



15907 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

Cycle: 27, Proposal Category: GO
(Availability Mode: AVAILABLE)

INVESTIGATORS

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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) V-AU-MIC	STIS/CCD	1	24-Jul-2019 14:06:12.0	yes
02	(1) V-AU-MIC	STIS/CCD	1	24-Jul-2019 14:06:14.0	yes
03	(2) PSFSTAR-HD-191849	STIS/CCD	1	24-Jul-2019 14:06:15.0	yes
04	(1) V-AU-MIC	STIS/CCD	1	24-Jul-2019 14:06:17.0	yes

<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>
05	(1) V-AU-MIC	STIS/CCD	1	24-Jul-2019 14:06:20.0	yes
06	(1) V-AU-MIC	STIS/CCD	1	24-Jul-2019 14:06:24.0	yes
07	(1) V-AU-MIC	STIS/CCD	1	24-Jul-2019 14:06:29.0	yes

7 Total Orbits Used

ABSTRACT

Boccaletti+ (2015) discovered features moving within the AU Mic debris disk at super-Keplerian tangential velocities in spatially resolved imagery of the AU Mic debris disk. To date, these are the only moving structures seen in spatially resolved imagery of debris disks. The surface brightness, number, morphology, and velocities of these moving features constrains their physical location and mass, and thus are critical quantities needed to constrain the origin of this phenomenon. We propose 7 orbits of HST/STIS time per cycle, for cycles 27,28,29, to determine: a) What is the surface brightness of all features, and how does the surface brightness and morphology of features change over time?; b) What is the detailed vertical motion of features, and does the amplitude of this motion depend on stellocentric separation?; and c) What is the motion of the newly found features (NW-gamma and NW-delta) on the NW-side of the disk? These data will be used to test hypotheses that predict features are caused by the stellar wind expelling grains originating from a parent body that orbits at 8+/-2 au (Sezestre+ 2017) or by interaction between the star's wind and repeated dust avalanche events (Chiang & Fung 2017).

OBSERVING DESCRIPTION

OVERALL PROGRAM

This program will obtain two sets of visits of observations of AU Mic. The first set of 5 visits utilize Wedge A0.6 and Wedge A1.0 observations. All visits during this set MUST be executed in contiguous orbits. The second set of 5 visits utilize BAR5 observations. All visits during this set MUST be executed in contiguous orbits.

VISITS AND EXPOSURE DETAILS

1) WEDGE-A OBSERVATION SET

Guide Star Acquisitions: We require pointing and roll control with 2-FGS guiding. Single-FGS guiding does not offer sufficient target position stability for coronagraphy.

Each visit (after its Guide Star acquisition) begins with a mode-2 target acquisition, is followed by a sequence of repetitive "short" exposures (by CR-SPLIT or exposure replication) at the WedgeA0.6 position followed by a sequence of repetitive "long" exposures (also by CR-SPLIT or exposure replication) at the Wedge A1.0 position.

1) Target Acquisitions. We expose our TA images to a $\text{SNR} > \text{appx } 100$ using the STIS ETC. While robust target acquisition is enabled with $\text{SNR } 40$, we also use the TA images as a pre mode-2 astrometric anchor to assess the "behind the wedge" target position to high precision (separate from "diffraction spike" analysis, for which higher SNR for precision centroiding is required). We also use these F25ND3 filtered images to photometrically obtain target:PSF template brightness ratios in the broad STIS passband. The STIS Target Acquisition ETC was used to determine the exposure times for all acquisition images.

2) The "short" exposure times are designed to reach 90% of full-well depth, with the target coronagraphically occulted, at the edge of the wedge 0.3" from the star. We scale, using the ETC, this from observations predicated upon an A0 star with $V = 3.55$ reach 90% full well from the PSF halo in 1 second based upon previous STIS coronagraphic observations allowing for up to as much of 1/2 pixel of possible target decentering in acquisition performance. We generally repeat these exposures to fill appx 35% of the target visibility interval after subtracting the time required for the preceding guide star and target acquisitions.

3) Following the short exposures we execute a Type-2 slew (by a change in instrument aperture to Wedge1.0) for the "long" exposure imaging.

Sub-Array Readouts. For most coronagraphic exposures we use subarray readouts (SIZEAXIS2) symmetrically centered on the target to fully read-out the region along the wedge (Axis2, image Y axis) to the edge of the FOV at the small end of the wedge taper, and symmetrically on the diametrically opposing side. For WedgeA1.0 the max SIZEAXIS2 (without displacing with an `|unsupported| CENTERAXIS2`) is 427 pixels. This implies that the A1.0 position is 10.82 from the edge of the FOV (whole sub-array centered on target symmetrically 21.65 along the wedge). For WedgeA0.6 is (without displacing with an `|unsupported| CENTERAXIS2`) is 137 pixels. This implies that the A0.6 position is 3.47 from the edge of the FOV (whole sub-array centered on target symmetrically 6.95 along the wedge).

VISIT LINKAGES (RELATIVE ORIENTATION CONSTRAINTS AND INTERLEAVED PSF OBSERVATIONS)

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We place an absolute orient request on VISIT 3 that constrain the AU Mic disk to align perpendicular to the long axis of occulting Wedge A. We place relative orient constraints on VISIT 1 (-30 to -20 degrees from VISIT 3) and on VISIT 5 (20 to 30 degrees from VISIT 3). No relative orient constraints are placed on VISIT 2 or VISIT 4.

We require all 5 visits within this observational be executed in contiguous orbits.

2) BAR5 OBSERVATION SET

Guide Star Acquisitions: We require pointing and roll control with 2-FGS guiding. Single-FGS guiding does not offer sufficient target position stability for coronagraphy.

Each visit (after its Guide Star acquisition) begins with a mode-2 target acquisition, is followed by a sequence of repetitive "short" exposures (by CR-SPLIT or exposure replication) at the nominal BAR5 position. To mitigate against target centering uncertainties behind BAR5, we also include one sequence of repetitive exposures with the target offset by 0.25 pixels ABOVE the nominal center of BAR5 and one sequence of repetitive exposures with the target offset by 0.25 pixels BELOW the nominal center of BAR5 (i.e. an effective dither about the center position of BAR5).

We achieve this dither pattern by using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS TARG offsets of $x = + 0.0024921$ arcsec and $y = + 0.0122491$ for the PLUSDITHER position, and $x = - 0.0024921$ arcsec and $y = - 0.0122491$ for the MINUSDITHER position).

1) Target Acquisitions. We expose our TA images to a SNR > appx 100 using the STIS ETC. While robust target acquisition is enabled with SNR 40, we also use the TA images as a pre mode-2 astrometric anchor to assess the "behind the wedge" target position to high precision (separate from "diffraction spike" analysis, for which higher SNR for precision centroiding is required. We also use these F25ND3 filtered imagesto

Proposal 15907 (STScI Edit Number: 0, Created: Wednesday, July 24, 2019 at 1:06:30 PM Eastern Standard Time) - Overview
photometrically obtain target:PSF template brightness ratios in the broad STIS passband. The STIS Target Acquisition ETC was used to determine the exposure times for all acquisition images.

VISIT LINKAGES (RELATIVE ORIENTATION CONSTRAINTS AND INTERLEAVED PSF OBSERVATIONS)

=====

We place an absolute orient request on VISIT 23 that constrains the AU Mic disk to align perpendicular to the long axis of occulting BAR5. We place relative orient constraints on VISIT 23 (-30 to -20 degrees from VISIT 23) and on VISIT 25 (20 to 30 degrees from VISIT 3). No relative orient constraints are placed on VISIT 21 or VISIT 24.

We require all 5 visits within this observational be executed in contiguous orbits.

----- Realtime Justification -----

We have no real-time requirements.

----- Calibration Justification -----

We ask for no SPECIAL calibrations for this proposal (and called none out in Phase 1). We did not because we ASSUME that STScI will acquire GAIN=4 (supported mode) bias, DARK, and flat-field frames (and derived hot/bad pixel maps) as part of their Cycle 25 calibration plan in support of approved Cycle 25 science programs. If this is NOT the case then we must obtain GAIN=4 calibration reference bias/dark data as part of our program using NON-POINTED (internal) orbits only. If STScI does not include acquiring for broader purposes the reference data we need, then we

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will need to add those internal calibrations to this program AFTER the Phase 2 deadline.

Proposal 15907 - Visit 01 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

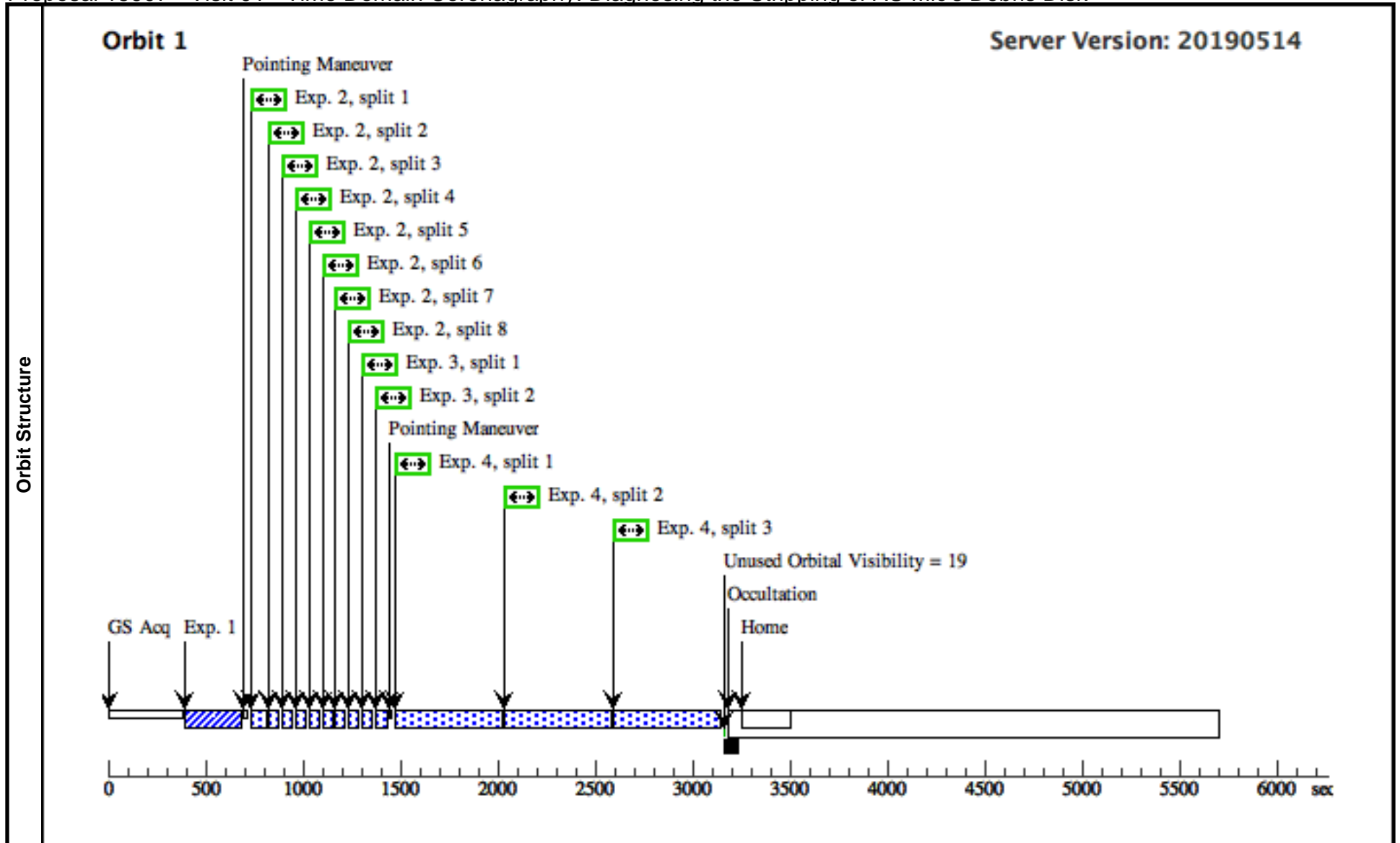
Wed Jul 24 18:06:30 GMT 2019

Visit	<p>Proposal 15907, Visit 01</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT -30D TO -20D FROM 02</p> <p><i>Comments: AU MIC (V=8.61, B-V = + 1.45).</i></p> <p><i>This set of visits (1-4) uses WedgeA. These visits (1-4) MUST be executed sequentially in contiguous orbits interrupted only for Earth occultation.</i></p> <p><i>Orientation: We have set the allowable orientation to range from -30 deg to -20 degrees from Visit 2, to allow a sufficiently large scheduling window. NOTE TO PC: Our science is optimized if we can achieve an orient as close as possible to -30 degrees from the preferred absolute orient of 83.7 degrees in Visit 2. We ask that you please try to identify scheduling windows that enable us to get as close as possible to this orientation. IF the absolute orient of Visit 2 deviates from 83.7 degrees, PLEASE ask us for guidance as to the orientation range we prefer for Visit 1. We absolutely do NOT want the disk major axis (128.7 degrees) to align with the STIS diffraction spikes in Visits 1, 2, or 4.</i></p>																
	<p>(Visit 01) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 01) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 01) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 01) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p>																
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<p><i>Comments: Coordinates are from GSC2.3.2.</i></p> <p><i>Category=STAR</i></p> <p><i>Description=[CIRCUMSTELLAR MATTER, M V-IV]</i></p>																	

Proposal 15907 - Visit 01 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	AUMIC-AC Q	(1) V-AU-MIC	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-4 Non-Int in Visit 01	0.40 Secs (0.4 Secs) [==>]	[1]
<p><i>Comments: SNR = 100, V = 8.61, sp = MIVe, Exptime rounded to nearest 0.1 second</i></p>									
2	AUMIC_SH ORTS_1	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=8; GAIN=4		Sequence 1-4 Non-Int in Visit 01	364 Secs (364 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. Use this for the "short" exposures, repeated (8x) with multiple CR Splits. This setup for the "short" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "short" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 137, appropriate for the WedgeA0.6 position.</i></p>									
3	AUMIC_SH ORTS_2	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=2; GAIN=4		Sequence 1-4 Non-Int in Visit 01	91 Secs (91 Secs) [==>(Split 1)] [==>(Split 2)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. Use this for the "short" exposures, repeated with multiple CR Splits. This setup for the "short" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "short" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 137, appropriate for the WedgeA0.6 position.</i></p>									
4	AUMIC_LO NG	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA1.0	MIRROR	SIZEAXIS2=427; CR-SPLIT=3; GAIN=4		Sequence 1-4 Non-Int in Visit 01	1592 Secs (1592 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. For long exposures at WedgeA1.0 go > 10x deeper in each that will fit into remainder of visibility period CR-SPLIT at least 3 times - and trim exposure time to fit in visibility window. This is setup for the "long" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "long" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 427, appropriate for the WedgeA1.0 position.</i></p>									

Exposures



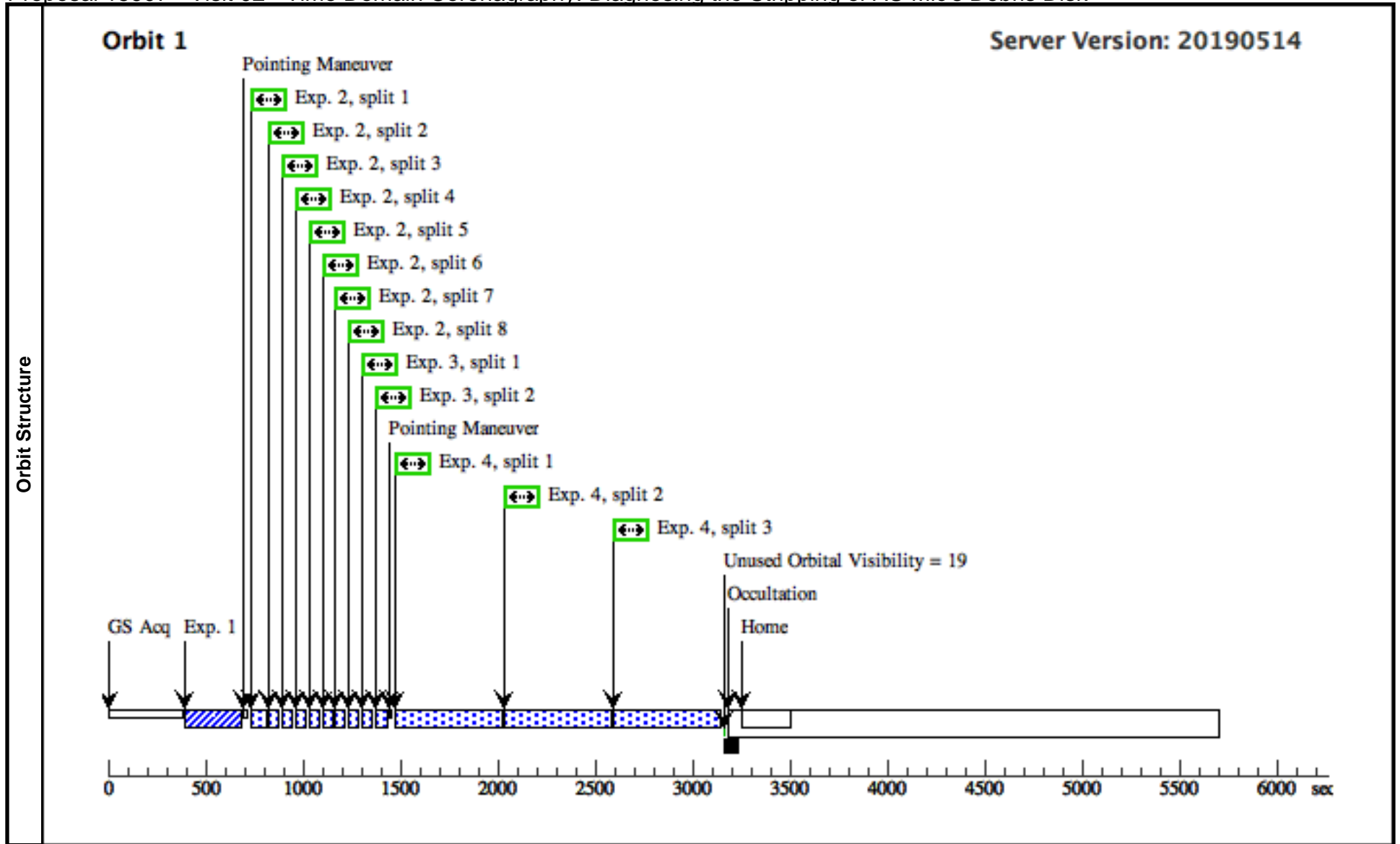
Proposal 15907 - Visit 02 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

Wed Jul 24 18:06:30 GMT 2019

Visit	<p>Proposal 15907, Visit 02</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 73.7D TO 93.7 D; AFTER 01 BY 0.5 Orbits TO 1.2 Orbits</p> <p>Comments: AU MIC (V=8.61, B-V = + 1.45).</p> <p>This set of visits (1-4) uses WedgeA. These visits (1-4) MUST be executed sequentially in contiguous orbits interrupted only for Earth occultation.</p> <p>Orientation: We have set the allowable absolute orientation to range from 73.7 deg to 93.7 degrees, to allow a sufficiently large scheduling window. NOTE TO PC: AU Mic's disk has a PA of 128.7 degrees. Our science is optimized if we can achieve an absolute orient that places the major axis of AU Mic's disk perpendicular to the long axis of WEDGEA. We need our absolute orient to be as close as possible to (128.7 degrees + 315 degrees = 83.7 degrees; or equivalently ok 128.7 degrees + 135 degrees = 263.7 degrees). We ask that you please try to identify scheduling windows that enable us to get as close as possible to either of these absolute orientations. These orientations place the circumstellar disk axis perpendicular to the long-axis of WEDGEA. We have allowed a +/-10 degree window about this strong preference to aid scheduled and GS acquisition.</p> <p>Relative Timing: This visit (2) MUST immediately follow Visit 1 and immediately precede Visit 3 in back-to-back orbits.</p>																	
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Proposal 15907 - Visit 02 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	AUMIC-AC Q	(1) V-AU-MIC	STIS/CCD, ACQ, F25ND3	MIRROR				Sequence 1-4 Non-Int in Visit 02	0.40 Secs (0.4 Secs) [==>]	[1]
	<i>Comments: SNR = 100, V = 8.61, sp = MIVe, Exptime rounded to nearest 0.1 second</i>										
	2	AUMIC_SH ORTS_1	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=8; GAIN=4			Sequence 1-4 Non-Int in Visit 02	364 Secs (364 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
	<i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. Use this for the "short" exposures, repeated (8x) with multiple CR Splits. This setup for the "short" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i>										
	<i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5") For these "short" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 137, appropriate for the WedgeA0.6 position.</i>										
	3	AUMIC_SH ORTS_2	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=2; GAIN=4			Sequence 1-4 Non-Int in Visit 02	91 Secs (91 Secs) [==>(Split 1)] [==>(Split 2)]	[1]
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	4	AUMIC_LO NG	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA1.0	MIRROR	SIZEAXIS2=427; CR-SPLIT=3; GAIN=4			Sequence 1-4 Non-Int in Visit 02	1592 Secs (1592 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
<i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. For long exposures at WedgeA1.0 go > 10x deeper in each that will fit into remainder of visibility period CR-SPLIT at least 3 times - and trim exposure time to fit in visibility window. This setup for the "long" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i>											
<i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5") For these "long" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 427, appropriate for the WedgeA1.0 position.</i>											



Proposal 15907 - Visit 03 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

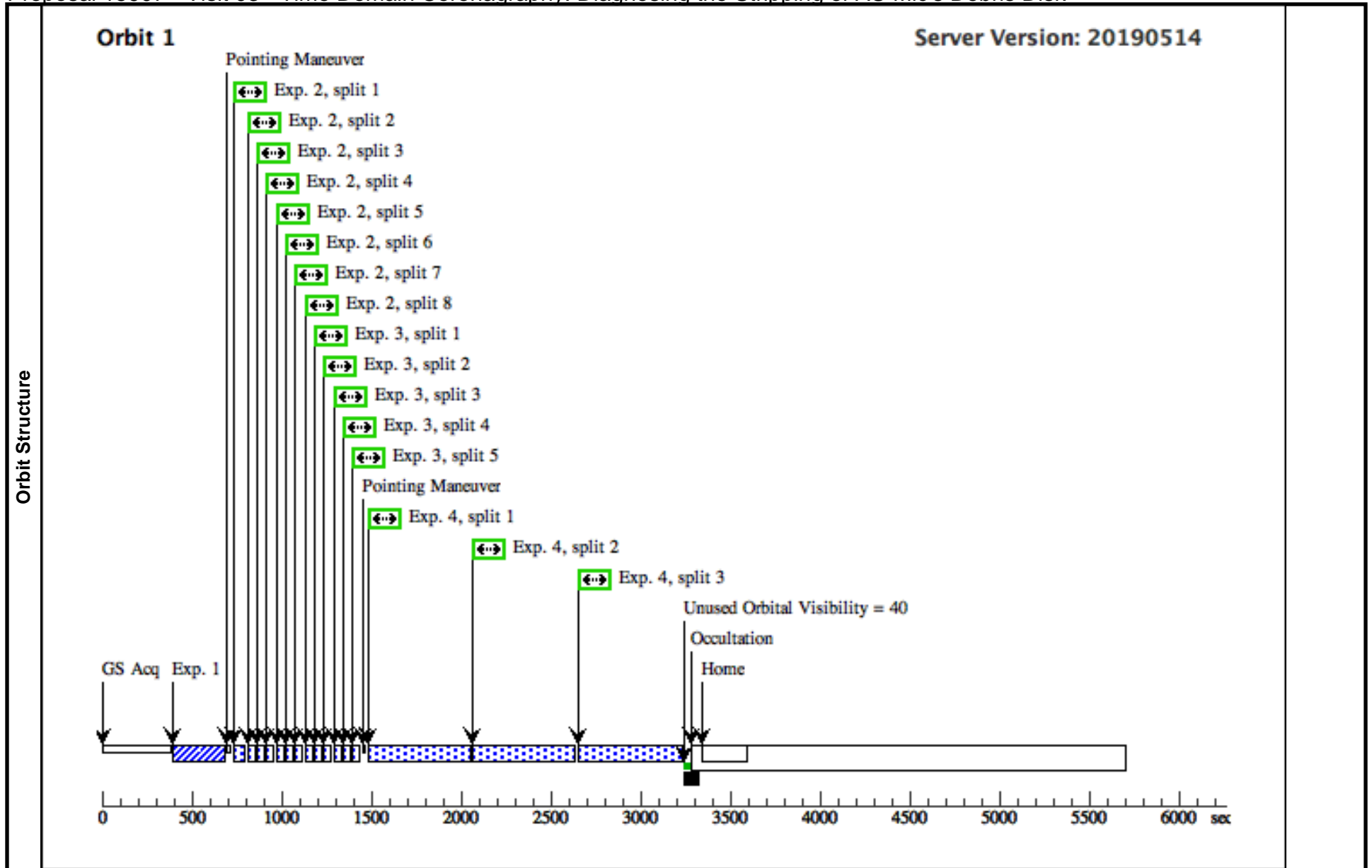
Wed Jul 24 18:06:30 GMT 2019

Visit	<p>Proposal 15907, Visit 03</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; AFTER 02 BY 0.5 Orbits TO 1.2 Orbits</p> <p>Comments: PSF (HD191849). PSF calibration target for AU MIC. $V = 7.97$. $B-V = +1.46$.</p> <p><i>This set of visits (1-4) uses WedgeA. These visits (1-4) MUST be executed sequentially in contiguous orbits interrupted only for Earth occultation.</i></p> <p><i>Orientation: NOTE TO OUR PC: Our PSF star visit (#3) has no absolute or relative orientation constraints. However, all other things being equal, when scheduled, we would request that both be observed with roll angles as close to Visit 2 as possible. This is not a hard requirement and we do not constrain, but a request this if possible to optimize the science return through likely better PSF calibration.</i></p> <p><i>Relative Timing: This visit (3) MUST immediately follow visit 2 and immediately precede visit 4. I.e., They should be executed sequentially in "back-to-back" orbits.</i></p>																	
	<p>(Visit 03) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 03) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 03) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 03) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p>																	
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Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(2)</td> <td>PSFSTAR-HD-191849</td> <td>RA: 20 13 53.3960 (303.4724833d) Dec: -45 09 50.47 (-45.16402d) Equinox: J2000</td> <td>Proper Motion RA: 778.236 mas/yr Proper Motion Dec: -159.744 mas/yr Parallax: 0.1623212" Epoch of Position: 2000.0</td> <td>V=7.966</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p>Comments: Coordinates from GSC2.3.2. Category=STAR Description=[M V-IV]</p>						#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	PSFSTAR-HD-191849	RA: 20 13 53.3960 (303.4724833d) Dec: -45 09 50.47 (-45.16402d) Equinox: J2000	Proper Motion RA: 778.236 mas/yr Proper Motion Dec: -159.744 mas/yr Parallax: 0.1623212" Epoch of Position: 2000.0	V=7.966	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous												
(2)	PSFSTAR-HD-191849	RA: 20 13 53.3960 (303.4724833d) Dec: -45 09 50.47 (-45.16402d) Equinox: J2000	Proper Motion RA: 778.236 mas/yr Proper Motion Dec: -159.744 mas/yr Parallax: 0.1623212" Epoch of Position: 2000.0	V=7.966	Reference Frame: ICRS													

Proposal 15907 - Visit 03 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	PSF-ACQ	(2) PSFSTAR-HD-1 91849	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-4 Non-Int in Visit 03	0.3 Secs (0.3 Secs) [==>]	[1]
<p><i>Comments: SNR = 100, V = 7.97, sp = MOVE, Exptime rounded to nearest 0.1 second</i></p>									
2	PSF1_SHO RTS_1	(2) PSFSTAR-HD-1 91849	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=8; GAIN=4		Sequence 1-4 Non-Int in Visit 03	244.8 Secs (244.8 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. V = 7.97 so saturation in 34.0s. So 90% full well in appx 30.6s. Use this for the "short" exposures, repeated (8x) with multiple CR Splits. This setup for the "short" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "short" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 137, appropriate for the WedgeA0.6 position.</i></p>									
3	PSF1_SHO RTS_2	(2) PSFSTAR-HD-1 91849	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=5; GAIN=4		Sequence 1-4 Non-Int in Visit 03	153 Secs (153 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. V = 7.97 so saturation in 34.0s. So 90% full well in appx 30.6s. Use this for the "short" exposures, repeated (8x) with multiple CR Splits. This setup for the "short" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "short" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 137, appropriate for the WedgeA0.6 position.</i></p>									
4	PSF1_LON G	(2) PSFSTAR-HD-1 91849	STIS/CCD, ACCUM, WEDGEA1.0	MIRROR	SIZEAXIS2=427; CR-SPLIT=3; GAIN=4		Sequence 1-4 Non-Int in Visit 03	1666 Secs (1666 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
<p><i>Comments: V = 6.26 so saturation in 12.1s. So 90% full well in appx 10.9s. Use this for the "short" exposures, repeated (8x) with multiple CR Splits. For long exposures at WedgeA1.0 go <=20x deeper in each that will fit into remainder of visibility period CR-SPLIT at least 3 times - and trim exposure time to fit in visibility window. This setup for the "long" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "long" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS12 = 427, appropriate for the WedgeA1.0 position.</i></p>									

Exposures



Proposal 15907 - Visit 04 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

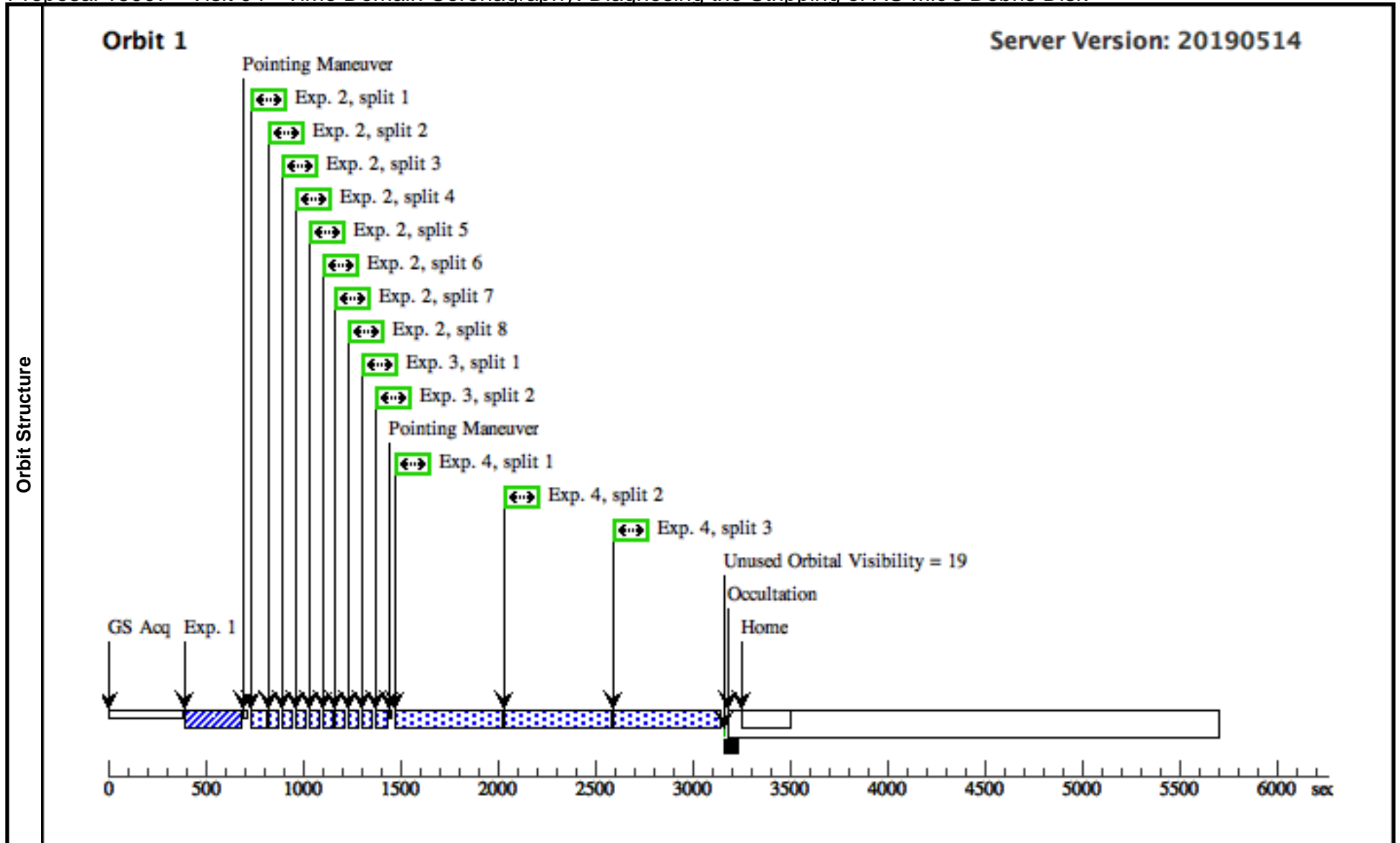
Wed Jul 24 18:06:31 GMT 2019

Visit	<p>Proposal 15907, Visit 04</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 20D TO 30D FROM 02; AFTER 03 BY 0.5 Orbits TO 1.2 Orbits</p> <p>Comments: AU MIC (V=8.61, B-V = + 1.45).</p> <p>This set of visits (1-4) uses WedgeA. These visits (1-4) MUST be executed sequentially in contiguous orbits interrupted only for Earth occultation.</p> <p>Orientation: We have set the allowable orientation to range from 20 deg to 30 degrees from Visit 2, to allow a sufficiently large scheduling window. NOTE TO PC: Our science is optimized if we can achieve an orient as close as possible to +30 degrees from the preferred absolute orient of 83.7 degrees in Visit 2. We ask that you please try to identify scheduling windows that enable us to get as close as possible to this orientation. IF the absolute orient of Visit 2 deviates from 83.7 degrees, PLEASE ask us for guidance as to the orientation range we prefer for Visit 4. We absolutely do NOT want the disk major axis (128.7 degrees) to align with the STIS diffraction spikes in Visits 1, 2, or 4.</p> <p>Relative Timing: This visit (4) MUST immediately follow Visit 3. I.e., They should be executed sequentially in "back-to-back" orbits.</p>																
	<p>(Visit 04) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 04) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 04) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p> <p>(Visit 04) Warning (Orbit Planner): SUBARRAY OFF OF DETECTOR</p>																
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	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(1)	V-AU-MIC	RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS												

Proposal 15907 - Visit 04 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	AUMIC-AC Q	(1) V-AU-MIC	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-4 Non-Int in Visit 04	0.4 Secs (0.4 Secs) [==>]	[1]
<p><i>Comments: SNR = 100, V = 8.61, sp = MIVe, Exptime rounded to nearest 0.1 second</i></p>									
2	AUMIC_SH ORTS_1	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=8; GAIN=4		Sequence 1-4 Non-Int in Visit 04	364 Secs (364 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. Use this for the "short" exposures, repeated (8x) with multiple CR Splits. This setup for the "short" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "short" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS2 = 137, appropriate for the WedgeA0.6 position.</i></p>									
3	AUMIC_SH ORTS_2	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA0.6	MIRROR	SIZEAXIS2=137; CR-SPLIT=2; GAIN=4		Sequence 1-4 Non-Int in Visit 04	91 Secs (91 Secs) [==>(Split 1)] [==>(Split 2)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. Use this for the "short" exposures, repeated with multiple CR Splits. This setup for the "short" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "short" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS2 = 137, appropriate for the WedgeA0.6 position.</i></p>									
4	AUMIC_LO NG	(1) V-AU-MIC	STIS/CCD, ACCUM, WEDGEA1.0	MIRROR	SIZEAXIS2=427; CR-SPLIT=3; GAIN=4		Sequence 1-4 Non-Int in Visit 04	1592 Secs (1592 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
<p><i>Comments: SCALABLE BENCHMARK: We expect full-well at r=0.3" from wings of stellar PSF in 1 second for V=3.55. AU MIC is V = 8.61 so saturation in 50.6s. So 90% full well in appx 45.5s. For long exposures at WedgeA1.0 go > 10x deeper in each that will fit into remainder of visibility period CR-SPLIT at least 3 times - and trim exposure time to fit in visibility window. This setup for the "long" exposures replicates the setup used for GO-12228 for this target and WEDGE observations.</i></p> <p><i>SCALABLE PARAMETER FOR SUB-ARRAY Readout: SIZEAXIS2 = 20 is 1" in full extent (r = 0.5")</i> <i>For these "long" exposures we will image perpendicular to the wedge (symmetrically) centered on the target to the maximum extent permitted by the limits of the FOV (edge of the detector) on the "small" side of the Wedge A taper. Thus, for these short exposures we use SIZEAXIS2 = 427, appropriate for the WedgeA1.0 position.</i></p>									

Exposures



Proposal 15907 - Visit 05 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

Wed Jul 24 18:06:31 GMT 2019

Visit	<p>Proposal 15907, Visit 05</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT -6.5D TO -6.5D FROM 06</p> <p>Comments: AU MIC (V=8.61, B-V = + 1.45).</p> <p><i>This set of visits (5-7) uses BAR5. These visits (5-7) MUST be executed sequentially in contiguous orbits interrupted only for Earth occultation.</i></p> <p><i>Orientation: We have set the allowable orientation to range from -6.5 deg to -6.5 degrees from Visit 6, to allow a sufficiently large scheduling window. NOTE TO PC: Our science is optimized if we can achieve an orient as close as possible to -6.5 degrees from the preferred absolute orient of 353.7 degrees in Visit 6. We ask that you please try to identify scheduling windows that enable us to get as close as possible to this orientation. IF the absolute orient of Visit 6 deviates from 353.7 degrees, PLEASE ask us for guidance as to the orientation range we prefer for Visit 5. We absolutely do NOT want the disk major axis (128.7 degrees) to align with the STIS diffraction spikes in Visits 5,6, or 7.</i></p>												
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>V-AU-MIC</td> <td>RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000</td> <td>Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0</td> <td>V=8.627</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p>Comments: Coordinates are from GSC2.3.2. Category=STAR Description=[CIRCUMSTELLAR MATTER, M V-IV]</p>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-AU-MIC	RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0	V=8.627
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous								
(1)	V-AU-MIC	RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS								

Proposal 15907 - Visit 05 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	AUMIC-AC Q	(1) V-AU-MIC	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in Visit 05	0.4 Secs (0.4 Secs) [==>]	[1]
<i>Comments: SNR = 100, V = 8.6I, sp = MIVe, Exptime rounded to nearest 0.1 second</i>									
2	AUMIC_B AR5_CENT ER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0		Sequence 1-10 Non-Int in Visit 05	133.6 Secs (133.6 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i>									
<i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i>									
3	AUMIC_B AR5_CENT ER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=7; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0		Sequence 1-10 Non-Int in Visit 05	116.9 Secs (116.9 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)]	[1]
<i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i>									
<i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i>									
4	AUMIC_B AR5_CENT ER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=2; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0		Sequence 1-10 Non-Int in Visit 05	33.4 Secs (33.4 Secs) [==>(Split 1)] [==>(Split 2)]	[1]
<i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i>									
<i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i>									

Exposures

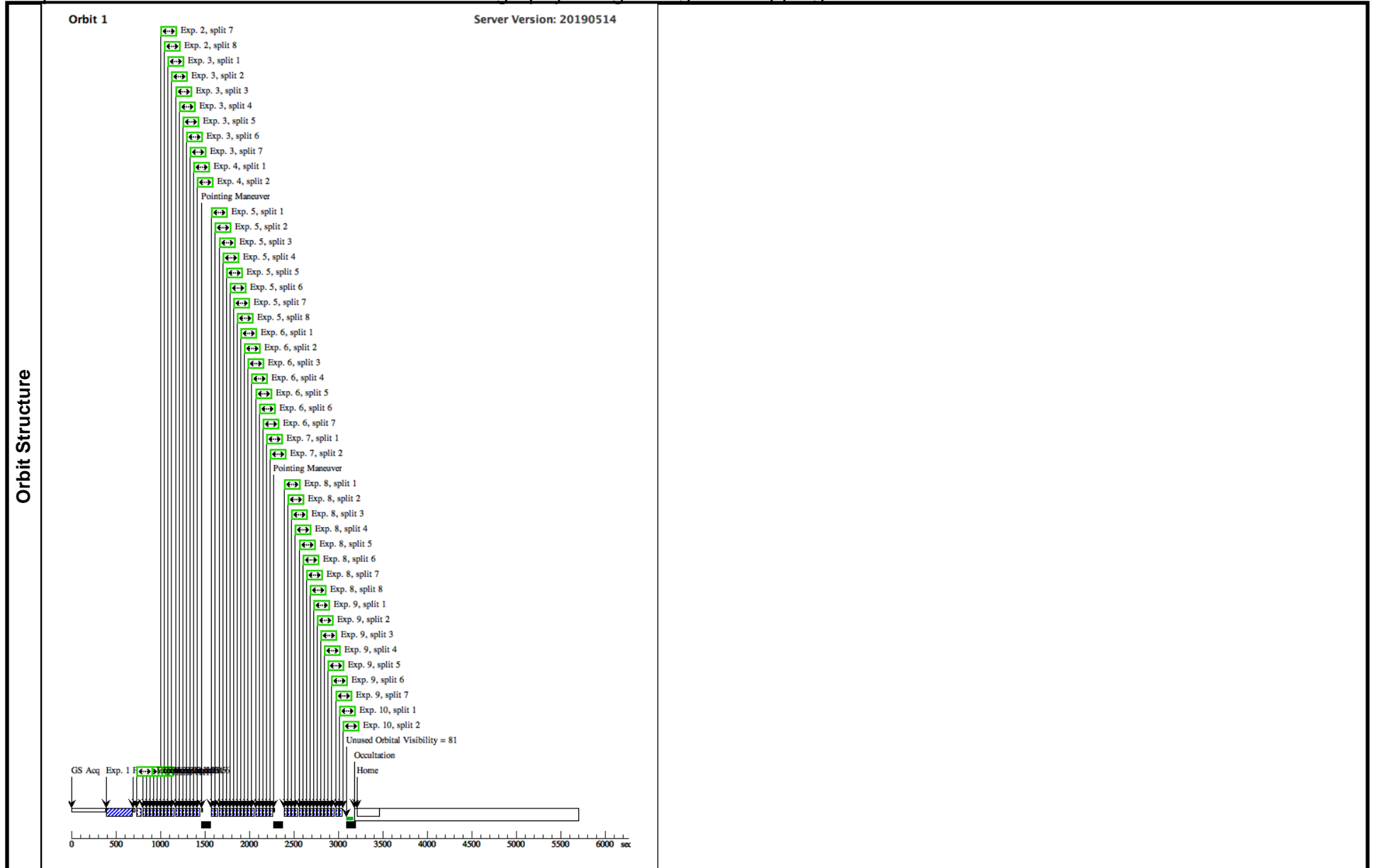
Proposal 15907 - Visit 05 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

5	AUMIC_B AR5_PLUS DITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in Visit 05	133.6 Secs (133.6 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly above the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = 0.0024921$ arcsec and $y = 0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
6	AUMIC_B AR5_PLUS DITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=7; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in Visit 05	116.9 Secs (116.9 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly above the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = 0.0024921$ arcsec and $y = 0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
7	AUMIC_B AR5_PLUS DITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=2; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in Visit 05	33.4 Secs (33.4 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly above the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = 0.0024921$ arcsec and $y = 0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									

Proposal 15907 - Visit 05 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

8	AUMIC_B AR5_MINU SDITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG -0.0024 921,-0.0122491	Sequence 1-10 Non-I nt in Visit 05	133.6 Secs (133.6 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 237$ to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
9	AUMIC_B AR5_MINU SDITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=7; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG -0.0024 921,-0.0122491	Sequence 1-10 Non-I nt in Visit 05	116.9 Secs (116.9 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 237$ to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
10	AUMIC_B AR5_MINU SDITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=2; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG -0.0024 921,-0.0122491	Sequence 1-10 Non-I nt in Visit 05	33.4 Secs (33.4 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 237$ to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									

Proposal 15907 - Visit 05 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk



Proposal 15907 - Visit 06 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

Wed Jul 24 18:06:31 GMT 2019

Visit	<p>Proposal 15907, Visit 06</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 343.7D TO 3.7 D; AFTER 05 BY 0.5 Orbits TO 1.2 Orbits</p> <p>Comments: AU MIC (V=8.61, B-V = + 1.45).</p> <p>This set of visits (5-7) uses BAR5. These visits (5-7) MUST be executed sequentially in contiguous orbits interrupted only for Earth occultation.</p> <p>Orientation: We have set the allowable absolute orientation to range from 343.7 deg to 3.7 degrees, to allow a sufficiently large scheduling window. NOTE TO PC: AU Mic's disk has a PA of 128.7 degrees. Our science is optimized if we can achieve an absolute orient that places the major axis of AU Mic's disk perpendicular to the long axis of BAR5. We need our absolute orient to be as close as possible to (128.7 degrees + 45 degrees = 173.7 degrees; or equivalently ok 128.7 degrees + 225 degrees = 353.7 degrees). We ask that you please try to identify scheduling windows that enable us to get as close as possible to either of these absolute orientations. These orientations place the circumstellar disk axis perpendicular to the long-axis of BAR5. We have allowed a +/-10 degree window about this strong preference to aid scheduled and GS acquisition.</p> <p>Relative Timing: This visit (6) MUST immediately follow Visit 5 and immediately precede Visit 7 in back-to-back orbits.</p>												
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>V-AU-MIC</td> <td>RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000</td> <td>Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0</td> <td>V=8.627</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p>Comments: Coordinates are from GSC2.3.2. Category=STAR Description=[CIRCUMSTELLAR MATTER, M V-IV]</p>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-AU-MIC	RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0	V=8.627
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(1)	V-AU-MIC	RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS								

Proposal 15907 - Visit 06 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	AUMIC-AC Q	(1) V-AU-MIC	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in Visit 06	0.4 Secs (0.4 Secs) [==>]	[1]
<p><i>Comments: SNR = 100, V = 8.6I, sp = MIVe, Exptime rounded to nearest 0.1 second</i></p>									
2	AUMIC_B AR5_CENT ER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=700		Sequence 1-10 Non-Int in Visit 06	133.6 Secs (133.6 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i></p>									
3	AUMIC_B AR5_CENT ER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=7; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=700		Sequence 1-10 Non-Int in Visit 06	116.9 Secs (116.9 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i></p>									
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<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i></p>									

Exposures

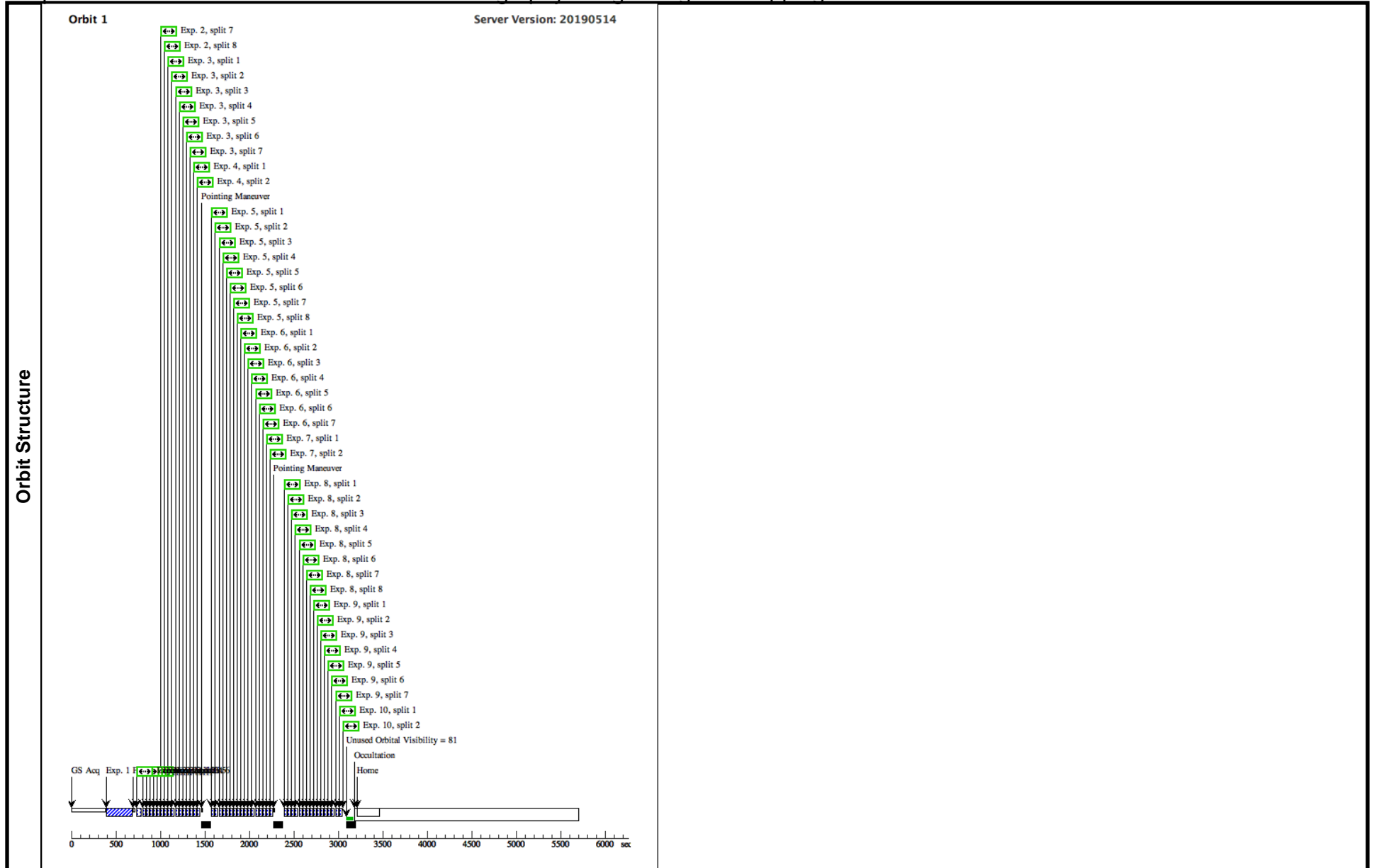
Proposal 15907 - Visit 06 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

5	AUMIC_B AR5_PLUS DITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in Visit 06	133.6 Secs (133.6 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly above the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = 0.0024921$ arcsec and $y = 0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p>										
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Proposal 15907 - Visit 06 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

8	AUMIC_B AR5_MINU SDITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG -0.0024 921,-0.0122491	Sequence 1-10 Non-I nt in Visit 06	133.6 Secs (133.6 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
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<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
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<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									

Proposal 15907 - Visit 06 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk



Proposal 15907 - Visit 07 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

Wed Jul 24 18:06:31 GMT 2019

Visit	<p>Proposal 15907, Visit 07</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 6.5D TO 6.5D FROM 06; AFTER 06 BY 0.5 Orbits TO 1.2 Orbits</p> <p>Comments: AU MIC (V=8.61, B-V = + 1.45).</p> <p>This set of visits (5-7) uses BAR5. These visits (5-7) MUST be executed sequentially in contiguous orbits interrupted only for Earth occultation.</p> <p>Orientation: We have set the allowable orientation to range from +6.5 deg to +6.5 degrees from Visit 6, to allow a sufficiently large scheduling window. NOTE TO PC: Our science is optimized if we can achieve an orient as close as possible to +6.5 degrees from the preferred absolute orient of 353.7 degrees in Visit 6. We ask that you please try to identify scheduling windows that enable us to get as close as possible to this orientation. IF the absolute orient of Visit 6 deviates from 353.7 degrees, PLEASE ask us for guidance as to the orientation range we prefer for Visit 7. We absolutely do NOT want the disk major axis (128.7 degrees) to align with the STIS diffraction spikes in Visits 5,6, or 7.</p> <p>Relative Timing: This visit (7) MUST immediately follow Visit 6. I.e., They should be executed sequentially in "back-to-back" orbits.</p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	V-AU-MIC	RA: 20 45 9.5323 (311.2897179d) Dec: -31 20 27.23 (-31.34090d) Equinox: J2000	Proper Motion RA: 281.424 mas/yr Proper Motion Dec: -359.895 mas/yr Parallax: 0.1028295" Epoch of Position: 2000.0	V=8.627	Reference Frame: ICRS
	<p>Comments: Coordinates are from GSC2.3.2. Category=STAR Description=[CIRCUMSTELLAR MATTER, M V-IV]</p>					

Proposal 15907 - Visit 07 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	AUMIC-AC Q	(1) V-AU-MIC	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in Visit 07	0.4 Secs (0.4 Secs) [==>]	[1]
<p><i>Comments: SNR = 100, V = 8.6I, sp = MIVe, Exptime rounded to nearest 0.1 second</i></p>									
2	AUMIC_B AR5_CENT ER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=700		Sequence 1-10 Non-Int in Visit 07	133.6 Secs (133.6 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i></p>									
3	AUMIC_B AR5_CENT ER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=7; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=700		Sequence 1-10 Non-Int in Visit 07	116.9 Secs (116.9 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i></p>									
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<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target on the mid-line of BAR5. We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</i></p>									

Exposures

Proposal 15907 - Visit 07 - Time Domain Coronagraphy: Diagnosing the Stripping of AU Mic's Debris Disk

5	AUMIC_B AR5_PLUS DITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in Visit 07	133.6 Secs (133.6 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly above the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = 0.0024921$ arcsec and $y = 0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
6	AUMIC_B AR5_PLUS DITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=7; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in Visit 07	116.9 Secs (116.9 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly above the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = 0.0024921$ arcsec and $y = 0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
7	AUMIC_B AR5_PLUS DITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=2; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in Visit 07	33.4 Secs (33.4 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly above the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = 0.0024921$ arcsec and $y = 0.0122491$). We then use a subarray readout of CENYERAXIS2 = 700 appropriate for BAR5 with a SIZEAXIS2 = 237 to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									

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8	AUMIC_B AR5_MINU SDITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG -0.0024 921,-0.0122491	Sequence 1-10 Non-I nt in Visit 07	133.6 Secs (133.6 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 237$ to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
9	AUMIC_B AR5_MINU SDITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=7; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG -0.0024 921,-0.0122491	Sequence 1-10 Non-I nt in Visit 07	116.9 Secs (116.9 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 237$ to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									
10	AUMIC_B AR5_MINU SDITHER	(1) V-AU-MIC	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=2; GAIN=4; SIZEAXIS2=237; CENTERAXIS2=70 0	POS TARG -0.0024 921,-0.0122491	Sequence 1-10 Non-I nt in Visit 07	33.4 Secs (33.4 Secs)	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture), and attempt to place the target slightly below the mid-line of BAR5, using a 0.25 pixel dither perpendicular to the BAR5 long-axis (via POS T ARG offsets of $x = -0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 237$ to yield a 6" round FOV.</p> <p>SCALABLE BENCHMARK: We scale our exposure times from GO-12923. We expect that 16.7 seconds per exposure will yield 75% to saturation in the brightest pixel. Our exposures are thus comprised of CR-SPLIT S in integral units of 16.7 second exposures.</p>									

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