



# 12564 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Cycle: 19, 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) SGR-STREAM-1	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:24:33.0	yes
02	(1) SGR-STREAM-1	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:24:45.0	yes
03	(2) SGR-STREAM-2	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:24:59.0	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) SGR-STREAM-2	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:25:17.0	yes
05	(3) SGR-STREAM-3	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:25:30.0	yes
06	(3) SGR-STREAM-3	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:25:44.0	yes
07	(4) SGR-STREAM-4	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:25:59.0	yes
08	(4) SGR-STREAM-4	ACS/WFC WFC3/UVIS	2	27-Apr-2012 21:26:12.0	yes

16 Total Orbits Used

## **ABSTRACT**

The Sagittarius Stream is the brightest and most prominent stellar stream around the Milky Way (MW), and the only one with a widely agreed upon origin and parent galaxy (the Sgr dSph). It therefore provides a unique tracer to constrain the MW's dark halo. The position, width, distance, mean line-of-sight velocity, and velocity dispersion of the Stream have been mapped in various parts of the sky. Detailed N-body modeling by the CoIs has shown that conflicting past claims about the implied shape of MW dark halo were due to unnecessarily restrictive assumed dark halo geometries, which did not yield a simultaneous fit to all the data. But when a fully general triaxial geometry is allowed (as typical of CDM halos), the best fit is a near-oblate halo with its spin axis perpendicular to the MW disk. Further observational data are needed to validate or refute this very surprising result. We therefore propose to map for the first time the variation in proper motion along the Stream. The only existing measurements to date, obtained by the CoIs from 90 years of ground-based data, are restricted to the trailing side of the Stream, and have 10 times larger errorbars than achievable with HST. We will target four fields with ACS/WFC for which serendipitous first epoch observations exist in the Archive. Proper motion accuracies near 5 km/s will be achieved by measuring the relative motion between Stream stars and background galaxies, using established techniques developed by us in the context of ongoing programs. The results will provide a large improvement in our understanding of the MW dark halo, solar circular velocity, and Sgr dSph history.

## **OBSERVING DESCRIPTION**

To measure the absolute proper motion of stars associated with the Sagittarius 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 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. We require that all of our images be obtained 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 additional stellar population of the Sagittarius stream.

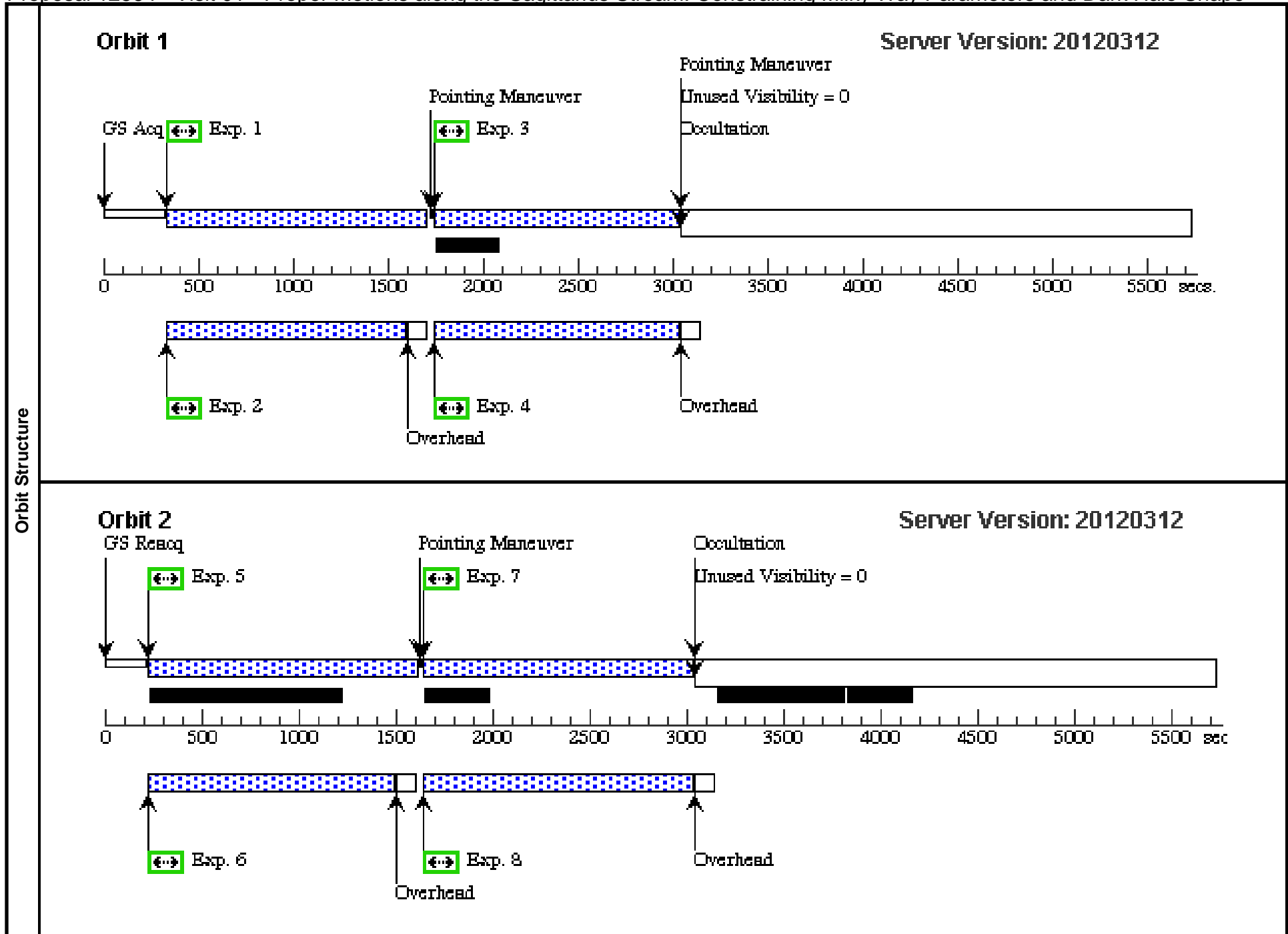
Proposal 12564 - Visit 01 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:21 GMT 2012

<b>Visit</b>	<p><b>Proposal 12564, Visit 01, scheduling</b></p> <p><b>Diagnostic Status: No Diagnostics</b></p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: SCHED 80%; ORIENT 357.807495D TO 357.807495 D; GROUP 01,02 WITHIN 30D</p> <p><i>Comments: This is the first visit for imaging SGRSTREAM-FIELD1. 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 9760. 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>					
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
	(1)	SGR-STREAM-1	RA: 02 09 37.2573 (32.4052387d) Dec: -04 38 31.22 (-4.64201d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS

Proposal 12564 - Visit 01 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	sgr-stream-1 -dither1	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.000,nu ll	Sequence 1-4 Non-Int in Visit 01 Prime + Parallel Gro up 1-2 in Sequence 1 -4 Non-Int in Visit 0 1	1169 Secs [==>]	[1]
	2	sgr-stream-1 -dither1	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-4 Non-Int in Visit 01 Prime + Parallel Gro up 1-2 in Sequence 1 -4 Non-Int in Visit 0 1	1229 Secs [==>]	[1]
	3	sgr-stream-1 -dither2	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.16471, 0.01238	Sequence 1-4 Non-Int in Visit 01 Prime + Parallel Gro up 3-4 in Sequence 1 -4 Non-Int in Visit 0 1	1168 Secs [==>]	[1]
	4	sgr-stream-1 -dither2	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-4 Non-Int in Visit 01 Prime + Parallel Gro up 3-4 in Sequence 1 -4 Non-Int in Visit 0 1	1270 Secs [==>]	[1]
	5	sgr-stream-1 -dither3	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.32931, 0.02475	Sequence 5-8 Non-Int in Visit 01 Prime + Parallel Gro up 5-6 in Sequence 5 -8 Non-Int in Visit 0 1	1265 Secs [==>]	[2]
	6	sgr-stream-1 -dither3	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 5-8 Non-Int in Visit 01 Prime + Parallel Gro up 5-6 in Sequence 5 -8 Non-Int in Visit 0 1	1252 Secs [==>]	[2]
	7	sgr-stream-1 -dither4	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F814W		POS TARG 0.07467, 0.12938	Sequence 5-8 Non-Int in Visit 01 Prime + Parallel Gro up 7-8 in Sequence 5 -8 Non-Int in Visit 0 1	1265 Secs [==>]	[2]
	8	sgr-stream-1 -dither4	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 5-8 Non-Int in Visit 01 Prime + Parallel Gro up 7-8 in Sequence 5 -8 Non-Int in Visit 0 1	1368 Secs [==>]	[2]



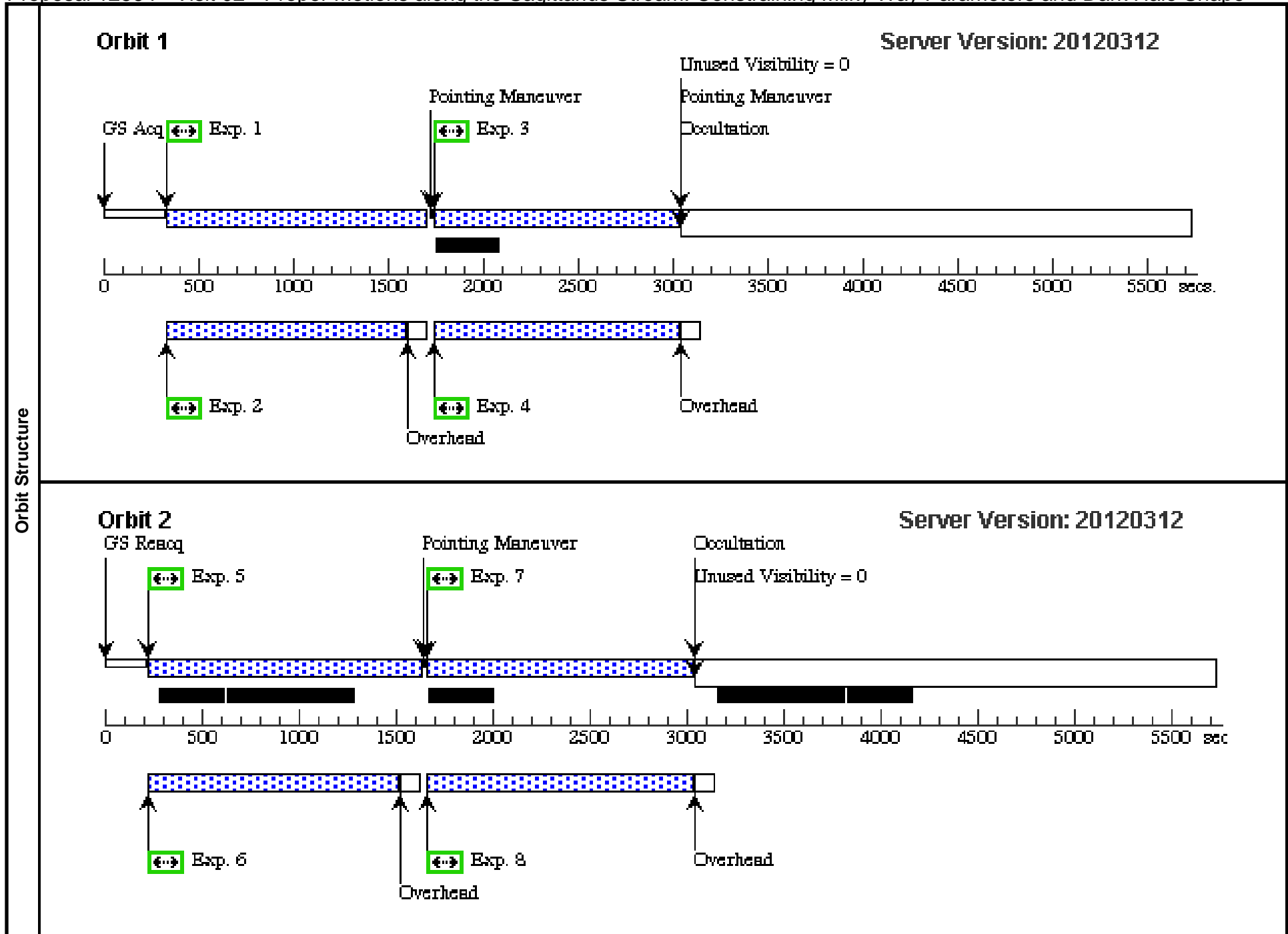
# Proposal 12564 - Visit 02 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:22 GMT 2012

<b>Visit</b>	<b>Proposal 12564, Visit 02, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: SCHED 80%; ORIENT 357.807495D TO 357.807495 D; GROUP 02,01 WITHIN 30D <i>Comments: This is the second visit for imaging SGRSTREAM-FIELD1. 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 9760. 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>					
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(1)		SGR-STREAM-1	RA: 02 09 37.2573 (32.4052387d) Dec: -04 38 31.22 (-4.64201d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS

Proposal 12564 - Visit 02 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	sgr-stream-1 -dither5	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.23934, 0.14176	Sequence 1-4 Non-Int in Visit 02 Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in Visit 02	1169 Secs [==>]	[1]
	2	sgr-stream-1 -dither5	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 1-4 Non-Int in Visit 02 Prime + Parallel Group 1-2 in Sequence 1-4 Non-Int in Visit 02	1229 Secs [==>]	[1]
	3	sgr-stream-1 -dither6	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F814W	POS TARG 0.40394, 0.15413	Sequence 1-4 Non-Int in Visit 02 Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in Visit 02	1168 Secs [==>]	[1]
	4	sgr-stream-1 -dither6	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 1-4 Non-Int in Visit 02 Prime + Parallel Group 3-4 in Sequence 1-4 Non-Int in Visit 02	1270 Secs [==>]	[1]
	5	sgr-stream-1 -dither1	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.0000, .0000	Sequence 5-8 Non-Int in Visit 02 Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in Visit 02	1228 Secs [==>]	[2]
	6	sgr-stream-1 -dither1	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 5-8 Non-Int in Visit 02 Prime + Parallel Group 5-6 in Sequence 5-8 Non-Int in Visit 02	1270 Secs [==>]	[2]
	7	sgr-stream-1 -dither2	(1) SGR-STREAM-1	ACS/WFC, ACCUM, WFC	F606W	POS TARG 0.0990, .1070	Sequence 5-8 Non-Int in Visit 02 Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in Visit 02	1247 Secs [==>]	[2]
	8	sgr-stream-1 -dither2	(1) SGR-STREAM-1	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 5-8 Non-Int in Visit 02 Prime + Parallel Group 7-8 in Sequence 5-8 Non-Int in Visit 02	1350 Secs [==>]	[2]



Proposal 12564 - Visit 03 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:23 GMT 2012

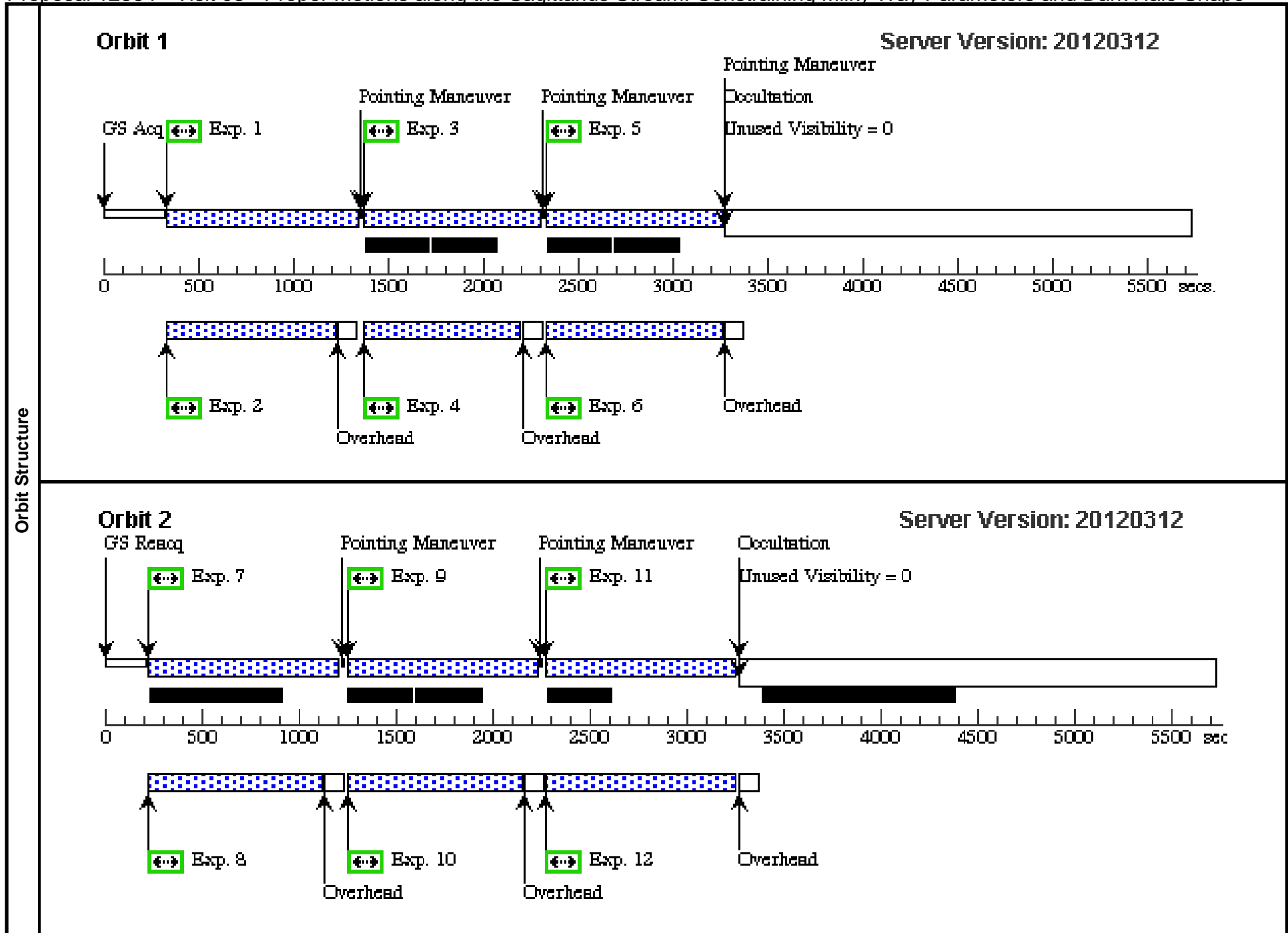
<b>Visit</b>	<p><b>Proposal 12564, Visit 03, completed</b></p> <p><b>Diagnostic Status: No Diagnostics</b></p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: ORIENT 281.820396D TO 281.820396 D; GROUP 03,04 WITHIN 30D</p> <p><i>Comments: This is the first visit for imaging SGRSTREAM-FIELD2. 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 10775. 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>					
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(2)		SGR-STREAM-2	RA: 18 35 45.7000 (278.9404167d) Dec: -32 59 25.00 (-32.99028d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS

Proposal 12564 - Visit 03 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	sgr-stream-2 -dither1	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.0000, null	Sequence 1-6 Non-Int in Visit 03  Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 03	802 Secs [==>]	[1]
	2	sgr-stream-2 -dither1	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in Visit 03  Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 03	862 Secs [==>]	[1]
	3	sgr-stream-2 -dither2	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.21409, 0.01609	Sequence 1-6 Non-Int in Visit 03  Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 03	802 Secs [==>]	[1]
	4	sgr-stream-2 -dither2	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in Visit 03  Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 03	801 Secs [==>]	[1]
	5	sgr-stream-2 -dither3	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.42806, 0.03217	Sequence 1-6 Non-Int in Visit 03  Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 03	802 Secs [==>]	[1]
	6	sgr-stream-2 -dither3	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in Visit 03  Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 03	928 Secs [==>]	[1]
	7	sgr-stream-2 -dither4	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.05037, 0.21829	Sequence 7-12 Non-Int in Visit 03  Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 03	861 Secs [==>]	[2]
	8	sgr-stream-2 -dither4	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in Visit 03  Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 03	877 Secs [==>]	[2]
	9	sgr-stream-2 -dither5	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.26442, 0.23439	Sequence 7-12 Non-Int in Visit 03  Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 03	861 Secs [==>]	[2]

Proposal 12564 - Visit 03 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

10	sgr-stream-2 (2) SGR-STREAM-2 WFC3/UVIS, ACCUM, UVIS -dither5	F814W		Sequence 7-12 Non-Int in Visit 03 Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 03	876 Secs	
					[==>]	[2]
11	sgr-stream-2 (2) SGR-STREAM-2 ACS/WFC, ACCUM, WFCENTER -dither6	F814W	POS TARG 0.47841, 0.25048	Sequence 7-12 Non-Int in Visit 03 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 03	860 Secs	
					[==>]	[2]
12	sgr-stream-2 (2) SGR-STREAM-2 WFC3/UVIS, ACCUM, UVIS -dither6	F814W		Sequence 7-12 Non-Int in Visit 03 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 03	986 Secs	
					[==>]	[2]



Proposal 12564 - Visit 04 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:25 GMT 2012

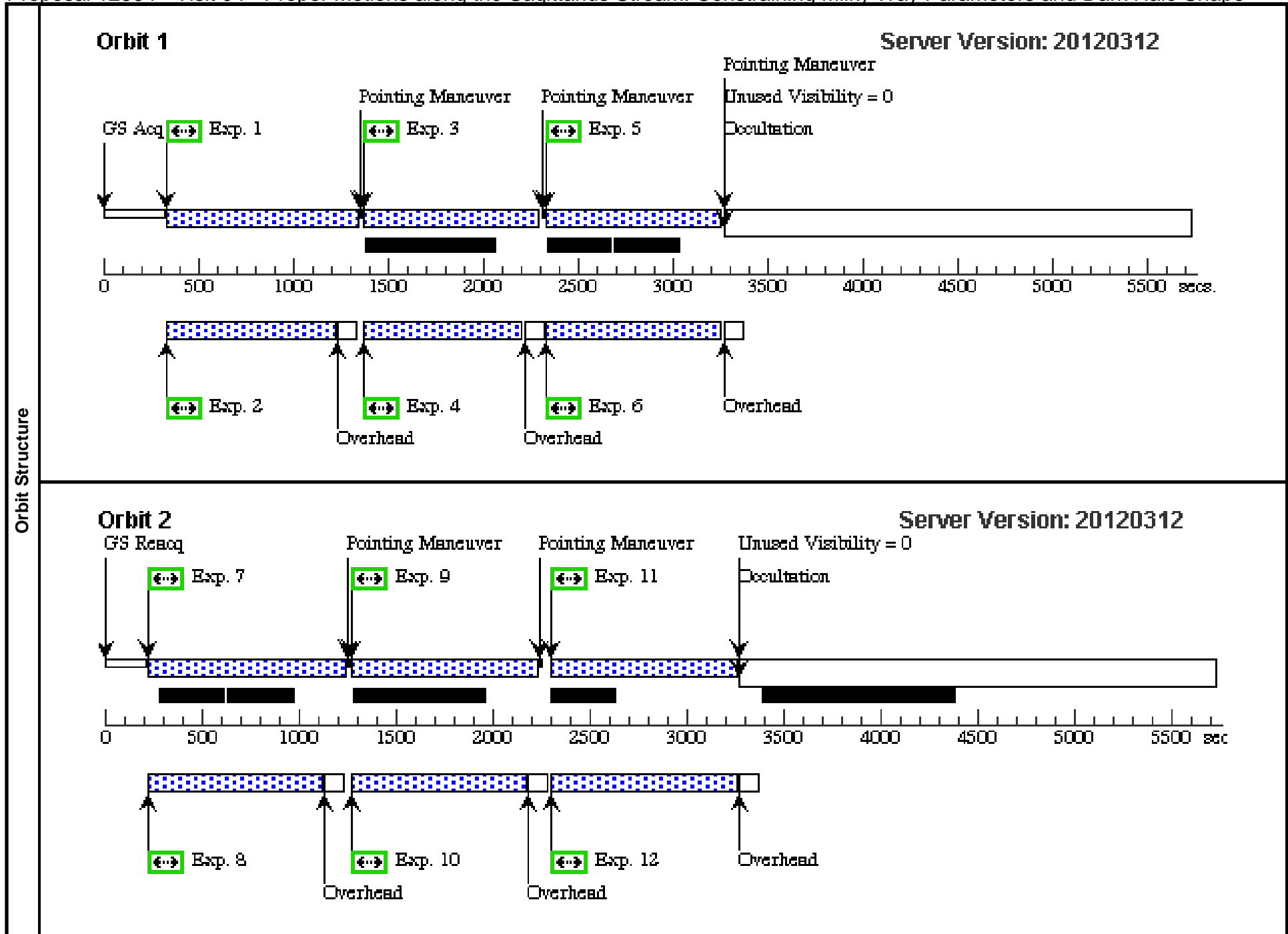
<b>Visit</b>	<p><b>Proposal 12564, Visit 04, completed</b></p> <p><b>Diagnostic Status: No Diagnostics</b></p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: ORIENT 281.820396D TO 281.820396 D; GROUP 04,03 WITHIN 30D</p> <p><i>Comments: This is the second visit for imaging SGRSTREAM-FIELD2. 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 10775. 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>					
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(2)		SGR-STREAM-2	RA: 18 35 45.7000 (278.9404167d) Dec: -32 59 25.00 (-32.99028d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS

Proposal 12564 - Visit 04 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	sgr-stream-2 -dither7	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.10075, 0.43657	Sequence 1-6 Non-Int in Visit 04  Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 04	801 Secs [==>]	[1]
	2	sgr-stream-2 -dither7	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in Visit 04  Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 04	862 Secs [==>]	[1]
	3	sgr-stream-2 -dither8	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.31475, 0.45267	Sequence 1-6 Non-Int in Visit 04  Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 04	801 Secs [==>]	[1]
	4	sgr-stream-2 -dither8	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in Visit 04  Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 04	812 Secs [==>]	[1]
	5	sgr-stream-2 -dither9	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.52879, 0.46876	Sequence 1-6 Non-Int in Visit 04  Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 04	800 Secs [==>]	[1]
	6	sgr-stream-2 -dither9	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in Visit 04  Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 04	926 Secs [==>]	[1]
	7	sgr-stream-2 -dither1	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F606W		POS TARG 0.0000, null	Sequence 7-12 Non-Int in Visit 04  Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 04	838 Secs [==>]	[2]
	8	sgr-stream-2 -dither1	(2) SGR-STREAM-2	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 7-12 Non-Int in Visit 04  Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 04	877 Secs [==>]	[2]
	9	sgr-stream-2 -dither2	(2) SGR-STREAM-2	ACS/WFC, ACCUM, WFCENTER	F606W		POS TARG 0.1150, 0.1250	Sequence 7-12 Non-Int in Visit 04  Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 04	838 Secs [==>]	[2]

Proposal 12564 - Visit 04 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

10	sgr-stream-2 (2) SGR-STREAM-2 WFC3/UVIS, ACCUM, UVIS -dither2	F814W		Sequence 7-12 Non-Int in Visit 04 Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 04	876 Secs	
					[==>]	[2]
11	sgr-stream-2 (2) SGR-STREAM-2 ACS/WFC, ACCUM, WFCENTER -dither3	F606W	POS TARG 0.2310,0.2490	Sequence 7-12 Non-Int in Visit 04 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 04	837 Secs	
					[==>]	[2]
12	sgr-stream-2 (2) SGR-STREAM-2 WFC3/UVIS, ACCUM, UVIS -dither3	F814W		Sequence 7-12 Non-Int in Visit 04 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 04	963 Secs	
					[==>]	[2]



# Proposal 12564 - Visit 05 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:26 GMT 2012

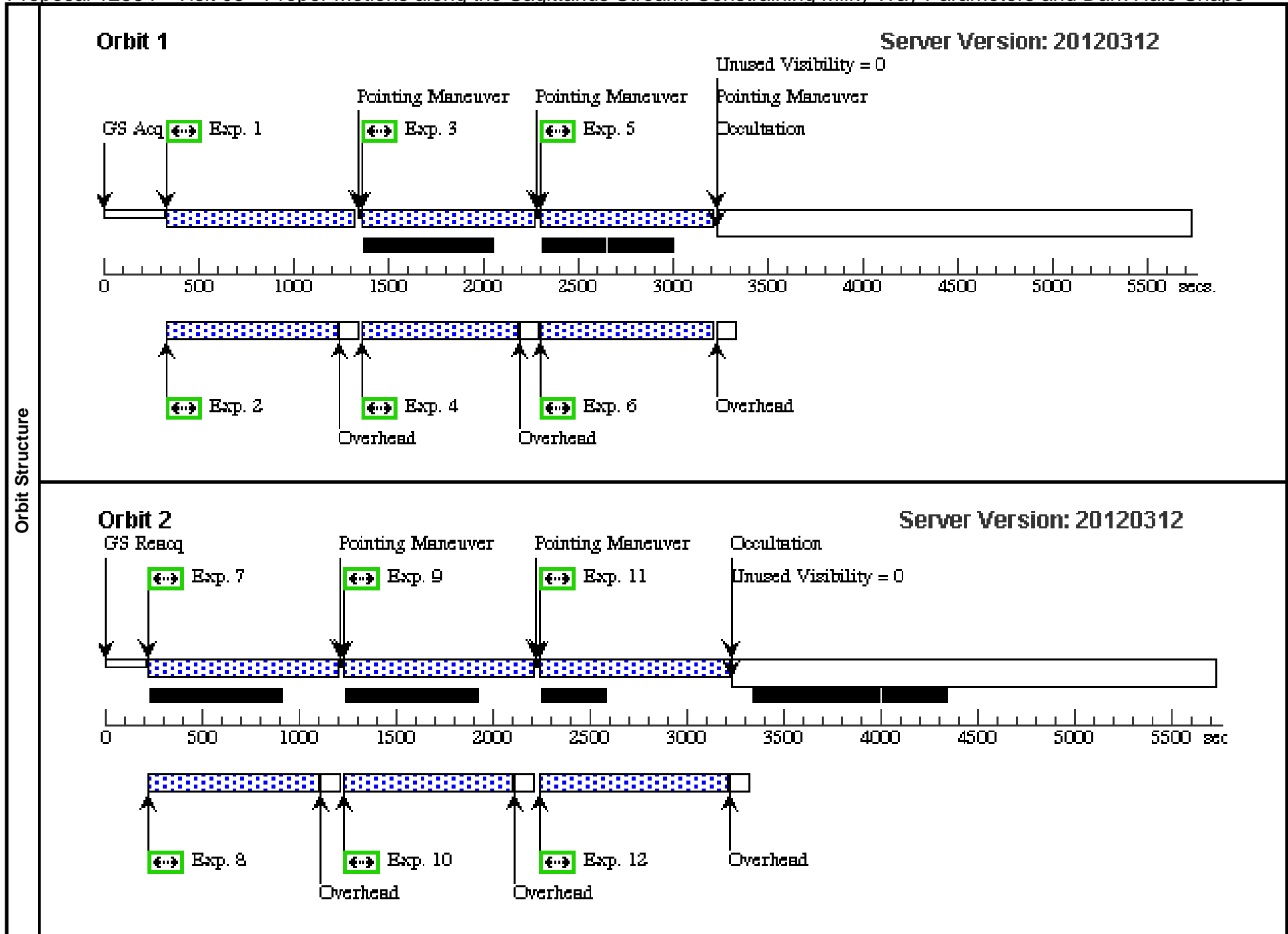
<b>Visit</b>	<b>Proposal 12564, Visit 05, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 145D TO 145 D; GROUP 05,06 WITHIN 30D <i>Comments: This is the first visit for imaging SGRSTREAM-FIELD3. Two orbits are required to 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 10417. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. For each visit we will do a set of 6-point dithering. 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>												
	<b>Fixed Targets</b>	<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>SGR-STREAM-3</td> <td>RA: 14 12 4.8465 (213.0201937d) Dec: -01 02 1.00 (-1.03361d) Equinox: J2000</td> <td></td> <td>V=22+/-2</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	SGR-STREAM-3	RA: 14 12 4.8465 (213.0201937d) Dec: -01 02 1.00 (-1.03361d) Equinox: J2000		V=22+/-2
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous								
(3)	SGR-STREAM-3	RA: 14 12 4.8465 (213.0201937d) Dec: -01 02 1.00 (-1.03361d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS								

Proposal 12564 - Visit 05 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	sgr-stream-3 -dither1	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.0000, null; GS ACQ SCENARI O BASE1B3	Sequence 1-6 Non-Int in Visit 05  Prime + Parallel Gro up 1-2 in Sequence 1 -6 Non-Int in Visit 0 5	789 Secs [==>]	[1]
	2	sgr-stream-3 -dither1	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 1-6 Non-Int in Visit 05  Prime + Parallel Gro up 1-2 in Sequence 1 -6 Non-Int in Visit 0 5	869 Secs [==>]	[1]
	3	sgr-stream-3 -dither2	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.21409, 0.01609	Sequence 1-6 Non-Int in Visit 05  Prime + Parallel Gro up 3-4 in Sequence 1 -6 Non-Int in Visit 0 5	788 Secs [==>]	[1]
	4	sgr-stream-3 -dither2	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 1-6 Non-Int in Visit 05  Prime + Parallel Gro up 3-4 in Sequence 1 -6 Non-Int in Visit 0 5	795 Secs [==>]	[1]
	5	sgr-stream-3 -dither3	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.42806, 0.03217	Sequence 1-6 Non-Int in Visit 05  Prime + Parallel Gro up 5-6 in Sequence 1 -6 Non-Int in Visit 0 5	788 Secs [==>]	[1]
	6	sgr-stream-3 -dither3	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 1-6 Non-Int in Visit 05  Prime + Parallel Gro up 5-6 in Sequence 1 -6 Non-Int in Visit 0 5	914 Secs [==>]	[1]
	7	sgr-stream-3 -dither4	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.05037, 0.21829	Sequence 7-12 Non-Int in Visit 05  Prime + Parallel Gro up 7-8 in Sequence 7 -12 Non-Int in Visit 05	853 Secs [==>]	[2]
	8	sgr-stream-3 -dither4	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 7-12 Non-Int in Visit 05  Prime + Parallel Gro up 7-8 in Sequence 7 -12 Non-Int in Visit 05	860 Secs [==>]	[2]
	9	sgr-stream-3 -dither5	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.26442, 0.23439	Sequence 7-12 Non-Int in Visit 05  Prime + Parallel Gro up 9-10 in Sequence 7-12 Non-Int in Visit 05	853 Secs [==>]	[2]

Proposal 12564 - Visit 05 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

10	sgr-stream-3 -dither5	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in Visit 05	850 Secs	
						Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 05	[==>]	[2]
11	sgr-stream-3 -dither6	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.47841, 0.25048	Sequence 7-12 Non-Int in Visit 05	852 Secs	
						Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 05	[==>]	[2]
12	sgr-stream-3 -dither6	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in Visit 05	970 Secs	
						Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 05	[==>]	[2]



# Proposal 12564 - Visit 06 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:27 GMT 2012

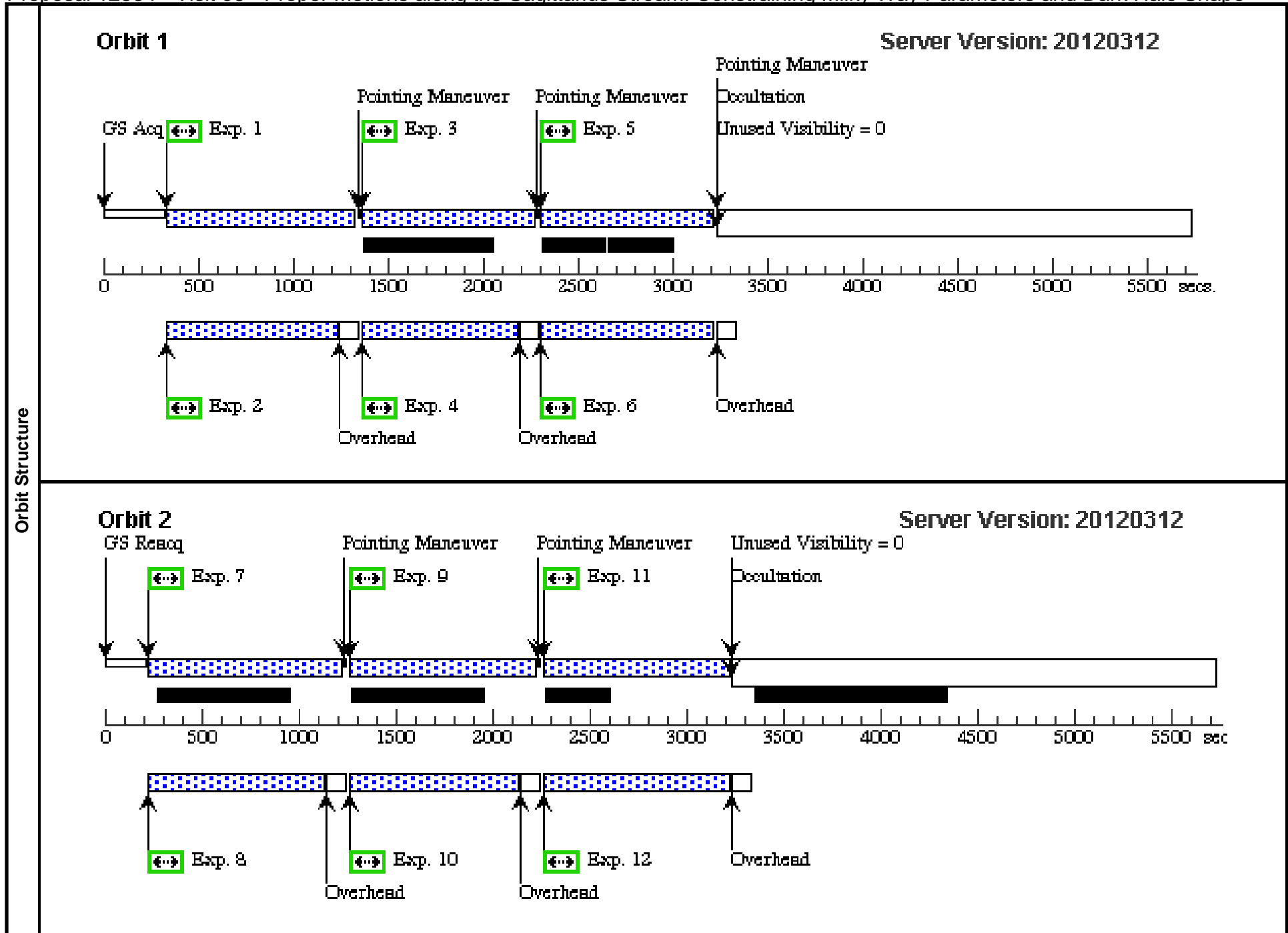
<b>Visit</b>	<b>Proposal 12564, Visit 06, scheduling</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 145D TO 145 D; GROUP 06,05 WITHIN 30D <i>Comments: This is the second visit for imaging SGRSTREAM-FIELD3. Two orbits are required to 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 10417. We adopt a customized dither pattern designed to optimally cover the pixel phase using the POS-TARG special requirements. For each visit we will do a set of 6-point dithering. 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>					
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(3)		SGR-STREAM-3	RA: 14 12 4.8465 (213.0201937d) Dec: -01 02 1.00 (-1.03361d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS

Proposal 12564 - Visit 06 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	sgr-stream-3 -dither7	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.10075, 0.43657; GS ACQ SCENARI O BASE1B3	Sequence 1-6 Non-Int in Visit 06  Prime + Parallel Gro up 1-2 in Sequence 1 -6 Non-Int in Visit 0 6	789 Secs [==>]	[1]
	2	sgr-stream-3 -dither7	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 1-6 Non-Int in Visit 06  Prime + Parallel Gro up 1-2 in Sequence 1 -6 Non-Int in Visit 0 6	869 Secs [==>]	[1]
	3	sgr-stream-3 -dither8	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.31475, 0.45267	Sequence 1-6 Non-Int in Visit 06  Prime + Parallel Gro up 3-4 in Sequence 1 -6 Non-Int in Visit 0 6	788 Secs [==>]	[1]
	4	sgr-stream-3 -dither8	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 1-6 Non-Int in Visit 06  Prime + Parallel Gro up 3-4 in Sequence 1 -6 Non-Int in Visit 0 6	795 Secs [==>]	[1]
	5	sgr-stream-3 -dither9	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.52879, 0.46876	Sequence 1-6 Non-Int in Visit 06  Prime + Parallel Gro up 5-6 in Sequence 1 -6 Non-Int in Visit 0 6	788 Secs [==>]	[1]
	6	sgr-stream-3 -dither9	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 1-6 Non-Int in Visit 06  Prime + Parallel Gro up 5-6 in Sequence 1 -6 Non-Int in Visit 0 6	914 Secs [==>]	[1]
	7	sgr-stream-3 -dither1	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F606W	POS TARG 0.0000,0 .0000	Sequence 7-12 Non-Int in Visit 06  Prime + Parallel Gro up 7-8 in Sequence 7 -12 Non-Int in Visit 06	838 Secs [==>]	[2]
	8	sgr-stream-3 -dither1	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 7-12 Non-Int in Visit 06  Prime + Parallel Gro up 7-8 in Sequence 7 -12 Non-Int in Visit 06	889 Secs [==>]	[2]
	9	sgr-stream-3 -dither2	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F606W	POS TARG 0.1150,0 .1250	Sequence 7-12 Non-Int in Visit 06  Prime + Parallel Gro up 9-10 in Sequence 7-12 Non-Int in Visit 06	835 Secs [==>]	[2]

Proposal 12564 - Visit 06 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

10	sgr-stream-3 -dither2	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in Visit 06	849 Secs	
						Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 06	[==>]	[2]
11	sgr-stream-3 -dither3	(3) SGR-STREAM-3	ACS/WFC, ACCUM, WFC1-FIX	F606W	POS TARG 0.2310,0.2490	Sequence 7-12 Non-Int in Visit 06	834 Secs	
						Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 06	[==>]	[2]
12	sgr-stream-3 -dither3	(3) SGR-STREAM-3	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in Visit 06	960 Secs	
						Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 06	[==>]	[2]



Proposal 12564 - Visit 07 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:27 GMT 2012

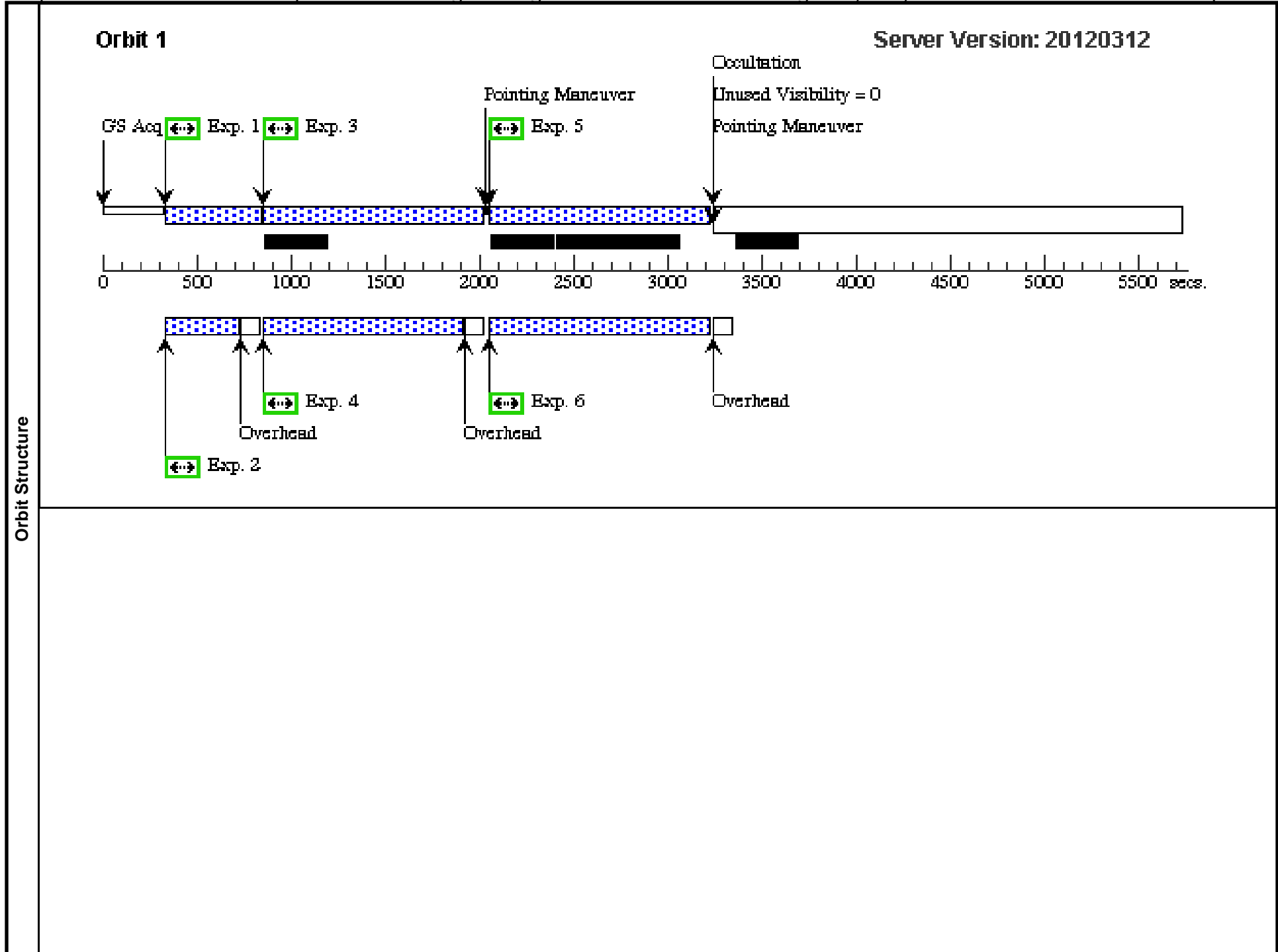
<b>Visit</b>	<p><b>Proposal 12564, Visit 07, implementation</b></p> <p><b>Diagnostic Status: No Diagnostics</b></p> <p>Scientific Instruments: WFC3/UVIS, ACS/WFC</p> <p>Special Requirements: ORIENT 129.9988D TO 129.9988 D; GROUP 07,08 WITHIN 30D</p> <p><i>Comments: This is the first visit for imaging SGRSTREAM-FIELD4. 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 10417. 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>					
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>
(4)		SGR-STREAM-4	RA: 11 59 6.2156 (179.7758983d) Dec: +13 37 19.19 (13.62200d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS

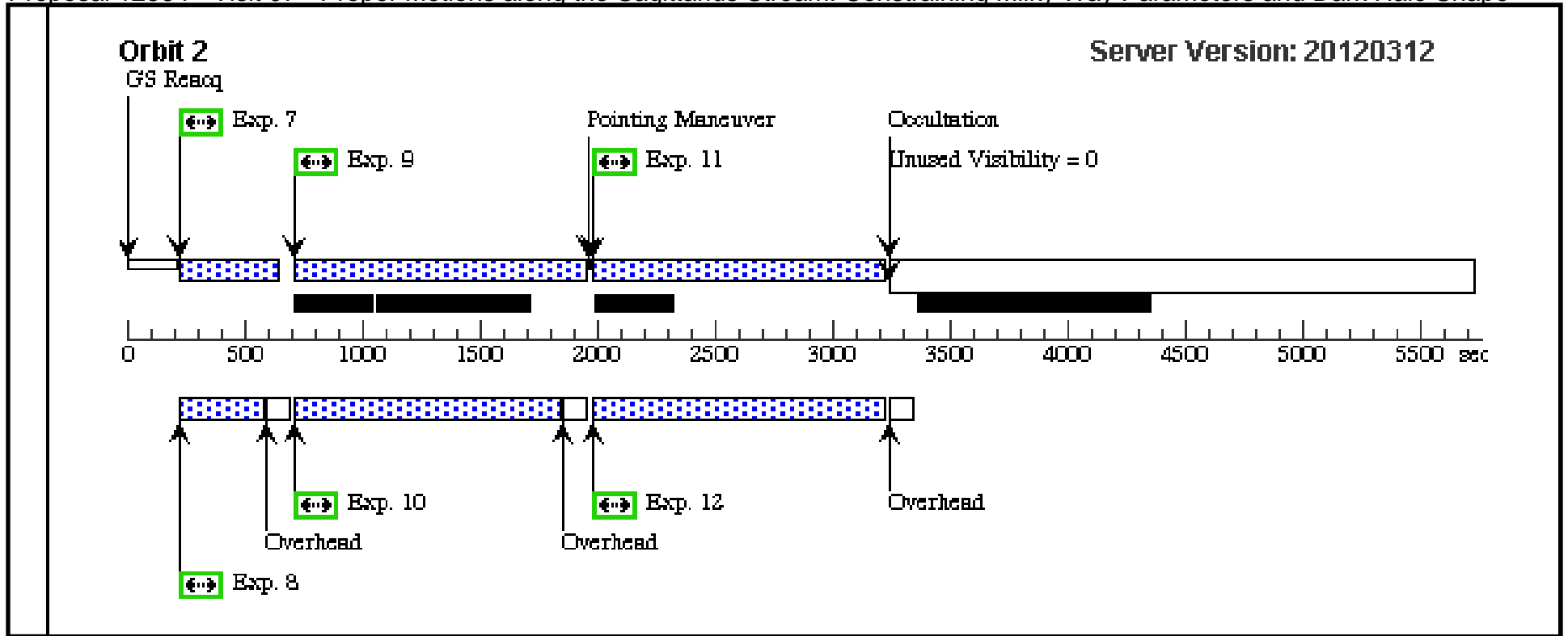
Proposal 12564 - Visit 07 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures	1	sgr-stream-4-short1	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W		Sequence 1-6 Non-Int in Visit 07 Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 07	300 Secs [==>]	[1]
	2	sgr-stream-4-short1	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 1-6 Non-Int in Visit 07 Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 07	360 Secs [==>]	[1]
	3	sgr-stream-4-dither1	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.00000, 0.00000	Sequence 1-6 Non-Int in Visit 07 Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 07	1048 Secs [==>]	[1]
	4	sgr-stream-4-dither1	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F606W		Sequence 1-6 Non-Int in Visit 07 Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 07	1035 Secs [==>]	[1]
	5	sgr-stream-4-dither2	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.16471, 0.01238	Sequence 1-6 Non-Int in Visit 07 Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 07	1048 Secs [==>]	[1]
	6	sgr-stream-4-dither2	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 1-6 Non-Int in Visit 07 Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 07	1151 Secs [==>]	[1]
	7	sgr-stream-4-short2	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.32931, 0.02475	Sequence 7-12 Non-Int in Visit 07 Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 07	300 Secs [==>]	[2]
	8	sgr-stream-4-short2	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F814W		Sequence 7-12 Non-Int in Visit 07 Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 07	360 Secs [==>]	[2]
	9	sgr-stream-4-dither3	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W	POS TARG 0.32931, 0.02475	Sequence 7-12 Non-Int in Visit 07 Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 07	1120 Secs [==>]	[2]

Proposal 12564 - Visit 07 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

10	sgr-stream-4 (4) SGR-STREAM-4 WFC3/UVIS, ACCUM, UVIS -dither3	F606W	Sequence 7-12 Non-Int in Visit 07 Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 07	1107 Secs	
				[==>]	[2]
11	sgr-stream-4 (4) SGR-STREAM-4 ACS/WFC, ACCUM, WFC1-FIX -dither4	F775W	POS TARG 0.07467, 0.12938 Sequence 7-12 Non-Int in Visit 07 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 07	1119 Secs	
				[==>]	[2]
12	sgr-stream-4 (4) SGR-STREAM-4 WFC3/UVIS, ACCUM, UVIS -dither4	F814W	Sequence 7-12 Non-Int in Visit 07 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 07	1222 Secs	
				[==>]	[2]





# Proposal 12564 - Visit 08 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

Sat Apr 28 01:26:28 GMT 2012

<b>Visit</b>	<b>Proposal 12564, Visit 08, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: WFC3/UVIS, ACS/WFC Special Requirements: ORIENT 129.9988D TO 129.9988 D; GROUP 08,07 WITHIN 30D <i>Comments: This is the first visit for imaging SGRSTREAM-FIELD4. 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 10417. 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>												
	<b>Fixed Targets</b>	<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>(4)</td> <td>SGR-STREAM-4</td> <td>                     RA: 11 59 6.2156 (179.7758983d)                      Dec: +13 37 19.19 (13.62200d)                      Equinox: J2000                 </td> <td></td> <td>V=22+/-2</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(4)	SGR-STREAM-4	RA: 11 59 6.2156 (179.7758983d) Dec: +13 37 19.19 (13.62200d) Equinox: J2000		V=22+/-2
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous								
(4)	SGR-STREAM-4	RA: 11 59 6.2156 (179.7758983d) Dec: +13 37 19.19 (13.62200d) Equinox: J2000		V=22+/-2	Reference Frame: ICRS								

Proposal 12564 - Visit 08 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
Exposures	1	sgr-stream-4-short3	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W		POS TARG 0.23934, 0.14176	Sequence 1-6 Non-Int in Visit 08 Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 08	300 Secs [==>]	[1]
	2	sgr-stream-4-short3	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in Visit 08 Prime + Parallel Group 1-2 in Sequence 1-6 Non-Int in Visit 08	300 Secs [==>]	[1]
	3	sgr-stream-4-dither5	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W		POS TARG 0.23934, 0.14176	Sequence 1-6 Non-Int in Visit 08 Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 08	1048 Secs [==>]	[1]
	4	sgr-stream-4-dither5	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F606W			Sequence 1-6 Non-Int in Visit 08 Prime + Parallel Group 3-4 in Sequence 1-6 Non-Int in Visit 08	1025 Secs [==>]	[1]
	5	sgr-stream-4-dither6	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F775W		POS TARG 0.40394, 0.15413	Sequence 1-6 Non-Int in Visit 08 Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 08	1048 Secs [==>]	[1]
	6	sgr-stream-4-dither6	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 1-6 Non-Int in Visit 08 Prime + Parallel Group 5-6 in Sequence 1-6 Non-Int in Visit 08	1141 Secs [==>]	[1]
	7	sgr-stream-4-short	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F606W		POS TARG 0.00000, 0.0000	Sequence 7-12 Non-Int in Visit 08 Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 08	300 Secs [==>]	[2]
	8	sgr-stream-4-short	(4) SGR-STREAM-4	WFC3/UVIS, ACCUM, UVIS	F814W			Sequence 7-12 Non-Int in Visit 08 Prime + Parallel Group 7-8 in Sequence 7-12 Non-Int in Visit 08	360 Secs [==>]	[2]
	9	sgr-stream-4-dither1	(4) SGR-STREAM-4	ACS/WFC, ACCUM, WFC1-FIX	F606W		POS TARG 0.0000, 0.0000	Sequence 7-12 Non-Int in Visit 08 Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 08	1119 Secs [==>]	[2]

Proposal 12564 - Visit 08 - Proper Motions along the Sagittarius Stream: Constraining Milky Way Parameters and Dark Halo Shape

10	sgr-stream-4 (4) SGR-STREAM-4 WFC3/UVIS, ACCUM, UVIS -dither1	F606W		Sequence 7-12 Non-Int in Visit 08 Prime + Parallel Group 9-10 in Sequence 7-12 Non-Int in Visit 08	1106 Secs	
					[==>]	[2]
11	sgr-stream-4 (4) SGR-STREAM-4 ACS/WFC, ACCUM, WFC1-FIX -dither2	F606W	POS TARG 0.0990,0.1070	Sequence 7-12 Non-Int in Visit 08 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 08	1118 Secs	
					[==>]	[2]
12	sgr-stream-4 (4) SGR-STREAM-4 WFC3/UVIS, ACCUM, UVIS -dither2	F814W		Sequence 7-12 Non-Int in Visit 08 Prime + Parallel Group 11-12 in Sequence 7-12 Non-Int in Visit 08	1223 Secs	
					[==>]	[2]

