17493 - Mapping the inner disk wind of RU Lup with molecular hydrogen

Cycle: 31, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
Dr. Jinyoung Serena Kim (PI) (Contact)	**University of Arizona**
Dr. Erika Hamden (CoI)	University of Arizona
Dr. Keri Hoadley (CoI)	University of Florida
Dr. Miriam Keppler (CoI)	University of Arizona
Dr. Thomas Haworth (CoI) (ESA Member)	Queen Mary University of London
Dr. Emma Teresa Whelan (CoI) (ESA Member)	National University of Ireland, Maynooth
Dr. Haeun Chung (CoI)	University of Arizona
Dr. Kyra Azalee Bostroem (CoI)	University of Arizona

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-RU-LUP (2) RULUP-NW1 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:13.0	yes
02	(1) V-RU-LUP (3) RULUP-NW2 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:14.0	yes
03	(1) V-RU-LUP (4) RULUP-NW3 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:15.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
04	(1) V-RU-LUP (5) RULUP-NW4 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:16.0	yes
05	(1) V-RU-LUP (6) RULUP-NW5 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:18.0	yes
06	(1) V-RU-LUP (7) RULUP-SE1 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:19.0	yes
07	(1) V-RU-LUP (8) RULUP-SE2 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:20.0	yes
08	(1) V-RU-LUP (9) RULUP-SE3 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:21.0	yes
09	(1) V-RU-LUP (10) RULUP-SE4 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:23.0	yes
10	(1) V-RU-LUP (11) RULUP-SE5 CCDFLAT	STIS/CCD STIS/FUV-MAMA	3	02-Apr-2025 17:00:24.0	yes

30 Total Orbits Used

ABSTRACT

The evolution of gas in protoplanetary disks sets direct constraints on the formation and evolution of planets. However, the exact mechanisms of how gas in disks evolves are not yet clear. It is now thought that disk winds play an essential role in removing angular momentum from the disk and are thus driving accretion onto the star, with significant implications on the viscous state of the disk. Measuring the ratio of wind mass loss rate to stellar accretion rate allows to estimate the disk viscosity - one fundamental parameter needed in all planet formation models.

To now, winds are observationally mainly characterized through the analysis of secondary tracers, such as forbidden atomic lines, CO or dust. However, the main mass component of disks and winds is molecular hydrogen (H2), and it is not entirely clear if wind properties derived from

secondary tracers directly relate to those derived from H2.

In this program, we propose to spatially and spectrally map the inner disk wind of RU Lup, which hosts one of the best characterized inner disk winds from secondary tracers. Our measurements will target multiple lines of fluorescent H2 emission in the UV, and therefore directly trace the main mass component in the wind. The comparison of H2 wind mass loss rate, as well as the wind's spatial and kinematic structure to wind properties derived from other tracers will fundamentally probe the viscous state of the disk, and reveal how the main mass component behaves with respect to other components.

OBSERVING DESCRIPTION

This program requests a spatial scan along the disk major axis of RU Lup using the E140M grating. There are 10 seperate spatial fields that are partially overlapping and are separated by 37.5 mas. Field 'NW1' and 'SE1' are identical and are centered onto the star. The fields are all slightly shifted to the SW along the slit length direction by 35 mas to allow a focus of the field on the SW part of the disk.

We request initial acquisition (incl. peak-up) of each visit on the central star itself, RU Lup, before slewing to the respective offset field. The slit is requested to a position angle (E of N) of 47 or 227 deg, corresponding to a STIS orient angle (=PA+45 deg) of 92 or 272 deg.

We insert an optical G750M spectrum at the end of the first orbit of each visit to measure the Halpha line which will allow an estimate of the instantaneous accretion rate.

The individual visits can be executed independently from each other, but a close sampling in time would be most preferable to limit any potential variability of the system.

Visit

Proposal 17493, NW1 (01), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

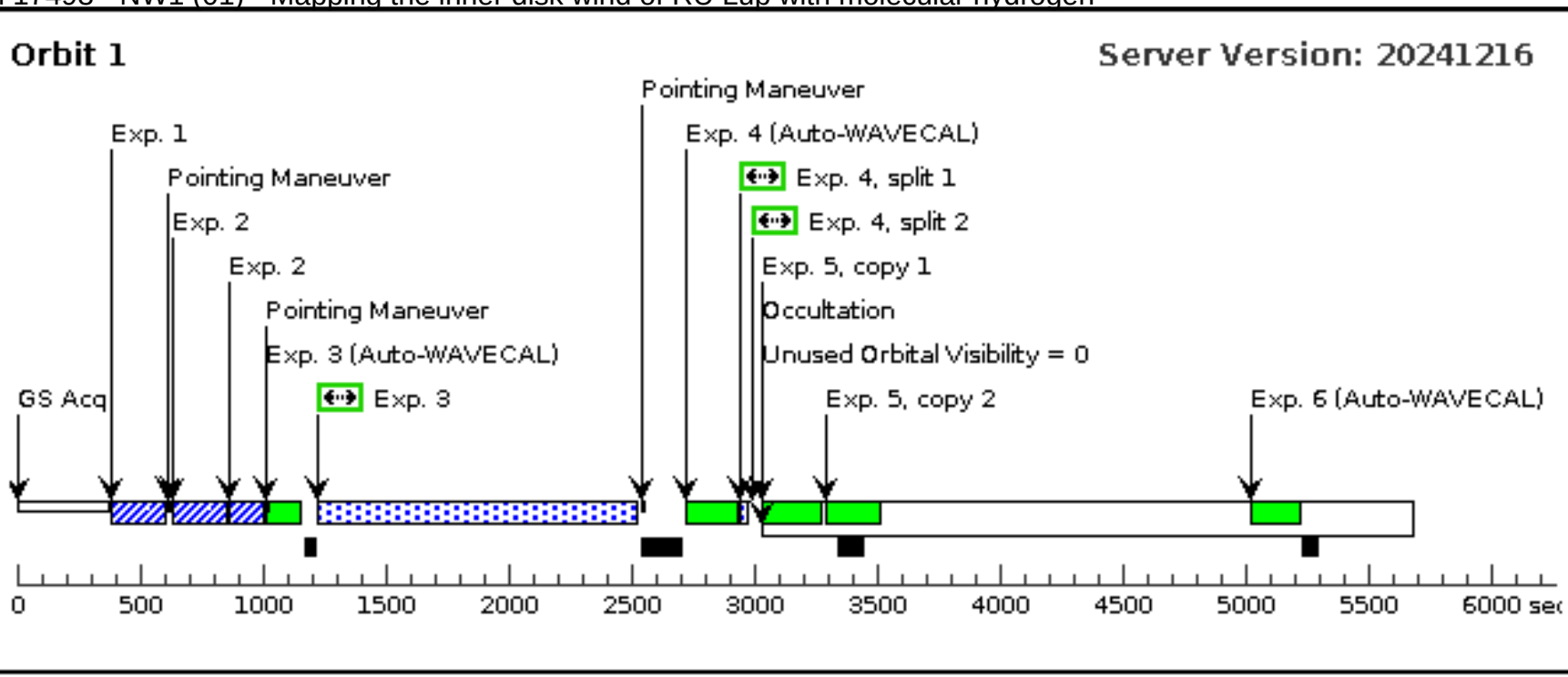
Fixed Targets

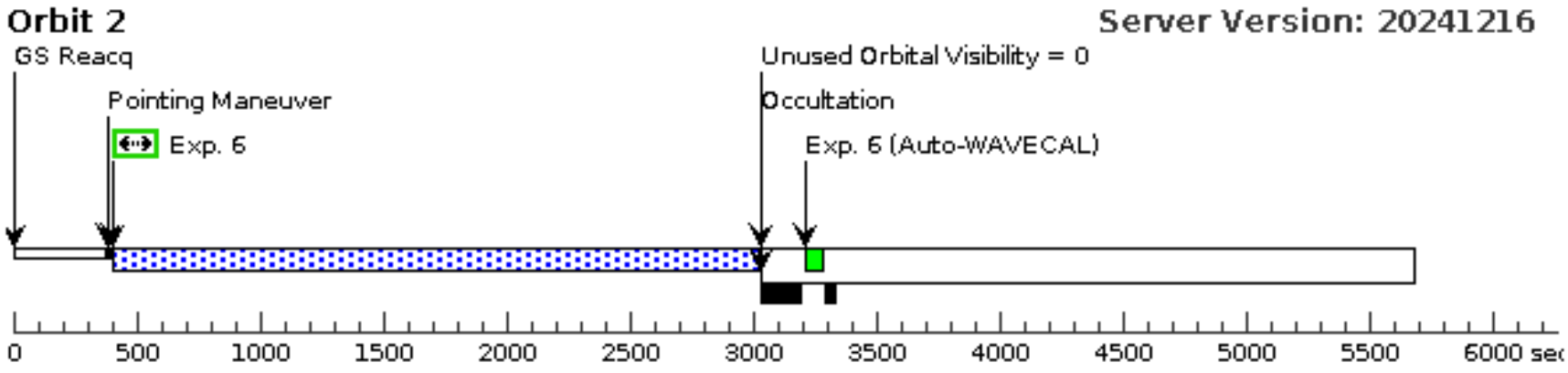
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(2)	RULUP-NW1	Offset from V-RU-LUP RA Offset: -0.0015213455071716457 Secs Dec Offset: -0.03000085489475168 Arcsec		V=11.4	Offset Position (RULUP-NW1)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

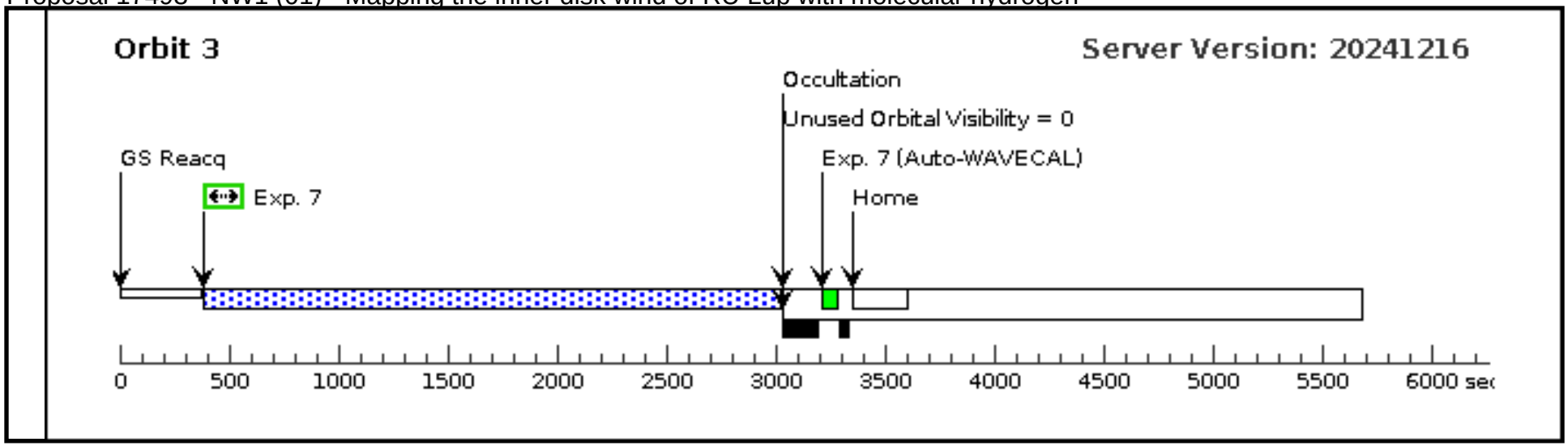
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(2) RULUP-NW1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1283 Secs) *[==>1283.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds.								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (0.2 Secs) *[==>0.1 Secs (Split 1)]* *[==>0.1 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(2) RULUP-NW1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2609 Secs) *[==>2609.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(2) RULUP-NW1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure



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GS Reacq
Exp. 7 (Auto-WAVECAL)
Exp. 7
Home
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1500
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3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, NW2 (02), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

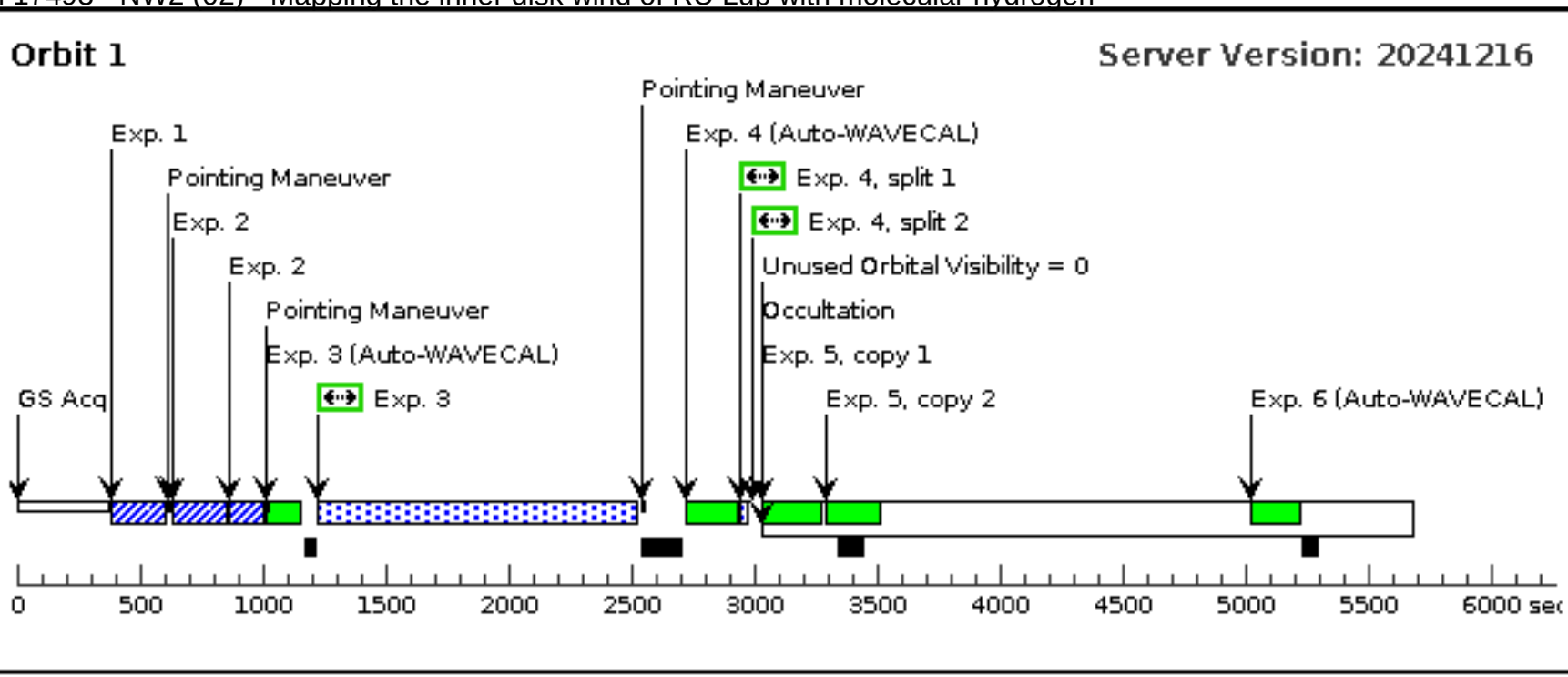
Fixed Targets

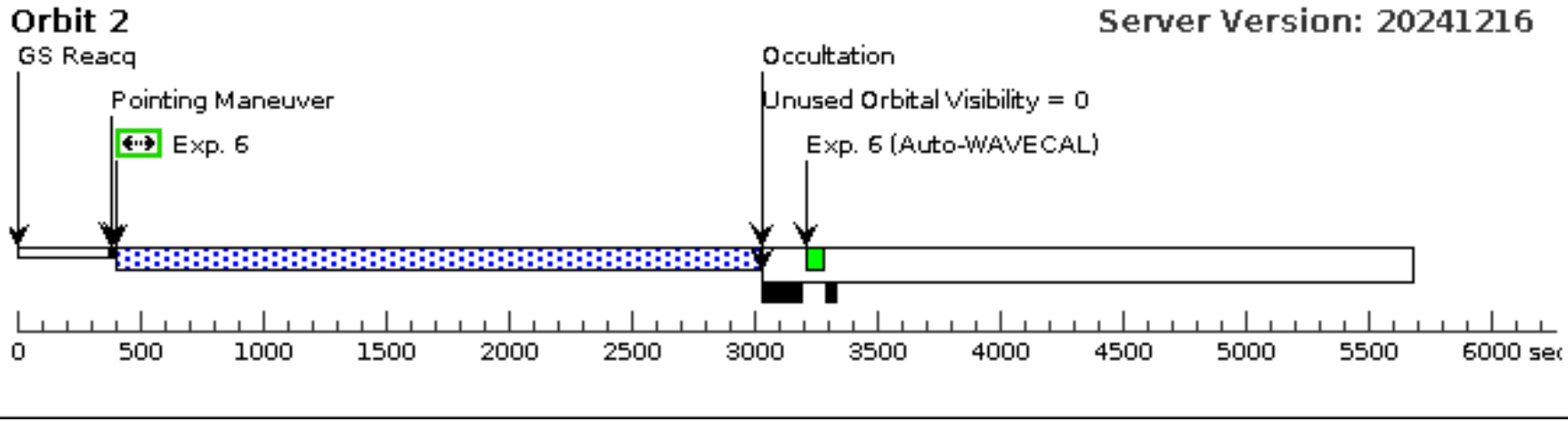
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(3)	RULUP-NW2	Offset from V-RU-LUP RA Offset: -0.004234142561472255 Secs Dec Offset: -0.010686925136838 Arcsec		V=11.4	Offset Position (RULUP-NW2)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

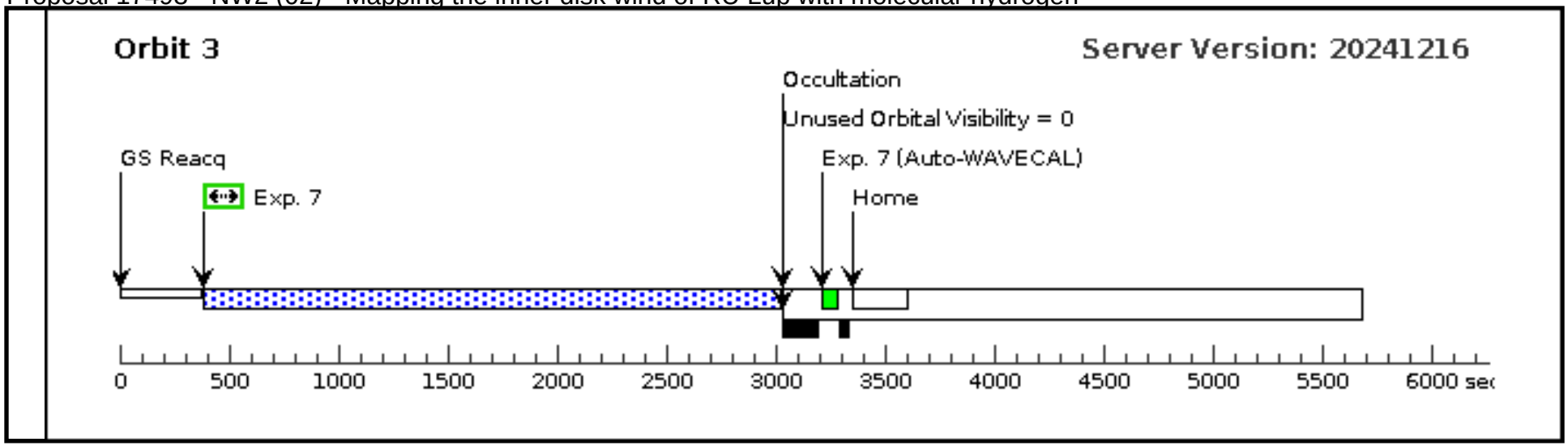
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(3) RULUP-NW2	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1283 Secs) *[==>1283.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (0.2 Secs) *[==>0.1 Secs (Split 1)]* *[==>0.1 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(3) RULUP-NW2	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2609 Secs) *[==>2609.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(3) RULUP-NW2	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure



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Occultation
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Exp. 7 (Auto-WAVECAL)
Exp. 7
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1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, NW3 (03), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

