copy 18, Forward)]* *[==>(Copy 18, Reverse)]* *[==>(Copy 19, Forward)]* *[==>(Copy 19, Reverse)]* *[==>(Copy 20, Forward)]* *[==>(Copy 20, Reverse)]* *[==>(Copy 21, Forward)]* *[==>(Copy 21, Reverse)]* *[==>(Copy 22, Forward)]*	***[3]***

								[==>(Copy 22, Reverse)]	***[4]***
	5	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-10; SPATIAL SCAN 0.2 17,90.0 Degrees,Round trip	Sequence 5-5 Non-Int in HD-219666 WFC3/G141 (03)	81.089172 Secs X 19 (3081.389 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]* *[==>(Copy 16, Forward)]* *[==>(Copy 16, Reverse)]* *[==>(Copy 17, Forward)]* *[==>(Copy 17, Reverse)]* *[==>(Copy 18, Forward)]* *[==>(Copy 18, Reverse)]* *[==>(Copy 19, Forward)]* *[==>(Copy 19, Reverse)]*	***[4]***

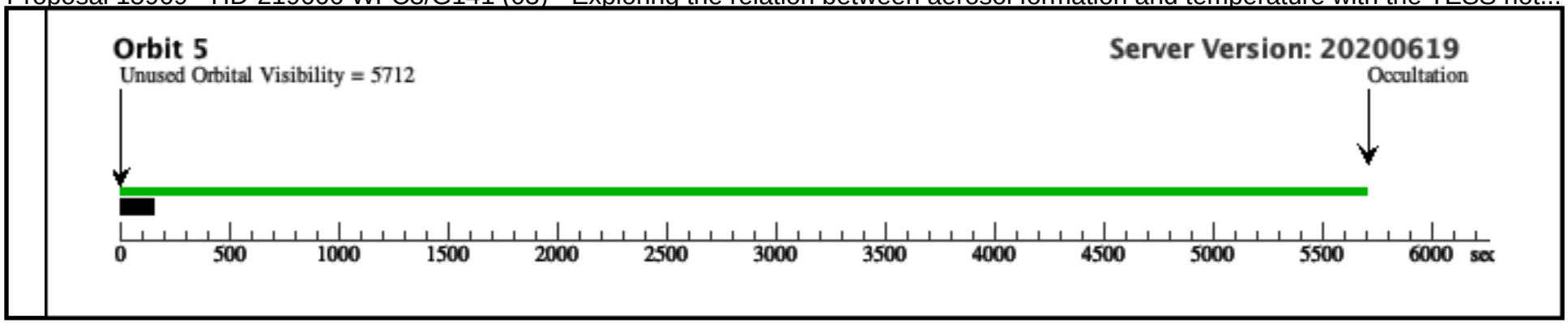
Orbit Structure




Orbit 2
Server Version: 20200619
GS Reacq
Setup
Exp. 3, copy 1
Exp. 3, copy 2
Exp. 3, copy 3
Exp. 3, copy 4
Exp. 3, copy 5
Exp. 3, copy 6
Exp. 3, copy 7
Exp. 3, copy 8
Exp. 3, copy 11
Exp. 3, copy 12
Exp. 3, copy 13
Exp. 3, copy 14
Exp. 3, copy 15
Exp. 3, copy 16
Exp. 3, copy 17
Exp. 3, copy 18
Exp. 3, copy 19
Exp. 3, copy 20
Exp. 3, copy 21
Exp. 3, copy 22
Unused Orbital Visibility = 40
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
secs.


Orbit 3
Server Version: 20200619
GS Reacq
*** ORBITAL VISIBILITY OVERRUN = 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
secs.


Orbit 4
Server Version: 20200619
Exp. 5, copy 8
Setup
Exp. 5, copy 8
Setup
Exp. 5, copy 9
Exp. 5, copy 9
Setup
Exp. 5, copy 10
Setup
Exp. 5, copy 10
Setup
Setup
Exp. 5, copy 11
Exp. 5, copy 11
Setup
Setup
Exp. 5, copy 12
Setup
Exp. 5, copy 12
Exp. 5, copy 13
Setup
Exp. 5, copy 13
Setup
Exp. 5, copy 14
Setup
Exp. 5, copy 14
Setup
Exp. 5, copy 15
Setup
Setup
Exp. 5, copy 15
Exp. 5, copy 16
Setup
Setup
Exp. 5, copy 16
Setup
Exp. 5, copy 17
Setup
Exp. 5, copy 17
Exp. 5, copy 18
Setup
Exp. 5, copy 18
Setup
Setup
Exp. 5, copy 19
Exp. 5, copy 19
Setup
Unused Orbital Visibility = 286
Reconfig
Occultation
Exp. 4, copy 22 (cont'd)
*** ORBITAL VISIBILITY OVERRUN = 74 (cont'd)
Exp. 5, copy 1
Setup
Setup
Exp. 5, copy 1
Setup
Exp. 5, copy 2
Exp. 5, copy 2
Setup
Setup
Exp. 5, copy 3
Exp. 5, copy 3
Setup
Setup
Exp. 5, copy 4
Exp. 5, copy 4
Setup
Setup
Exp. 5, copy 5
Setup
Setup
Setup
Setup
Exp. 4, copy 22
GS Reacq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
secs.


Orbit 5
Server Version: 20200619
Unused Orbital Visibility = 5712
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15969, HD-219666 WFC3/G102 (04), scheduling Thu Jul 30 19:03:42 GMT 2020

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 30%; Period 6.0343926 D AND ZERO-PHASE HJD2458329.2023619385

Comments: sched 100 wiht 40 min phase windows to catch the opportunity at 20.156

Diagnostics

(HD-219666 WFC3/G102 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(HD-219666 WFC3/G102 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(HD-219666 WFC3/G102 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-219666	RA: 23 18 14.2240 (349.5592667d) Dec: -56 54 14.35 (-56.90399d) Equinox: J2000	Proper Motion RA: 0.03832635966954526 sec of time/yr Proper Motion Dec: -0.02017699998759781 arcsec/yr Epoch of Position: 2015.5	V=9.81	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[G V-IV]

