



12679 - Luminosity-Distance Standards from Gaia and HST

Cycle: 18, Proposal Category: GO/DD

(Availability Mode: AVAILABLE)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Adam Riess (PI) (Contact)	The Johns Hopkins University	ariess@pha.jhu.edu
Dr. John W. MacKenty (CoI)	Space Telescope Science Institute	mackenty@stsci.edu
Dr. John Grunsfeld (CoI)	Space Telescope Science Institute	grunsfeld@stsci.edu
Prof. Lucas Macri (CoI)	Texas A & M University	lmacri@physics.tamu.edu

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	(2) V-SY-AUR	WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:14:41.0	yes
02	(3) V-RX-AUR	WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:15:08.0	yes
22	(3) V-RX-AUR DARK	S/C WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:15:24.0	yes
21	(2) V-SY-AUR DARK	S/C WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:15:37.0	yes
23	(3) V-RX-AUR	WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:15:52.0	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>
24	(2) V-SY-AUR	WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:16:10.0	yes
25	(2) V-SY-AUR	WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:16:21.0	yes
26	(2) V-SY-AUR	WFC3/IR WFC3/UVIS	1	26-Jan-2013 02:16:31.0	yes

8 Total Orbits Used

ABSTRACT

The ESA astrometric space mission, Gaia, is poised to measure parallaxes of a billion Milky Way stars, revolutionizing our knowledge of the luminosity and distance scales of every stellar type. Twenty-five of these billion sources are invaluable; nearby, long period classical Cepheids whose 1% to 3% parallax measurements from Gaia can solidify the distance scale beyond the Milky Way and the Hubble constant to better than 1% precision. The missing component to achieving this goal is a precise photometric cross-calibration between these bright Milky Way Cepheids with $4 < m(H) < 8$ and those observed with HST in galaxies at distances of tens of megaparsecs. While temporal variations in the ground-based near-IR system due to atmospheric water and OH prohibit such precise cross-calibration between the ground and HST photometric systems, it can now be done directly with HST. We propose to observe 25 of the nearest Milky Way Cepheids with WFC3 using modes recently devised to accommodate very bright targets such as Vega. Our goal is to retain and transfer the precision of the distance scale measured with Gaia to distances only measurable by HST. Undertaking this calibration now will secure this invaluable enhancement to HST's enormous archive of over a thousand orbits of data on the distance scale, open a new path for the scientific use of these modes by future GOs and inform planning of their future use with JWST.

OBSERVING DESCRIPTION

TBD

Proposal 12679 - Visit 01 - Luminosity-Distance Standards from Gaia and HST

Sat Jan 26 02:16:41 GMT 2013

Visit	Proposal 12679, Visit 01, failed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 280D TO 280 D; BETWEEN 12-SEP-2011 AND 15-SEP-2011; VISIBILITY INTERVAL 3600 S					
	(Visit 01) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 01) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 01) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 01) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>						

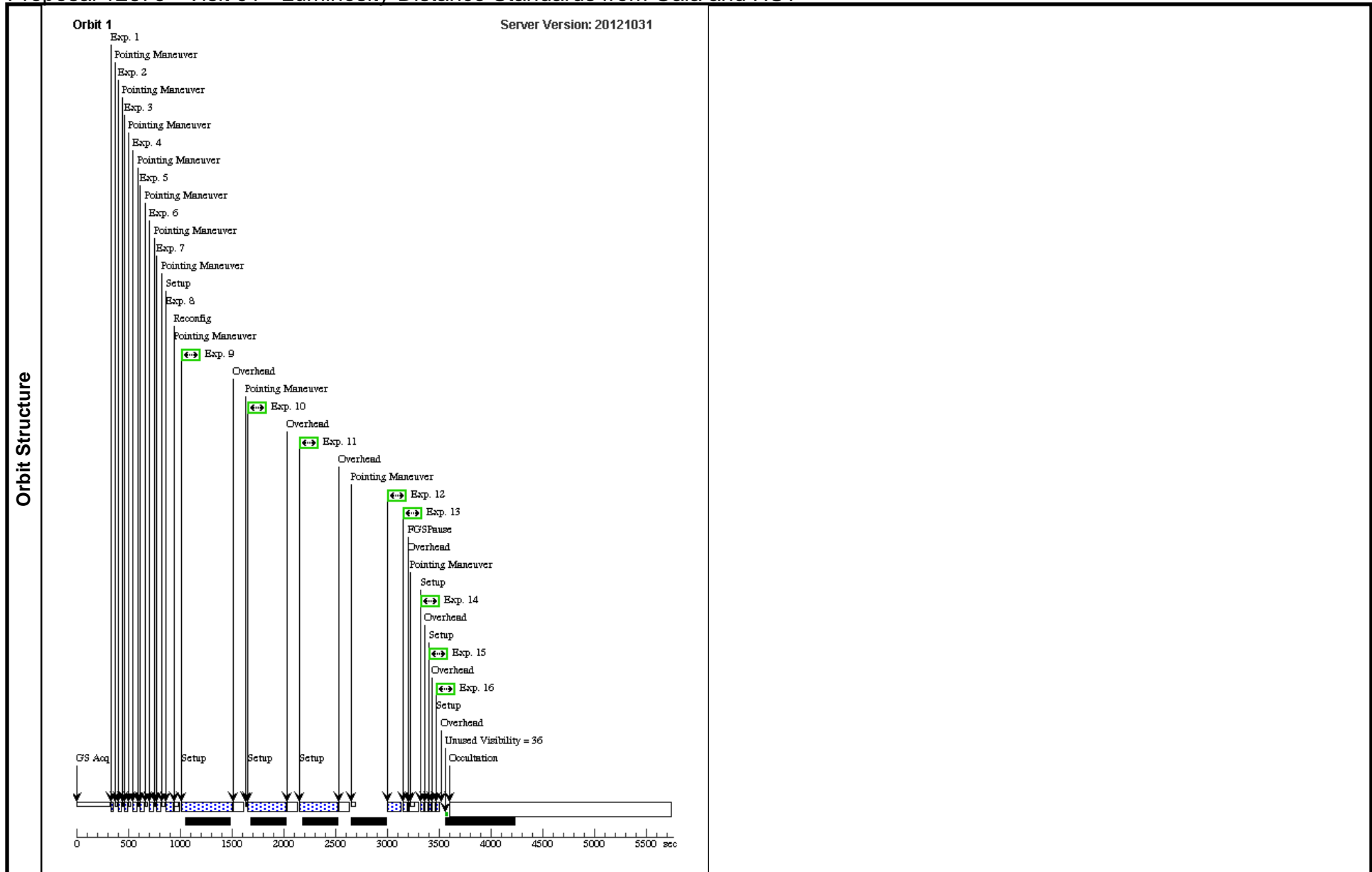
Proposal 12679 - Visit 01 - Luminosity-Distance Standards from Gaia and HST

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, IRSUB64	F167N	SAMP-SEQ=RAPID ; NSAMP=2		Sequence 1-16 Non-Int in Visit 01 Same Obset in Sequence 1-16 Non-Int in Visit 01	[==>]	[1]
<p>Comments: 1. IR: Shortest narrow-band direct image to identify Cepheid for subsequent grism. F167N, IRSUB64 (64x64 subarray) RAPID NSAMP=2 (unsaturated in first samp for H>5, 2/3 Cepheids, could be used with Cepheid stellar type to get F160W mag), could do 2 dithers. Dither small integer 1,1, to allow easy combination in pixel space</p>									
2		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 0,6.055	Sequence 1-16 Non-Int in Visit 01 Same Obset in Sequence 1-16 Non-Int in Visit 01	[==>]	[1]
<p>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</p>									
3		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -0.1355, 6.1761	Sequence 1-16 Non-Int in Visit 01 Same Obset in Sequence 1-16 Non-Int in Visit 01	[==>]	[1]
<p>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</p>									
4		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 5,null	Sequence 1-16 Non-Int in Visit 01 Same Obset in Sequence 1-16 Non-Int in Visit 01	[==>]	[1]
<p>Comments: 4. IR: Full frame F160W to get photometry of fainter background stars, RAPID, NSAMP=5,unsaturated photometry for stars H>12.5, need to check if there are some of these. Otherwise this won't help (could use subarray if there are some at H>10). 2 dithers not critical since this is a statistical measure and I can tolerate a bad pix</p>									
5		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	F125W	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 5.6,0.6	Sequence 1-16 Non-Int in Visit 01 Same Obset in Sequence 1-16 Non-Int in Visit 01	[==>]	[1]
<p>Comments: 4. IR: Full frame F160W to get photometry of fainter background stars, RAPID, NSAMP=5,unsaturated photometry for stars H>12.5, need to check if there are some of these. Otherwise this won't help (could use subarray if there are some at H>10). 2 dithers not critical since this is a statistical measure and I can tolerate a bad pix</p>									
6		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-16 Non-Int in Visit 01 Same Obset in Sequence 1-16 Non-Int in Visit 01	[==>]	[1]
<p>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRSIM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroeth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</p>									
7		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.371,-0.2422	Sequence 1-16 Non-Int in Visit 01 Same Obset in Sequence 1-16 Non-Int in Visit 01	[==>]	[1]
<p>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRSIM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroeth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</p>									

Exposures

Proposal 12679 - Visit 01 - Luminosity-Distance Standards from Gaia and HST

8	(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 10; NSAMP=4	POS TARG 27.1,-40 ; SPATIAL SCAN 0.9 9,90.0 Degrees,Forw ard	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	[==>]	[1]
<p><i>Comments: 5. IR: Full frame, G141, spatial scan at FGS 1"/sec rate, RAPID, NSAMP=10 to 15, same pos targ as #3, goal to get -1 and +1 orders of Cep, excellent S/N. This is not so critical for Cepheids with H>5 since already got this in #2, but its important for brighter Cepheids.</i></p>								
9	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forw ard	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	455 Secs [==>]	[1]
10	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Re verse	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	348 Secs [==>]	[1]
11	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Forw ard	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	348 Secs [==>]	[1]
12	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG null,-2	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	10 Secs [==>]	[1]
13	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W		POS TARG null,-2	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	10 Secs [==>]	[1]
14	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W		POS TARG null,-7.4 4; SPATIAL SCAN 3.0 .90,05 Degrees,Forw ard; EXP PCS MODE G YRO	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	5 Secs [==>]	[1]
15	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W		POS TARG null,-7.4 4; SPATIAL SCAN 3.0 .90,05 Degrees,Reve rse; EXP PCS MODE G YRO	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	5 Secs [==>]	[1]
16	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W		POS TARG null,-7.4 4; SPATIAL SCAN 3.0 .90,05 Degrees,Forw ard; EXP PCS MODE G YRO	Sequence 1-16 Non-Int in Visit 01 Same Obset in Seque nce 1-16 Non-Int in Visit 01	5 Secs [==>]	[1]



Proposal 12679 - Visit 02 - Luminosity-Distance Standards from Gaia and HST

Sat Jan 26 02:16:45 GMT 2013

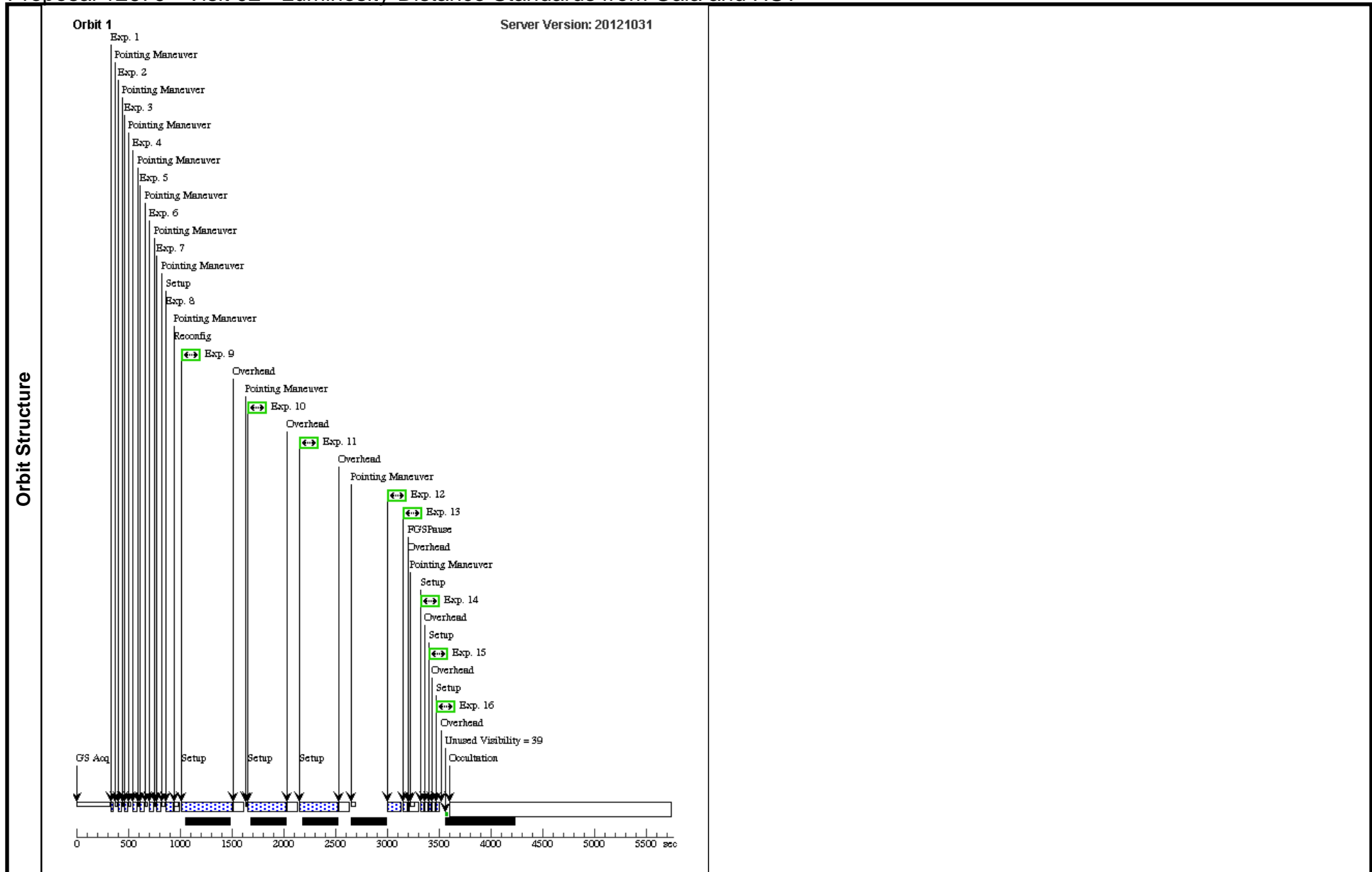
Visit	Proposal 12679, Visit 02, failed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 278D TO 278 D; BETWEEN 10-SEP-2011 AND 13-SEP-2011; VISIBILITY INTERVAL 3600 S																
	Diagnosics (Visit 02) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 02) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 02) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 02) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING																
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>(3)</td> <td>V-RX-AUR</td> <td>RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000</td> <td></td> <td>V=7.62</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	V-RX-AUR	RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000		V=7.62	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(3)	V-RX-AUR	RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000		V=7.62	Reference Frame: ICRS												
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.																	

Proposal 12679 - Visit 02 - Luminosity-Distance Standards from Gaia and HST

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, IRSUB64	F167N	SAMP-SEQ=RAPID ; NSAMP=2		Sequence 1-16 Non-Int in Visit 02 Same Obset in Sequence 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 1. IR: Shortest narrow-band direct image to identify Cepheid for subsequent grism. F167N, IRSUB64 (64x64 subarray) RAPID NSAMP=2 (unsaturated in first samp for H>5, 2/3 Cepheids, could be used with Cepheid stellar type to get F160W mag), could do 2 dithers. Dither small integer 1,1, to allow easy combination in pixel space</p>									
2		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 0,6.055	Sequence 1-16 Non-Int in Visit 02 Same Obset in Sequence 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</p>									
3		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -0.1355, 6.1761	Sequence 1-16 Non-Int in Visit 02 Same Obset in Sequence 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</p>									
4		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 5,null	Sequence 1-16 Non-Int in Visit 02 Same Obset in Sequence 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 4. IR: Full frame F160W to get photometry of fainter background stars, RAPID, NSAMP=5,unsaturated photometry for stars H>12.5, need to check if there are some of these. Otherwise this won't help (could use subarray if there are some at H>10). 2 dithers not critical since this is a statistical measure and I can tolerate a bad pix</p>									
5		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	F125W	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 5.6,0.6	Sequence 1-16 Non-Int in Visit 02 Same Obset in Sequence 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 4. IR: Full frame F160W to get photometry of fainter background stars, RAPID, NSAMP=5,unsaturated photometry for stars H>12.5, need to check if there are some of these. Otherwise this won't help (could use subarray if there are some at H>10). 2 dithers not critical since this is a statistical measure and I can tolerate a bad pix</p>									
6		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-16 Non-Int in Visit 02 Same Obset in Sequence 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRISM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</p>									
7		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.371,-0.2422	Sequence 1-16 Non-Int in Visit 02 Same Obset in Sequence 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRISM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</p>									

Proposal 12679 - Visit 02 - Luminosity-Distance Standards from Gaia and HST

8	(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 10; NSAMP=4	POS TARG 27.1,-40 ; SPATIAL SCAN 0.9 9,90.0 Degrees,Forw ard	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	[==>]	[1]
<p>Comments: 5. IR: Full frame, G141, spatial scan at FGS 1"/sec rate, RAPID, NSAMP=10 to 15, same pos targ as #3, goal to get -1 and +1 orders of Cep, excellent S/N. This is not so critical for Cepheids with H>5 since already got this in #2, but its important for brighter Cepheids.</p>								
9	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forw ard	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	455 Secs [==>]	[1]
10	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Re verse	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	348 Secs [==>]	[1]
11	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Forw ard	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	348 Secs [==>]	[1]
12	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG null,-2	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	10 Secs [==>]	[1]
13	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W		POS TARG null,-2	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	10 Secs [==>]	[1]
14	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W		POS TARG null,-9.2 4; SPATIAL SCAN 4.5 .90.05 Degrees,Forw ard; EXP PCS MODE G YRO	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	4 Secs [==>]	[1]
15	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W		POS TARG null,-9.2 4; SPATIAL SCAN 4.5 .90.05 Degrees,Reve rse; EXP PCS MODE G YRO	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	4 Secs [==>]	[1]
16	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W		POS TARG null,-9.2 4; SPATIAL SCAN 4.5 .90.05 Degrees,Forw ard; EXP PCS MODE G YRO	Sequence 1-16 Non-Int in Visit 02 Same Obset in Seque nce 1-16 Non-Int in Visit 02	4 Secs [==>]	[1]



Proposal 12679 - Visit 22 - Luminosity-Distance Standards from Gaia and HST

Visit	Proposal 12679, Visit 22, completed Sat Jan 26 02:16:47 GMT 2013 Diagnostic Status: Warning Scientific Instruments: WFC3/IR, S/C, WFC3/UVIS Special Requirements: ORIENT 274D TO 275 D; BETWEEN 26-SEP-2011 AND 02-OCT-2011																
	Diagnosics (Visit 22) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 22) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 22) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 22) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING																
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>(3)</td> <td>V-RX-AUR</td> <td>RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000</td> <td></td> <td>V=7.62</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	V-RX-AUR	RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000		V=7.62	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(3)	V-RX-AUR	RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000		V=7.62	Reference Frame: ICRS												
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>																	

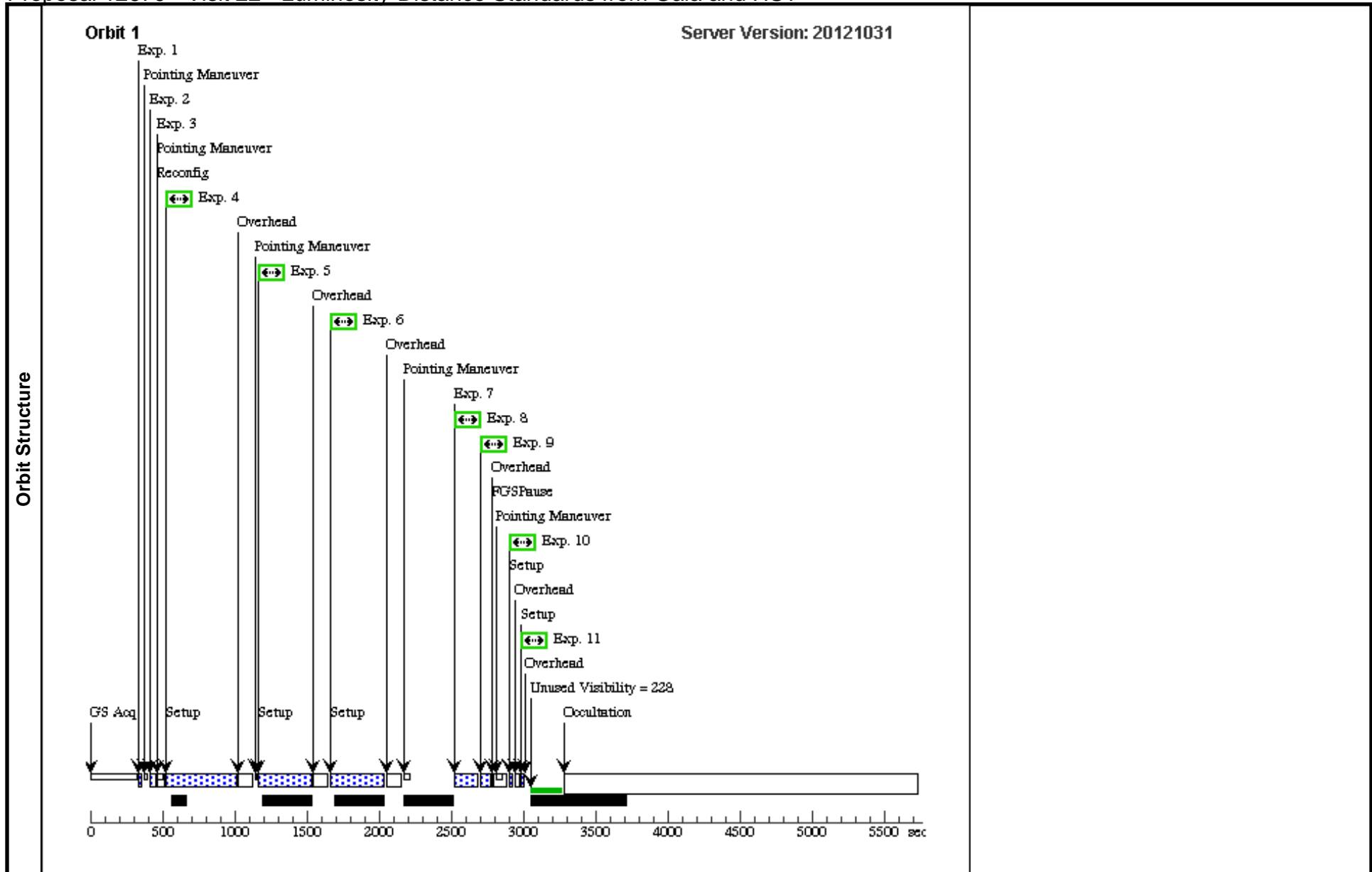
Proposal 12679 - Visit 22 - Luminosity-Distance Standards from Gaia and HST

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, IRSUB64	F167N	SAMP-SEQ=RAPID ; NSAMP=2		Sequence 1-11 Non-Int in Visit 22 Same Obset in Sequence 1-11 Non-Int in Visit 22	[==>]	[1]
<p><i>Comments: 1. IR: Shortest narrow-band direct image to identify Cepheid for subsequent grism. F167N, IRSUB64 (64x64 subarray) RAPID NSAMP=2 (unsaturated in first samp for H>5, 2/3 Cepheids, could be used with Cepheid stellar type to get F160W mag), could do 2 dithers. Dither small integer 1,1, to allow easy combination in pixel space</i></p>									
2		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-11 Non-Int in Visit 22 Same Obset in Sequence 1-11 Non-Int in Visit 22 Same Alignment in Same Obset in Sequence 1-11 Non-Int in Visit 22	[==>]	[1]
<p><i>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRSIM1024, RAPID, NSAMP= 4, puts reference at 497.562, need to move pos targ x=+200 pix or +27.1" to center on zeroeth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</i></p>									
3	Disable TDF	DARK	S/C, DATA, NONE			SPEC COM INSTR ECTDF; QESIPARM SI WFC 3; QESIPARM ACTION DISABLE	Sequence 1-11 Non-Int in Visit 22 Same Obset in Sequence 1-11 Non-Int in Visit 22 Same Alignment in Same Obset in Sequence 1-11 Non-Int in Visit 22	2 Secs [==>]	[1]
<p><i>Comments: Disable take data flag before UVIS FGS spatial scans</i></p>									
4		(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forward	Sequence 1-11 Non-Int in Visit 22 Same Obset in Sequence 1-11 Non-Int in Visit 22	455 Secs [==>]	[1]
5		(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Reverse	Sequence 1-11 Non-Int in Visit 22 Same Obset in Sequence 1-11 Non-Int in Visit 22	348 Secs [==>]	[1]
6		(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Forward	Sequence 1-11 Non-Int in Visit 22 Same Obset in Sequence 1-11 Non-Int in Visit 22	348 Secs [==>]	[1]
7	Enable TDF	DARK	S/C, DATA, NONE			SPEC COM INSTR ECTDF; QESIPARM SI WFC 3; QESIPARM ACTION ENABLE	Sequence 1-11 Non-Int in Visit 22 Same Obset in Sequence 1-11 Non-Int in Visit 22	2 Secs [==>]	[1]
<p><i>Comments: Enable take data flag after UVIS FGS spatial scans</i></p>									

Exposures

Proposal 12679 - Visit 22 - Luminosity-Distance Standards from Gaia and HST

8	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M	POS TARG null,-2	Sequence 1-11 Non-Int in Visit 22	45 Secs	
					Same Obset in Sequence 1-11 Non-Int in Visit 22	[==>]	[1]
9	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	POS TARG null,-2	Sequence 1-11 Non-Int in Visit 22	45 Secs	
					Same Obset in Sequence 1-11 Non-Int in Visit 22	[==>]	[1]
10	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	POS TARG null,-6; SPATIAL SCAN 4.5 ,90.05 Degrees,Forward; EXP PCS MODE G YRO	Sequence 1-11 Non-Int in Visit 22	2 Secs	
				Same Obset in Sequence 1-11 Non-Int in Visit 22	[==>]	[1]	
11	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	POS TARG null,-6; SPATIAL SCAN 4.5 ,90.05 Degrees,Reverse; EXP PCS MODE G YRO	Sequence 1-11 Non-Int in Visit 22	2 Secs	
				Same Obset in Sequence 1-11 Non-Int in Visit 22	[==>]	[1]	



Proposal 12679 - Visit 21 - Luminosity-Distance Standards from Gaia and HST

Visit	Proposal 12679, Visit 21, completed Sat Jan 26 02:16:48 GMT 2013 Diagnostic Status: Warning Scientific Instruments: WFC3/IR, S/C, WFC3/UVIS Special Requirements: ORIENT 275D TO 277 D; BETWEEN 26-SEP-2011 AND 02-OCT-2011																
	Diagnosics (Visit 21) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 21) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 21) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 21) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING																
Fixed Targets	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 20%;">Name</th> <th style="width: 30%;">Target Coordinates</th> <th style="width: 20%;">Targ. Coord. Corrections</th> <th style="width: 10%;">Fluxes</th> <th style="width: 15%;">Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(2)</td> <td>V-SY-AUR</td> <td>RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000</td> <td></td> <td>V=9.05</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS												
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.																	

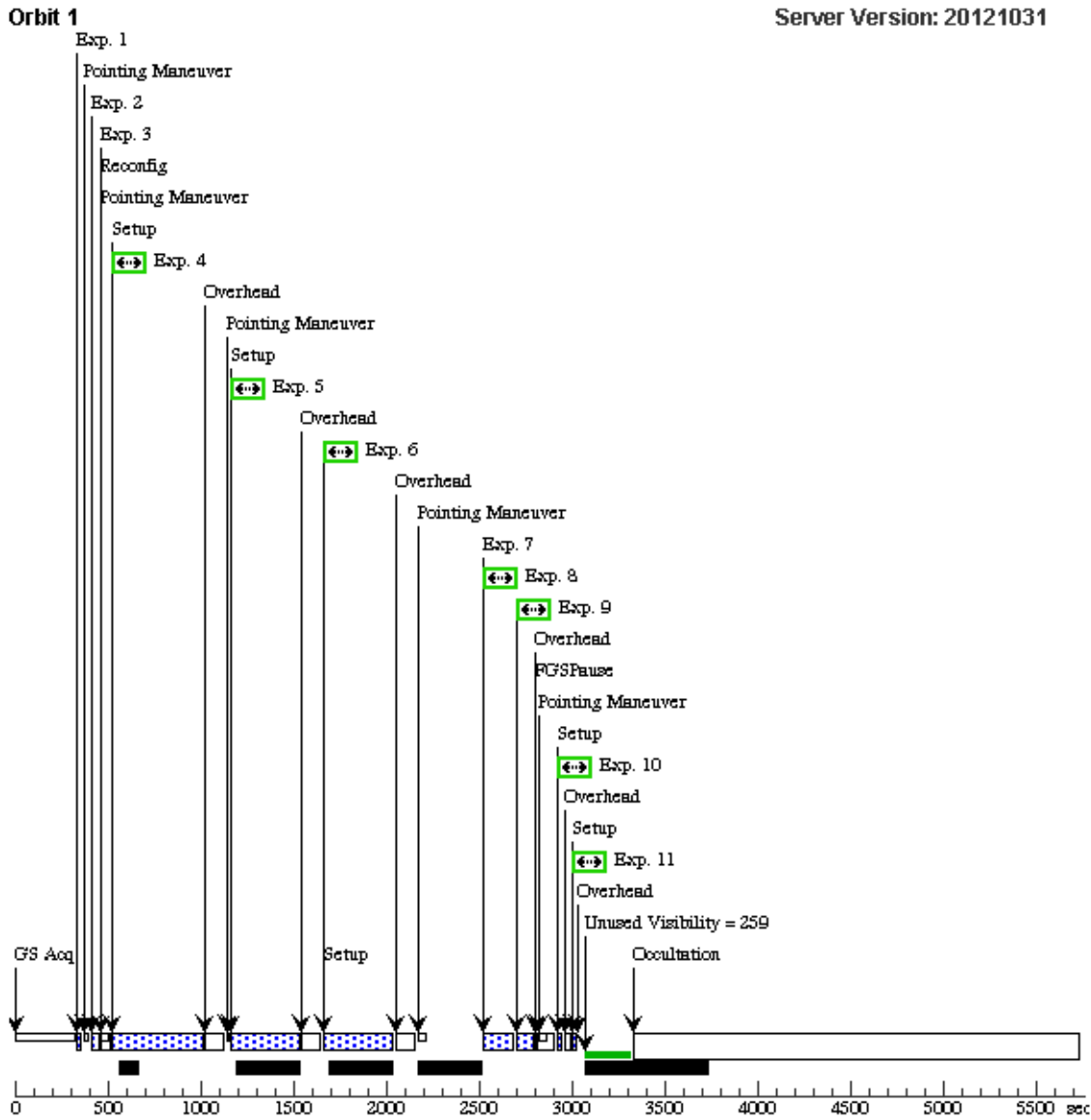
Proposal 12679 - Visit 21 - Luminosity-Distance Standards from Gaia and HST

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, IRSUB64	F167N	SAMP-SEQ=RAPID ; NSAMP=2		Sequence 1-11 Non-Int in Visit 21 Same Obset in Sequence 1-11 Non-Int in Visit 21	[==>]	[1]
<p><i>Comments: 1. IR: Shortest narrow-band direct image to identify Cepheid for subsequent grism. F167N, IRSUB64 (64x64 subarray) RAPID NSAMP=2 (unsaturated in first samp for H>5, 2/3 Cepheids, could be used with Cepheid stellar type to get F160W mag), could do 2 dithers. Dither small integer 1,1, to allow easy combination in pixel space</i></p>									
2		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-11 Non-Int in Visit 21 Same Obset in Sequence 1-11 Non-Int in Visit 21 Same Alignment in Same Obset in Sequence 1-11 Non-Int in Visit 21	[==>]	[1]
<p><i>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRSIM1024, RAPID, NSAMP= 4, puts reference at 497.562, need to move pos targ x=+200 pix or +27.1" to center on zeroth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</i></p>									
3	Disable TDF	DARK	S/C, DATA, NONE			SPEC COM INSTR ECTDF; QESIPARM SI WFC 3; QESIPARM ACTION DISABLE	Sequence 1-11 Non-Int in Visit 21 Same Obset in Sequence 1-11 Non-Int in Visit 21 Same Alignment in Same Obset in Sequence 1-11 Non-Int in Visit 21	2 Secs [==>]	[1]
<p><i>Comments: Disable take data flag before UVIS FGS spatial scans</i></p>									
4		(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forward	Sequence 1-11 Non-Int in Visit 21 Same Obset in Sequence 1-11 Non-Int in Visit 21	455 Secs [==>]	[1]
5		(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Reverse	Sequence 1-11 Non-Int in Visit 21 Same Obset in Sequence 1-11 Non-Int in Visit 21	348 Secs [==>]	[1]
6		(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Forward	Sequence 1-11 Non-Int in Visit 21 Same Obset in Sequence 1-11 Non-Int in Visit 21	348 Secs [==>]	[1]
7	Enable TDF	DARK	S/C, DATA, NONE			SPEC COM INSTR ECTDF; QESIPARM SI WFC 3; QESIPARM ACTION ENABLE	Sequence 1-11 Non-Int in Visit 21 Same Obset in Sequence 1-11 Non-Int in Visit 21	2 Secs [==>]	[1]
<p><i>Comments: Enable take data flag after UVIS FGS spatial scans</i></p>									

Proposal 12679 - Visit 21 - Luminosity-Distance Standards from Gaia and HST

8	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M	POS TARG null,-2	Sequence 1-11 Non-Int in Visit 21	45 Secs						
					Same Obset in Sequence 1-11 Non-Int in Visit 21	[==>]	[1]					
					9	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	POS TARG null,-2	Sequence 1-11 Non-Int in Visit 21	60 Secs	
					Same Obset in Sequence 1-11 Non-Int in Visit 21	[==>]	[1]					
10	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	POS TARG null,-6; SPATIAL SCAN 4.5 ,90.05 Degrees,Forward; EXP PCS MODE G YRO	Sequence 1-11 Non-Int in Visit 21	2 Secs						
Same Obset in Sequence 1-11 Non-Int in Visit 21	[==>]	[1]										
11	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	POS TARG null,-6; SPATIAL SCAN 4.5 ,90.05 Degrees,Reverse; EXP PCS MODE G YRO	Sequence 1-11 Non-Int in Visit 21	2 Secs						
Same Obset in Sequence 1-11 Non-Int in Visit 21	[==>]	[1]										

Orbit Structure



Proposal 12679 - Visit 23 - Luminosity-Distance Standards from Gaia and HST

Visit	Proposal 12679, Visit 23, completed Sat Jan 26 02:16:50 GMT 2013 Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 94D TO 94 D; BETWEEN 03-MAR-2012 AND 05-APR-2012																
	Diagnosics (Visit 23) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 23) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 23) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 23) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING																
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>(3)</td> <td>V-RX-AUR</td> <td>RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000</td> <td></td> <td>V=7.62</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	V-RX-AUR	RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000		V=7.62	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(3)	V-RX-AUR	RA: 05 01 23.1886 (75.3466192d) Dec: +39 57 37.43 (39.96040d) Equinox: J2000		V=7.62	Reference Frame: ICRS												
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.																	

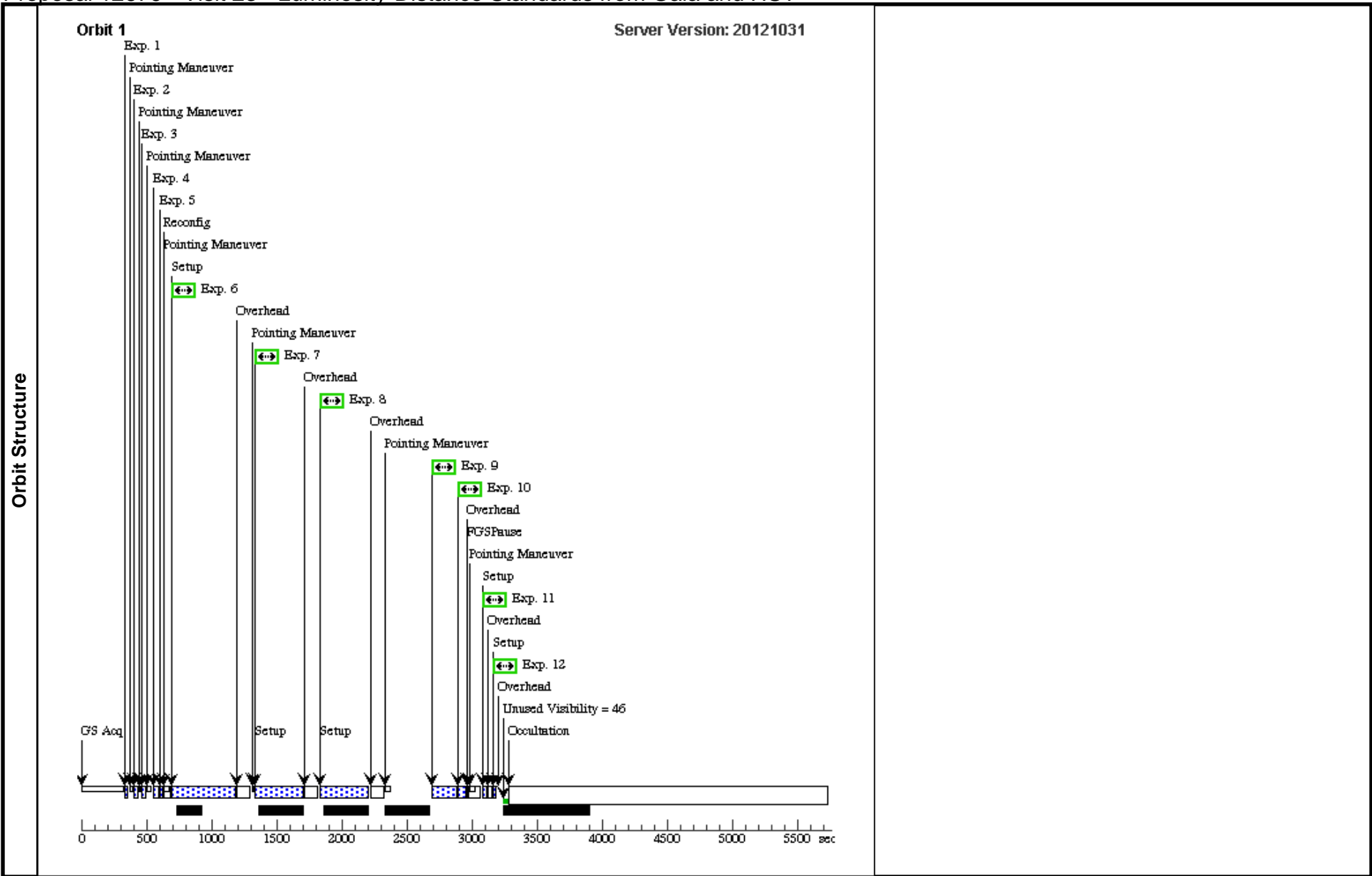
Proposal 12679 - Visit 23 - Luminosity-Distance Standards from Gaia and HST

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, IRSUB64	F167N	SAMP-SEQ=RAPID ; NSAMP=2	GS ACQ SCENARI O BASE1B3	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
<p><i>Comments: 1. IR: Shortest narrow-band direct image to identify Cepheid for subsequent grism. F167N, IRSUB64 (64x64 subarray) RAPID NSAMP=2 (unsaturated in first samp for H>5, 2/3 Cepheids, could be used with Cepheid stellar type to get F160W mag), could do 2 dithers. Dither small integer 1,1, to allow easy combination in pixel space</i></p>									
2		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 0,6.055	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
<p><i>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</i></p>									
3		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -0.1355, 6.1761	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
<p><i>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</i></p>									
4		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
<p><i>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRISM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroeth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</i></p>									
5		(3) V-RX-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
<p><i>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRISM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroeth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</i></p>									
6		(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forward	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	455 Secs [==>]	[1]
7		(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Reverse	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	348 Secs [==>]	[1]
8		(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Forward	Sequence 1-12 Non-Int in Visit 23 Same Obset in Sequence 1-12 Non-Int in Visit 23	348 Secs [==>]	[1]

Exposures

Proposal 12679 - Visit 23 - Luminosity-Distance Standards from Gaia and HST

9	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F410M	POS TARG null,-2	Sequence 1-12 Non-Int in Visit 23	60 Secs	
					Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
10	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F547M	POS TARG null,-2	Sequence 1-12 Non-Int in Visit 23	40 Secs	
					Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
11	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	POS TARG null,-7.5 ;	Sequence 1-12 Non-Int in Visit 23	1.5 Secs	
				SPATIAL SCAN 4.0 ,90.05 Degrees,Forward;	Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
12	(3) V-RX-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	POS TARG null,-7.5 ;	Sequence 1-12 Non-Int in Visit 23	1.5 Secs	
				SPATIAL SCAN 4.0 ,90.05 Degrees,Reverse;	Same Obset in Sequence 1-12 Non-Int in Visit 23	[==>]	[1]
				EXP PCS MODE G YRO			



Proposal 12679 - Visit 24 - Luminosity-Distance Standards from Gaia and HST

Visit	Proposal 12679, Visit 24, completed Sat Jan 26 02:16:52 GMT 2013 Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 95D TO 95 D; BETWEEN 01-MAR-2012 AND 05-APR-2012																
	Diagnosics (Visit 24) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 24) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 24) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (Visit 24) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING																
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>V-SY-AUR</td> <td>RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000</td> <td></td> <td>V=9.05</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS												
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>																	

Proposal 12679 - Visit 24 - Luminosity-Distance Standards from Gaia and HST

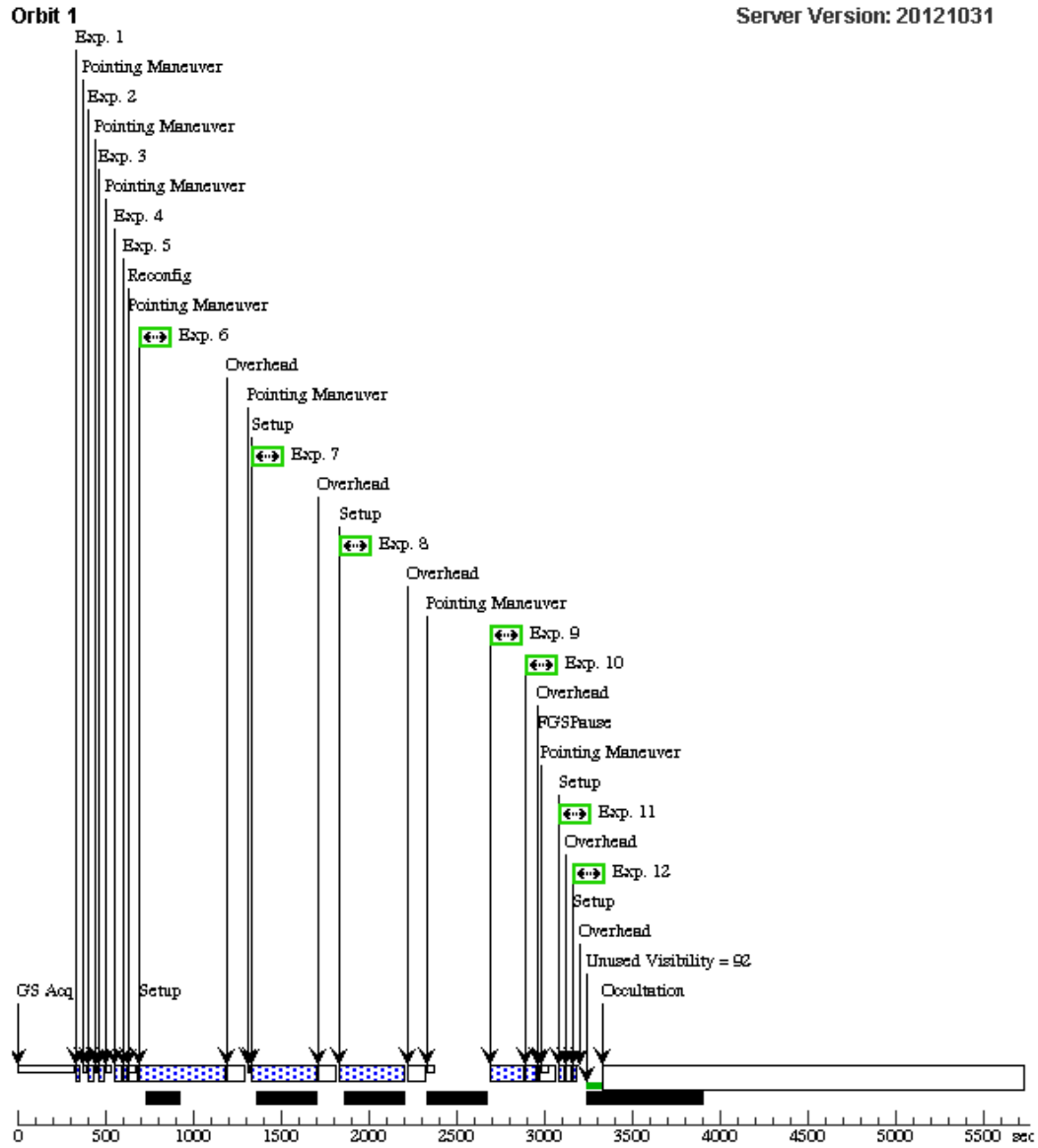
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, IRSUB64	F167N	SAMP-SEQ=RAPID ; NSAMP=2	GS ACQ SCENARI O BASE1B3	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
<p><i>Comments: 1. IR: Shortest narrow-band direct image to identify Cepheid for subsequent grism. F167N, IRSUB64 (64x64 subarray) RAPID NSAMP=2 (unsaturated in first samp for H>5, 2/3 Cepheids, could be used with Cepheid stellar type to get F160W mag), could do 2 dithers. Dither small integer 1,1, to allow easy combination in pixel space</i></p>									
2		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 0,6.055	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
<p><i>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</i></p>									
3		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM256	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -0.1355, 6.1761	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
<p><i>Comments: 2. IR: Shortest 256x256 G141 grism of Cepheid, GRISM256 gets first order, RAPID, NSAMP=2, unsaturated in first samp for H>5.5, gets 2/3 Cepheids spectrophotometry for F160W, should do 2 dithers. There will be persistence at x=522,y=522 and spectrum at y=532 so need a POS TARG of delta y = - 50 pixels = -6.055" to move target up and away from persistence</i></p>									
4		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
<p><i>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRISM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroeth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</i></p>									
5		(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 27.1,null	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
<p><i>Comments: 3. IR: Full Frame G141 grism to get -1 order of Cepheid, GRISM1024, RAPID, NSAMP= 4, puts reference at 497,562, need to move pos targ x=+200 pix or +27.1" to center on zeroeth order and fit -1 order in frame, do 2 dithers. Gets -1 order spectrophotometry for all Cepheids (H>3, so can do a few reads, may be more a buffer issue). Persistence in center of frame so won't touch -1 order. This frame also gets +1 order for fainter background stars to cross-calibrate to their F160W in next frame.</i></p>									
6		(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forward	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	455 Secs [==>]	[1]
7		(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Reverse	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	348 Secs [==>]	[1]
8		(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F467M		POS TARG -3,-72; SPATIAL SCAN 0.4 14,90.05 Degrees,Forward	Sequence 1-12 Non-Int in Visit 24 Same Obset in Sequence 1-12 Non-Int in Visit 24	348 Secs [==>]	[1]

Exposures

Proposal 12679 - Visit 24 - Luminosity-Distance Standards from Gaia and HST

9	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F410M	POS TARG null,-2	Sequence 1-12 Non-Int in Visit 24	60 Secs	
					Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
10	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F547M	POS TARG null,-2	Sequence 1-12 Non-Int in Visit 24	40 Secs	
					Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
11	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F555W	POS TARG null,-7.5 ;	Sequence 1-12 Non-Int in Visit 24	1.5 Secs	
				SPATIAL SCAN 4.0 ,90.05 Degrees,Forward;	Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
12	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	POS TARG null,-7.5 ;	Sequence 1-12 Non-Int in Visit 24	1.5 Secs	
				SPATIAL SCAN 4.0 ,90.05 Degrees,Reverse;	Same Obset in Sequence 1-12 Non-Int in Visit 24	[==>]	[1]
				EXP PCS MODE G YRO			

Orbit Structure



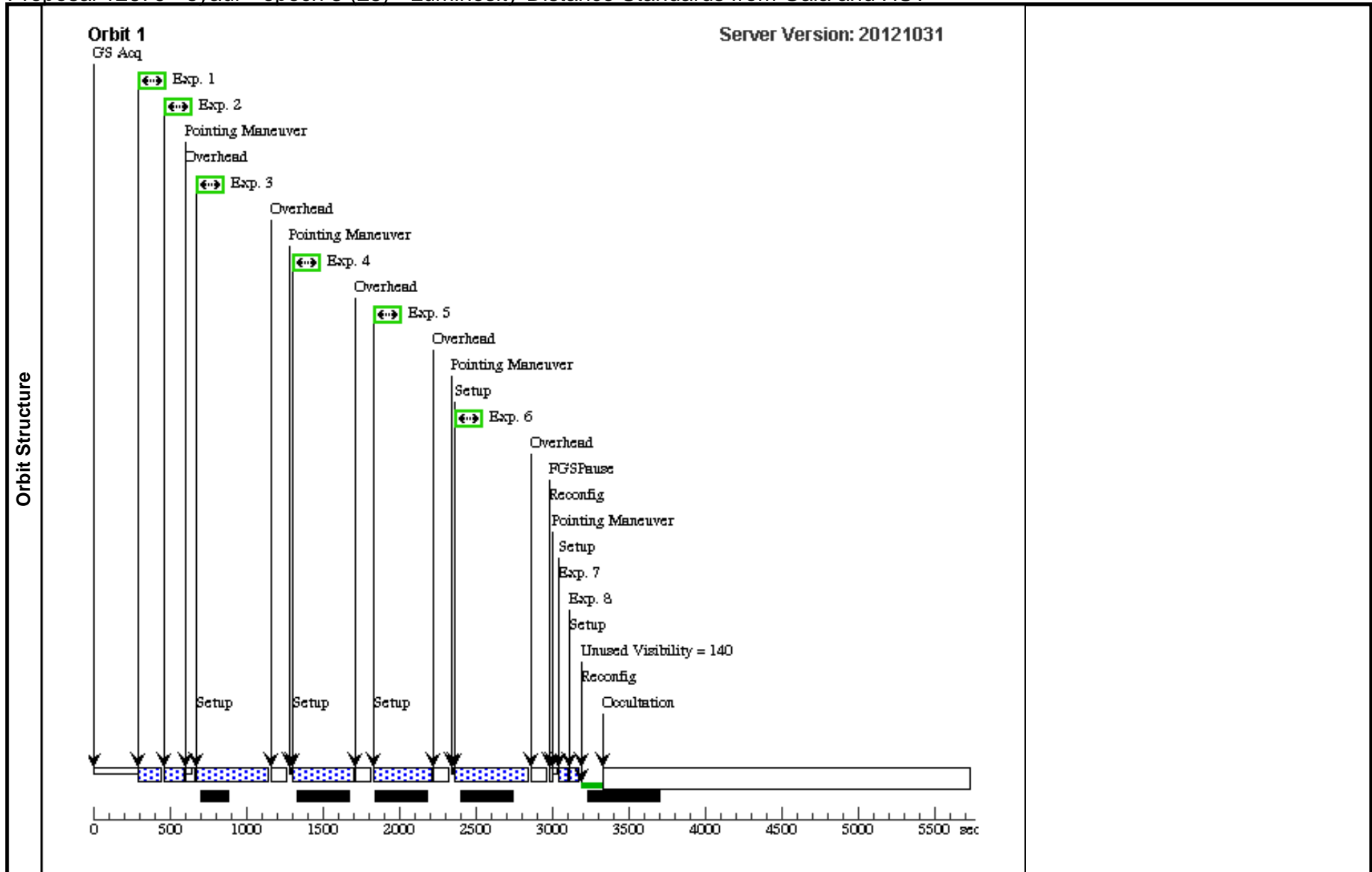
Proposal 12679 - syaur - epoch 3 (25) - Luminosity-Distance Standards from Gaia and HST

Sat Jan 26 02:16:53 GMT 2013

Visit	Proposal 12679, syaur - epoch 3 (25), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 275D TO 275 D; BETWEEN 10-SEP-2012 AND 18-SEP-2012 <i>Comments: Please note critical scheduling window, Sept 10-18</i>																
	Diagnosics (syaur - epoch 3 (25)) Warning (Orbit Planner): INVALID GS ACQ SCENARIO SPECIAL REQUIREMENT (syaur - epoch 3 (25)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (syaur - epoch 3 (25)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (syaur - epoch 3 (25)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING (syaur - epoch 3 (25)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING																
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>V-SY-AUR</td> <td>RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000</td> <td></td> <td>V=9.05</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous											
(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS												
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>																	

Proposal 12679 - syaur - epoch 3 (25) - Luminosity-Distance Standards from Gaia and HST

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F850LP	CR-SPLIT=NO; BIN=2; FLASH=10	POS TARG -3,null; GS ACQ SCENARI O BASE1B3	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	50 Secs [==>]	[1]
	2	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F275W	CR-SPLIT=NO; BIN=2; FLASH=10	POS TARG -3,null; GS ACQ SCENARI O BASE1B3	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	100 Secs [==>]	[1]
	3	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forward	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	455 Secs [==>]	[1]
	4	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.3 79,90.05 Degrees,Reverse	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	380 Secs [==>]	[1]
	5	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.3 79,90.05 Degrees,Forward	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	380 Secs [==>]	[1]
	6	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Reverse	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	455 Secs [==>]	[1]
	7	(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM512	G141	SAMP-SEQ=RAPID ; NSAMP=12	POS TARG null,-40; SPATIAL SCAN 7.5 ,90.0 Degrees,Forward; EXP PCS MODE G YRO	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	[==>]	[1]
	8	(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM512	F160W	SAMP-SEQ=RAPID ; NSAMP=12	POS TARG null,-40; SPATIAL SCAN 7.5 ,90.0 Degrees,Reverse; EXP PCS MODE G YRO	Sequence 1-8 Non-Int in syaur - epoch 3 (25) Same Obset in Sequence 1-8 Non-Int in syaur - epoch 3 (25)	[==>]	[1]



Proposal 12679 - syaur - epoch 3 (26) - Luminosity-Distance Standards from Gaia and HST

Sat Jan 26 02:16:55 GMT 2013

Visit	<p>Proposal 12679, syaur - epoch 3 (26), implementation</p> <p>Diagnostic Status: Warning</p> <p>Scientific Instruments: WFC3/IR, WFC3/UVIS</p> <p>Special Requirements: ORIENT 95D TO 95 D; BETWEEN 01-MAR-2013 AND 05-APR-2013</p> <p><i>Comments: Please note critical scheduling window, March</i></p>					
Diagnostics	<p>(syaur - epoch 3 (26)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING</p> <p>(syaur - epoch 3 (26)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING</p> <p>(syaur - epoch 3 (26)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING</p> <p>(syaur - epoch 3 (26)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING</p> <p>(syaur - epoch 3 (26)) Warning (Orbit Planner): INVALID GS ACQ SCENARIO SPECIAL REQUIREMENT</p> <p>(syaur - epoch 3 (26)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING</p> <p>(syaur - epoch 3 (26)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING</p>					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(2)	V-SY-AUR	RA: 05 12 39.2269 (78.1634454d) Dec: +42 49 54.42 (42.83178d) Equinox: J2000		V=9.05	Reference Frame: ICRS
	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p>					

Proposal 12679 - syaur - epoch 3 (26) - Luminosity-Distance Standards from Gaia and HST

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO; BIN=2; FLASH=10	POS TARG -3,-72; GSPAIR NCAM000 208F2NCAM000237 F3; GS ACQ SCENARI O BASE1B3	Sequence 1-7 Non-Int in syaur - epoch 3 (26) Same Obset in Sequence 1-7 Non-Int in syaur - epoch 3 (26)	100 Secs [==>]	[1]
	2	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F336W	CR-SPLIT=NO; BIN=2; FLASH=10	POS TARG -3,-72; GS ACQ SCENARI O BASE1B3	Sequence 1-7 Non-Int in syaur - epoch 3 (26) Same Obset in Sequence 1-7 Non-Int in syaur - epoch 3 (26)	100 Secs [==>]	[1]
	3	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Forward	Sequence 1-7 Non-Int in syaur - epoch 3 (26) Same Obset in Sequence 1-7 Non-Int in syaur - epoch 3 (26)	455 Secs [==>]	[1]
	4	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.3 79,90.05 Degrees,Reverse	Sequence 1-7 Non-Int in syaur - epoch 3 (26) Same Obset in Sequence 1-7 Non-Int in syaur - epoch 3 (26)	380 Secs [==>]	[1]
	5	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F673N		POS TARG -3,-72; SPATIAL SCAN 0.3 79,90.05 Degrees,Forward	Sequence 1-7 Non-Int in syaur - epoch 3 (26) Same Obset in Sequence 1-7 Non-Int in syaur - epoch 3 (26)	380 Secs [==>]	[1]
	6	(2) V-SY-AUR	WFC3/UVIS, ACCUM, UVIS-CENTER	F606W		POS TARG -3,-72; SPATIAL SCAN 0.3 16,90.05 Degrees,Reverse	Sequence 1-7 Non-Int in syaur - epoch 3 (26) Same Obset in Sequence 1-7 Non-Int in syaur - epoch 3 (26)	455 Secs [==>]	[1]
	7	(2) V-SY-AUR	WFC3/IR, MULTIACCUM, GRISM512	F160W	SAMP-SEQ=RAPID ; NSAMP=12	POS TARG null,-40; SPATIAL SCAN 7.5 ,90.0 Degrees,Reverse; EXP PCS MODE G YRO	Sequence 1-7 Non-Int in syaur - epoch 3 (26) Same Obset in Sequence 1-7 Non-Int in syaur - epoch 3 (26)	[==>]	[1]

