



14258 - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

Cycle: 23, Proposal Category: GO

(Availability Mode: SUPPORTED)

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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	(9) SPIRITS-14QB	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:12:55.0	yes
02	(10) SPIRITS-15QO+15AAG	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:12:56.0	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>
03	(11) SPIRITS-15AHG	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:12:57.0	yes
04	(12) SPIRITS-15AFP	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:12:58.0	yes
05	(13) SPIRITS-15WT	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:12:59.0	yes
06	(14) SPIRITS-16AJ	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:13:00.0	yes
07	(15) SPIRITS-15MR+15MT	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:13:01.0	yes
08	(16) SPIRITS-16TN	WFC3/IR WFC3/UVIS	1	07-Sep-2016 17:13:02.0	yes

8 Total Orbits Used

ABSTRACT

Our team is conducting a large-scale time-domain search for mid-infrared (MIR) transients in 194 nearby galaxies, using the warm Spitzer telescope. This program, called SPIRITS (SPitzer InfraRed Intensive Transients Survey) is underway now, and will continue throughout all of HST Cycle 23.

Among the astrophysical transients that we have found is a puzzling new class of luminous extragalactic MIR eruptions that lack conspicuous ground-based optical counterparts. They have MIR luminosities between those of novae and supernovae, and appear to be associated with spiral arms. Because of the lack of optical counterparts and of obvious progenitors, their exact nature is unclear. They have a wide range of eruption timescales, ranging from months to several years.

To explore their nature, we propose to obtain deep images of eight such events during Cycle 23, using WFC3 UVIS and IR observations. These will be non-disruptive Targets of Opportunity, with the exposures obtained about 4 weeks after the Spitzer discoveries. We will select transients that are

at sites previously imaged by HST, so that we can look for progenitor objects, characterize the stellar populations at the outburst sites, and attempt to detect faint optical or near-IR counterparts at HST depth and resolution. By observing 8 events, we will sample their diverse range of outburst timescales, luminosities, and other properties.

OBSERVING DESCRIPTION

This is a non-disruptive Target of Opportunity program, aimed at mid-IR transients discovered in our ongoing Spitzer program.

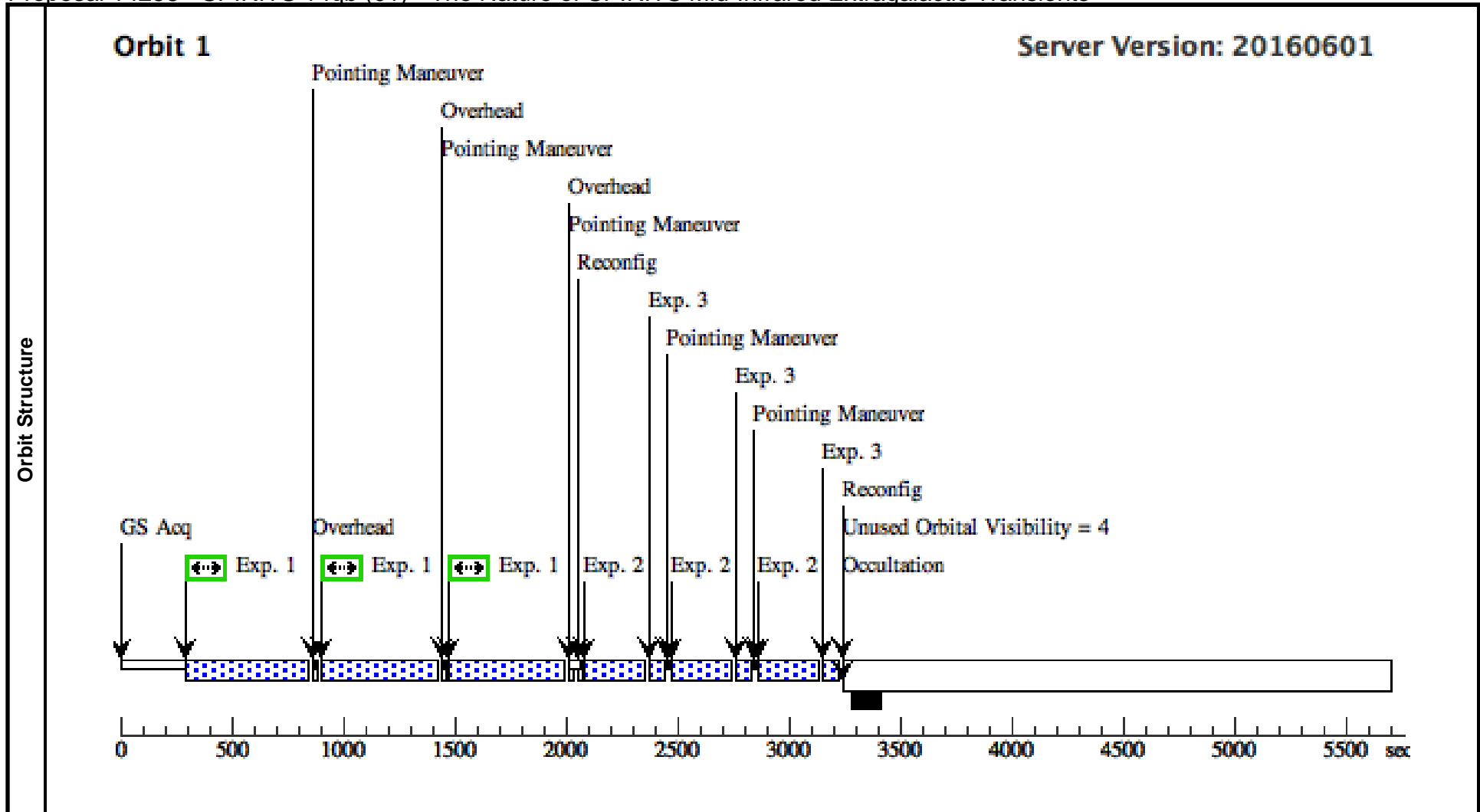
When we find a new transient that satisfies our criteria, we will activate the TOO and obtain WFC3 images as soon as possible after the 3-week delay for non-disruptive TOOs.

The WFC3 observations will be made in UVIS channel I band (F814W), and in IR channel J and H (F110W and F160W). We will use a 3-point dither in each filter.

Proposal 14258 - SPIRITS 14qb (01) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

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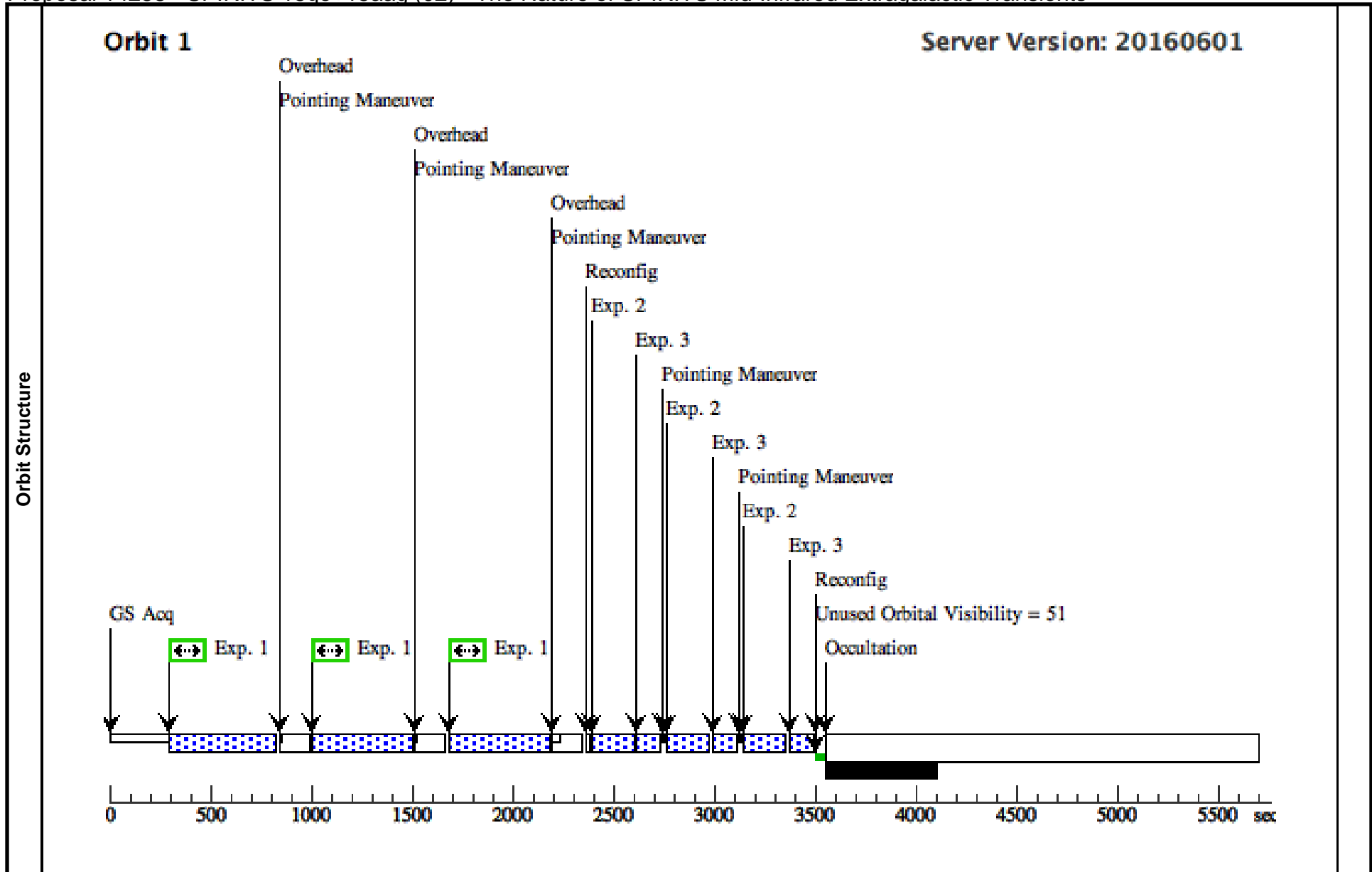
Visit	Proposal 14258, SPIRITS 14qb (01), completed Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)									
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)						
(2)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(9)	SPIRITS-14QB	RA: 12 41 57.5000 (190.4895833d) Dec: +32 32 6.70 (32.53519d) Equinox: J2000		V=30+/-5	Reference Frame: ICRS				
<i>Comments: Mid-IR transient detected by Spitzer at 3.6 and 4.5 microns. Optical and NIR magnitudes very uncertain.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(9) SPIRITS-14QB	(9) SPIRITS-14QB	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO		Pattern 1, Exps 1-1 in SPIRITS 14qb (01) (1)	525 Secs (1575 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	2	(9) SPIRITS-14QB	(9) SPIRITS-14QB	WFC3/IR, MULTIACCUM, IRSUB256	F110W	NSAMP=12; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 in SPIRITS 14qb (01) (2)	246.084244 Secs (738.253 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	3	(9) SPIRITS-14QB	(9) SPIRITS-14QB	WFC3/IR, MULTIACCUM, IRSUB256	F160W	NSAMP=9; SAMP-SEQ=SPAR S10		Pattern 2, Exps 2-3 in SPIRITS 14qb (01) (2)	59.049711 Secs (177.149 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 14258 - SPIRITS 15qo+15aag (02) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

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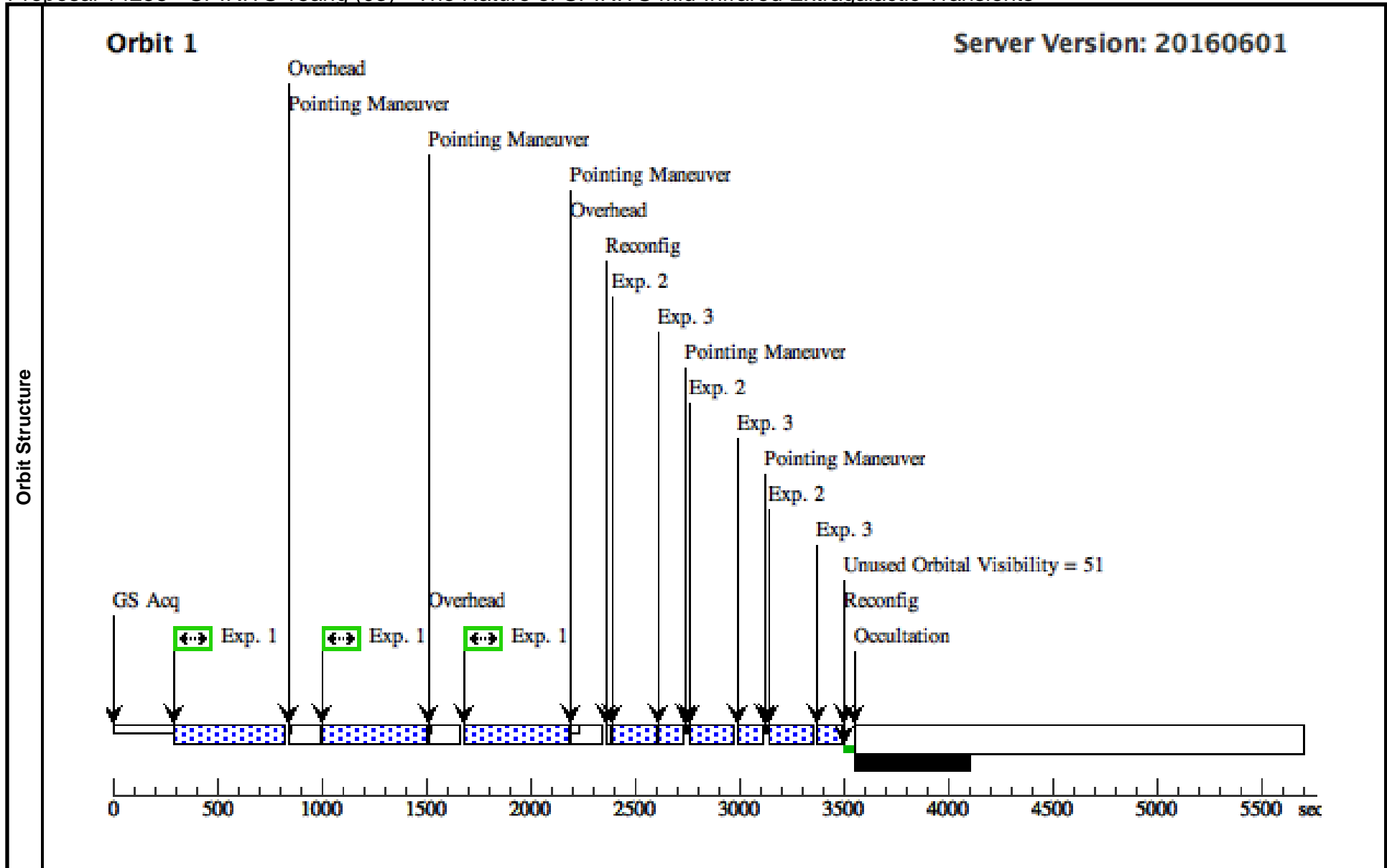
Visit	Proposal 14258, SPIRITS 15qo+15aag (02), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: BEFORE 01-MAR-2016:00:00:00									
	(Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 15qo+15aag (02)) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)					
(2)	Pattern Type=WFC3-IR-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(10)	SPIRITS-15QO+15AAG	RA: 03 18 19.4400 (49.5810000d) Dec: -66 30 13.80 (-66.50383d) Equinox: J2000		V=30+/-5	Reference Frame: ICRS				
<i>Comments: Two Mid-IR transients detected by Spitzer at 3.6 and 4.5 microns. Optical and NIR magnitudes very uncertain. Coordinates are halfway between 15qo and 15aag</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(10) SPIRITS-15QO+15AAG	(10) SPIRITS-15QO+15AAG	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F814W	CR-SPLIT=NO	POS TARG 9.9,9.9	Pattern 1, Exps 1-1 in SPIRITS 15qo+15aag (02) (1)	500 Secs (1500 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	2	(10) SPIRITS-15QO+15AAG	(10) SPIRITS-15QO+15AAG	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F110W	NSAMP=9; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 in SPIRITS 15qo+15aag (02) (2)	184.223035 Secs (552.669 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	3	(10) SPIRITS-15QO+15AAG	(10) SPIRITS-15QO+15AAG	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP2 5		Pattern 2, Exps 2-3 in SPIRITS 15qo+15aag (02) (2)	105.518395 Secs (316.555 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 14258 - SPIRITS 15ahg (03) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

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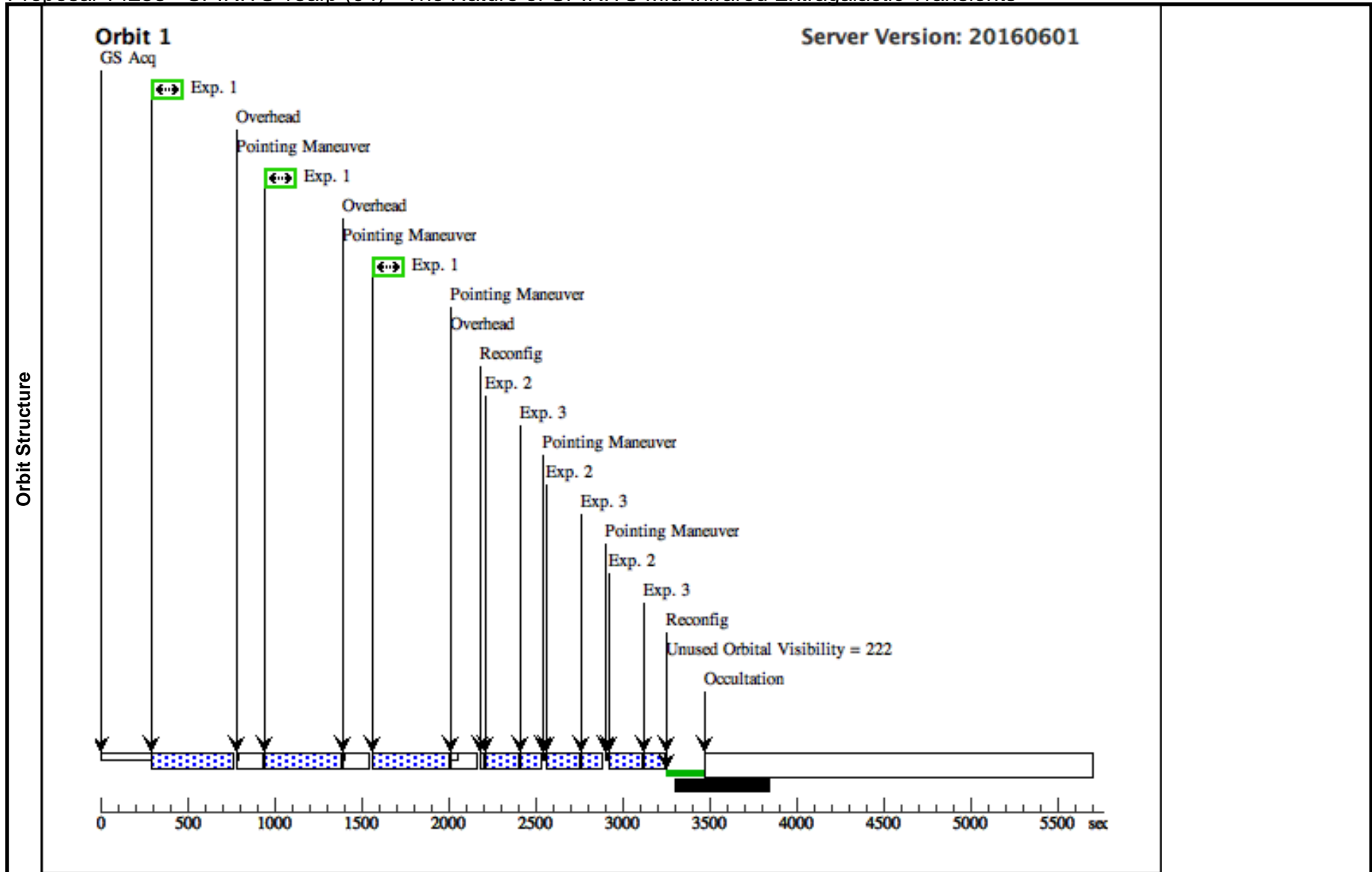
Visit	Proposal 14258, SPIRITS 15ahg (03), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 116D TO 126 D; BEFORE 17-MAR-2016:00:00:00									
	(Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 15ahg (03)) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)						
(2)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(11)	SPIRITS-15AHG	RA: 07 36 33.7200 (114.1405000d) Dec: +65 37 44.40 (65.62900d) Equinox: J2000		V=30+/-5	Reference Frame: ICRS				
Comments: Mid-IR transient detected by Spitzer at 3.6 and 4.5 microns. Optical and NIR magnitudes very uncertain.										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(11) SPIRITS-15AHG	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F814W	CR-SPLIT=NO	POS TARG 9.9,9.9	Pattern 1, Exps 1-1 in SPIRITS 15ahg (03) (1)	500 Secs (1500 Secs)	
			G						[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]
	2		(11) SPIRITS-15AHG	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F110W	NSAMP=9; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 in SPIRITS 15ahg (03) (2)	184.223035 Secs (552.669 Secs)	
		G						[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]	
3		(11) SPIRITS-15AHG	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP2 5		Pattern 2, Exps 2-3 in SPIRITS 15ahg (03) (2)	105.518395 Secs (316.555 Secs)		
		G						[==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)]	[1]	



Proposal 14258 - SPIRITS 15afp (04) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

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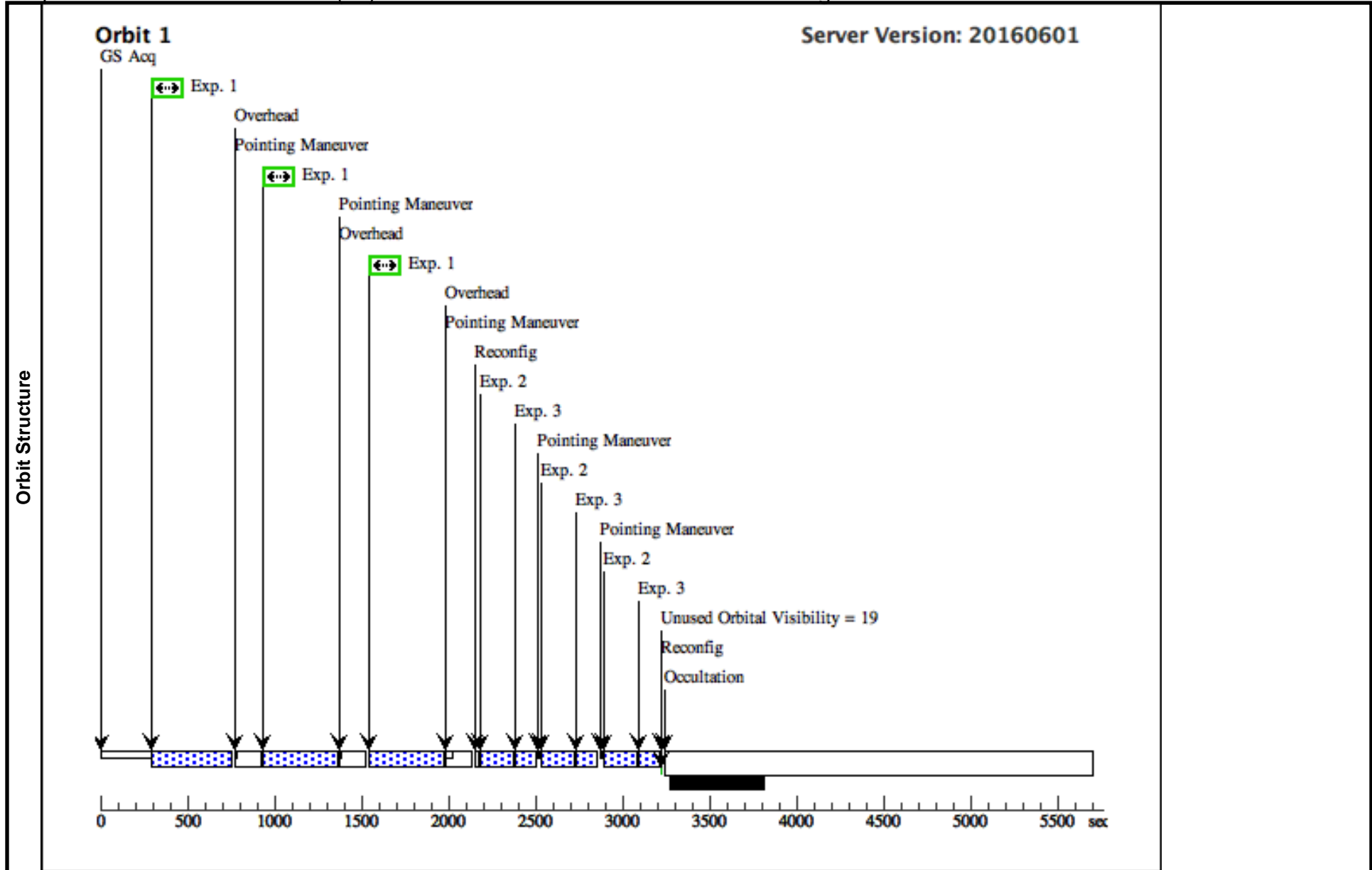
Visit	Proposal 14258, SPIRITS 15afp (04), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 290D TO 320 D; BEFORE 25-MAR-2016:00:00:00									
	(Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 15afp (04))) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 15afp (04)) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)					
(2)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(12)	SPIRITS-15AFP	RA: 20 34 57.0800 (308.7378333d) Dec: +60 11 6.40 (60.18511d) Equinox: J2000		V=30+/-5	Reference Frame: ICRS				
<i>Comments: Mid-IR transient detected by Spitzer at 3.6 and 4.5 microns. Optical and NIR magnitudes very uncertain.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(12) SPIRITS-15AFP	P	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F814W	CR-SPLIT=NO	POS TARG 9.9,9.9	Pattern 1, Exps 1-1 in SPIRITS 15afp (04) (1)	440 Secs (1320 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	2	(12) SPIRITS-15AFP	P	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F110W	NSAMP=8; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 in SPIRITS 15afp (04) (2)	161.301784 Secs (483.905 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	3	(12) SPIRITS-15AFP	P	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP2 5		Pattern 2, Exps 2-3 in SPIRITS 15afp (04) (2)	105.518395 Secs (316.555 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 14258 - SPIRITS 15wt (05) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

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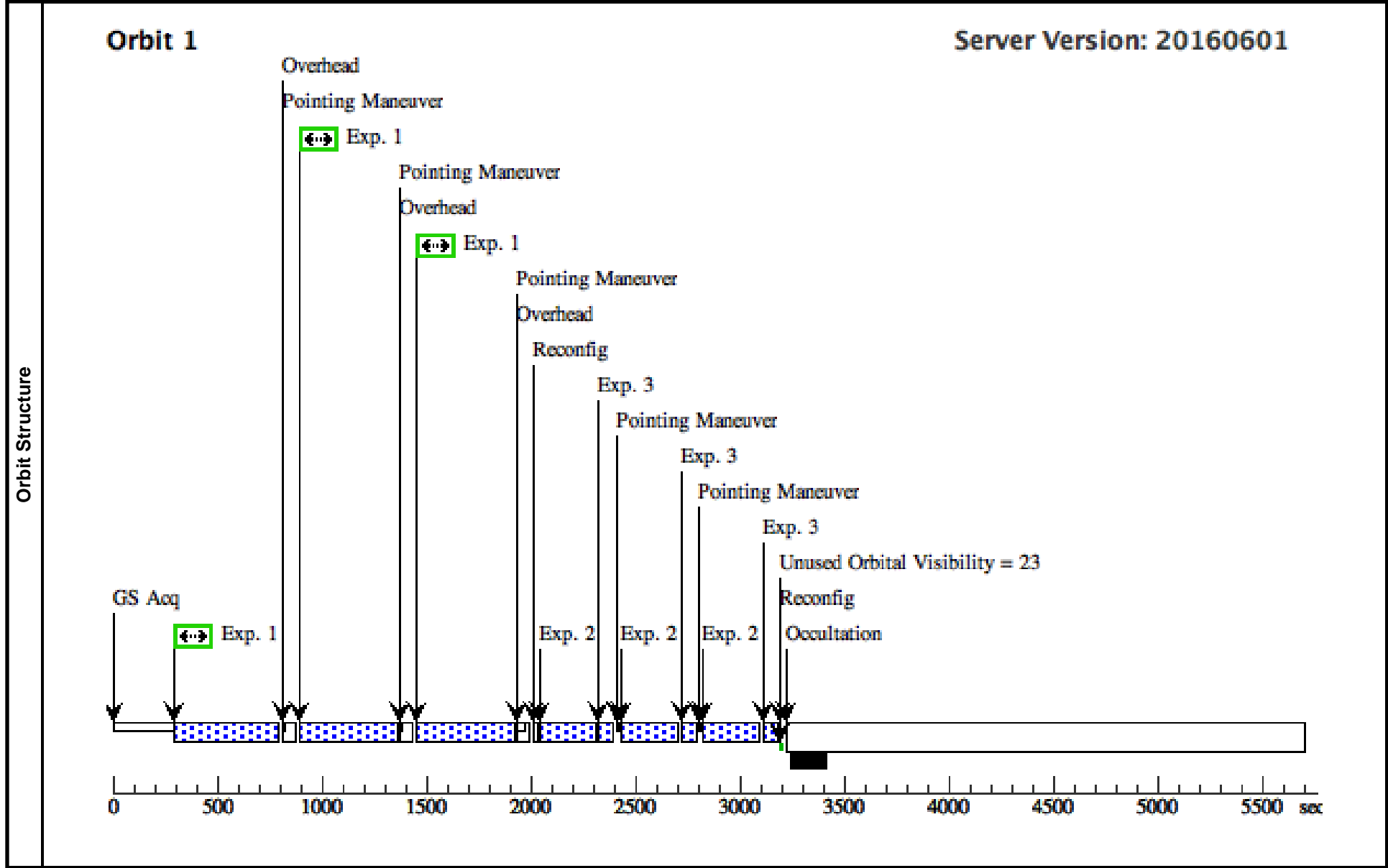
Visit	Proposal 14258, SPIRITS 15wt (05), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 204D TO 234 D; BEFORE 25-APR-2016:00:00:00									
	(Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 15wt (05))) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 15wt (05)) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)					
(2)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(13)	SPIRITS-15WT	RA: 23 57 44.8500 (359.4368750d) Dec: -32 35 1.00 (-32.58361d) Equinox: J2000		V=30+/-5	Reference Frame: ICRS				
<i>Comments: Group of 3 mid-IR transients detected by Spitzer at 3.6 and 4.5 microns. Optical and NIR magnitudes very uncertain.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(13) SPIRITS-15WT	(13) SPIRITS-15WT	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F814W	CR-SPLIT=NO	POS TARG 9.9,9.9	Pattern 1, Exps 1-1 in SPIRITS 15wt (05) (1)	430 Secs (1290 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	2	(13) SPIRITS-15WT	(13) SPIRITS-15WT	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F110W	NSAMP=8; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 in SPIRITS 15wt (05) (2)	161.301784 Secs (483.905 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	3	(13) SPIRITS-15WT	(13) SPIRITS-15WT	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP2 5		Pattern 2, Exps 2-3 in SPIRITS 15wt (05) (2)	105.518395 Secs (316.555 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 14258 - SPIRITS 16aj (06) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

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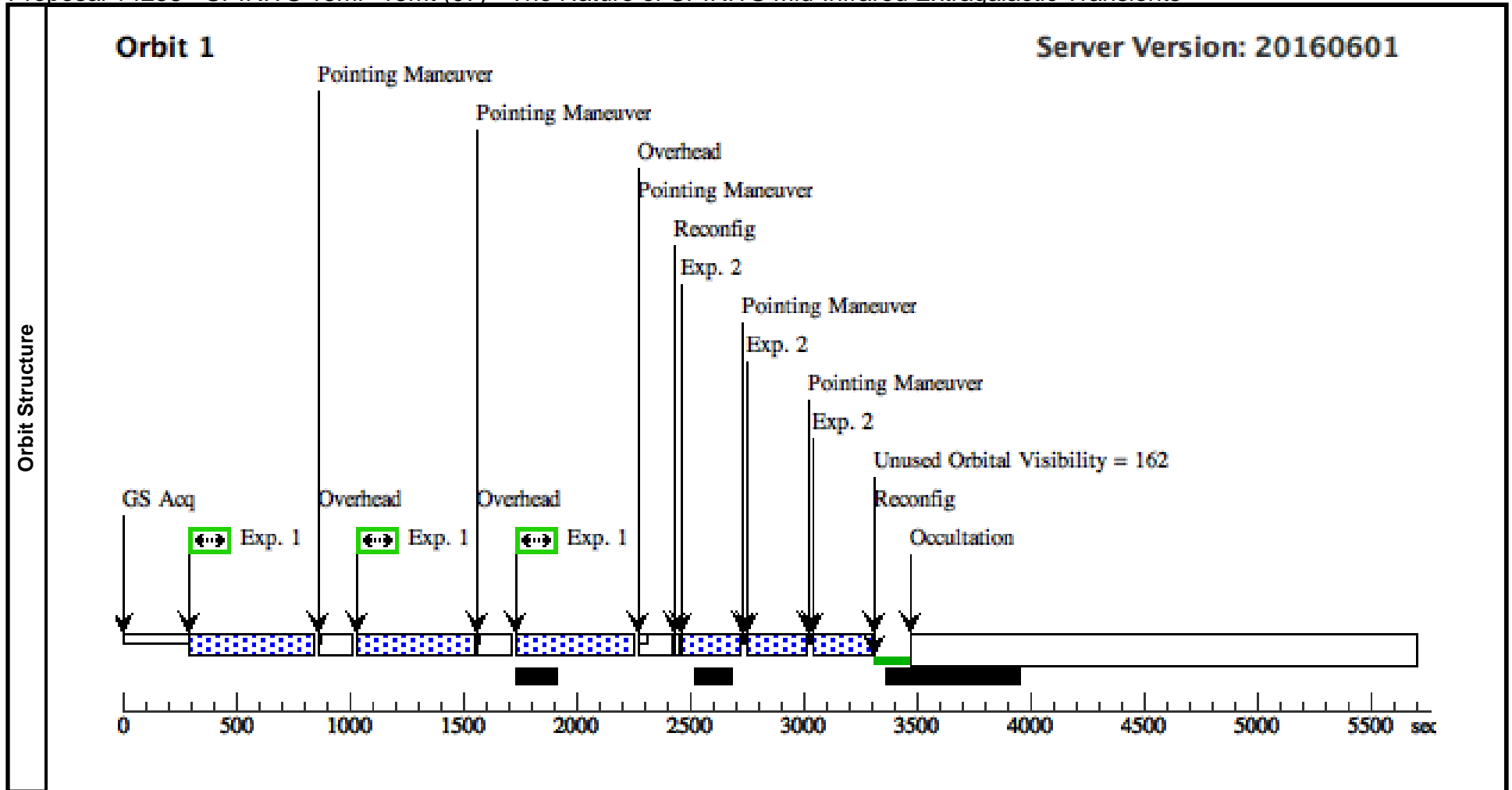
Visit	Proposal 14258, SPIRITS 16aj (06), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)									
	(Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 16aj (06))) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)					
(2)	Pattern Type=WFC3-IR-DITHER- LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(14)	SPIRITS-16AJ	RA: 09 32 11.6400 (143.0485000d) Dec: +21 30 3.00 (21.50083d) Equinox: J2000 <i>Comments: Optical and NIR magnitudes very uncertain.</i>		V=30+/-5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(14) SPIRITS-16AJ	(14) SPIRITS-16AJ	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F814W	CR-SPLIT=NO		Pattern 1, Exps 1-1 i n SPIRITS 16aj (06) (1)	475 Secs (1425 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	2	(14) SPIRITS-16AJ	(14) SPIRITS-16AJ	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F110W	NSAMP=12; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 i n SPIRITS 16aj (06) (2)	246.084244 Secs (738.253 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	3	(14) SPIRITS-16AJ	(14) SPIRITS-16AJ	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=9; SAMP-SEQ=SPAR S10		Pattern 2, Exps 2-3 i n SPIRITS 16aj (06) (2)	59.049711 Secs (177.149 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 14258 - SPIRITS 15mr+15mt (07) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

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Visit	Proposal 14258, SPIRITS 15mr+15mt (07), completed Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: ORIENT 101D TO 111 D									
	(Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 15mr+15mt (07)) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)						
Patterns	(2)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2)						
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(15)	SPIRITS-15MR+15MT	RA: 12 40 0.9100 (190.0037917d) Dec: +61 36 34.30 (61.60953d) Equinox: J2000		V=30+/-5	Reference Frame: ICRS				
	<i>Comments: Optical and NIR magnitudes very uncertain.</i>									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(15) SPIRITS-15MR+15MT	(15) SPIRITS-15MR+15MT	WFC3/UVIS, ACCUM, UVIS2-2K2C-SUB	F814W	CR-SPLIT=NO	POS TARG 9.39,8.24	Pattern 1, Exps 1-1 in SPIRITS 15mr+15mt (07) (1)	525 Secs (1575 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
Exposures	2	(15) SPIRITS-15MR+15MT	(15) SPIRITS-15MR+15MT	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-2 in SPIRITS 15mr+15mt (07) (2)	227.936926 Secs (683.811 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]



Proposal 14258 - SPIRITS 16aj (08) - The Nature of SPIRITS Mid-Infrared Extragalactic Transients

Wed Sep 07 21:13:03 GMT 2016

Visit	Proposal 14258, SPIRITS 16aj (08), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/IR, WFC3/UVIS Special Requirements: (none)									
	(Exposure 1 (Pattern 1, Exps 1-1 in SPIRITS 16aj (08))) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(1)	Pattern Type=WFC3-UVIS-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.135 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=true		(1)						
(2)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=0.605 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2-3)							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(16)	SPIRITS-16TN	RA: 11 11 20.4000 (167.8350000d) Dec: +55 40 17.30 (55.67147d) Equinox: J2000 <i>Comments: Optical and NIR magnitudes very uncertain.</i>		V=30+/-5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	(16) SPIRITS-16TN	(16) SPIRITS-16TN	WFC3/UVIS, ACCUM, UVIS2-C1K1C-SUB	F814W	CR-SPLIT=NO		Pattern 1, Exps 1-1 in SPIRITS 16aj (08) (1)	475 Secs (1425 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	2	(16) SPIRITS-16TN	(16) SPIRITS-16TN	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F110W	NSAMP=12; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 in SPIRITS 16aj (08) (2)	246.084244 Secs (738.253 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]
	3	(16) SPIRITS-16TN	(16) SPIRITS-16TN	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=7; SAMP-SEQ=SPAR S25		Pattern 2, Exps 2-3 in SPIRITS 16aj (08) (2)	134.354049 Secs (403.062 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)]	[1]