Exposures

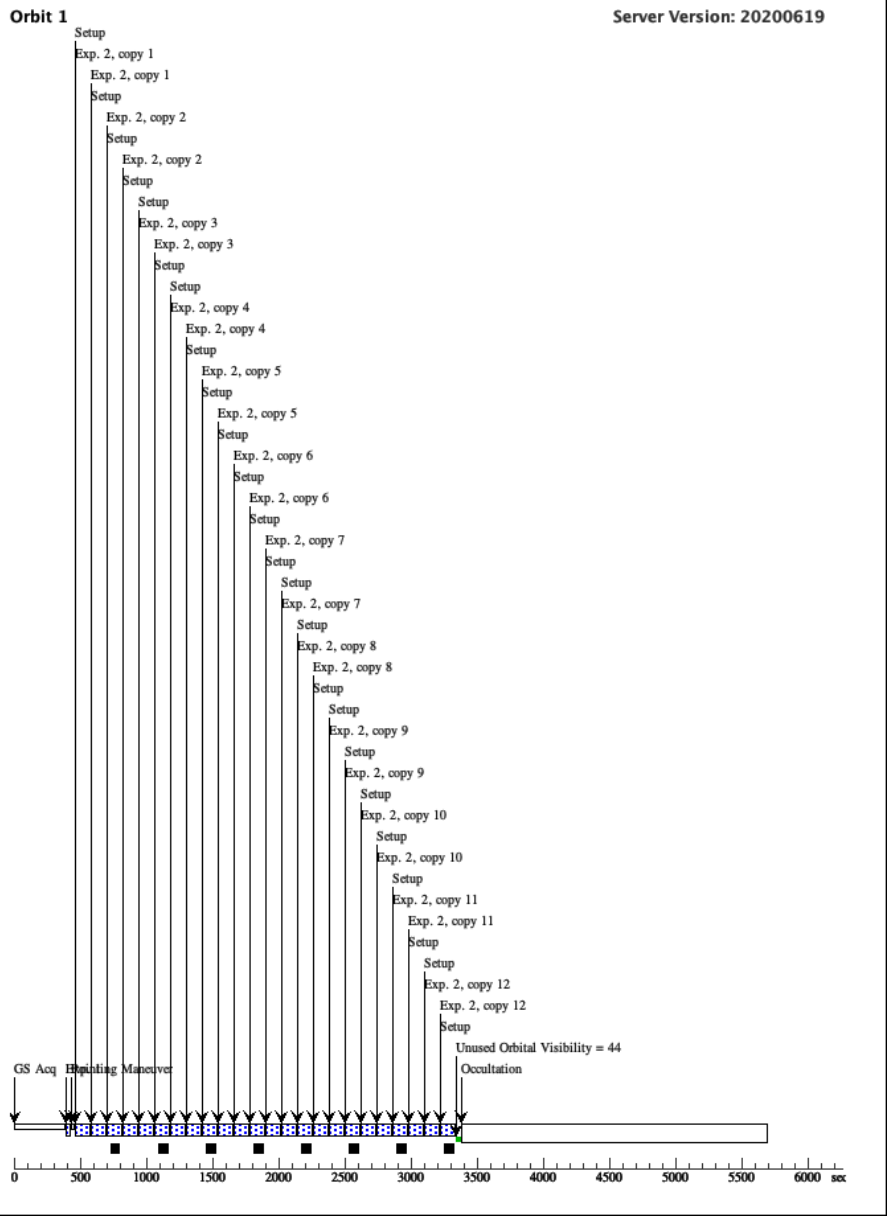
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Stare	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	F126N	NSAMP=2; SAMP-SEQ=RAPID	PHASE 0.9783705176349312 TO 0.982972535159414	Sequence 1-2 Non-Int in HD-219666 WFC3/G102 (04)	0.55563 Secs (0.556 Secs) *[==>]*	 ***[1]***
2	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1736,90.0 Degrees,Round trip	Sequence 1-2 Non-Int in HD-219666 WFC3/G102 (04)	81.089172 Secs X 12 (1946.14 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	 ***[1]***

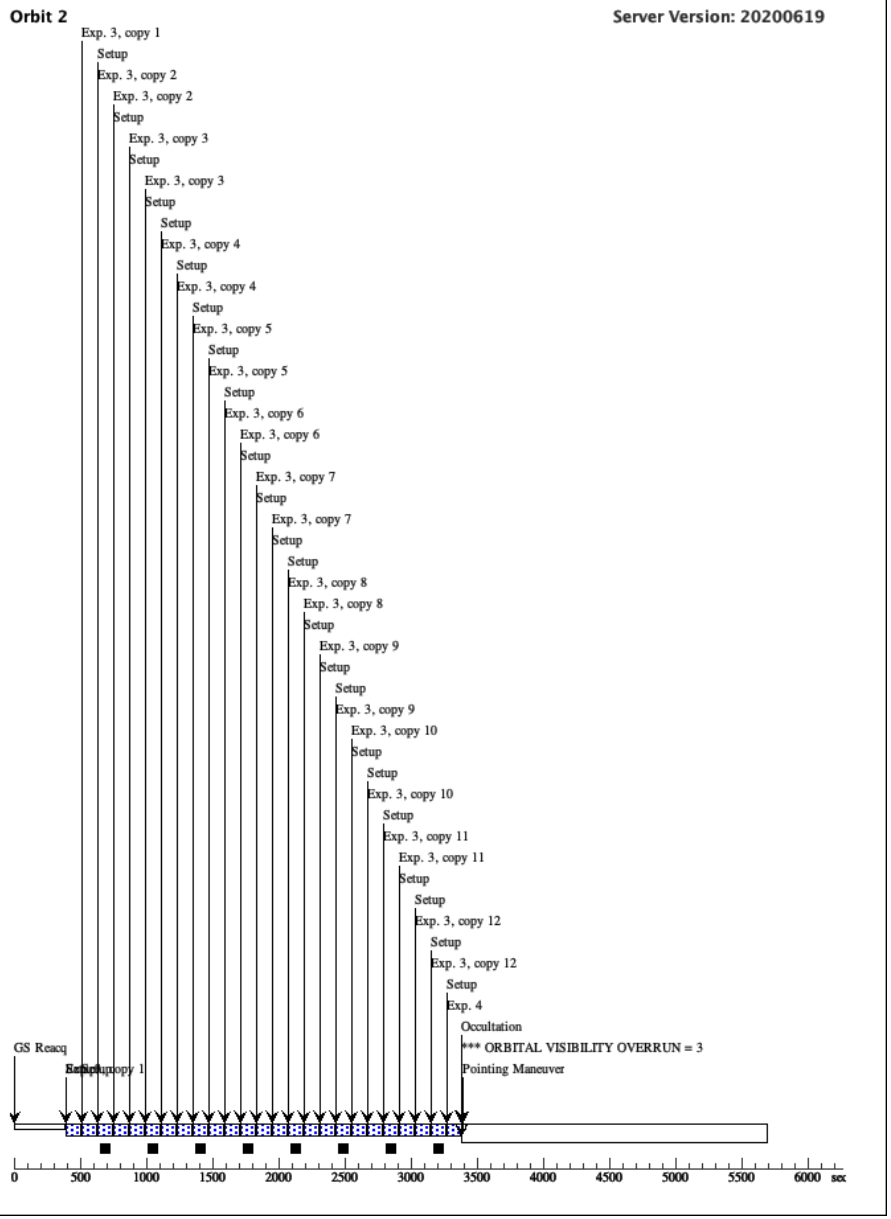
	3	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 3-4 Non-Int in HD-219666 WFC3/G102 (04)	81.089172 Secs X 12 (1946.14 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 2, 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	***[2]***
	4	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Forward	Sequence 3-4 Non-Int in HD-219666 WFC3/G102 (04)	81.089172 Secs (81.089 Secs) *[==>]*	***[2]***

	5	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 5-6 Non-Int in HD-219666 WFC3/G102 (04)	81.089172 Secs X 12 (1946.14 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	***[3]***
	6	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Forward	Sequence 5-6 Non-Int in HD-219666 WFC3/G102 (04)	81.089172 Secs (81.089 Secs) *[==>]*	***[3]***

	7	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 7-8 Non-Int in HD-219666 WFC3/G102 (04)	81.089172 Secs X 12 (1946.14 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]*	***[4]***
	8	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Forward	Sequence 7-8 Non-Int in HD-219666 WFC3/G102 (04)	81.089172 Secs (81.089 Secs) *[==>]*	***[4]***

