



13443 - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Cycle: 21, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) ORPHAN-STREAM-FIELD1	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:01:38.0	yes
02	(1) ORPHAN-STREAM-FIELD1	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:01:56.0	yes
03	(2) ORPHAN-STREAM-FIELD2	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:02:12.0	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>
04	(2) ORPHAN-STREAM-FIELD2	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:02:26.0	yes
05	(3) ORPHAN-STREAM-FIELD3	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:02:41.0	yes
06	(3) ORPHAN-STREAM-FIELD3	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:02:55.0	yes
07	(4) ORPHAN-STREAM-FIELD4	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:03:13.0	yes
08	(4) ORPHAN-STREAM-FIELD4	ACS/WFC WFC3/UVIS	2	07-Jun-2013 21:03:26.0	yes

16 Total Orbits Used

ABSTRACT

Stellar streams in the Milky Way (MW) support the view that much of its halo was formed hierarchically via the tidal disruption of dwarf galaxies and globular clusters. These streams are unique dynamical tracers of the dark matter halo, and provide strong tests of galaxy formation models. The Orphan Stream, discovered in the SDSS survey area, is closer, colder, and fainter than the better known Sagittarius (Sgr) Stream, and it has no known parent galaxy. It therefore allows a study of the less-massive objects that built up the MW halo. Lack of proper motion (PM) data limits our understanding of stream orbits and MW dark halo properties. HST's excellent astrometric accuracy can now address this, as demonstrated by our ongoing Sgr Stream study. We propose here to map the PM variation along the Orphan Stream. We will target four fields with ACS/WFC for which serendipitous first-epoch observations exist in the Archive with 10-12 yr time baselines. PM accuracies near 6 km/s will be achieved by measuring the relative motion between stream stars and background galaxies, using techniques developed by us for other successful PM programs (e.g., LMC/SMC, Leo I, M31). We will interpret the results using dynamical calculations and N-body models, using our techniques already developed for modeling the Sgr and Magellanic Streams. Our study will yield the orbit of the Orphan Stream, which in turn may allow us to identify its progenitor (if not already entirely disrupted). The orbit will also strongly constrain the shape and mass of the MW dark halo, especially when combined with our ongoing studies of other streams.

OBSERVING DESCRIPTION

To measure the absolute proper motion of stars associated with the Orphan stellar stream in the four target fields, we will use compact background galaxies in the field of view as stationary reference sources. We will measure the average motion of stars in each target field between epochs 1 and 2 with respect to their reference sources. Our analysis techniques and expected accuracies are described in the Phase I proposal. First epoch ACS/WFC data are available in the archive from previous observing programs. The present project will obtain the second epoch data.

We will observe each target field for 4 orbits with ACS/WFC. We will use the I-band (F814W or F775W filter, depending on what was used in epoch 1) for astrometry and the V-band (F606W filter) to construct color-magnitude diagrams (CMDs). Individual exposures will be dithered using customized patterns designed by J. Anderson (STScI) to maximize pixel phase coverage. These are specified using POS TARGs on the individual exposures; no pre-specified patterns are used. To maximize the overlapping area and to minimize systematics dependent on location on the detector, we request the same orientations and coordinates as used by the first-epoch observations. We also require that each target field be imaged in 30 day windows so that they can be treated as single epoch data for astrometric analyses.

During our second epoch observations, the WFC3/UVIS camera will be pointed ~ 6 arcmin away from our target fields. These parallel fields will be observed with F814W and F606W filters to construct CMDs and to study also the stellar population of the Orphan stellar stream.

Finally, to mitigate the impact of CTE in our science which is important for astrometric analyses, we will use the FLASH optional parameters on all of the ACS and WFC3 exposures.

Proposal 13443 - FIELD1-Visit1 (01) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:37 GMT 2013