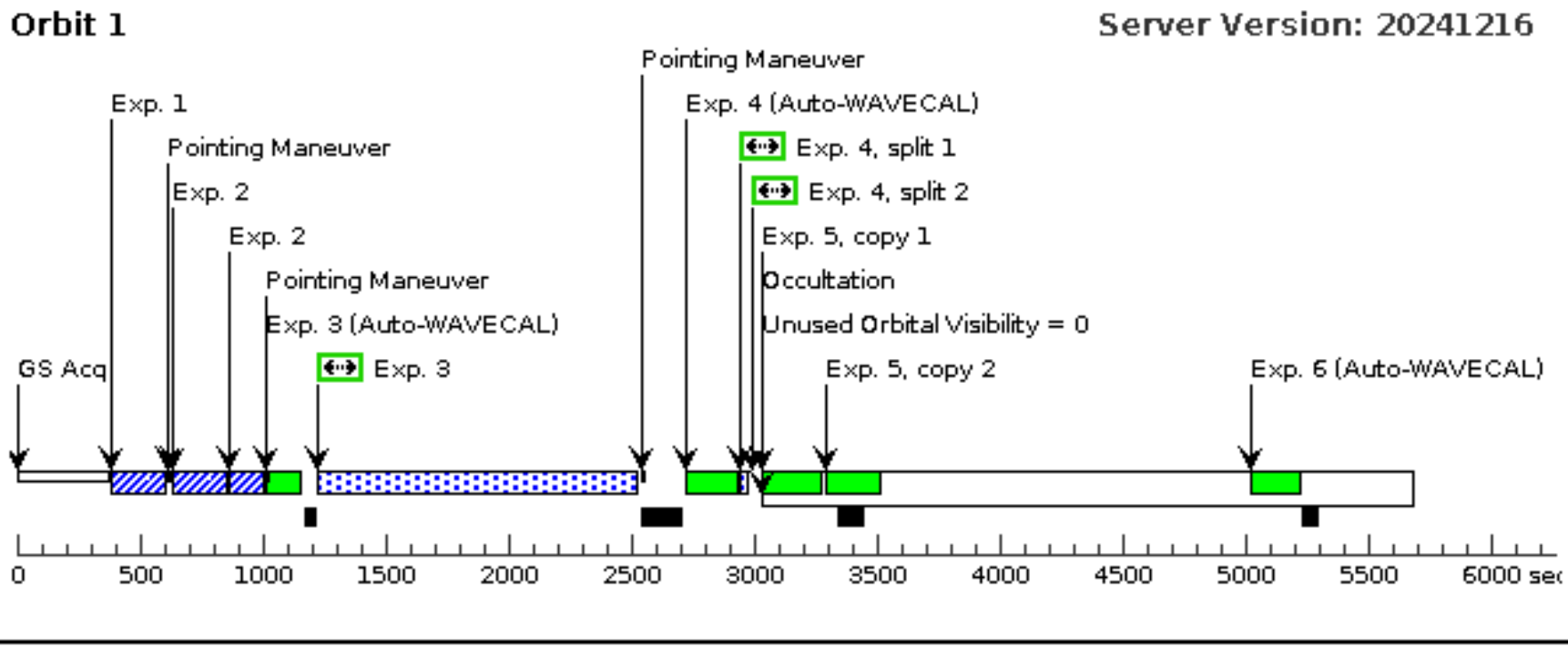
Fixed Targets

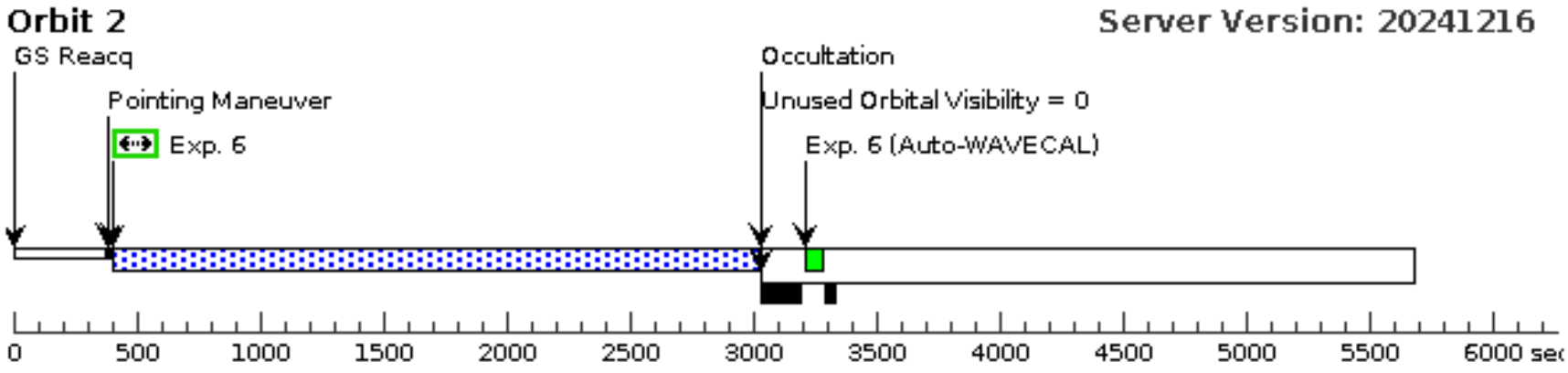
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(4)	RULUP-NW3	Offset from V-RU-LUP RA Offset: -0.006946939240606299 Secs Dec Offset: 0.008627008483585996 Arcsec		V=11.4	Offset Position (RULUP-NW3)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

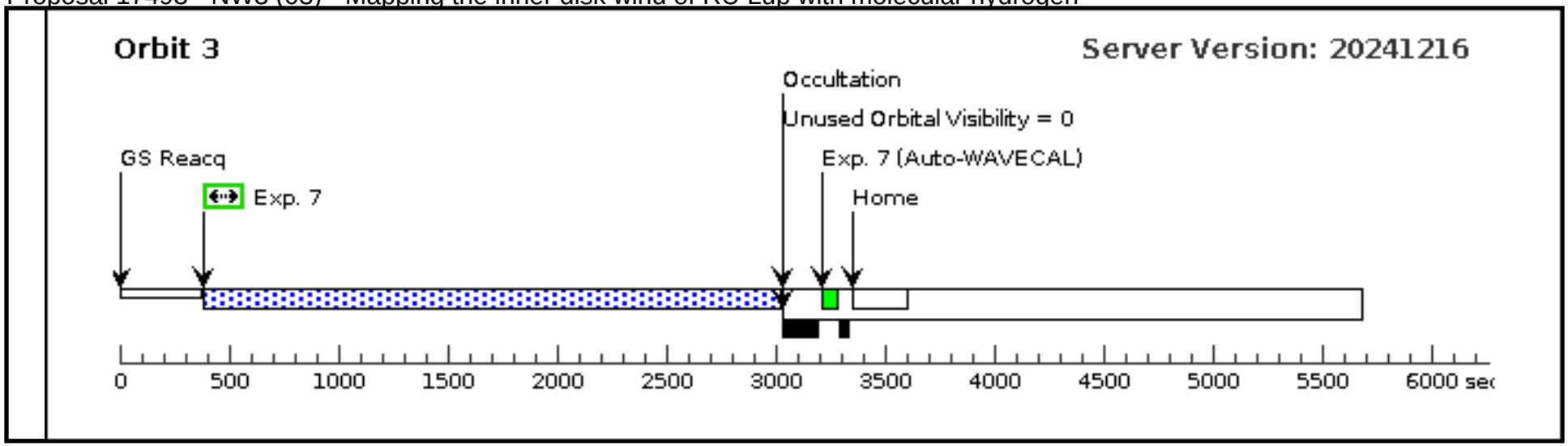
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(4) RULUP-NW3	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1283 Secs) *[==>1283.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (0.2 Secs) *[==>0.1 Secs (Split 1)]* *[==>0.1 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(4) RULUP-NW3	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2609 Secs) *[==>2609.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(4) RULUP-NW3	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure



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Server Version: 20241216
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 7 (Auto-WAVECAL)
Exp. 7
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2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, NW4 (04), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

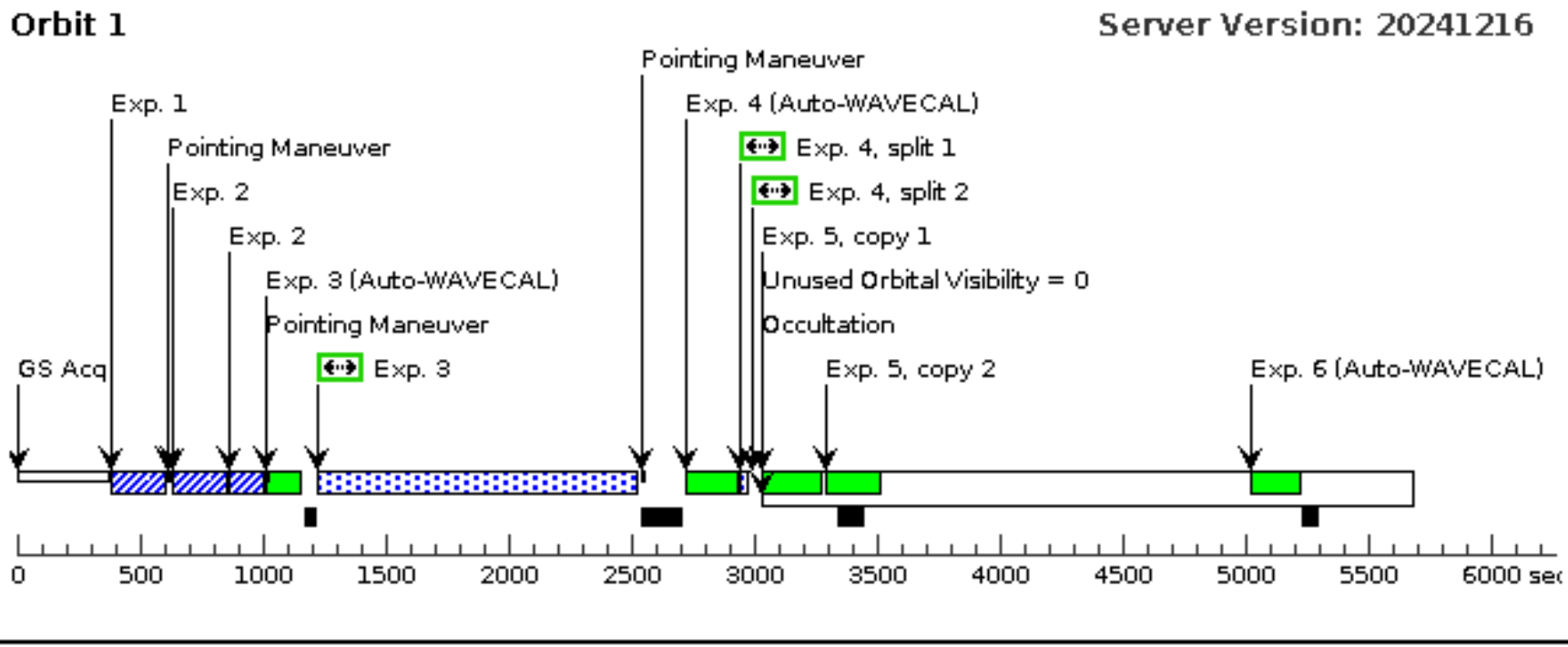
Fixed Targets

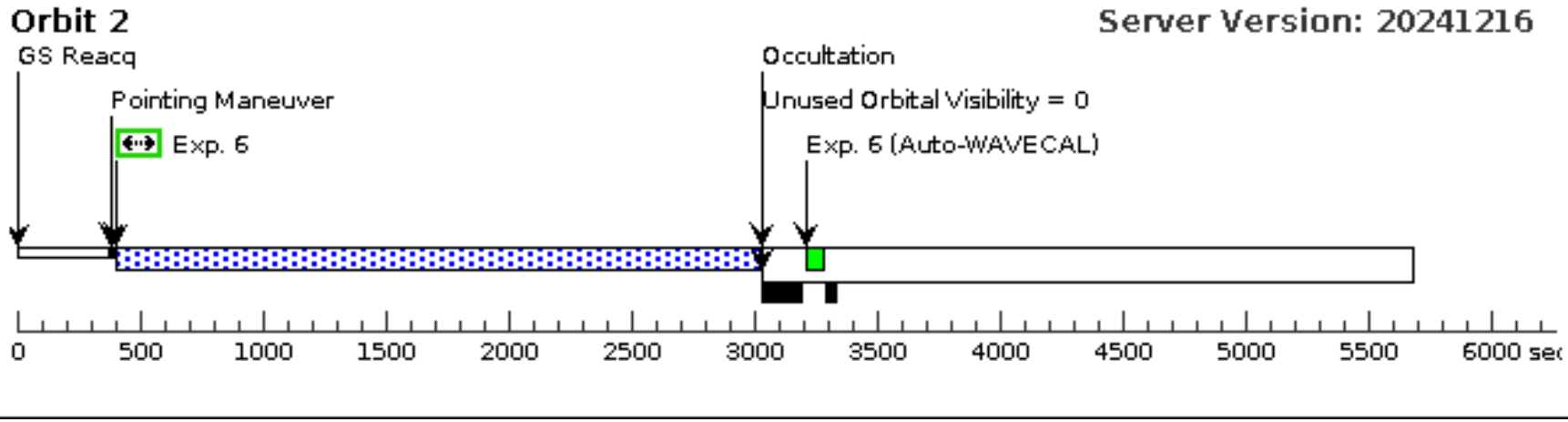
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(5)	RULUP-NW4	Offset from V-RU-LUP RA Offset: -0.009659735503646518 Secs Dec Offset: 0.02794094604325892 Arcsec		V=11.4	Offset Position (RULUP-NW4)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