Orbit Structure




Orbit 2
Server Version: 20200619
Exp. 3, copy 1
Setup
Exp. 3, copy 2
Exp. 3, copy 2
Setup
Exp. 3, copy 3
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Exp. 3, copy 3
Setup
Setup
Exp. 3, copy 4
Setup
Exp. 3, copy 4
Setup
Exp. 3, copy 5
Setup
Exp. 3, copy 5
Setup
Exp. 3, copy 6
Exp. 3, copy 6
Setup
Exp. 3, copy 7
Setup
Exp. 3, copy 7
Setup
Setup
Exp. 3, copy 8
Exp. 3, copy 8
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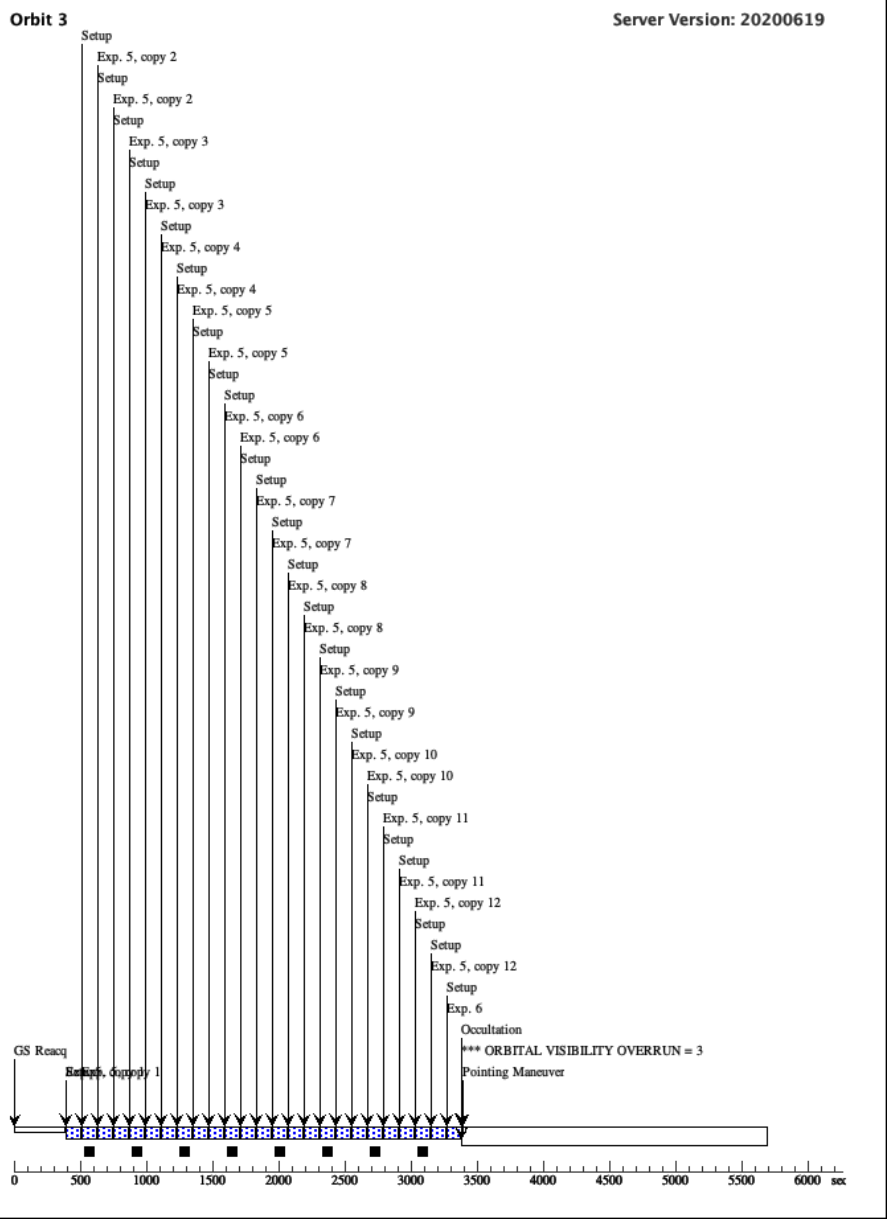
Exp. 3, copy 9
Setup
Setup
Exp. 3, copy 9
Exp. 3, copy 10
Setup
Setup
Exp. 3, copy 10
Setup
Exp. 3, copy 11
Exp. 3, copy 11
Setup
Setup
Exp. 3, copy 12
Setup
Exp. 3, copy 12
Setup
Exp. 4
Occultation
*** ORBITAL VISIBILITY OVERRUN = 3
Pointing Maneuver
GS Reacq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 3
Server Version: 20200619
Setup
Exp. 5, copy 2
Setup
Exp. 5, copy 2
Setup
Exp. 5, copy 3
Setup
Setup
Exp. 5, copy 3
Setup
Exp. 5, copy 4
Setup
Exp. 5, copy 4
Exp. 5, copy 5
Setup
Exp. 5, copy 5
Setup
Setup
Exp. 5, copy 6
Exp. 5, copy 6
Setup
Setup
Exp. 5, copy 7
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Exp. 5, copy 7
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Exp. 5, copy 8
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Exp. 5, copy 8
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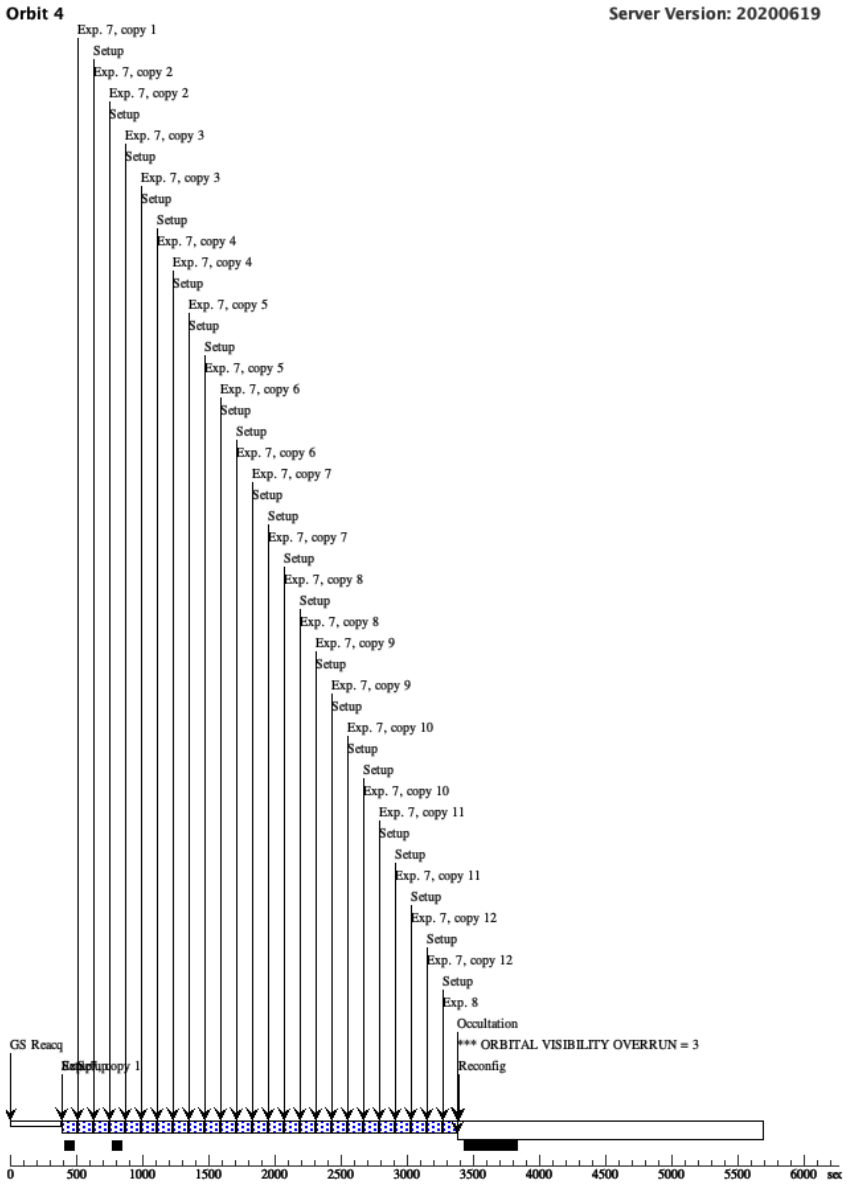
Exp. 5, copy 9
Setup
Exp. 5, copy 9
Setup
Exp. 5, copy 10
Exp. 5, copy 10
Setup
Exp. 5, copy 11
Setup
Setup
Exp. 5, copy 11
Exp. 5, copy 12
Setup
Setup
Exp. 5, copy 12
Setup
Exp. 6
Occultation
*** ORBITAL VISIBILITY OVERRUN = 3
Pointing Maneuver
GS Reacq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 4
Server Version: 20200619
Exp. 7, copy 1
Setup
Exp. 7, copy 2
Exp. 7, copy 2
Setup
Exp. 7, copy 3
Setup
Exp. 7, copy 3
Setup
Setup
Exp. 7, copy 4
Exp. 7, copy 4
Setup
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
Setup
Exp. 7, copy 7
Setup
Exp. 7, copy 8
Setup
Exp. 7, copy 8
Exp. 7, copy 9
Setup
Exp. 7, copy 9
Setup
Exp. 7, copy 10
Setup
Setup
Exp. 7, copy 10
Exp. 7, copy 11
Setup
Setup
Exp. 7, copy 11
Setup
Exp. 7, copy 12
Setup
Exp. 7, copy 12
Setup
Exp. 8
Occultation
*** ORBITAL VISIBILITY OVERRUN = 3
Reconfig
GS Reacq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15969, HD-219666 WFC3/G102 (05), completed Thu Jul 30 19:03:43 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 100%; Period 6.036854 D AND ZERO-PHASE HJD2458329.1996