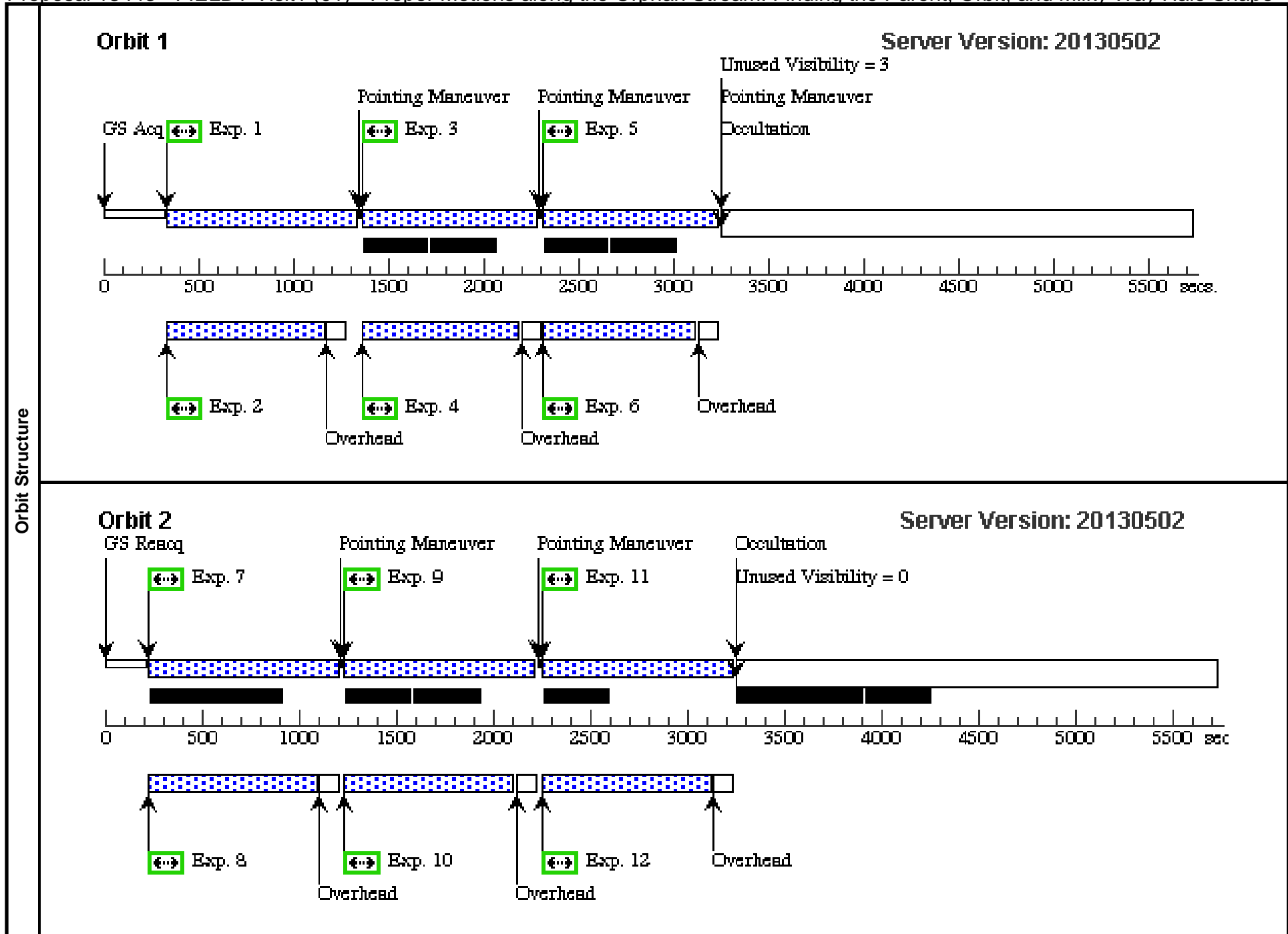
Visit	<p>Proposal 13443, FIELD1-Visit1 (01)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: ORIENT 118.74D TO 118.74 D; GROUP 01,02 WITHIN 30D</p> <p><i>Comments: This is the first visit for imaging ORPHAN-STREAM-1 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9468. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 01 and 02 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	ORPHAN-STREAM-FIELD1	RA: 10 03 48.9000 (150.9537500d) Dec: +29 06 12.80 (29.10356d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD1-Visit1 (01) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0000,0.0000	Sequence 1-6 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD1-Visit1 (01)	795 Secs (794 Secs) [==>794.0 Secs]	[1]
	2	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD1-Visit1 (01)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	3	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.2141,0.0161	Sequence 1-6 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD1-Visit1 (01)	795 Secs (794 Secs) [==>794.0 Secs]	[1]
	4	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD1-Visit1 (01)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	5	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.4281,0.0322	Sequence 1-6 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD1-Visit1 (01)	794 Secs (793 Secs) [==>793.0 Secs]	[1]
	6	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD1-Visit1 (01)	800 Secs (800 Secs) [==>]	[1]
	7	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0504,0.2183	Sequence 7-12 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD1-Visit1 (01)	859 Secs (859 Secs) [==>859.0 Secs]	[2]
	8	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD1-Visit1 (01)	800 Secs (846 Secs) [==>846.0 Secs]	[2]

Proposal 13443 - FIELD1-Visit1 (01) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.2644,0 .2344	Sequence 7-12 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD1-Visit1 (01)	859 Secs (859 Secs) [==>859.0 Secs]	[2]
10	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD1-Visit1 (01)	800 Secs (846 Secs) [==>846.0 Secs]	[2]
11	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4784,0 .2505	Sequence 7-12 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD1-Visit1 (01)	859 Secs (859 Secs) [==>859.0 Secs]	[2]
12	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD1-Visit1 (01) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD1-Visit1 (01)	800 Secs (869 Secs) [==>869.0 Secs]	[2]



Proposal 13443 - FIELD1-Visit2 (02) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:40 GMT 2013

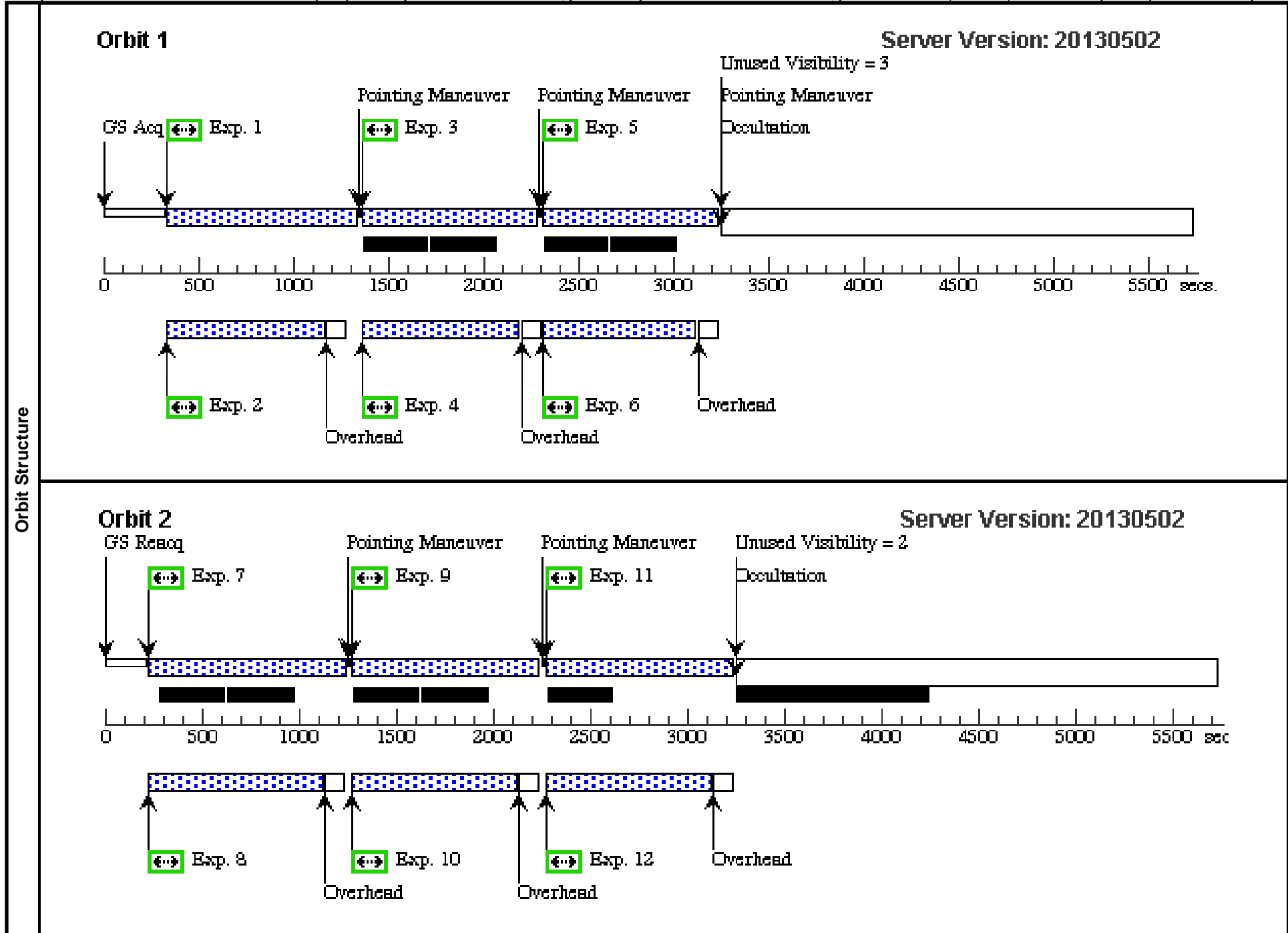
Visit	<p>Proposal 13443, FIELD1-Visit2 (02)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: SAME ORIENT AS 01; GROUP 02,01 WITHIN 30D</p> <p><i>Comments: This is the second visit for imaging ORPHAN-STREAM-1 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9468. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 01 and 02 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(1)		ORPHAN-STREAM-FIELD1	RA: 10 03 48.9000 (150.9537500d) Dec: +29 06 12.80 (29.10356d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD1-Visit2 (02) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1008,0 .4366	Sequence 1-6 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD1-Visit2 (02)	795 Secs (794 Secs) [==>794.0 Secs]	[1]
	2	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD1-Visit2 (02)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	3	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.3148,0 .4527	Sequence 1-6 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD1-Visit2 (02)	795 Secs (794 Secs) [==>794.0 Secs]	[1]
	4	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD1-Visit2 (02)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	5	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.5288,0 .4688	Sequence 1-6 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD1-Visit2 (02)	794 Secs (793 Secs) [==>793.0 Secs]	[1]
	6	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD1-Visit2 (02)	800 Secs (800 Secs) [==>]	[1]
	7	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0 .0000	Sequence 7-12 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD1-Visit2 (02)	840 Secs (840 Secs) [==>840.0 Secs]	[2]
	8	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD1-Visit2 (02)	800 Secs (882 Secs) [==>882.0 Secs]	[2]

Proposal 13443 - FIELD1-Visit2 (02) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.1150,0 .1250	Sequence 7-12 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD1-Visit2 (02)	840 Secs (840 Secs) <i>[==>840.0 Secs]</i>	[2]
10	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD1-Visit2 (02)	800 Secs (827 Secs) <i>[==>827.0 Secs]</i>	[2]
11	(1) ORPHAN-STRE AM-FIELD1	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2310,0 .2490	Sequence 7-12 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD1-Visit2 (02)	840 Secs (840 Secs) <i>[==>840.0 Secs]</i>	[2]
12	(1) ORPHAN-STRE AM-FIELD1	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD1-Visit2 (02) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD1-Visit2 (02)	800 Secs (850 Secs) <i>[==>850.0 Secs]</i>	[2]



Proposal 13443 - FIELD2-Visit1 (03) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:42 GMT 2013

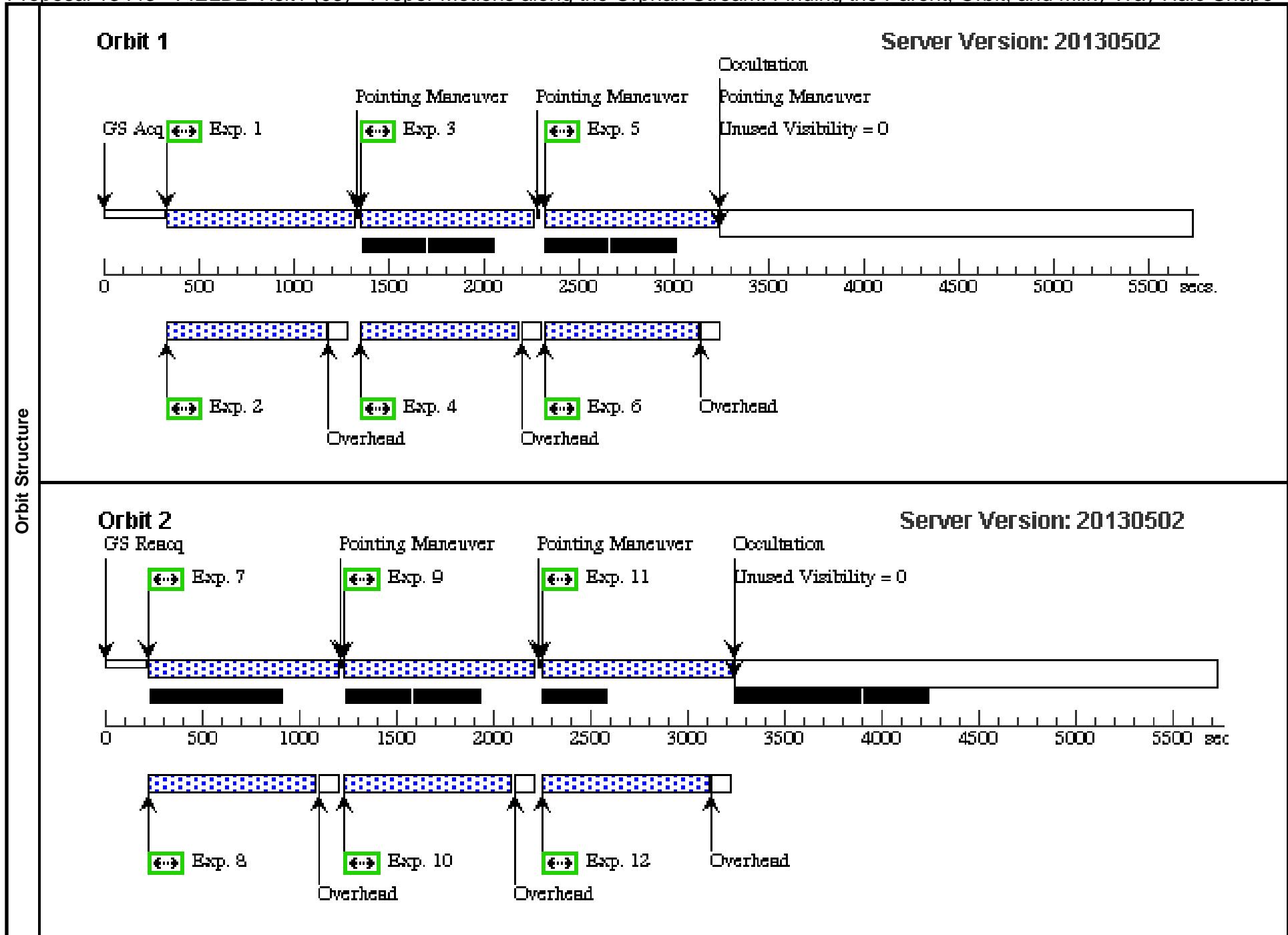
Visit	<p>Proposal 13443, FIELD2-Visit1 (03)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: ORIENT 109.64D TO 109.64 D; GROUP 03,04 WITHIN 30D</p> <p><i>Comments: This is the first visit for imaging ORPHAN-STREAM-2 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9575. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 03 and 04 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(2)		ORPHAN-STREAM-FIELD2	RA: 10 19 16.4000 (154.8183333d) Dec: +20 02 11.70 (20.03658d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD2-Visit1 (03) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.0000,0.0000	Sequence 1-6 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD2-Visit1 (03)	791 Secs (786 Secs) [==>786.0 Secs]	[1]
	2	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD2-Visit1 (03)	800 Secs (810 Secs) [==>810.0 Secs]	[1]
	3	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.2141,0.0161	Sequence 1-6 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD2-Visit1 (03)	791 Secs (786 Secs) [==>786.0 Secs]	[1]
	4	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD2-Visit1 (03)	800 Secs (810 Secs) [==>810.0 Secs]	[1]
	5	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.4281,0.0322	Sequence 1-6 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD2-Visit1 (03)	791 Secs (786 Secs) [==>786.0 Secs]	[1]
	6	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD2-Visit1 (03)	800 Secs (810 Secs) [==>810.0 Secs]	[1]
	7	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.0504,0.2183	Sequence 7-12 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD2-Visit1 (03)	856 Secs (856 Secs) [==>856.0 Secs]	[2]
	8	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD2-Visit1 (03)	800 Secs (843 Secs) [==>843.0 Secs]	[2]

Proposal 13443 - FIELD2-Visit1 (03) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W	POS TARG 0.2644,0 .2344	Sequence 7-12 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD2-Visit1 (03)	856 Secs (856 Secs) [==>856.0 Secs]	[2]
10	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD2-Visit1 (03)	800 Secs (843 Secs) [==>843.0 Secs]	[2]
11	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W	POS TARG 0.4784,0 .2505	Sequence 7-12 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD2-Visit1 (03)	856 Secs (856 Secs) [==>856.0 Secs]	[2]
12	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD2-Visit1 (03) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD2-Visit1 (03)	800 Secs (866 Secs) [==>866.0 Secs]	[2]



Proposal 13443 - FIELD2-Visit2 (04) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:45 GMT 2013

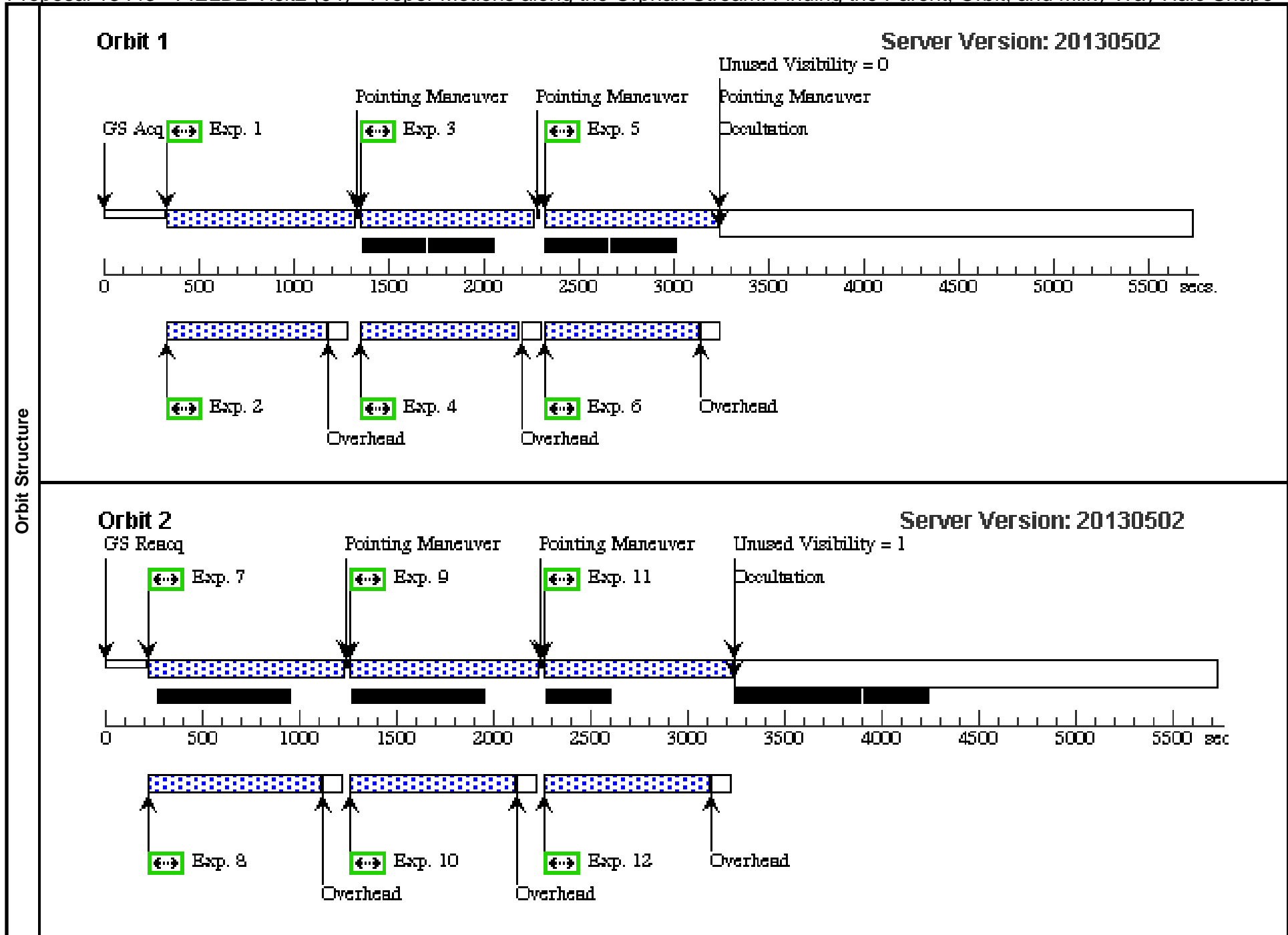
Visit	<p>Proposal 13443, FIELD2-Visit2 (04)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: SAME ORIENT AS 03; GROUP 04,03 WITHIN 30D</p> <p><i>Comments: This is the second visit for imaging ORPHAN-STREAM-2 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9575. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 03 and 04 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(2)		ORPHAN-STREAM-FIELD2	RA: 10 19 16.4000 (154.8183333d) Dec: +20 02 11.70 (20.03658d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD2-Visit2 (04) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.1008,0 .4366	Sequence 1-6 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD2-Visit2 (04)	791 Secs (786 Secs) [==>786.0 Secs]	[1]
	2	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD2-Visit2 (04)	800 Secs (810 Secs) [==>810.0 Secs]	[1]
	3	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.3148,0 .4527	Sequence 1-6 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD2-Visit2 (04)	791 Secs (786 Secs) [==>786.0 Secs]	[1]
	4	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD2-Visit2 (04)	800 Secs (810 Secs) [==>810.0 Secs]	[1]
	5	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.5288,0 .4688	Sequence 1-6 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD2-Visit2 (04)	791 Secs (786 Secs) [==>786.0 Secs]	[1]
	6	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD2-Visit2 (04)	800 Secs (810 Secs) [==>810.0 Secs]	[1]
	7	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0 .0000	Sequence 7-12 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD2-Visit2 (04)	842 Secs (842 Secs) [==>842.0 Secs]	[2]
	8	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD2-Visit2 (04)	800 Secs (870 Secs) [==>870.0 Secs]	[2]

Proposal 13443 - FIELD2-Visit2 (04) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.1150,0 .1250	Sequence 7-12 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD2-Visit2 (04)	842 Secs (842 Secs) [==>842.0 Secs]	[2]
10	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD2-Visit2 (04)	800 Secs (829 Secs) [==>829.0 Secs]	[2]
11	(2) ORPHAN-STRE AM-FIELD2	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2310,0 .2490	Sequence 7-12 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD2-Visit2 (04)	842 Secs (842 Secs) [==>842.0 Secs]	[2]
12	(2) ORPHAN-STRE AM-FIELD2	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD2-Visit2 (04) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD2-Visit2 (04)	800 Secs (852 Secs) [==>852.0 Secs]	[2]



Proposal 13443 - FIELD3-Visit1 (05) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:47 GMT 2013

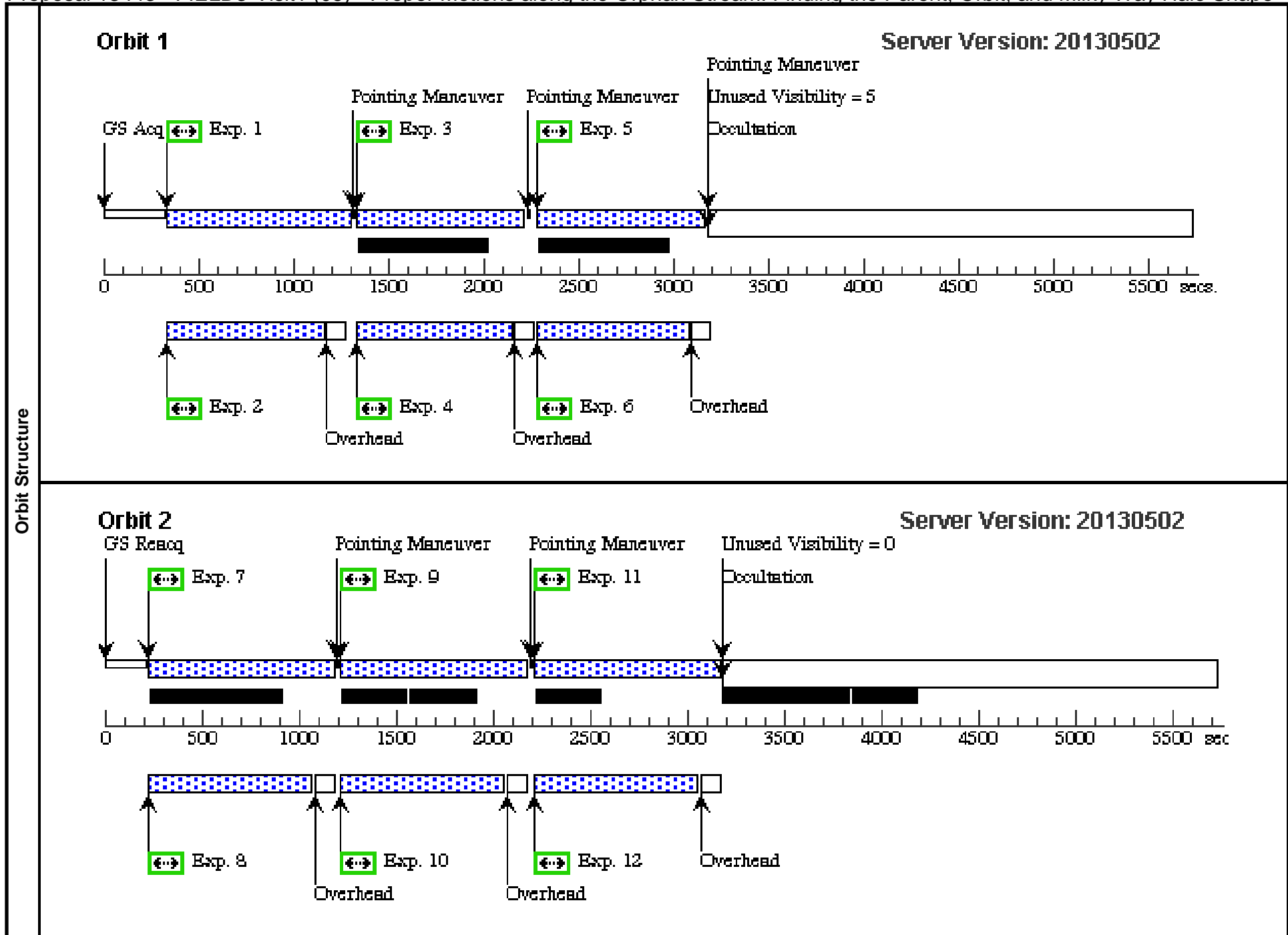
Visit	<p>Proposal 13443, FIELD3-Visit1 (05)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: SCHED 40%; ORIENT 291.63D TO 291.63 D; GROUP 05,06 WITHIN 30D</p> <p><i>Comments: This is the first visit for imaging ORPHAN-STREAM-3 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9984. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 05 and 06 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(3)		ORPHAN-STREAM-FIELD3	RA: 10 33 15.4000 (158.3141667d) Dec: +07 03 2.20 (7.05061d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD3-Visit1 (05) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.0000,0 .0000	Sequence 1-6 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD3-Visit1 (05)	765 Secs (760 Secs) [==>760.0 Secs]	[1]
	2	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD3-Visit1 (05)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	3	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.2141,0 .0161	Sequence 1-6 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD3-Visit1 (05)	765 Secs (760 Secs) [==>760.0 Secs]	[1]
	4	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD3-Visit1 (05)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	5	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.4281,0 .0322	Sequence 1-6 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD3-Visit1 (05)	765 Secs (760 Secs) [==>760.0 Secs]	[1]
	6	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD3-Visit1 (05)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	7	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.0504,0 .2183	Sequence 7-12 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD3-Visit1 (05)	852 Secs (837 Secs) [==>837.0 Secs]	[2]
	8	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD3-Visit1 (05)	800 Secs (824 Secs) [==>824.0 Secs]	[2]

Proposal 13443 - FIELD3-Visit1 (05) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W	POS TARG 0.2644,0 .2344	Sequence 7-12 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD3-Visit1 (05)	852 Secs (837 Secs) [==>837.0 Secs]	[2]
10	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD3-Visit1 (05)	800 Secs (824 Secs) [==>824.0 Secs]	[2]
11	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W	POS TARG 0.4784,0 .2505	Sequence 7-12 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD3-Visit1 (05)	852 Secs (837 Secs) [==>837.0 Secs]	[2]
12	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD3-Visit1 (05) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD3-Visit1 (05)	800 Secs (847 Secs) [==>847.0 Secs]	[2]



Proposal 13443 - FIELD3-Visit2 (06) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:49 GMT 2013

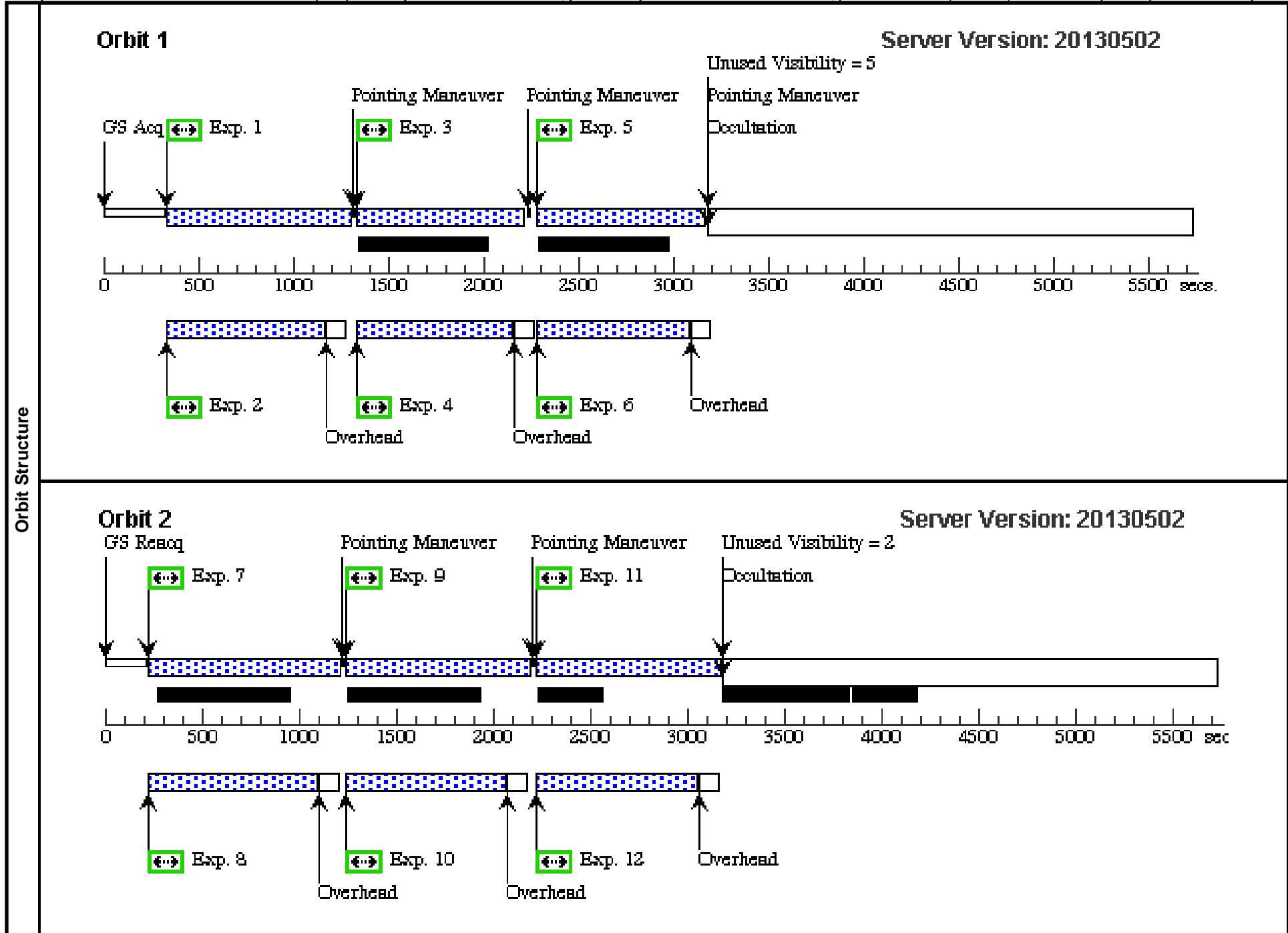
Visit	<p>Proposal 13443, FIELD3-Visit2 (06)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: SCHED 40%; SAME ORIENT AS 05; GROUP 06,05 WITHIN 30D</p> <p><i>Comments: This is the second visit for imaging ORPHAN-STREAM-3 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9984. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 05 and 06 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(3)		ORPHAN-STREAM-FIELD3	RA: 10 33 15.4000 (158.3141667d) Dec: +07 03 2.20 (7.05061d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD3-Visit2 (06) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.1008,0 .4366	Sequence 1-6 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD3-Visit2 (06)	785 Secs (760 Secs) [==>760.0 Secs]	[1]
	2	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD3-Visit2 (06)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	3	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.3148,0 .4527	Sequence 1-6 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD3-Visit2 (06)	786 Secs (761 Secs) [==>761.0 Secs]	[1]
	4	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD3-Visit2 (06)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	5	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F775W		POS TARG 0.5288,0 .4688	Sequence 1-6 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD3-Visit2 (06)	785 Secs (760 Secs) [==>760.0 Secs]	[1]
	6	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD3-Visit2 (06)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	7	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0 .0000	Sequence 7-12 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD3-Visit2 (06)	839 Secs (823 Secs) [==>823.0 Secs]	[2]
	8	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD3-Visit2 (06)	800 Secs (851 Secs) [==>851.0 Secs]	[2]

Proposal 13443 - FIELD3-Visit2 (06) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.1150,0 .1250	Sequence 7-12 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD3-Visit2 (06)	839 Secs (823 Secs) [==>823.0 Secs]	[2]
10	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD3-Visit2 (06)	800 Secs (800 Secs) [==>]	[2]
11	(3) ORPHAN-STRE AM-FIELD3	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2310,0 .2490	Sequence 7-12 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD3-Visit2 (06)	838 Secs (822 Secs) [==>822.0 Secs]	[2]
12	(3) ORPHAN-STRE AM-FIELD3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD3-Visit2 (06) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD3-Visit2 (06)	800 Secs (832 Secs) [==>832.0 Secs]	[2]



Proposal 13443 - FIELD4-Visit1 (07) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:51 GMT 2013

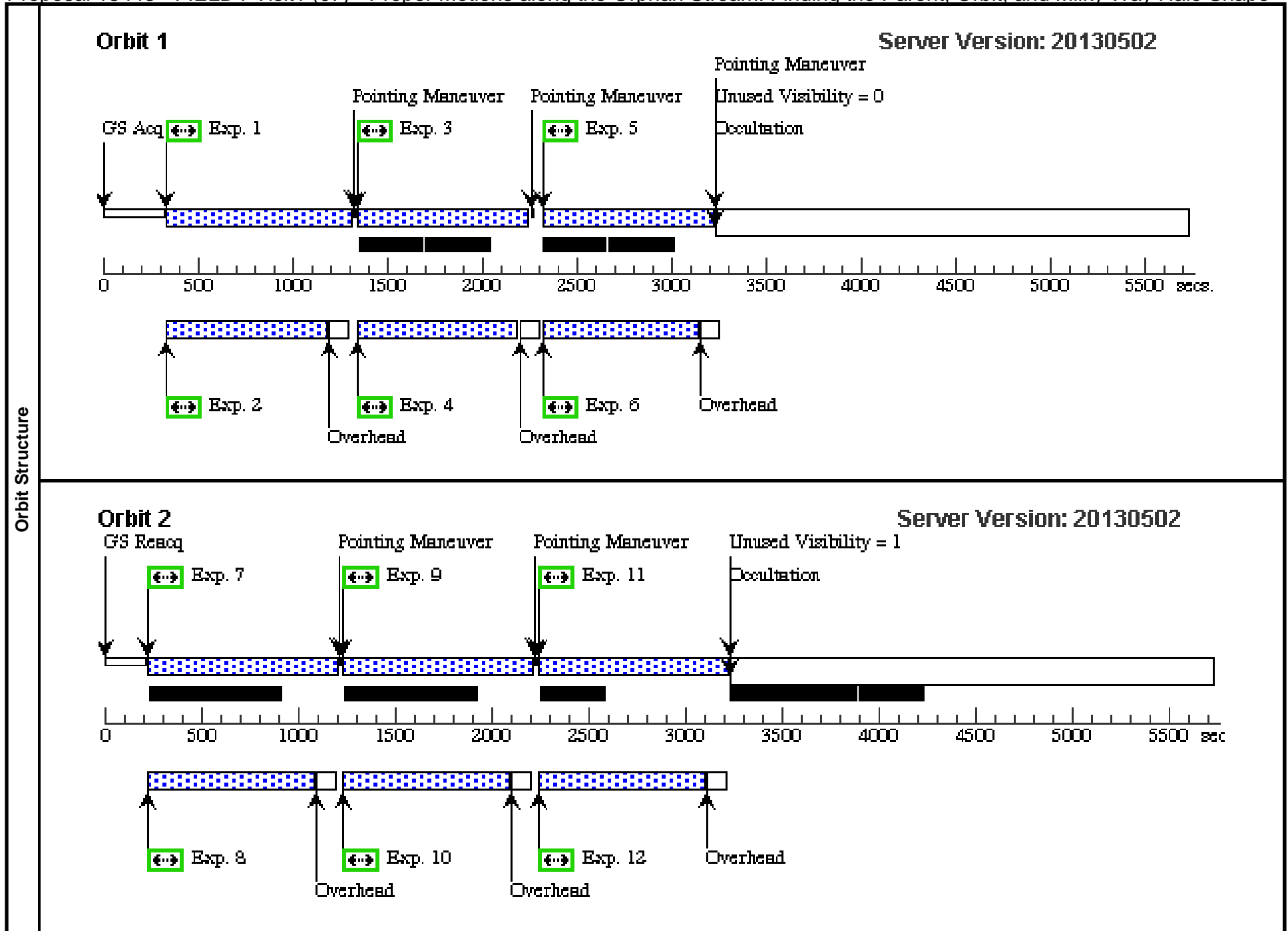
Visit	<p>Proposal 13443, FIELD4-Visit1 (07)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: ORIENT 124.70D TO 124.70 D; GROUP 07,08 WITHIN 30D</p> <p><i>Comments: This is the first visit for imaging ORPHAN-STREAM-4 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9877. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 07 and 08 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(4)		ORPHAN-STREAM-FIELD4	RA: 10 47 24.4000 (161.8516667d) Dec: +05 35 43.80 (5.59550d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD4-Visit1 (07) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0000,0 .0000	Sequence 1-6 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD4-Visit1 (07)	786 Secs (776 Secs) [==>776.0 Secs]	[1]
	2	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD4-Visit1 (07)	800 Secs (820 Secs) [==>820.0 Secs]	[1]
	3	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.2141,0 .0161	Sequence 1-6 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD4-Visit1 (07)	786 Secs (776 Secs) [==>776.0 Secs]	[1]
	4	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD4-Visit1 (07)	800 Secs (820 Secs) [==>820.0 Secs]	[1]
	5	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.4281,0 .0322	Sequence 1-6 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD4-Visit1 (07)	785 Secs (775 Secs) [==>775.0 Secs]	[1]
	6	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD4-Visit1 (07)	800 Secs (820 Secs) [==>820.0 Secs]	[1]
	7	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.0504,0 .2183	Sequence 7-12 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD4-Visit1 (07)	852 Secs (852 Secs) [==>852.0 Secs]	[2]
	8	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD4-Visit1 (07)	800 Secs (839 Secs) [==>839.0 Secs]	[2]

Proposal 13443 - FIELD4-Visit1 (07) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.2644,0 .2344	Sequence 7-12 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD4-Visit1 (07)	852 Secs (852 Secs) [==>852.0 Secs]	[2]
10	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD4-Visit1 (07)	800 Secs (839 Secs) [==>839.0 Secs]	[2]
11	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.4784,0 .2505	Sequence 7-12 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD4-Visit1 (07)	852 Secs (852 Secs) [==>852.0 Secs]	[2]
12	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD4-Visit1 (07) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD4-Visit1 (07)	800 Secs (862 Secs) [==>862.0 Secs]	[2]



Proposal 13443 - FIELD4-Visit2 (08) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

Sat Jun 08 01:03:53 GMT 2013

Visit	<p>Proposal 13443, FIELD4-Visit2 (08)</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: SAME ORIENT AS 07; GROUP 08,07 WITHIN 30D</p> <p><i>Comments: This is the second visit for imaging ORPHAN-STREAM-4 field. Two orbits are required to complete this visit. Since our goal is to measure proper motions of stars in the target field, our orientation is set to exactly match the previous observations of PID 9877. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. We require that Visits 07 and 08 be observed in a 30 day window so that they can be treated as single epoch data for astrometric analysis.</i></p>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(4)	ORPHAN-STREAM-FIELD4	RA: 10 47 24.4000 (161.8516667d) Dec: +05 35 43.80 (5.59550d) Equinox: J2000		V=24+/-2	Reference Frame: ICRS

Proposal 13443 - FIELD4-Visit2 (08) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
Exposures	1	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.1008,0 .4366	Sequence 1-6 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD4-Visit2 (08)	786 Secs (784 Secs) [==>784.0 Secs]	[1]
	2	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in FIELD4-Visit2 (08)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	3	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.3148,0 .4527	Sequence 1-6 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD4-Visit2 (08)	786 Secs (784 Secs) [==>784.0 Secs]	[1]
	4	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in FIELD4-Visit2 (08)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	5	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.5288,0 .4688	Sequence 1-6 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD4-Visit2 (08)	785 Secs (783 Secs) [==>783.0 Secs]	[1]
	6	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in FIELD4-Visit2 (08)	800 Secs (800 Secs) [==>800.0 Secs]	[1]
	7	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F606W		POS TARG 0.0000,0 .0000	Sequence 7-12 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD4-Visit2 (08)	834 Secs (834 Secs) [==>834.0 Secs]	[2]
	8	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in FIELD4-Visit2 (08)	800 Secs (876 Secs) [==>876.0 Secs]	[2]

Proposal 13443 - FIELD4-Visit2 (08) - Proper Motions along the Orphan Stream: Finding the Parent, Orbit, and Milky Way Halo Shape

9	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.1150,0 .1250	Sequence 7-12 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD4-Visit2 (08)	834 Secs (834 Secs) [==>834.0 Secs]	[2]
10	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in FIELD4-Visit2 (08)	800 Secs (821 Secs) [==>821.0 Secs]	[2]
11	(4) ORPHAN-STRE AM-FIELD4	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.2310,0 .2490	Sequence 7-12 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD4-Visit2 (08)	834 Secs (834 Secs) [==>834.0 Secs]	[2]
12	(4) ORPHAN-STRE AM-FIELD4	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in FIELD4-Visit2 (08) Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in FIELD4-Visit2 (08)	800 Secs (844 Secs) [==>844.0 Secs]	[2]

