



15314 - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

Cycle: 25, Proposal Category: GO

(Availability Mode: AVAILABLE)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Jamie R. Lomax (PI) (Contact)	University of Washington	jrlomax@gmail.com
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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-V384-PUP	STIS/CCD	1	31-Jan-2018 19:02:19.0	yes
02	(1) V-V384-PUP	STIS/CCD	1	31-Jan-2018 19:02:24.0	yes
03	(2) PSF-TYC-6551-975-1	STIS/CCD	1	31-Jan-2018 19:02:27.0	yes
04	(1) V-V384-PUP	STIS/CCD	1	31-Jan-2018 19:02:32.0	yes
05	(1) V-V384-PUP	STIS/CCD	1	31-Jan-2018 19:02:36.0	yes
06	(1) V-V384-PUP	STIS/CCD	1	31-Jan-2018 19:02:41.0	yes
07	(2) PSF-TYC-6551-975-1	STIS/CCD	1	31-Jan-2018 19:02:44.0	yes
08	(1) V-V384-PUP	STIS/CCD	1	31-Jan-2018 19:02:48.0	yes

8 Total Orbits Used

ABSTRACT

In young and low mass environments, where ABG stars have yet to form and WC stars are intrinsically rare, red supergiants (RSGs) are thought to be the main source of circumstellar dust due to their dusty winds. A recent discovery of large grains around VY CMa that will escape from the system

before its central star becomes a SN has further strengthened this idea. At the same time, it is unclear what physical scenario is responsible for the large mass-loss rates of RSGs. Characterizing the morphologies of circumstellar material close to RSGs is likely the only way to distinguish between these scenarios. We have recently obtained high-contrast coronagraphic imagery of material around a RSG that appears to be viewed at a low inclination angle. Because of the observing techniques used by ground-based extreme adaptive optics systems to remove PSF residuals, much of the dust signal has likely been self-subtracted from our dataset. The only way to fully characterize the morphology of this material is to use the coronagraphic capabilities HST/STIS. Therefore, we ask for 8 orbits to obtain new imagery of this system using a previously proven high-fidelity coronagraphic imaging technique.

OBSERVING DESCRIPTION

In this program we plan to observe one red supergiant star (V-V384-PUP, spectral type of M2.5 I) in order to search for and image any dust forming in its stellar wind using STIS coronagraphy. Specifically, we plan to use the STIS BAR5 occulting aperture. In order to accomplish this, we also plan to observe one B-V color matching PSF star that is within ~15 degrees of our red supergiant science target.

Visit Structure

Our observing strategy is to use two sets of four consecutive visits each to observe V-V384-PUP at three different roll angles and our PSF star. There is no set timing between our two sets of visits, although there are relative orient constraints between them that affect when they can be scheduled. In particular, the first set of four consecutive visits can occur at any time and will include three visits of V-V384-PUP at three different orient angles: the nominal roll angle, the nominal roll angle +30 deg, and the nominal roll angle -30 deg. The fourth visit will be to collect data on a PSF star, which can be done at any orient. We will then repeat those four visits at additional orient angles such that a final mosaiced image of the entire area around V-V384-PUP can be created.

The optimal orient break down of our visits are as follows:

Visits 1 - 4 in Back-to-Back Orbits

-
- 1 V-V384-PUP Orient from Visit 2 by -30 deg
 - 2 V-V384-PUP Nominal (or other) Roll as Scheduled by STScI
 - 3 PSF-STAR Nominal (or other) Roll as Scheduled by STScI

4 V-V384-PUP Orient from Visit 2 by +30 deg

Visits 5 - 8 in Back-to-Back Orbits

5 V-V384-PUP Orient from Visit 1 by +90 deg *OR* -90 deg*

6 V-V384-PUP Orient from Visit 5 by +30 deg

7 PSF-STAR Nominal (or other) Roll as Scheduled by STScI

8 V-V384-PUP Orient from Visit 5 by +60 deg

*We note that for Visit 5 both +90 deg and -90 deg orient angles relative to the orient of Visit 1 are acceptable, but we are unable to specify this in the current version of the APT. We have used +90 deg when linking the constraints of the observations to each other, but the PC is free to change this to -90 deg if needed for scheduling purposes.

We recognize that our relative 30 deg orientation differences might not always be possible, even though they are optimal for our science. We ask that our visits be scheduled with as close to the relative orientations that we outlined above, but have the following loose tolerances:

Loose tolerances in orient break down of our visits are as follows:

Visits 1 - 4 in Back-to-Back Orbits

1 V-V384-PUP Orient from Visit 2 by -30 deg to -15 deg

2 V-V384-PUP Nominal (or other) Roll as Scheduled by STScI

3 PSF-STAR Nominal (or other) Roll as Scheduled by STScI

4 V-V384-PUP Orient from Visit 2 by +15 deg to +30 deg

Visits 5 - 8 in Back-to-Back Orbits

5 V-V384-PUP Orient from Visit 1 by +75 deg to +105 deg *OR* -105 deg* to -75 deg

6 V-V384-PUP Orient from Visit 5 by +15 to +30 deg

7 PSF-STAR Nominal (or other) Roll as Scheduled by STScI

8 V-V384-PUP Orient from Visit 5 by +45 deg to +60 deg

For each orbit we observe either our PSF star or V-V384-PUP and perform:

- 1) a coronagraphic imaging target acquisition
- 2) a series of short exposure with BAR5

We dither by $\pm 1/4$ pixel above and below the mid-line of the BAR5 finger in sets of eight short images for most of the Visit. In order to fill as much observable time as possible during a Visit, a few of these dithers have only 3 or 4 subexposures.

BAR5 WITH POS TARGS for dithering

For BAR5 we use the following for dithering:

POS TARGs to effect a ± 3 point dither centered on the bar as follows:

BAR10 with POSTARG 0.0024921, -0.0122491 (below mid-line of BAR5)

BAR10 with POSTARG 0.0, 0.0 (on mid-line of BAR5)

BAR10 with POSTARG 0.0024921, 0.0122491 (above mid-line of BAR5)

Proposal 15314 - V-V384-PUP (01) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

Thu Feb 01 00:02:50 GMT 2018

Visit	<p>Proposal 15314, V-V384-PUP (01), completed</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 -30D TO -15D FROM 02</p> <p><i>Comments: This is the first visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p> <p><i>Orient constraints: The optimal relative orient for this visit is -30 deg from Visit 2 and we ask that this visit is scheduled as close to that orient as possible. However, we allow for a relative orientation tolerance of -15 deg to -30 deg to assist in guide star selection and scheduling.</i></p> <p><i>Timing constraints: There is no specific timing constraint except that it needs to immediately precede Visit 2. They should be scheduled in back-to-back orbits.</i></p>															
	<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-V384-PUP</td> <td>RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000</td> <td>Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000</td> <td>V=8.77</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>B-V Color: 2.04</i> <i>Category=EXT-STAR</i> <i>Description=[CIRCUMSTELLAR MATTER, M III-I]</i></p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
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Proposal 15314 - V-V384-PUP (01) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	V-V384-PU P-ACQ (STIS.ta.100 9352)	(1) V-V384-PUP	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in V-V384-PUP (01)	0.5 Secs (0.5 Secs) [==>]	[1]
<p><i>Comments: V384 Pup: M2.5 I; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1009352</i></p>									
2	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (01)	147.2 Secs (147.2 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</i></p>									
3	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (01)	147.2 Secs (147.2 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</i></p>									
4	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4		Sequence 1-10 Non-Int in V-V384-PUP (01)	73.6 Secs (73.6 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures.</i></p>									

Exposures

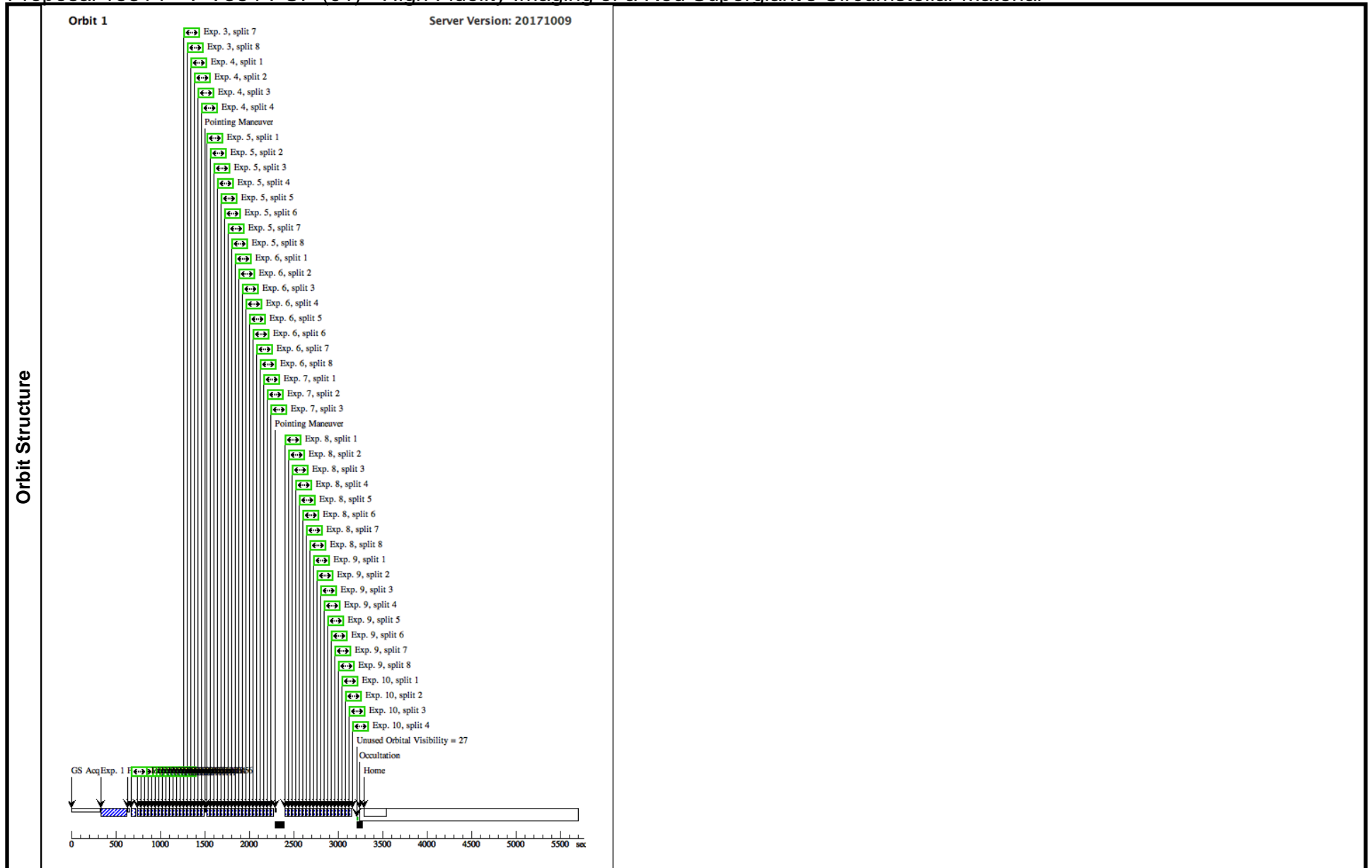
Proposal 15314 - V-V384-PUP (01) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

5	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 1)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
6	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 1)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
7	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=3	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 1)	55.2 Secs (55.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 3 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-V384-PUP (01) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

8	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 1)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
9	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 1)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
10	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 1)	73.6 Secs (73.6 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
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Proposal 15314 - V-V384-PUP (01) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material



Proposal 15314 - V-384-PUP (02) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

Visit	<p>Proposal 15314, V-384-PUP (02), completed Thu Feb 01 00:02:51 GMT 2018</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 280D TO 346 D; AFTER 01 BY 0.5 Orbits TO 1.5 Orbits</p> <p><i>Comments: This is the second visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(1)		V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77	Reference Frame: ICRS
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p>B-V Color: 2.04 Category=EXT-STAR Description=[CIRCUMSTELLAR MATTER, M III-I]</p>						

Proposal 15314 - V-384-PUP (02) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	V-V384-PU P-ACQ (STIS.ta.100 9352)	(1) V-V384-PUP	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in V-384-PUP (02)	0.5 Secs (0.5 Secs) [==>]	[1]
<p><i>Comments: V384 Pup: M2.5 I; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1009352</i></p>									
2	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-384-PUP (02)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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3	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-384-PUP (02)	147.2 Secs (147.2 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</i></p>									
4	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4		Sequence 1-10 Non-Int in V-384-PUP (02)	73.6 Secs (73.6 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 = 100 (the same that used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures.</i></p>									

Exposures

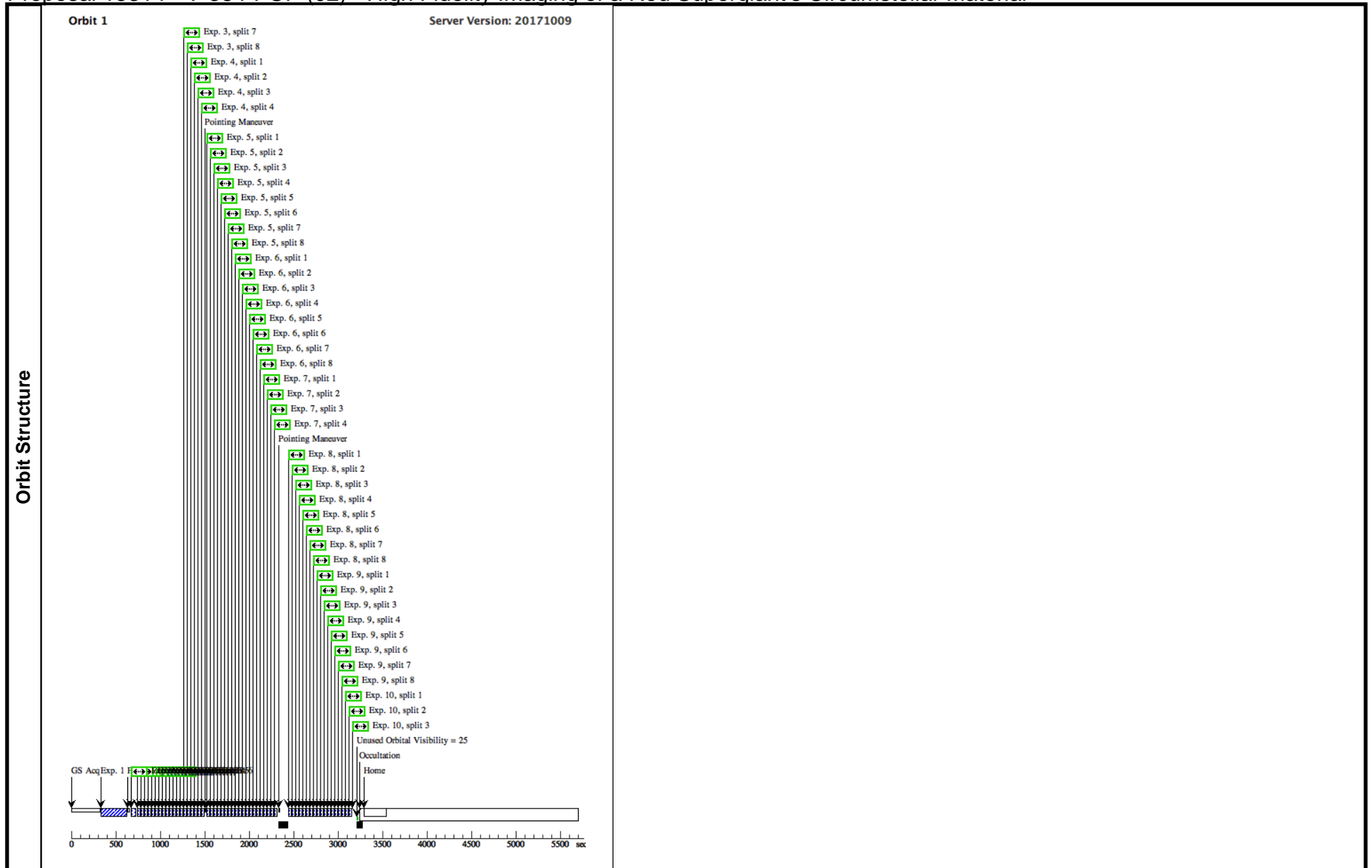
Proposal 15314 - V-384-PUP (02) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

5	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-384-PUP (02)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
6	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-384-PUP (02)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
7	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-384-PUP (02)	73.6 Secs (73.6 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-384-PUP (02) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

8	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-384-PUP (02)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was comissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>								
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>								
9	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-384-PUP (02)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was comissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>								
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>								
10	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=3	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-384-PUP (02)	55.2 Secs (55.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was comissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>								
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 3 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>								

Proposal 15314 - V-384-PUP (02) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material



Proposal 15314 - PSF Star (03) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

Thu Feb 01 00:02:51 GMT 2018

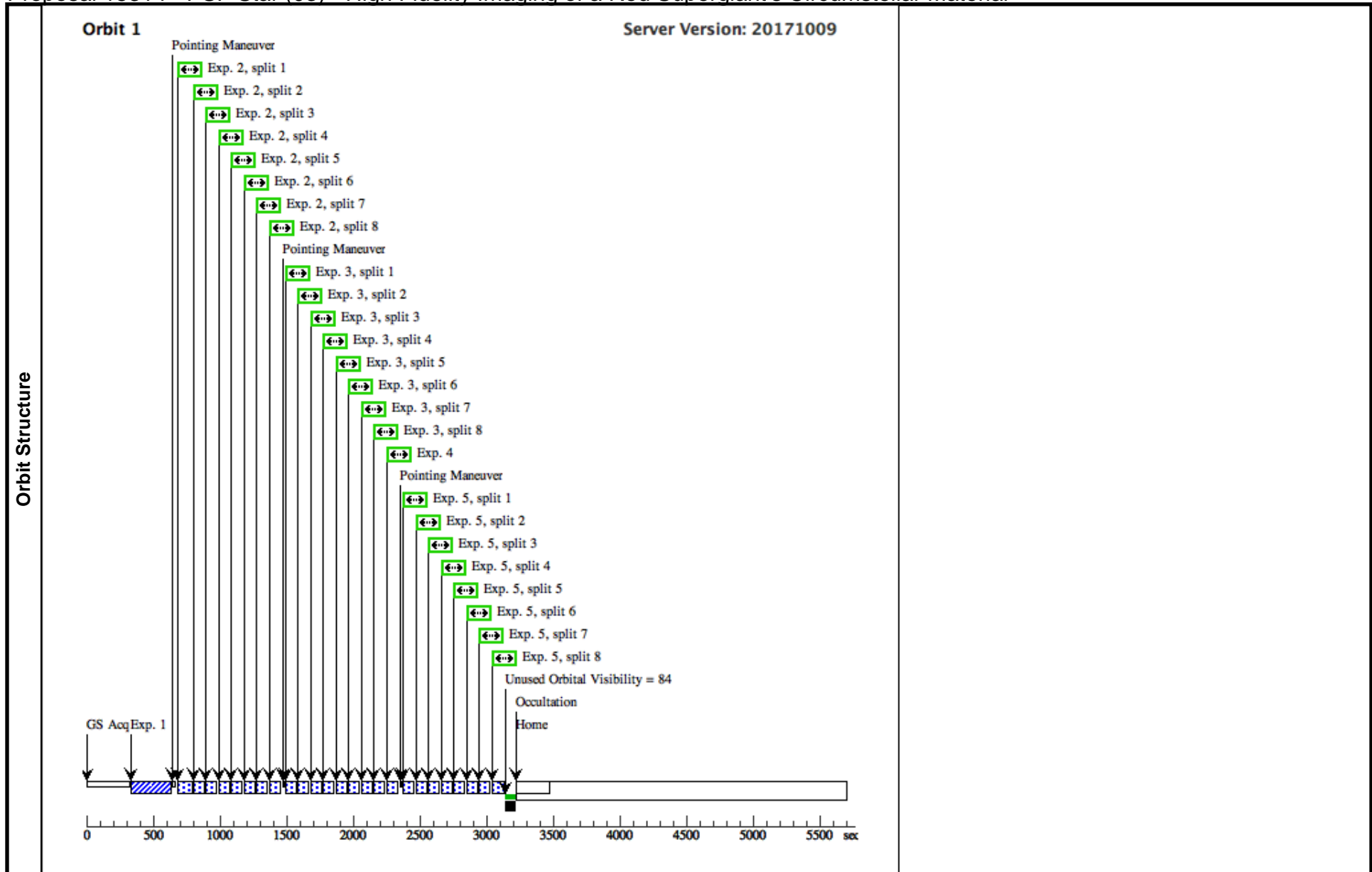
Visit	<p>Proposal 15314, PSF Star (03), completed</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: STIS/CCD</p> <p>Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; AFTER 02 BY 0.5 Orbits TO 1.5 Orbits</p> <p><i>Comments: This is the third visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p> <p><i>Orient Constraints: NOTE TO OUR PC: Our PSF star visits (#3 and #7) have 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>Timing Constraints: This visit should immediately proceed Visit 2. They should be in back-to-back orbits.</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>(2)</td> <td>PSF-TYC-6551-975-1</td> <td>RA: 07 36 43.1618 (114.1798408d) Dec: -28 17 30.00 (-28.29167d) Equinox: J2000</td> <td>Proper Motion RA: -2.470 mas/yr Proper Motion Dec: 0.778 mas/yr Parallax: 0.00059" Epoch of Position: 2000</td> <td>V=10.26+/-0.04</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	PSF-TYC-6551-975-1	RA: 07 36 43.1618 (114.1798408d) Dec: -28 17 30.00 (-28.29167d) Equinox: J2000	Proper Motion RA: -2.470 mas/yr Proper Motion Dec: 0.778 mas/yr Parallax: 0.00059" Epoch of Position: 2000	V=10.26+/-0.04	Reference Frame: ICRS	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>PSF was chosen to be close in color to V-V384-PUP. This star's B-V is 2.05.</i></p> <p><i>Magnitudes from Simbad are:</i> <i>B 12.31 [0.23]</i> <i>V 10.26 [0.04]</i> <i>J 6.764 [0.024]</i> <i>H 5.901 [0.042]</i> <i>K 5.620 [0.027]</i></p> <p><i>The spectral type for this star is unknown.</i> <i>Category=STAR</i> <i>Description=[UNDESIGNATED]</i></p>		
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	PSF-TYC-6551-975-1	RA: 07 36 43.1618 (114.1798408d) Dec: -28 17 30.00 (-28.29167d) Equinox: J2000	Proper Motion RA: -2.470 mas/yr Proper Motion Dec: 0.778 mas/yr Parallax: 0.00059" Epoch of Position: 2000	V=10.26+/-0.04	Reference Frame: ICRS												

Proposal 15314 - PSF Star (03) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
Exposures	1	PSF-AQM (2) PSF-TYC-6551-9 (STIS.ta.101 75-1 0701)	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-5 Non-Int in PSF Star (03)	2.2 Secs (2.2 Secs) [==>]	[1]	
	<p><i>Comments: TYC 6551-975-1: unknown spectral type; assumed spectral type of M2V for exposure time calculation because SED appears to be M type like; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1010701</i></p> <p><i>Exposure time created by exposure time calculator is consistent with scaling exposure time of V-V384-PUP to TYC 6551-975-1's brightness in V band.</i></p>									
	2	PSF-BAR5 (2) PSF-TYC-6551-9 Center 75-1	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; CENTERAXIS2=70 0; GAIN=4; SIZEAXIS2=100		Sequence 1-5 Non-Int in PSF Star (03)	588 Secs (588 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</i></p>									
	3	PSF-BAR5 (2) PSF-TYC-6551-9 DitherUp 75-1	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; CENTERAXIS2=70 0; GAIN=4; SIZEAXIS2=100	POS TARG 0.00249 21,0.0122491	Sequence 1-5 Non-Int in PSF Star (03)	588 Secs (588 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) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</i></p>										
	4	PSF-BAR5 (2) PSF-TYC-6551-9 DitherUp 75-1	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=NO; CENTERAXIS2=70 0; GAIN=4; SIZEAXIS2=100	POS TARG 0.00249 21,0.0122491	Sequence 1-5 Non-Int in PSF Star (03)	73.5 Secs (73.5 Secs) [==>]	[1]	
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of no CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</i></p>										

Proposal 15314 - PSF Star (03) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

5	PSF-BAR5 (2) PSF-TYC-6551-9 STIS/CCD, ACCUM, BAR5 DitherBelow 75-1	MIRROR	CR-SPLIT=8; CENTERAXIS2=70 0; GAIN=4; SIZEAXIS2=100	POS TARG 0.00249 21,-0.0122491	Sequence 1-5 Non-In t in PSF Star (03)	588 Secs (588 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) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</i></p>							
<p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</i></p>							



Proposal 15314 - V-V384-PUP (04) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

Thu Feb 01 00:02:51 GMT 2018

Visit	<p>Proposal 15314, V-V384-PUP (04), completed</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 +15D TO +30D FROM 02; AFTER 03 BY 0.5 Orbits TO 1.5 Orbits</p> <p><i>Comments: This is the fourth visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p> <p><i>Orient Constraints: The optimal relative orient for this visit is +30 deg from Visit 2 and ask that this visit is scheduled as close to that orient as possible. However, we allow for a relative orientation tolerance of +15 deg to +30 deg to assist in guide star selection and scheduling.</i></p> <p><i>Timing Constraints: This visit should immediately proceed Visit 3. They should be in back-to-back orbits.</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-V384-PUP</td> <td>RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000</td> <td>Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000</td> <td>V=8.77</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>B-V Color: 2.04</i> <i>Category=EXT-STAR</i> <i>Description=[CIRCUMSTELLAR MATTER, M III-I]</i></p>						#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous												
(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77	Reference Frame: ICRS													

Proposal 15314 - V-V384-PUP (04) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	V-V384-PU P-ACQ (STIS.ta.100 9352)	(1) V-V384-PUP	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in V-V384-PUP (04)	0.5 Secs (0.5 Secs) [==>]	[1]
<p>Comments: V384 Pup: M2.5 I; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1009352</p>									
2	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (04)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</p> <p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
3	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (04)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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4	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=3		Sequence 1-10 Non-Int in V-V384-PUP (04)	55.2 Secs (55.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
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Exposures

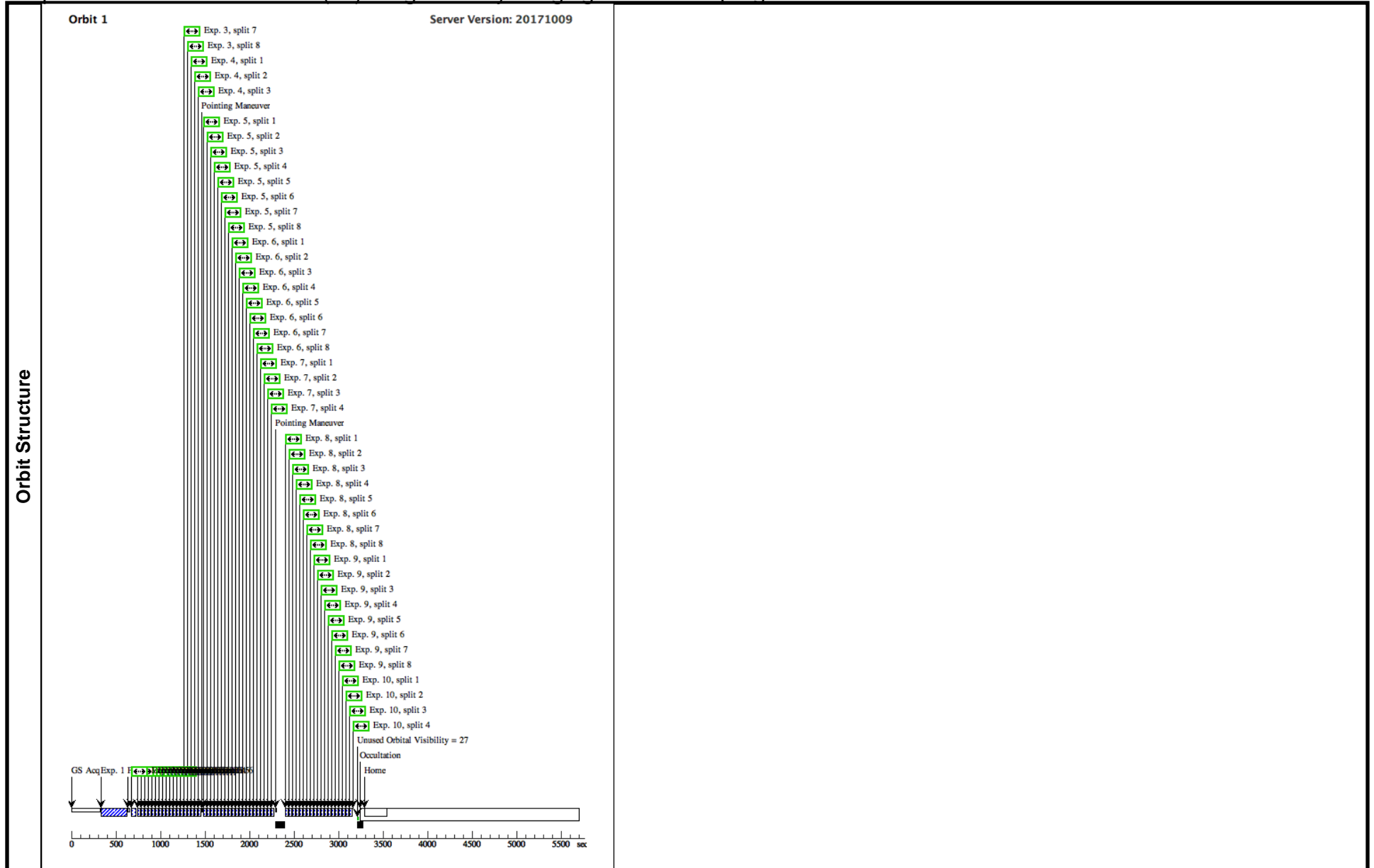
Proposal 15314 - V-V384-PUP (04) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

5	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 4)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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6	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 4)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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7	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 4)	73.6 Secs (73.6 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
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<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-V384-PUP (04) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

8	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 4)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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9	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 4)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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Proposal 15314 - V-V384-PUP (04) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material



Proposal 15314 - V-V384-PUP (05) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

Thu Feb 01 00:02:51 GMT 2018

Visit	<p>Proposal 15314, V-V384-PUP (05), scheduling</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 +75D TO +106D FROM 01</p> <p><i>Comments: This is the first visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p> <p><i>Orient constraints: The optimal relative orient for this visit is +90 deg *or* -90 deg from Visit 1 and ask that this visit is scheduled as close to one of those orients as possible. However, we allow for a relative orientation tolerance of +75 deg to +105 deg or -75 deg to -105 deg to assist in guide star selection and scheduling. We note that there is no way to specify that both relative orientations are acceptable.</i></p> <p><i>Timing constraints: There is no specific timing constraint except that it needs to immediately precede Visit 6. They should be scheduled in back-to-back orbits.</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-V384-PUP</td> <td>RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000</td> <td>Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000</td> <td>V=8.77</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p>B-V Color: 2.04 Category=EXT-STAR Description=[CIRCUMSTELLAR MATTER, M III-I]</p>						#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77
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Proposal 15314 - V-V384-PUP (05) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	V-V384-PU P-ACQ (STIS.ta.100 9352)	(1) V-V384-PUP	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in V-V384-PUP (05)	0.5 Secs (0.5 Secs) [==>]	[1]
<p><i>Comments: V384 Pup: M2.5; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1009352</i></p>									
2	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (05)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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3	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (05)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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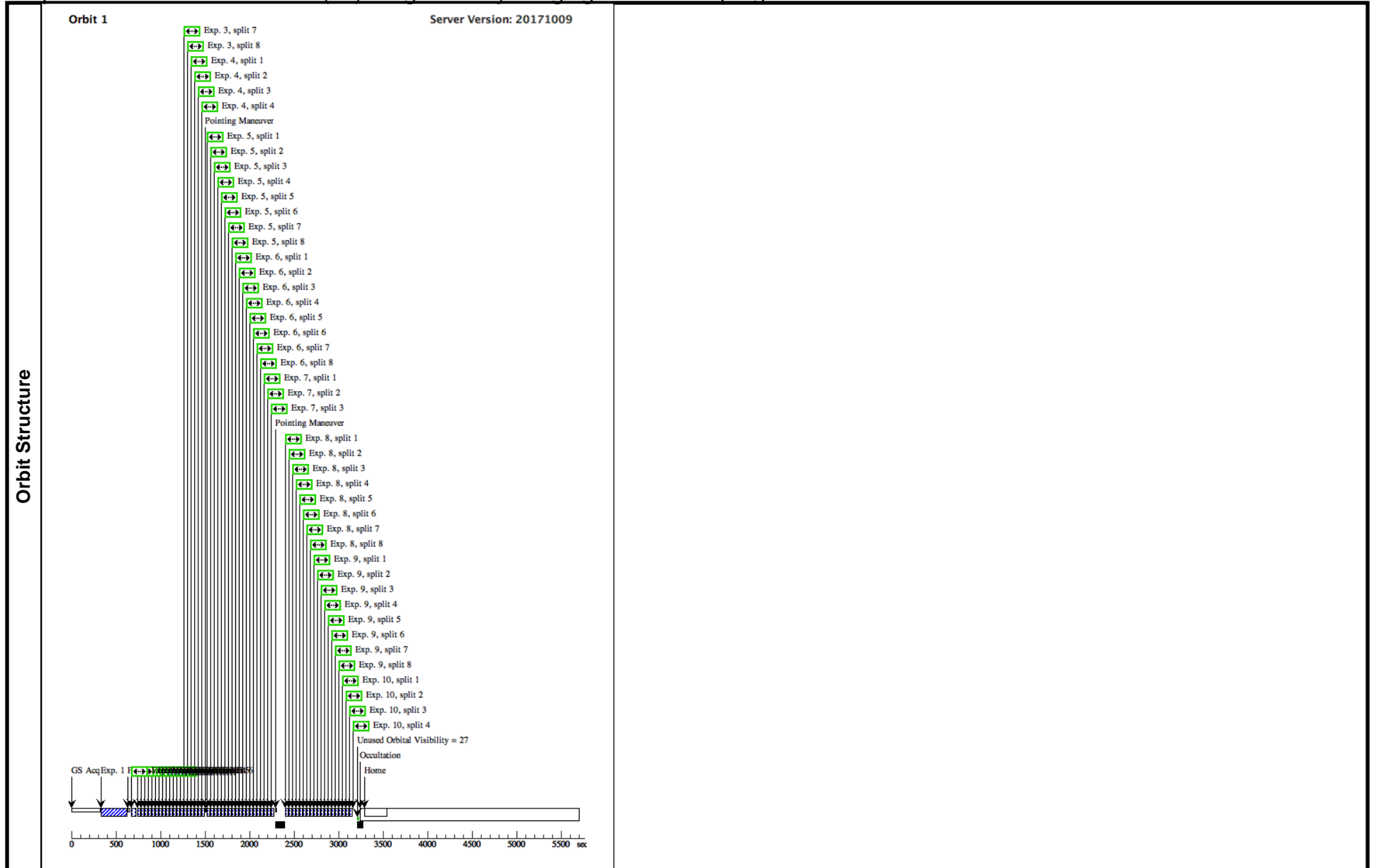
Proposal 15314 - V-V384-PUP (05) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

5	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 5)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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6	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 5)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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Proposal 15314 - V-V384-PUP (05) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

8	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 5)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
10	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 5)	73.6 Secs (73.6 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-V384-PUP (05) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material



Proposal 15314 - V-V384-PUP (06) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

Thu Feb 01 00:02:51 GMT 2018

Visit	<p>Proposal 15314, V-V384-PUP (06), scheduling</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 +15D TO +30D FROM 05; AFTER 05 BY 0.5 Orbits TO 1.5 Orbits</p> <p><i>Comments: This is the second visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p> <p><i>Orient constraints: The optimal relative orient for this visit is +30 deg from Visit 5 and ask that this visit is scheduled as close to that orient as possible. However, we allow for a relative orientation tolerance of +15 deg to +30 deg to assist in guide star selection and scheduling.</i></p> <p><i>Timing constraints: There is no specific timing constraint except that it needs to immediately proceed Visit 5. They should be scheduled in back-to-back orbits.</i></p>															
	<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-V384-PUP</td> <td>RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000</td> <td>Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000</td> <td>V=8.77</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>B-V Color: 2.04</i></p> <p><i>Category=EXT-STAR</i></p> <p><i>Description=[CIRCUMSTELLAR MATTER, M III-I]</i></p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77	Reference Frame: ICRS											

Proposal 15314 - V-V384-PUP (06) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	V-V384-PU P-ACQ (STIS.ta.100 9352)	(1) V-V384-PUP	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in V-V384-PUP (06)	0.5 Secs (0.5 Secs) [==>]	[1]
<p><i>Comments: V384 Pup: M2.5; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1009352</i></p>									
2	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (06)	147.2 Secs (147.2 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</i></p>									
3	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (06)	147.2 Secs (147.2 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</i></p>									
4	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4		Sequence 1-10 Non-Int in V-V384-PUP (06)	73.6 Secs (73.6 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 = 100 (the same that used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures.</i></p>									

Exposures

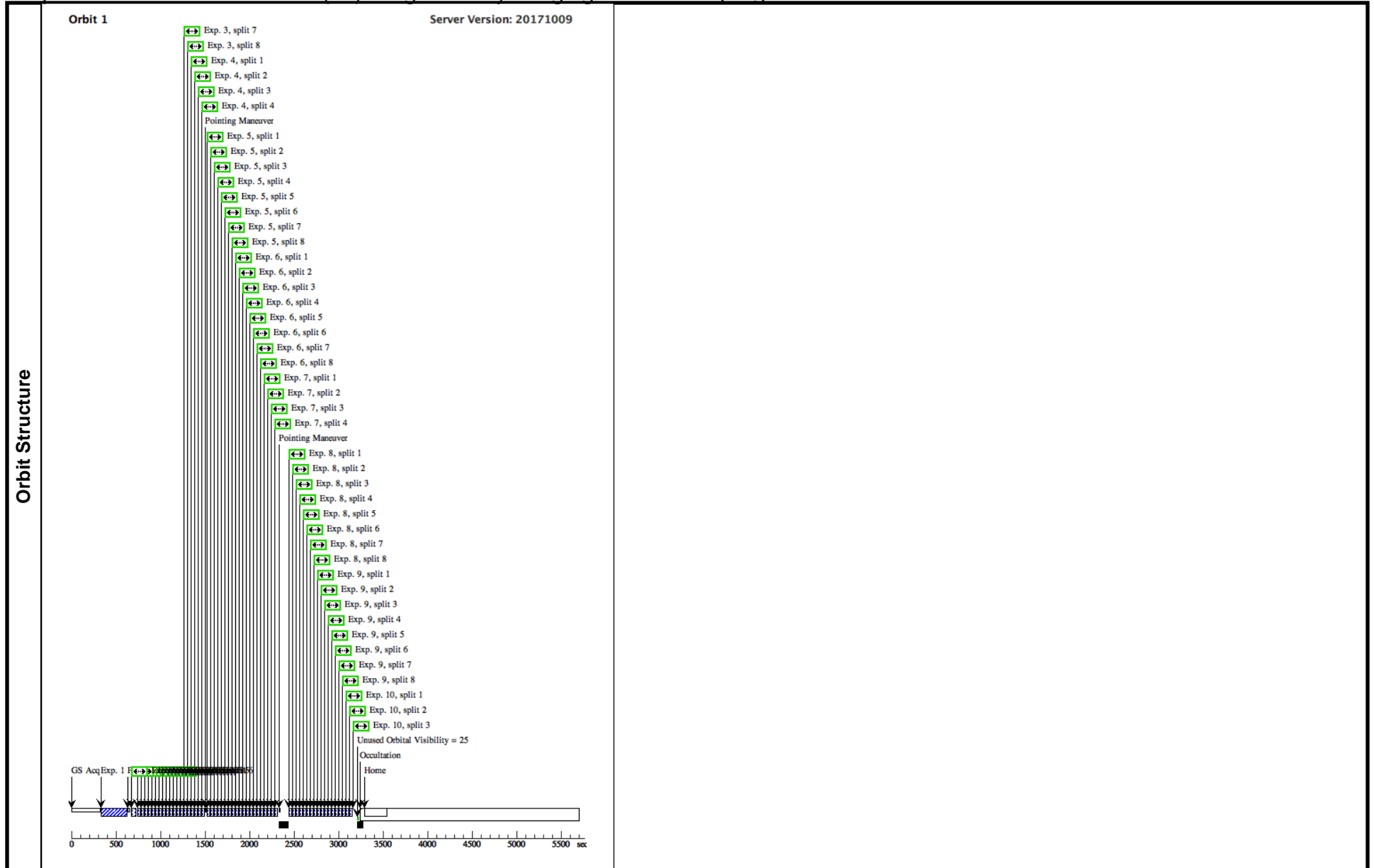
Proposal 15314 - V-V384-PUP (06) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

5	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 6)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
6	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 6)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
7	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 6)	73.6 Secs (73.6 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-V384-PUP (06) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

8	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 6)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]	
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
9	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 6)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]	
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
10	V384-Pup-B (1) V-V384-PUP AR5-Dither Below	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=3	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 6)	55.2 Secs (55.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]	
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 3 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-V384-PUP (06) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material



Proposal 15314 - PSF Star (07) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

Thu Feb 01 00:02:51 GMT 2018

Visit	<p>Proposal 15314, PSF Star (07), scheduling</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; AFTER 06 BY 0.5 Orbits TO 1.5 Orbits</p> <p><i>Comments: This is the third visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p> <p><i>Orient Constraints: NOTE TO OUR PC: Our PSF star visits (#3 and #7) have 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 6 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>Timing constraints: There is no specific timing constraint except that it needs to immediately proceed Visit 6. They should be scheduled in back-to-back orbits.</i></p>															
	<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>PSF-TYC-6551-975-1</td> <td>RA: 07 36 43.1618 (114.1798408d) Dec: -28 17 30.00 (-28.29167d) Equinox: J2000</td> <td>Proper Motion RA: -2.470 mas/yr Proper Motion Dec: 0.778 mas/yr Parallax: 0.00059" Epoch of Position: 2000</td> <td>V=10.26+/-0.04</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>PSF was chosen to be close in color to V-V384-PUP. This star's B-V is 2.05.</i></p> <p><i>Magnitudes from Simbad are:</i> <i>B 12.31 [0.23]</i> <i>V 10.26 [0.04]</i> <i>J 6.764 [0.024]</i> <i>H 5.901 [0.042]</i> <i>K 5.620 [0.027]</i></p> <p><i>The spectral type for this star is unknown.</i> <i>Category=STAR</i> <i>Description=[UNDESIGNATED]</i></p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	PSF-TYC-6551-975-1	RA: 07 36 43.1618 (114.1798408d) Dec: -28 17 30.00 (-28.29167d) Equinox: J2000	Proper Motion RA: -2.470 mas/yr Proper Motion Dec: 0.778 mas/yr Parallax: 0.00059" Epoch of Position: 2000	V=10.26+/-0.04
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	PSF-TYC-6551-975-1	RA: 07 36 43.1618 (114.1798408d) Dec: -28 17 30.00 (-28.29167d) Equinox: J2000	Proper Motion RA: -2.470 mas/yr Proper Motion Dec: 0.778 mas/yr Parallax: 0.00059" Epoch of Position: 2000	V=10.26+/-0.04	Reference Frame: ICRS											
Fixed Targets																

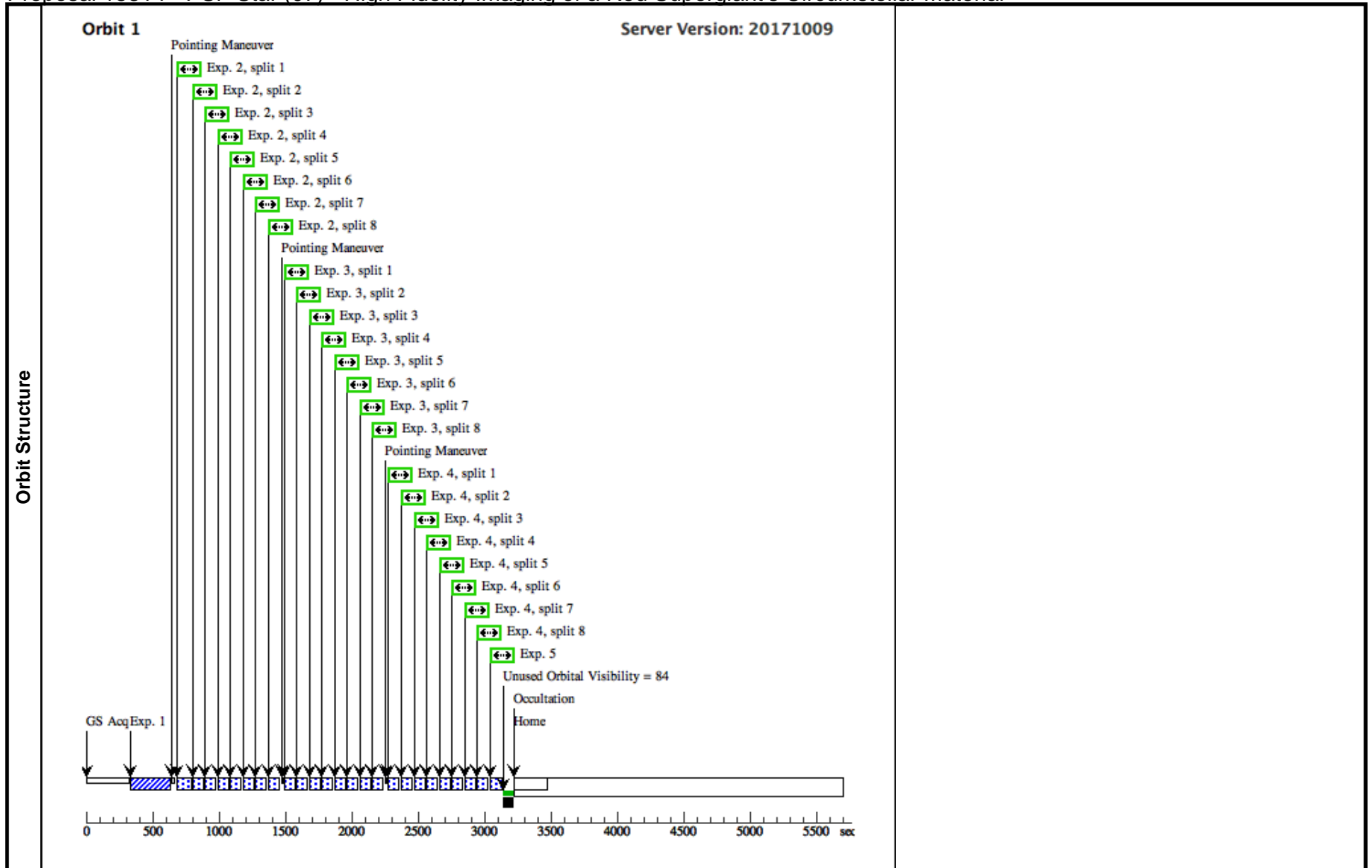
Proposal 15314 - PSF Star (07) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	PSF-AQM (STIS.ta.101 0701)	(2) PSF-TYC-6551-9 75-1	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-5 Non-Int in PSF Star (07)	2.2 Secs (2.2 Secs) [==>]	[1]
<p>Comments: TYC 6551-975-1: unknown spectral type; assumed spectral type of M2V for exposure time calculation because SED appears to be M type like; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1010701</p> <p>Exposure time created by exposure time calculator is consistent with scaling exposure time of V-V384-PUP to TYC 6551-975-1's brightness in V band.</p>									
2	PSF-BAR5 Center	(2) PSF-TYC-6551-9 75-1	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; CENTERAXIS2=700; GAIN=4; SIZEAXIS2=100		Sequence 1-5 Non-Int in PSF Star (07)	588 Secs (588 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</p> <p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</p>									
3	PSF-BAR5 DitherUp	(2) PSF-TYC-6551-9 75-1	STIS/CCD, ACCUM, BAR5	MIRROR	CR-SPLIT=8; CENTERAXIS2=700; GAIN=4; SIZEAXIS2=100	POS TARG 0.00249 21,0.0122491	Sequence 1-5 Non-Int in PSF Star (07)	588 Secs (588 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p> <p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</p>									

Exposures

Proposal 15314 - PSF Star (07) - High Fidelity Imaging of a Red Superqiant's Circumstellar Material

4	PSF-BAR5 (2) PSF-TYC-6551-9 STIS/CCD, ACCUM, BAR5 DitherBelow 75-1	MIRROR	CR-SPLIT=8; CENTERAXIS2=70 0; GAIN=4; SIZEAXIS2=100	POS TARG 0.00249 21,-0.0122491	Sequence 1-5 Non-In t in PSF Star (07)	588 Secs (588 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG offsets of $x = 0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 100$ (the same that was used for GO program 13786)</p> <p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</p>							
5	PSF-BAR5 (2) PSF-TYC-6551-9 STIS/CCD, ACCUM, BAR5 DitherBelow 75-1	MIRROR	CR-SPLIT=NO; CENTERAXIS2=70 0; GAIN=4; SIZEAXIS2=100	POS TARG 0.00249 21,-0.0122491	Sequence 1-5 Non-In t in PSF Star (07)	73.5 Secs (73.5 Secs) [==>]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG offsets of $x = 0.0024921$ arcsec and $y = -0.0122491$). We then use a subarray readout of $CENTYERAXIS2 = 700$ appropriate for BAR5 with a $SIZEAXIS2 = 100$ (the same that was used for GO program 13786)</p> <p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 73.5 seconds per exposure will yield 75% to saturation in the brightest pixel of TYC-6551-957-1. Our exposures are thus comprised of no CR-SPLITS in integral units of 73.5 second exposures. (Note: AU Mic is approximately 4.5 times brighter TYC-6551-957-1.)</p>							



Proposal 15314 - V-V384-PUP (08) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

Thu Feb 01 00:02:51 GMT 2018

Visit	<p>Proposal 15314, V-V384-PUP (08), implementation</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 +42D TO +60D FROM 05; AFTER 07 BY 0.5 Orbits TO 1.5 Orbits</p> <p><i>Comments: This is the fourth visit in a set of four that must all be conducted back to back (the four visits within each set must be executed sequentially in contiguous orbits interrupted only by Earth occultation).</i></p> <p><i>Orient constraints: The optimal relative orient for this visit is +60 deg from Visit 5 and ask that this visit is scheduled as close to that orient as possible. However, we allow for a relative orientation tolerance of +45 deg to +60 deg to assist in guide star selection and scheduling.</i></p> <p><i>Timing constraints: There is no specific timing constraint except that it needs to immediately proceed Visit 7. They should be scheduled in back-to-back orbits.</i></p>															
	<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-V384-PUP</td> <td>RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000</td> <td>Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000</td> <td>V=8.77</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>B-V Color: 2.04</i> <i>Category=EXT-STAR</i> <i>Description=[CIRCUMSTELLAR MATTER, M III-I]</i></p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(1)	V-V384-PUP	RA: 07 41 2.6293 (115.2609554d) Dec: -31 40 59.10 (-31.68308d) Equinox: J2000	Proper Motion RA: -1.96 mas/yr Proper Motion Dec: 2.24 mas/yr Parallax: 0.0002" Epoch of Position: 2000	V=8.77	Reference Frame: ICRS											

Proposal 15314 - V-V384-PUP (08) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	V-V384-PU P-ACQ (STIS.ta.1009352)	(1) V-V384-PUP	STIS/CCD, ACQ, F25ND3	MIRROR			Sequence 1-10 Non-Int in V-V384-PUP (08)	0.5 Secs (0.5 Secs) [==>]	[1]
<p><i>Comments: V384 Pup: M2.5; SNR+100; exposure time from STIS AQC ETC; ETC Request ID: STIS.ta.1009352</i></p>									
2	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (08)	147.2 Secs (147.2 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</i></p>									
3	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8		Sequence 1-10 Non-Int in V-V384-PUP (08)	147.2 Secs (147.2 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) that was commissioned in GO program 12923. Here we 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 = 100 (the same that was used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</i></p>									
4	V384-Pup-B AR5Center	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=700; SIZEAXIS2=100; GAIN=4; CR-SPLIT=3		Sequence 1-10 Non-Int in V-V384-PUP (08)	55.2 Secs (55.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)]	[1]
<p><i>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 = 100 (the same that used for GO program 13786)</i></p> <p><i>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 3 CR-SPLITS in integral units of 18.4 second exposures.</i></p>									

Exposures

Proposal 15314 - V-V384-PUP (08) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

5	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 8)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
6	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 8)	147.2 Secs (147.2 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
7	V384-Pup-B (1) V-V384-PUP AR5-Dither Up	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4	POS TARG 0.00249 21,0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 8)	73.6 Secs (73.6 Secs)	[==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p>									
<p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-V384-PUP (08) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

8	V384-Pup-B AR5-Dither Below	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 8)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p> <p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 8 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									
9	V384-Pup-B AR5-Dither Below	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=8	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 8)	147.2 Secs (147.2 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)] [==>(Split 5)] [==>(Split 6)] [==>(Split 7)] [==>(Split 8)]	[1]
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10	V384-Pup-B AR5-Dither Below	(1) V-V384-PUP	STIS/CCD, ACCUM, BAR5	MIRROR	CENTERAXIS2=70 0; SIZEAXIS2=100; GAIN=4; CR-SPLIT=4	POS TARG 0.00249 21,-0.0122491	Sequence 1-10 Non-I nt in V-V384-PUP (0 8)	73.6 Secs (73.6 Secs) [==>(Split 1)] [==>(Split 2)] [==>(Split 3)] [==>(Split 4)]	[1]
<p>Comments: NOTE TO PC/CS: Here we use the BAR5 occulter (Aperture) that was commissioned in GO program 12923. Here we 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 TARG 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 = 100 (the same that was used for GO program 13786)</p> <p>SCALABLE BENCHMARK: We scale our exposure times from the end product result of the AU Mic observations in GO-12923. We expect that 18.4 seconds per exposure will yield 75% to saturation in the brightest pixel of V-V384-PUP. Our exposures are thus comprised of 4 CR-SPLITS in integral units of 18.4 second exposures. (Note: V-V384-PUP is approximately 10% dimmer than AU Mic.)</p>									

Proposal 15314 - V-V384-PUP (08) - High Fidelity Imaging of a Red Supergiant's Circumstellar Material