Comments: sched 100 with 20 minute phase windows

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-219666	RA: 23 18 14.2240 (349.5592667d) Dec: -56 54 14.35 (-56.90399d) Equinox: J2000	Proper Motion RA: 0.03832635966954526 sec of time/yr Proper Motion Dec: -0.02017699998759781 arcsec/yr Epoch of Position: 2015.5	V=9.81	Reference Frame: SIMBAD

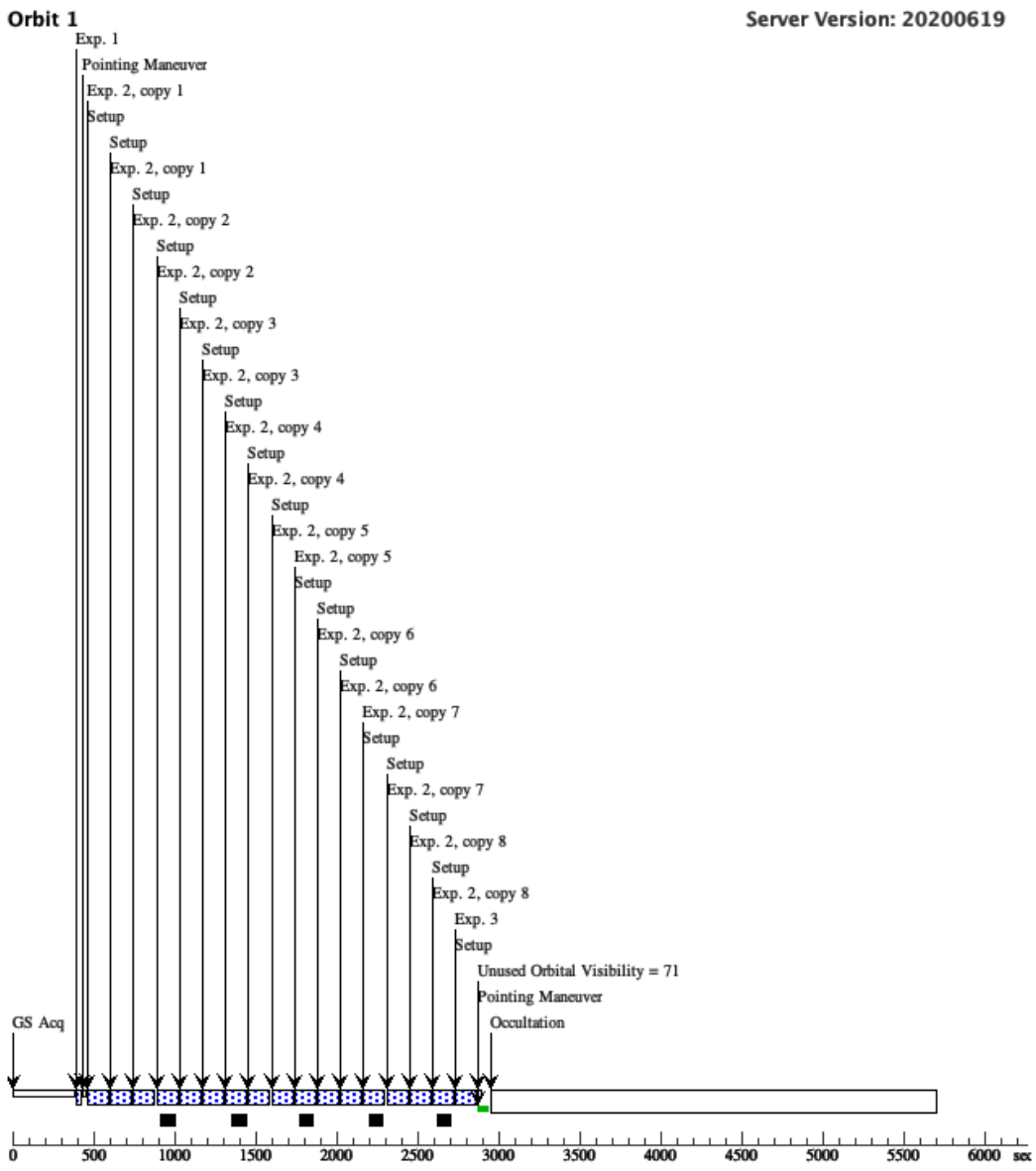
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[G V-IV]