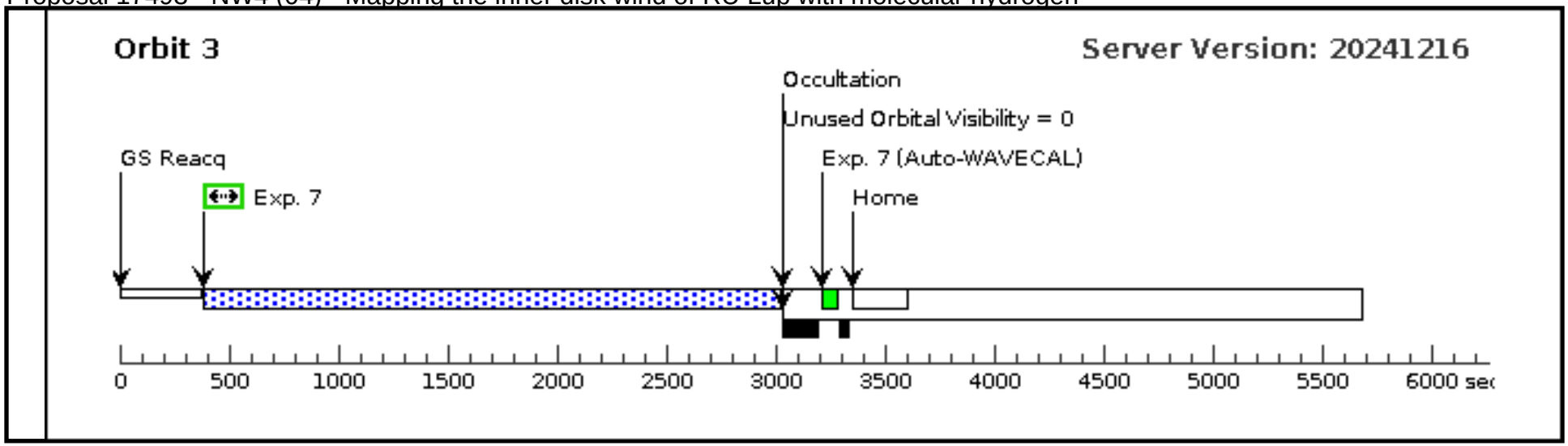
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(5) RULUP-NW4	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1283 Secs) *[==>1283.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (0.2 Secs) *[==>0.1 Secs (Split 1)]* *[==>0.1 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(5) RULUP-NW4	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2609 Secs) *[==>2609.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(5) RULUP-NW4	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure



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Unused Orbital Visibility = 0
GS Reacq
Exp. 7 (Auto-WAVECAL)
Exp. 7
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4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, NW5 (05), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

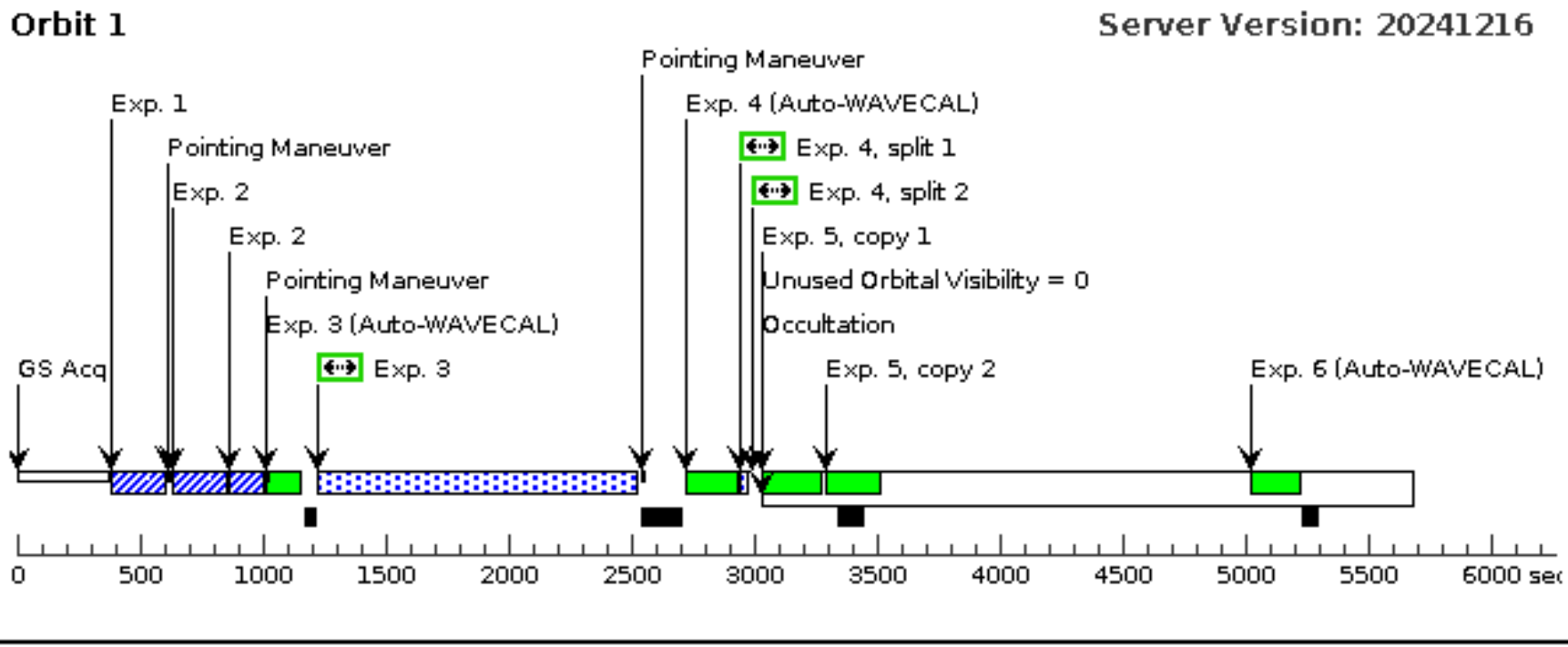
Fixed Targets

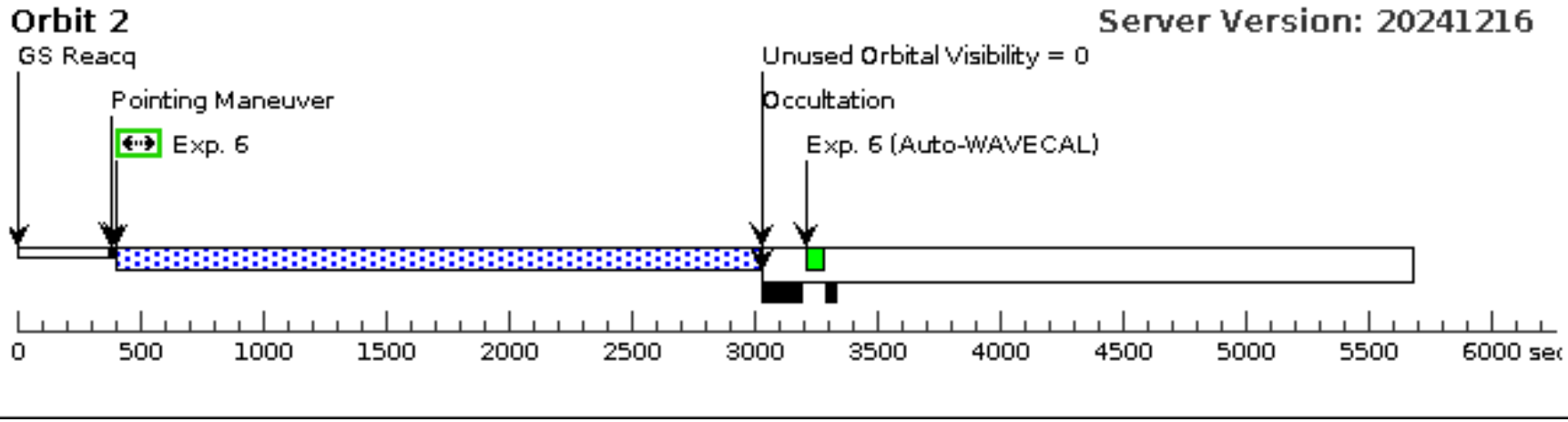
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(6)	RULUP-NW5	Offset from V-RU-LUP RA Offset: -0.012372531391520173 Secs Dec Offset: 0.04725488746544215 Arcsec		V=11.4	Offset Position (RULUP-NW5)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

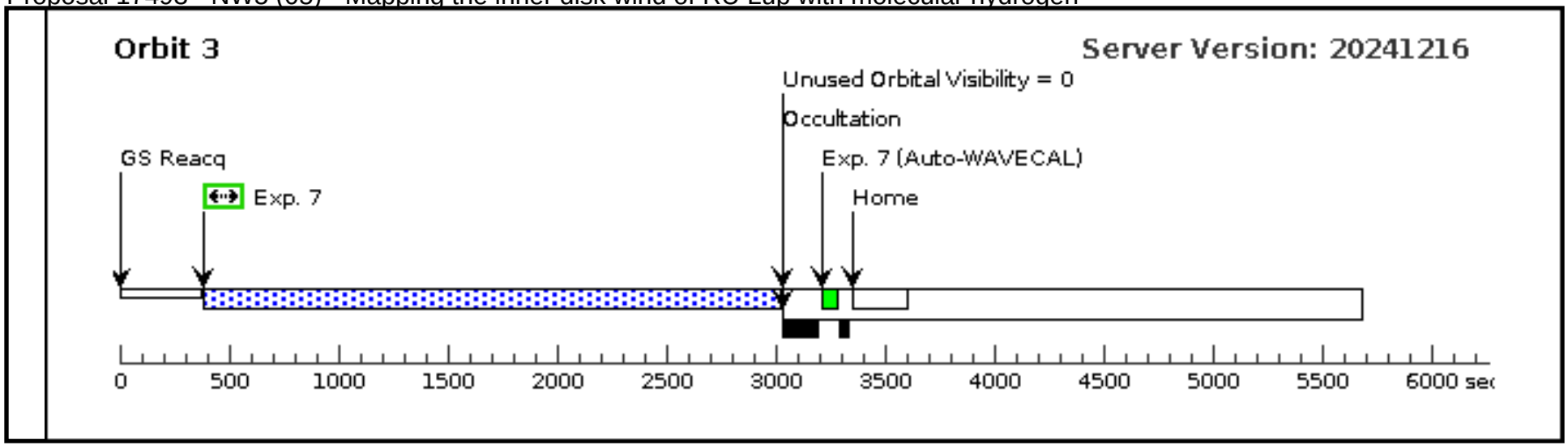
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(6) RULUP-NW5	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1283 Secs) *[==>1283.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (0.2 Secs) *[==>0.1 Secs (Split 1)]* *[==>0.1 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(6) RULUP-NW5	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2609 Secs) *[==>2609.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(6) RULUP-NW5	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure



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Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 7
Exp. 7 (Auto-WAVECAL)
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, SE1 (06), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

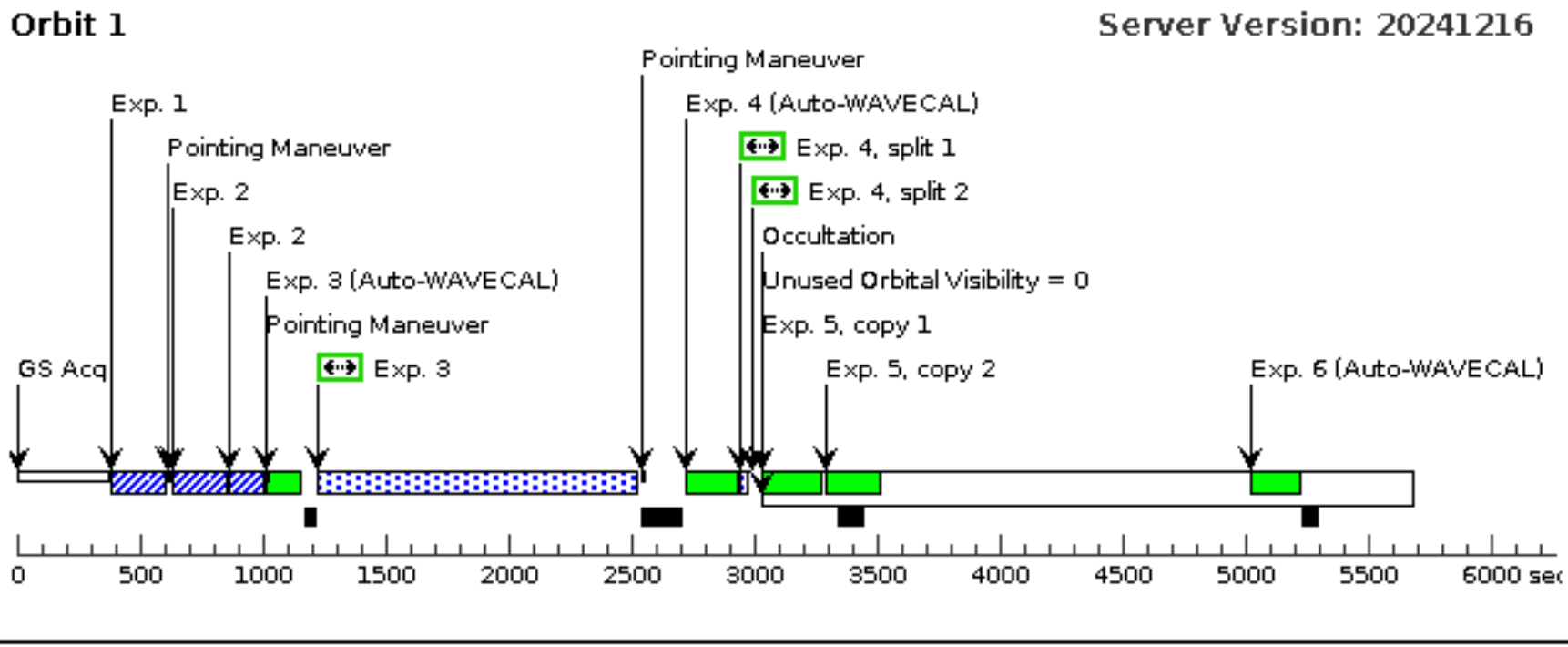
Fixed Targets

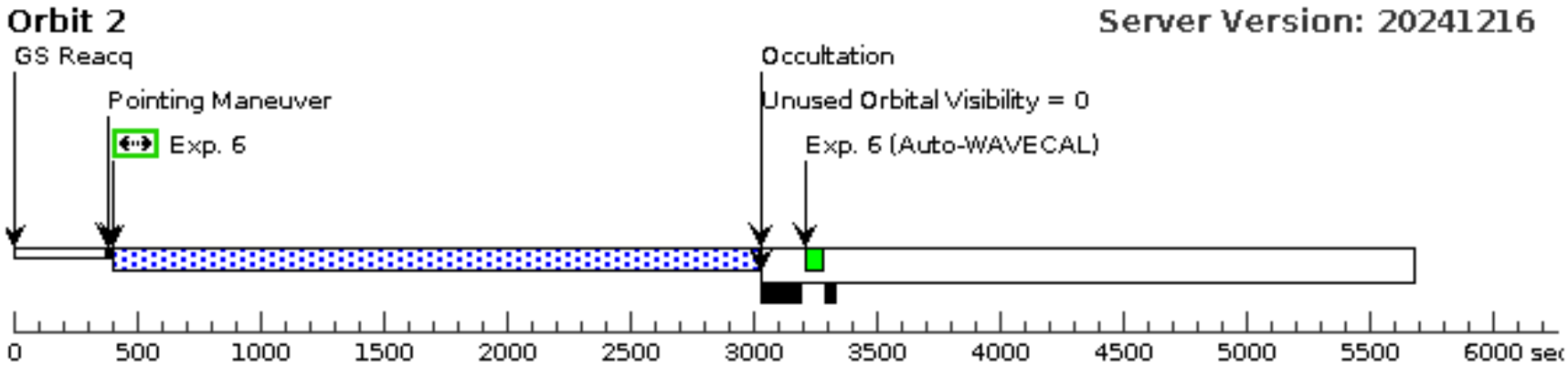
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(7)	RULUP-SE1	Offset from V-RU-LUP RA Offset: -0.0015213455071716457 Secs Dec Offset: -0.03000085489475168 Arcsec		V=11.4	Offset Position (RULUP-SE1)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

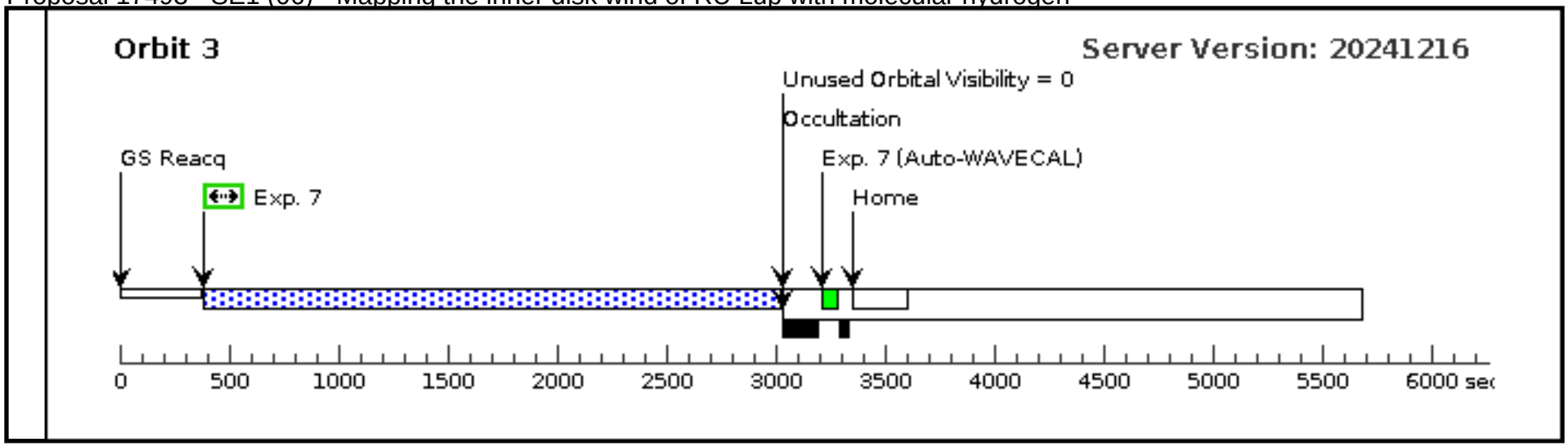
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(7) RULUP-SE1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1283 Secs) *[==>1283.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (0.2 Secs) *[==>0.1 Secs (Split 1)]* *[==>0.1 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(7) RULUP-SE1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2609 Secs) *[==>2609.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(7) RULUP-SE1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure



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Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 7
Exp. 7 (Auto-WAVECAL)
Home
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4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, SE2 (07), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

