15836 - A deep look into the atmosphere of an exoplanet around a pre-main sequence star

Cycle: 27, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-AU-MIC-1 WAVE	STIS/CCD STIS/FUV-MAMA	2	13-Oct-2021 12:00:34.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
02	(1) V-AU-MIC-1 WAVE	STIS/CCD STIS/FUV-MAMA	3	13-Oct-2021 12:00:35.0	yes
03	(1) V-AU-MIC-1 WAVE	STIS/CCD STIS/FUV-MAMA	1	13-Oct-2021 12:00:36.0	yes
04	(1) V-AU-MIC-1 WAVE	STIS/CCD STIS/FUV-MAMA	5	13-Oct-2021 12:00:38.0	yes
05	(1) V-AU-MIC-1 WAVE	STIS/CCD STIS/FUV-MAMA	1	13-Oct-2021 12:00:39.0	yes
07	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:00:44.0	yes
08	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:00:49.0	yes
09	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:00:55.0	yes
10	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:00.0	yes
11	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:05.0	yes
12	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:10.0	yes
13	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:14.0	yes
14	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:18.0	yes
15	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:23.0	yes
16	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:28.0	yes
17	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:33.0	yes
18	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:37.0	yes
19	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:42.0	yes
20	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:47.0	yes
21	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:51.0	yes
22	(1) V-AU-MIC-1	WFC3/IR	1	13-Oct-2021 12:01:56.0	yes

28 Total Orbits Used

ABSTRACT

Two planets around the pre-main sequence M dwarf AU Mic have recently been detected, including the hot, 6 Earth radius AU Mic b. AU Mic thus joins the small number of known young planetary systems, and the even smaller number of planets that co-exist with debris disks. AU Mic b is the only planet in a young stellar association with both a mass and a radius, and AU Mic is a bright, nearby, and extremely well-observed host star. We propose to take advantage of the unique opportunities available with HST to conduct a multi-pronged investigation into the atmosphere of AU Mic b. First, we will constrain its atmospheric composition through WFC3 transmission spectroscopy. With transmission spectroscopy with both the G102 and G141 grisms, we can probe both H2O and CH4 features. We can then constrain the C/O ratio and thus where the planet formed. Second, we will probe atmospheric escape through STIS UV transit observations. Using the E140M grating, we will obtain high resolution UV spectra and can search for signatures of atmospheric outflows in Ly-alpha and C II. AU Mic b thus provides an exceptional opportunity to investigate planet formation and evolution.

OBSERVING DESCRIPTION

We propose a double-pronged investigation of the atmosphere of AU Mic b, obtaining transits with both WFC3/IR and STIS. We will use WFC3/IR to obtain multi-wavelength lightcurves, producing near-infrared exoplanet transmission spectra. We will use STIS to obtain transits at Ly-alpha, measuring the size of the planet at Ly-alpha wavelengths. Only HST has the ability to carry out these observations. The precision, wavelength coverage, and continuous observing capability are required for our WFC3 observations, while FUV transits cannot be observed from the ground.

We will observe AU Mic using WFC3/IR G102 and G141 grisms over two transit observations to measure the complete atmospheric transmission spectrum from 0.8 to 1.7 micron, which covers multiple H2O and CH4 spectral features (Figure 1). The precision of our proposed measurements would allow for strong constraints (0.5 dex) to be placed on the H2O abundance and the detection of CH4 and/or constraint of CH4 abundance to within an order of magnitude depending on atmospheric metallicity and the existence of clouds (Figure 2). Note that our simulations (e.g. Line et al., 2012) show that constraints obtained using 1 transit in each of G102 and G141 is tighter than those obtained from 2 transits in G102 or 2 transits in G141. CH4 is best constrained when the atmospheric metallicity is 30x solar and the cloud top is at or lower than 0.1 bar. In the event that the metallicity and/or cloud opacity is unfavorable to CH4 detection, H2O remains largely constrained to well within an order of magnitude. This would allow for constraints on the atmospheric metallicity, which is helpful in probing the diversity of exoplanet metallicities (e.g. Kreidberg et al., 2014; Wakeford et al., 2017a). Using STIS, we will search for an evaporating exosphere by detecting a deep and long transit at Ly-alpha, and potentially at C II.

The transit duration of AU Mic b is in excess of 4 hours; we use the ExoCTK HST Pandexo ETC (exoctk.stsci.edu) to determine the phase constraints and number of orbits required including the rst HST orbit which will be used to determine the instrument settling effeciency for this bright target. In total for each transit we will require 8 HST orbits, 4.2 in transit, to provide adequate stellar baseline to achieve the needed precision on the transit
depth. As AU Mic is a bright target (Jmag = 5.436) we will conduct both observations in spatial scan mode to spread the target across a column of pixels in the cross-dispersion direction, resulting in a 10-fold increase in the number of photons collected per exposure (McCullough et al., 2014). We simulate each grism observation using the online STScI ETC and ExoCTK (exoctk.stsci.edu) HST Pandexo simulator.

G102 set-up: We use the 256x256 subarray to reduce overhead times applied to each exposure. We will scan at a rate of 1.66 arcseconds/second over 6 seconds to produce a scan 10 arcseconds in length (80 pixels). The planetary transit extends over 3 HST orbits containing 95 exposures with a total of 200 exposures over the whole transit observation. This will result in precisions of 38 ppm in 20 channels between 0.8 to 1.15 micron. To force a buffer dump after each orbit of the 8 orbit transit each orbit is scheduled as a single visit where all 8 visits are requested to be conducted in sequence.

G141 set-up: We will again use the 256x256 subarray to reduce overheads. We will scan at a rate of 3.38 arcseconds/second over 5 seconds to produce a scan 17 arcseconds in length (130 pixels). This results in a total of 176 exposures over the whole observation. This will allow us to achieve precisions of 43 ppm in 27 channels between 1.1 and 1.7 micron. For both WFC3/IR measurements we will be limited to an NSAMP<3 due to the brightness of the target and the short exposure times, to minimize the impact on the observing effeciency we will use the SPARS5 sampling sequence. Each of our observation procedures will ensure that the maximum count stays in the sweet-spot between 28,000-36,000 e- shown by Wilkins et al. (2014) and Wakeford et al. (2017b). To force a buffer dump after each orbit of the 8 orbit transit each orbit is scheduled as a single visit where all 8 visits are requested to be conducted in sequence.

STIS set-up: We will use the E140M grating with STIS/MAMA, which delivers R =45800 spectra covering 1144 to 1710A. Both Ly-alpha and C II are simultaneously accessible. We have checked the bright object limits for AU Mic using the guidelines for active M1 dwarfs, finding that E140M is acceptable (see ETC STIS.sp.1330912). We will observe 2 transits (13 orbits total) using STIS, taking into considering crossings of the South Atlantic Anomaly. The C II transit is likely to be closer in size to the whitelight transit, while for the prototype system Gl 436b, the Ly transit begins 3 hours prior to the transit midpoint and lasts for 10 hours following. With transit 1, we will probe the time region corresponding to the white-light transit which we expect to more closely match the C II; we will obtain 2 orbits 10 hours before transit to set the baseline, and 5 orbits capturing egress and the transit midpoint. With transit 2, we will probe the full possible shape of the Ly transit by obtaining 2 orbits 10 hours prior to the

transit to establish a baseline, 2 orbits centered on the transit midpoint, and 2 orbitsabout 5 hours after transit. With this observing strategy, we will have a full view of the exosphere transit, the opportunity to detect the transit in two different species, and the possibility to see time-dependent behavior in the Ly-alpha exosphere.

We estimate that the Ly-alpha transit depth is 38%. Modeling this decrement in flux in the Ly-alpha line of an observed spectrum of AU Mic (Texp = 2130s), we estimate S/N= 30 detection of a Ly-alpha exosphere in a single HST orbit. Our predictions for C II transits derive from a photo-evaporative atmospheric escape model. We use the radiative transfer code CLOUDY to calculate the ionization balance, and assume that the stellar wind can be described as a Parker wind. We estimate that we can detect the C II exosphere at 5-7 sigma in one transit.

2-GYRO IMPACT: As our observations are transit observations and required sequenced visits >3 orbits, scheduling would be challenging in 2-gyro mode. For our WFC3 observations, our fastest scan rate is 3.38 arcsec/sec and so would not be impacted by the limitations of the 2-gyro mode.

Visit

Proposal 15836, LyaEclipse-1-pre-transit (01), completed Wed Oct 13 16:01:57 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: (none)

Comments: This is STIS Ly-alpha visit corresponds to Eclipse 1, and is the 1st of three visits associated with this eclipse event. Eclipse 1 captures the behavior surrounding the white-light transit. This visit should occur roughly 8 hours prior to the white-light transit event (specified by the period and phase entries for the "in transit" visit) in order provide a baseline Lyman-alpha flux level. The visit consists of 2 HST orbits.

Diagnostics

(LyaEclipse-1-pre-transit (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

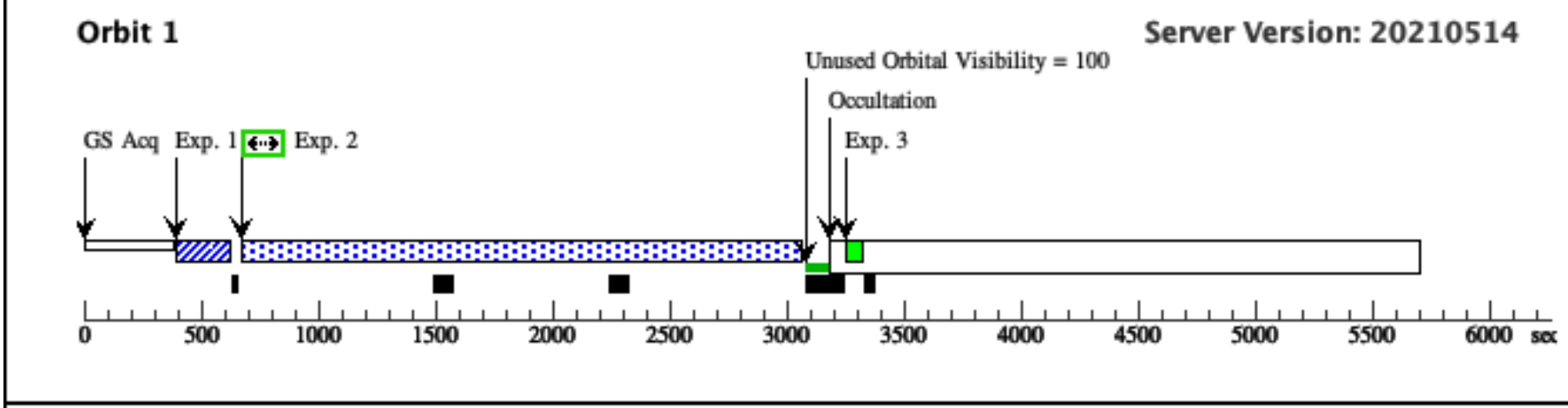
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d) Dec: -31 20 27.24 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.42 mas/yr Proper Motion Dec: -359.89 mas/yr Parallax: 0.10282" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS

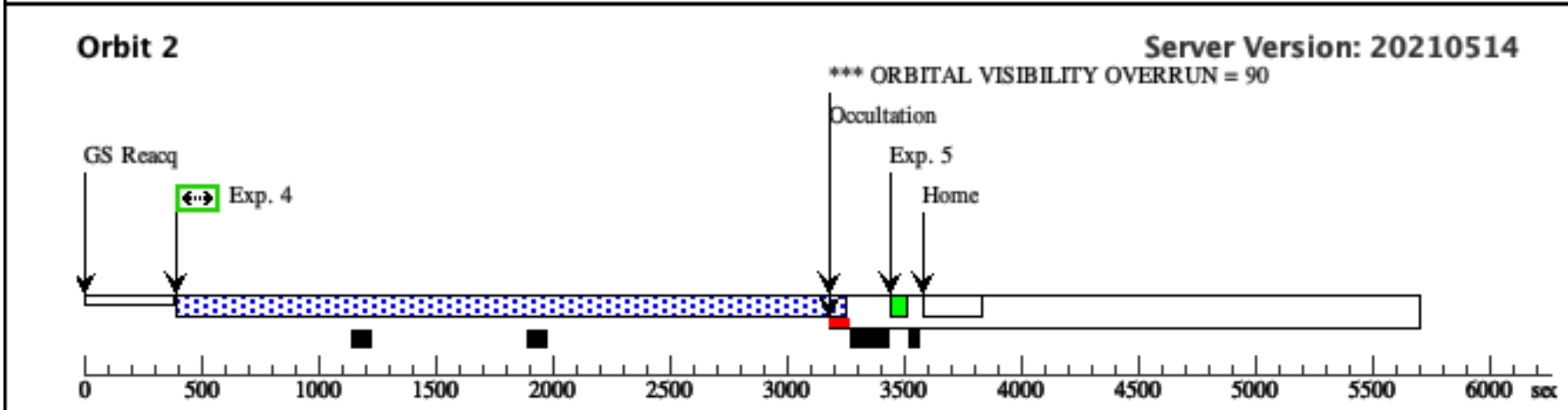
Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443364)	(1) V-AU-MIC-1	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT		Sequence 1-3 Non-Int in LyaEclipse-1-pre-transit (01)	0.2 Secs (0.2 Secs) *[==>]*	*[1]*
2	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 1-3 Non-Int in LyaEclipse-1-pre-transit (01)	3000 Secs (2306 Secs) *[==>2306.0 Secs]*	*[1]*
3	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 1-3 Non-Int in LyaEclipse-1-pre-transit (01)	*[==>]*	*[1]*
4	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 4-5 Non-Int in LyaEclipse-1-pre-transit (01)	3000 Secs (2848 Secs) *[==>2848.0 Secs]*	*[2]*
5	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 4-5 Non-Int in LyaEclipse-1-pre-transit (01)	*[==>]*	*[2]*

Orbit Structure





Visit

Proposal 15836, LyaEclipse-1-in-transit (02), completed Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: Warning

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

Special Requirements: AFTER 01 BY 0 H TO 12 H; Period 8.463213 D AND ZERO-PHASE HJD2458330.3915026

Comments: This is STIS Ly-alpha visit corresponds to Eclipse 1, and is the 2nd of three visits associated with this eclipse event. Eclipse 1 captures the behavior surrounding the white-light transit. This visit corresponds to the white-light transit event specified by the period and phase. If at all possible, one of the orbits should actually coincide to within 30min of phase=1. The visit consists of 3 HST orbits.

Diagnostics

(LyaEclipse-1-in-transit (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(LyaEclipse-1-in-transit (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

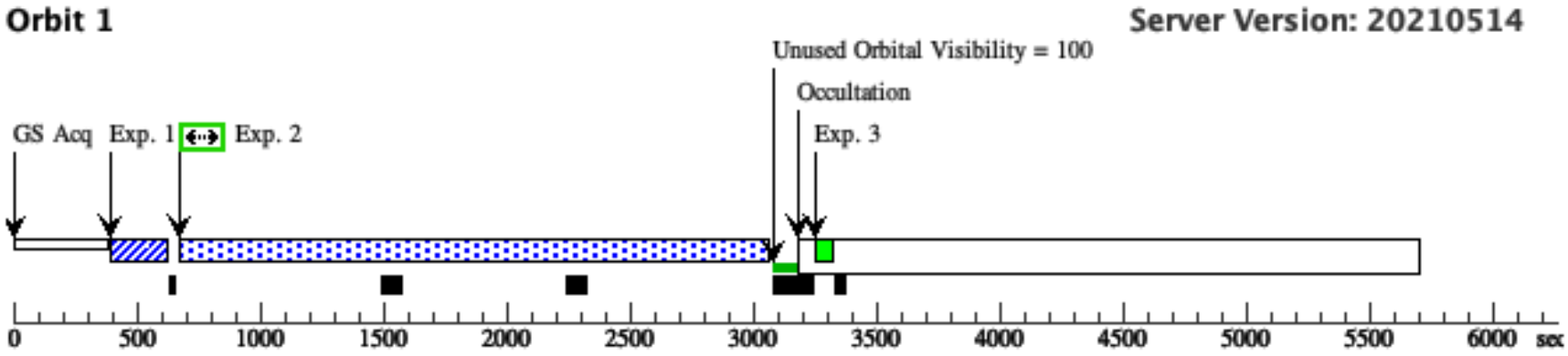
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d) Dec: -31 20 27.24 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.42 mas/yr Proper Motion Dec: -359.89 mas/yr Parallax: 0.10282" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS

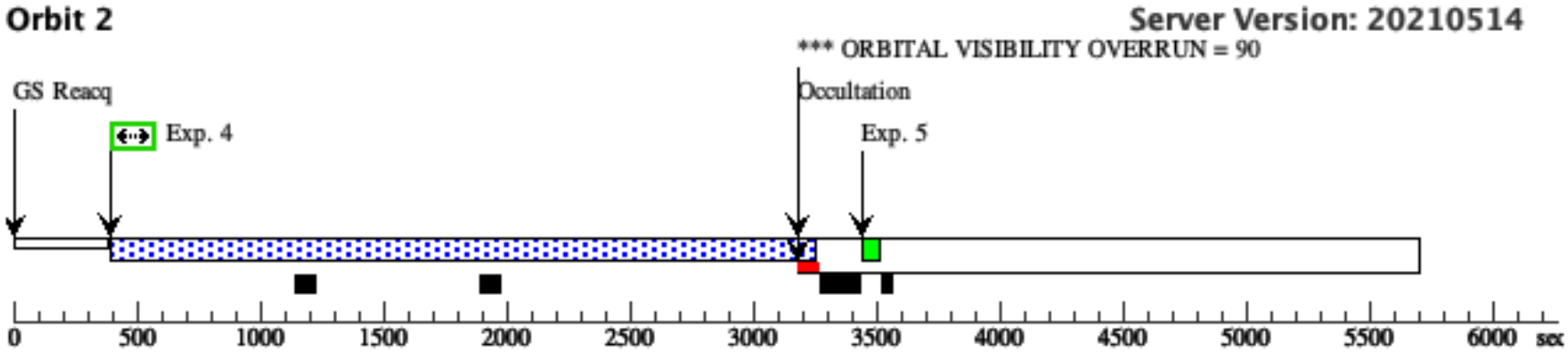
Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

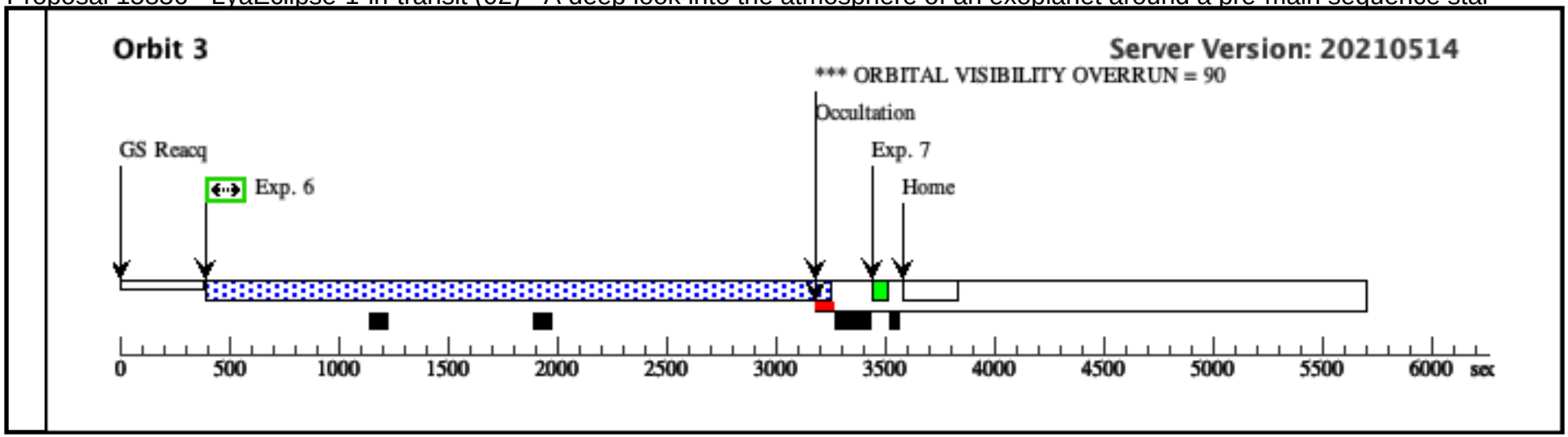
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443364)	(1) V-AU-MIC-1	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	PHASE 0.98695 TO 0.991875	Sequence 1-3 Non-Int in LyaEclipse-1-in-transit (02)	0.2 Secs (0.2 Secs) *[==>]*	***[1]***
2	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 1-3 Non-Int in LyaEclipse-1-in-transit (02)	3000 Secs (2306 Secs) *[==>2306.0 Secs]*	***[1]***
3	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 1-3 Non-Int in LyaEclipse-1-in-transit (02)	*[==>]*	***[1]***
4	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 4-5 Non-Int in LyaEclipse-1-in-transit (02)	3000 Secs (2848 Secs) *[==>2848.0 Secs]*	***[2]***
5	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 4-5 Non-Int in LyaEclipse-1-in-transit (02)	*[==>]*	***[2]***
6	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 6-7 Non-Int in LyaEclipse-1-in-transit (02)	3000 Secs (2848 Secs) *[==>2848.0 Secs]*	***[3]***
7	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 6-7 Non-Int in LyaEclipse-1-in-transit (02)	*[==>]*	***[3]***

Orbit Structure



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Visit

Proposal 15836, LyaEclipse-1-post-transit (03), completed Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: AFTER 02 BY 0 H TO 20 H

Comments: This is STIS Ly-alpha visit corresponds to Eclipse 1, and is the 3rd of three visits associated with this eclipse event. Eclipse 1 captures the behavior surrounding the white-light transit. This visit corresponds to a baseline after the white-light transit event specified by the period and phase. This visit should occur roughly 8 hours after the white-light transit. The visit consists of 1 HST orbit.

Fixed Targets

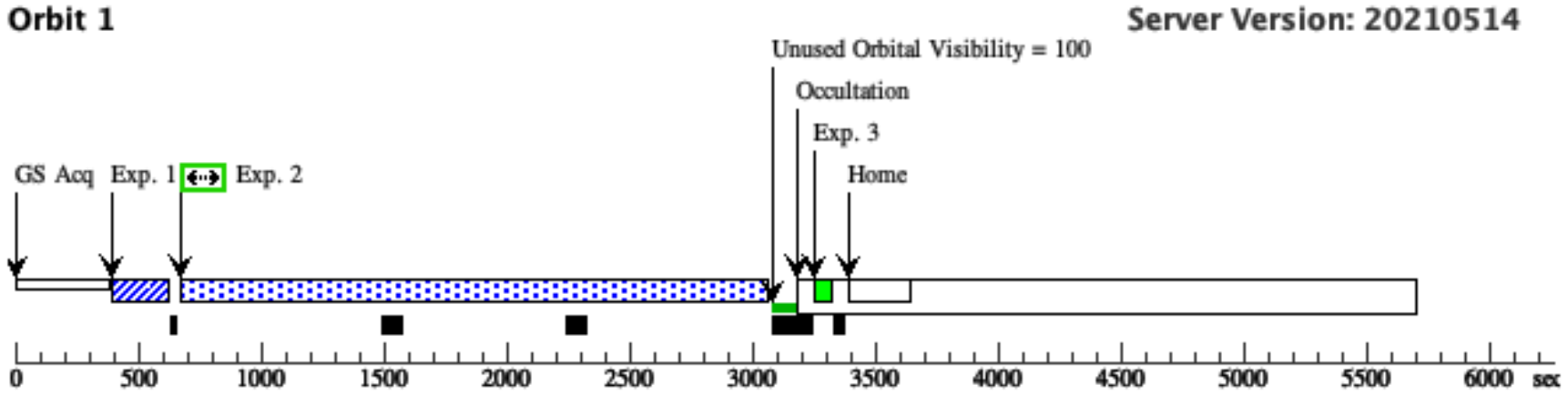
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d) Dec: -31 20 27.24 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.42 mas/yr Proper Motion Dec: -359.89 mas/yr Parallax: 0.10282" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443364)	(1) V-AU-MIC-1	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT		Sequence 1-3 Non-Int in LyaEclipse-1-post-transit (03)	0.2 Secs (0.2 Secs) *[==>]*	*[1]*
2	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 1-3 Non-Int in LyaEclipse-1-post-transit (03)	3000 Secs (2306 Secs) *[==>2306.0 Secs]*	*[1]*
3	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 1-3 Non-Int in LyaEclipse-1-post-transit (03)	*[==>]*	*[1]*

Orbit Structure



Visit

Proposal 15836, LyaEclipse-2-transit (04), scheduling Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: Period 8.4629991 D AND ZERO-PHASE HJD2458330.39046

Comments: This is STIS Ly-alpha visit corresponds to Eclipse 2, and is the 1st of two visits associated with this eclipse event. This visit captures the immediate time around the white light transit (specified by the period and phase entries for the "in transit" visit).

Fixed Targets

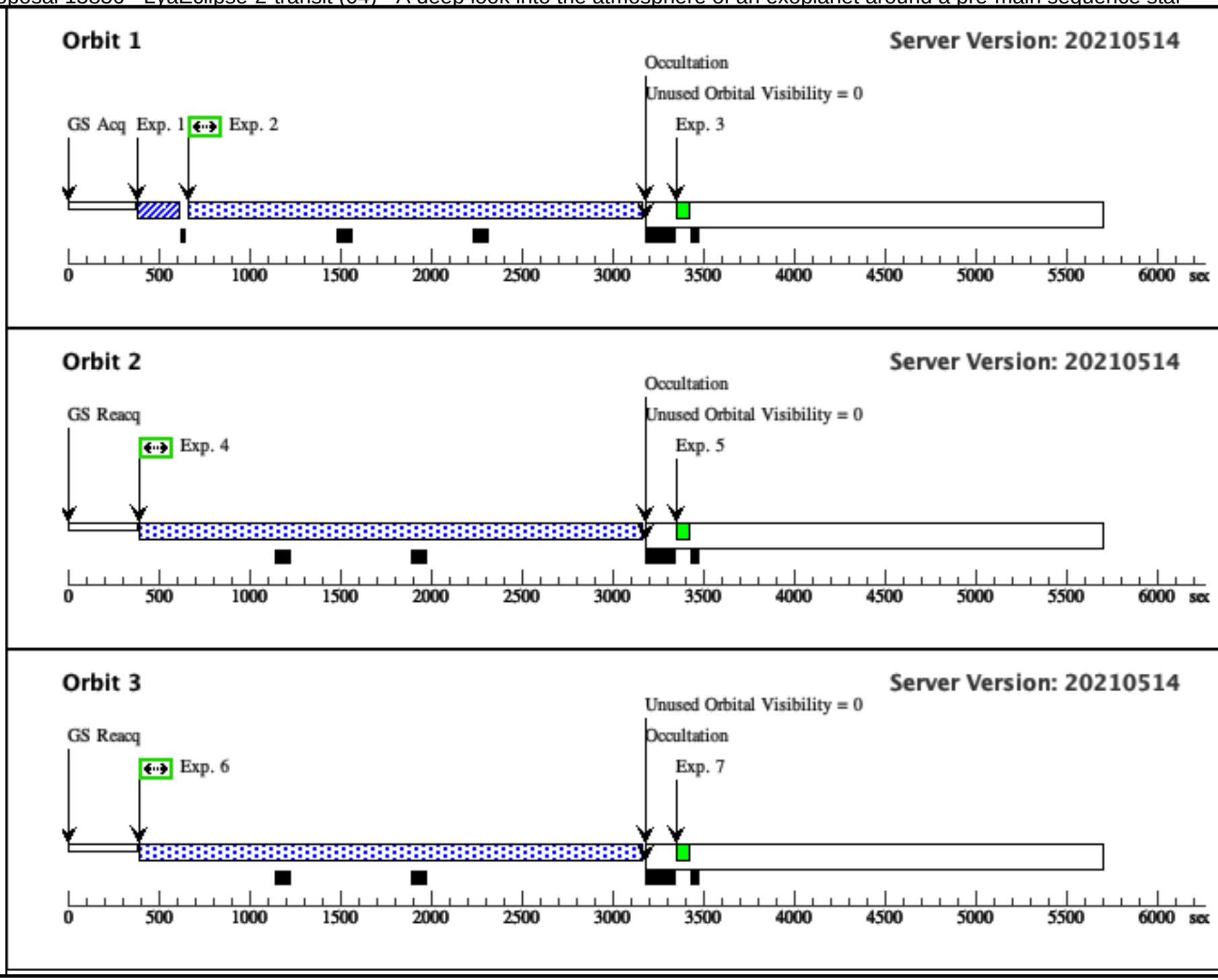
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d) Dec: -31 20 27.24 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.42 mas/yr Proper Motion Dec: -359.89 mas/yr Parallax: 0.10282" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS

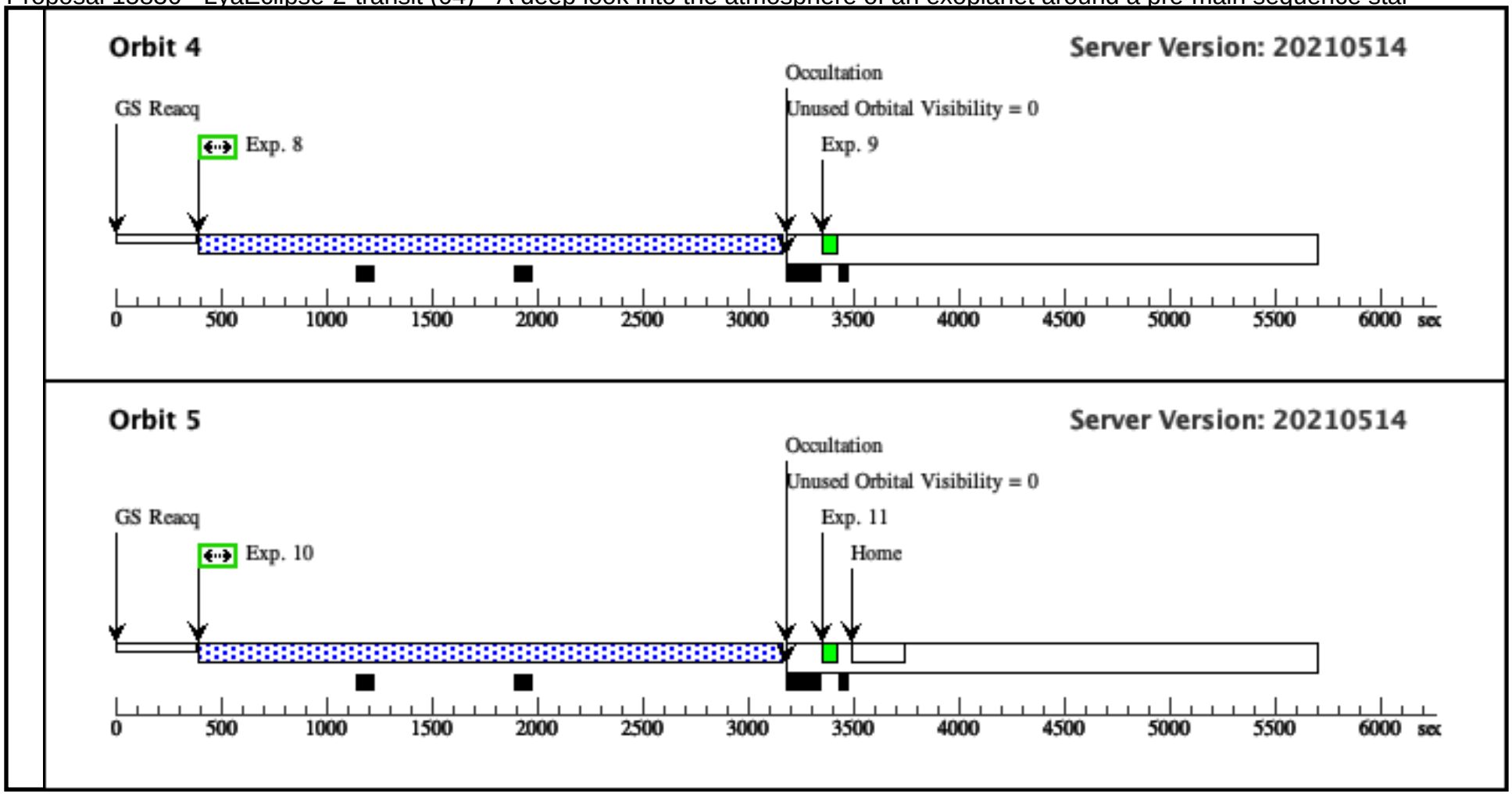
Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443364)	(1) V-AU-MIC-1	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	PHASE 0.98188 TO 0.984343; GS ACQ SCENARIO BASE1B3	Sequence 1-3 Non-Int in LyaEclipse-2-transit (04)	0.1 Secs (0.1 Secs) *[==>]*	***[1]***
2	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 1-3 Non-Int in LyaEclipse-2-transit (04)	3000 Secs (2416 Secs) *[==>2416.0 Secs]*	***[1]***
3	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 1-3 Non-Int in LyaEclipse-2-transit (04)	*[==>]*	***[1]***
4	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 4-5 Non-Int in LyaEclipse-2-transit (04)	3000 Secs (2758 Secs) *[==>2758.0 Secs]*	***[2]***
5	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 4-5 Non-Int in LyaEclipse-2-transit (04)	*[==>]*	***[2]***
6	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 6-7 Non-Int in LyaEclipse-2-transit (04)	3000 Secs (2758 Secs) *[==>2758.0 Secs]*	***[3]***
7	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 6-7 Non-Int in LyaEclipse-2-transit (04)	*[==>]*	***[3]***
8	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750		Sequence 8-9 Non-Int in LyaEclipse-2-transit (04)	3000 Secs (2758 Secs) *[==>2758.0 Secs]*	***[4]***
9	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 8-9 Non-Int in LyaEclipse-2-transit (04)	*[==>]*	***[4]***
10	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 10-11 Non-Int in LyaEclipse-2-transit (04)	3000 Secs (2758 Secs) *[==>2758.0 Secs]*	***[5]***
11	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 10-11 Non-Int in LyaEclipse-2-transit (04)	*[==>]*	***[5]***

Orbit Structure

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Exp. 10
Exp. 11
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2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15836, LyaEclipse-2-post-transit (05), scheduling Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: No Diagnostics

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

Special Requirements: AFTER 04 BY 0 H TO 18 H

Comments: This is STIS Ly-alpha visit corresponds to Eclipse 2, and is the 2nd of visits associated with this eclipse event. . This visit corresponds to a baseline after the white-light transit event specified by the period and phase. This visit should occur roughly 8 hours after the white-light transit.

Fixed Targets

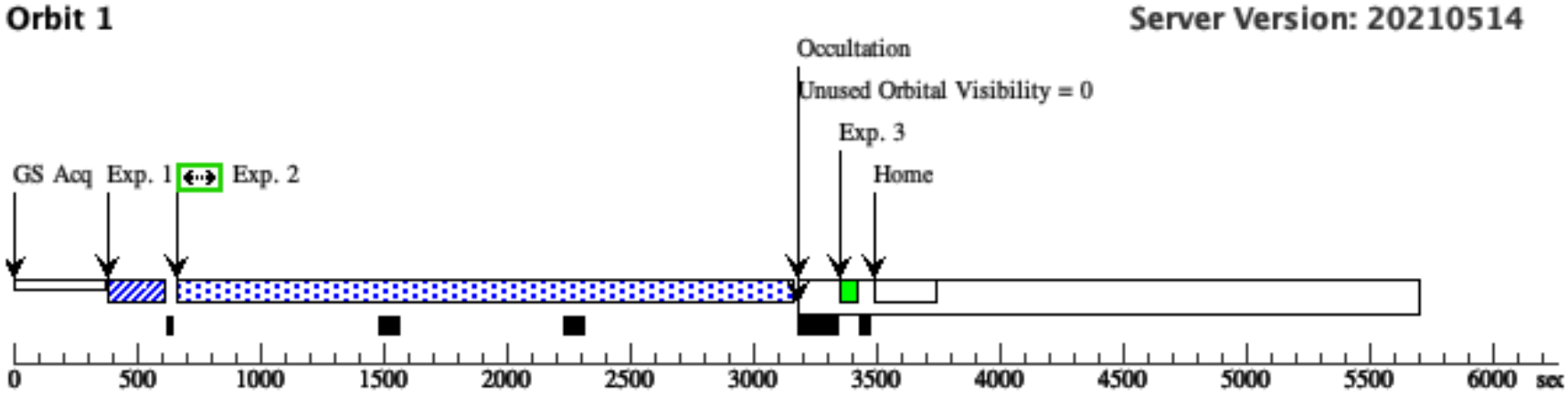
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d) Dec: -31 20 27.24 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.42 mas/yr Proper Motion Dec: -359.89 mas/yr Parallax: 0.10282" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	ACQ (STIS.ta.1443364)	(1) V-AU-MIC-1	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT	GS ACQ SCENARIO BASE1B3	Sequence 1-3 Non-Int in LyaEclipse-2-post-transit (05)	0.1 Secs (0.1 Secs) *[==>]*	*[1]*
2	SCIENCE (STIS.sp.1371796)	(1) V-AU-MIC-1	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140M 1425 A	BUFFER-TIME=750; WAVECAL=NO		Sequence 1-3 Non-Int in LyaEclipse-2-post-transit (05)	3000 Secs (2416 Secs) *[==>2416.0 Secs]*	*[1]*
3	GO-WAVE CAL	WAVE	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A			Sequence 1-3 Non-Int in LyaEclipse-2-post-transit (05)	*[==>]*	*[1]*

Orbit Structure



Visit

Proposal 15836, G141 orbit 1 (07), completed Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: Warning

Scientific Instruments: WFC3/IR

Special Requirements: Period 8.463213 D AND ZERO-PHASE HJD2458499.65576; SEQ 07,08,09,10,11,12,13,14 WITHIN 8.2 Orbits

Diagnostics

(G141 orbit 1 (07)) Warning (Orbit Planner): POS TARG OUTSIDE OF APERTURE

Fixed Targets

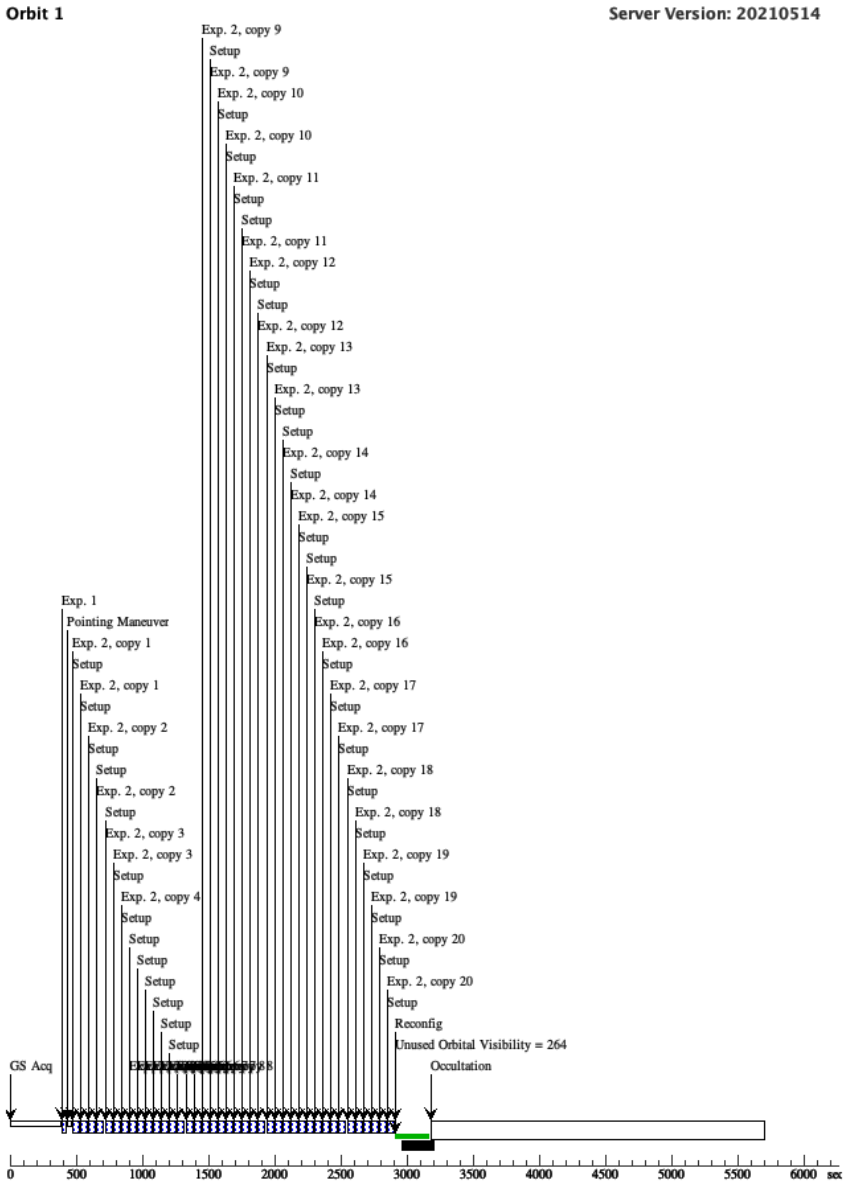
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Filter	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	F164N	NSAMP=3; SAMP-SEQ=RAPID	POS TARG 0,-22; PHASE 0.9656 TO 0.9672	Sequence 1-2 Non-Int in G141 orbit 1 (07)	0.833445 Secs (0.833 Secs) *[==>]*	 ***[1]***
2	Orbit 1	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG 0,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-2 Non-Int in G141 orbit 1 (07)	4.9784 Secs X 20 (199.136 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)]*	 ***[1]***

Orbit Structure



Visit

Proposal 15836, G141 orbit 2 (08), completed Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 07

Fixed Targets

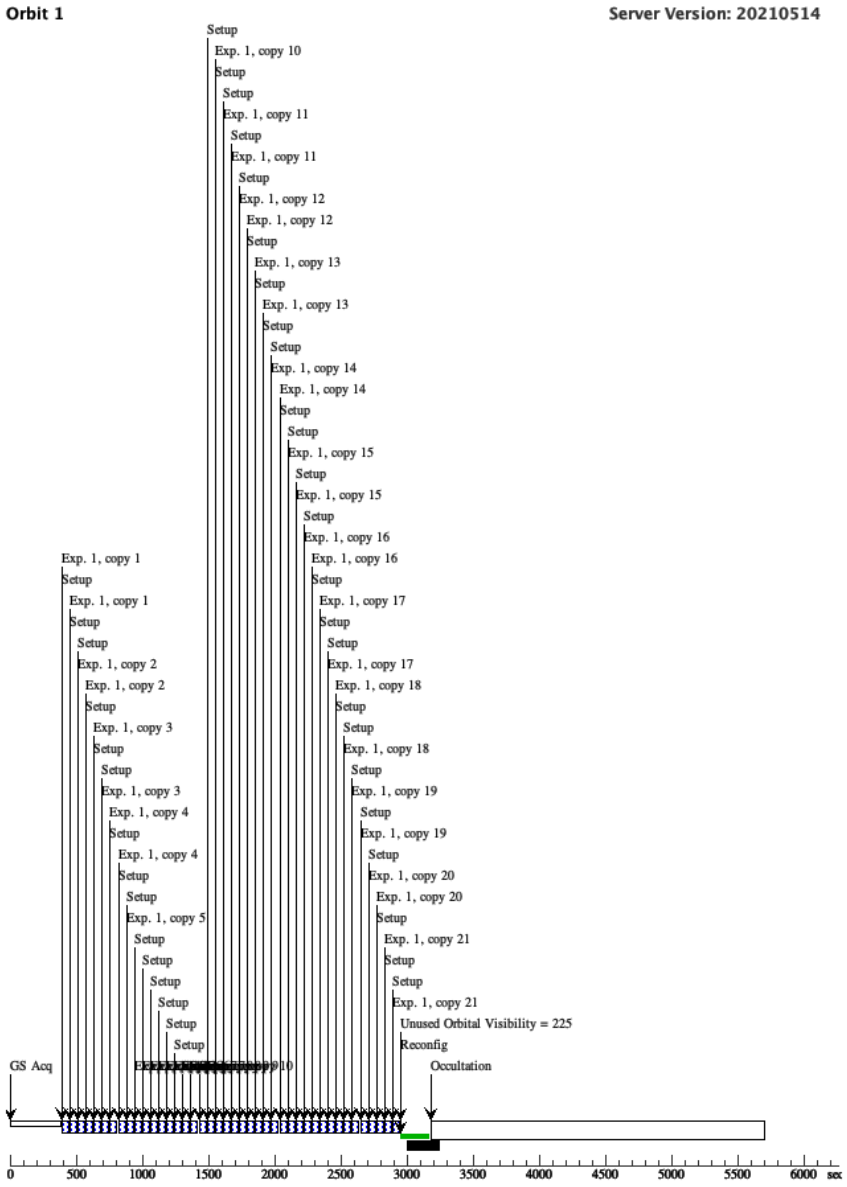
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Orbit 2	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG null,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G141 orbit 2 (08)	4.9784 Secs X 21 (209.093 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G141 orbit 3 (09), completed Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 07

Fixed Targets

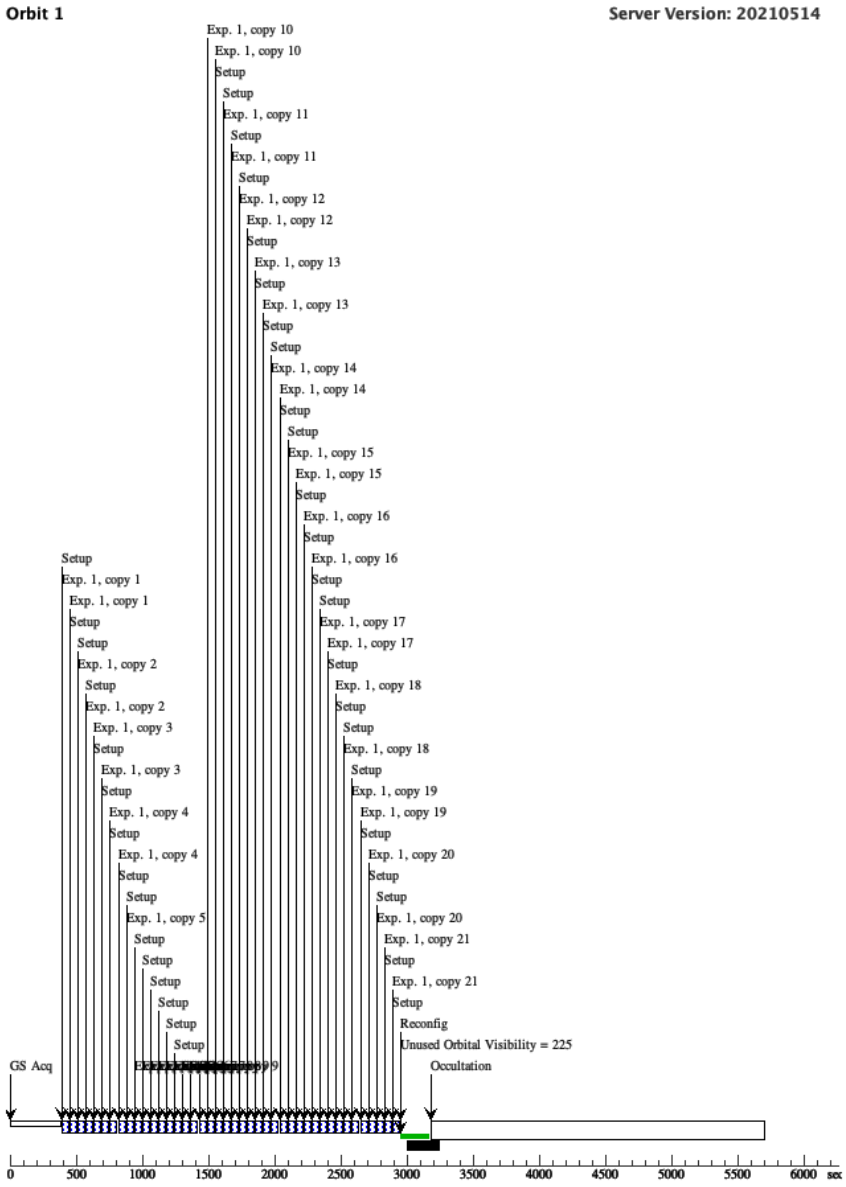
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Orbit 3	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG null,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G141 orbit 3 (09)	4.9784 Secs X 21 (209.093 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G141 orbit 4 (10), completed Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 07

Fixed Targets

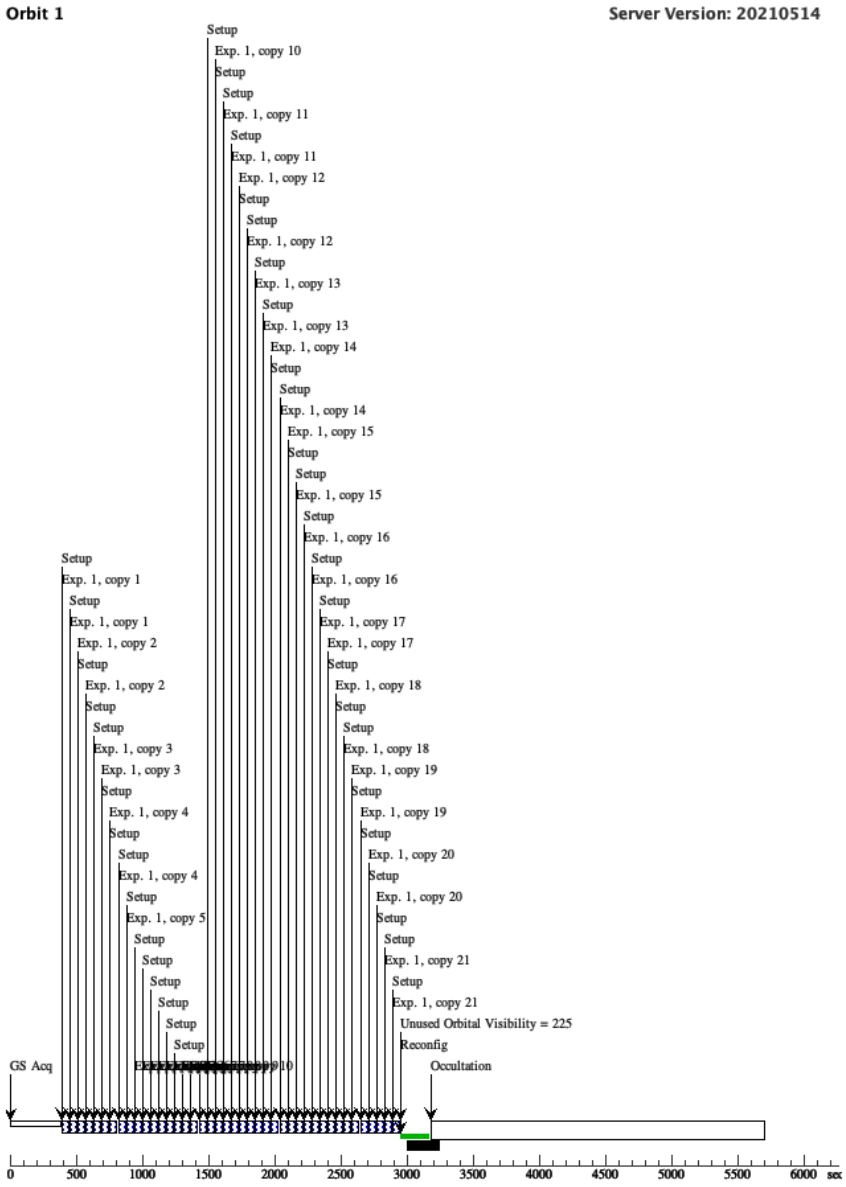
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Orbit 4	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG null,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G141 orbit 4 (10)	4.9784 Secs X 21 (209.093 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)]*	***[1]***

Orbit Structure



Proposal 15836 - G141 orbit 5 (11) - A deep look into the atmosphere of an exoplanet around a pre-main sequence star

Visit

Proposal 15836, G141 orbit 5 (11), completed Wed Oct 13 16:01:58 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 07

Fixed Targets

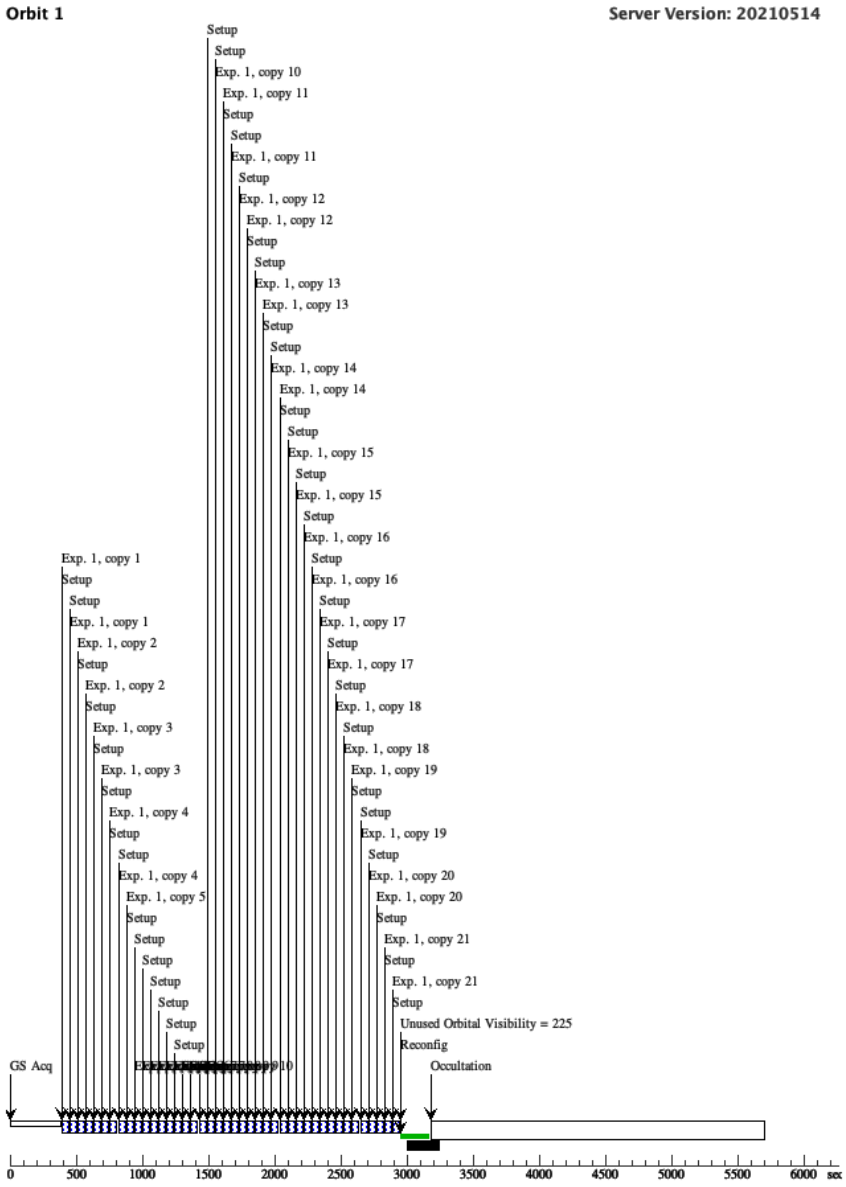
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Orbit 5	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG null,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G141 orbit 5 (11)	4.9784 Secs X 21 (209.093 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G141 orbit 6 (12), completed Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 07

Fixed Targets

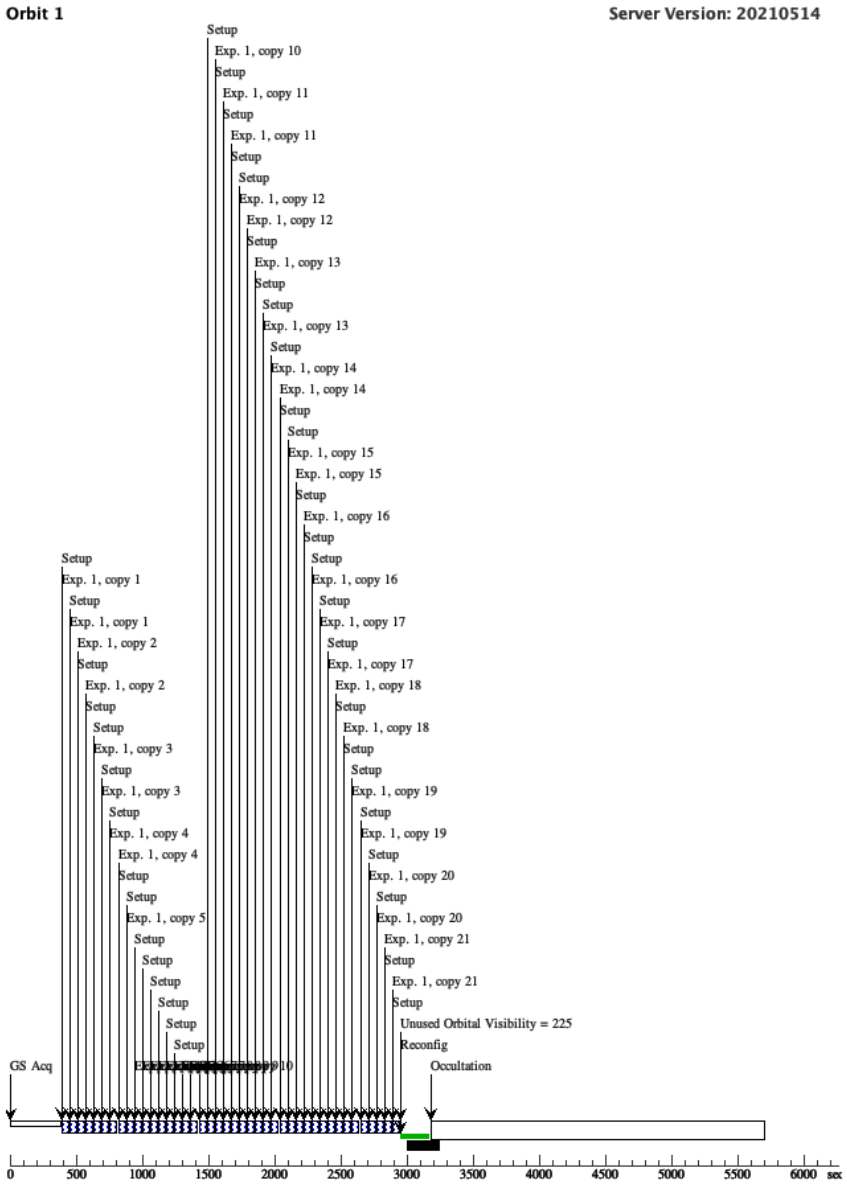
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Orbit 6	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG null,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G141 orbit 6 (12)	4.9784 Secs X 21 (209.093 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G141 orbit 7 (13), completed Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 07

Fixed Targets

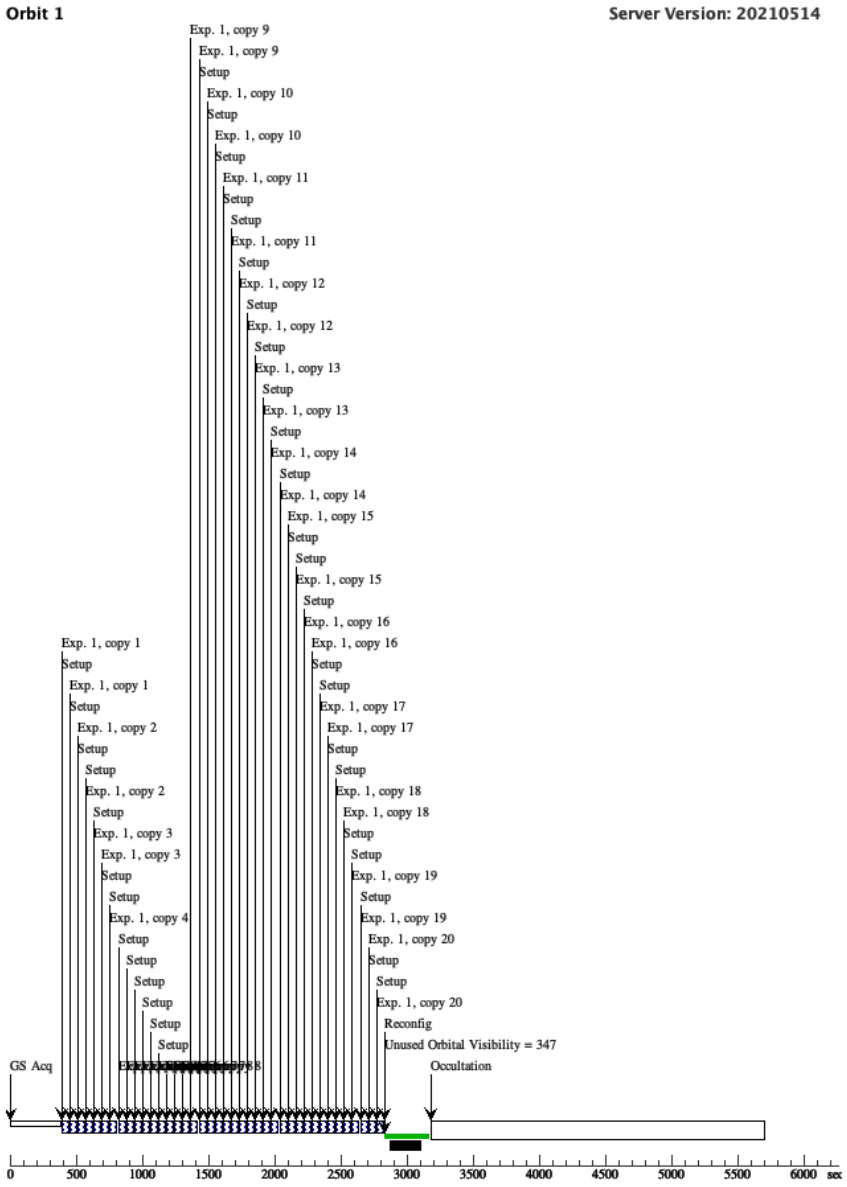
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Orbit 7	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG null,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G141 orbit 7 (13)	4.9784 Secs X 20 (199.136 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G141 orbit 8 (14), completed Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 07

Fixed Targets

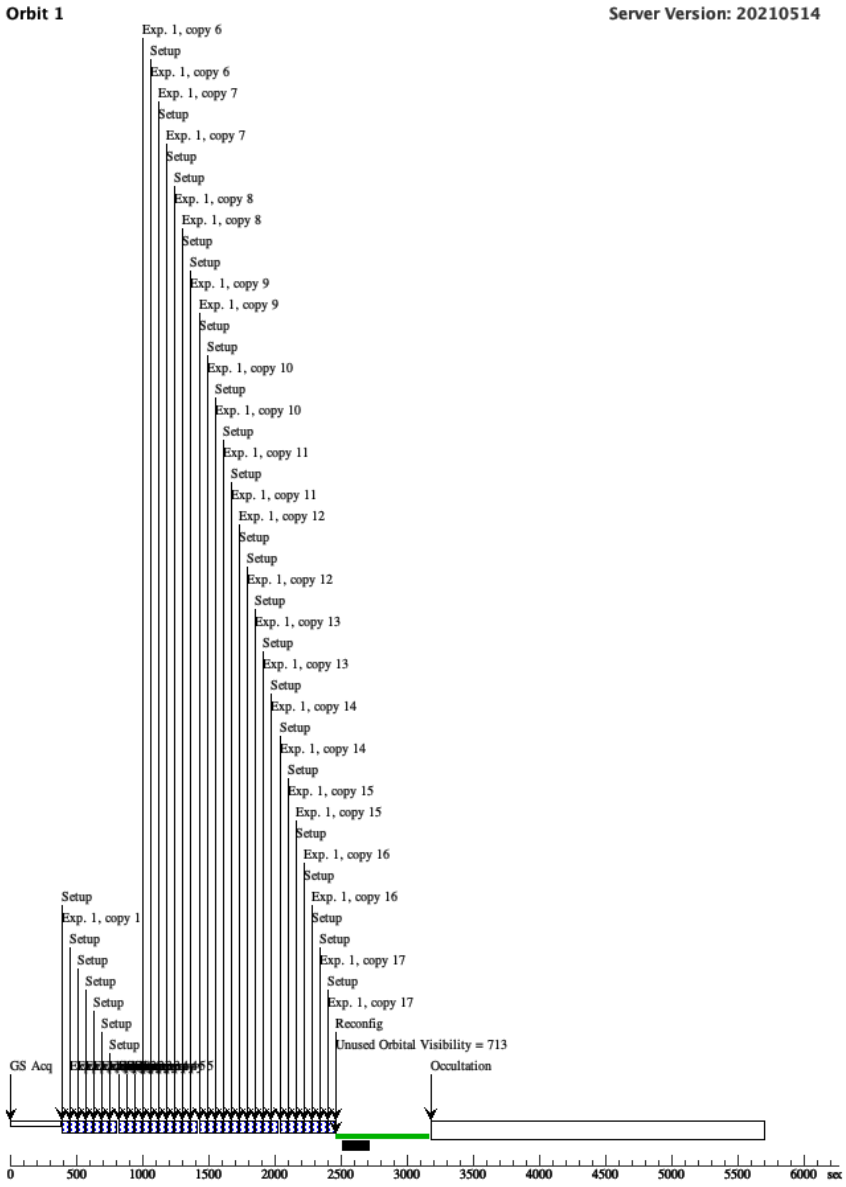
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Orbit 8	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G141	NSAMP=3; SAMP-SEQ=SPARS5	POS TARG null,-22; SPATIAL SCAN 3.38,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G141 orbit 8 (14)	4.9784 Secs X 17 (169.266 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 1 (15), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: Period 8.463213 D AND ZERO-PHASE HJD2458499.65576; SEQ 15,16,17,18,19,20,21,22 WITHIN 8.2 Orbits

Fixed Targets

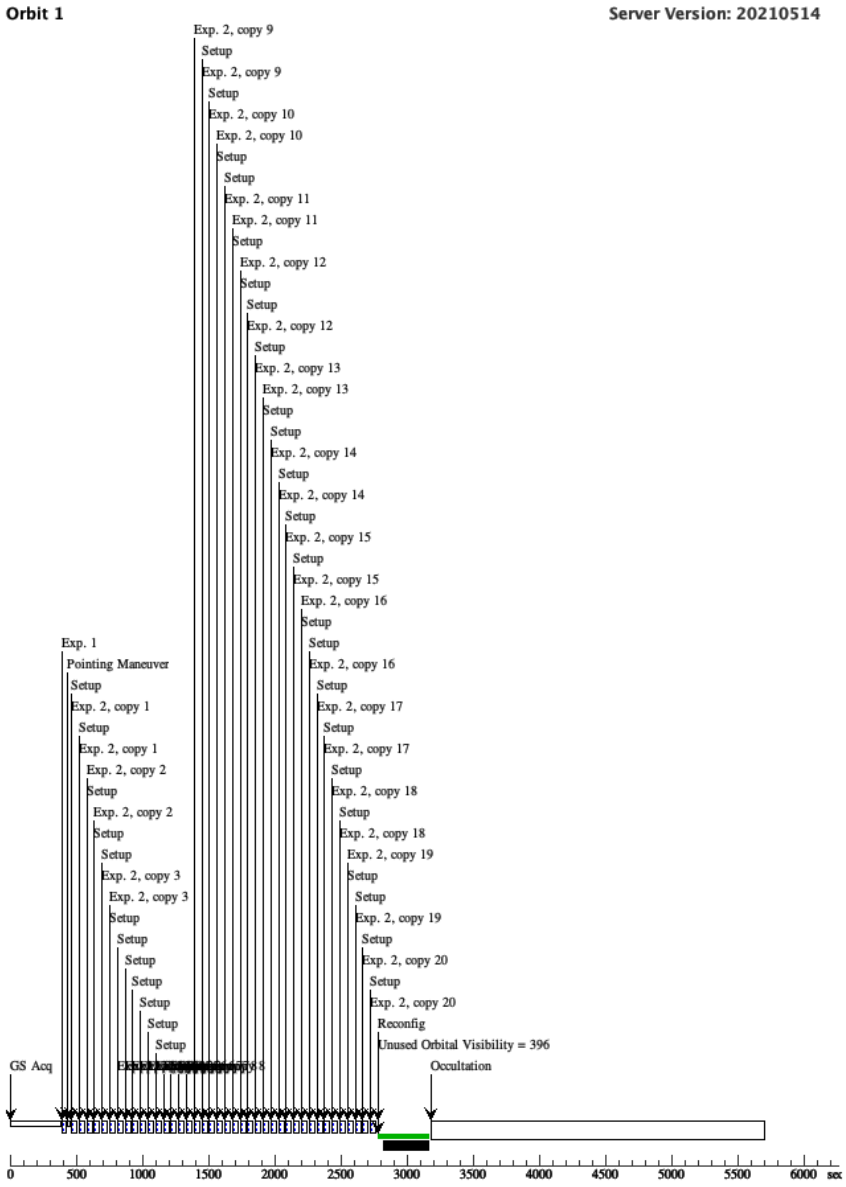
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	filter	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	F126N	SAMP-SEQ=RAPID; NSAMP=4	POS TARG null,-14; PHASE 0.9656 TO 0.9672	Sequence 1-2 Non-Int in G102 Orbit 1 (15)	1.11126 Secs (1.111 Secs) *[==>]*	***[1]***
2	orbit 1	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.667,90.0 Degrees,Round trip	Sequence 1-2 Non-Int in G102 Orbit 1 (15)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 2 (16), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 15

Fixed Targets

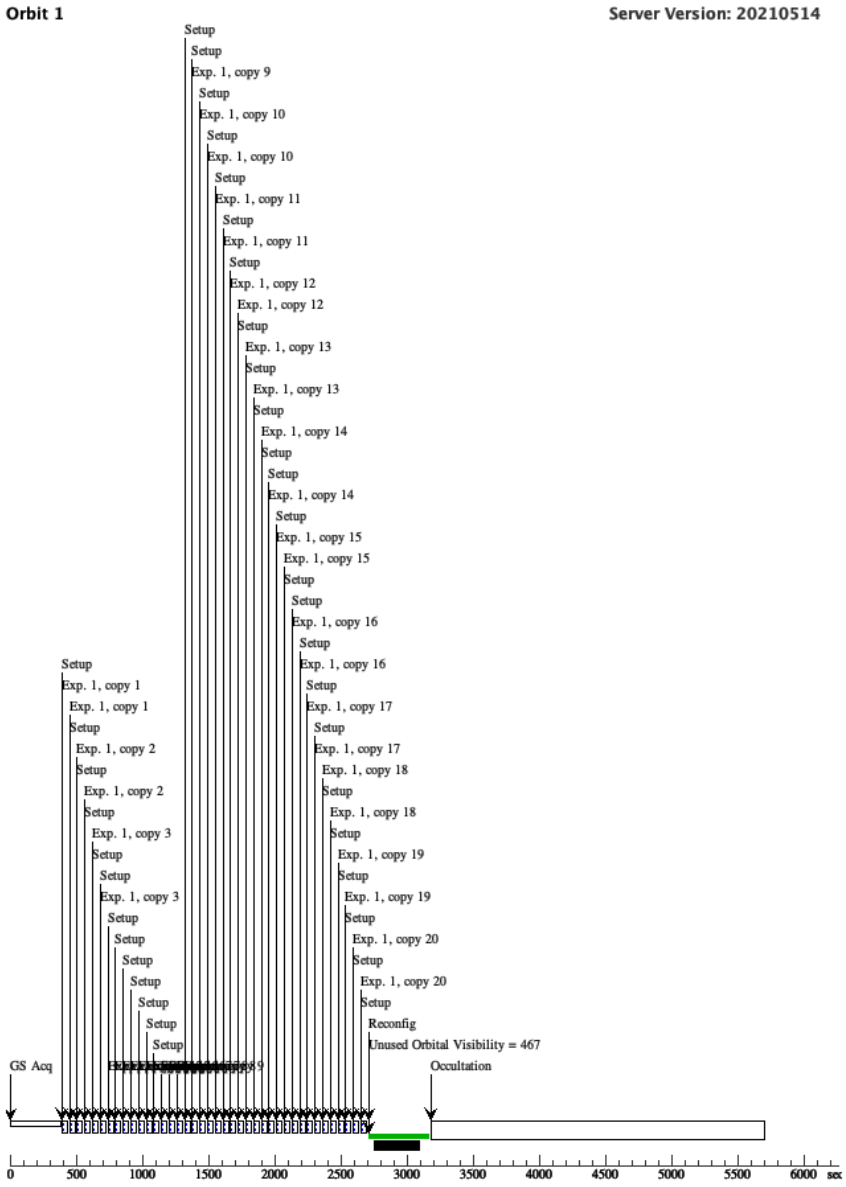
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	orbit 2	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.667,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G102 Orbit 2 (16)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 3 (17), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 15

Fixed Targets

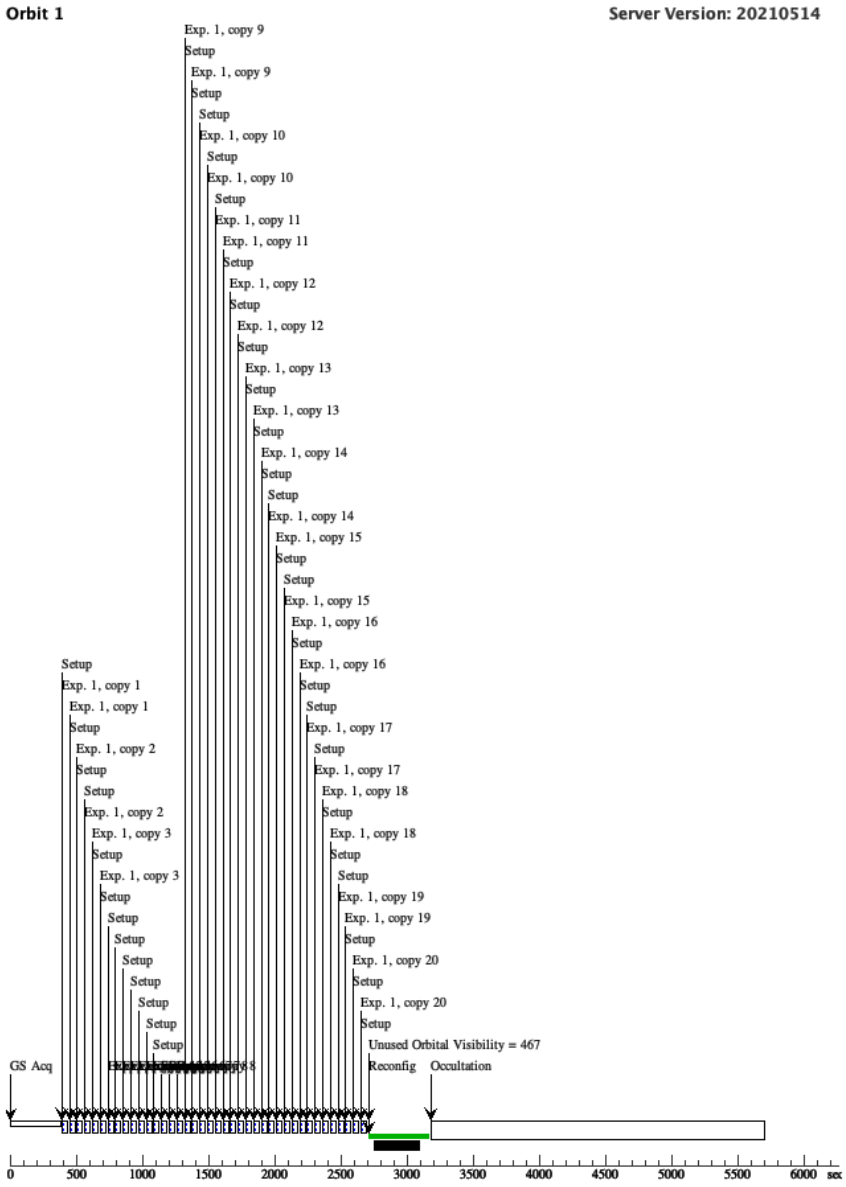
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	orbit 3	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.67,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G102 Orbit 3 (17)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 4 (18), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 15

Fixed Targets

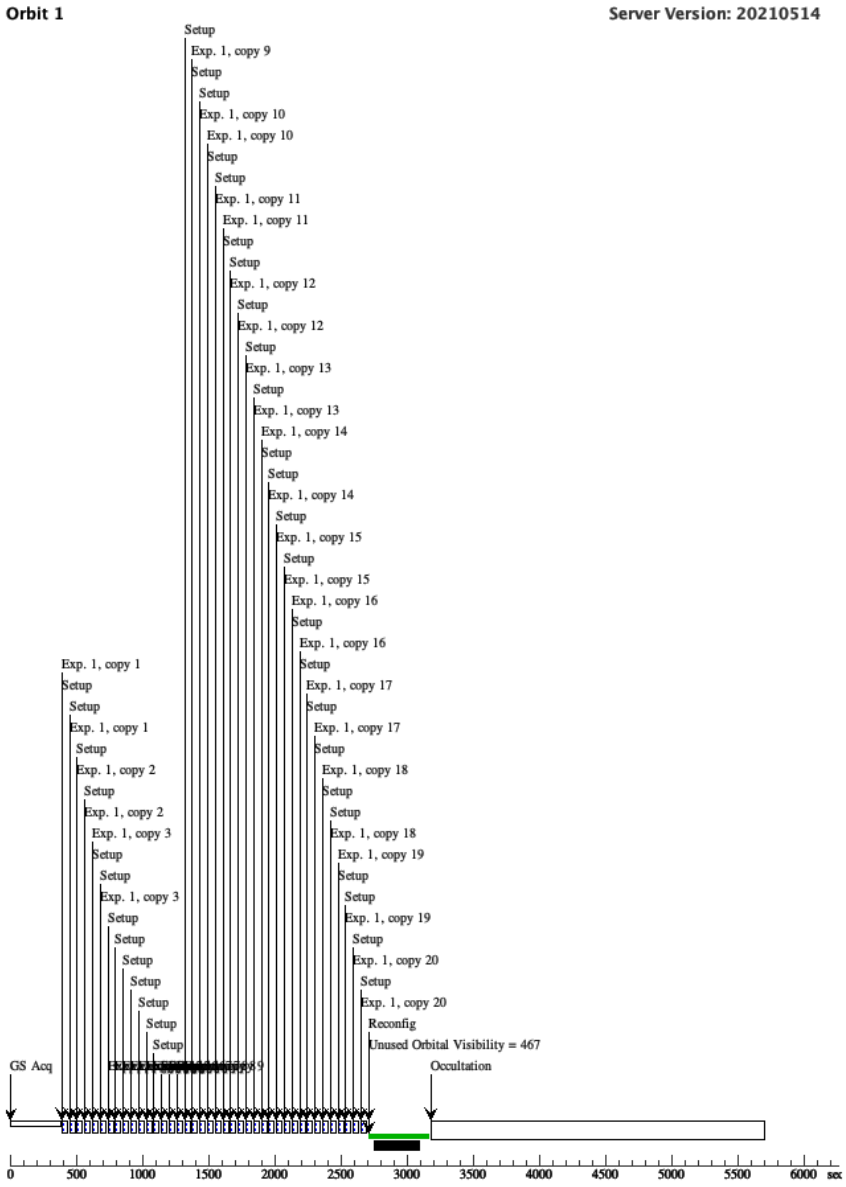
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	orbit 4	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.67,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G102 Orbit 4 (18)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 5 (19), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 15

Fixed Targets

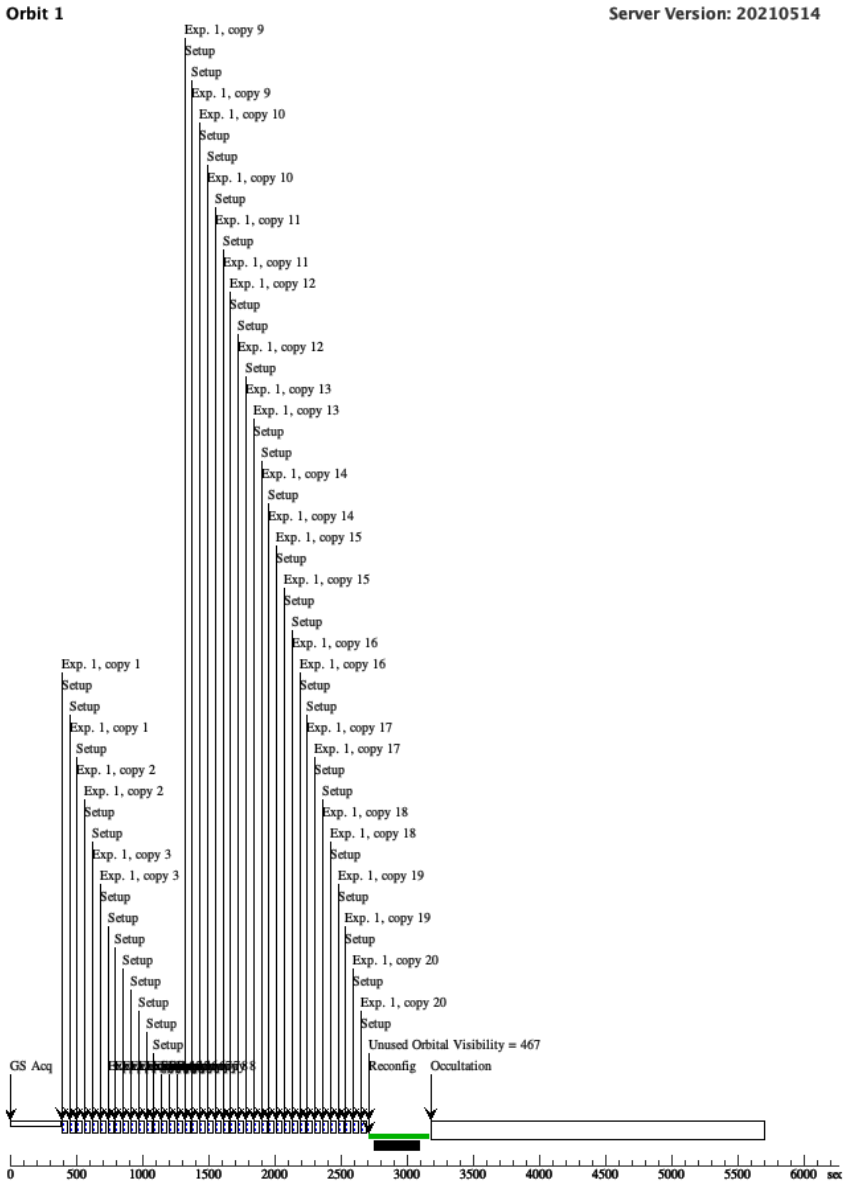
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	orbit 5	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.667,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G102 Orbit 5 (19)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 6 (20), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 15

Fixed Targets

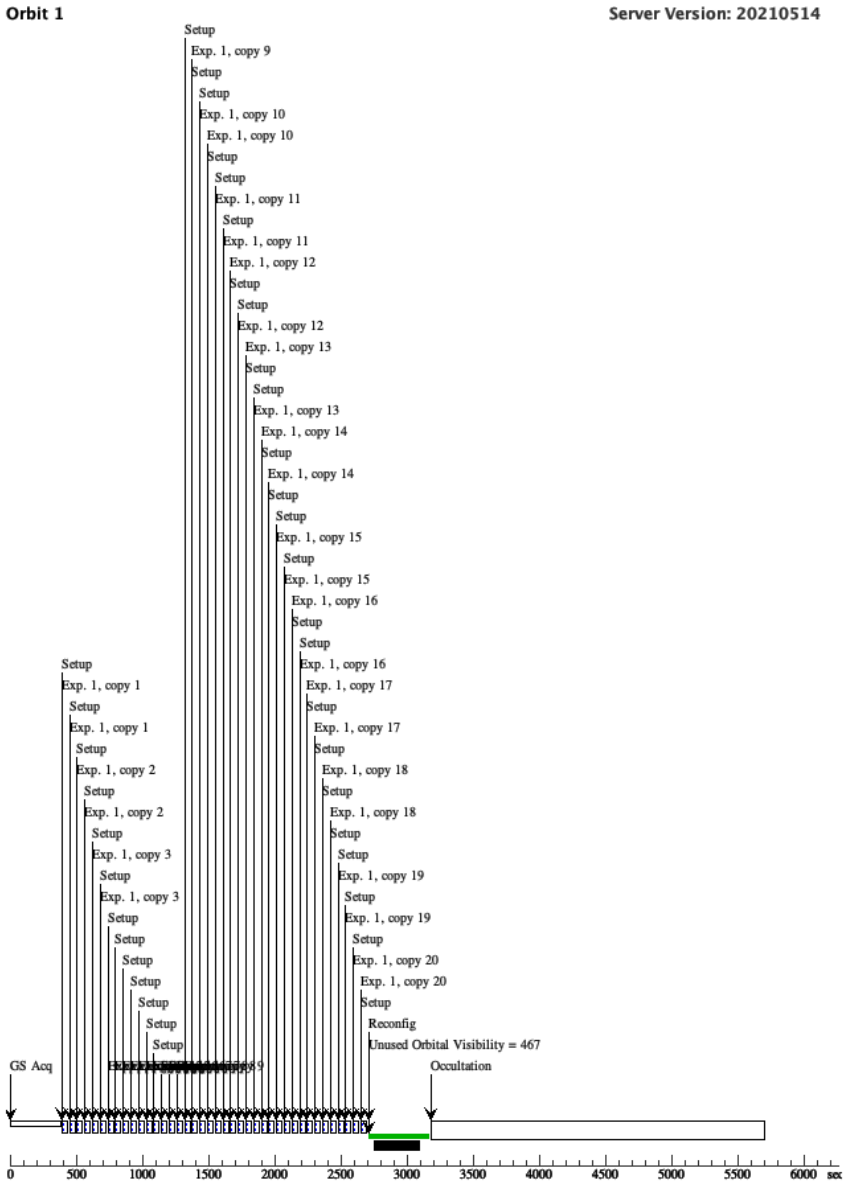
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	orbit 6	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.67,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G102 Orbit 6 (20)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 7 (21), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 15

Fixed Targets

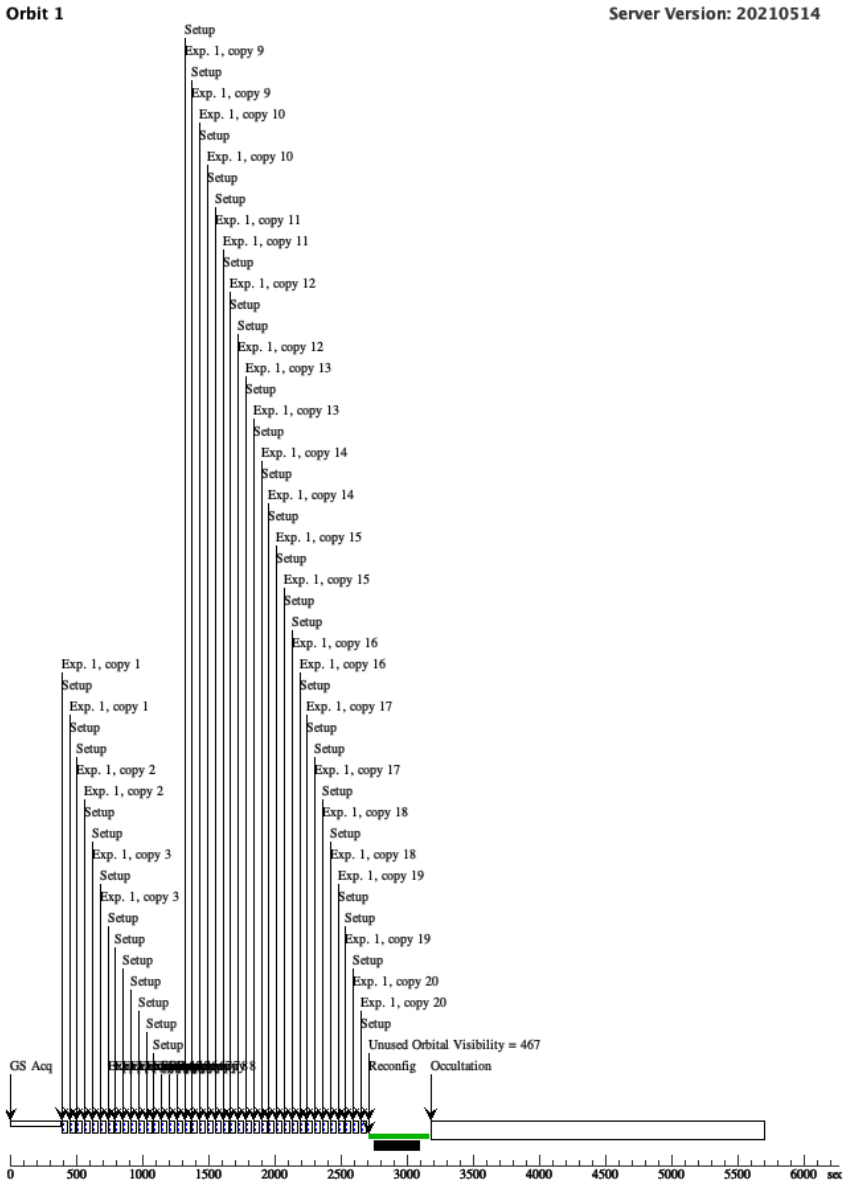
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	orbit 7	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.667,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G102 Orbit 7 (21)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure



Visit

Proposal 15836, G102 Orbit 8 (22), implementation Wed Oct 13 16:01:59 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: SAME ORIENT AS 15

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-AU-MIC-1	RA: 20 45 9.5324 (311.2897183d)	Proper Motion RA: 281.42 mas/yr	V=8.627	Reference Frame: ICRS
		Dec: -31 20 27.24 (-31.34090d)	Proper Motion Dec: -359.89 mas/yr		
		Equinox: J2000	Parallax: 0.10282"		
			Epoch of Position: 2000.0		

Comments: Coordinates were taken from SIMBAD (ICRS, Gaia coordinates traced back to epoch 2000.0). Proper motions and parallax taken from Gaia.
Category=STAR
Description=[EXTRA-SOLAR PLANET, M III-I]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	orbit 8	(1) V-AU-MIC-1	WFC3/IR, MULTIACCUM, GRISM256	G102	NSAMP=5; SAMP-SEQ=SPARS5	POS TARG null,-14; SPATIAL SCAN 1.67,90.0 Degrees,Round trip	Sequence 1-1 Non-Int in G102 Orbit 8 (22)	9.67632 Secs X 20 (387.053 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)]*	***[1]***

Orbit Structure