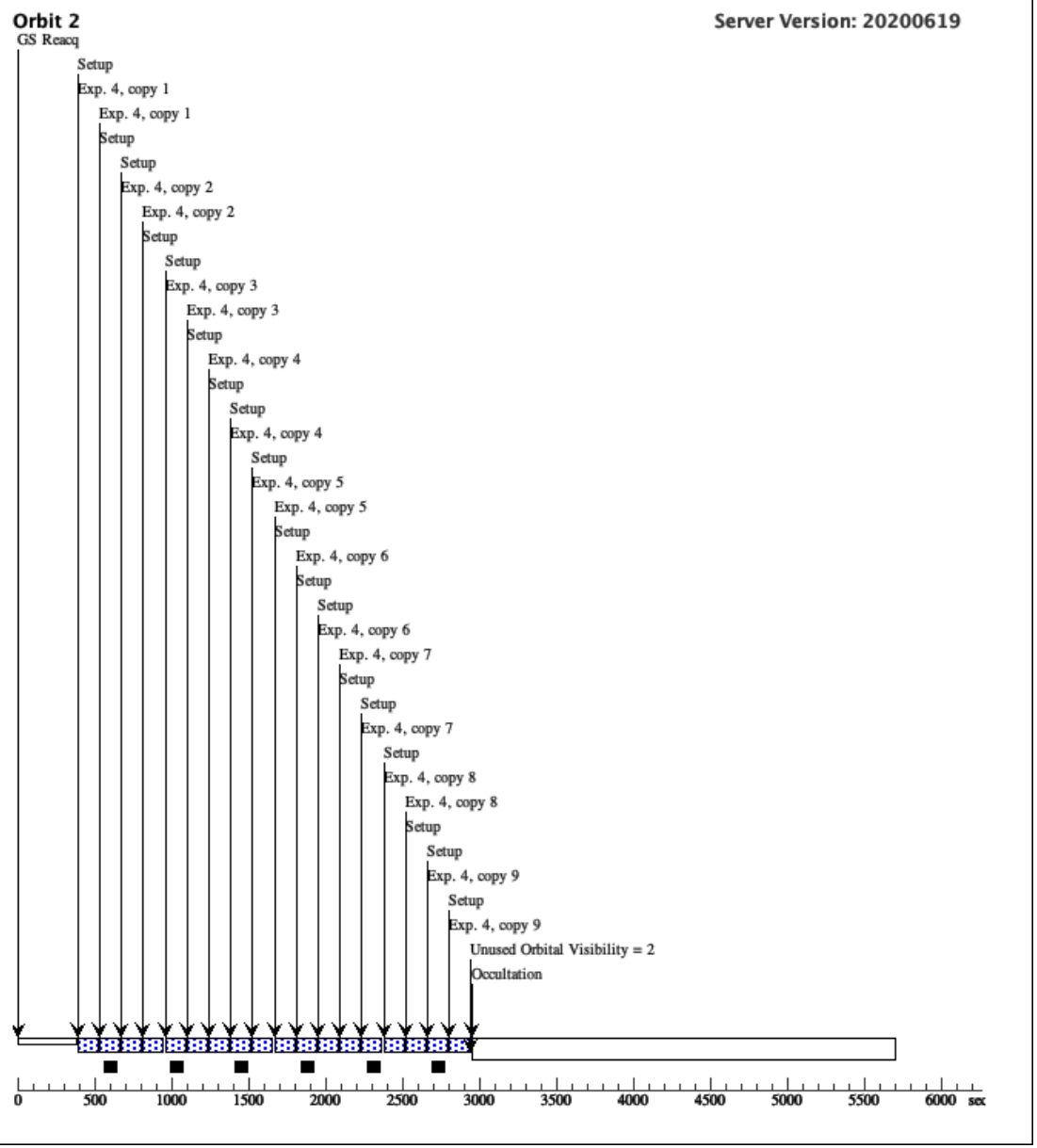
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Stare	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	F126N	NSAMP=2; SAMP-SEQ=RAPID	PHASE 0.97952102 2016052 TO 0.98182 20307782932	Sequence 1-3 Non-Int in HD-219666 WFC3/G102 (05)	0.55563 Secs (0.556 Secs)	
								[==>]	***[1]***
2	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=15; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 1-3 Non-Int in HD-219666 WFC3/G102 (05)	103.128633 Secs X 8 (1650.058 Secs)	
								[==>(Copy 1, Forward)]	***[1]***
								[==>(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	Scan-Forward	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=15; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Forward	Sequence 1-3 Non-Int in HD-219666 WFC3/G102 (05)	103.128633 Secs (103.129 Secs)	
								[==>]	***[1]***
4	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=15; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 4-4 Non-Int in HD-219666 WFC3/G102 (05)	103.128633 Secs X 9 (1856.315 Secs)	
								[==>(Copy 1, Forward)]	***[2]***
								[==>(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)]	
								[==>(Copy 9, Forward)]	
								[==>(Copy 9, Reverse)]	

	5	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=15; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 5-5 Non-Int in HD-219666 WFC3/G102 (05)	103.128633 Secs X 9 (1856.315 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]*	***[3]***
	6	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=15; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 6-6 Non-Int in HD-219666 WFC3/G102 (05)	103.128633 Secs X 9 (1856.315 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]*	***[4]***

Orbit Structure

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GS Reacq
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Exp. 4, copy 1
Setup
Setup
Exp. 4, copy 2
Exp. 4, copy 2
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Exp. 4, copy 3
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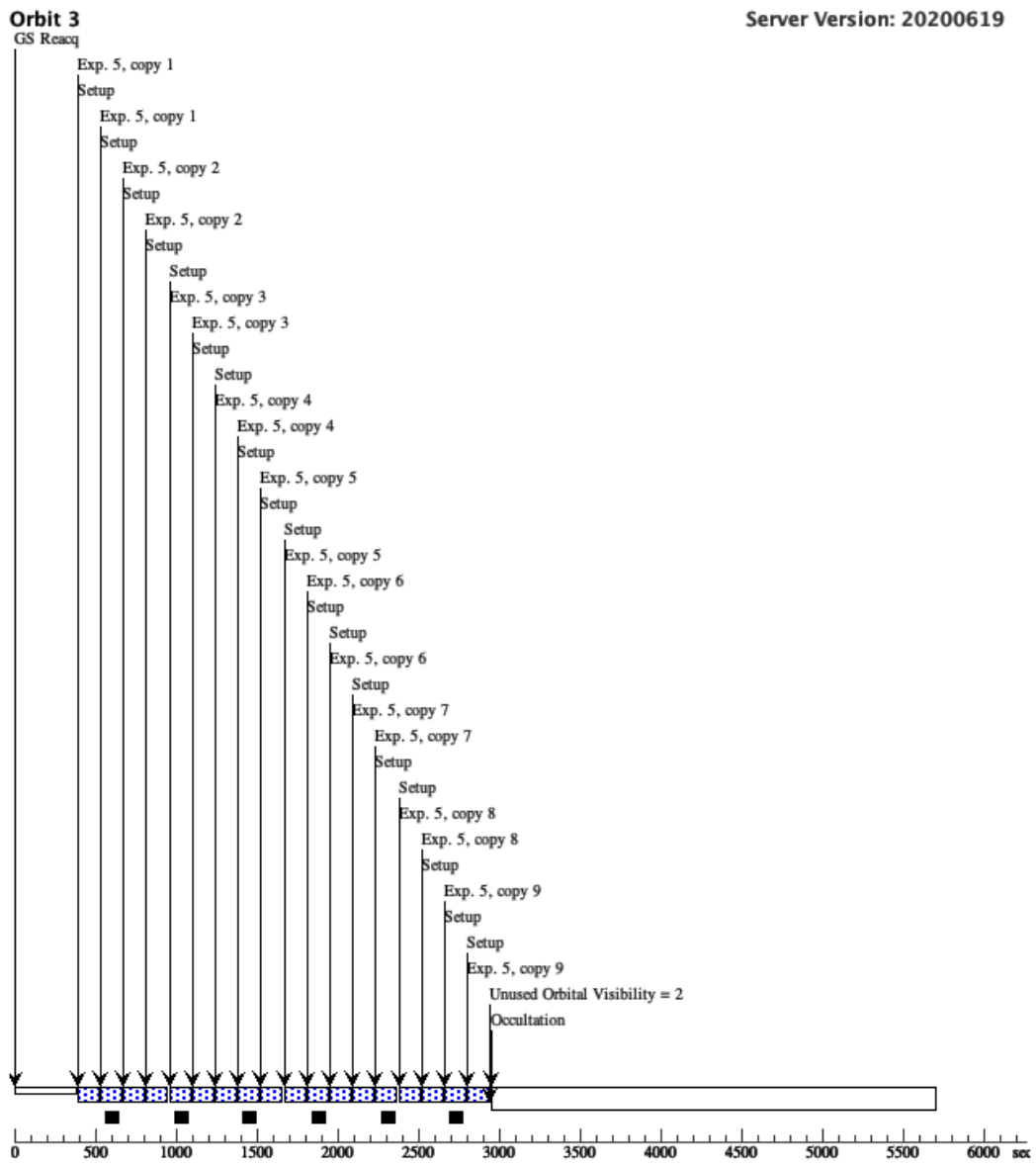
Exp. 4, copy 4
Setup
Setup
Exp. 4, copy 4
Setup
Exp. 4, copy 5
Exp. 4, copy 5
Setup
Exp. 4, copy 6
Setup
Setup
Exp. 4, copy 6
Exp. 4, copy 7
Setup
Setup
Exp. 4, copy 7
Setup
Exp. 4, copy 8
Exp. 4, copy 8
Setup
Setup
Exp. 4, copy 9
Setup
Exp. 4, copy 9
Unused Orbital Visibility = 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 3
Server Version: 20200619
GS Reacq
Exp. 5, copy 1
Setup
Exp. 5, copy 1
Setup
Exp. 5, copy 2
Setup
Exp. 5, copy 2
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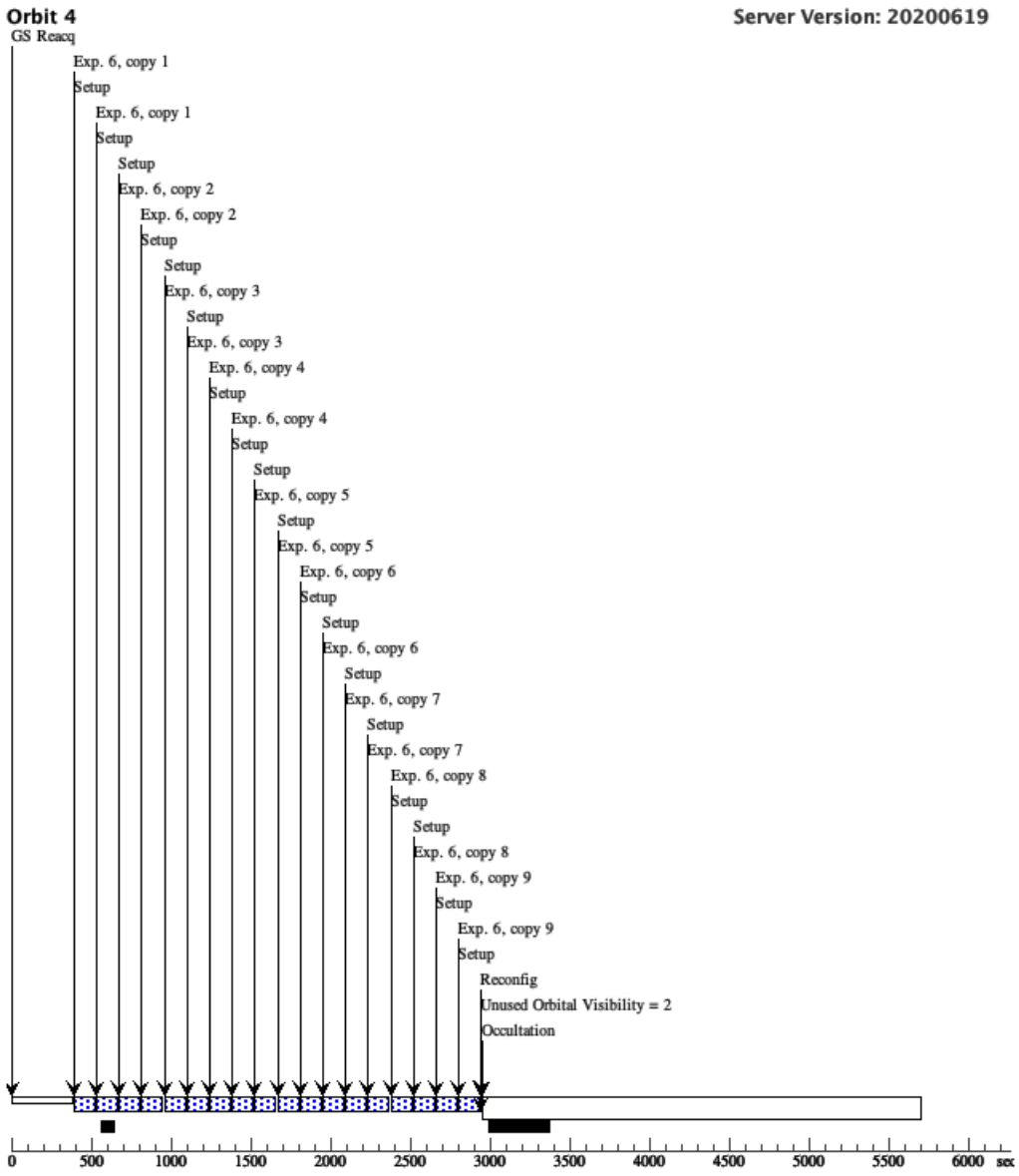
Setup
Exp. 5, copy 3
Exp. 5, copy 3
Setup
Setup
Exp. 5, copy 4
Exp. 5, copy 4
Setup
Exp. 5, copy 5
Setup
Setup
Exp. 5, copy 5
Exp. 5, copy 6
Setup
Setup
Exp. 5, copy 6
Setup
Exp. 5, copy 7
Exp. 5, copy 7
Setup
Setup
Exp. 5, copy 8
Exp. 5, copy 8
Setup
Exp. 5, copy 9
Setup
Setup
Exp. 5, copy 9
Unused Orbital Visibility = 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec


Orbit 4
Server Version: 20200619
GS Reacq
Exp. 6, copy 1
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Exp. 6, copy 1
Setup
Setup
Exp. 6, copy 2
Exp. 6, copy 2
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Exp. 6, copy 3
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Exp. 6, copy 3
Exp. 6, copy 4
Setup
Exp. 6, copy 4
Setup
Setup
Exp. 6, copy 5
Setup
Exp. 6, copy 5
Exp. 6, copy 6
Setup
Setup
Exp. 6, copy 6
Setup
Exp. 6, copy 7
Setup
Exp. 6, copy 7
Exp. 6, copy 8
Setup
Setup
Exp. 6, copy 8
Exp. 6, copy 9
Setup
Exp. 6, copy 9
Setup
Reconfig
Unused Orbital Visibility = 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15969, HD-219666 WFC3/G102 (06), implementation Thu Jul 30 19:03:43 GMT 2020

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SCHED 30%; Period 6.0343926 D AND ZERO-PHASE HJD2458329.2023619385; VISIBILITY INTERVAL 70 M

Comments: sched 100 with 20 minutes phase windows

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD-219666	RA: 23 18 14.2240 (349.5592667d) Dec: -56 54 14.35 (-56.90399d) Equinox: J2000	Proper Motion RA: 0.03832635966954526 sec of time/yr Proper Motion Dec: -0.02017699998759781 arcsec/yr Epoch of Position: 2015.5	V=9.81	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=STAR
Description=[G V-IV]