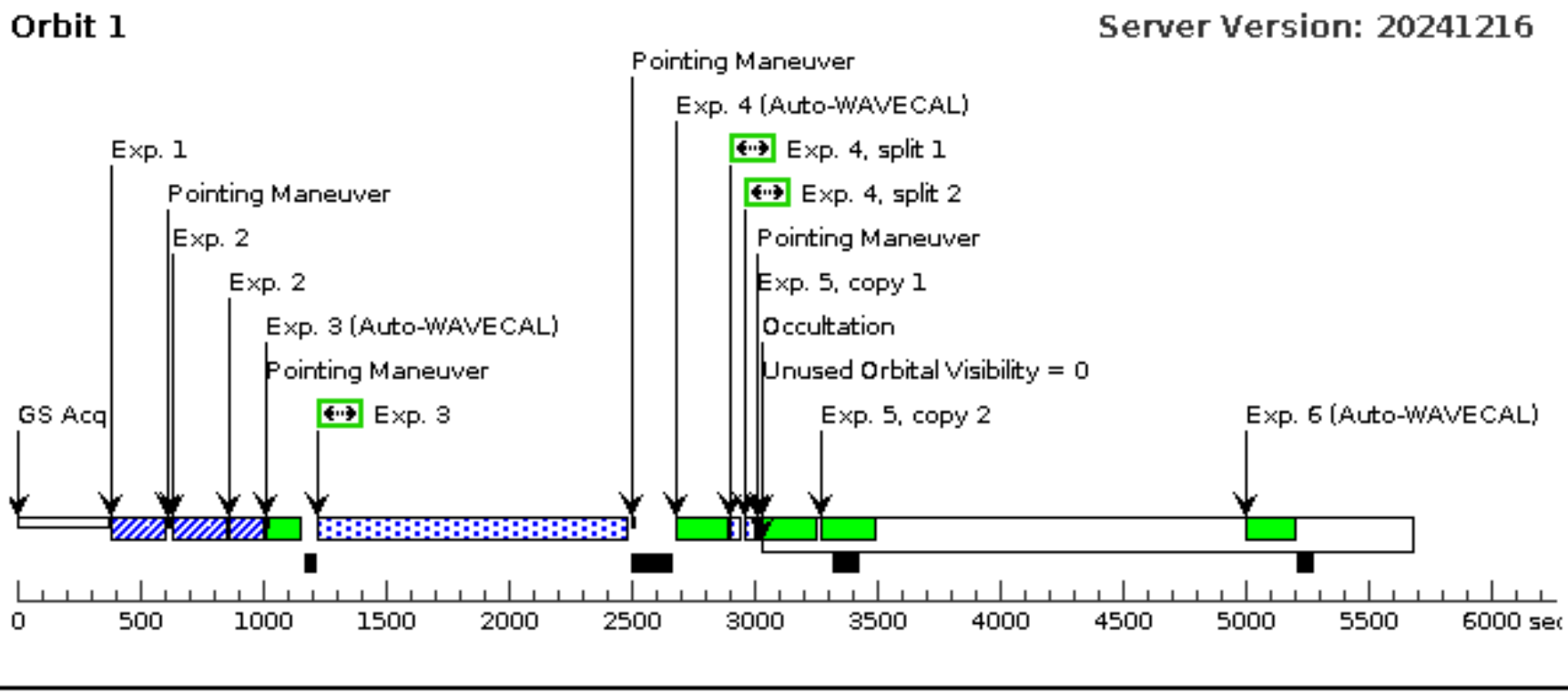
Fixed Targets

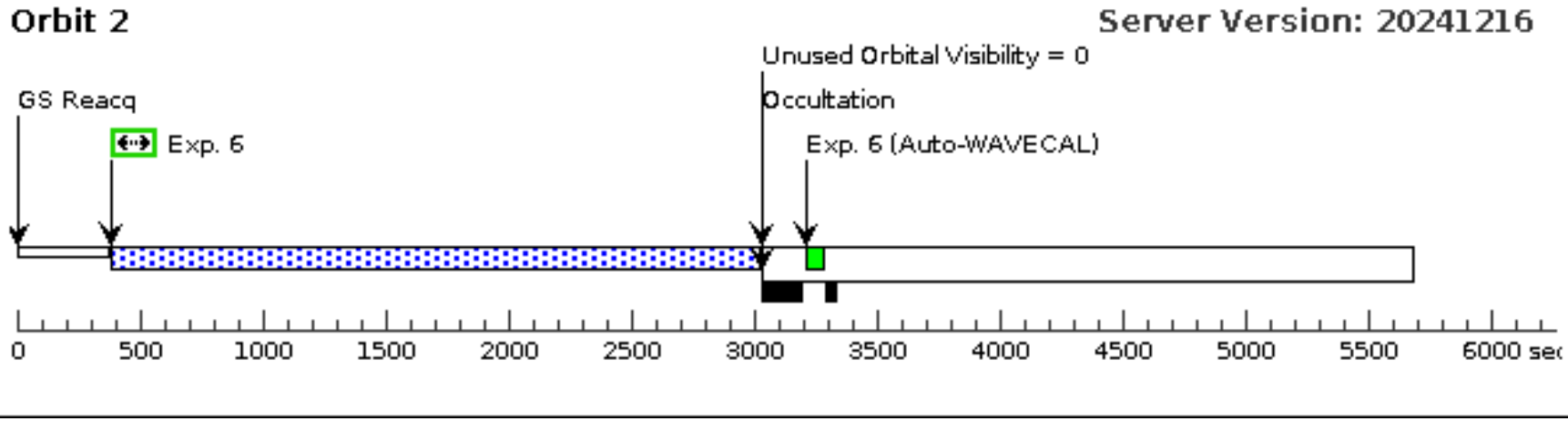
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(8)	RULUP-SE2	Offset from V-RU-LUP RA Offset: 0.001191451949580369 Secs Dec Offset: -0.049314780790155055 Arcsec		V=11.4	Offset Position (RULUP-SE2)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

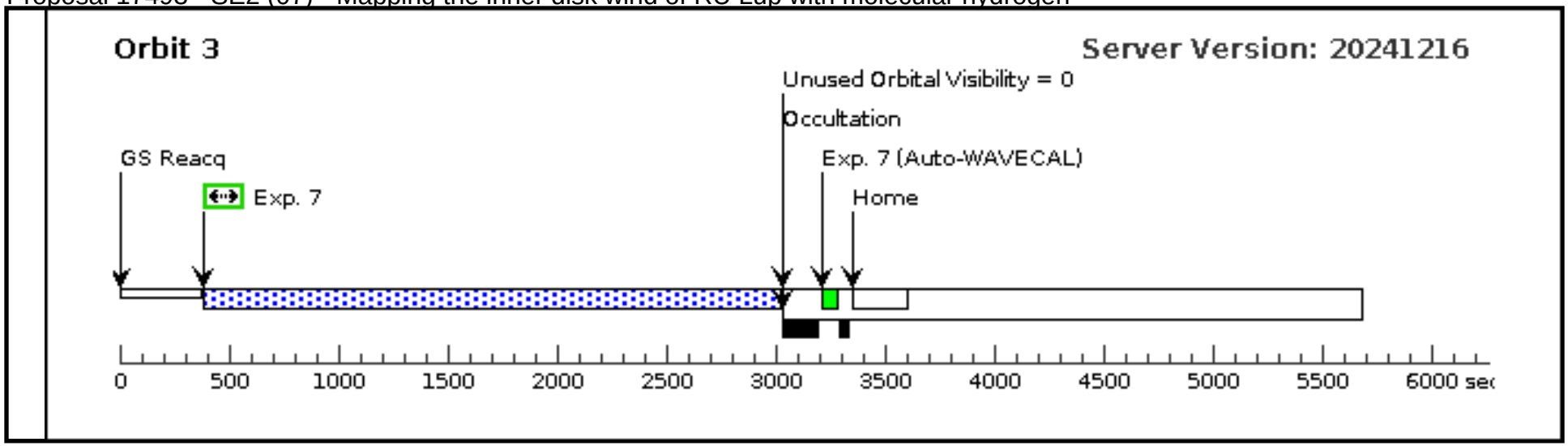
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s..								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(8) RULUP-SE2	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1245 Secs) *[==>1245.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (20 Secs) *[==>10.0 Secs (Split 1)]* *[==>10.0 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(8) RULUP-SE2	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(8) RULUP-SE2	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure



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Server Version: 20241216
Unused Orbital Visibility = 0
Occultation
GS Reacq
Exp. 7
Exp. 7 (Auto-WAVECAL)
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1500
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4500
5000
5500
6000 sec

Visit

Proposal 17493, SE3 (08), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

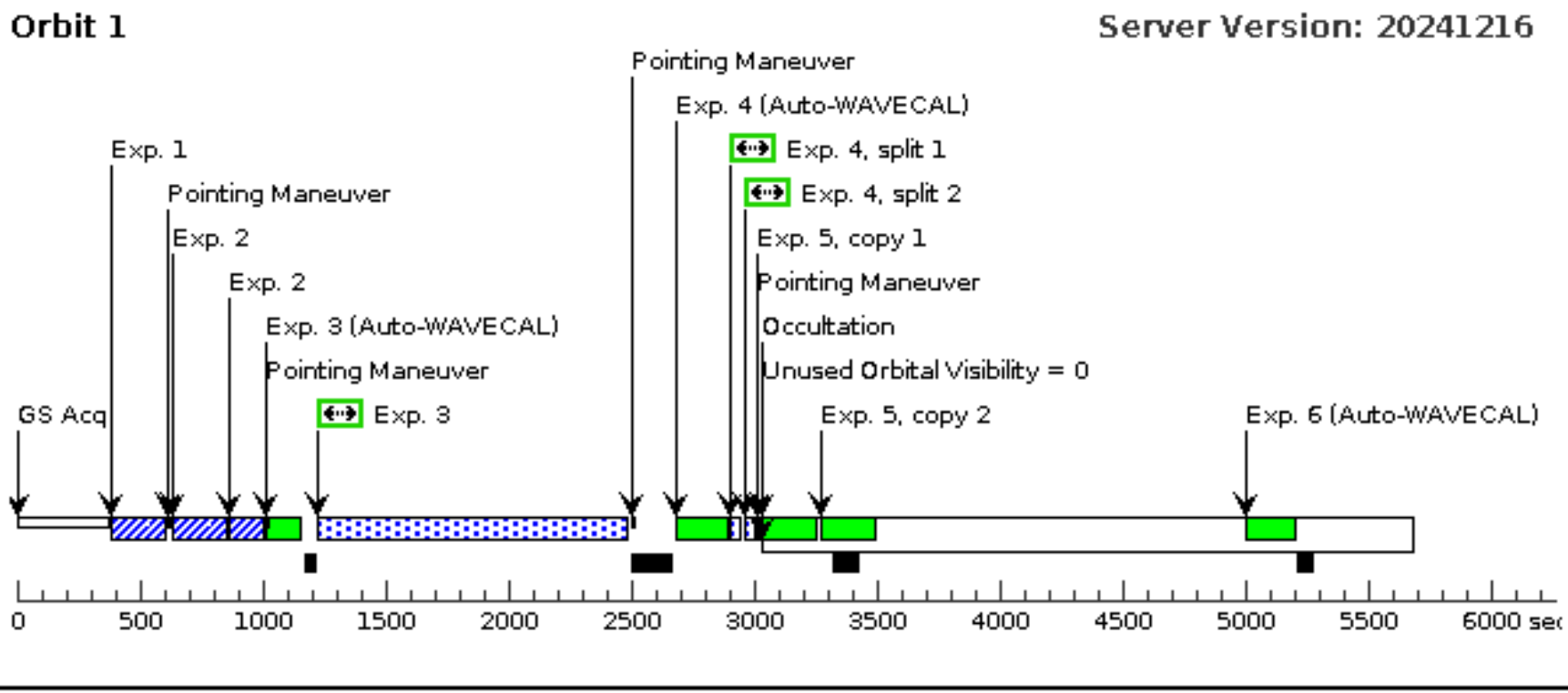
Fixed Targets

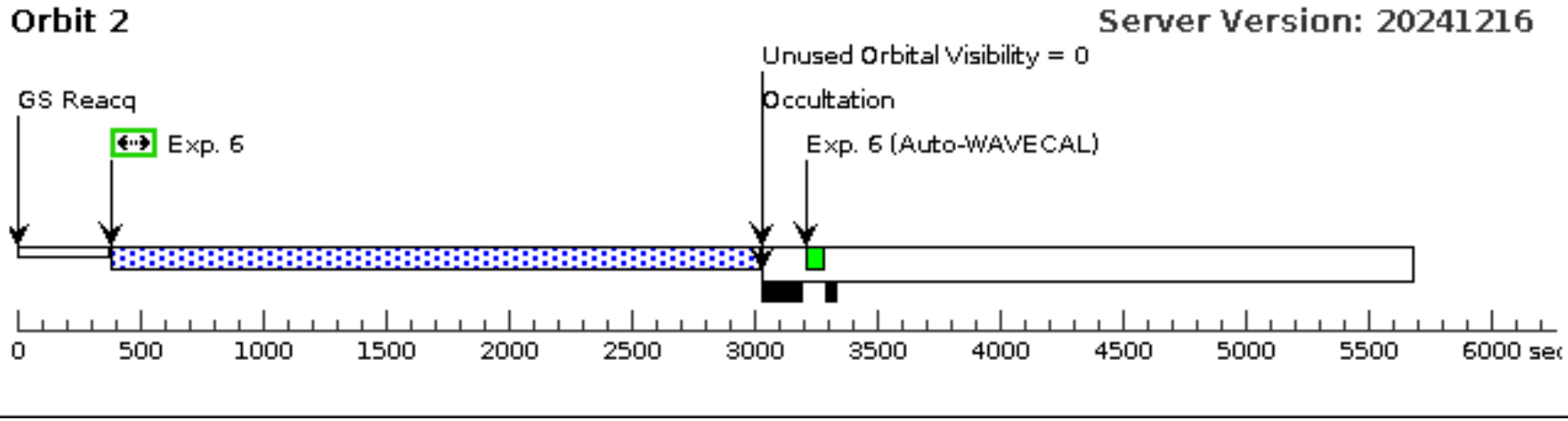
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(9)	RULUP-SE3	Offset from V-RU-LUP RA Offset: 0.00390424980196257 Secs Dec Offset: -0.0686287027463095 Arcsec		V=11.4	Offset Position (RULUP-SE3)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

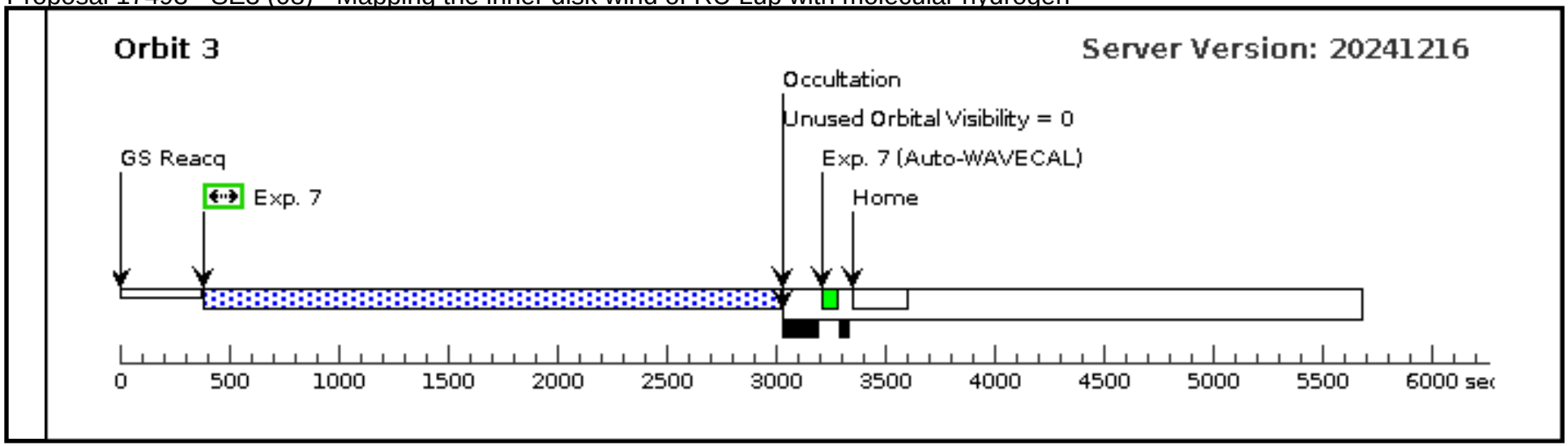
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(9) RULUP-SE3	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1245 Secs) *[==>1245.0 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (20 Secs) *[==>10 Secs (Split 1)]* *[==>10 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(9) RULUP-SE3	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(9) RULUP-SE3	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure






Orbit 3
Server Version: 20241216
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 7 (Auto-WAVECAL)
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, SE4 (09), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

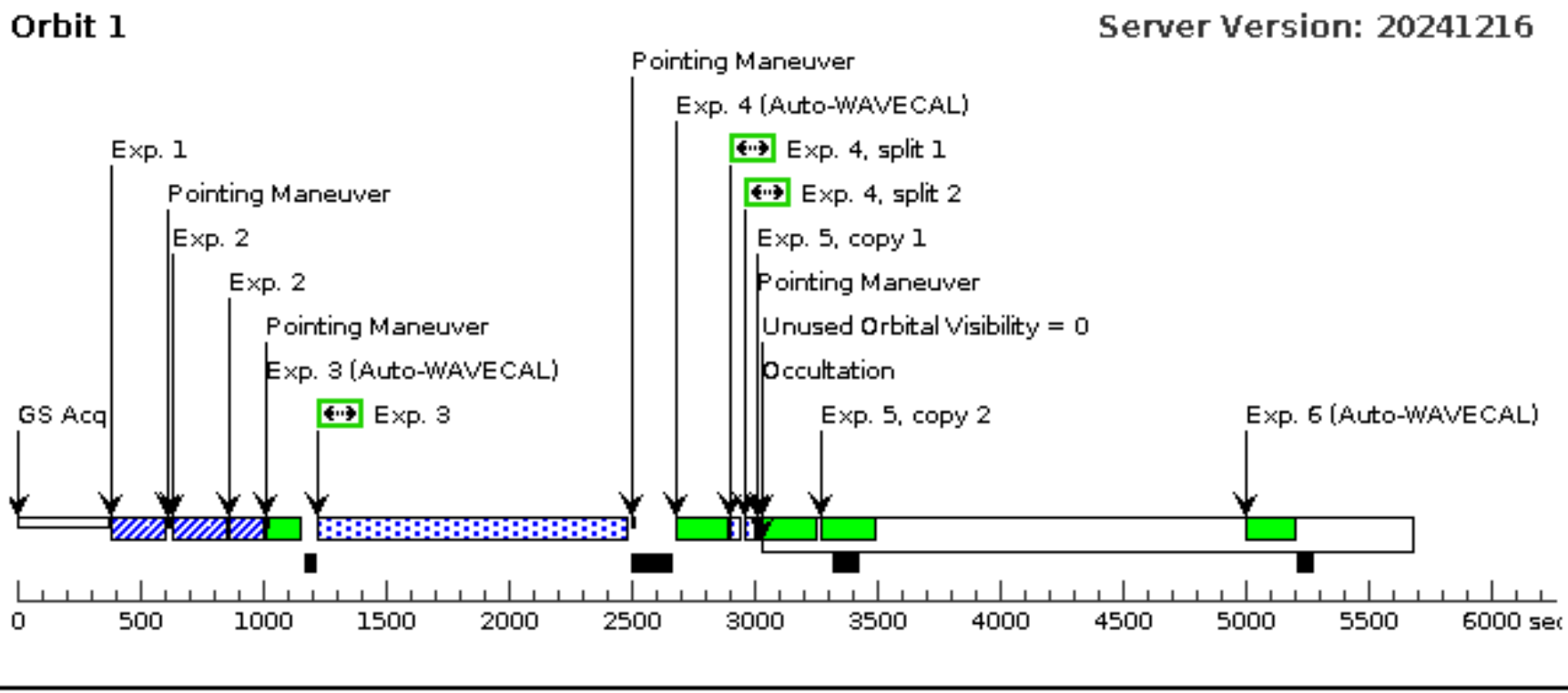
Fixed Targets

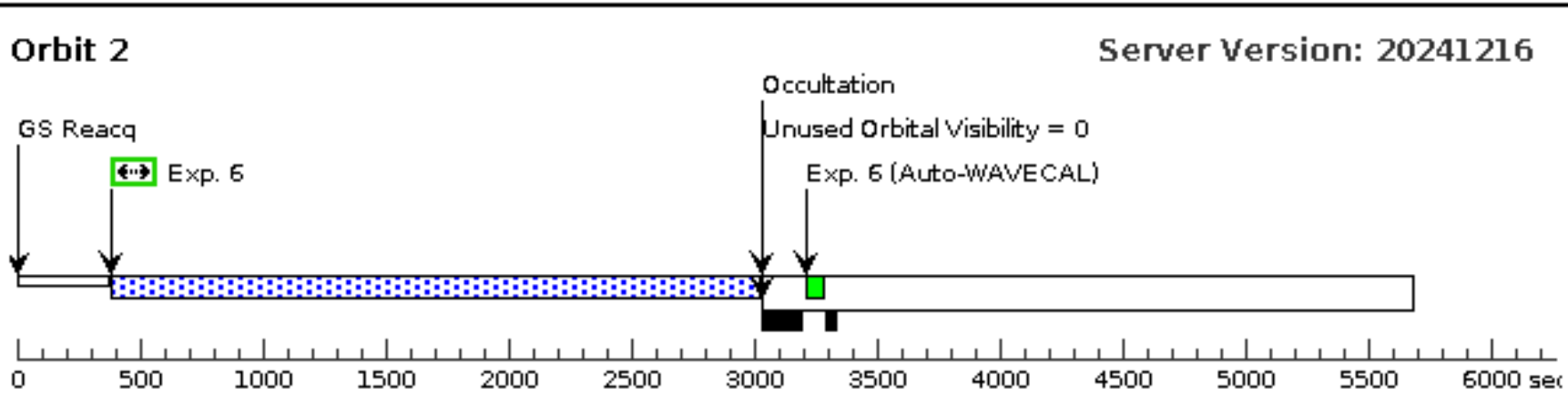
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(10)	RULUP-SE4	Offset from V-RU-LUP RA Offset: 0.00661704804315377 Secs Dec Offset: -0.087942620814374 Arcsec		V=11.4	Offset Position (RULUP-SE4)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

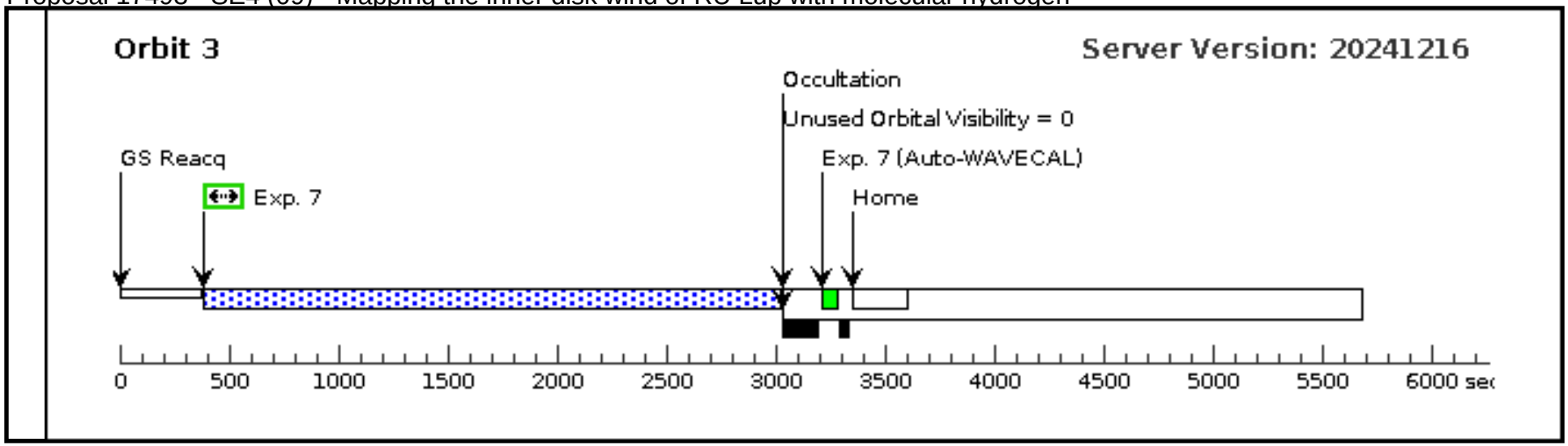
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(10) RULUP-SE4	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1245 Secs) *[==>1245 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (20 Secs) *[==>10 Secs (Split 1)]* *[==>10 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(10) RULUP-SE4	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(10) RULUP-SE4	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure






Orbit 3
Server Version: 20241216
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 7 (Auto-WAVECAL)
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17493, SE5 (10), completed Wed Apr 02 21:00:25 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD, STIS/FUV-MAMA

Special Requirements: ORIENT 92D TO 92 D; ORIENT 272D TO 272 D

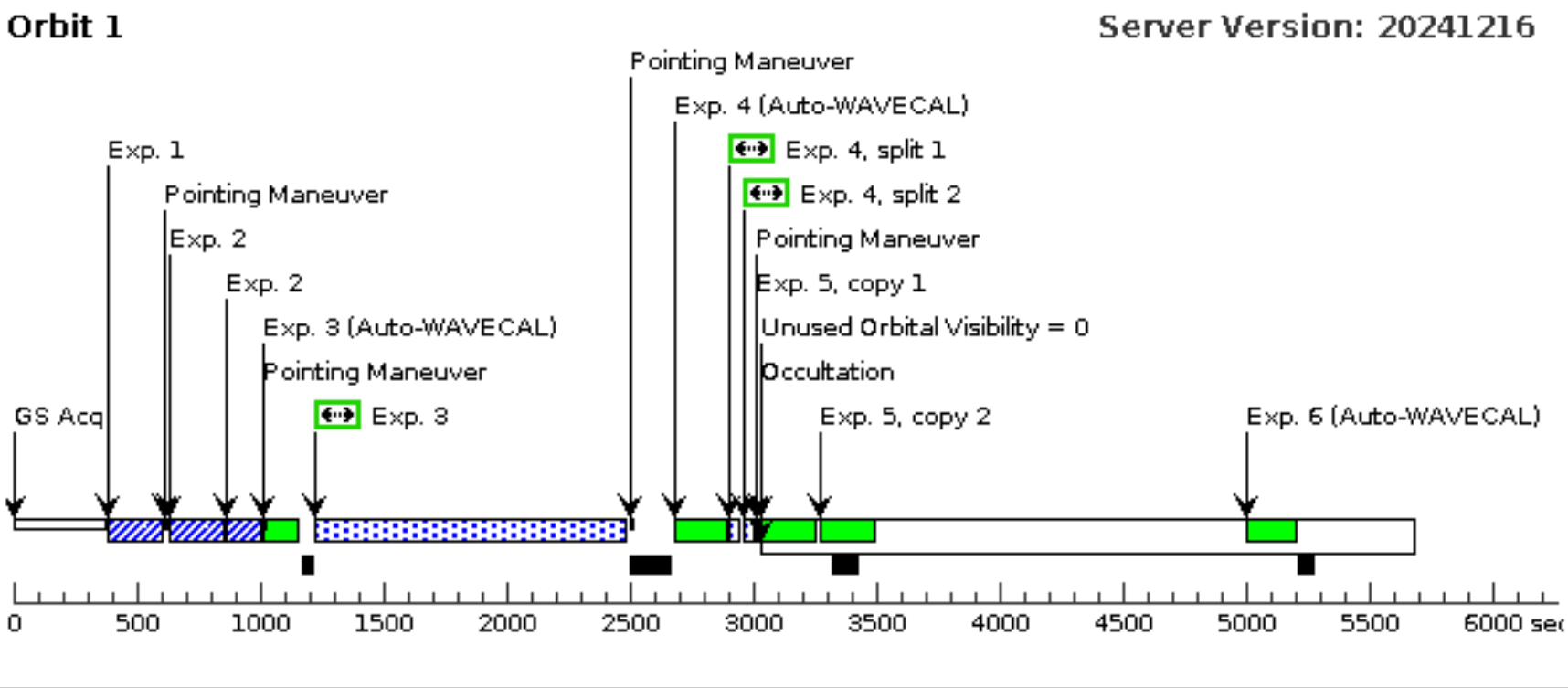
Fixed Targets

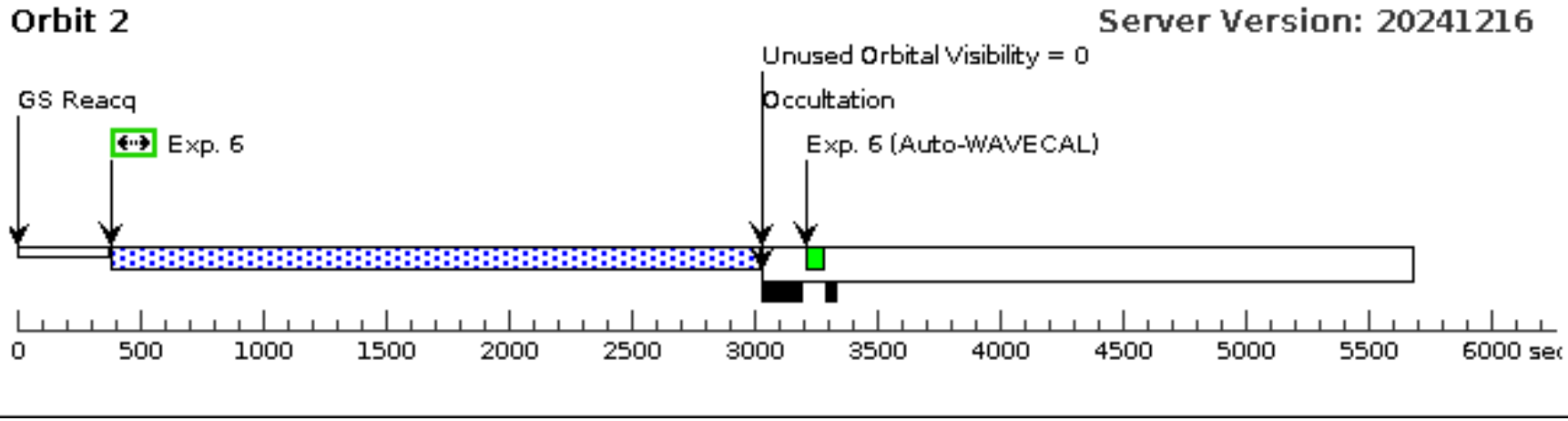
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-RU-LUP	RA: 15 56 42.2954 (239.1762308d) Dec: -37 49 15.85 (-37.82107d) Equinox: J2000	Proper Motion RA: -11.457 mas/yr Proper Motion Dec: -23.211 mas/yr Parallax: 0.0063489" Epoch of Position: 2016	V=11.1 SpT=K7, G=10.7107, J=8.732, H=7.824, K=7.138	Reference Frame: ICRS
Comments: Coordinates of RU Lup were retrieved from Gaia DR3. Vmag was retrieved from Hipparcos catalogue but might be variable (Vmag=9.6 reported in Ducati et al. 2002). *Category=STAR* *Description=[PROTOPLANETARY DISK, T TAURI STAR]*					
(11)	RULUP-SE5	Offset from V-RU-LUP RA Offset: 0.009329846686796374 Secs Dec Offset: -0.10725653501992838 Arcsec		V=11.4	Offset Position (RULUP-SE5)
Comments: Vmag reported here correponds to the central star (RU Lup) not included in this offset field. There is no emission expected to be as bright as the star in the offset fields. *Category=STAR* *Description=[PROTOPLANETARY DISK]*					

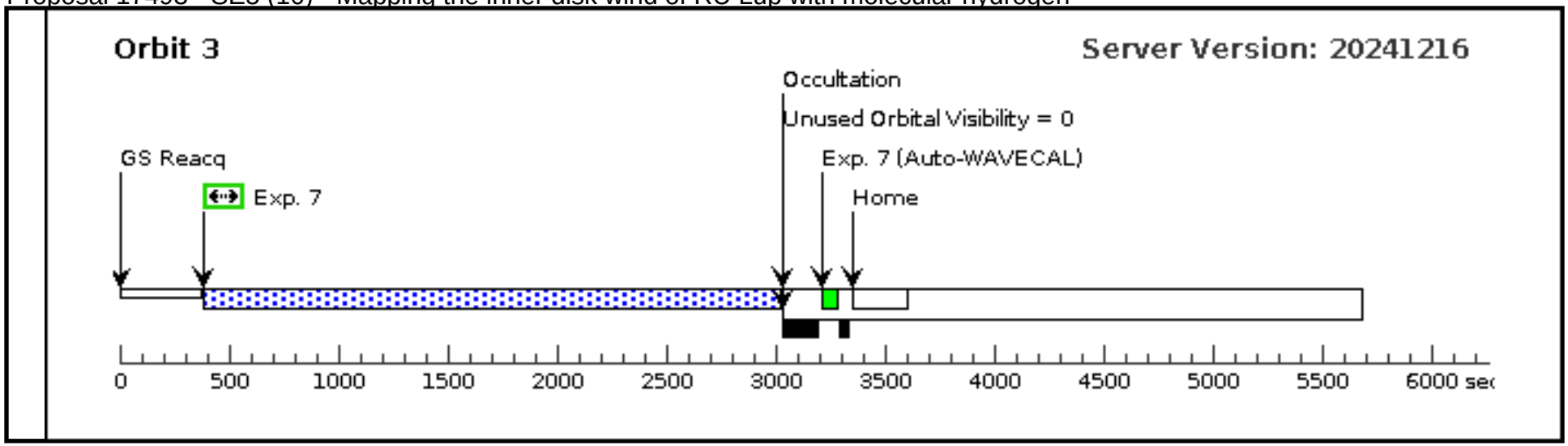
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Target Acquisition (ACQ) (STIS.ta.1890871)	(1) V-RU-LUP	STIS/CCD, ACQ, F28X50LP	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the F28X50LP slit and a K7 model spectrum, the ACQ ETC predicts an SNR of 243 for an exposure time of 0.1s.								
2	Target acquisition (ACQ/PEAK) (STIS.ta.1891149)	(1) V-RU-LUP	STIS/CCD, ACQ/PEAK, 0.2X0.06	MIRROR				0.1 Secs (0.1 Secs) *[==>]*	***[1]***
	Comments: RU LUP has V=11.1 mag. Using the 0.2x0.06 slit, the ACQ ETC predicts an SNR of 174 for an exposure time of 0.1s.								
3	Science obs 1 (STIS.sp.1891388)	(11) RULUP-SE5	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			1340 Secs (1245 Secs) *[==>1245 Secs]*	***[1]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
4	Stellar spectrum	(1) V-RU-LUP	STIS/CCD, ACCUM, 52X0.1	G750M 6768 A				20 Secs (20 Secs) *[==>10 Secs (Split 1)]* *[==>10 Secs (Split 2)]*	***[1]***
5	Fringe flat	CCDFLAT	STIS/CCD, ACCUM, 0.2X0.06	G750M 6768 A				*[==>(Copy 1)]* *[==>(Copy 2)]*	***[1]***
6	Science obs 2 (STIS.sp.1891388)	(11) RULUP-SE5	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[2]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								
7	Science obs 3 (STIS.sp.1891388)	(11) RULUP-SE5	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=8000			2757 Secs (2629 Secs) *[==>2629.0 Secs]*	***[3]***
	Comments: According to the STIS ETC, we expect a count rate of ~120 counts/s for RU Lup on the entire detector. According to the STIS instrument handbook, the buffert time should be less or equal fo 1.6 x 10^6 divided by the count rate, which corresponds to about 8000 seconds								

Orbit Structure






Orbit 3
Server Version: 20241216
Occultation
Unused Orbital Visibility = 0
GS Reacq
Exp. 7 (Auto-WAVECAL)
Exp. 7
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec