



18381 - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit Spectra of Three Giant Planets

Cycle: 34, Proposal Category: GO

(UV Initiative)

(Availability Mode: AVAILABLE)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
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Ms. Lakeisha M. Ramos Rosado (CoI)	The Johns Hopkins University
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Dr. Hannah Wakeford (CoI) (ESA Member)	University of Bristol
Dr. Thaddeus Komacek (CoI) (ESA Member)	University of Oxford
Ms. Emeline Fromont (CoI)	University of Maryland
Ms. Katherine Bennett (CoI)	The Johns Hopkins University

VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) HD-202772A BIAS	WFC3/UVIS	6	12-Aug-2026 12:00:53.0	yes
02	(1) HD-202772A BIAS	WFC3/UVIS	6	12-Aug-2026 12:01:03.0	yes
03	(2) WASP-82 BIAS	WFC3/UVIS	6	12-Aug-2026 12:01:12.0	yes
04	(2) WASP-82 BIAS	WFC3/UVIS	6	12-Aug-2026 12:01:20.0	yes
05	(3) KELT-18 BIAS	WFC3/UVIS	6	12-Aug-2026 12:01:28.0	yes
06	(3) KELT-18 BIAS	WFC3/UVIS	6	12-Aug-2026 12:01:36.0	yes

36 Total Orbits Used

ABSTRACT

From Earth to brown dwarfs, clouds fundamentally shape the visual appearance, outgoing thermal emission, atmospheric circulation, and energy balance of substellar objects. A key piece of our understanding of these clouds is the transition from the cloudy atmospheres of hot Jupiters to the relatively cloud-free atmospheres of ultra-hot Jupiters. This transition depends on a complex interplay between circulation, chemistry, and microphysics and it is not clear from models exactly at what equilibrium temperature this transition should occur. NUV-Optical transmission spectra of planets in this regime suggest clouds dissipate and metals are evaporated into the gas phase somewhere between 2050 and 2250 K. Here, we propose for observations with WFC3/UVIS/G280 (0.2-0.8 μm) of three planets between these temperatures to identify silicate cloud precursors (Mg, Fe, Si species) in the gas phase through their enormous NUV absorption. KELT-18b (2085 K), HD 202772 Ab (2130 K), and WASP-82b (2190 K) will trace the cloudy-to-clear transition to a precision of ~ 50 K, enabling a stringent test of 1D and 3D models of cloud formation. We will further explore whether the transition is discrete or gradual by comparing to nine previously observed planets. Properly understanding the conditions under which clouds begin to form is vital to understanding observed spectra across the substellar domain. Further, quantifying elemental rainout is necessary for accurate atmospheric composition measurements, with critical consequences for accurate planet formation inferences.

OBSERVING DESCRIPTION

Proposal 18381 (STScI Edit Number: 0, Created: Wednesday, August 12, 2026, 11:01:38AM Eastern Standard Time) - Overview

We are using WFC3/UVIS G280 to obtain spectroscopic time series of exoplanet transit events. Two transits each of three planets will be observed. Our observations spend 1-2 orbits measuring the pre-transit baseline, 2-3 orbits measuring the transit depth, and 1-2 orbits measuring the post-transit baseline. All observations are phase constrained to be around transit events.

We include a reference image for calibration to determine the location of the zeroth order trace on the detector, necessary for the wavelength solution. All observations use a custom subarray to optimize read-out times for sufficient duty cycle for our time-series observations. All observations use POSARGS to place the target and subarray on chip 2. Bias images are taken at the end of the visit because of the custom subarray.

Observations of HD 202772 Ab are orient constrained to keep a binary companion $\sim \geq 1''$ resolved in the cross-dispersion direction.

Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

Visit	Proposal 18381, HD202772 Ab Visit 1 (01) Wed Aug 12 16:01:38 GMT 2026				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 19D TO 99 D; ORIENT 199D TO 279 D; Period 3.30887750 D AND ZERO-PHASE HJD2458328.68357 <i>Comments: The optional parameters SIZEAXIS1=2250 and SIZEAXIS2=300 are used for all exposures to minimize the read out time and optimize the duty cycle. This is fine for the data that needs to be obtained because the spectrum will occupy only a narrow swath of pixel rows within the field. This also requires the use of optional parameters CENTERAXIS1 and CENTERAXIS2 in order to "steer" the location of the subarray readout so that it is centered on the target spectrum. We hardwire CENTERAXIS1=2136 and CENTERAXIS2=1216, which is intended to put the vertical center of the subarray on the zeroth order of the target spectrum.</i> Chip 2 biases are taken at the end of the visit because the grism exposures use custom subarrays, which will not have matching biases from the WFC3 bias calibration program. For each visit we have phase constraints around the event of the planetary transit, both the orbital period of the planet and the phasing needed are placed on the target acq exposure. Using Jofre et al. 2025 orbital parameters. Transit events agree to within a few minutes of other ephemerides. To avoid any contamination by several dim, nearby stars, we have placed Orient Ranges for the observations to reach our science goals. From discovery paper AO imaging of the binary system in Wang et al. 2019 (Fig. 2), we measure the companion star to be 29 degrees north of west and 1.3" separated. To keep the star at least 1" (25 pixels) away from the target star in the non-dispersion direction, we place orient constraints 40 degrees wide on either side ($1.3 * \sin(40.0 * \pi / 180) \sim 1.0$) of the 59 degree V3PA that maximally separates the objects in the non-dispersion direction. This results in several transit opportunities for the UVIS observations in Spring/Summer 2027.				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	HD-202772A	RA: 21 18 47.8742 (319.6994758d) Dec: -26 36 58.05 (-26.61613d) Equinox: J2000	Proper Motion RA: 23.247 mas/yr Proper Motion Dec: -57.66800009041617 mas/yr Parallax: 0.0061367" Epoch of Position: 2000	V=8.32
Fixed Targets	Miscellaneous Reference Frame: ICRS				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM. Category=STAR Description=[EXTRA-SOLAR PLANET, EXTRA-SOLAR PLANETARY SYSTEM, F3-F9]				

Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G280 reference image (WFC3UVIS.im.2363690)	(1) HD-202772A	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=16; CENTERAXIS1=2136; CENTERAXIS2=1216; SIZEAXIS1=2250; SIZEAXIS2=300	POS TARG null,-50; PHASE 0.938 TO 0.952	Sequence 1-2 Non-Int in HD202772 Ab Visit 1 (01)	0.5 Secs (0.5 Secs) [>=>]	[1]
Comments: For the reference image ("filter acq"), saturation in 0.87 seconds. 0.5 seconds gives SNR of >400.									
The nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2, at an approximate XY position of (2048,1024).									
CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the target spectrum, which will be displaced from the direct image of the target, in agreement with programs 16039, 16695, and 17082. We match the subarray size of the science exposures.									
We use FLASH=16 to meet the nominal count level.									

Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

2	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 1-2 Non-In t in HD202772 Ab V isit 1 (01)	14 Secs X 35 (490 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)]	[1]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

3	(WFC3UVI (1) HD-202772A S.sp.2363629)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 3-3 Non-Int in HD202772 Ab Visit 1 (01)	14 Secs X 36 (504 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[2]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

4	(WFC3UVI (1) HD-202772A S.sp.2363629)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 4-4 Non-Int in HD202772 Ab Visit 1 (01)	14 Secs X 36 (504 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[3]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

5	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 5-5 Non-In t in HD202772 Ab V isit 1 (01)	14 Secs X 36 (504 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[4]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

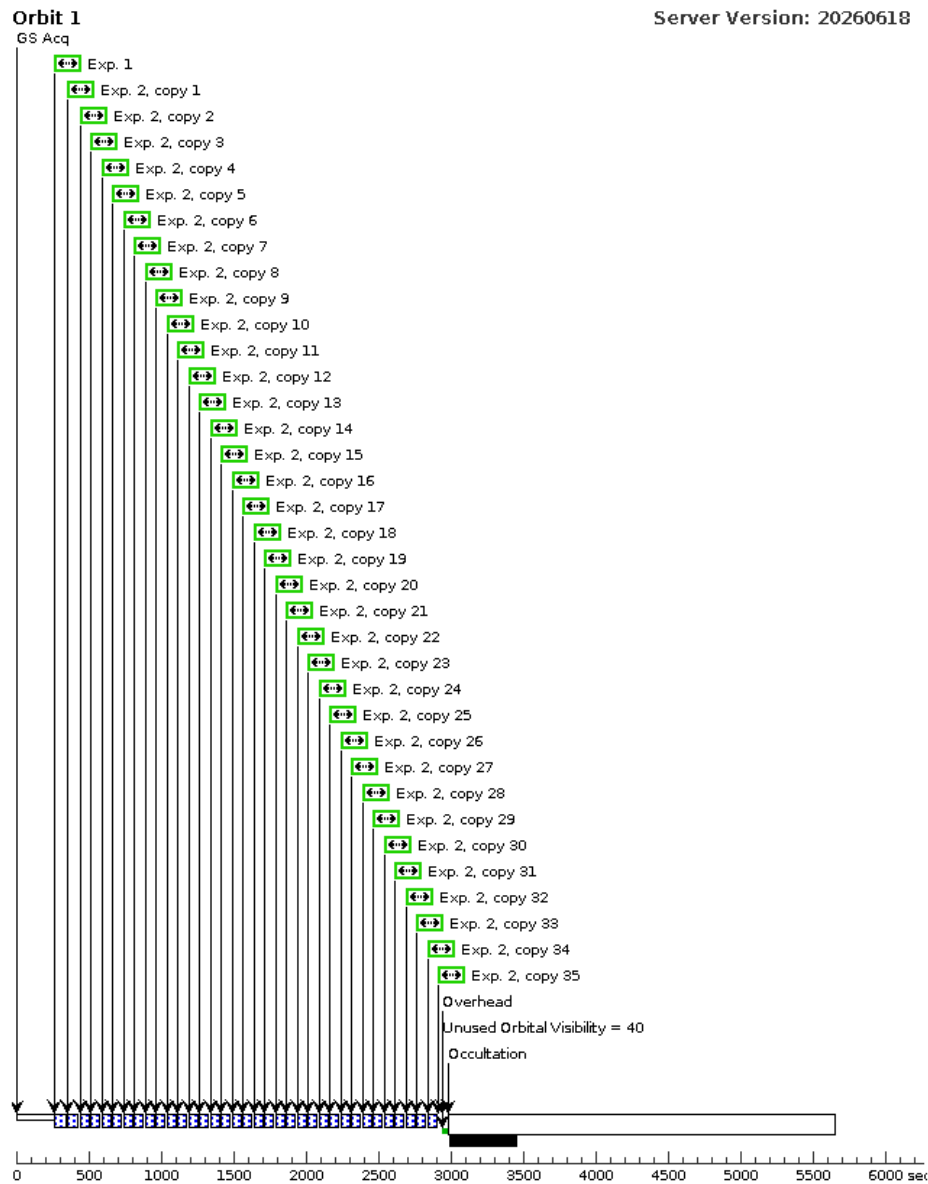
6	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 6-6 Non-In t in HD202772 Ab V isit 1 (01)	14 Secs X 36 (504 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[5]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

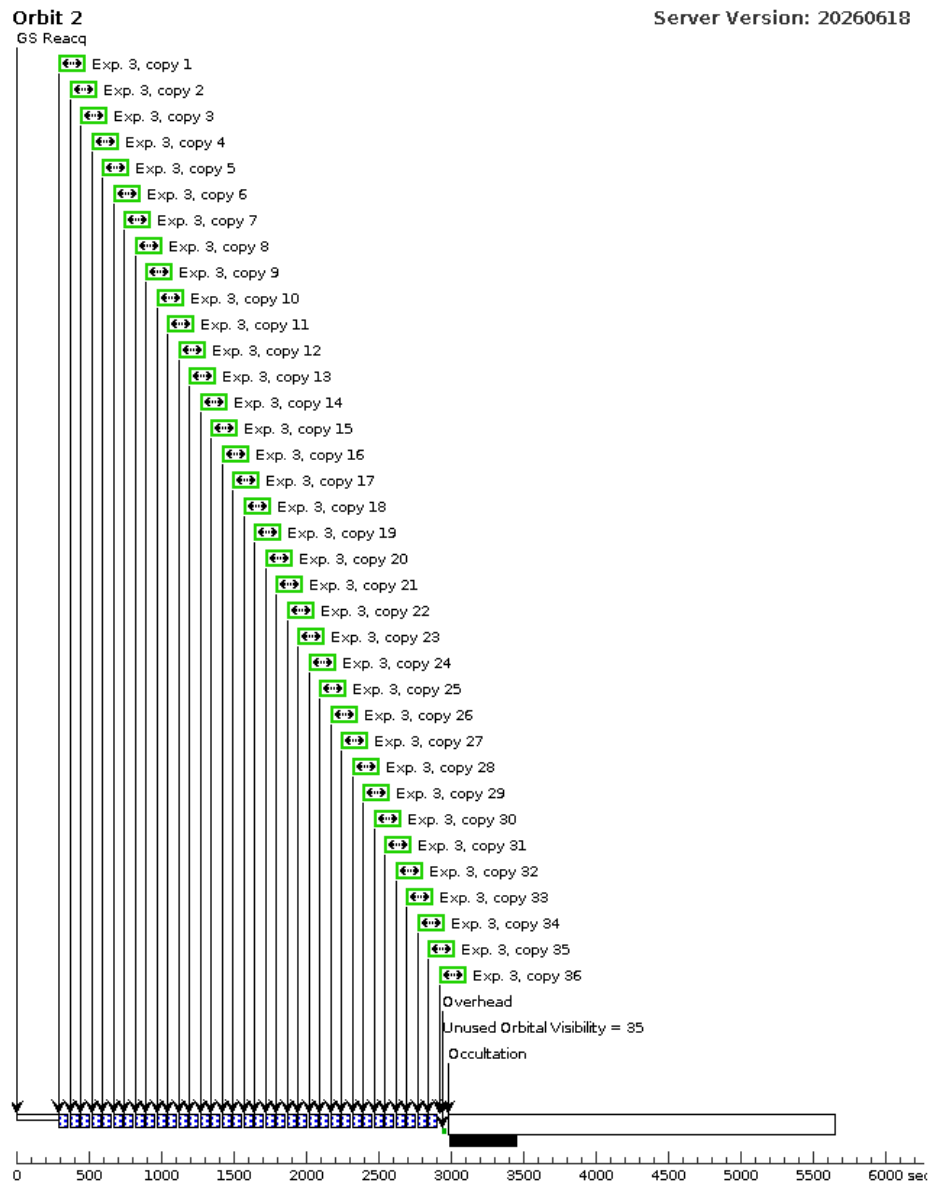
Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

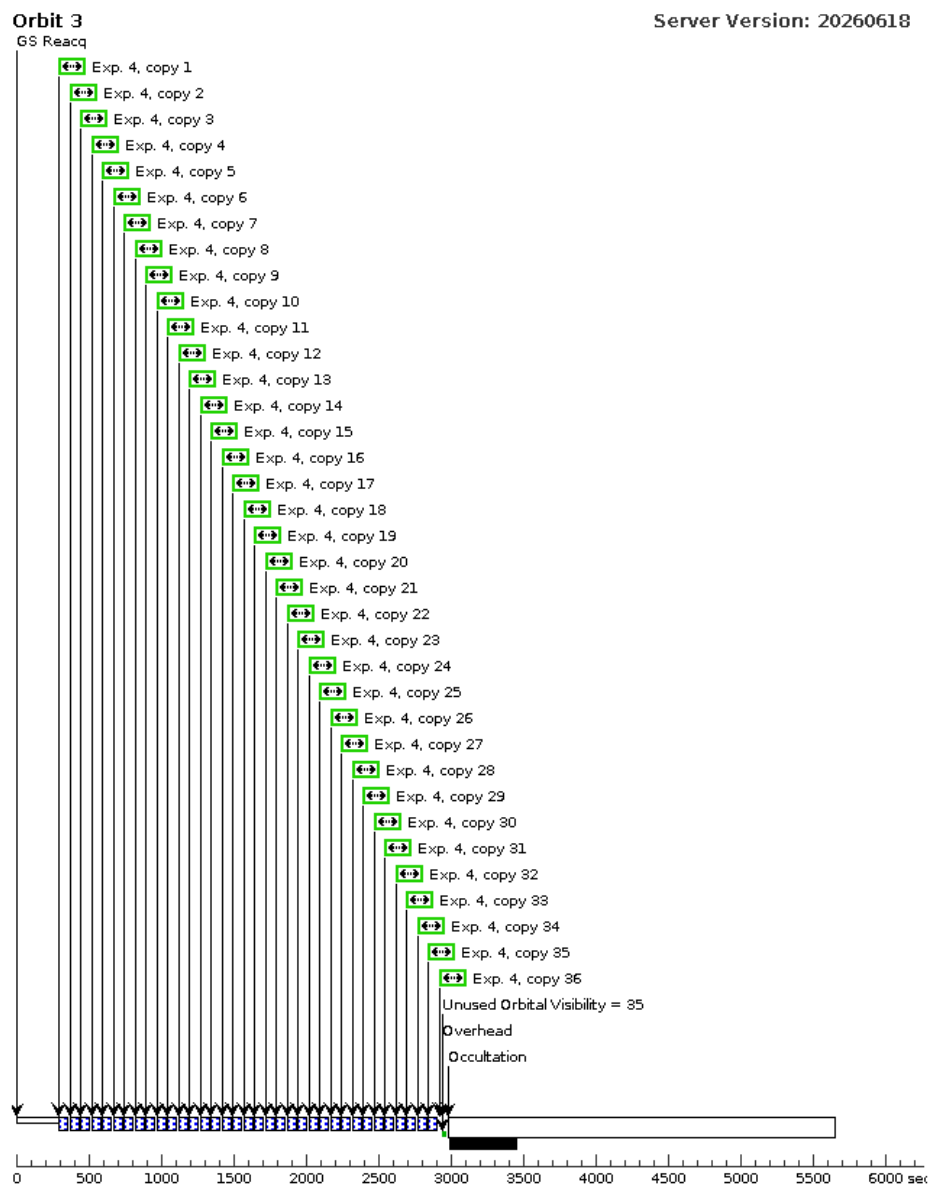
7	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 7-8 Non-In t in HD202772 Ab V isit 1 (01)	14 Secs X 36 (504 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[6]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

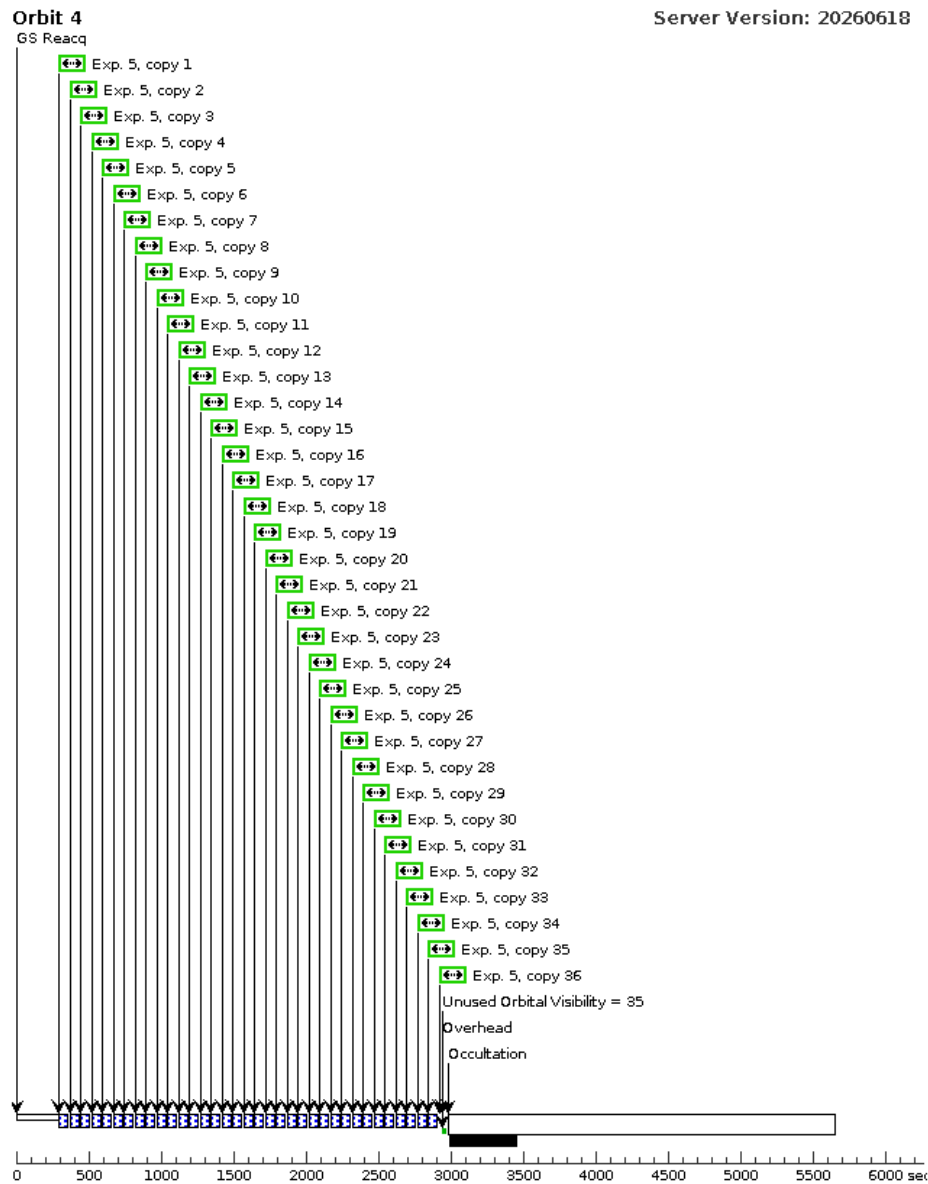
Proposal 18381 - HD202772 Ab Visit 1 (01) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

8	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	Sequence 7-8 Non-Int in HD202772 Ab Visit 1 (01)	0.0 Secs X 4 (0 Secs)	[6]
						[==>(Copy 1)]	
						[==>(Copy 2)]	
						[==>(Copy 3)]	
						[==>(Copy 4)]	
Comments: We set up the bias frames based on previously sucessful program 11934, 16039, and 16086 and are using the same Aperture and subarray size and position as the observations for direct calibration.							





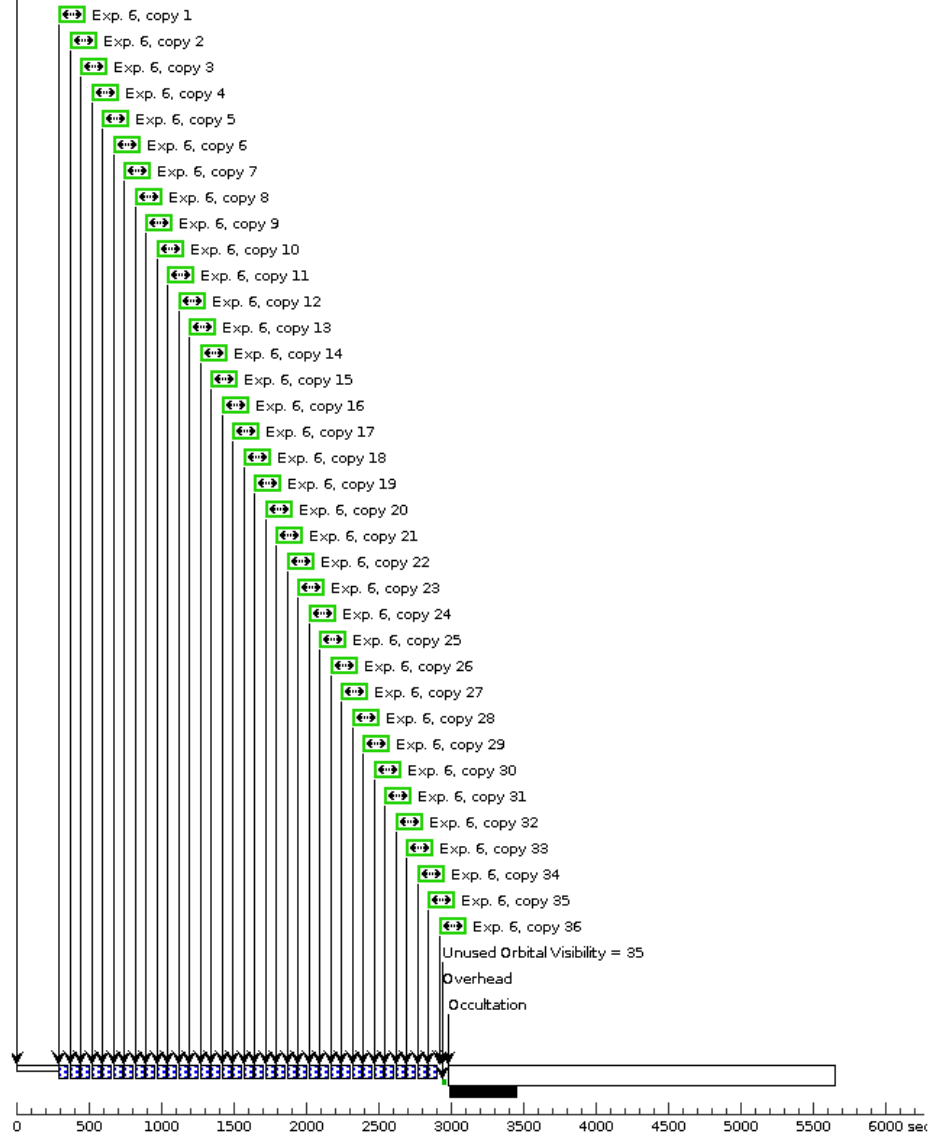


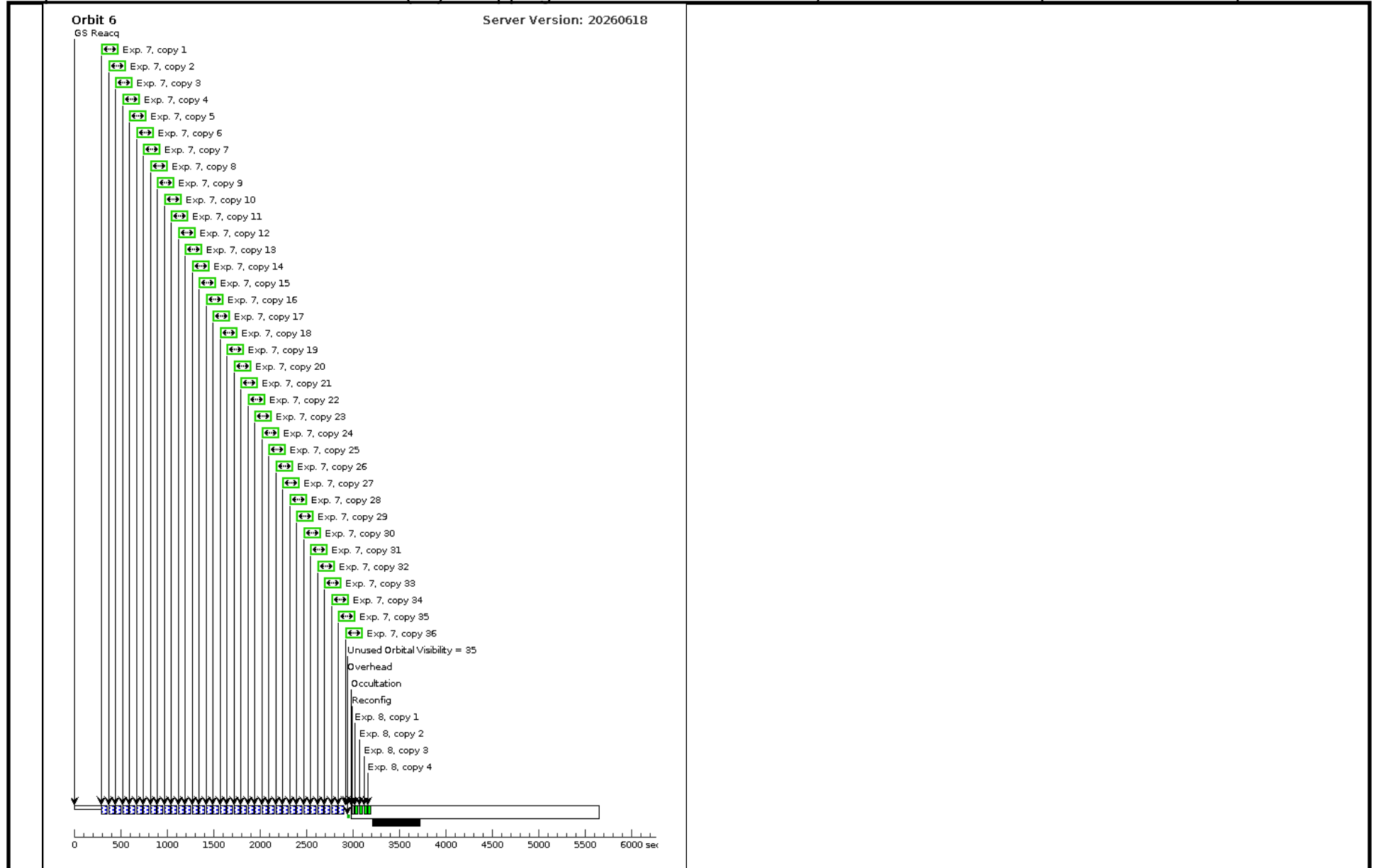


Orbit 5

Server Version: 20260618

GS Reacq





Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

Visit	Proposal 18381, HD202772 Ab Visit 2 (02) Wed Aug 12 16:01:39 GMT 2026				
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: ORIENT 19D TO 99 D; ORIENT 199D TO 279 D; Period 3.30887750 D AND ZERO-PHASE HJD2458328.68357 <i>Comments: The optional parameters SIZEAXIS1=2250 and SIZEAXIS2=300 are used for all exposures to minimize the read out time and optimize the duty cycle. This is fine for the data that needs to be obtained because the spectrum will occupy only a narrow swath of pixel rows within the field. This also requires the use of optional parameters CENTERAXIS1 and CENTERAXIS2 in order to "steer" the location of the subarray readout so that it is centered on the target spectrum. We hardwire CENTERAXIS1=2136 and CENTERAXIS2=1216, which is intended to put the vertical center of the subarray on the zeroth order of the target spectrum.</i> Chip 2 biases are taken at the end of the visit because the grism exposures use custom subarrays, which will not have matching biases from the WFC3 bias calibration program. For each visit we have phase constraints around the event of the planetary transit, both the orbital period of the planet and the phasing needed are placed on the target acq exposure. Using Jofre et al. 2025 orbital parameters. Transit events agree to within a few minutes of other ephemerides. To avoid any contamination by several dim, nearby stars, we have placed Orient Ranges for the observations to reach our science goals. From discovery paper AO imaging of the binary system in Wang et al. 2019 (Fig. 2), we measure the companion star to be 29 degrees north of west and 1.3" separated. To keep the star at least 1" (25 pixels) away from the target star in the non-dispersion direction, we place orient constraints 40 degrees wide on either side ($1.3 * \sin(40.0 * \pi / 180) \sim 1.0$) of the 59 degree V3PA that maximally separates the objects in the non-dispersion direction. This results in several transit opportunities for the UVIS observations in Spring/Summer 2027.				
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	HD-202772A	RA: 21 18 47.8742 (319.6994758d) Dec: -26 36 58.05 (-26.61613d) Equinox: J2000	Proper Motion RA: 23.247 mas/yr Proper Motion Dec: -57.66800009041617 mas/yr Parallax: 0.0061367" Epoch of Position: 2000	V=8.32
Fixed Targets	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.				
	SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM. Category=STAR Description=[EXTRA-SOLAR PLANET, EXTRA-SOLAR PLANETARY SYSTEM, F3-F9]				

Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G280 reference image (WFC3UVIS.im.2363690)	(1) HD-202772A	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=16; CENTERAXIS1=2136; CENTERAXIS2=1216; SIZEAXIS1=2250; SIZEAXIS2=300	POS TARG null,-50; PHASE 0.938 TO 0.952	Sequence 1-2 Non-Insert in HD202772 Ab Visit 2 (02)	0.5 Secs (0.5 Secs) [>=>]	[1]
Comments: For the reference image ("filter acq"), saturation in 0.87 seconds. 0.5 seconds gives SNR of >400.									
The nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2, at an approximate XY position of (2048,1024).									
CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the target spectrum, which will be displaced from the direct image of the target, in agreement with programs 16039, 16695, and 17082. We match the subarray size of the science exposures.									
We use FLASH=16 to meet the nominal count level.									

Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

2	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 1-2 Non-In t in HD202772 Ab V isit 2 (02)	14 Secs X 35 (490 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)]	[1]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

3	(WFC3UVI (1) HD-202772A S.sp.2363629)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 3-3 Non-Int in HD202772 Ab Visit 2 (02)	14 Secs X 36 (504 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[2]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

4	(WFC3UVI (1) HD-202772A S.sp.2363629)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 4-4 Non-Int in HD202772 Ab Visit 2 (02)	14 Secs X 36 (504 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[3]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

5	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 5-5 Non-In t in HD202772 Ab V isit 2 (02)	14 Secs X 36 (504 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[4]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

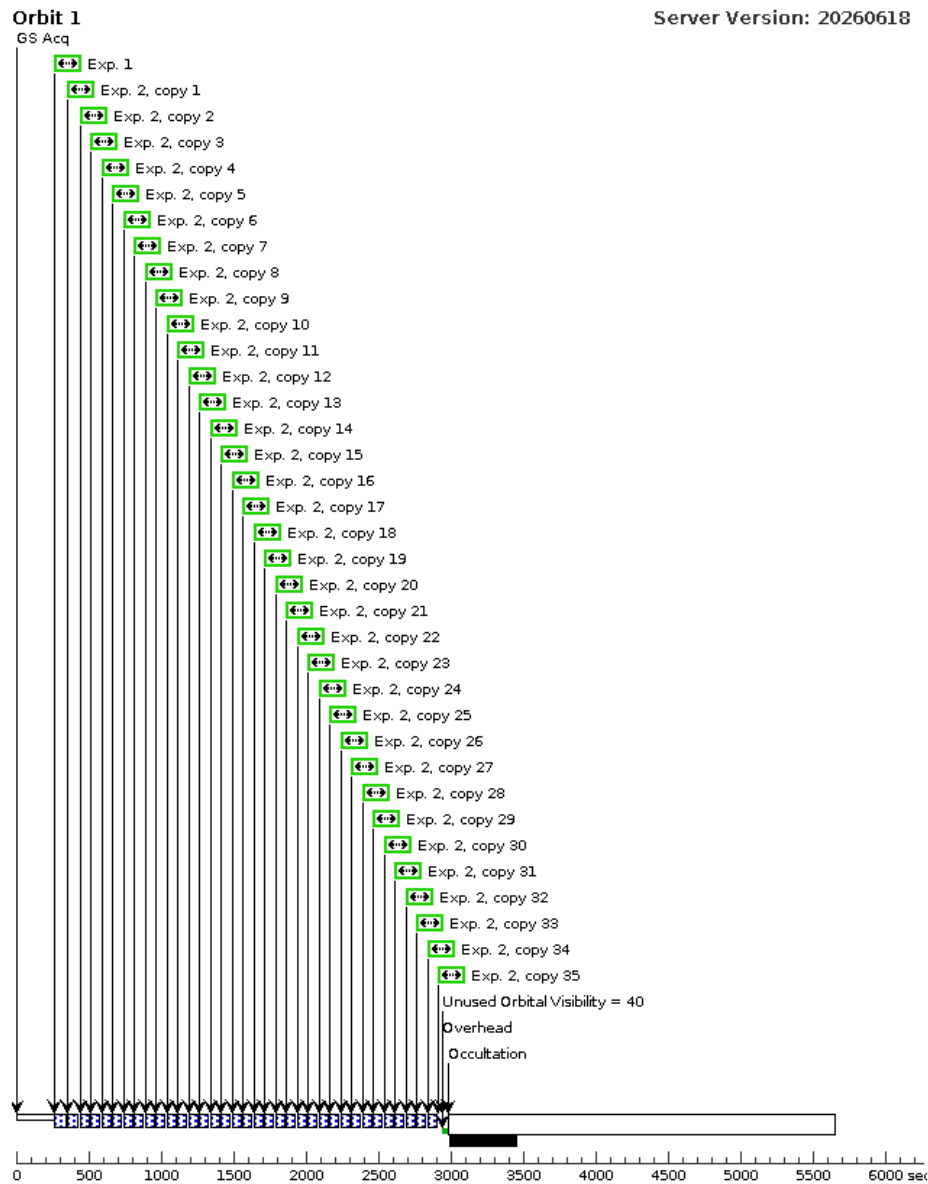
6	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 6-6 Non-In t in HD202772 Ab V isit 2 (02)	14 Secs X 36 (504 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[5]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

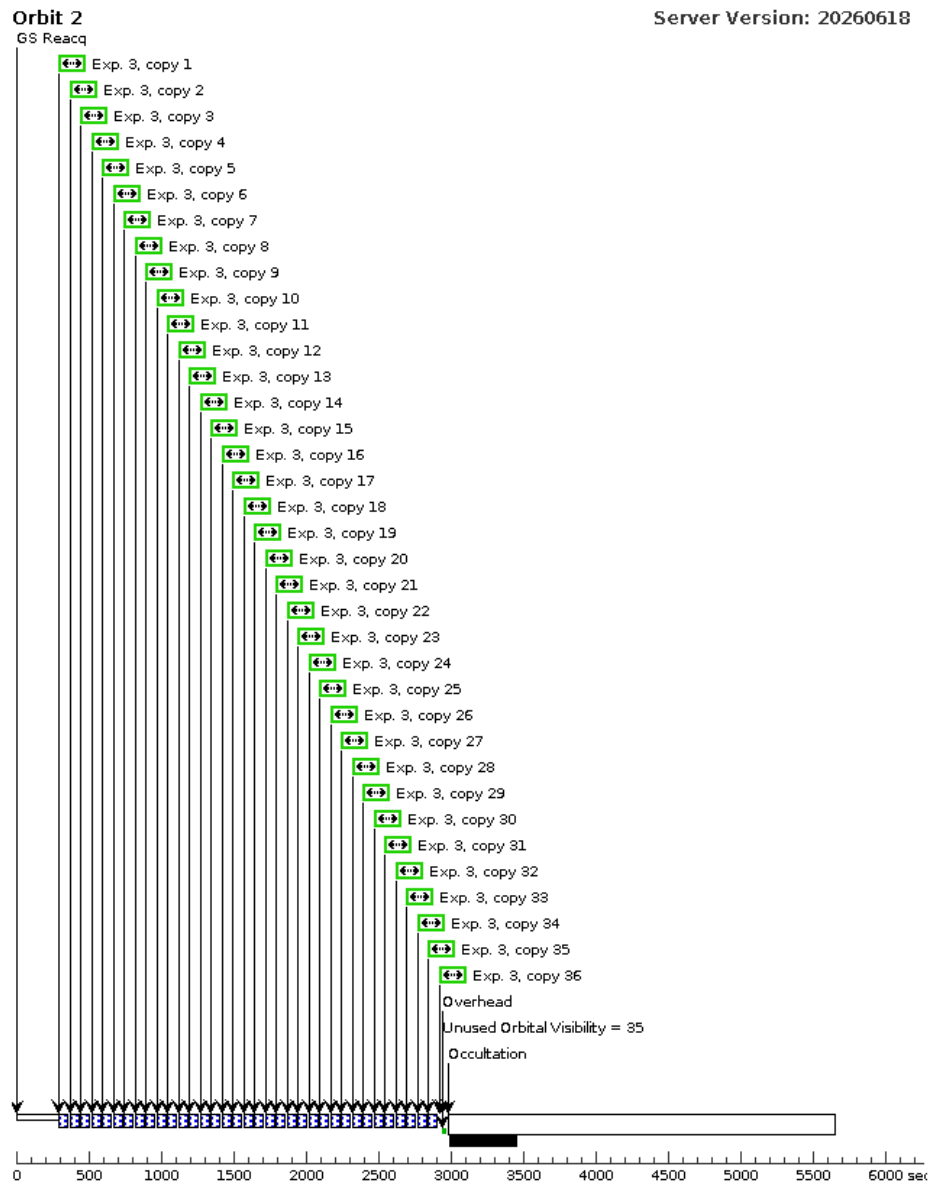
Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

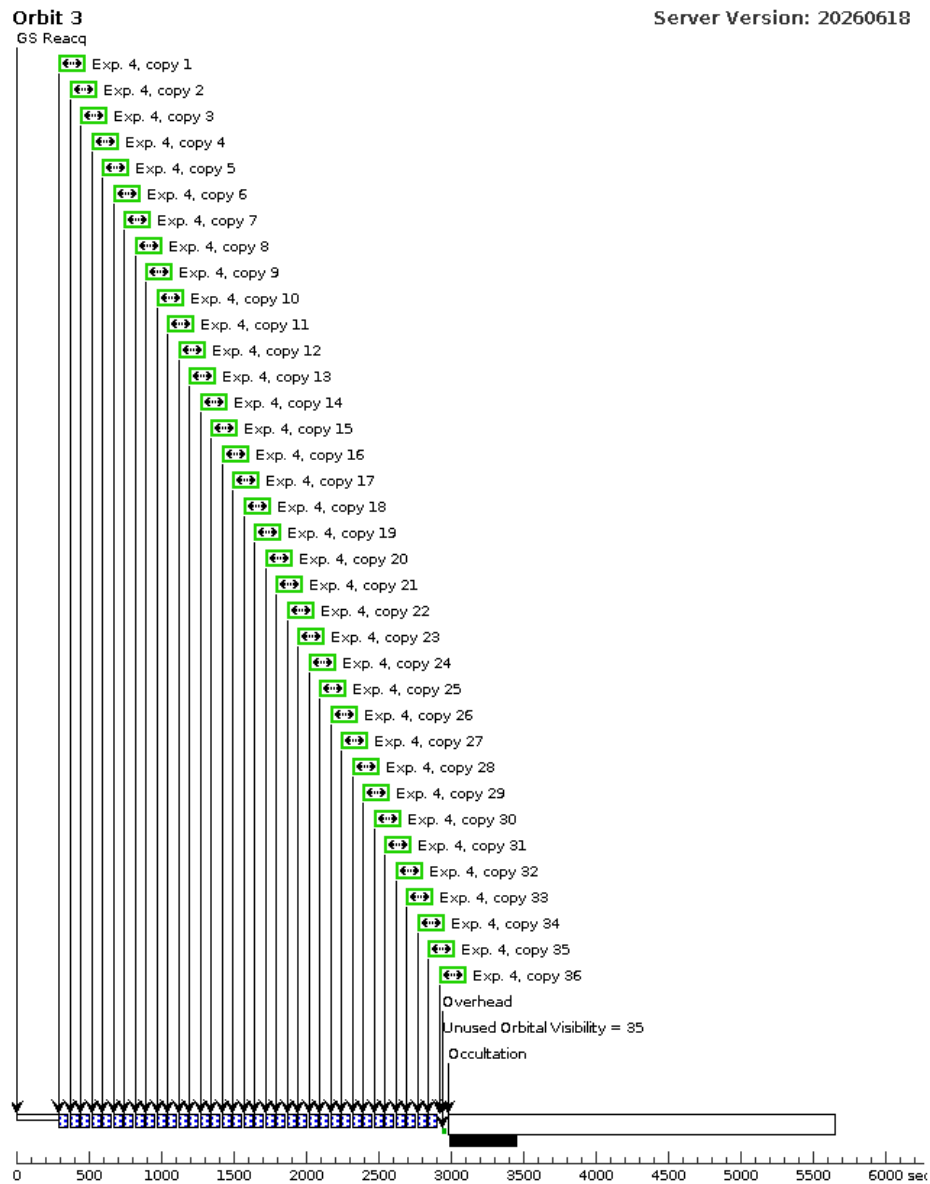
7	(WFC3UVI S.sp.236362 9)	(1) HD-202772A	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=16; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 7-8 Non-In t in HD202772 Ab V isit 2 (02)	14 Secs X 36 (504 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)] [==>(Copy 24)] [==>(Copy 25)] [==>(Copy 26)] [==>(Copy 27)] [==>(Copy 28)] [==>(Copy 29)] [==>(Copy 30)] [==>(Copy 31)] [==>(Copy 32)] [==>(Copy 33)] [==>(Copy 34)] [==>(Copy 35)] [==>(Copy 36)]	[6]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~55.5 K, which is 87% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 16 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - HD202772 Ab Visit 2 (02) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Trans...

8	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	Sequence 7-8 Non-Int in HD202772 Ab Visit 2 (02)	0.0 Secs X 4 (0 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[6]
Comments: We set up the bias frames based on previously sucessful program 11934, 16039, and 16086 and are using the same Aperture and subarray size and position as the observations for direct calibration.							



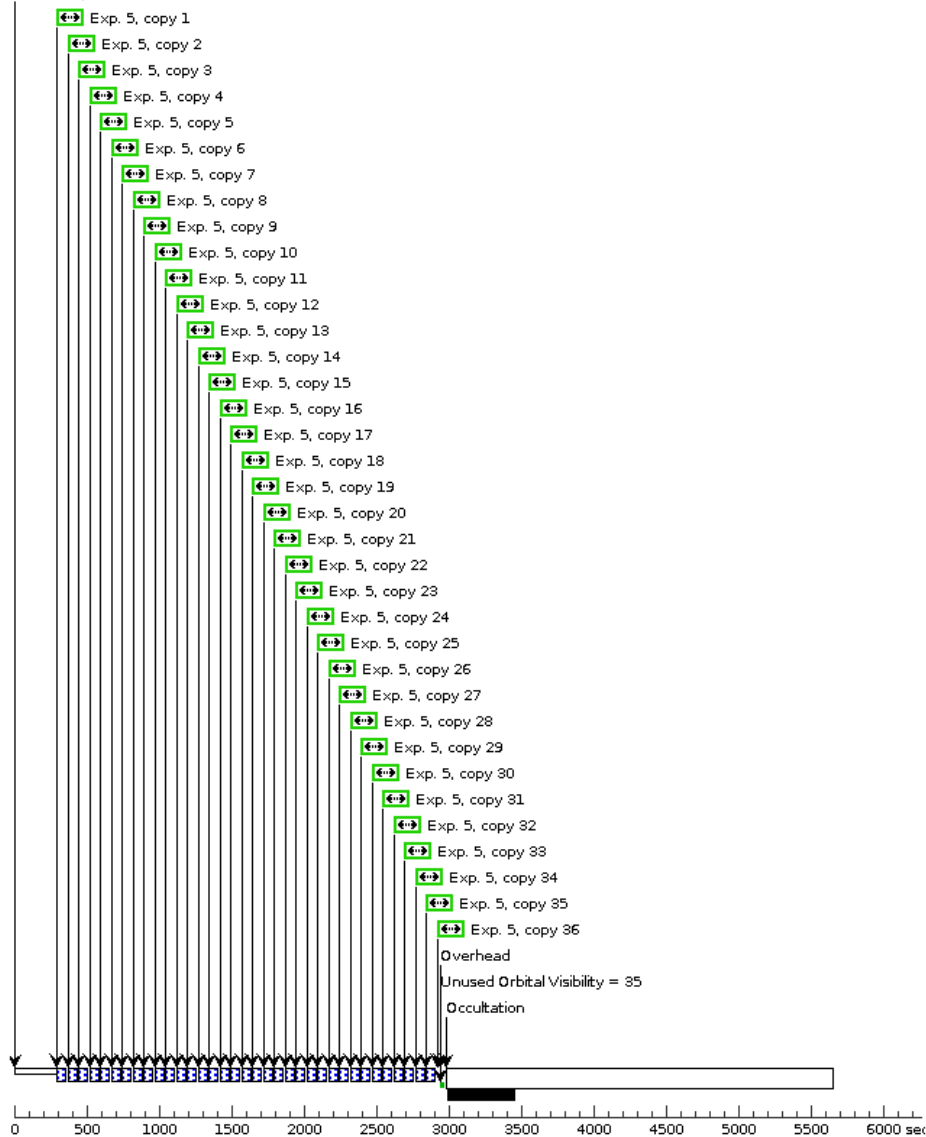




Orbit 4

Server Version: 20260618

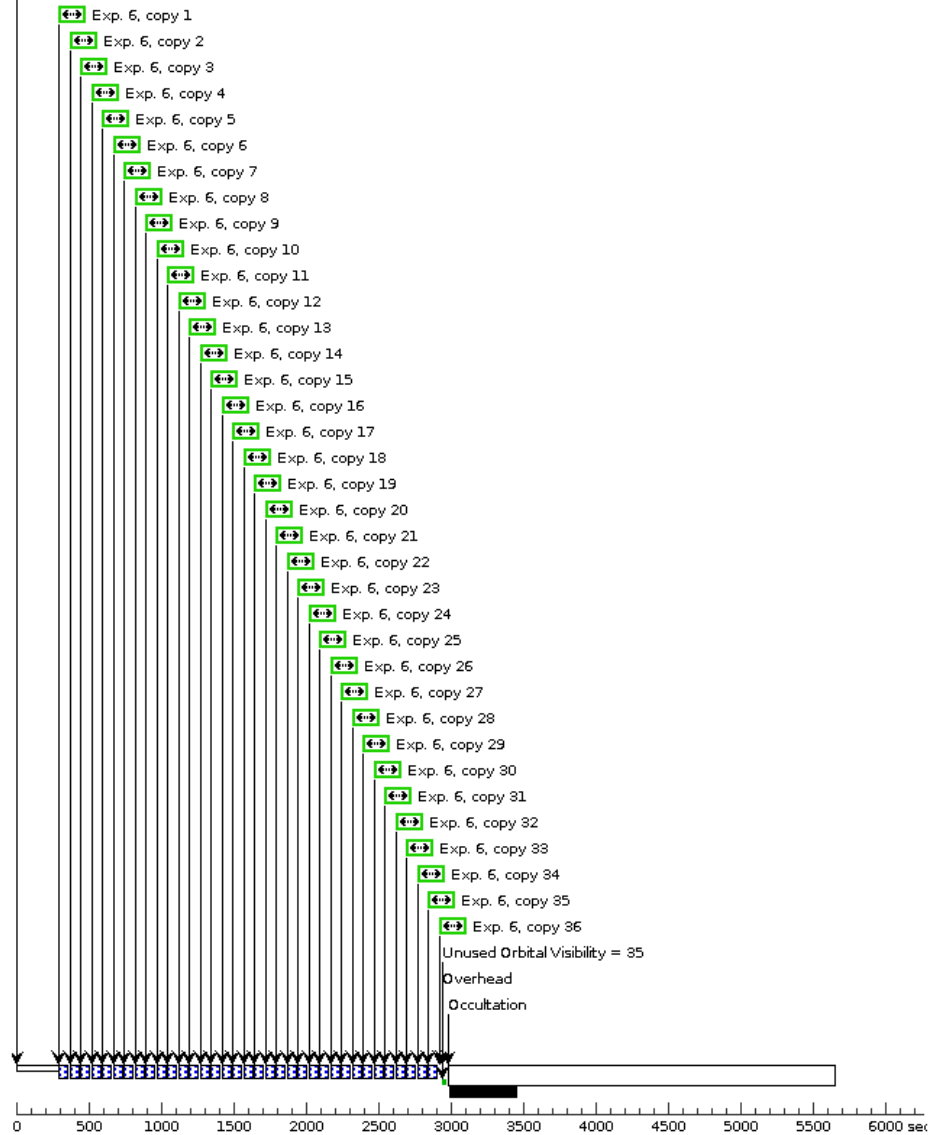
GS Reacq

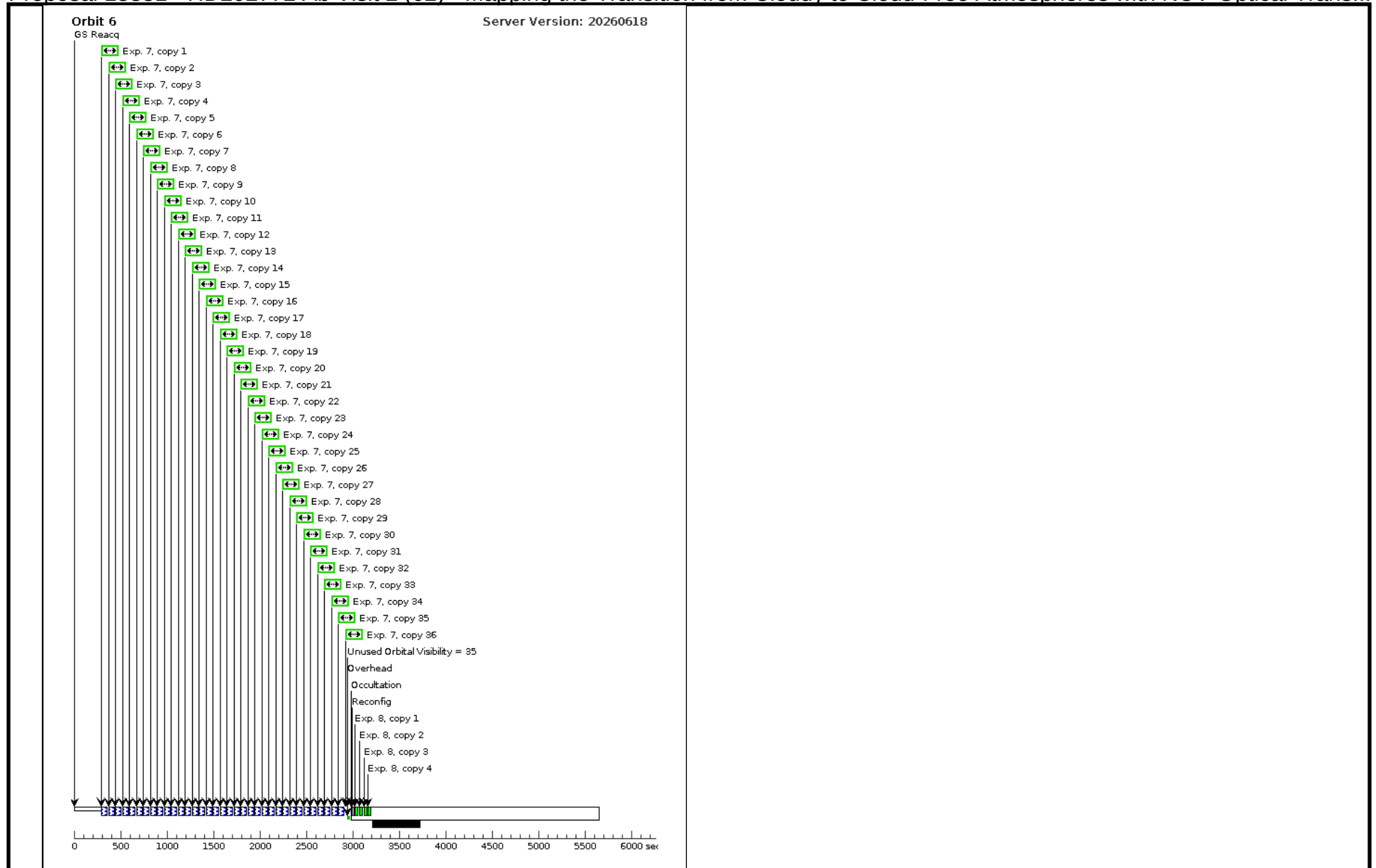


Orbit 5

Server Version: 20260618

GS Reacq





Proposal 18381 - WASP-82b Visit 1 (03) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Visit	Proposal 18381, WASP-82b Visit 1 (03)					Wed Aug 12 16:01:39 GMT 2026
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: Period 2.70578401 D AND ZERO-PHASE HJD2458217.09214					
	Comments: The optional parameters SIZEAXIS1=2250 and SIZEAXIS2=300 are used for all exposures to minimize the read out time and optimize the duty cycle. This is fine for the data that needs to be obtained because the spectrum will occupy only a narrow swath of pixel rows within the field. This also requires the use of optional parameters CENTERAXIS1 and CENTERAXIS2 in order to "steer" the location of the subarray readout so that it is centered on the target spectrum. We hardwire CENTERAXIS1=2136 and CENTERAXIS2=1216, which is intended to put the vertical center of the subarray on the zeroth order of the target spectrum. Chip 2 biases are taken at the end of the visit because the grism exposures use custom subarrays, which will not have matching biases from the WFC3 bias calibration program. For each visit we have phase constraints around the event of the planetary transit, both the orbital period of the planet and the phasing needed are placed on the target acq exposure. Many visit opportunities exist throughout the year. Using Kokori et al. 2023 orbital parameters. Recent (non-candidate) solutions all agree to within 15 minutes.					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	WASP-82	RA: 04 50 38.5588 (72.6606617d)	Proper Motion RA: -16.231 mas/yr	V=10.07	Reference Frame: ICRS
		Alt Name1: BD+01-828	Dec: +01 53 38.10 (1.89392d)	Proper Motion Dec: -18.762000081551378 mas/yr		
			Equinox: J2000	Parallax: 0.0036299"		
				Epoch of Position: 2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM. Category=STAR Description=[EXTRA-SOLAR PLANET, EXTRA-SOLAR PLANETARY SYSTEM, F3-F9]						

Proposal 18381 - WASP-82b Visit 1 (03) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G280 reference image (WFC3UVI S.im.236369 5)	(2) WASP-82	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; CENTERAXIS1=2136; CENTERAXIS2=1216; SIZEAXIS1=2250; SIZEAXIS2=300	POS TARG null,-50; PHASE 0.916 TO 0.93	Sequence 1-2 Non-Int in WASP-82b Visit 1 (03)	2 Secs (2 Secs) [==>]	[1]
Comments: For the reference image ("filter acq"), saturation in 3.95 seconds. 2 seconds gives SNR of >400. The nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2, at an approximate XY position of (2048,1024). CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the target spectrum, which will be displaced from the direct image of the target, in agreement with programs 16039, 16695, and 17082. We match the subarray size of the science exposures. We use FLASH=20 to meet the nominal count level.									
2	(WFC3UVI S.sp.236369 8)	(2) WASP-82	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-2 Non-Int in WASP-82b Visit 1 (03)	60 Secs X 23 (1380 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[1]
Comments: With exposure time of 60 second, we remain below 83% saturation (w/ saturation at 76.44 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - WASP-82b Visit 1 (03) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

3	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 3-3 Non-Int in WASP-82b Visit 1 (03)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[2]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - WASP-82b Visit 1 (03) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

4	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 4-4 Non-Int in WASP-82b Visit 1 (03)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[3]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - WASP-82b Visit 1 (03) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

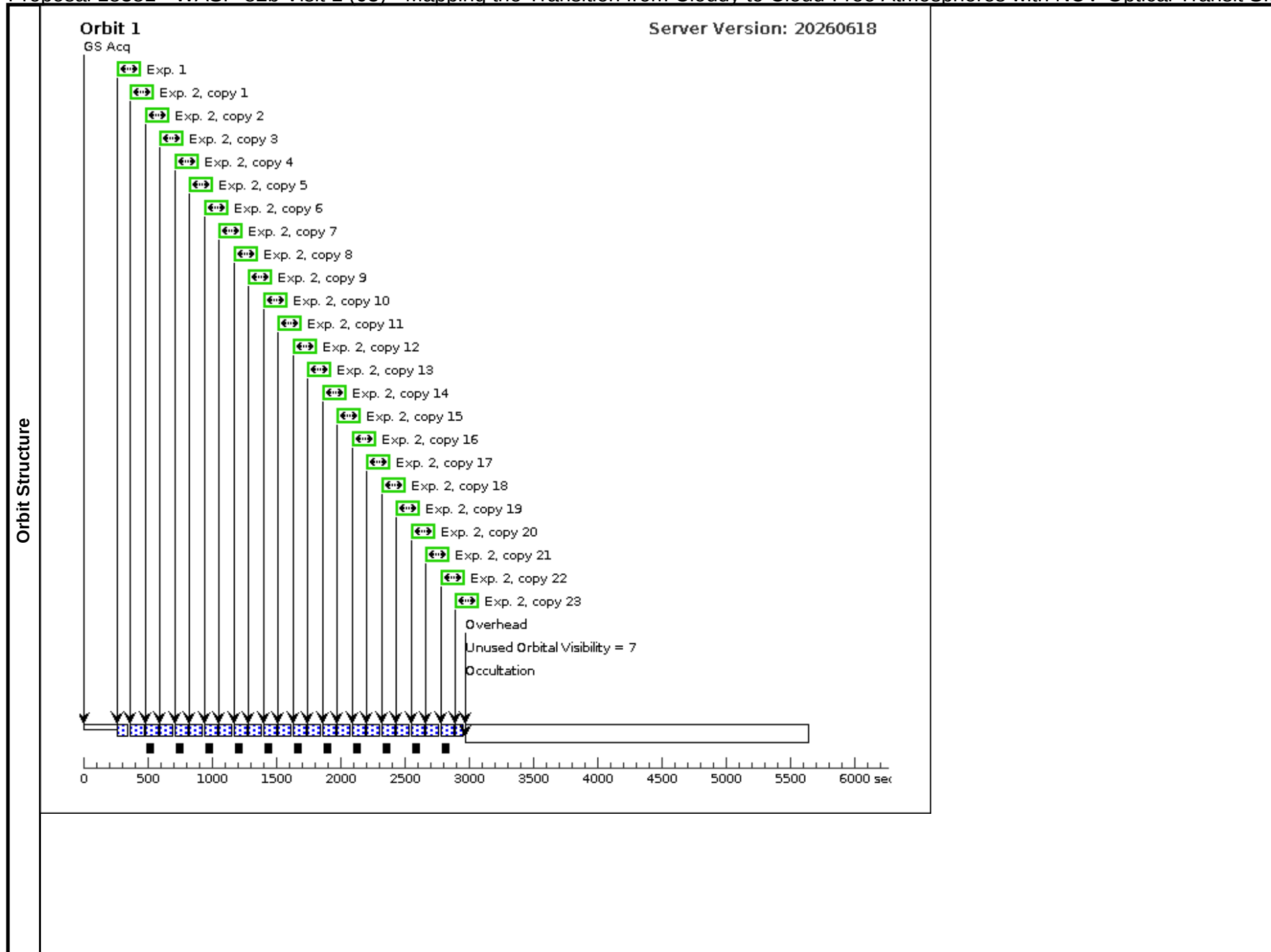
5	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 5-5 Non-Int in WASP-82b Visit 1 (03)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[4]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

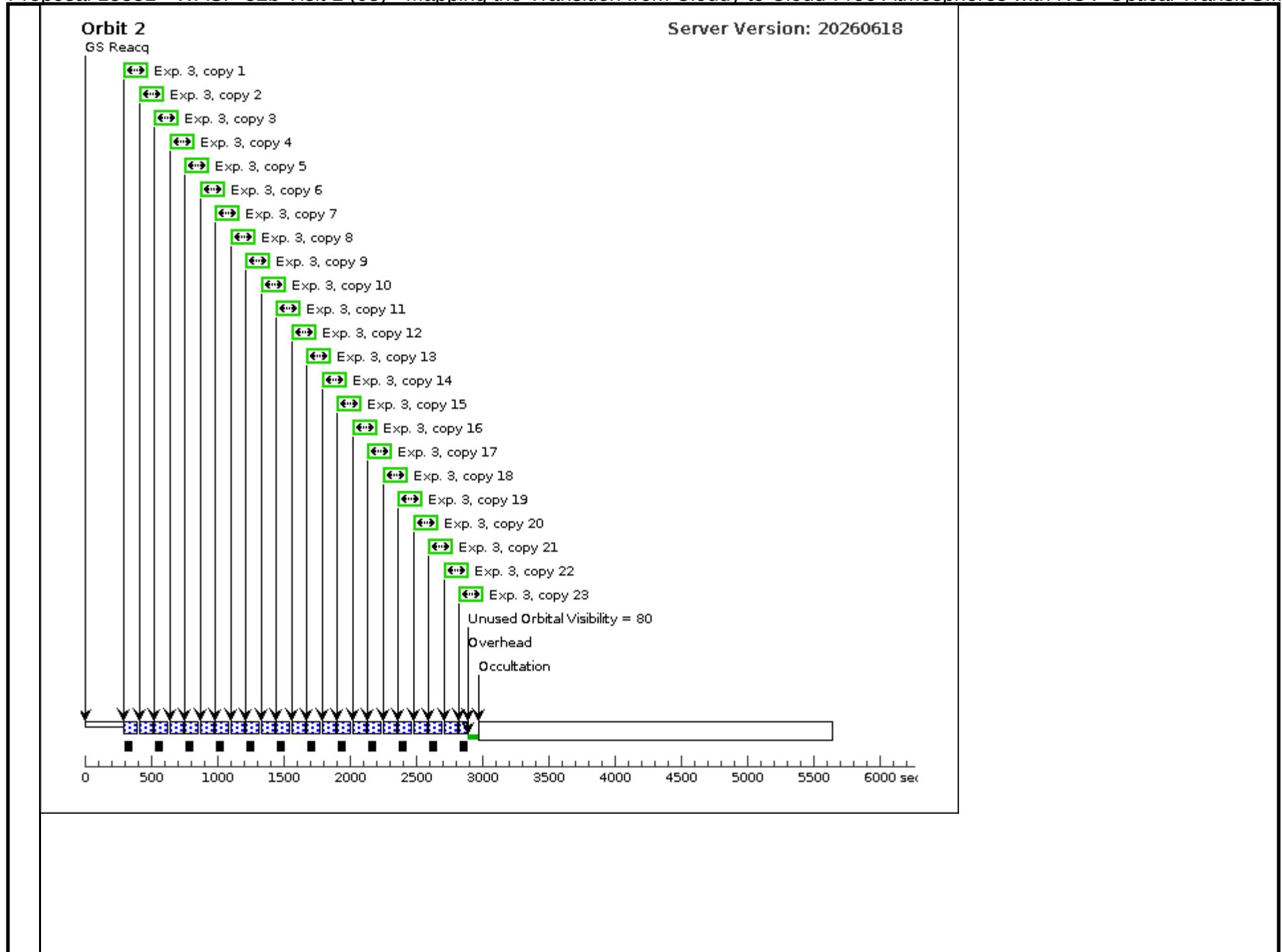
Proposal 18381 - WASP-82b Visit 1 (03) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

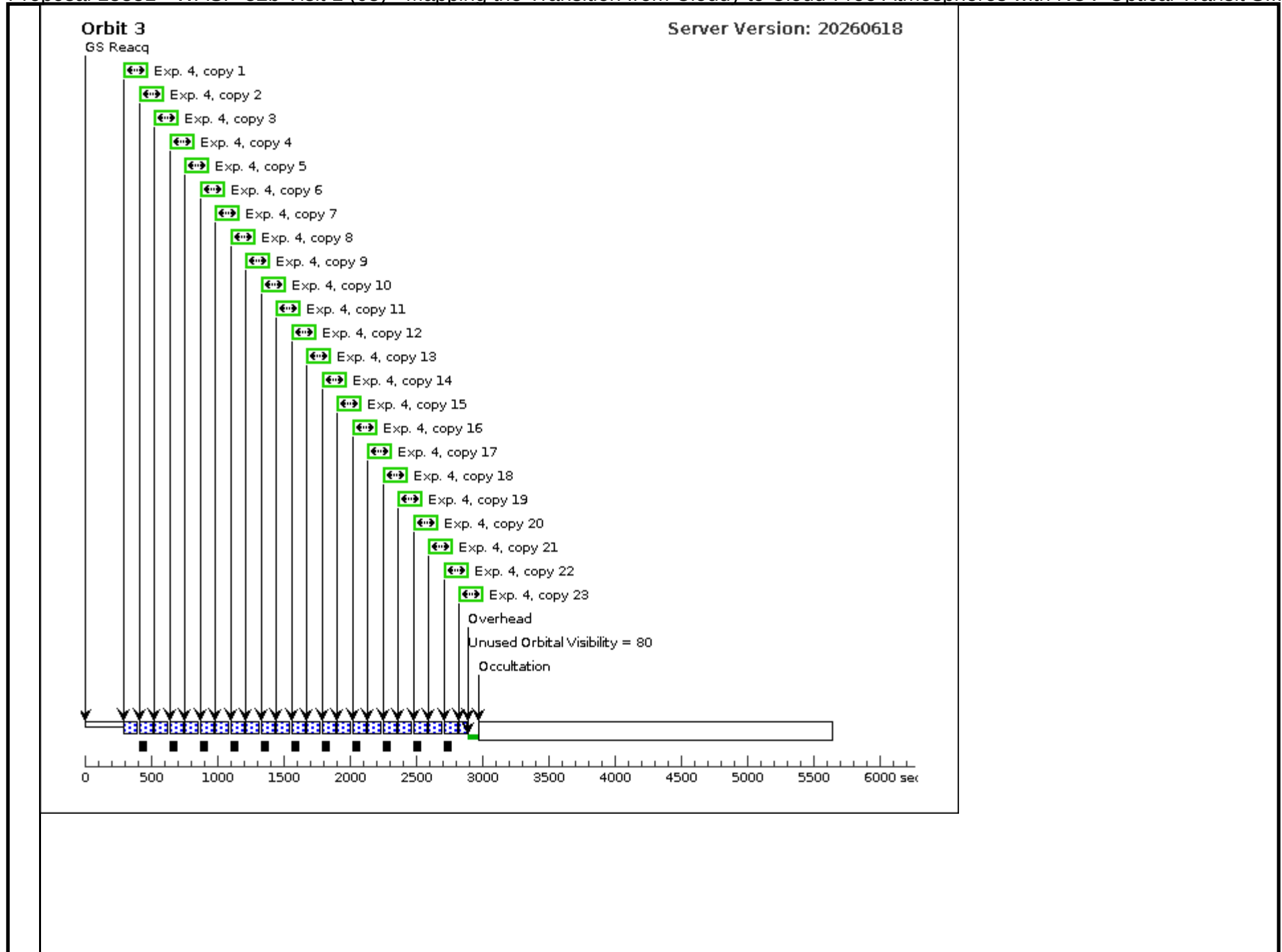
6	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 6-6 Non-Int in WASP-82b Visit 1 (03)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[5]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

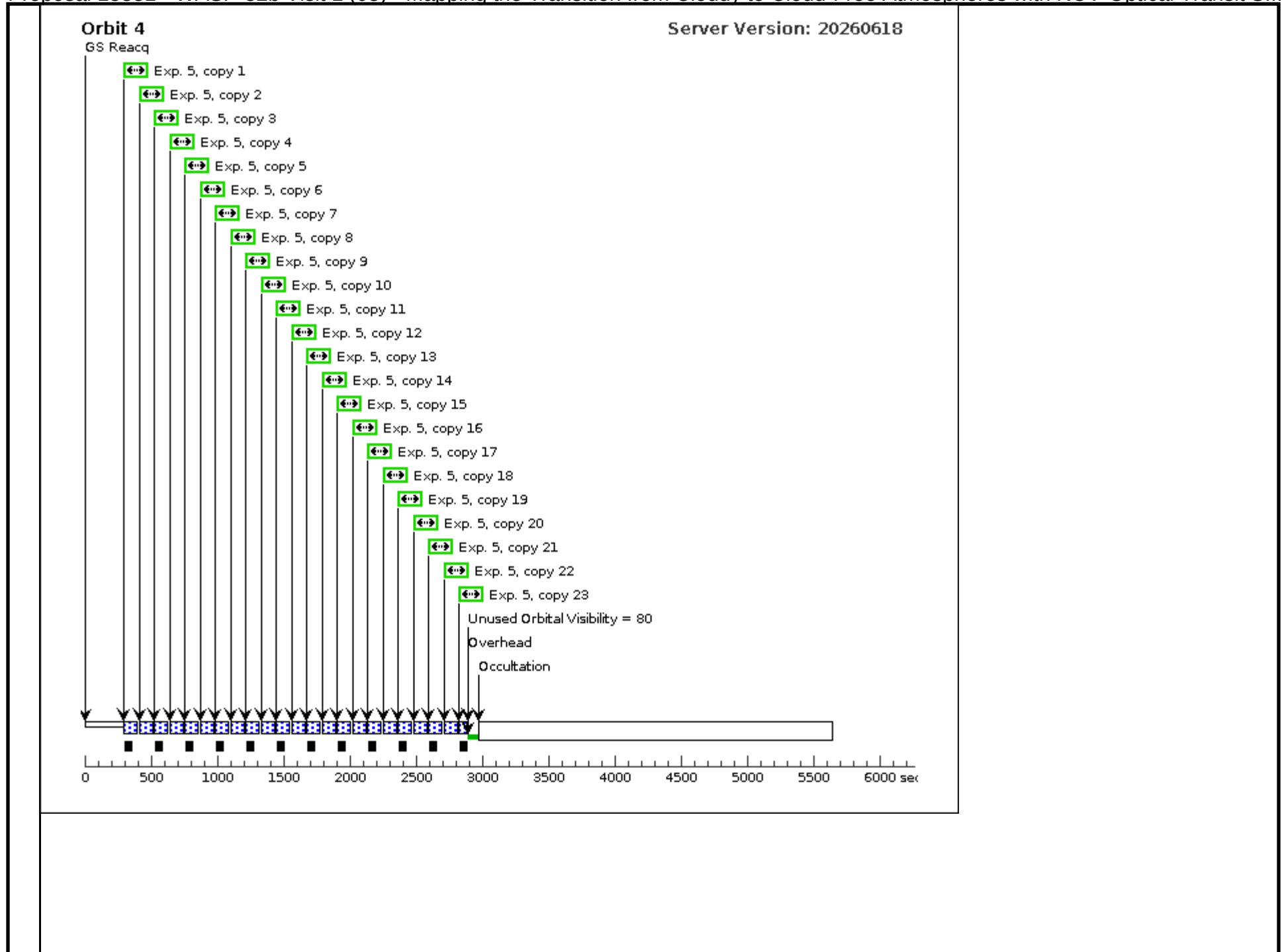
Proposal 18381 - WASP-82b Visit 1 (03) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

7	(WFC3UVI (2) WASP-82 S.sp.236369 8)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 7-8 Non-Int in WASP-82b Visit 1 (03)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[6]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								
8	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216		Sequence 7-8 Non-Int in WASP-82b Visit 1 (03)	0.0 Secs X 4 (0 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[6]
Comments: We set up the bias frames based on previously sucessful proqram 11934, 16039, and 16086 and are using the same Aperture and subarray size and position as the observations for direct calibration.								





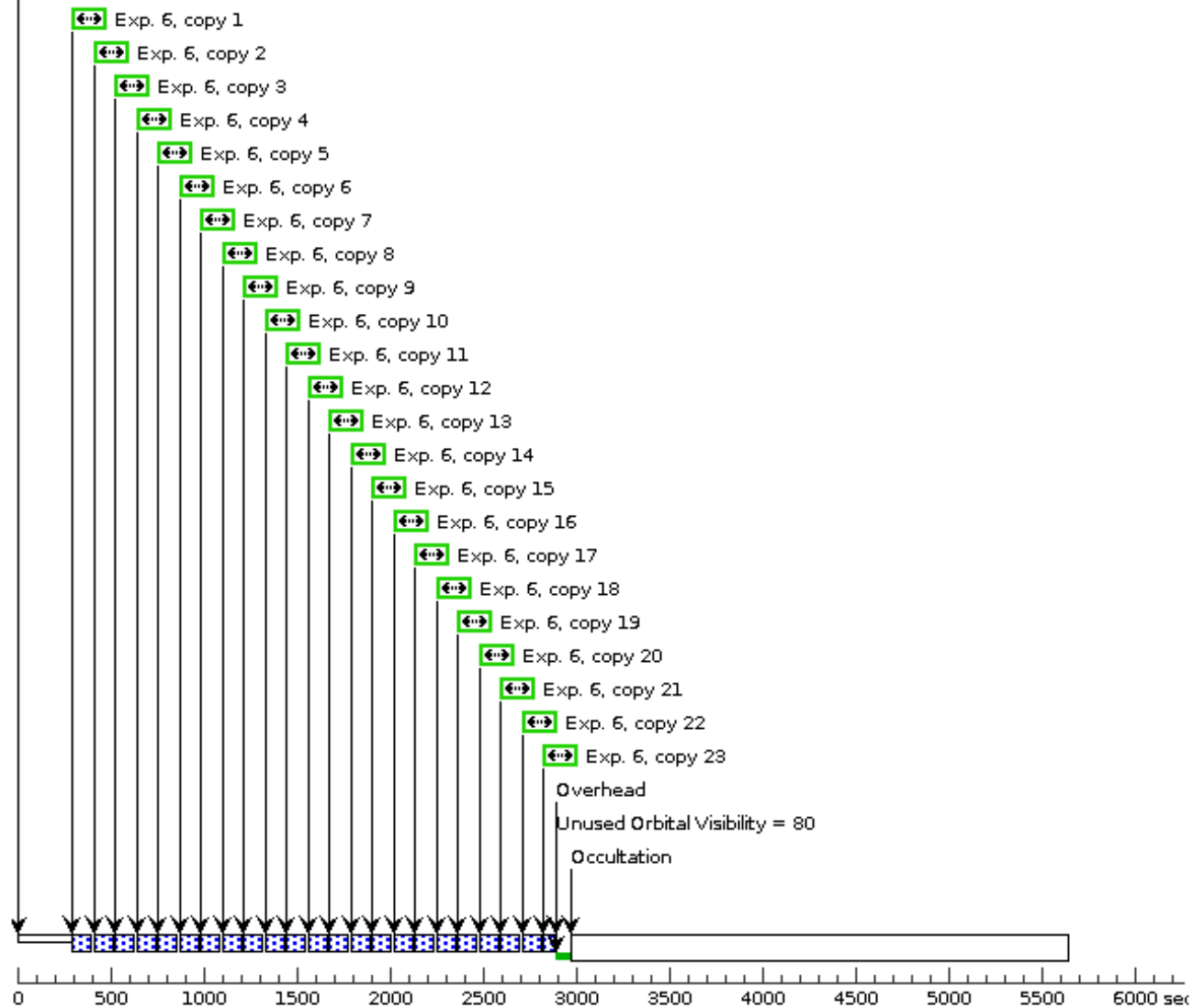


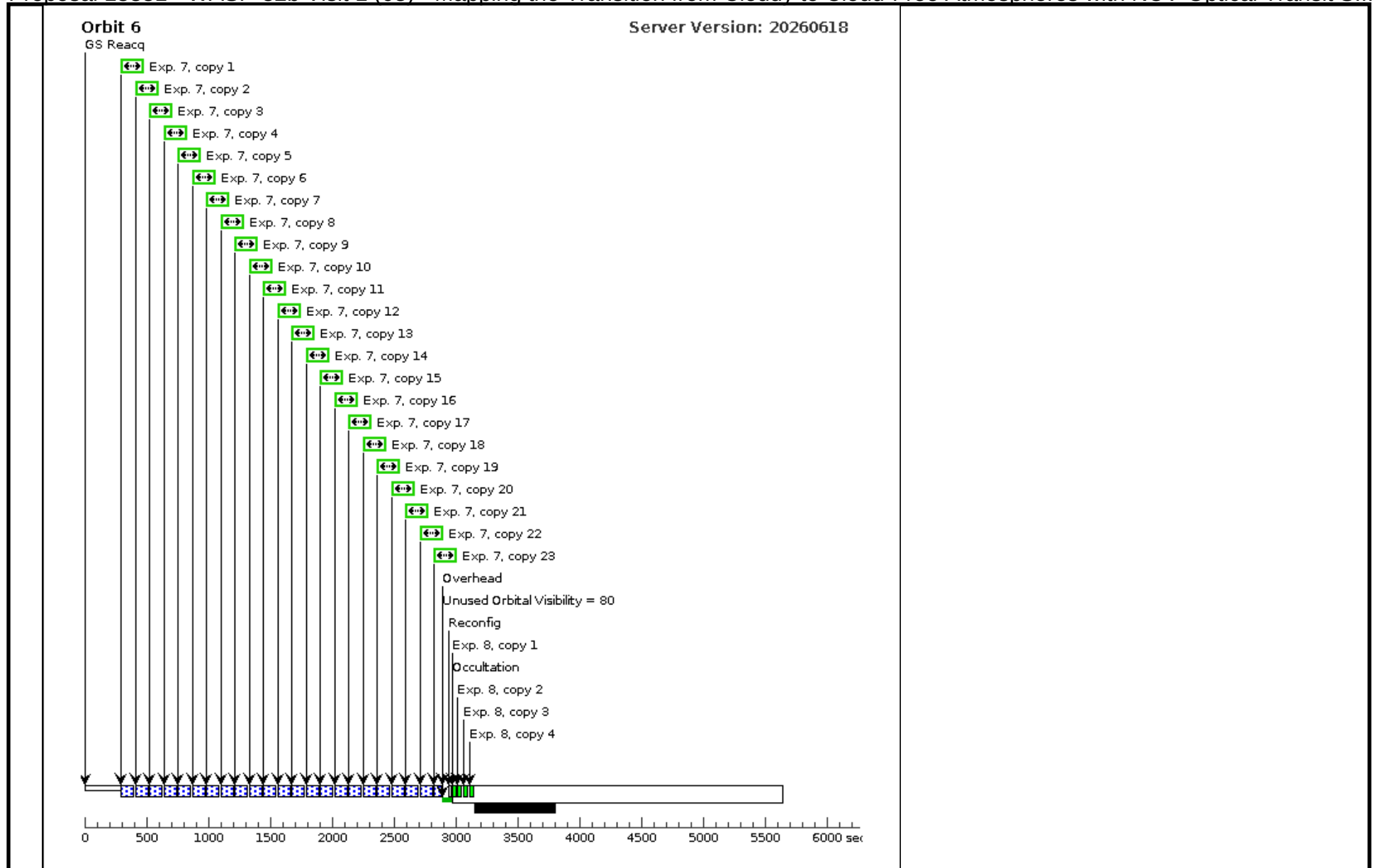


Orbit 5

Server Version: 20260618

GS Reacq





Proposal 18381 - WASP-82b Visit 2 (04) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Visit	Proposal 18381, WASP-82b Visit 2 (04)					Wed Aug 12 16:01:39 GMT 2026
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: Period 2.70578401 D AND ZERO-PHASE HJD2458217.09214					
	Comments: The optional parameters SIZEAXIS1=2250 and SIZEAXIS2=300 are used for all exposures to minimize the read out time and optimize the duty cycle. This is fine for the data that needs to be obtained because the spectrum will occupy only a narrow swath of pixel rows within the field. This also requires the use of optional parameters CENTERAXIS1 and CENTERAXIS2 in order to "steer" the location of the subarray readout so that it is centered on the target spectrum. We hardwire CENTERAXIS1=2136 and CENTERAXIS2=1216, which is intended to put the vertical center of the subarray on the zeroth order of the target spectrum. Chip 2 biases are taken at the end of the visit because the grism exposures use custom subarrays, which will not have matching biases from the WFC3 bias calibration program. For each visit we have phase constraints around the event of the planetary transit, both the orbital period of the planet and the phasing needed are placed on the target acq exposure. Many visit opportunities exist throughout the year. Using Kokori et al. 2023 orbital parameters. Recent (non-candidate) solutions all agree to within 15 minutes.					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	WASP-82	RA: 04 50 38.5588 (72.6606617d)	Proper Motion RA: -16.231 mas/yr	V=10.07	Reference Frame: ICRS
		Alt Name1: BD+01-828	Dec: +01 53 38.10 (1.89392d)	Proper Motion Dec: -18.762000081551378 mas/yr		
			Equinox: J2000	Parallax: 0.0036299"		
				Epoch of Position: 2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM. Category=STAR Description=[EXTRA-SOLAR PLANET, EXTRA-SOLAR PLANETARY SYSTEM, F3-F9]						

Proposal 18381 - WASP-82b Visit 2 (04) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G280 reference image (WFC3UVIS.im.2363695)	(2) WASP-82	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; CENTERAXIS1=2136; CENTERAXIS2=1216; SIZEAXIS1=2250; SIZEAXIS2=300	POS TARG null,-50; PHASE 0.916 TO 0.93	Sequence 1-2 Non-Int in WASP-82b Visit 2 (04)	2 Secs (2 Secs) [==>]	[1]
Comments: For the reference image ("filter acq"), saturation in 3.95 seconds. 2 seconds gives SNR of >400. The nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2, at an approximate XY position of (2048,1024). CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the target spectrum, which will be displaced from the direct image of the target, in agreement with programs 16039, 16695, and 17082. We match the subarray size of the science exposures. We use FLASH=20 to meet the nominal count level.									
2	(WFC3UVIS.sp.2363698)	(2) WASP-82	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-2 Non-Int in WASP-82b Visit 2 (04)	60 Secs X 23 (1380 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[1]
Comments: With exposure time of 60 second, we remain below 83% saturation (w/ saturation at 76.44 seconds)(with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - WASP-82b Visit 2 (04) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

3	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 3-3 Non-Int in WASP-82b Visit 2 (04)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[2]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - WASP-82b Visit 2 (04) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

4	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 4-4 Non-Int in WASP-82b Visit 2 (04)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[3]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - WASP-82b Visit 2 (04) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

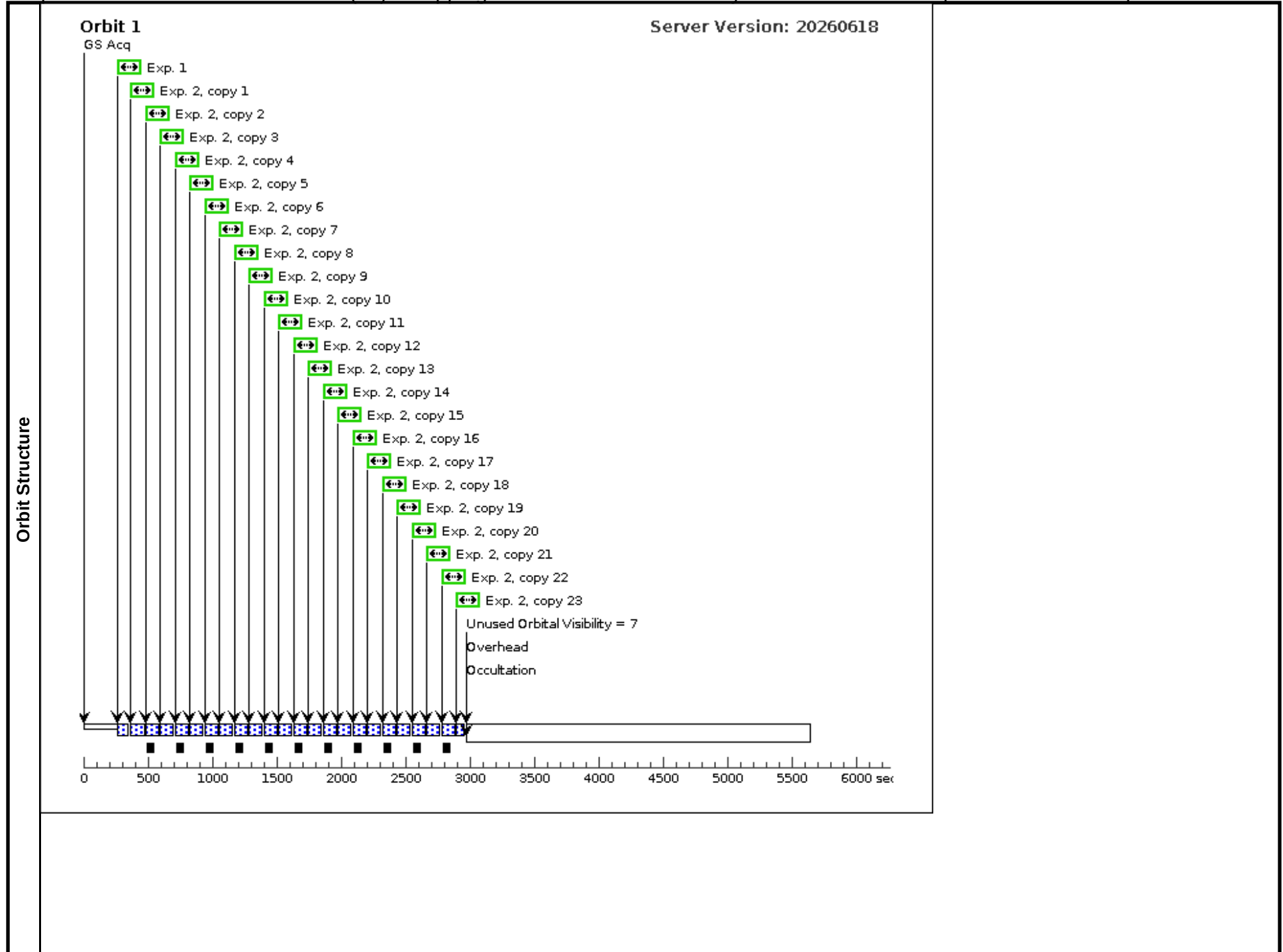
5	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 5-5 Non-Int in WASP-82b Visit 2 (04)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[4]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

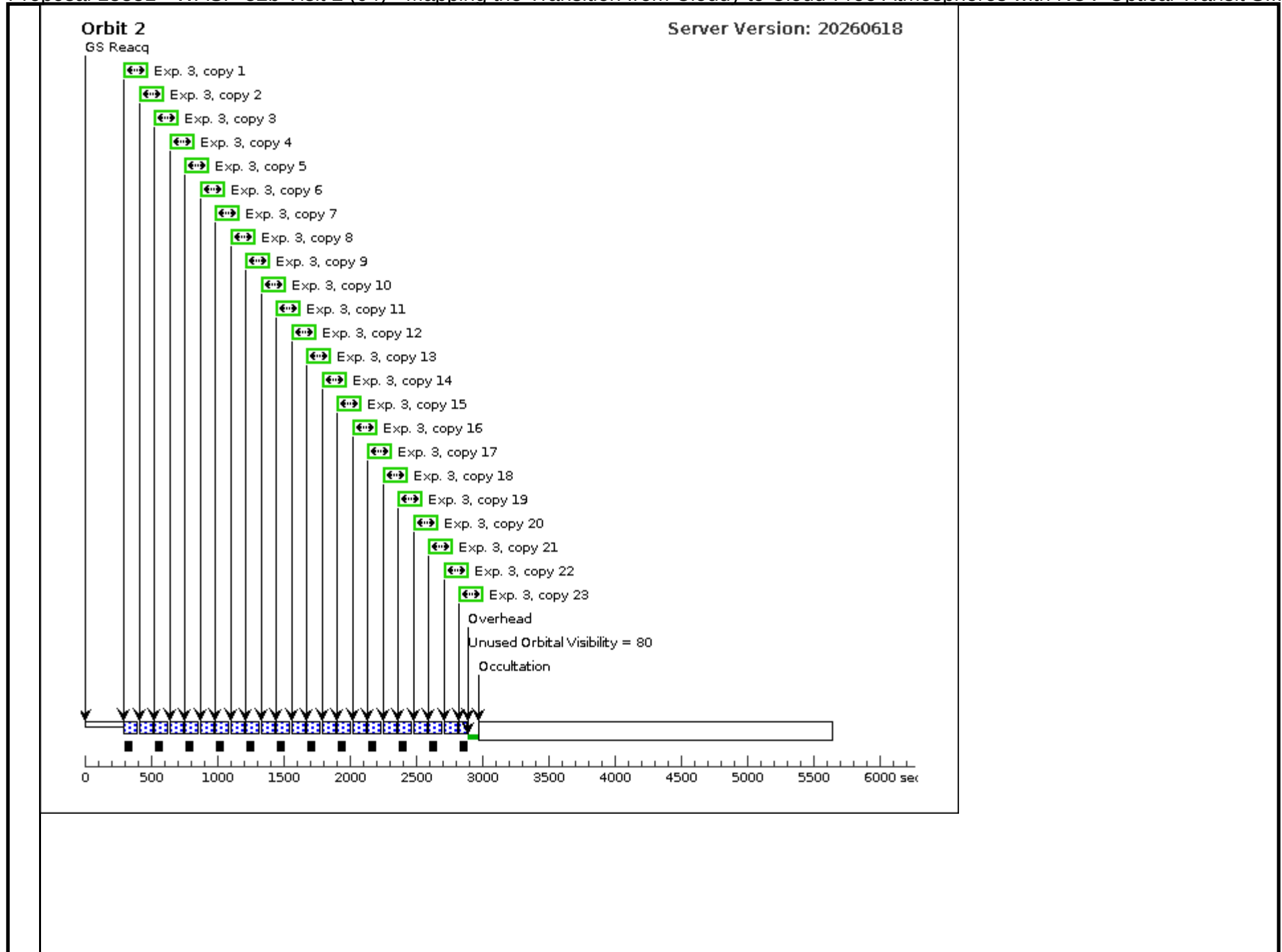
Proposal 18381 - WASP-82b Visit 2 (04) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

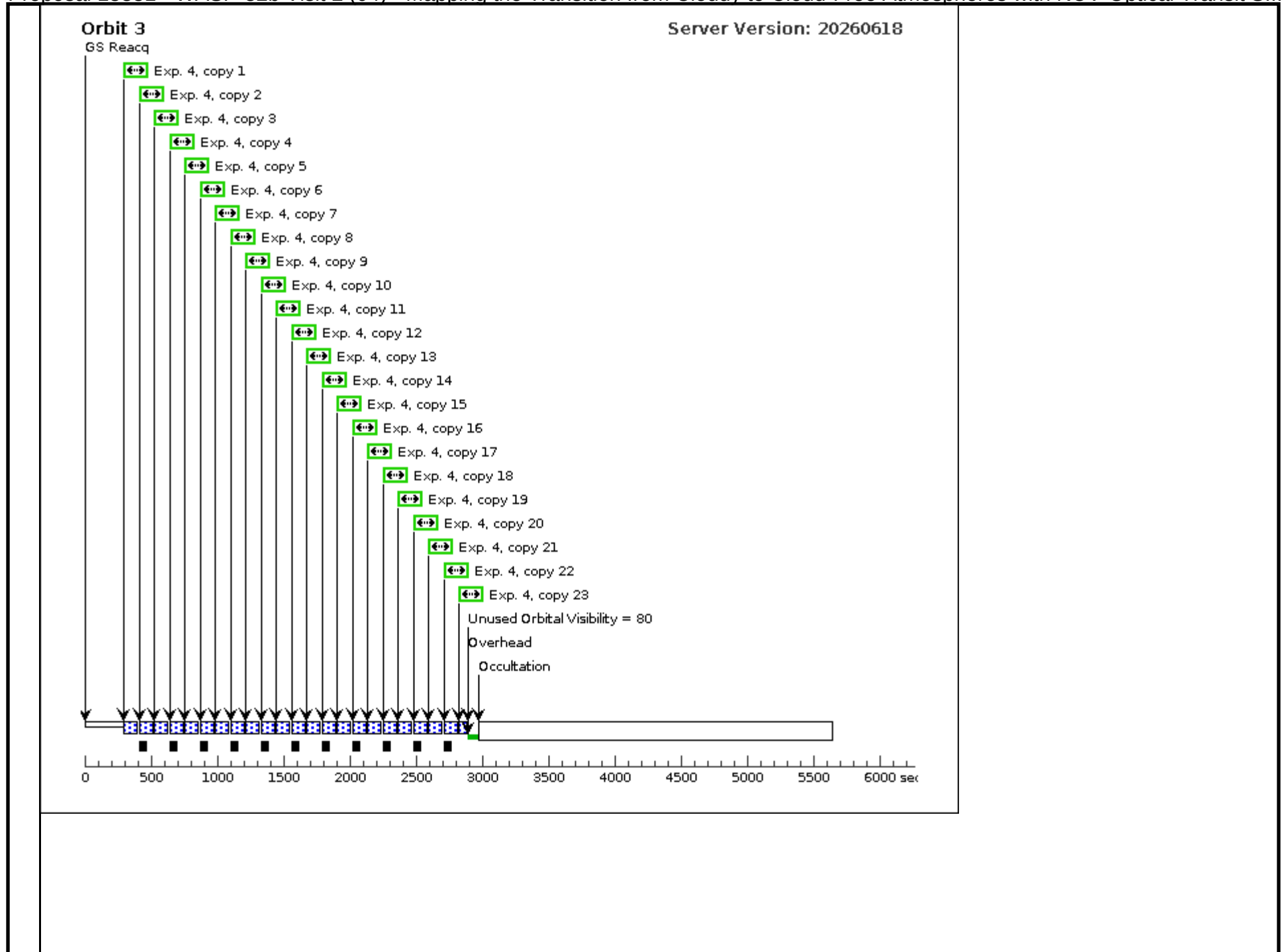
6	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 6-6 Non-Int in WASP-82b Visit 2 (04)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[5]
Comments: With exposure time of 14 second, we remain below 83% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

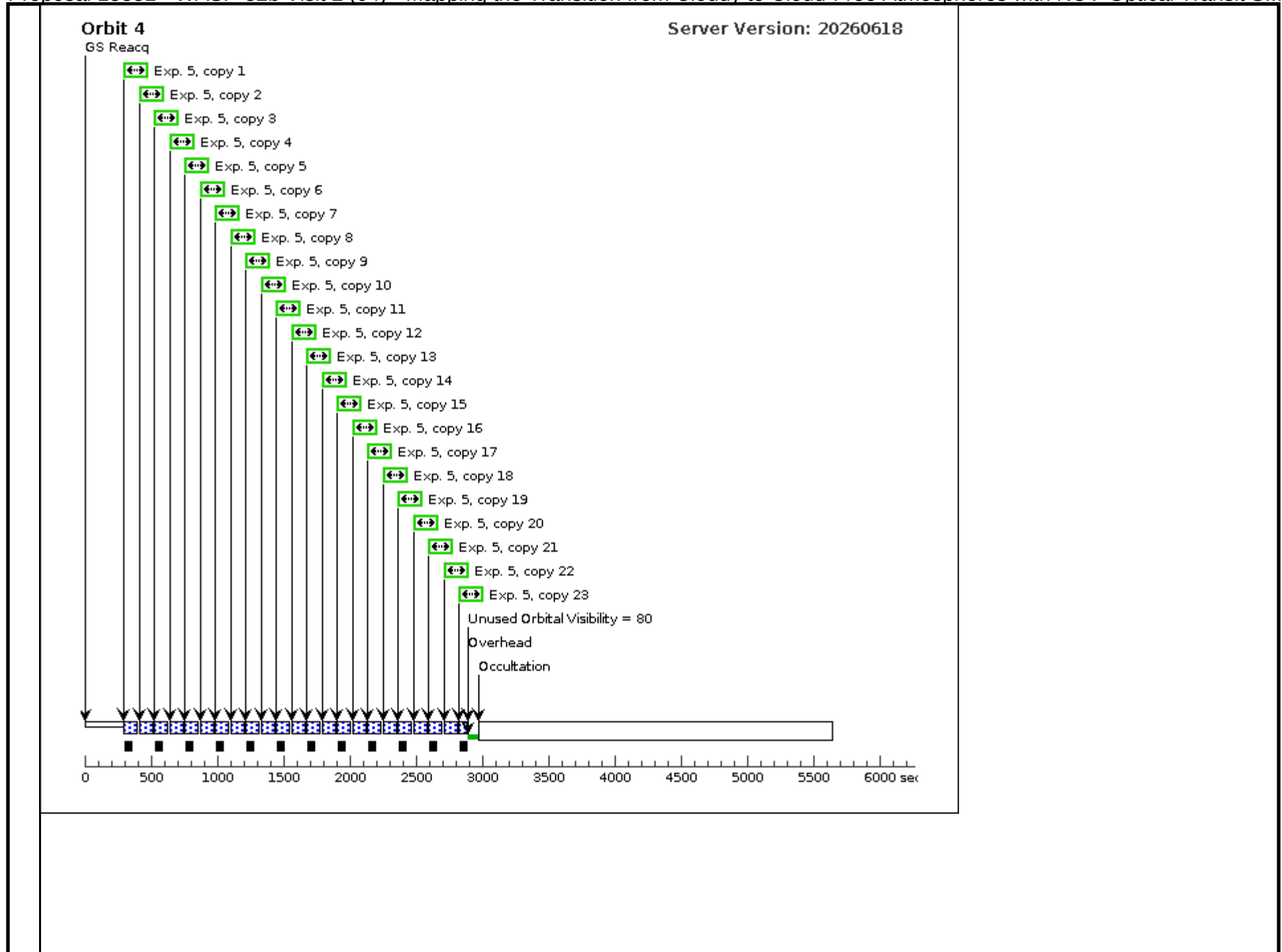
Proposal 18381 - WASP-82b Visit 2 (04) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

7	(WFC3UVI (2) WASP-82 S.sp.2363698)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=14; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 7-8 Non-Int in WASP-82b Visit 2 (04)	60 Secs X 23 (1380 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)] [==>(Copy 23)]	[6]
Comments: With exposure time of 14 second, we remain below 87% saturation (w/ saturation at 16.88 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52.6 K, which is 82.8% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 14 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								
8	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216		Sequence 7-8 Non-Int in WASP-82b Visit 2 (04)	0.0 Secs X 4 (0 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[6]
Comments: We set up the bias frames based on previously sucessful proqram 11934, 16039, and 16086 and are using the same Aperture and subarray size and position as the observations for direct calibration.								





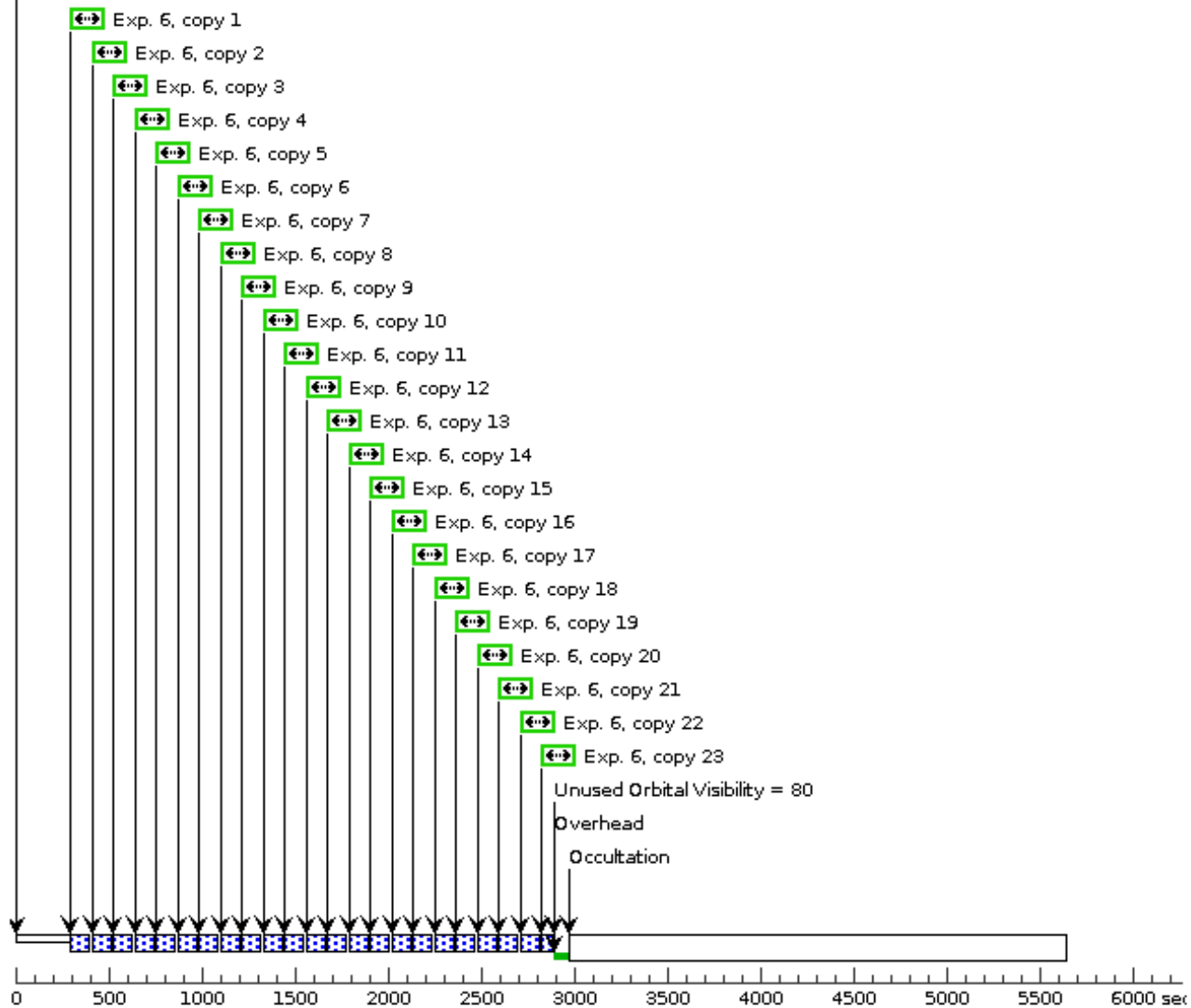


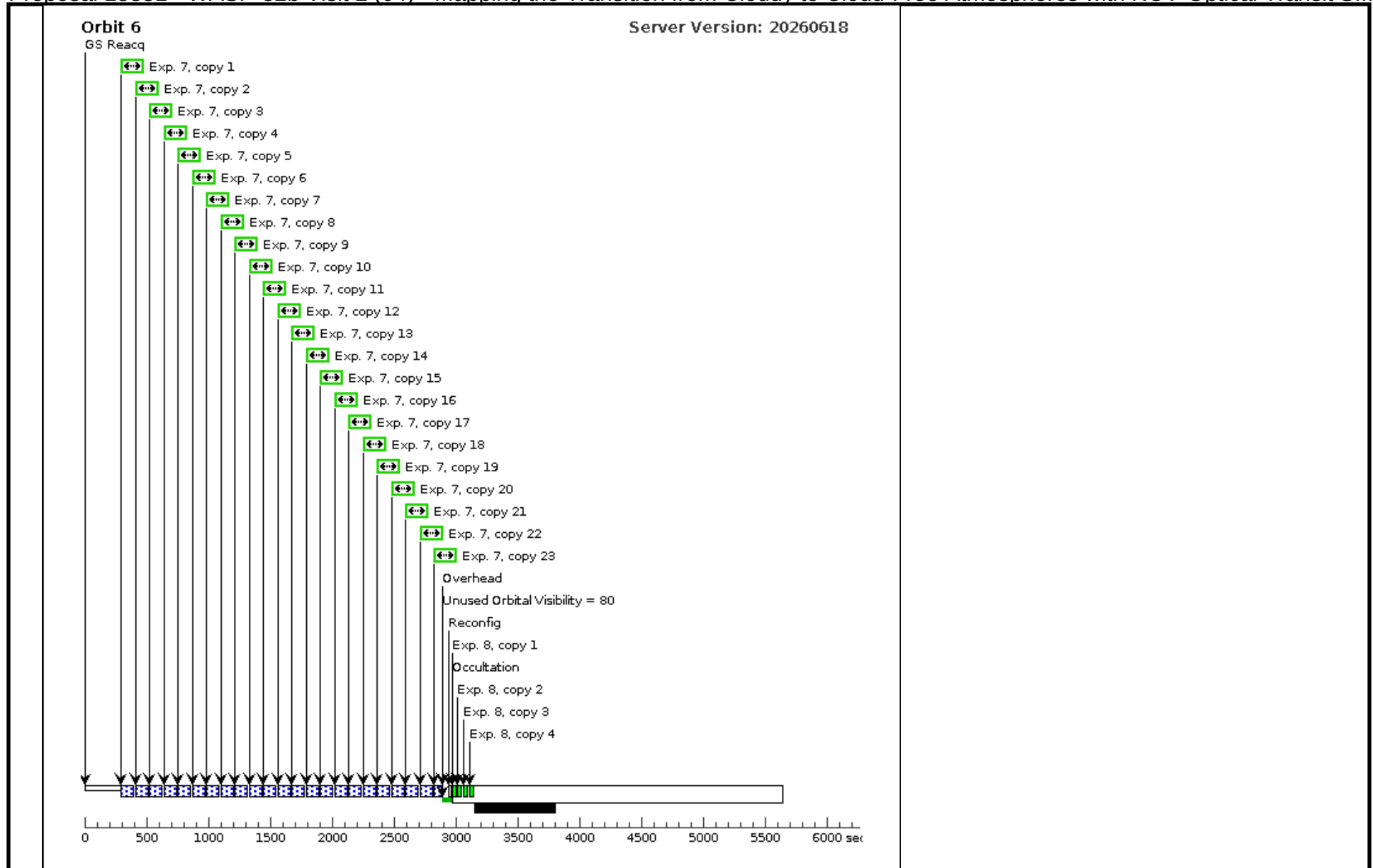


Orbit 5

Server Version: 20260618

GS Reacq





Proposal 18381 - KELT-18b Visit 1 (05) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Visit	Proposal 18381, KELT-18b Visit 1 (05)					Wed Aug 12 16:01:39 GMT 2026
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: Period 2.8716995 D AND ZERO-PHASE HJD2458676.84596					
	Comments: The optional parameters SIZEAXIS1=2250 and SIZEAXIS2=300 are used for all exposures to minimize the read out time and optimize the duty cycle. This is fine for the data that needs to be obtained because the spectrum will occupy only a narrow swath of pixel rows within the field. This also requires the use of optional parameters CENTERAXIS1 and CENTERAXIS2 in order to "steer" the location of the subarray readout so that it is centered on the target spectrum. We hardwire CENTERAXIS1=2136 and CENTERAXIS2=1216, which is intended to put the vertical center of the subarray on the zeroth order of the target spectrum. Chip 2 biases are taken at the end of the visit because the grism exposures use custom subarrays, which will not have matching biases from the WFC3 bias calibration program. For each visit we have phase constraints around the event of the planetary transit, both the orbital period of the planet and the phasing needed are placed on the target acq exposure. Many visit opportunities exist throughout the year. Using Kokori et al. 2023 ephemeris, which agrees with all others to within a couple minutes.					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(3)	KELT-18	RA: 14 26 5.7571 (216.5239879d)	Proper Motion RA: -19.27 mas/yr	V=10.16	Reference Frame: ICRS
		Alt Name1: BD+60-1538	Dec: +59 26 39.29 (59.44425d)	Proper Motion Dec: 6.124 mas/yr		
			Equinox: J2000	Parallax: 0.0031607"		
				Epoch of Position: 2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM. Category=STAR Description=[EXTRA-SOLAR PLANET, EXTRA-SOLAR PLANETARY SYSTEM, F3-F9]						

Proposal 18381 - KELT-18b Visit 1 (05) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	G280 reference image (WFC3UVI S.im.2363704)	(3) KELT-18	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; CENTERAXIS1=2136; CENTERAXIS2=1216; SIZEAXIS1=2250; SIZEAXIS2=300	POS TARG null,-50; PHASE 0.92 TO 0.930	Sequence 1-2 Non-Int in KELT-18b Visit 1 (05)	2 Secs (2 Secs) [==>]	[1]
Comments: For the reference image ("filter acq"), saturation in 4.46 seconds. 2 seconds gives SNR of >380. The nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2, at an approximate XY position of (2048,1024). CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the target spectrum, which will be displaced from the direct image of the target, in agreement with programs 16039, 16695, and 17082. We match the subarray size of the science exposures. We use FLASH=20 to meet the nominal count level.									
2	(WFC3UVI S.sp.2363711)	(3) KELT-18	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-2 Non-Int in KELT-18b Visit 1 (05)	66 Secs X 21 (1386 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)]	[1]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - KELT-18b Visit 1 (05) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

3	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 3-3 Non-Int in KELT-18b Visit 1 (05)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[2]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - KELT-18b Visit 1 (05) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

4	(WFC3UVI S.sp.236371 1)	(3) KELT-18	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 4-4 Non-Int in KELT-18b Visit 1 (05)	66 Secs X 22 (1452 Secs)	
								[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[3]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - KELT-18b Visit 1 (05) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

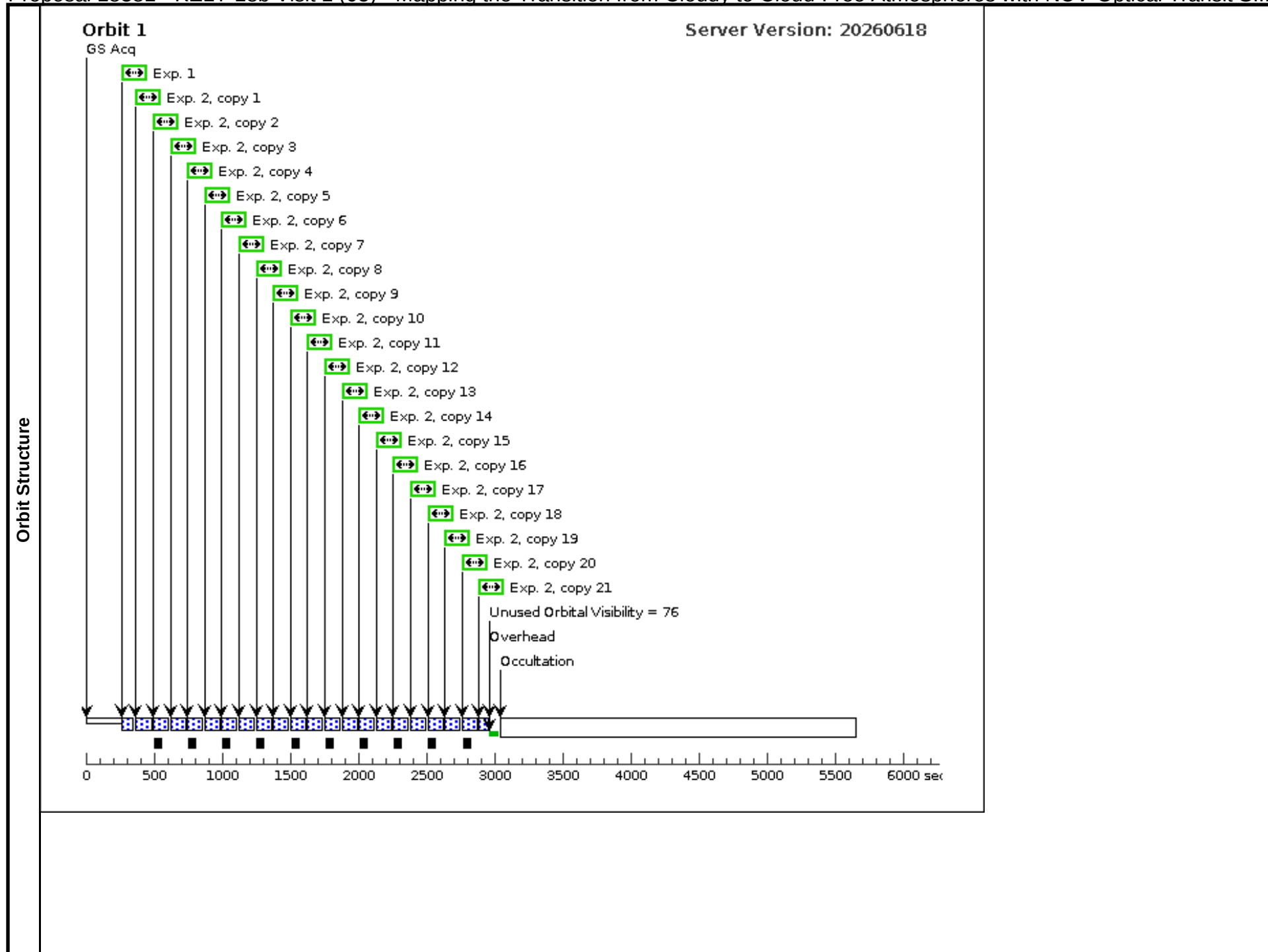
5	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 5-5 Non-Int in KELT-18b Visit 1 (05)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[4]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

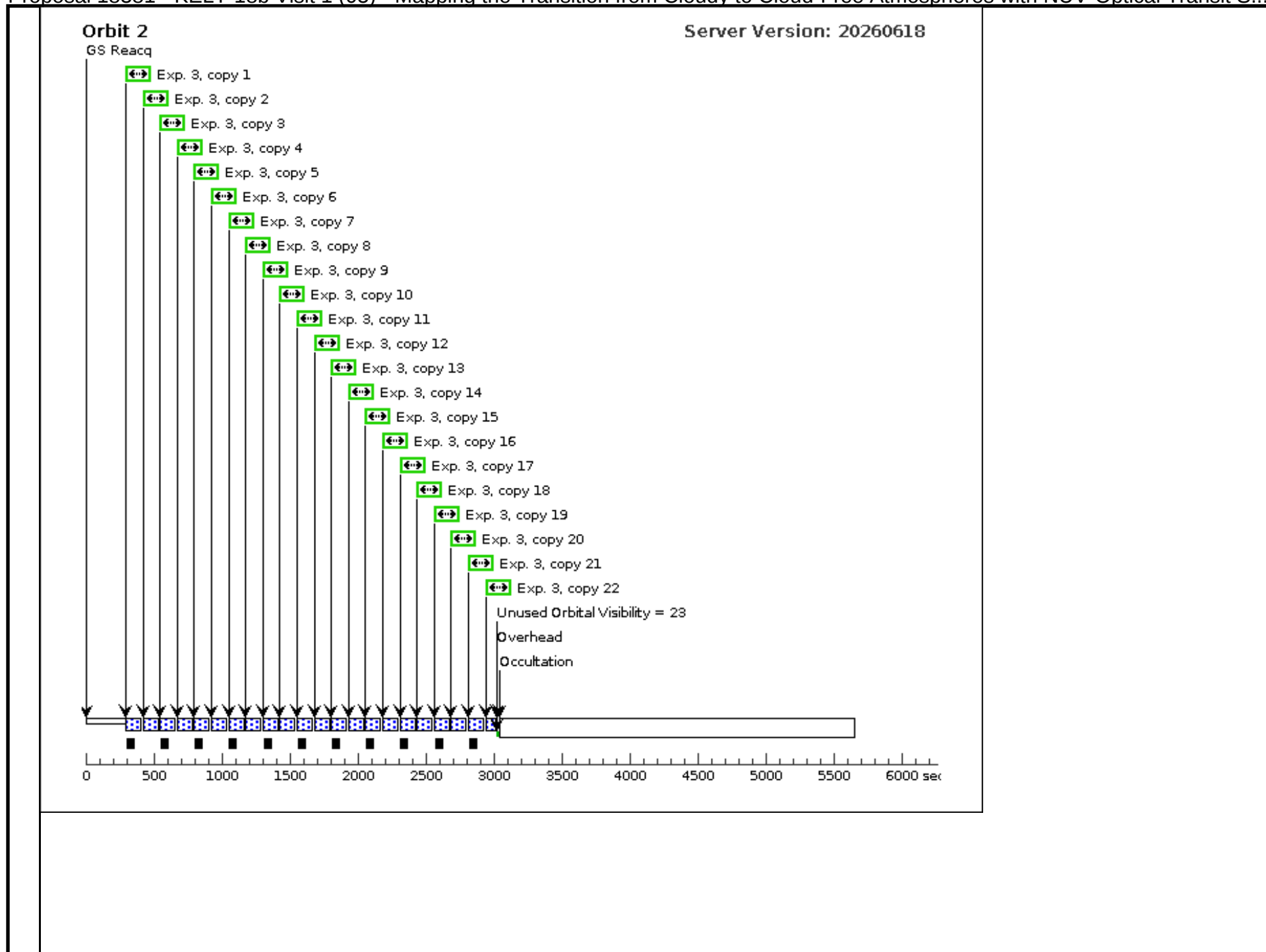
Proposal 18381 - KELT-18b Visit 1 (05) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

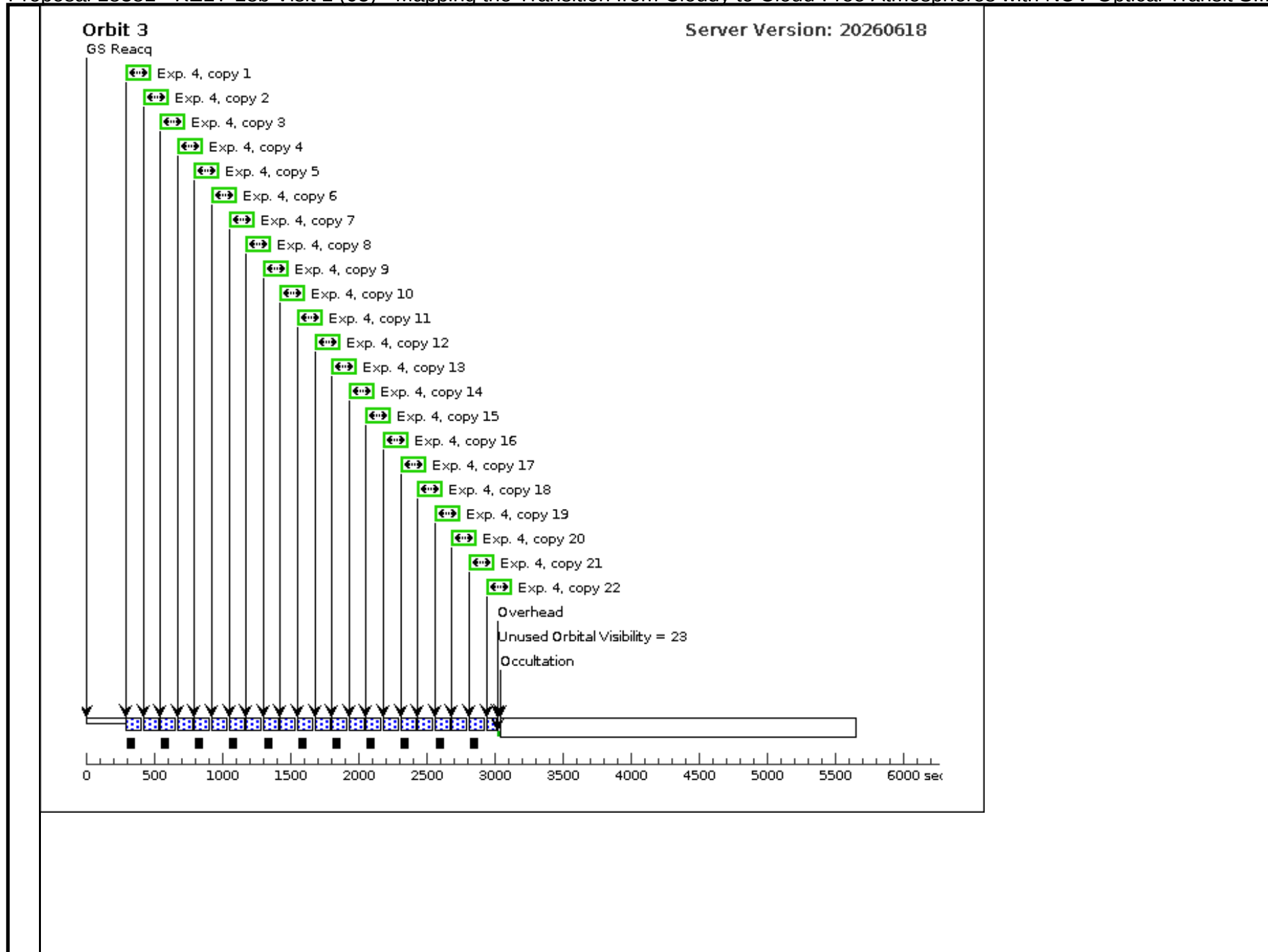
6	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 6-6 Non-Int in KELT-18b Visit 1 (05)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[5]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

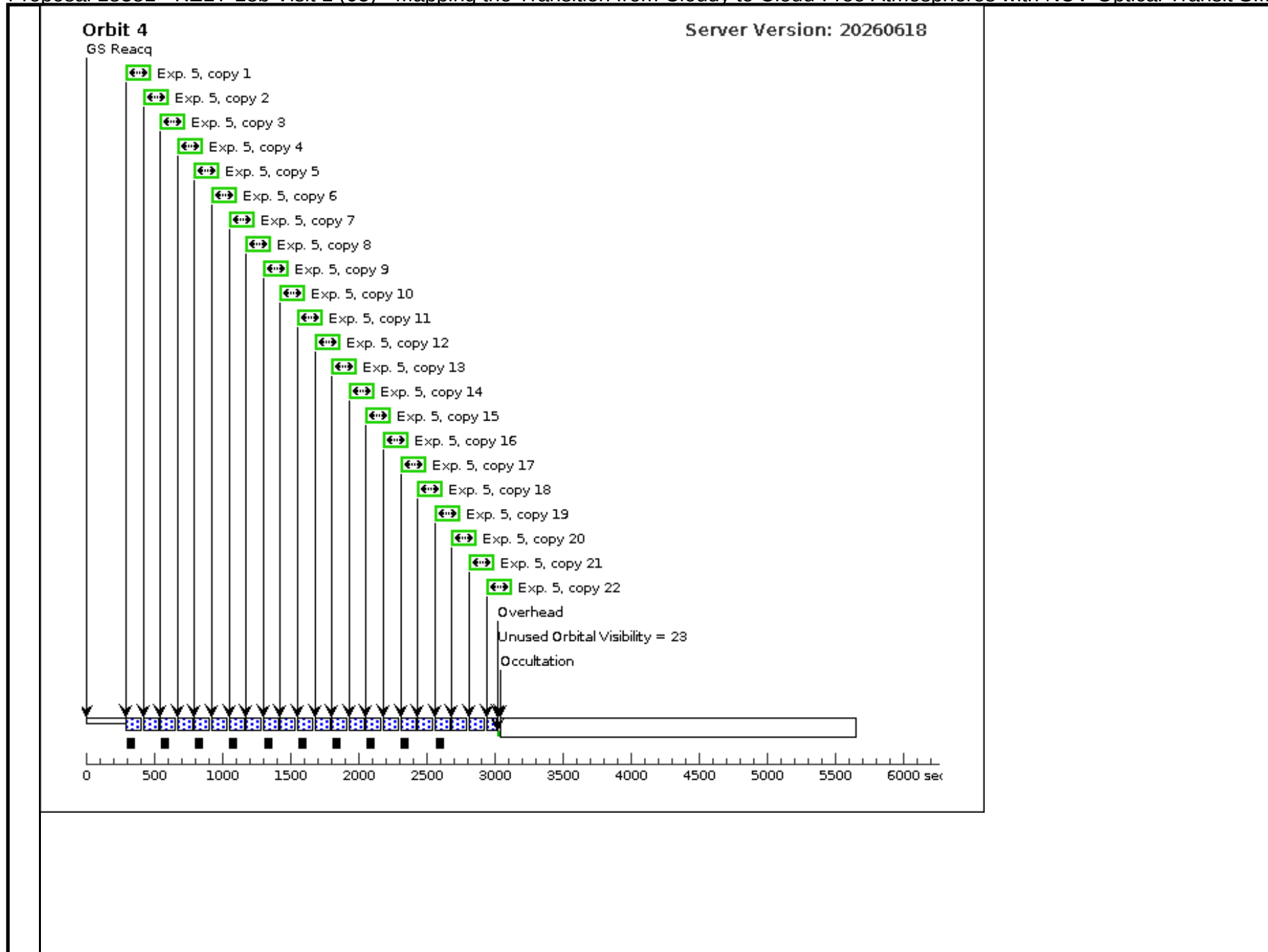
Proposal 18381 - KELT-18b Visit 1 (05) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

7	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 7-8 Non-Int in KELT-18b Visit 1 (05)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[6]
Comments: With exposure time of 66 second, we remain below 87% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								
8	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216		Sequence 7-8 Non-Int in KELT-18b Visit 1 (05)	0.0 Secs X 4 (0 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[6]
Comments: We set up the bias frames based on previously sucessful proqram 11934, 16039, and 16086 and are using the same Aperture and subarray size and position as the observations for direct calibration.								





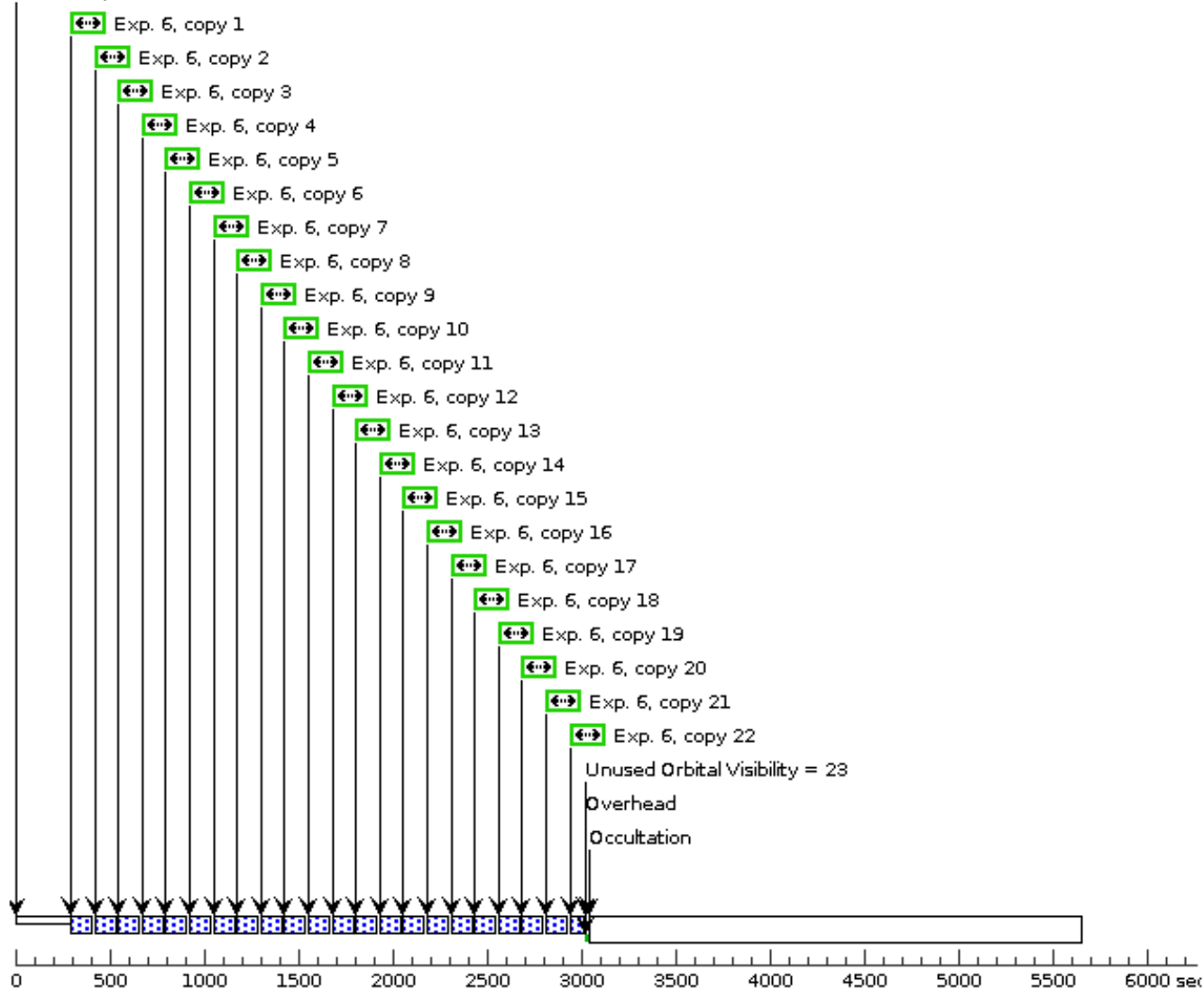


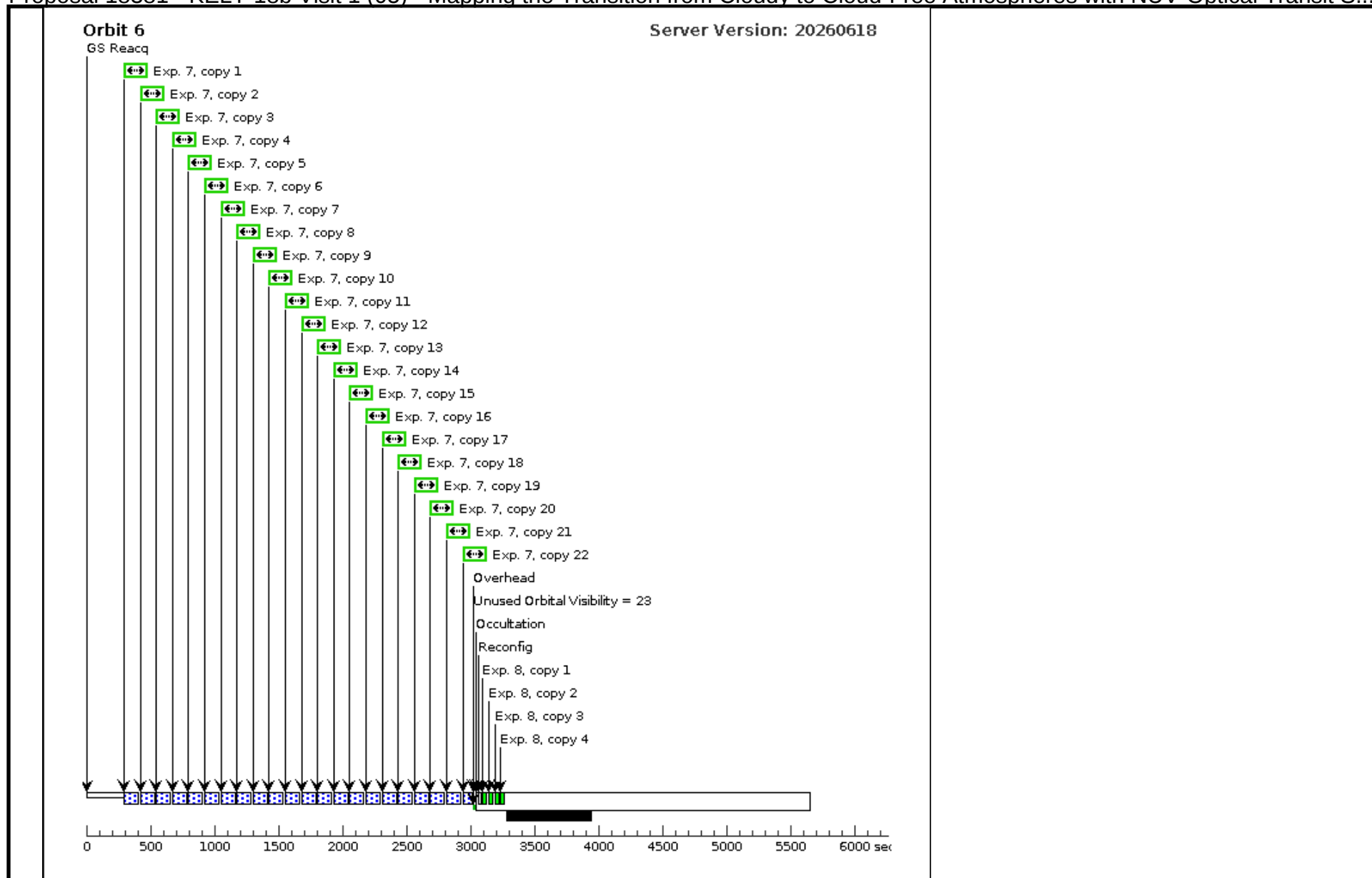


Orbit 5

Server Version: 20260618

GS Reacq





Proposal 18381 - KELT-18b Visit 2 (06) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Visit	Proposal 18381, KELT-18b Visit 2 (06)					Wed Aug 12 16:01:40 GMT 2026
	Diagnostic Status: No Diagnostics					
	Scientific Instruments: WFC3/UVIS					
	Special Requirements: Period 2.8716995 D AND ZERO-PHASE HJD2458676.84596					
	Comments: The optional parameters SIZEAXIS1=2250 and SIZEAXIS2=300 are used for all exposures to minimize the read out time and optimize the duty cycle. This is fine for the data that needs to be obtained because the spectrum will occupy only a narrow swath of pixel rows within the field. This also requires the use of optional parameters CENTERAXIS1 and CENTERAXIS2 in order to "steer" the location of the subarray readout so that it is centered on the target spectrum. We hardwire CENTERAXIS1=2136 and CENTERAXIS2=1216, which is intended to put the vertical center of the subarray on the zeroth order of the target spectrum. Chip 2 biases are taken at the end of the visit because the grism exposures use custom subarrays, which will not have matching biases from the WFC3 bias calibration program. For each visit we have phase constraints around the event of the planetary transit, both the orbital period of the planet and the phasing needed are placed on the target acq exposure. Many visit opportunities exist throughout the year. Using Kokori et al. 2023 ephemeris, which agrees with all others to within a couple minutes.					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(3)	KELT-18	RA: 14 26 5.7571 (216.5239879d)	Proper Motion RA: -19.27 mas/yr	V=10.16	Reference Frame: ICRS
		Alt Name1: BD+60-1538	Dec: +59 26 39.29 (59.44425d)	Proper Motion Dec: 6.124 mas/yr		
			Equinox: J2000	Parallax: 0.0031607"		
				Epoch of Position: 2000		
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. SIMBAD listed proper motion for this target. When retrieving targets with PM from SIMBAD, APT requests the coordinates be calculated with an epoch of the year 2000. Do not modify this epoch. Always review coordinates using the Target Confirmation tool, which graphically displays the PM. Category=STAR Description=[EXTRA-SOLAR PLANET, EXTRA-SOLAR PLANETARY SYSTEM, F3-F9]						

Proposal 18381 - KELT-18b Visit 2 (06) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	G280 reference image (WFC3UVIS.im.2363704)	(3) KELT-18	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; CENTERAXIS1=2136; CENTERAXIS2=1216; SIZEAXIS1=2250; SIZEAXIS2=300	POS TARG null,-50; PHASE 0.92 TO 0.93	Sequence 1-2 Non-Int in KELT-18b Visit 2 (06)	2 Secs (2 Secs) [==>]	[1]
	Comments: For the reference image ("filter acq"), saturation in 4.46 seconds. 2 seconds gives SNR of >380.									
	The nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2, at an approximate XY position of (2048,1024).									
	CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the target spectrum, which will be displaced from the direct image of the target, in agreement with programs 16039, 16695, and 17082. We match the subarray size of the science exposures.									
	We use FLASH=20 to meet the nominal count level.									
	2	(WFC3UVIS.sp.2363711)	(3) KELT-18	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-2 Non-Int in KELT-18b Visit 2 (06)	66 Secs X 21 (1386 Secs) [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)]	[1]
	Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06.									
	We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series...									
	Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2.									
	SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.									

Proposal 18381 - KELT-18b Visit 2 (06) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

3	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 3-3 Non-Int in KELT-18b Visit 2 (06)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[2]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - KELT-18b Visit 2 (06) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

4	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 4-4 Non-In t in KELT-18b Visit 2 (06)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[3]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

Proposal 18381 - KELT-18b Visit 2 (06) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

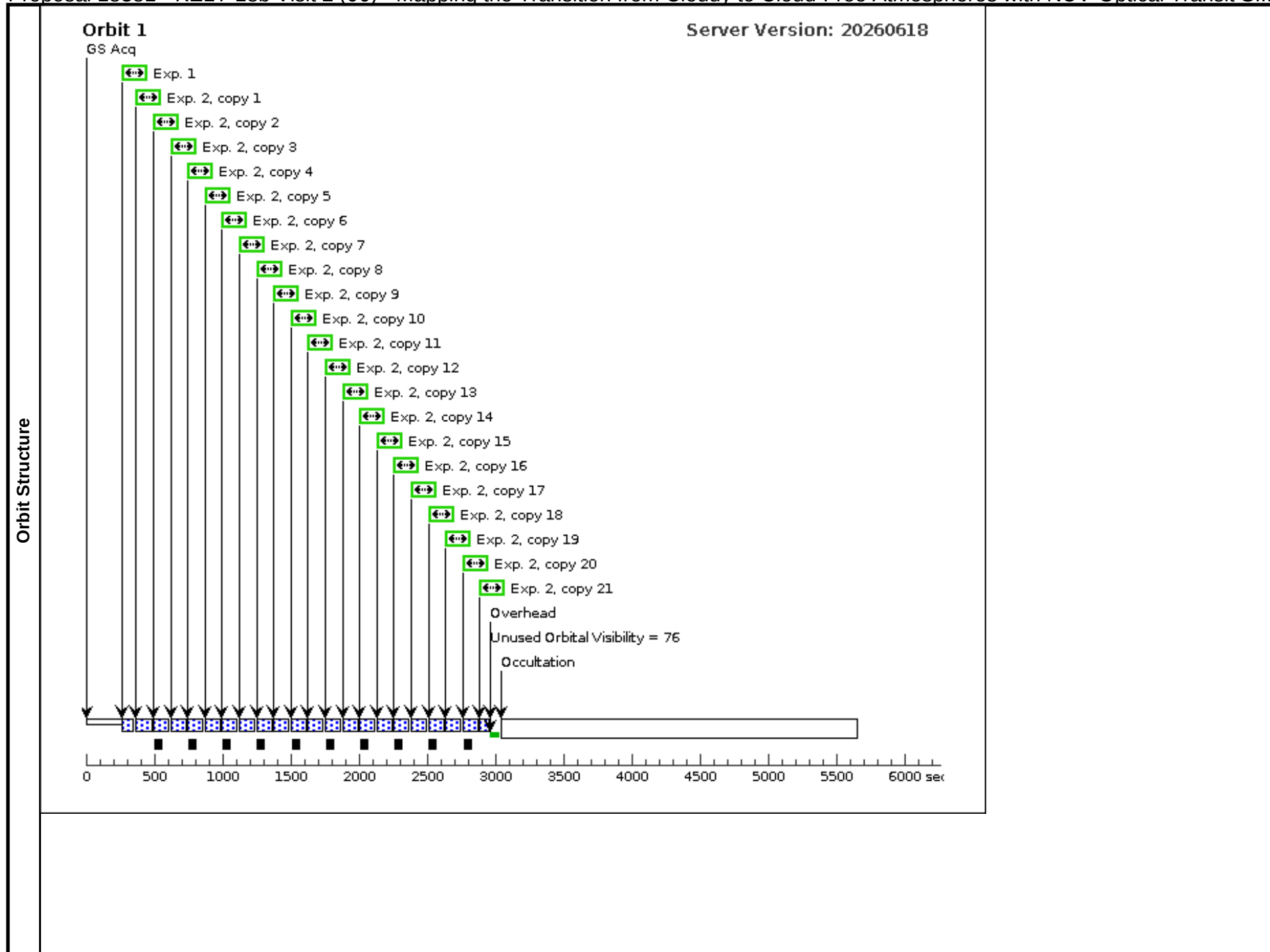
5	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 5-5 Non-Int in KELT-18b Visit 2 (06)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[4]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

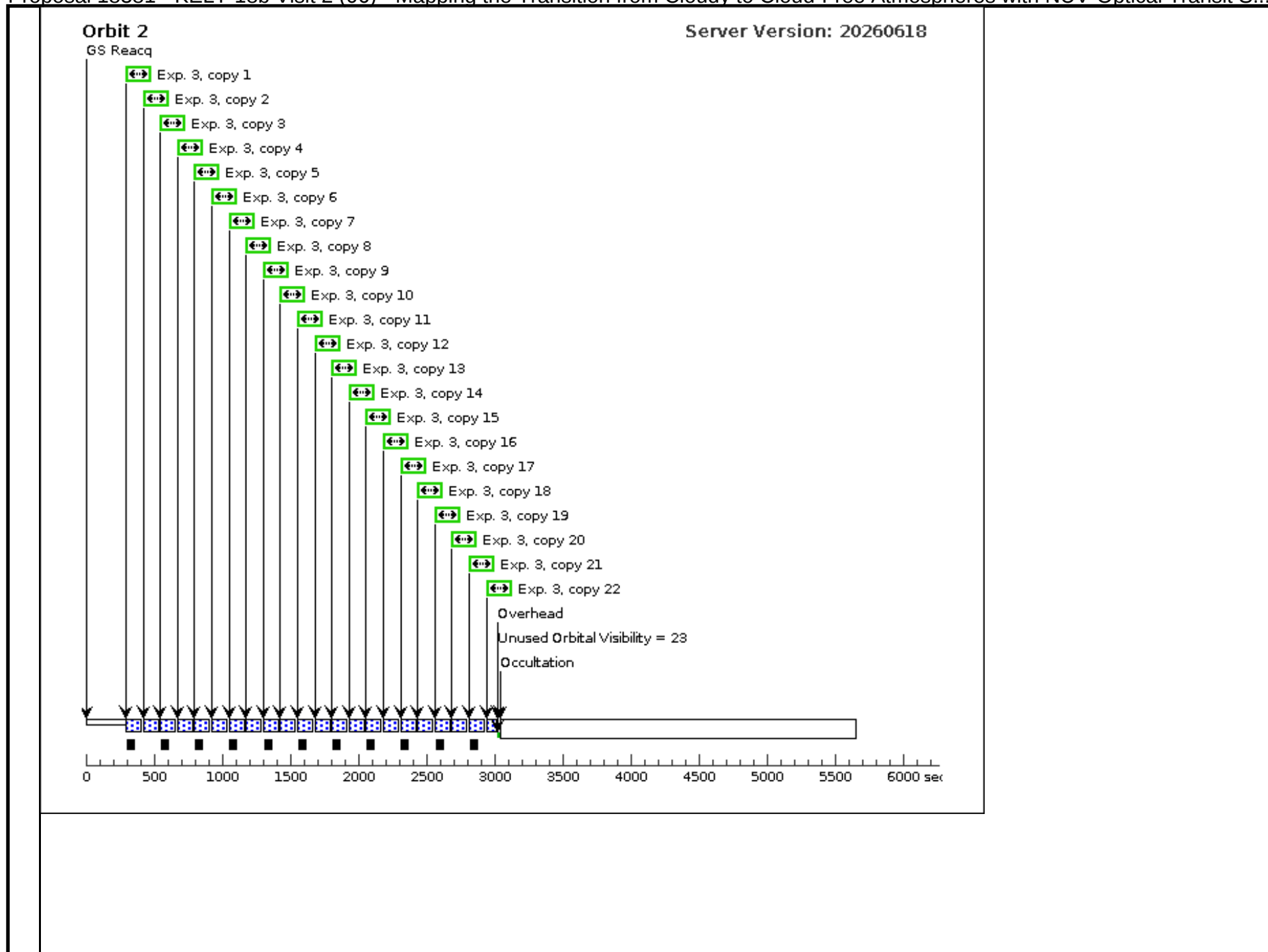
Proposal 18381 - KELT-18b Visit 2 (06) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

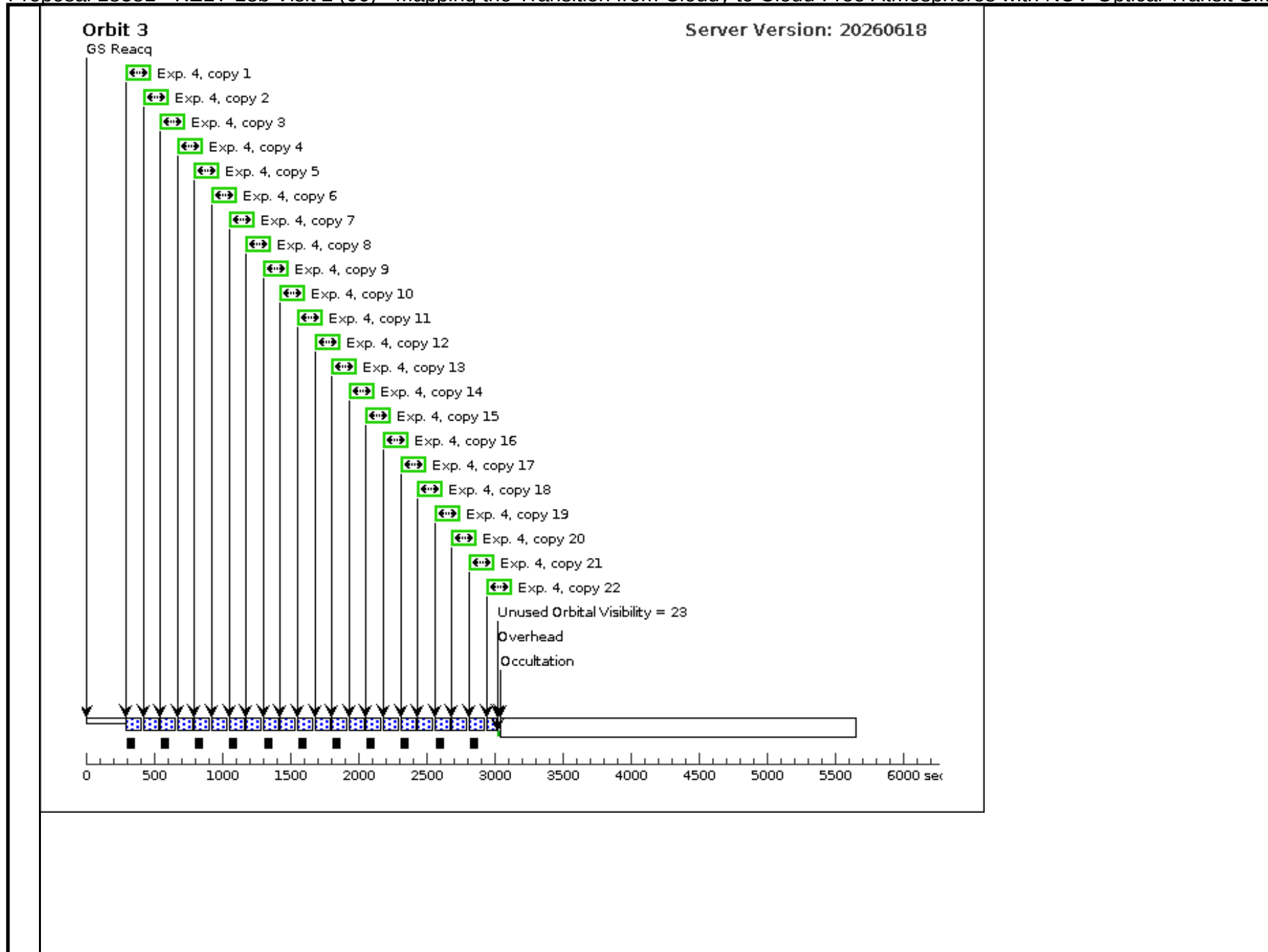
6	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 6-6 Non-Int in KELT-18b Visit 2 (06)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[5]
Comments: With exposure time of 66 second, we remain below 83% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								

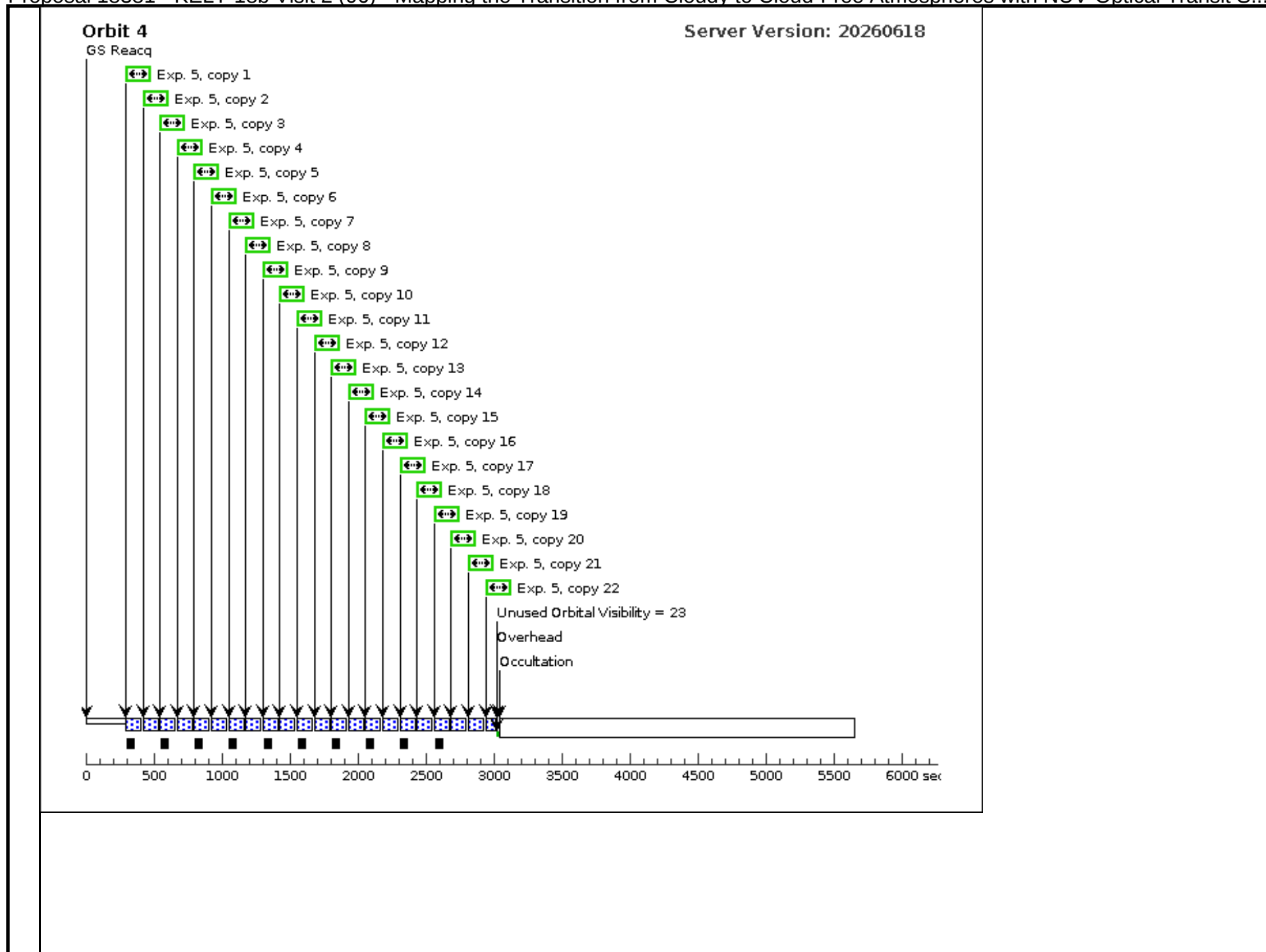
Proposal 18381 - KELT-18b Visit 2 (06) - Mapping the Transition from Cloudy to Cloud-Free Atmospheres with NUV-Optical Transit S...

7	(WFC3UVI (3) KELT-18 S.sp.236371 1)	WFC3/UVIS, ACCUM, UVIS	G280	FLASH=13; SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16	POS TARG null,-50	Sequence 7-8 Non-In t in KELT-18b Visit 2 (06)	66 Secs X 22 (1452 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)] [==>(Copy 7)] [==>(Copy 8)] [==>(Copy 9)] [==>(Copy 10)] [==>(Copy 11)] [==>(Copy 12)] [==>(Copy 13)] [==>(Copy 14)] [==>(Copy 15)] [==>(Copy 16)] [==>(Copy 17)] [==>(Copy 18)] [==>(Copy 19)] [==>(Copy 20)] [==>(Copy 21)] [==>(Copy 22)]	[6]
Comments: With exposure time of 66 second, we remain below 87% saturation (w/ saturation at 86.4 seconds) (with a maximum SNR of about 700 at about 4000 Angstrom). Our brightest pixel is expected to be ~52K, which is ~82% of the lowest full-well depth from ISR WFC3 2025-06. We also add a FLASH of 13 to improve CTE. Combined with the high flux from the object, we're not too worried about CTE, but FLASH could be increased at the expense of fewer exposures in the time series... Nominal "UVIS" aperture is ~10" above the chip gap on chip 1; a Y-postarg of about -50" places the target near the center of subarray on chip 2. SIZEAXIS1=2250 and SIZEAXIS2=300 are used to minimize readout times, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574, 15288, 16086, 17082.								
8	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=300; CENTERAXIS1=21 36; CENTERAXIS2=12 16		Sequence 7-8 Non-In t in KELT-18b Visit 2 (06)	0.0 Secs X 4 (0 Secs)	
							[==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)]	[6]
Comments: We set up the bias frames based on previously sucessful proqram 11934, 16039, and 16086 and are using the same Aperture and subarray size and position as the observations for direct calibration.								









Orbit 5

Server Version: 20260618

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