Exposures

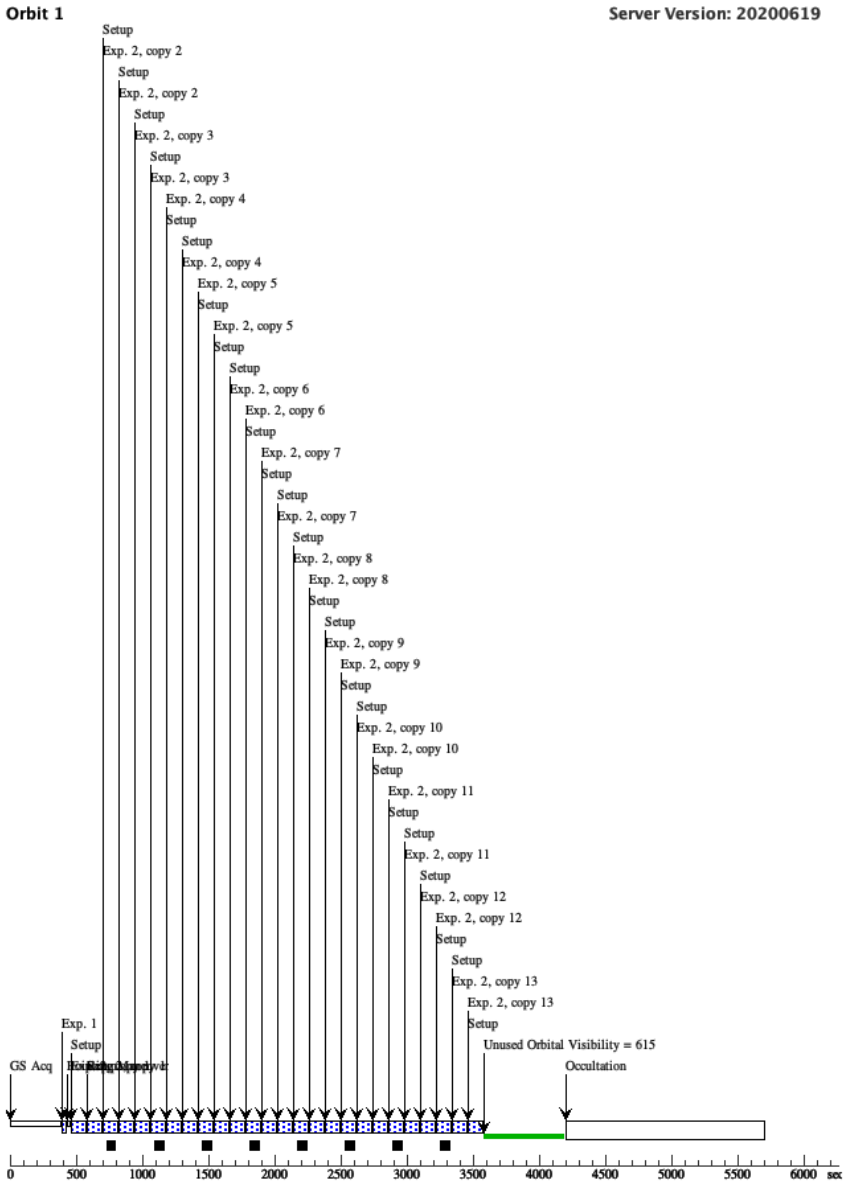
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Stare	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	F126N	NSAMP=2; SAMP-SEQ=RAPID	PHASE 0.97952102 2016052 TO 0.98182 20307782932	Sequence 1-2 Non-Int in HD-219666 WFC3/G102 (06)	0.55563 Secs (0.556 Secs) *[==>]*	 ***[1]***
2	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 1-2 Non-Int in HD-219666 WFC3/G102 (06)	81.089172 Secs X 13 (2108.318 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]*	 ***[1]***

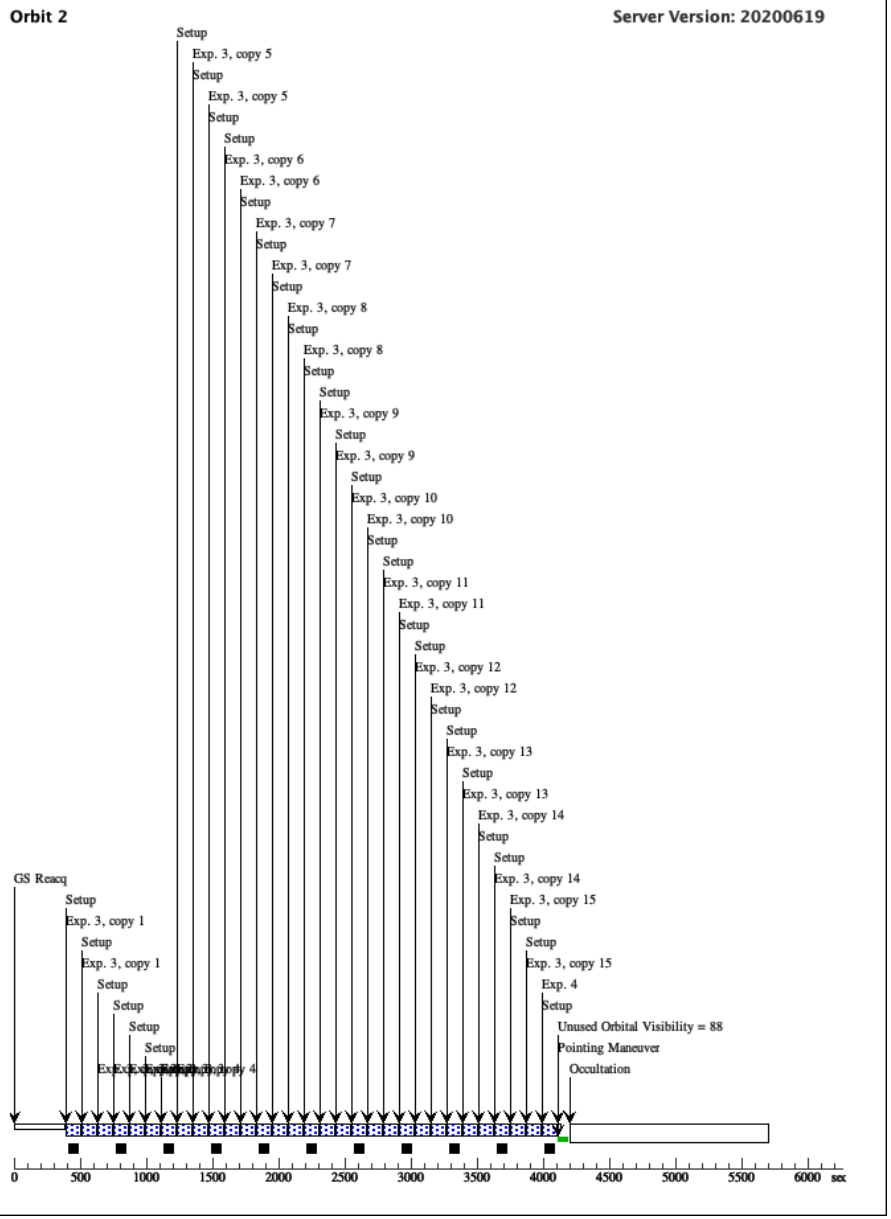
	3	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 3-4 Non-Int in HD-219666 WFC3/G102 (06)	81.089172 Secs X 15 (2432.675 Secs) *[==>(Copy 1, Forward)]* *[==>(Copy 1, Reverse)]* *[==>(Copy 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]*	***[2]***
	4	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Forward	Sequence 3-4 Non-Int in HD-219666 WFC3/G102 (06)	81.089172 Secs (81.089 Secs) *[==>]*	***[2]***

	5	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 5-6 Non-Int in HD-219666 WFC3/G102 (06)	81.089172 Secs X 15 (2432.675 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]*	***[3]***
	6	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Forward	Sequence 5-6 Non-Int in HD-219666 WFC3/G102 (06)	81.089172 Secs (81.089 Secs) *[==>]*	***[3]***

	7	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Round trip	Sequence 7-8 Non-Int in HD-219666 WFC3/G102 (06)	81.089172 Secs X 15 (2432.675 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)]* *[==>(Copy 9, Forward)]* *[==>(Copy 9, Reverse)]* *[==>(Copy 10, Forward)]* *[==>(Copy 10, Reverse)]* *[==>(Copy 11, Forward)]* *[==>(Copy 11, Reverse)]* *[==>(Copy 12, Forward)]* *[==>(Copy 12, Reverse)]* *[==>(Copy 13, Forward)]* *[==>(Copy 13, Reverse)]* *[==>(Copy 14, Forward)]* *[==>(Copy 14, Reverse)]* *[==>(Copy 15, Forward)]* *[==>(Copy 15, Reverse)]*	***[4]***
	8	Scan-Round Trip	(1) HD-219666	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=12; SAMP-SEQ=SPARS10	POS TARG 0,-12; SPATIAL SCAN 0.1 736,90.0 Degrees,Forward	Sequence 7-8 Non-Int in HD-219666 WFC3/G102 (06)	81.089172 Secs (81.089 Secs) *[==>]*	***[4]***

Orbit Structure

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Exp. 3, copy 10
Exp. 3, copy 11
Exp. 3, copy 12
Exp. 3, copy 13
Exp. 3, copy 14
Exp. 3, copy 15
GS Reacq
Exp. 3, copy 1
Exp. 4
Unused Orbital Visibility = 88
Pointing Maneuver
Occultation
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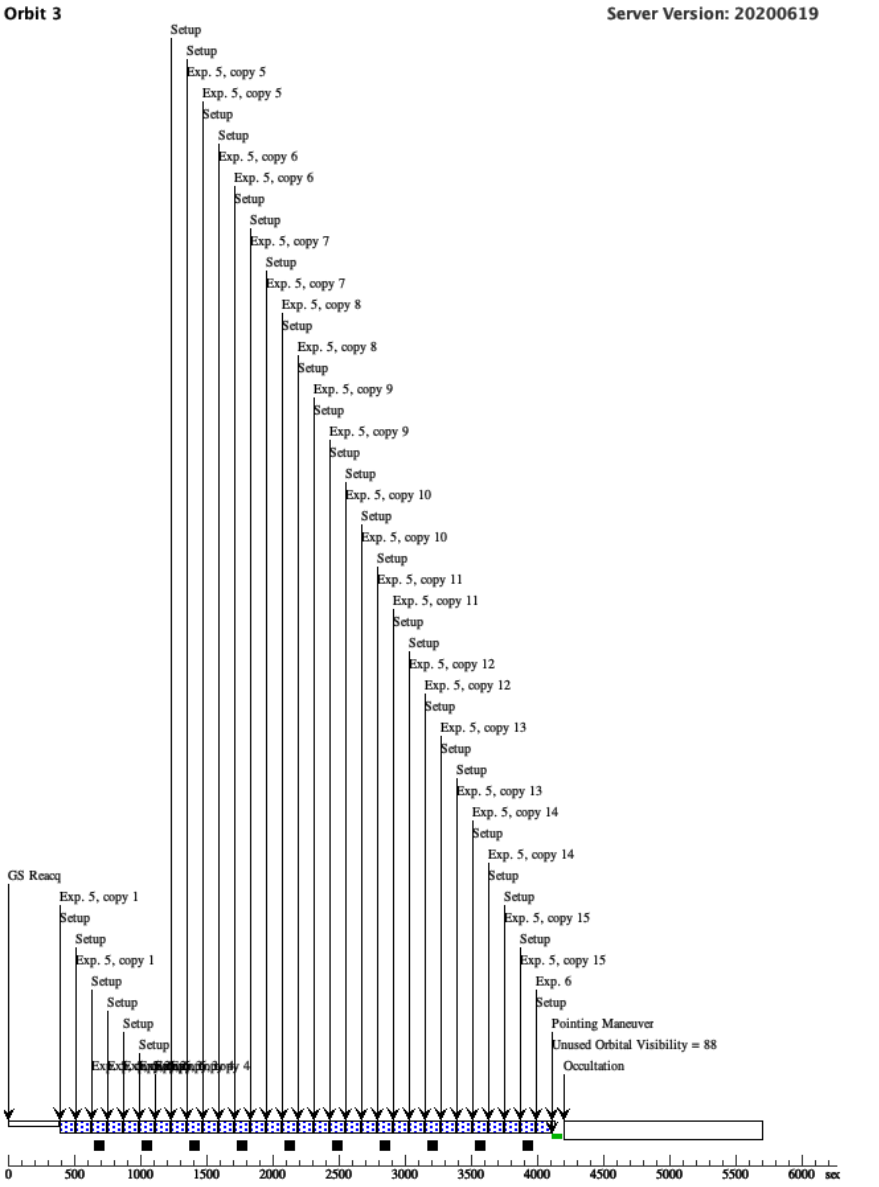
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec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Exp. 5, copy 8
Exp. 5, copy 9
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Exp. 5, copy 14
Exp. 5, copy 15
GS Reacq
Exp. 5, copy 1
Exp. 6
Pointing Maneuver
Unused Orbital Visibility = 88
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2500
3000
3500
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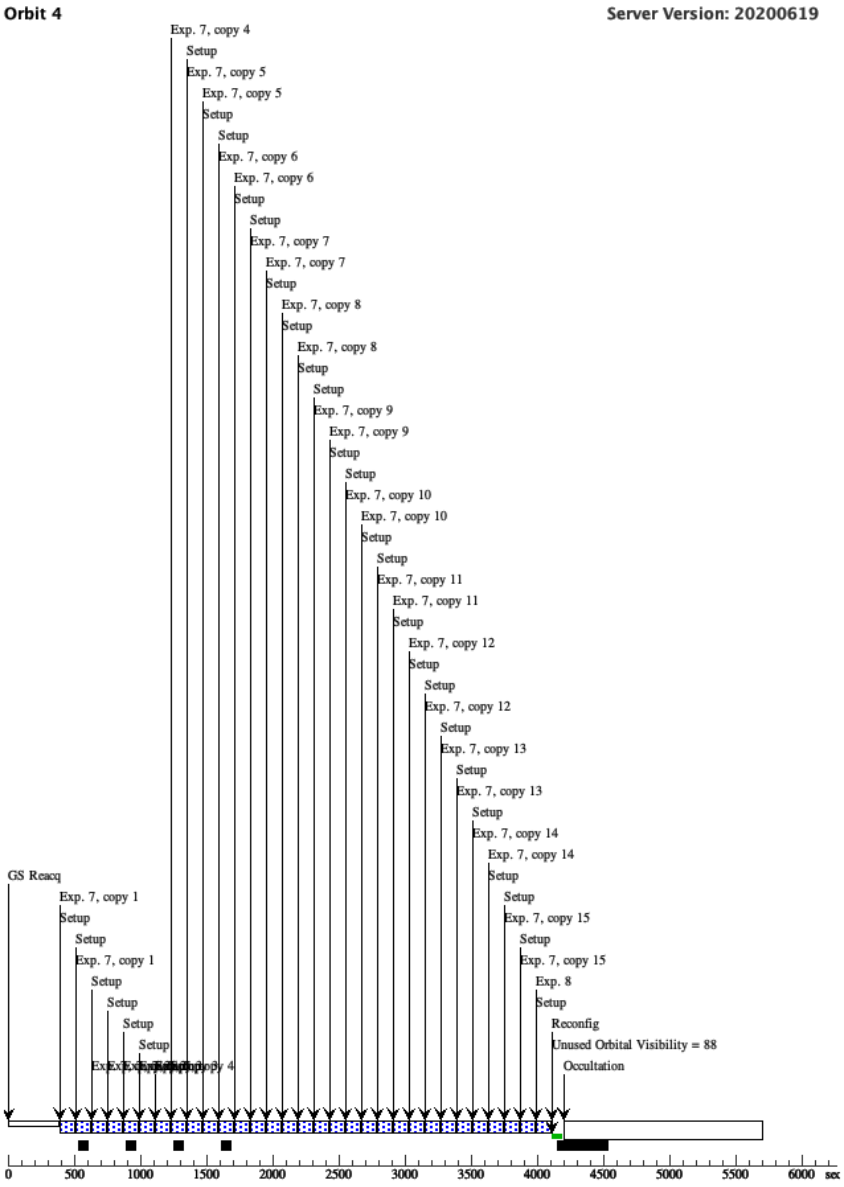
sec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Exp. 7, copy 5
Setup
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Exp. 7, copy 6
Exp. 7, copy 6
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Exp. 7, copy 8
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Exp. 7, copy 8
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Exp. 7, copy 9
Exp. 7, copy 9
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Exp. 7, copy 10
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Exp. 7, copy 13
Setup
Exp. 7, copy 13
Setup
Exp. 7, copy 14
Exp. 7, copy 14
Setup
Setup
Exp. 7, copy 15
Setup
Exp. 7, copy 15
Exp. 8
Setup
Reconfig
Unused Orbital Visibility = 88
Occultation
GS Reacq
Exp. 7, copy 1
Setup
Setup
Exp. 7, copy 1
Setup
Setup
Setup
Setup
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec