17943 - Accelerating Our Models of Stellar Flare Particles

Cycle: 33, Proposal Category: GO

(Availability Mode: AVAILABLE)

INVESTIGATORS

Name	*Institution*
Dr. Isaiah I. Tristan (PI) (Contact)	**University of Colorado at Boulder**
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Dr. Yuta Notsu (CoI)	University of Colorado at Boulder

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-YZ-CMI BIAS	WFC3/UVIS	3	27-Aug-2025 11:00:14.0	yes
02	(1) V-YZ-CMI BIAS	WFC3/UVIS	3	27-Aug-2025 11:00:17.0	yes
03	(1) V-YZ-CMI BIAS	WFC3/UVIS	3	27-Aug-2025 11:00:19.0	yes
04	(1) V-YZ-CMI BIAS	WFC3/UVIS	3	27-Aug-2025 11:00:21.0	yes

12 Total Orbits Used

ABSTRACT

M-dwarf flares exhibit strong responses in the X-ray, ultraviolet (UV), and visible, and radio regimes, and these various emissions may affect the atmospheres and habitability of exoplanets. Our understanding of these energetic events is hampered by the limited amount of spectral and multi-

wavelength observations than can be used to constrain their underlying energetics and extrapolations from solar models. We request for high-frequency radio data to probe the gyrosynchrotron radiation from flares in the optically thin part of the spectrum. This will allow us to constrain the initial electron beam energetics parameter space, which will be compared to current M-dwarf flaring models. For example, a recent HST NUV study has exemplified that extreme electron beams can reproduce NUV+optical M-dwarf flaring spectra using radiative-hydrodynamic models. However, this study lacked simultaneous radio data that probes the action of accelerated electrons needed to confirm these extreme estimates. We propose for a self-contained, comprehensive multi-wavelength dataset to follow-up on and expand these findings. This campaign will connect observational parameters to flaring models, explore justifications between wavelength extrapolations, and build pathways for modeling archival flares (depending on flaring degeneracies). This work will improve habitability estimates for M-dwarfs and provide flaring rates/models/priors for future campaigns.

OBSERVING DESCRIPTION

This goal of this project is to study M-dwarf flares with simultaneous high-frequency radio data, X-ray photometry/spectroscopy, and UV/optical spectroscopy. We choose YZ Cmi (M4.5Ve) as our target due to its high flaring rate from Kepler and TESS and lack of planets that may complicate light curve interpretation. YZ CMi is observable simultaneously by the VLA, HST, and XMM-Newton between October 02, 2025 and November 09, 2025, which sets our windows for HST visits.

This program will use the WFC3/UVIS G280 grism of HST. Using the low-resolution spectra, we will be able to determine changes in the continuum emission between the quiescent emission and different flaring events. To this end, a exposure time of 45s is chosen to achieve a high SNR while still allowing for time-resolved spectral changes to be captured. A subarray setup is used based on Proposal 16039 (and previously 13574 and 15288) to minimize the data used and maximize on-source monitoring. We plan for a reference image with the F467M spectral element, which has a higher SNR for M-dwarf spectra than F300X and used in Proposal 16039. However, a reference image with the F300X filter is also taken as a backup, as it is recommended under Section 8.2 of the WFC3 Instrument Handbook.

Four visits of three orbits are planned to occur simultaneously with the VLA observations, which will have 4 observing blocks of 5 hours each. Continuous orbits are necessary to monitor for flares and observe their full evolution when they occur, which can span from minutes to hours in the UV/optical bands. The high-frequency radio observations are very weather-dependent, thus HST observations are requested to be planned a few days in advance (Disruptive) based on the forecast at the VLA.

Visit

Proposal 17943, YZ CMi vis1 (01), implementation Wed Aug 27 15:00:22 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SCHED 100%; BETWEEN 2025.275:10 AND 2025.275:11

Comments: We set the field center location on chip 2 as recommended in the proposal guide on WFC3/UVIS G280. As in Proposal 16039, the optional parameters SIZEAXIS1=2250 and SIZEAXIS2=590 are used for all exposures to minimize data volume. This allows for parallel WFC3 Buffer Dumps in order to maximize on-source time. The spectrum of YZ CMi should be similar to LTT1445A from Proposal 16039, meaning it will only use a narrow swatch of pixel rows in the field and that these options are valid for the data output. The optional parameters CENTERAXIS1=2136 and CENTERAXIS2=1216 are then used to change the vertical center of the subarray on the zeroth order of the target spectrum. While centering on the target would be typical when positioning on chip 1, this would cause the subarray to extend into the chip gap when the field center location is on chip 2.

Biases are taken at the end of each visit, as the exposures use custom subarrays. These will not have matching biases from the standard WFC3 bias calibration program.

Observations should be simultaneous with VLA observations.

Diagnostics

(YZ CMi vis1 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(YZ CMi vis1 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-YZ-CMI	RA: 07 44 40.1723 (116.1673846d)	Proper Motion RA: -347.782 mas/yr	V=11.225	Reference Frame: ICRS
	Alt Name1: G-285	Dec: +03 33 8.88 (3.55247d)	Proper Motion Dec: -445.70199997906457 mas/yr	U=13.761	
	Alt Name2: GAIA-DR3-3136952686035250688	Equinox: J2000	Parallax: 0.1669769"		
			Epoch of Position: 2000		
			Radial Velocity: 26.66 km/sec		

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=[M V-IV]

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 (F467M) (WFC3UVIS.im.2020175)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F467M	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis1 (01)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

We use FLASH=20 for our CTE mitigation strategy during this observation.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G280 reference image (F300X) (WFC3UVIS.im.2020327)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis1 (01)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

We use FLASH=20 is used based on ETC recommendations.

3	YZ CMi, orb1, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis1 (01)	40 Secs X 19 (760 Secs)		
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Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

4	YZ CMi, orb2, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 4-4 Non-Int in YZ CMi vis1 (01)	40 Secs X 21 (840 Secs)		
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								[==>(Copy 21)]		

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

5	YZ CMi, orb3, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 5-6 Non-Int in YZ CMi vis1 (01)	40 Secs X 21 (840 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)]*	***[3]***

Comments: 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.

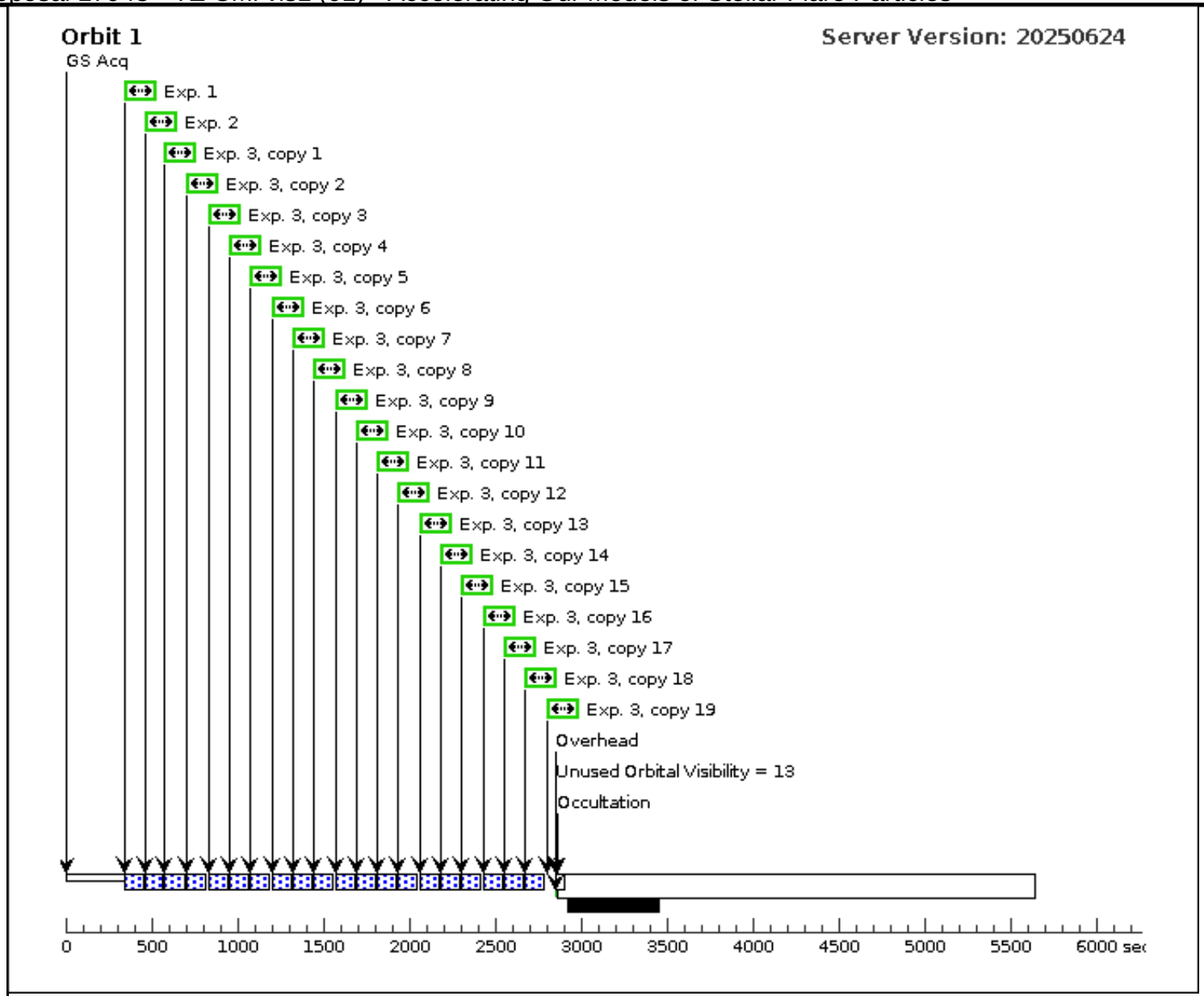
SIZEAXIS1=2250 and SIZEAXIS2=590 are used to minimize data volume, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

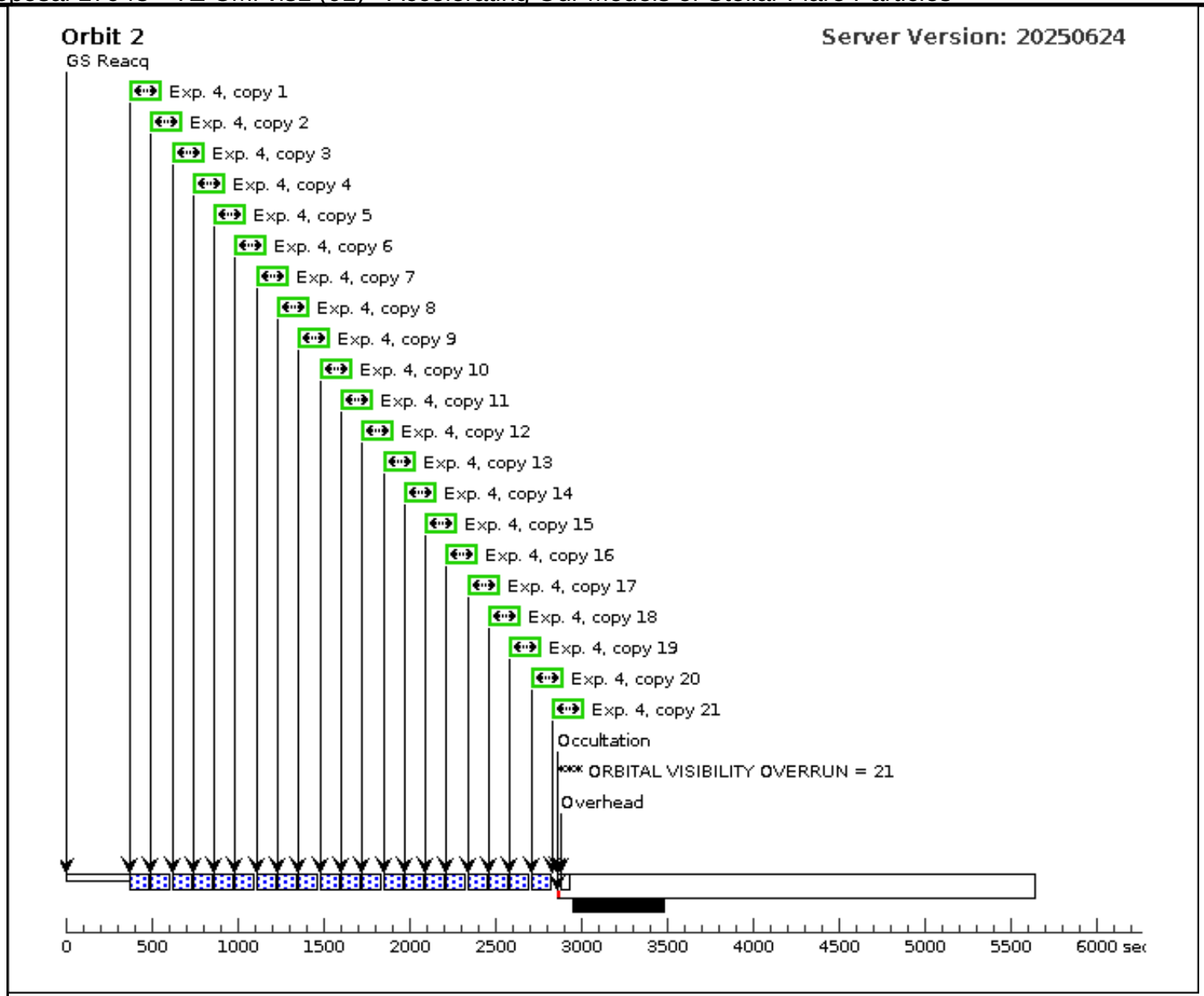
Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

6	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216		Sequence 5-6 Non-Int in YZ CMi vis1 (01)	0.0 Secs X 4 (0 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]* *[==>(Copy 3)]* *[==>(Copy 4)]*	***[3]***

Comments: Bias frames based on previous, successful Proposals 11934 and 16039. These use the same sizeaxis and centeraxis as the observations for direct calibration.

Orbit Structure




Orbit 2
Server Version: 20250624
GS Reacq
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Exp. 4, copy 2
Exp. 4, copy 3
Exp. 4, copy 4
Exp. 4, copy 5
Exp. 4, copy 6
Exp. 4, copy 7
Exp. 4, copy 8
Exp. 4, copy 9
Exp. 4, copy 10
Exp. 4, copy 11
Exp. 4, copy 12
Exp. 4, copy 13
Exp. 4, copy 14
Exp. 4, copy 15
Exp. 4, copy 16
Exp. 4, copy 17
Exp. 4, copy 18
Exp. 4, copy 19
Exp. 4, copy 20
Exp. 4, copy 21
Occultation
*** ORBITAL VISIBILITY OVERRUN = 21
Overhead
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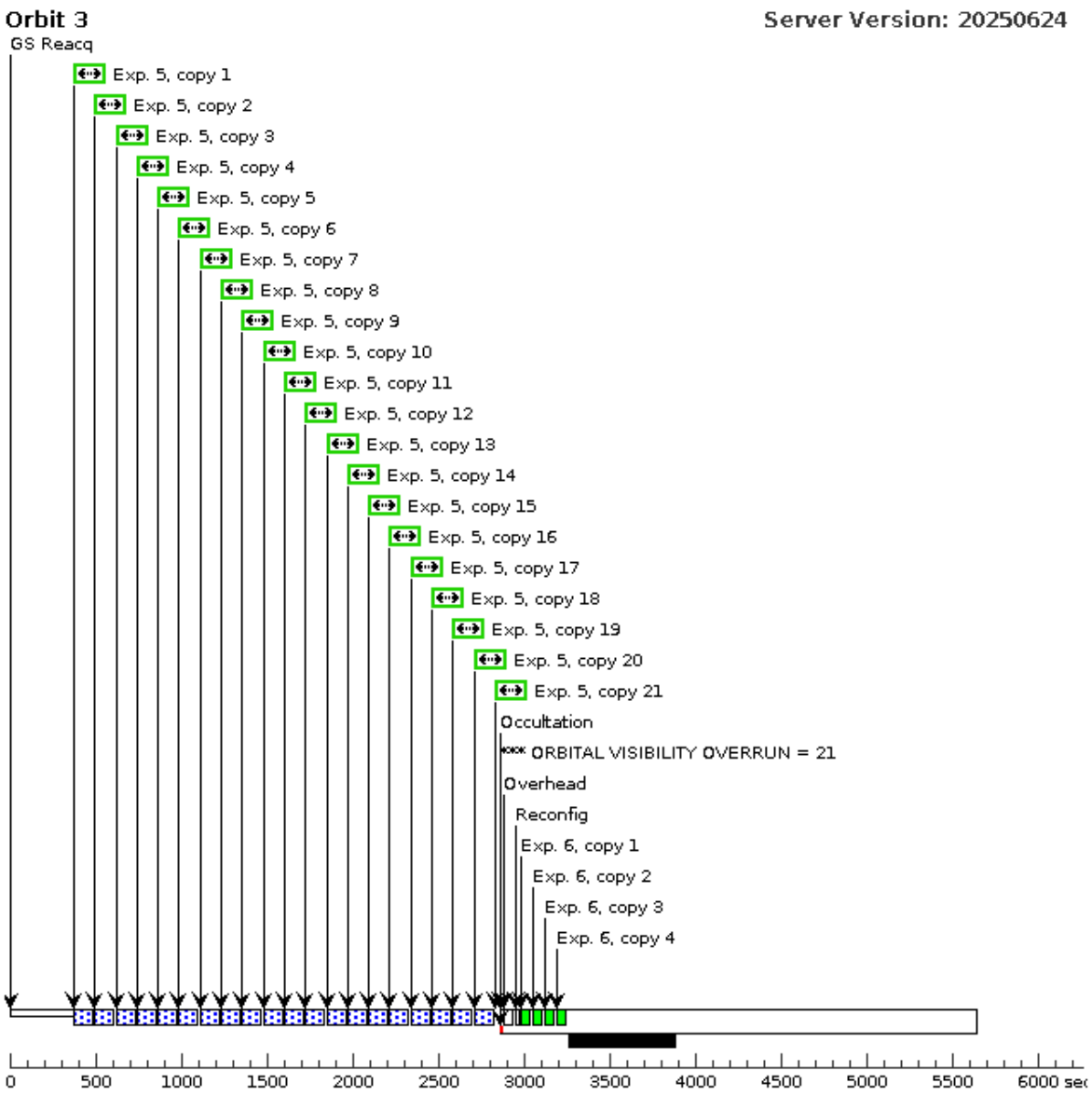
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec


Orbit 3
Server Version: 20250624
GS Reacq
Exp. 5, copy 1
Exp. 5, copy 2
Exp. 5, copy 3
Exp. 5, copy 4
Exp. 5, copy 5
Exp. 5, copy 6
Exp. 5, copy 7
Exp. 5, copy 8
Exp. 5, copy 9
Exp. 5, copy 10
Exp. 5, copy 11
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Exp. 5, copy 15
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Exp. 5, copy 18
Exp. 5, copy 19
Exp. 5, copy 20
Exp. 5, copy 21
Occultation
*** ORBITAL VISIBILITY OVERRUN = 21
Overhead
Reconfig
Exp. 6, copy 1
Exp. 6, copy 2
Exp. 6, copy 3
Exp. 6, copy 4
0
500
1000
1500
2000
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3000
3500
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5500
6000 sec

Visit

Proposal 17943, YZ CMi vis2 (02), implementation Wed Aug 27 15:00:22 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SCHED 100%; BETWEEN 2025.277:09 AND 2025.277:10

Comments: We set the field center location on chip 2 as recommended in the proposal guide on WFC3/UVIS G280. As in Proposal 16039, the optional parameters SIZEAXIS1=2250 and SIZEAXIS2=590 are used for all exposures to minimize data volume. This allows for parallel WFC3 Buffer Dumps in order to maximize on-source time. The spectrum of YZ CMi should be similar to LTT1445A from Proposal 16039, meaning it will only use a narrow swatch of pixel rows in the field and that these options are valid for the data output. The optional parameters CENTERAXIS1=2136 and CENTERAXIS2=1216 are then used to change the vertical center of the subarray on the zeroth order of the target spectrum. While centering on the target would be typical when positioning on chip 1, this would cause the subarray to extend into the chip gap when the field center location is on chip 2.

Biases are taken at the end of each visit, as the exposures use custom subarrays. These will not have matching biases from the standard WFC3 bias calibration program.

Observations should be simultaneous with VLA observations.

Diagnostics

(YZ CMi vis2 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(YZ CMi vis2 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-YZ-CMI	RA: 07 44 40.1723 (116.1673846d)	Proper Motion RA: -347.782 mas/yr	V=11.225	Reference Frame: ICRS
	Alt Name1: G-285	Dec: +03 33 8.88 (3.55247d)	Proper Motion Dec: -445.70199997906457 mas/yr	U=13.761	
	Alt Name2: GAIA-DR3-3136952686035250688	Equinox: J2000	Parallax: 0.1669769"		
			Epoch of Position: 2000		
			Radial Velocity: 26.66 km/sec		

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=[M V-IV]

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 (F467M) (WFC3UVIS.im.2020336)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F467M	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis2 (02)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

We use FLASH=20 for our CTE mitigation strategy during this observation.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G280 reference image (F300X) (WFC3UVIS.im.2020327)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis2 (02)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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.

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We use FLASH=20 is used based on ETC recommendations.

3	YZ CMi, orb1, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis2 (02)	40 Secs X 19 (760 Secs)		
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Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

4	YZ CMi, orb2, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 4-4 Non-Int in YZ CMi vis2 (02)	40 Secs X 21 (840 Secs)		
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Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

5	YZ CMi, orb3, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 5-6 Non-Int in YZ CMi vis2 (02)	40 Secs X 21 (840 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)]*	***[3]***

Comments: 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.

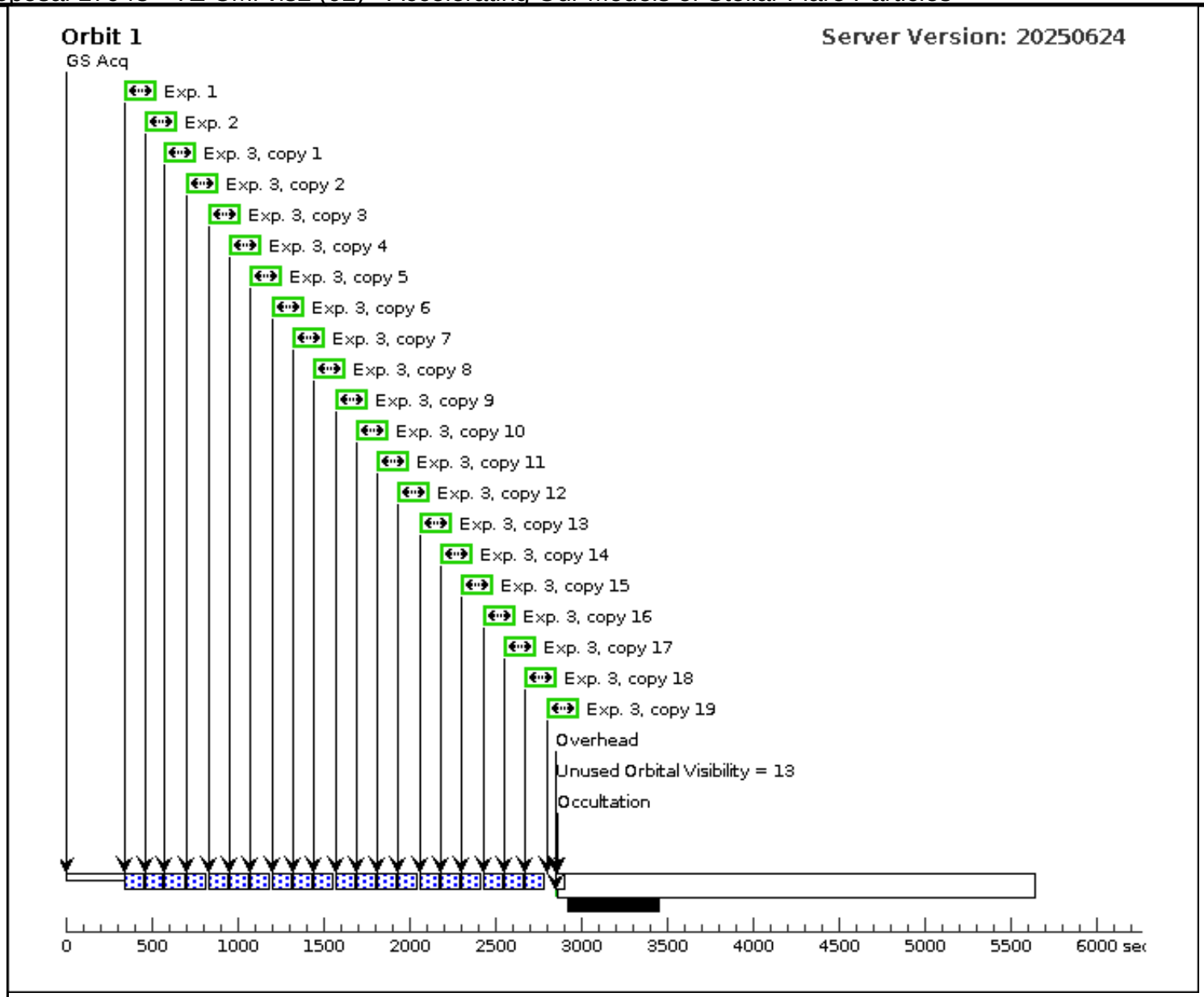
SIZEAXIS1=2250 and SIZEAXIS2=590 are used to minimize data volume, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

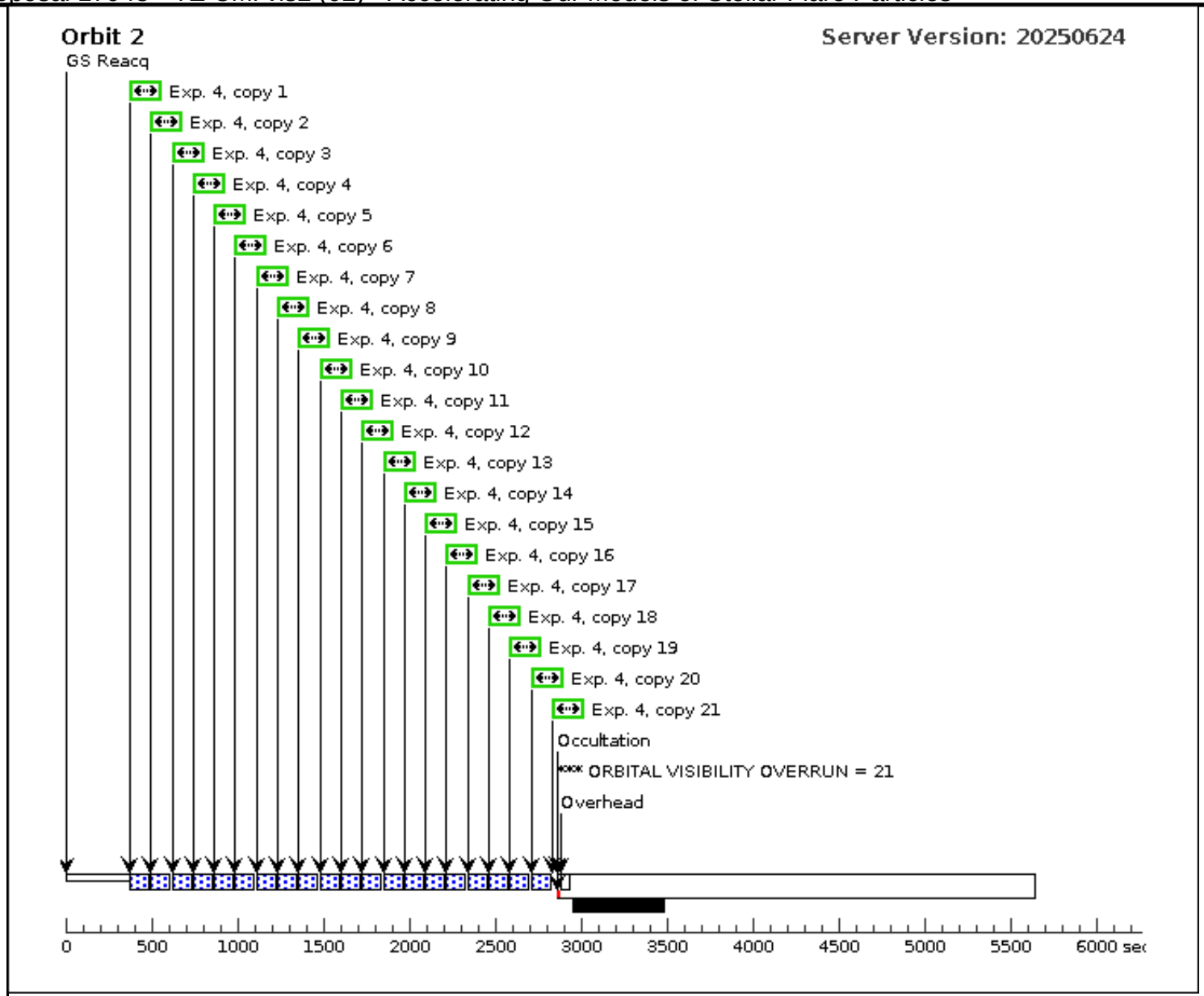
Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

6	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216		Sequence 5-6 Non-Int in YZ CMi vis2 (02)	0.0 Secs X 4 (0 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]* *[==>(Copy 3)]* *[==>(Copy 4)]*	***[3]***

Comments: Bias frames based on previous, successful Proposals 11934 and 16039. These use the same sizeaxis and centeraxis as the observations for direct calibration.

Orbit Structure

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Server Version: 20250624
GS Reacq
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Exp. 4, copy 3
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Exp. 4, copy 16
Exp. 4, copy 17
Exp. 4, copy 18
Exp. 4, copy 19
Exp. 4, copy 20
Exp. 4, copy 21
Occultation
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1000
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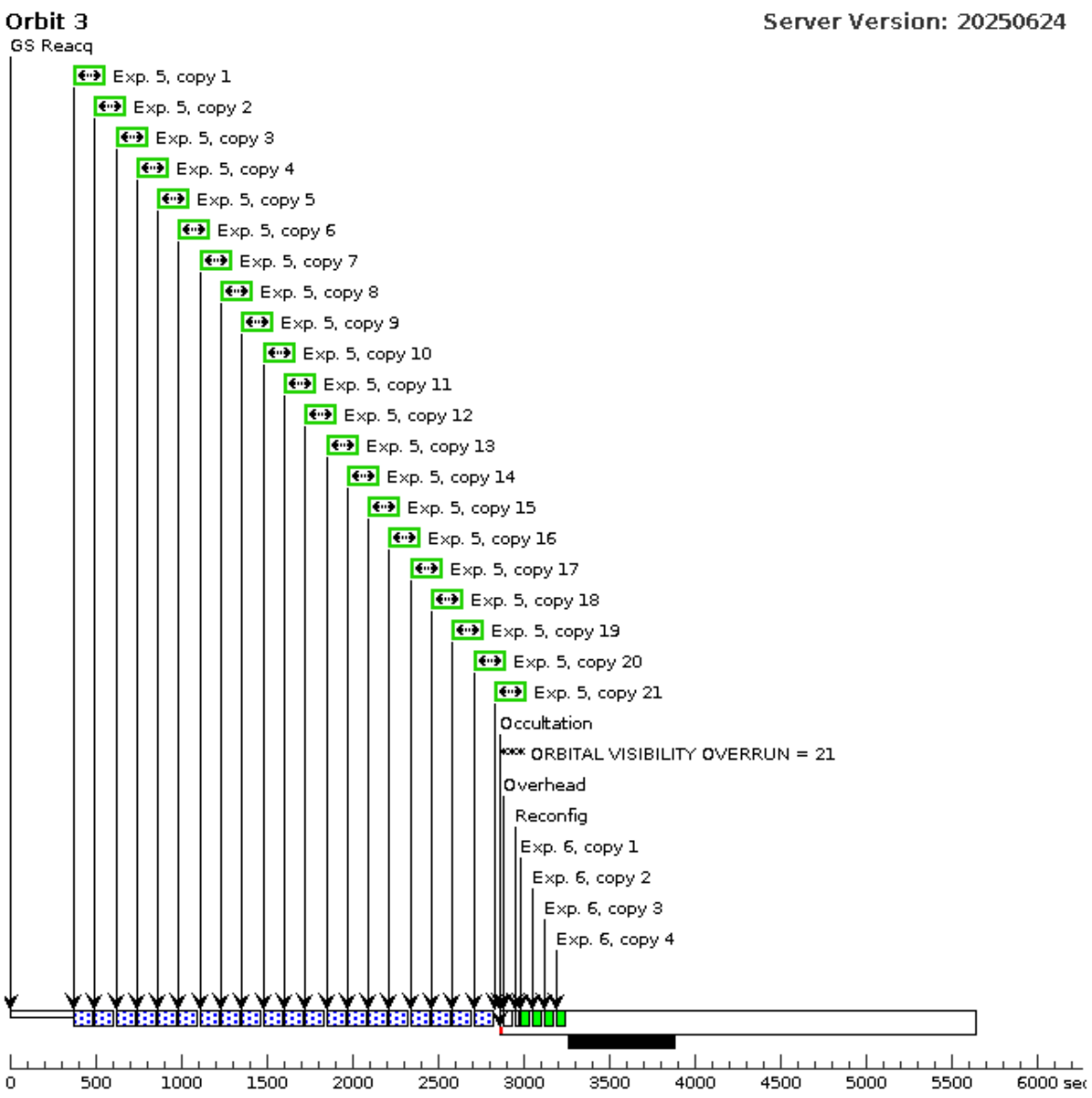
4500
5000
5500
6000 sec


Orbit 3
Server Version: 20250624
GS Reacq
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Exp. 5, copy 2
Exp. 5, copy 3
Exp. 5, copy 4
Exp. 5, copy 5
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Exp. 5, copy 14
Exp. 5, copy 15
Exp. 5, copy 16
Exp. 5, copy 17
Exp. 5, copy 18
Exp. 5, copy 19
Exp. 5, copy 20
Exp. 5, copy 21
Occultation
*** ORBITAL VISIBILITY OVERRUN = 21
Overhead
Reconfig
Exp. 6, copy 1
Exp. 6, copy 2
Exp. 6, copy 3
Exp. 6, copy 4
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17943, YZ CMi vis3 (03), implementation Wed Aug 27 15:00:22 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SCHED 100%; BETWEEN 2025.305:13 AND 2025.305:15

Comments: We set the field center location on chip 2 as recommended in the proposal guide on WFC3/UVIS G280. As in Proposal 16039, the optional parameters SIZEAXIS1=2250 and SIZEAXIS2=590 are used for all exposures to minimize data volume. This allows for parallel WFC3 Buffer Dumps in order to maximize on-source time. The spectrum of YZ CMi should be similar to LTT1445A from Proposal 16039, meaning it will only use a narrow swatch of pixel rows in the field and that these options are valid for the data output. The optional parameters CENTERAXIS1=2136 and CENTERAXIS2=1216 are then used to change the vertical center of the subarray on the zeroth order of the target spectrum. While centering on the target would be typical when positioning on chip 1, this would cause the subarray to extend into the chip gap when the field center location is on chip 2.

Biases are taken at the end of each visit, as the exposures use custom subarrays. These will not have matching biases from the standard WFC3 bias calibration program.
Observations should be simultaneous with VLA observations.

Diagnostics

(YZ CMi vis3 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(YZ CMi vis3 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-YZ-CMI	RA: 07 44 40.1723 (116.1673846d)	Proper Motion RA: -347.782 mas/yr	V=11.225	Reference Frame: ICRS
	Alt Name1: G-285	Dec: +03 33 8.88 (3.55247d)	Proper Motion Dec: -445.70199997906457 mas/yr	U=13.761	
	Alt Name2: GAIA-DR3-3136952686035250688	Equinox: J2000	Parallax: 0.1669769"		
			Epoch of Position: 2000		
			Radial Velocity: 26.66 km/sec		

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=[M V-IV]

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 (F467M) (WFC3UVIS.im.2020175)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F467M	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis3 (03)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

We use FLASH=20 for our CTE mitigation strategy during this observation.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G280 reference image (F300X) (WFC3UVIS.im.2020327)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis3 (03)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

We use FLASH=20 is used based on ETC recommendations.

3	YZ CMi, orb1, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis3 (03)	40 Secs X 19 (760 Secs)		
								[==>(Copy 1)]		
								[==>(Copy 2)]		
								[==>(Copy 3)]		
								[==>(Copy 4)]		
								[==>(Copy 5)]		
								[==>(Copy 6)]		
								[==>(Copy 7)]		
								[==>(Copy 8)]		
								[==>(Copy 9)]		
								[==>(Copy 10)]		***[1]***
								[==>(Copy 11)]		
								[==>(Copy 12)]		
								[==>(Copy 13)]		
								[==>(Copy 14)]		
								[==>(Copy 15)]		
								[==>(Copy 16)]		
								[==>(Copy 17)]		
								[==>(Copy 18)]		
								[==>(Copy 19)]		

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

4	YZ CMi, orb2, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 4-4 Non-Int in YZ CMi vis3 (03)	40 Secs X 21 (840 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)]*	***[2]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

5	YZ CMi, orb3, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 5-6 Non-Int in YZ CMi vis3 (03)	40 Secs X 21 (840 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)]*	***[3]***

Comments: 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.

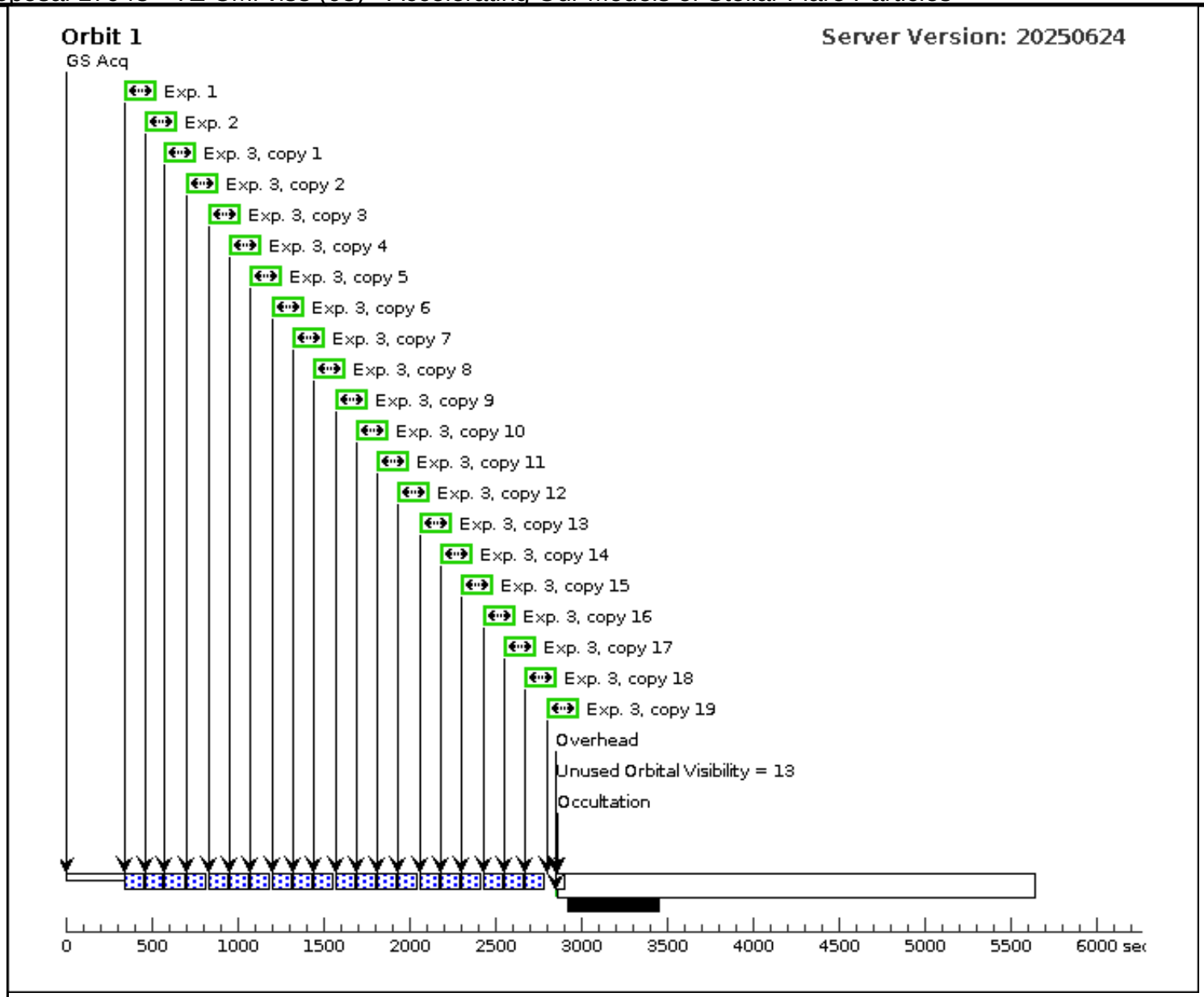
SIZEAXIS1=2250 and SIZEAXIS2=590 are used to minimize data volume, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

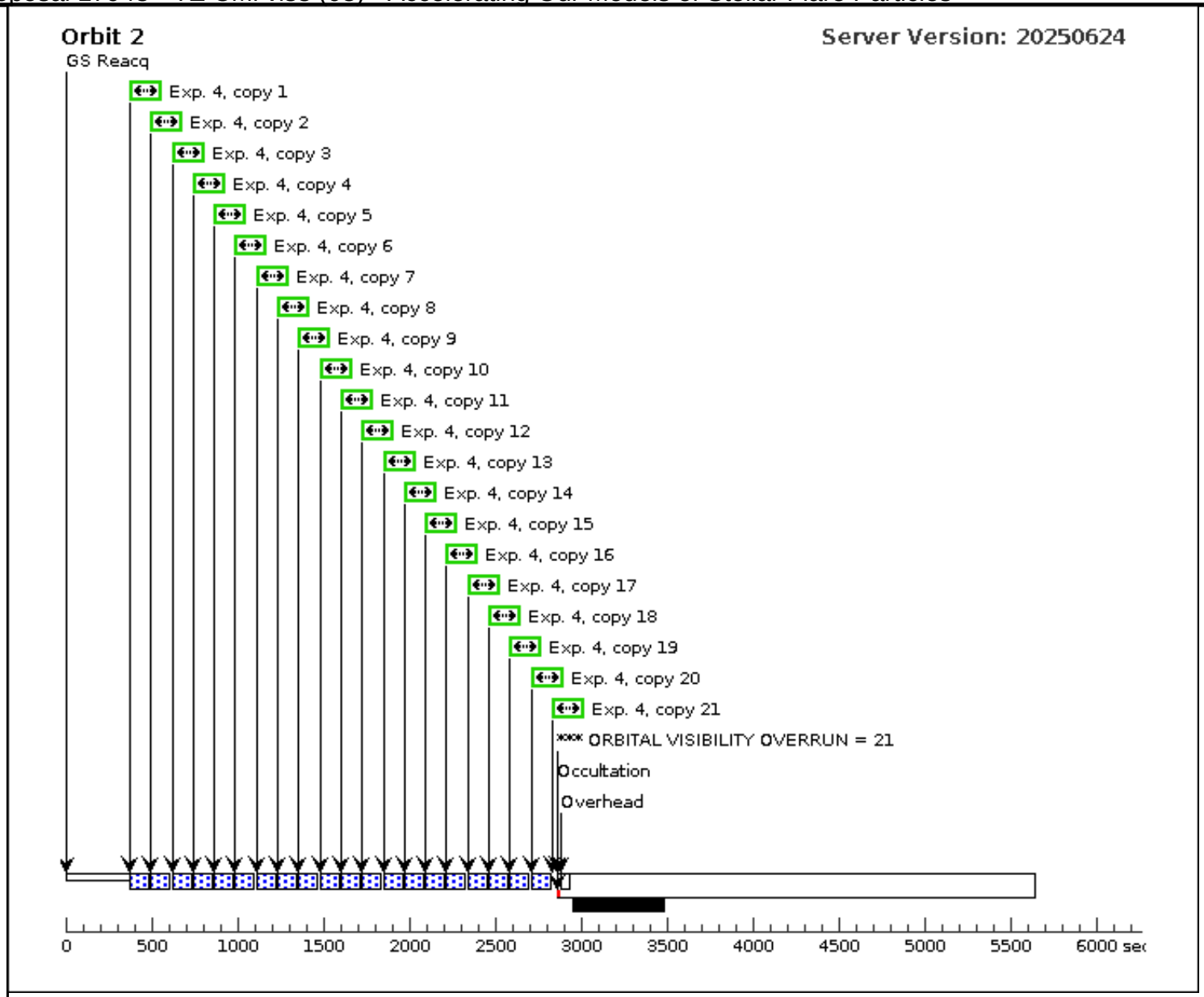
Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

6	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216		Sequence 5-6 Non-Int in YZ CMi vis3 (03)	0.0 Secs X 4 (0 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]* *[==>(Copy 3)]* *[==>(Copy 4)]*	***[3]***

Comments: Bias frames based on previous, successful Proposals 11934 and 16039. These use the same sizeaxis and centeraxis as the observations for direct calibration.

Orbit Structure

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Server Version: 20250624
GS Reacq
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Exp. 4, copy 4
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Exp. 4, copy 15
Exp. 4, copy 16
Exp. 4, copy 17
Exp. 4, copy 18
Exp. 4, copy 19
Exp. 4, copy 20
Exp. 4, copy 21
*** ORBITAL VISIBILITY OVERRUN = 21
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1500
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3500
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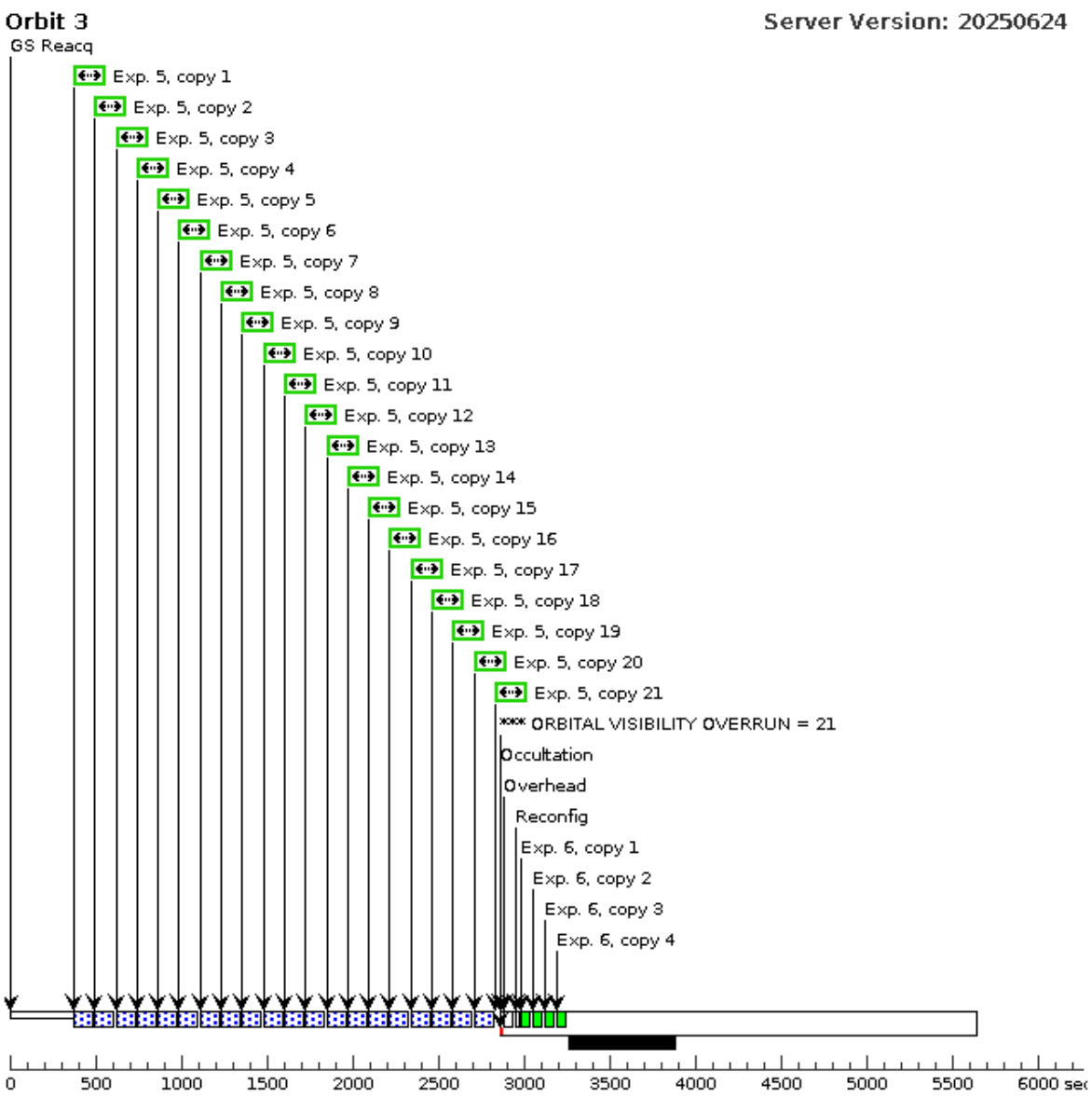
5000
5500
6000 sec


Orbit 3
Server Version: 20250624
GS Reacq
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Exp. 5, copy 14
Exp. 5, copy 15
Exp. 5, copy 16
Exp. 5, copy 17
Exp. 5, copy 18
Exp. 5, copy 19
Exp. 5, copy 20
Exp. 5, copy 21
**** ORBITAL VISIBILITY OVERRUN = 21
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Overhead
Reconfig
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Exp. 6, copy 2
Exp. 6, copy 3
Exp. 6, copy 4
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1500
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4000
4500
5000
5500
6000 sec

Visit

Proposal 17943, YZ CMi vis4 (04), implementation Wed Aug 27 15:00:23 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: SCHED 100%; BETWEEN 2025.307:12 AND 2025.307:14

Comments: We set the field center location on chip 2 as recommended in the proposal guide on WFC3/UVIS G280. As in Proposal 16039, the optional parameters SIZEAXIS1=2250 and SIZEAXIS2=590 are used for all exposures to minimize data volume. This allows for parallel WFC3 Buffer Dumps in order to maximize on-source time. The spectrum of YZ CMi should be similar to LTT1445A from Proposal 16039, meaning it will only use a narrow swatch of pixel rows in the field and that these options are valid for the data output. The optional parameters CENTERAXIS1=2136 and CENTERAXIS2=1216 are then used to change the vertical center of the subarray on the zeroth order of the target spectrum. While centering on the target would be typical when positioning on chip 1, this would cause the subarray to extend into the chip gap when the field center location is on chip 2.

Biases are taken at the end of each visit, as the exposures use custom subarrays. These will not have matching biases from the standard WFC3 bias calibration program.

Observations should be simultaneous with VLA observations.

Diagnostics

(YZ CMi vis4 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(YZ CMi vis4 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-YZ-CMI	RA: 07 44 40.1723 (116.1673846d)	Proper Motion RA: -347.782 mas/yr	V=11.225	Reference Frame: ICRS
	Alt Name1: G-285	Dec: +03 33 8.88 (3.55247d)	Proper Motion Dec: -445.70199997906457 mas/yr	U=13.761	
	Alt Name2: GAIA-DR3-3136952686035250688	Equinox: J2000	Parallax: 0.1669769"		
			Epoch of Position: 2000		
			Radial Velocity: 26.66 km/sec		

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=[M V-IV]

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 (F467M) (WFC3UVIS.im.2020175)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F467M	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis4 (04)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

We use FLASH=20 for our CTE mitigation strategy during this observation.

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	G280 reference image (F300X) (WFC3UVIS.im.2020327)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, G280-REF	F300X	FLASH=20; SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis4 (04)	4 Secs (4 Secs) *[==>]*	***[1]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

We use FLASH=20 is used based on ETC recommendations.

3	YZ CMi, orb1, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 1-3 Non-Int in YZ CMi vis4 (04)	40 Secs X 19 (760 Secs)		
								[==>(Copy 1)]		
								[==>(Copy 2)]		
								[==>(Copy 3)]		
								[==>(Copy 4)]		
								[==>(Copy 5)]		
								[==>(Copy 6)]		
								[==>(Copy 7)]		
								[==>(Copy 8)]		
								[==>(Copy 9)]		
								[==>(Copy 10)]		***[1]***
								[==>(Copy 11)]		
								[==>(Copy 12)]		
								[==>(Copy 13)]		
								[==>(Copy 14)]		
								[==>(Copy 15)]		
								[==>(Copy 16)]		
								[==>(Copy 17)]		
								[==>(Copy 18)]		
								[==>(Copy 19)]		

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

4	YZ CMi, orb2, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 4-4 Non-Int in YZ CMi vis4 (04)	40 Secs X 21 (840 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)]*	***[2]***

Comments: 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=590 are used to minimize data volume, 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 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

5	YZ CMi, orb3, G280 (WFC3UVIS.sp.2020334)	(1) V-YZ-CMI	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216; FLASH=16	POS TARG null,-50	Sequence 5-6 Non-Int in YZ CMi vis4 (04)	40 Secs X 21 (840 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)]*	***[3]***

Comments: 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.

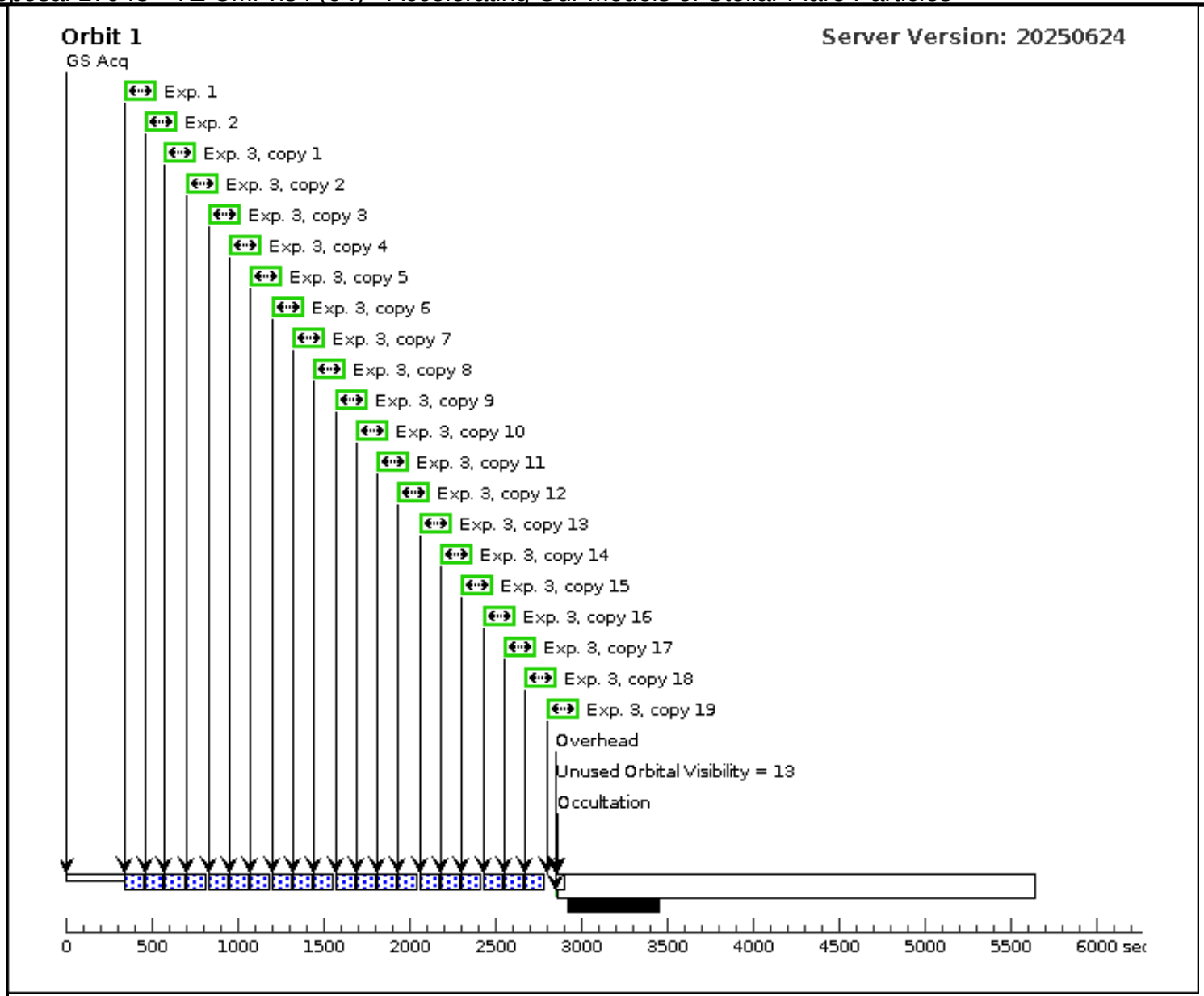
SIZEAXIS1=2250 and SIZEAXIS2=590 are used to minimize data volume, while CENTERAXIS1 and CENTERAXIS2 are used to center the subarray readout on the zeroth order of G280 spectrum. These parameters are based upon similar observations obtained successfully in GOs 13574 and 15288, with the adjustments from GO 16039 to better center the zeroth order spectrum on the sub-array.

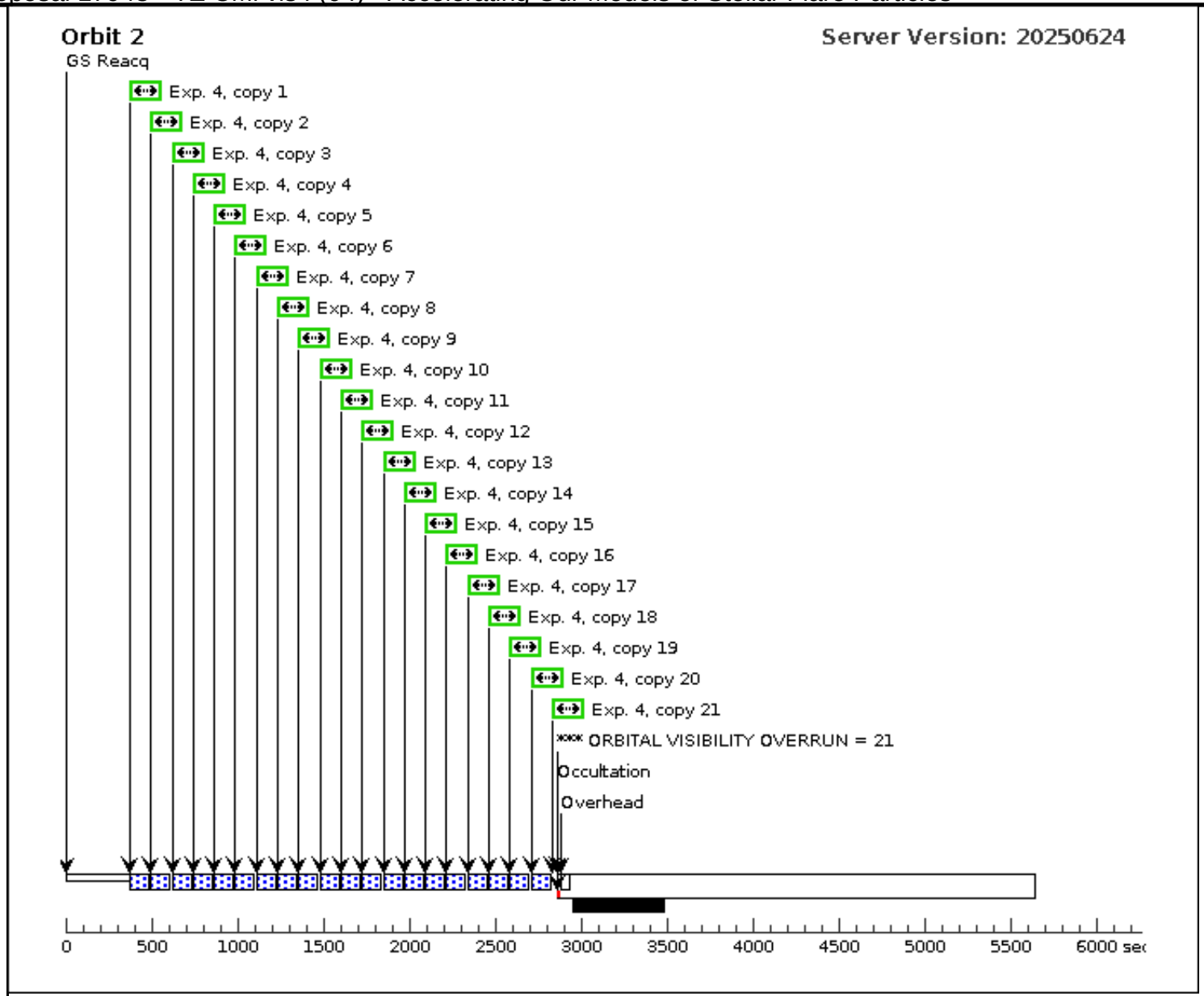
Exposure times of 40 seconds have been chosen to obtain a high-SNR while keeping the time resolution at a level useful for determining changes over flaring events. The NUV wavelength of 3000 Angstrom is chosen in the ETC to best estimate the NUV quiescent expected.The optical range will be much stronger, and the NUV range of the spectrum will increase dramatically during events to levels similar or somewhat higher than the optical. No saturation is expected based on this exposure time.

6	Bias	BIAS	WFC3/UVIS, ACCUM, UVIS	DEF	SIZEAXIS1=2250; SIZEAXIS2=590; CENTERAXIS1=2136; CENTERAXIS2=1216		Sequence 5-6 Non-Int in YZ CMi vis4 (04)	0.0 Secs X 4 (0 Secs) *[==>(Copy 1)]* *[==>(Copy 2)]* *[==>(Copy 3)]* *[==>(Copy 4)]*	***[3]***

Comments: Bias frames based on previous, successful Proposals 11934 and 16039. These use the same sizeaxis and centeraxis as the observations for direct calibration.

Orbit Structure

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Exp. 4, copy 18
Exp. 4, copy 19
Exp. 4, copy 20
Exp. 4, copy 21
*** ORBITAL VISIBILITY OVERRUN = 21
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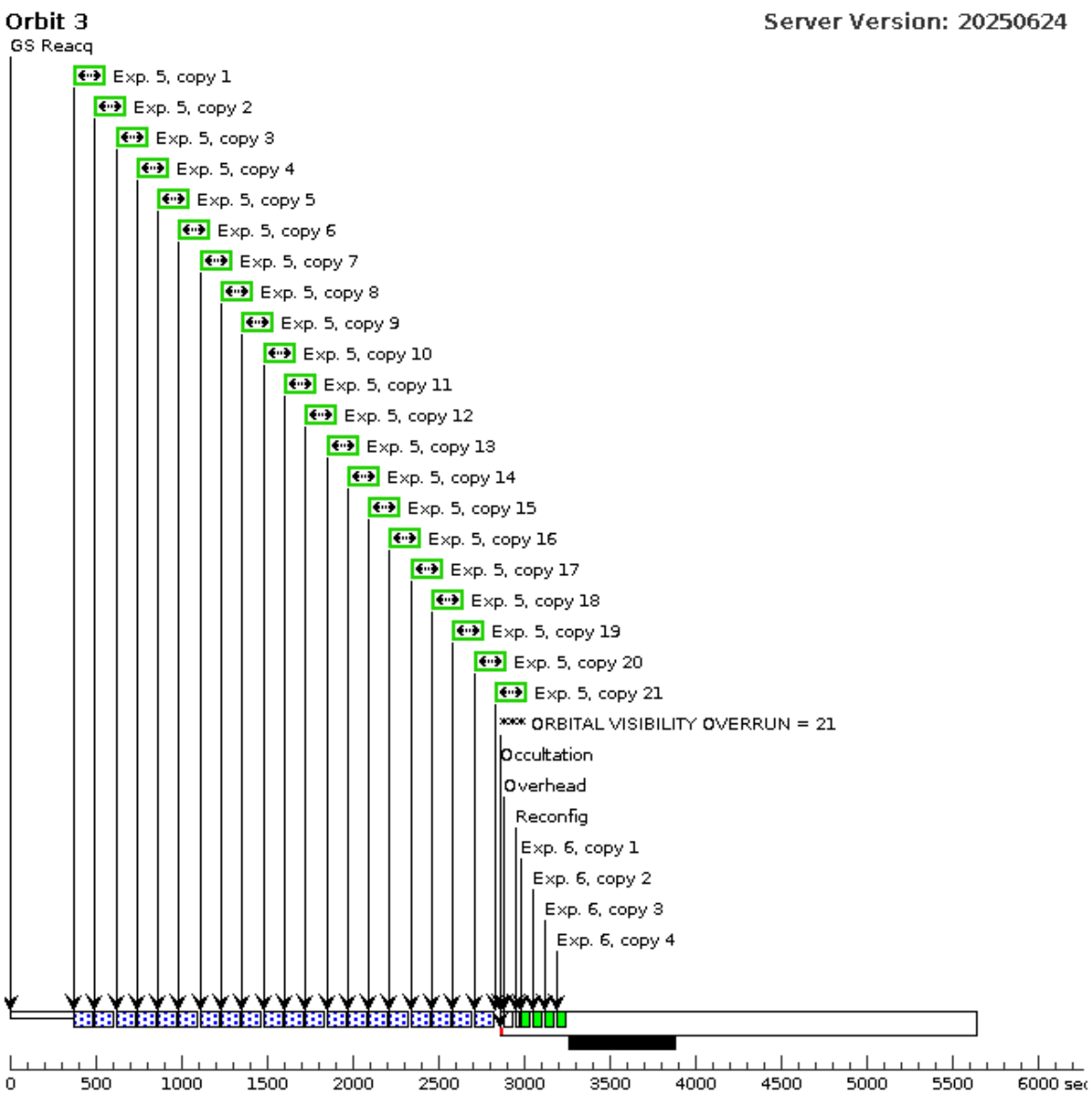
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**** ORBITAL VISIBILITY OVERRUN = 21
Occultation
Overhead
Reconfig
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